Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LINDA CULPEPPER
Director

February 25, 2016

Carolyn Callihan
Superfund Restoration and Site Evaluation Section
Superfund Division
US EPA Region 4
61 Forsyth Street, 11th Floor
Atlanta, GA 30303-3104

Re: Private Well Sampling
1811 Cheek Road
Durham, Durham County, NC
Southchem, EPA ID# NCD980503148

Dear Ms. Callihan:

Based on the results of a well survey conducted by Tetra Tech, Inc in October 2015, one drinking water well was found with 0.75 miles of the Southchem site in Durham, Durham County, NC. North Carolina Superfund Section staff conducted sampling at 1811 Cheek Road as a follow-up to the well survey on February 3, 2016.

Results from the sampling showed the presence of six contaminants in the drinking water well. These results are summarized in the table below.

Sample ID	Contaminant	Concentration (µg/l)*	MCL (µg/l)	2L (µg/l)
RB04004-002	Barium	800	2,000	
	Copper	23	1,300	
	Iron	1,100		300**
	Magnesium	38,000	NA	NA
	Manganese	46		50***
	Zinc	230		1,000

* The abbreviation µg/l stands for micrograms of contaminant per liter of water and is roughly equivalent to parts per billion.
NA-Not Available
** This value is based on taste, the health based value is 2,500 ug/L.
*** This value is based on discoloration, the health based value is 200 ug/L.

The results were reviewed by an Environmental Toxicologist for the North Carolina Division of Waste Management. Based on the levels detected in the drinking water well, he recommended no restrictions

on the use of this water at this time because none of the contaminants detected exceeded the applicable water standards.

A copy of all the sample results along with the recommendation of the Environmental Toxicologist have been mailed to the homeowner. A copy of all documents associated with the private well sampling are attached to this letter.

If you have any questions, please contact me at (919) 707-8373.

Sincerely,

Melanie Bartlett

Melanie Bartlett, Environmental Engineer
Division of Waste Management, NCDEQ

Attachments

cc: File

Waste Management
ENVIRONMENTAL QUALITY

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Director

February 25, 2016

Ms. Shirley Harris
1811 Cheek Road
Durham, NC 27704

SUBJECT: Well Sampling Results for 1811 Cheek Road
Southchem, EPA ID# NCD980503148
Durham, Durham County, NC

Dear Ms. Harris:

As you are aware, the NC Superfund Section collected a sample from your drinking water well on February 3, 2016. The sample was analyzed for all of the contaminants listed on the attached laboratory report sheets. Six contaminants were detected in your well water. The detected levels do not exceed any applicable health-based standards. Therefore, no restrictions on the use of this water are recommended at this time.

The six contaminants detected in your well water are listed in the summary table below, along with their detected concentrations and their applicable health standards. Concentrations are in micrograms per liter (ug/l).

Sample ID	Contaminant	Concentration (µg/l)*	MCL (µg/l)	2L (µg/l)
RB04004-002	Barium	800	2,000	
	Copper	23	1,300	
	Iron	1,100		300**
	Magnesium	38,000	NA	NA
	Manganese	46		50***
	Zinc	230		1,000

* The abbreviation µg/l stands for micrograms of contaminant per liter of water and is roughly equivalent to parts per billion.
NA-Not Available
** This value is based on taste, the health based value is 2,500 ug/L.
*** This value is based on discoloration, the health based value is 200 ug/L.

Again, these contaminants were measured at concentrations which are below the federal Maximum Contaminant Levels (MCLs) considered acceptable for public water supplies. The Environmental Toxicologist for the NC Division of Waste Management has reviewed the analytical results and has concluded that there are no restrictions for use of this water recommended at this time. A copy of the Environmental Toxicologist's evaluation is attached for your information.

If you have any questions regarding health concerns, please contact Mr. Dave Lilley, Environmental Toxicologist, NC Division of Waste Management, at (919) 707-8241. If you have any other questions, please contact me at (919) 707-8373.

Sincerely,

Melanie Bartlett

Melanie Bartlett, Environmental Engineer
Division of Waste Management, NCDEQ

Attachments

cc: Mr. Dave Lilley, letter only
File

Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LINDA CULPEPPER
Director

February 24, 2016

TO: Melanie Bartlett
NC Superfund Section

RE: Health Risk Evaluation
NCD980503148
Southchem Well Sampling Results
Durham, NC

During this sampling event, six contaminants were detected in the well water. The standards used to determine if the water is suitable for drinking and cooking are the United States Environmental Protection Agency's Maximum Contaminant Levels (MCLs) or, if no MCLs exist, North Carolina Groundwater Standards (2L).

If any contaminant concentrations exceed applicable standards for using the water for drinking and cooking, those contaminant concentrations are further analyzed to determine if the water is suitable for other household uses, such as showering, bathing, washing dishes, flushing toilets, and hand washing. The chart below compares the detected contaminant concentrations with the applicable standards:

Sample ID	Contaminant	Concentration (µg/l)*	MCL (µg/l)	2L (µg/l)
RB04004-002	Barium	800	2,000	
	Copper	23	1,300	
	Iron	1,100		300**
	Magnesium	38,000	NA	NA
	Manganese	46		50***
	Zinc	230		1,000

* The abbreviation µg/l stands for micrograms of contaminant per liter of water and is roughly equivalent to parts per billion.

NA-Not Available

** This value is based on taste, the health based value is 2,500 ug/L.

*** This value is based on discoloration, the health based value is 200 ug/L.

RECOMMENDATION: None of the contaminants detected exceeded the applicable water standards. Therefore, no restrictions on the use of this water are recommended at this time.

David Lilley, Environmental Toxicologist
Division of Waste Management, NCDEQ

February 22, 2016

MEMORANDUM

TO: Mr. Dave Lilley, Industrial Hygiene Consultant
NC Division of Waste Management, Superfund Section

THROUGH: David Lown, Head
Federal Remediation Branch

FROM: Melanie Bartlett, Environmental Engineer
NC Superfund Section

Subject: Health Risk Evaluation Request
Southchem
EPA ID# NCD980503148
Durham, Durham County, NC

Please find attached a copy of the laboratory analyses for Sample ID **1811 Cheek**, collected by the Superfund Section at the subject site. Since this sample was collected from a private drinking water well, the Superfund Section requests a health risk evaluation and a recommendation on the continued use of this well. This information will be provided to the well owner. If you have any questions regarding this matter, please contact me at 707-8373.

Attachments

cc: File

Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	02/04/2016 2249	KDB	02/04/2016 1638	95776
1	3005A	6010C	1	02/10/2016 1358	CJZ	02/04/2016 1906	95812

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.20	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	mg/L	1
Barium	7440-39-3	6010C	0.80		0.025	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0050	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	mg/L	1
Copper	7440-50-8	6010C	0.023		0.010	mg/L	1
Iron	7439-89-6	6010C	1.1		0.10	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	mg/L	1
Magnesium	7439-95-4	6010C	38		5.0	mg/L	1
Manganese	7439-96-5	6010C	0.046		0.015	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	mg/L	1
Zinc	7440-66-6	6010C	0.23		0.020	mg/L	1

= Practical quantitation limit
Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2300	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		10	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2300	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
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Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	02/09/2016 1021	DRB1	02/07/2016 1631	95933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: NCDENR - DWM - DSCA
Description: 1811 CHEEK
Date Sampled: 02/03/2016 1010
Date Received: 02/04/2016

Laboratory ID: RB04004-002
Matrix: Aqueous

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	02/09/2016 1021	DRB1	02/07/2016 1631	95933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		87	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		80	24-127
Nitrobenzene-d5		77	38-127
Phenol-d5		94	28-128
Terphenyl-d14		84	10-148

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E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
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Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	02/16/2016 1102	MEM	02/09/2016 1515	96051

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081B	ND		0.040	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.040	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.040	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.040	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.040	ug/L	1
Chlordane	57-74-9	8081B	ND		0.40	ug/L	1
cis-Chlordane	5103-71-9	8081B	ND		0.040	ug/L	1
trans-Chlordane	5103-74-2	8081B	ND		0.040	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.040	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.040	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.040	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.040	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.040	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.040	ug/L	1
Endrin	72-20-8	8081B	ND		0.040	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.040	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.040	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.040	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.16	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		77	10-122
Tetrachloro-m-xylene		93	46-119

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **NCDENR - DWM - DSCA**
Description: **1811 CHEEK**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Laboratory ID: **RB04004-002**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	02/04/2016 2249	KDB	02/04/2016 1638	95776
1	3005A	6010C	1	02/10/2016 1358	CJZ	02/04/2016 1906	95812

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.20	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	mg/L	1
Barium	**7440-39-3**	**6010C**	**0.80**		**0.025**	**mg/L**	**1**
Cadmium	7440-43-9	6010C	ND		0.0050	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	mg/L	1
Copper	**7440-50-8**	**6010C**	**0.023**		**0.010**	**mg/L**	**1**
Iron	**7439-89-6**	**6010C**	**1.1**		**0.10**	**mg/L**	**1**
Lead	7439-92-1	6010C	ND		0.010	mg/L	1
Magnesium	**7439-95-4**	**6010C**	**38**		**5.0**	**mg/L**	**1**
Manganese	**7439-96-5**	**6010C**	**0.046**		**0.015**	**mg/L**	**1**
Mercury	7439-97-6	7470A	ND		0.00010	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	mg/L	1
Zinc	**7440-66-6**	**6010C**	**0.23**		**0.020**	**mg/L**	**1**

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

NCDENR - DWM - DSCA
217 West Jones St.
Raleigh, NC 27603
Attention: Melanie Bartlett

Project Name: **Southchem**

Project Number: **NCD980503148**

Lot Number: **RB04004**

Date Completed: **02/16/2016**

Nisreen Saikaly
Project Manager

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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

Case Narrative
NCDENR - DWM - DSCA
Lot Number: RB04004

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Summary
NCDENR - DWM - DSCA
Lot Number: RB04004

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TRIP BLANK	Aqueous	02/03/2016	02/04/2016
002	1811 CHEEK	Aqueous	02/03/2016 1010	02/04/2016

(2 samples)

Executive Summary
NCDENR - DWM - DSCA
Lot Number: RB04004

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	TRIP BLANK	Aqueous	Carbon disulfide	8260B	0.51		ug/L	5
002	1811 CHEEK	Aqueous	Barium	6010C	0.80		mg/L	12
002	1811 CHEEK	Aqueous	Copper	6010C	0.023		mg/L	12
002	1811 CHEEK	Aqueous	Iron	6010C	1.1		mg/L	12
002	1811 CHEEK	Aqueous	Magnesium	6010C	38		mg/L	12
002	1811 CHEEK	Aqueous	Manganese	6010C	0.046		mg/L	12
002	1811 CHEEK	Aqueous	Zinc	6010C	0.23		mg/L	12

(7 detections)

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-001**
Description: **TRIP BLANK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2238	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		10	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	**75-15-0**	**8260B**	**0.51**		**0.50**	**ug/L**	**1**
Carbon tetrachloride	56-23-5	8260B	ND		0.50	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-001**
Description: **TRIP BLANK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2238	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2300	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		10	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/05/2016 2300	JJG		95904

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
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ND = Not detected at or above the PQL
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P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	02/09/2016 1021	DRB1	02/07/2016 1631	95933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270D	ND		5.0	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		5.0	ug/L	1
Acetophenone	98-86-2	8270D	ND		5.0	ug/L	1
Anthracene	120-12-7	8270D	ND		5.0	ug/L	1
Atrazine	1912-24-9	8270D	ND		5.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		25	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		5.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		5.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		5.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		5.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		5.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		5.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		5.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		10	ug/L	1
Caprolactam	105-60-2	8270D	ND		25	ug/L	1
Carbazole	86-74-8	8270D	ND		5.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		5.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		5.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		5.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		5.0	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		5.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		5.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		5.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		5.0	ug/L	1
Chrysene	218-01-9	8270D	ND		5.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		5.0	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		5.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		25	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		5.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		5.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		25	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		5.0	ug/L	1
Fluorene	86-73-7	8270D	ND		5.0	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		5.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		5.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		25	ug/L	1

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ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	02/09/2016 1021	DRB1	02/07/2016 1631	95933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		5.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		5.0	ug/L	1
Isophorone	78-59-1	8270D	ND		5.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		5.0	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		5.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		5.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		5.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		5.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		5.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		25	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		25	ug/L	1
Phenanthrene	85-01-8	8270D	ND		5.0	ug/L	1
Phenol	108-95-2	8270D	ND		5.0	ug/L	1
Pyrene	129-00-0	8270D	ND		5.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		5.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		87	41-144
2-Fluorobiphenyl		90	37-129
2-Fluorophenol		80	24-127
Nitrobenzene-d5		77	38-127
Phenol-d5		94	28-128
Terphenyl-d14		84	10-148

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Organochlorine Pesticides by GC

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	02/16/2016 1102	MEM	02/09/2016 1515	96051

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081B	ND		0.040	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.040	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.040	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.040	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.040	ug/L	1
Chlordane	57-74-9	8081B	ND		0.40	ug/L	1
cis-Chlordane	5103-71-9	8081B	ND		0.040	ug/L	1
trans-Chlordane	5103-74-2	8081B	ND		0.040	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.040	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.040	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.040	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.040	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.040	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.040	ug/L	1
Endrin	72-20-8	8081B	ND		0.040	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.040	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.040	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.040	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.16	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		77	10-122
Tetrachloro-m-xylene		93	46-119

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

TAL Metals

Client: **NCDENR - DWM - DSCA**
Laboratory ID: **RB04004-002**
Description: **1811 CHEEK**
Matrix: **Aqueous**
Date Sampled: **02/03/2016 1010**
Date Received: **02/04/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	02/04/2016 2249	KDB	02/04/2016 1638	95776
1	3005A	6010C	1	02/10/2016 1358	CJZ	02/04/2016 1906	95812

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.20	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	mg/L	1
Barium	**7440-39-3**	**6010C**	**0.80**		**0.025**	**mg/L**	**1**
Cadmium	7440-43-9	6010C	ND		0.0050	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	mg/L	1
Copper	**7440-50-8**	**6010C**	**0.023**		**0.010**	**mg/L**	**1**
Iron	**7439-89-6**	**6010C**	**1.1**		**0.10**	**mg/L**	**1**
Lead	7439-92-1	6010C	ND		0.010	mg/L	1
Magnesium	**7439-95-4**	**6010C**	**38**		**5.0**	**mg/L**	**1**
Manganese	**7439-96-5**	**6010C**	**0.046**		**0.015**	**mg/L**	**1**
Mercury	7439-97-6	7470A	ND		0.00010	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	mg/L	1
Zinc	**7440-66-6**	**6010C**	**0.23**		**0.020**	**mg/L**	**1**

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the PQL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ95904-001
Batch: 95904
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Acetone	ND		1	10	ug/L	02/05/2016 2111
Benzene	ND		1	0.50	ug/L	02/05/2016 2111
Bromodichloromethane	ND		1	0.50	ug/L	02/05/2016 2111
Bromoform	ND		1	0.50	ug/L	02/05/2016 2111
Bromomethane (Methyl bromide)	ND		1	0.50	ug/L	02/05/2016 2111
2-Butanone (MEK)	ND		1	10	ug/L	02/05/2016 2111
Carbon disulfide	ND		1	0.50	ug/L	02/05/2016 2111
Carbon tetrachloride	ND		1	0.50	ug/L	02/05/2016 2111
Chlorobenzene	ND		1	0.50	ug/L	02/05/2016 2111
Chloroethane	ND		1	0.50	ug/L	02/05/2016 2111
Chloroform	ND		1	0.50	ug/L	02/05/2016 2111
Chloromethane (Methyl chloride)	ND		1	0.50	ug/L	02/05/2016 2111
Cyclohexane	ND		1	0.50	ug/L	02/05/2016 2111
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	ug/L	02/05/2016 2111
Dibromochloromethane	ND		1	0.50	ug/L	02/05/2016 2111
1,2-Dibromoethane (EDB)	ND		1	0.50	ug/L	02/05/2016 2111
1,4-Dichlorobenzene	ND		1	0.50	ug/L	02/05/2016 2111
1,2-Dichlorobenzene	ND		1	0.50	ug/L	02/05/2016 2111
1,3-Dichlorobenzene	ND		1	0.50	ug/L	02/05/2016 2111
Dichlorodifluoromethane	ND		1	0.50	ug/L	02/05/2016 2111
1,2-Dichloroethane	ND		1	0.50	ug/L	02/05/2016 2111
1,1-Dichloroethane	ND		1	0.50	ug/L	02/05/2016 2111
cis-1,2-Dichloroethene	ND		1	0.50	ug/L	02/05/2016 2111
1,1-Dichloroethene	ND		1	0.50	ug/L	02/05/2016 2111
trans-1,2-Dichloroethene	ND		1	0.50	ug/L	02/05/2016 2111
1,2-Dichloropropane	ND		1	0.50	ug/L	02/05/2016 2111
cis-1,3-Dichloropropene	ND		1	0.50	ug/L	02/05/2016 2111
trans-1,3-Dichloropropene	ND		1	0.50	ug/L	02/05/2016 2111
Ethylbenzene	ND		1	0.50	ug/L	02/05/2016 2111
2-Hexanone	ND		1	10	ug/L	02/05/2016 2111
Isopropylbenzene	ND		1	0.50	ug/L	02/05/2016 2111
Methyl acetate	ND		1	1.0	ug/L	02/05/2016 2111
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	ug/L	02/05/2016 2111
4-Methyl-2-pentanone	ND		1	10	ug/L	02/05/2016 2111
Methylcyclohexane	ND		1	5.0	ug/L	02/05/2016 2111
Methylene chloride	ND		1	0.50	ug/L	02/05/2016 2111
Styrene	ND		1	0.50	ug/L	02/05/2016 2111
1,1,2,2-Tetrachloroethane	ND		1	0.50	ug/L	02/05/2016 2111
Tetrachloroethene	ND		1	0.50	ug/L	02/05/2016 2111
Toluene	ND		1	0.50	ug/L	02/05/2016 2111
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	02/05/2016 2111
1,2,4-Trichlorobenzene	ND		1	0.50	ug/L	02/05/2016 2111
1,1,2-Trichloroethane	ND		1	0.50	ug/L	02/05/2016 2111
1,1,1-Trichloroethane	ND		1	0.50	ug/L	02/05/2016 2111

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ95904-001
Batch: 95904
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Trichloroethene	ND		1	0.50	ug/L	02/05/2016 2111
Trichlorofluoromethane	ND		1	0.50	ug/L	02/05/2016 2111
Vinyl chloride	ND		1	0.50	ug/L	02/05/2016 2111
Xylenes (total)	ND		1	0.50	ug/L	02/05/2016 2111

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		101	70-130
1,2-Dichloroethane-d4		104	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ95904-002
Batch: 95904
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	67		1	67	60-140	02/05/2016 2006
Benzene	50	43		1	86	70-130	02/05/2016 2006
Bromodichloromethane	50	50		1	100	70-130	02/05/2016 2006
Bromoform	50	58		1	116	70-130	02/05/2016 2006
Bromomethane (Methyl bromide)	50	39		1	79	60-140	02/05/2016 2006
2-Butanone (MEK)	100	94		1	94	60-140	02/05/2016 2006
Carbon disulfide	50	40		1	79	60-140	02/05/2016 2006
Carbon tetrachloride	50	42		1	84	70-130	02/05/2016 2006
Chlorobenzene	50	53		1	106	70-130	02/05/2016 2006
Chloroethane	50	34		1	69	60-140	02/05/2016 2006
Chloroform	50	40		1	80	70-130	02/05/2016 2006
Chloromethane (Methyl chloride)	50	39		1	79	20-158	02/05/2016 2006
Cyclohexane	50	38		1	77	70-130	02/05/2016 2006
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	106	70-130	02/05/2016 2006
Dibromochloromethane	50	57		1	113	70-130	02/05/2016 2006
1,2-Dibromoethane (EDB)	50	55		1	111	70-130	02/05/2016 2006
1,4-Dichlorobenzene	50	57		1	115	70-130	02/05/2016 2006
1,2-Dichlorobenzene	50	58		1	116	70-130	02/05/2016 2006
1,3-Dichlorobenzene	50	58		1	116	70-130	02/05/2016 2006
Dichlorodifluoromethane	50	46		1	92	60-140	02/05/2016 2006
1,2-Dichloroethane	50	45		1	89	70-130	02/05/2016 2006
1,1-Dichloroethane	50	41		1	81	70-130	02/05/2016 2006
cis-1,2-Dichloroethene	50	44		1	88	70-130	02/05/2016 2006
1,1-Dichloroethene	50	42		1	83	70-130	02/05/2016 2006
trans-1,2-Dichloroethene	50	41		1	83	70-130	02/05/2016 2006
1,2-Dichloropropane	50	47		1	94	70-130	02/05/2016 2006
cis-1,3-Dichloropropene	50	51		1	102	70-130	02/05/2016 2006
trans-1,3-Dichloropropene	50	51		1	102	70-130	02/05/2016 2006
Ethylbenzene	50	48		1	97	70-130	02/05/2016 2006
2-Hexanone	100	110		1	108	60-140	02/05/2016 2006
Isopropylbenzene	50	53		1	106	70-130	02/05/2016 2006
Methyl acetate	50	35		1	70	60-140	02/05/2016 2006
Methyl tertiary butyl ether (MTBE)	50	44		1	88	70-130	02/05/2016 2006
4-Methyl-2-pentanone	100	110		1	112	60-140	02/05/2016 2006
Methylcyclohexane	50	45		1	90	70-130	02/05/2016 2006
Methylene chloride	50	42		1	84	70-130	02/05/2016 2006
Styrene	50	55		1	109	70-130	02/05/2016 2006
1,1,2,2-Tetrachloroethane	50	57		1	114	70-130	02/05/2016 2006
Tetrachloroethene	50	54		1	108	70-130	02/05/2016 2006
Toluene	50	47		1	94	70-130	02/05/2016 2006
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	99	70-130	02/05/2016 2006
1,2,4-Trichlorobenzene	50	75	N	1	150	70-130	02/05/2016 2006
1,1,2-Trichloroethane	50	53		1	107	70-130	02/05/2016 2006
1,1,1-Trichloroethane	50	41		1	81	70-130	02/05/2016 2006

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ95904-002
Batch: 95904
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	94	70-130	02/05/2016 2006
Trichlorofluoromethane	50	45		1	89	60-140	02/05/2016 2006
Vinyl chloride	50	40		1	79	60-140	02/05/2016 2006
Xylenes (total)	100	110		1	109	70-130	02/05/2016 2006

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4		102	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: RQ95933-001
Batch: 95933
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/07/2016 1631

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
1,1'-Biphenyl	ND		1	5.0	ug/L	02/09/2016 0931
2,4,5-Trichlorophenol	ND		1	5.0	ug/L	02/09/2016 0931
2,4,6-Trichlorophenol	ND		1	5.0	ug/L	02/09/2016 0931
2,4-Dichlorophenol	ND		1	5.0	ug/L	02/09/2016 0931
2,4-Dimethylphenol	ND		1	5.0	ug/L	02/09/2016 0931
2,4-Dinitrophenol	ND		1	25	ug/L	02/09/2016 0931
2,4-Dinitrotoluene	ND		1	10	ug/L	02/09/2016 0931
2,6-Dinitrotoluene	ND		1	10	ug/L	02/09/2016 0931
2-Chloronaphthalene	ND		1	5.0	ug/L	02/09/2016 0931
2-Chlorophenol	ND		1	5.0	ug/L	02/09/2016 0931
2-Methylnaphthalene	ND		1	5.0	ug/L	02/09/2016 0931
2-Methylphenol	ND		1	5.0	ug/L	02/09/2016 0931
2-Nitroaniline	ND		1	10	ug/L	02/09/2016 0931
2-Nitrophenol	ND		1	10	ug/L	02/09/2016 0931
3+4-Methylphenol	ND		1	10	ug/L	02/09/2016 0931
3,3'-Dichlorobenzidine	ND		1	25	ug/L	02/09/2016 0931
3-Nitroaniline	ND		1	10	ug/L	02/09/2016 0931
4,6-Dinitro-2-methylphenol	ND		1	25	ug/L	02/09/2016 0931
4-Bromophenyl phenyl ether	ND		1	5.0	ug/L	02/09/2016 0931
4-Chloro-3-methyl phenol	ND		1	5.0	ug/L	02/09/2016 0931
4-Chloroaniline	ND		1	5.0	ug/L	02/09/2016 0931
4-Chlorophenyl phenyl ether	ND		1	5.0	ug/L	02/09/2016 0931
4-Nitroaniline	ND		1	10	ug/L	02/09/2016 0931
4-Nitrophenol	ND		1	25	ug/L	02/09/2016 0931
Acenaphthene	ND		1	5.0	ug/L	02/09/2016 0931
Acenaphthylene	ND		1	5.0	ug/L	02/09/2016 0931
Acetophenone	ND		1	5.0	ug/L	02/09/2016 0931
Anthracene	ND		1	5.0	ug/L	02/09/2016 0931
Atrazine	ND		1	5.0	ug/L	02/09/2016 0931
Benzaldehyde	ND		1	25	ug/L	02/09/2016 0931
Benzo(a)anthracene	ND		1	5.0	ug/L	02/09/2016 0931
Benzo(a)pyrene	ND		1	5.0	ug/L	02/09/2016 0931
Benzo(b)fluoranthene	ND		1	5.0	ug/L	02/09/2016 0931
Benzo(g,h,i)perylene	ND		1	5.0	ug/L	02/09/2016 0931
Benzo(k)fluoranthene	ND		1	5.0	ug/L	02/09/2016 0931
bis (2-Chloro-1-methylethyl) ether	ND		1	5.0	ug/L	02/09/2016 0931
bis(2-Chloroethoxy)methane	ND		1	5.0	ug/L	02/09/2016 0931
bis(2-Chloroethyl)ether	ND		1	5.0	ug/L	02/09/2016 0931
bis(2-Ethylhexyl)phthalate	ND		1	5.0	ug/L	02/09/2016 0931
Butyl benzyl phthalate	ND		1	10	ug/L	02/09/2016 0931
Caprolactam	ND		1	25	ug/L	02/09/2016 0931
Carbazole	ND		1	5.0	ug/L	02/09/2016 0931
Chrysene	ND		1	5.0	ug/L	02/09/2016 0931
Di-n-butyl phthalate	ND		1	5.0	ug/L	02/09/2016 0931

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: RQ95933-001
Batch: 95933
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/07/2016 1631

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	ug/L	02/09/2016 0931
Dibenzo(a,h)anthracene	ND		1	5.0	ug/L	02/09/2016 0931
Dibenzofuran	ND		1	5.0	ug/L	02/09/2016 0931
Diethylphthalate	ND		1	5.0	ug/L	02/09/2016 0931
Dimethyl phthalate	ND		1	5.0	ug/L	02/09/2016 0931
Fluoranthene	ND		1	5.0	ug/L	02/09/2016 0931
Fluorene	ND		1	5.0	ug/L	02/09/2016 0931
Hexachlorobenzene	ND		1	5.0	ug/L	02/09/2016 0931
Hexachlorobutadiene	ND		1	5.0	ug/L	02/09/2016 0931
Hexachlorocyclopentadiene	ND		1	25	ug/L	02/09/2016 0931
Hexachloroethane	ND		1	5.0	ug/L	02/09/2016 0931
Indeno(1,2,3-c,d)pyrene	ND		1	5.0	ug/L	02/09/2016 0931
Isophorone	ND		1	5.0	ug/L	02/09/2016 0931
N-Nitrosodi-n-propylamine	ND		1	5.0	ug/L	02/09/2016 0931
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	5.0	ug/L	02/09/2016 0931
Naphthalene	ND		1	5.0	ug/L	02/09/2016 0931
Nitrobenzene	ND		1	5.0	ug/L	02/09/2016 0931
Pentachlorophenol	ND		1	25	ug/L	02/09/2016 0931
Phenanthrene	ND		1	5.0	ug/L	02/09/2016 0931
Phenol	ND		1	5.0	ug/L	02/09/2016 0931
Pyrene	ND		1	5.0	ug/L	02/09/2016 0931

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		98	41-144
2-Fluorobiphenyl		89	37-129
2-Fluorophenol		85	24-127
Nitrobenzene-d5		83	38-127
Phenol-d5		97	28-128
Terphenyl-d14		91	10-148

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: RQ95933-002
Batch: 95933
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/07/2016 1631

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	50	41		1	82	42-120	02/09/2016 0956
2,4,5-Trichlorophenol	50	42		1	83	56-118	02/09/2016 0956
2,4,6-Trichlorophenol	50	45		1	91	55-121	02/09/2016 0956
2,4-Dichlorophenol	100	87		1	87	55-117	02/09/2016 0956
2,4-Dimethylphenol	50	35		1	69	36-170	02/09/2016 0956
2,4-Dinitrophenol	50	41		1	82	47-133	02/09/2016 0956
2,4-Dinitrotoluene	50	44		1	89	59-127	02/09/2016 0956
2,6-Dinitrotoluene	50	45		1	89	59-126	02/09/2016 0956
2-Chloronaphthalene	50	39		1	78	46-100	02/09/2016 0956
2-Chlorophenol	50	43		1	85	50-117	02/09/2016 0956
2-Methylnaphthalene	50	44		1	87	57-115	02/09/2016 0956
2-Methylphenol	50	39		1	78	56-119	02/09/2016 0956
2-Nitroaniline	50	43		1	86	60-124	02/09/2016 0956
2-Nitrophenol	50	43		1	86	51-118	02/09/2016 0956
3+4-Methylphenol	50	38		1	75	53-119	02/09/2016 0956
3,3'-Dichlorobenzidine	50	39		1	79	10-126	02/09/2016 0956
3-Nitroaniline	50	43		1	86	43-123	02/09/2016 0956
4,6-Dinitro-2-methylphenol	50	43		1	87	56-128	02/09/2016 0956
4-Bromophenyl phenyl ether	50	42		1	84	55-121	02/09/2016 0956
4-Chloro-3-methyl phenol	50	48		1	97	58-125	02/09/2016 0956
4-Chloroaniline	50	57		1	114	10-128	02/09/2016 0956
4-Chlorophenyl phenyl ether	50	42		1	83	55-121	02/09/2016 0956
4-Nitroaniline	50	42		1	84	60-135	02/09/2016 0956
4-Nitrophenol	100	76		1	76	53-130	02/09/2016 0956
Acenaphthene	50	41		1	83	54-118	02/09/2016 0956
Acenaphthylene	50	42		1	85	48-155	02/09/2016 0956
Acetophenone	50	41		1	82	52-125	02/09/2016 0956
Anthracene	50	42		1	85	55-122	02/09/2016 0956
Atrazine	50	37		1	75	25-121	02/09/2016 0956
Benzaldehyde	50	44		1	87	45-115	02/09/2016 0956
Benzo(a)anthracene	50	40		1	80	56-123	02/09/2016 0956
Benzo(a)pyrene	50	44		1	89	54-124	02/09/2016 0956
Benzo(b)fluoranthene	50	47		1	94	55-136	02/09/2016 0956
Benzo(g,h,i)perylene	50	53		1	107	42-129	02/09/2016 0956
Benzo(k)fluoranthene	50	45		1	91	53-132	02/09/2016 0956
bis (2-Chloro-1-methylethyl) ether	50	45		1	90	42-124	02/09/2016 0956
bis(2-Chloroethoxy)methane	50	42		1	84	44-127	02/09/2016 0956
bis(2-Chloroethyl)ether	50	42		1	83	46-120	02/09/2016 0956
bis(2-Ethylhexyl)phthalate	50	33		1	66	56-128	02/09/2016 0956
Butyl benzyl phthalate	50	44		1	88	54-135	02/09/2016 0956
Caprolactam	50	51		1	102	44-152	02/09/2016 0956
Carbazole	50	42		1	84	47-140	02/09/2016 0956
Chrysene	50	39		1	79	54-120	02/09/2016 0956
Di-n-butyl phthalate	50	43		1	86	60-131	02/09/2016 0956

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: RQ95933-002
Batch: 95933
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/07/2016 1631

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Di-n-octylphthalate	50	37		1	74	50-136	02/09/2016 0956
Dibenzo(a,h)anthracene	50	47		1	95	50-127	02/09/2016 0956
Dibenzofuran	50	42		1	85	58-118	02/09/2016 0956
Diethylphthalate	50	44		1	89	60-125	02/09/2016 0956
Dimethyl phthalate	50	43		1	86	60-122	02/09/2016 0956
Fluoranthene	50	41		1	83	58-124	02/09/2016 0956
Fluorene	50	41		1	81	57-119	02/09/2016 0956
Hexachlorobenzene	50	39		1	78	55-118	02/09/2016 0956
Hexachlorobutadiene	50	43		1	86	53-116	02/09/2016 0956
Hexachlorocyclopentadiene	250	130		1	51	16-96	02/09/2016 0956
Hexachloroethane	50	35		1	71	31-110	02/09/2016 0956
Indeno(1,2,3-c,d)pyrene	50	49		1	98	48-126	02/09/2016 0956
Isophorone	50	40		1	81	57-123	02/09/2016 0956
N-Nitrosodi-n-propylamine	50	37		1	74	54-127	02/09/2016 0956
N-Nitrosodiphenylamine (Diphenylamine)	50	44		1	87	35-146	02/09/2016 0956
Naphthalene	50	41		1	83	52-109	02/09/2016 0956
Nitrobenzene	50	43		1	87	51-122	02/09/2016 0956
Pentachlorophenol	100	100		1	102	42-131	02/09/2016 0956
Phenanthrene	50	42		1	84	56-119	02/09/2016 0956
Phenol	50	41		1	82	49-117	02/09/2016 0956
Pyrene	50	43		1	85	55-127	02/09/2016 0956

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		89	41-144
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		73	24-127
Nitrobenzene-d5		82	38-127
Phenol-d5		81	28-128
Terphenyl-d14		81	10-148

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Organochlorine Pesticides by GC - MB

Sample ID: RQ96051-001
Batch: 96051
Analytical Method: 8081B

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/09/2016 1515

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
4,4'-DDD	ND		1	0.040	ug/L	02/16/2016 1032
4,4'-DDE	ND		1	0.040	ug/L	02/16/2016 1032
4,4'-DDT	ND		1	0.040	ug/L	02/16/2016 1032
Aldrin	ND		1	0.040	ug/L	02/16/2016 1032
alpha-BHC	ND		1	0.040	ug/L	02/16/2016 1032
beta-BHC	ND		1	0.040	ug/L	02/16/2016 1032
Chlordane	ND		1	0.40	ug/L	02/16/2016 1032
cis-Chlordane	ND		1	0.040	ug/L	02/16/2016 1032
delta-BHC	ND		1	0.040	ug/L	02/16/2016 1032
Dieldrin	ND		1	0.040	ug/L	02/16/2016 1032
Endosulfan I	ND		1	0.040	ug/L	02/16/2016 1032
Endosulfan II	ND		1	0.040	ug/L	02/16/2016 1032
Endosulfan sulfate	ND		1	0.040	ug/L	02/16/2016 1032
Endrin	ND		1	0.040	ug/L	02/16/2016 1032
Endrin aldehyde	ND		1	0.040	ug/L	02/16/2016 1032
Endrin ketone	ND		1	0.040	ug/L	02/16/2016 1032
gamma-BHC (Lindane)	ND		1	0.040	ug/L	02/16/2016 1032
Heptachlor	ND		1	0.040	ug/L	02/16/2016 1032
Heptachlor epoxide	ND		1	0.040	ug/L	02/16/2016 1032
Methoxychlor	ND		1	0.16	ug/L	02/16/2016 1032
Toxaphene	ND		1	0.40	ug/L	02/16/2016 1032
trans-Chlordane	ND		1	0.040	ug/L	02/16/2016 1032

Surrogate	Q	% Rec	Acceptance Limit
Decachlorobiphenyl		85	10-122
Tetrachloro-m-xylene		91	46-119

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Organochlorine Pesticides by GC - LCS

Sample ID: RQ96051-002
Batch: 96051
Analytical Method: 8081B

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/09/2016 1515

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.80	0.86		1	108	70-130	02/16/2016 1047
4,4'-DDE	0.80	0.84		1	105	70-130	02/16/2016 1047
4,4'-DDT	0.80	0.98		1	123	70-130	02/16/2016 1047
Aldrin	0.80	0.79		1	98	70-130	02/16/2016 1047
alpha-BHC	0.80	0.83		1	103	70-130	02/16/2016 1047
beta-BHC	0.80	0.78		1	98	70-130	02/16/2016 1047
cis-Chlordane	0.80	0.81		1	102	70-130	02/16/2016 1047
delta-BHC	0.80	0.84		1	105	70-130	02/16/2016 1047
Dieldrin	0.80	0.86		1	107	70-130	02/16/2016 1047
Endosulfan I	0.80	0.78		1	98	70-130	02/16/2016 1047
Endosulfan II	0.80	0.82		1	102	70-130	02/16/2016 1047
Endosulfan sulfate	0.80	0.84		1	104	70-130	02/16/2016 1047
Endrin	0.80	0.83		1	104	70-130	02/16/2016 1047
Endrin aldehyde	0.80	0.88		1	110	70-130	02/16/2016 1047
Endrin ketone	0.80	0.89		1	111	70-130	02/16/2016 1047
gamma-BHC (Lindane)	0.80	0.84		1	105	70-130	02/16/2016 1047
Heptachlor	0.80	0.82		1	102	70-130	02/16/2016 1047
Heptachlor epoxide	0.80	0.81		1	101	70-130	02/16/2016 1047
Methoxychlor	0.80	0.92		1	115	70-130	02/16/2016 1047
trans-Chlordane	0.80	0.83		1	104	70-130	02/16/2016 1047

Surrogate	Q	% Rec	Acceptance Limit
Decachlorobiphenyl		87	10-122
Tetrachloro-m-xylene		94	46-119

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Organochlorine Pesticides by GC - MS

Sample ID: RB04004-002MS
Batch: 96051
Analytical Method: 8081B

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/09/2016 1515

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aldrin	ND	0.80	0.79		1	99	70-130	02/16/2016 1117
gamma-BHC (Lindane)	ND	0.80	0.85		1	106	70-130	02/16/2016 1117
alpha-BHC	ND	0.80	0.83		1	104	70-130	02/16/2016 1117
beta-BHC	ND	0.80	0.79		1	99	70-130	02/16/2016 1117
delta-BHC	ND	0.80	0.86		1	108	70-130	02/16/2016 1117
cis-Chlordane	ND	0.80	0.83		1	104	70-130	02/16/2016 1117
trans-Chlordane	ND	0.80	0.85		1	106	70-130	02/16/2016 1117
4,4'-DDD	ND	0.80	0.89		1	111	70-130	02/16/2016 1117
4,4'-DDE	ND	0.80	0.86		1	107	70-130	02/16/2016 1117
4,4'-DDT	ND	0.80	0.93		1	116	70-130	02/16/2016 1117
Dieldrin	ND	0.80	0.88		1	110	70-130	02/16/2016 1117
Endosulfan I	ND	0.80	0.80		1	100	70-130	02/16/2016 1117
Endosulfan II	ND	0.80	0.84		1	105	70-130	02/16/2016 1117
Endosulfan sulfate	ND	0.80	0.87		1	109	70-130	02/16/2016 1117
Endrin	ND	0.80	0.86		1	107	70-130	02/16/2016 1117
Endrin aldehyde	ND	0.80	0.94		1	117	70-130	02/16/2016 1117
Endrin ketone	ND	0.80	0.95		1	119	70-130	02/16/2016 1117
Heptachlor	ND	0.80	0.83		1	104	70-130	02/16/2016 1117
Heptachlor epoxide	ND	0.80	0.83		1	104	70-130	02/16/2016 1117
Methoxychlor	ND	0.80	0.91		1	114	70-130	02/16/2016 1117

Surrogate	Q	% Rec	Acceptance Limit
Decachlorobiphenyl		88	10-122
Tetrachloro-m-xylene		93	46-119

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Organochlorine Pesticides by GC - MSD

Sample ID: RB04004-002MD
Batch: 96051
Analytical Method: 8081B

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/09/2016 1515

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Aldrin	ND	0.80	0.78		1	97	2.2	70-130	30	02/16/2016 1131
gamma-BHC (Lindane)	ND	0.80	0.83		1	104	1.8	70-130	30	02/16/2016 1131
alpha-BHC	ND	0.80	0.82		1	102	1.6	70-130	30	02/16/2016 1131
beta-BHC	ND	0.80	0.78		1	98	1.3	70-130	30	02/16/2016 1131
delta-BHC	ND	0.80	0.84		1	105	2.4	70-130	30	02/16/2016 1131
cis-Chlordane	ND	0.80	0.81		1	102	2.1	70-130	30	02/16/2016 1131
trans-Chlordane	ND	0.80	0.83		1	104	2.3	70-130	30	02/16/2016 1131
4,4'-DDD	ND	0.80	0.87		1	109	2.5	70-130	30	02/16/2016 1131
4,4'-DDE	ND	0.80	0.84		1	105	2.0	70-130	30	02/16/2016 1131
4,4'-DDT	ND	0.80	1.0		1	128	9.8	70-130	30	02/16/2016 1131
Dieldrin	ND	0.80	0.86		1	107	2.3	70-130	30	02/16/2016 1131
Endosulfan I	ND	0.80	0.78		1	98	2.3	70-130	30	02/16/2016 1131
Endosulfan II	ND	0.80	0.82		1	102	2.8	70-130	30	02/16/2016 1131
Endosulfan sulfate	ND	0.80	0.85		1	106	2.7	70-130	30	02/16/2016 1131
Endrin	ND	0.80	0.83		1	103	3.8	70-130	30	02/16/2016 1131
Endrin aldehyde	ND	0.80	0.89		1	112	4.7	70-130	30	02/16/2016 1131
Endrin ketone	ND	0.80	0.92		1	115	4.0	70-130	30	02/16/2016 1131
Heptachlor	ND	0.80	0.81		1	101	3.2	70-130	30	02/16/2016 1131
Heptachlor epoxide	ND	0.80	0.81		1	101	2.3	70-130	30	02/16/2016 1131
Methoxychlor	ND	0.80	1.0		1	125	9.4	70-130	30	02/16/2016 1131

Surrogate	Q	% Rec	Acceptance Limit
Decachlorobiphenyl		84	10-122
Tetrachloro-m-xylene		91	46-119

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: RQ95812-001
Batch: 95812
Analytical Method: 6010C

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 02/04/2016 1906

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Aluminum	ND		1	0.20	mg/L	02/05/2016 1537
Arsenic	ND		1	0.015	mg/L	02/05/2016 1537
Barium	ND		1	0.025	mg/L	02/05/2016 1537
Cadmium	ND		1	0.0050	mg/L	02/05/2016 1537
Chromium	ND		1	0.010	mg/L	02/05/2016 1537
Copper	ND		1	0.010	mg/L	02/05/2016 1537
Iron	ND		1	0.10	mg/L	02/05/2016 1537
Lead	ND		1	0.010	mg/L	02/05/2016 1537
Magnesium	ND		1	5.0	mg/L	02/05/2016 1537
Manganese	ND		1	0.015	mg/L	02/05/2016 1537
Nickel	ND		1	0.040	mg/L	02/05/2016 1537
Silver	ND		1	0.010	mg/L	02/05/2016 1537
Zinc	ND		1	0.020	mg/L	02/05/2016 1537

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: RQ95812-002
Batch: 95812
Analytical Method: 6010C

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 02/04/2016 1906

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	20	21		1	107	80-120	02/05/2016 1542
Arsenic	0.40	0.41		1	102	80-120	02/05/2016 1542
Barium	2.0	2.0		1	102	80-120	02/05/2016 1542
Cadmium	0.40	0.41		1	102	80-120	02/05/2016 1542
Chromium	2.0	2.2		1	108	80-120	02/05/2016 1542
Copper	2.0	2.1		1	107	80-120	02/05/2016 1542
Iron	20	22		1	108	80-120	02/05/2016 1542
Lead	0.40	0.42		1	105	80-120	02/05/2016 1542
Magnesium	40	45		1	113	80-120	02/05/2016 1542
Manganese	2.0	2.2		1	108	80-120	02/05/2016 1542
Nickel	2.0	2.1		1	105	80-120	02/05/2016 1542
Silver	0.40	0.43		1	107	80-120	02/05/2016 1542
Zinc	2.0	2.1		1	103	80-120	02/05/2016 1542

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: RQ95776-001
Batch: 95776
Analytical Method: 7470A

Matrix: Aqueous
Prep Method: 7470A
Prep Date: 02/04/2016 1638

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Mercury	ND		1	0.00010	mg/L	02/04/2016 2153

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: RQ95776-002
Batch: 95776
Analytical Method: 7470A

Matrix: Aqueous
Prep Method: 7470A
Prep Date: 02/04/2016 1638

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0021		1	103	80-120	02/04/2016 2155

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: RB04004-002MS
Batch: 95776
Analytical Method: 7470A

Matrix: Aqueous
Prep Method: 7470A
Prep Date: 02/04/2016 1638

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	ND	0.0020	0.0022		1	108	85-115	02/04/2016 2251

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: RB04004-002MD
Batch: 95776
Analytical Method: 7470A

Matrix: Aqueous
Prep Method: 7470A
Prep Date: 02/04/2016 1638

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	ND	0.0020	0.0022		1	110	1.8	85-115	20	02/04/2016 2254

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY **Chain of Custody Record**

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 50867

Client: NCDEQ-DWM
Address: 217 W. Jones St.
City: Raleigh | State: NC | Zip Code: 27603
Project Name: Southchem
Project No.: NCD980503148
P.O. No.:
Report to Contact: Melanie Bartlett
Sampler's Signature: x Melanie Bartlett
Printed Name: Melanie Bartlett
Telephone No. / E-mail: 919-707-8373 melanie.bartlett@ncdenr.gov
Quote No.:
Page 1 of 1
RB04004

Analysis (Attach list if more space is needed): VOCs, Metals, SVOCs, Pesticides

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Grab/Composite	Matrix: Aqueous	Soil	Non-aqueous	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOCs	Metals	SVOCs	Pesticides	Remarks / Cooler I.D.
Trip Blank			G	X						2			✓				
1811 Cheek	2/3/16	10:10	G	X			4		2	3			✓	✓	✓	✓	

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☒ Standard ☐ Rush (Specify)
Sample Disposal: ☐ Return to Client ☒ Disposal by Lab
Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown
QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished by: Melanie Bartlett	2/3/16	16:00	1. Received by:		
2. Relinquished by:			2. Received by:		
3. Relinquished by:			3. Received by:		
4. Relinquished by: FedEx	2/4/16	1000	4. Laboratory received by:	2/4/16	1000

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Circle) Yes No Ice Pack
Receipt Temp. 3.8 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services, Inc.
Document Number: ME0018C-03

Page 1 of 1
Effective Date: 01/16/2015
Expiry Date: 01/16/2021

Sample Receipt Checklist (SRC)

Client: NCDENR Cooler Inspected by/date: mcm / 02/04/16 Lot #: R8304004

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other			
Yes ☑	No ☐		1. Were custody seals present on the cooler?
Yes ☑	No ☐	NA ☐	2. If custody seals were present, were they intact and unbroken?

pH strip ID: 15-1440 Cl strip ID:
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:
13.2/3.2 °C / / °C / / °C / / °C
Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0.0°C
Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Yes ☐	No ☐	NA ☑	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM was notified by: phone / email / face-to-face (circle one).
Yes ☑	No ☐	NA ☐	4. Is the commercial courier's packing slip attached to this form?
Yes ☑	No ☐		5. Were proper custody procedures (relinquished/received) followed?
Yes ☑	No ☐	NA ☐	5a Were samples relinquished by client to commercial courier?
Yes ☑	No ☐		6. Were sample IDs listed on the COC?
Yes ☑	No ☐		7. Were sample IDs listed on all sample containers?
Yes ☑	No ☐		8. Was collection date & time listed on the COC?
Yes ☑	No ☐		9. Was collection date & time listed on all sample containers?
Yes ☑	No ☐		10. Did all container label information (ID, date, time) agree with the COC?
Yes ☑	No ☐		11. Were tests to be performed listed on the COC?
Yes ☑	No ☐		12. Did all samples arrive in the proper containers for each test?
Yes ☑	No ☐		13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes ☑	No ☐		14. Was adequate sample volume available?
Yes ☑	No ☐		15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes ☐	No ☑		16. Were any samples containers missing?
Yes ☐	No ☑		17. Were there any excess samples not listed on COC?
Yes ☑	No ☐	NA ☐	18. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any VOA vials?
Yes ☐	No ☑	NA ☑	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes ☐	No ☐	NA ☑	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes ☐	No ☐	NA ☑	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes ☐	No ☐	NA ☑	22. Were collection temperatures documented on the COC for NC samples?
Yes ☐	No ☐	NA ☑	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
Yes ☐	No ☑		24. Was the quote number used taken from the container label?

mcm 2/4/16

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H_2SO_4, HNO3, HCl, NaOH) using SR # _____.

Sample(s) 001(1) _____ were received with bubbles >6 mm in diameter.

Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)

SC Drinking Water Project Sample(s) pH verified to be ≥2 by _____ Date: _____
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____

Sample labels applied by: mcm Verified by: _____ Date: 2/4/16

Comments:

Well Log Sheet

Site Name: Southchem
Site Id #: NCD980503148
Owner Name: Shirley Ham's
Well Address: 1811 Cheek Rd
Well ID #: 1811 Cheek

Weather
Temp: 55°F
Wind: light precip
Percip: misty

Date: 2/3/16

Coordinates: 36.004694 N
-78.870314 E

Sample Team: Melanie Bartlett
Bonnie Ware

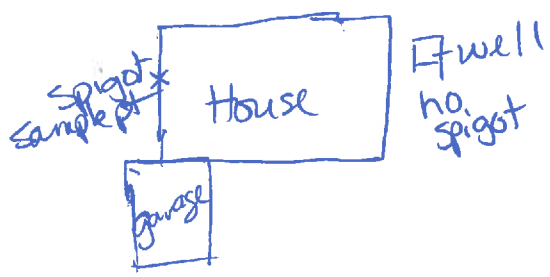
Comments (well construction, etc.) deep well- lots of iron in water

Time Interval	5 Min	10 Min	15 Min	20 Min	25 Min
	9:57	10:02	10:07		
Temp (°C)	15.7	16.0	16.1		
pH	6.74	6.96	7.09		
S.C.	872.5	860.9	843.2		
Turbidity	35.7	21.4	7.2		

Time Sample Collected: 10:10

Water Condition (turbodity, color, odor): rusty to clear

Lot Layout



Samples Collected:

- ✓ VOCs 8260 (3 - 40ml vials)
- ___ 1,4 Dioxane (3 - 40ml vials)
- ✓ SVOCs/PCBs (2 - 1L Amber bottle)
- ✓ Metals (1 - 1L HDPE bottle)
- ___ Dioxin (1 - 1L bottle)
- ✓ Pest./Herb. (2 - 1L Amber bottle)
- ___ Base Neutral & Acid Extractables (2 - 1L Amber bottle)

Comments:
Turbidity Meter S/N 07070C024507
pH Meter S/N 2369223

SOUTHCHEM SITE,
DURHAM, NORTH CAROLINA

PRIVATE WELL ACCESS AUTHORIZATION
(please fill in blanks)

1. I, Shirley S Harris, am the (X) owner, ( ) tenant, or ( ) authorized representative of the owner of the properties with the following Address(es):

Address: **1811 Cheeck Road, Durham, NC 27704**

(hereinafter "Properties"), and as such I have the authority to sign this authorization.

2. I grant authorization to the United States Environmental Protection Agency (EPA), its officers, employees, contractors and other authorized representatives to enter the Properties. The Properties are currently owned by Shirley S Harris. This authorization allows EPA, its officers, employees, contractors and other authorized representatives to have access to the Properties to conduct sampling and other related response activities. EPA's activities at the Properties will include, but not be limited to, the following:

a. collection of well water sample
b. transporting equipment onto and about the Property as necessary to accomplish the above activities.

3. The consent for access and use granted herein will commence on **February 3, 2016**, and will continue until EPA completes the response activities.

4. I have been notified that these actions by EPA are undertaken pursuant to its response authority under Section 104(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), 42 U.S.C. Section 9604(a).

5. I have been notified that parties found responsible pursuant to Section 107(a) of CERCLA, 42 U.S.C. Section 9607(a), may be liable for all costs EPA incurs in connection with the response which are not inconsistent with the National Contingency Plan (NCP), at 40 CFR Part 300.

X I grant access to my properties. _____ I do not grant access to my properties.

Shirley S Harris
(Signature)

2/3/16
(Date)

Shirley S Harris
(Printed Name)

919-682-8562
(Daytime Phone Number)

_____
(Title, if signing as authorized representative of owner)

_____
(Mailing address including City, State, and Zip Code)

Do you currently live at the property? Yes __X__
No _____

If not, is anyone living at the property? Yes _____
No _____

If owner is not living at the property, please provide the following information regarding residents at the property:

Name: _____ Phone: _____

Other contact information: _____

E-Mail Address: _____