



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

June 4, 2012

William Sturtevant
6520 Vintage Ridge Ln
Fuquay-Varina, NC 27526

RE: Water Supply Well Sampling Results – Needmore General Store (NONCD0002882)
6520 Vintage Ridge Ln – Well ID #N-1
Fuquay-Varina, NC 27526

Dear Mr. or Ms. Sturtevant:

Please find attached the Sample Analytical Results for a water sample collected from your well located at the address referenced above, on May 3, 2012. The sample was submitted for laboratory analyses for Volatile Organic Compounds (VOCs). VOCs were detected in the water sample as shown on the attached sheets.

Because VOCs were detected in the water sample, a Health Risk Evaluation (HRE) of the water supply was performed by our toxicologist. The HRE, which is enclosed, compares the concentration of detected contaminants to acceptable concentrations and provides a recommendation for acceptable uses of the water.

In accordance with the residential property disclosure act, it is your responsibility to disclose this contamination as part of the property sale. You should also notify all current and future tenants of your property of the contamination detected in your well.

If you have any questions regarding the Health Risk Evaluation, please contact Hanna Assefa at (919) 707-8351 or me at (919) 707-8353.

Sincerely,

Vincent Antrilli, Jr.
Environmental Specialist
Inactive Hazardous Sites Branch
Superfund Section

Enclosure

CC: Wake County Health Department

June 1, 2012

MEMORANDUM

TO: Vince Antrilli
Inactive Hazardous Sites Branch
Superfund Section

FROM: Hanna Assefa, Industrial Hygiene Consultant 
Inactive Hazardous Sites Branch
Superfund Section

RE: Health Risk Evaluation
Needmore General Store Site
6520 Vintage Ridge Ln.
Fuquay Varina, Wake County
NONCD 0002882

A water sample was collected from the subject well on May 03, 2012. The concentration of 1,2-dichloropropane detected did not exceed its applicable standard. The standards used to determine if the water is suitable for drinking and cooking are the federal drinking water standards (USEPA MCL), or where there is no MCL, the North Carolina Groundwater Quality Standard (NC 2L). If there is no USEPA MCL or health-based North Carolina 2L available a health-based concentration is calculated.

If contaminant concentrations exceed the applicable standards for using the water for drinking and cooking, the 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. **Therefore, based on this evaluation the water from this well can be used for drinking, cooking and all other purposes described above.** The table below compares the detected contaminant concentrations with the applicable standards:

Well ID	Compound	Concentration (ug/L)	US EPA MCL (ug/L)	NC 2L (ug/L)	Health-based Concentration (ug/l)
NE04005-002	1,2-Dichloropropane	1.1 J	5	**	**

J- Estimated Concentration

** Not Applicable

ug/L= Micrograms of contaminant per liter of water.

Volatile Organic Compounds by GC/MS

Client: NCDENR - DWM - DSCA

Laboratory ID: NE04005-002

Description: N-1

Matrix: Aqueous

Date Sampled: 05/03/2012 0900

Date Received: 05/04/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	05/15/2012 2259	DD		84858		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	1.7	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.30	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	1.7	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.50	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	1.7	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.30	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.98	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.60	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	1.7	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.30	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	1.7	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	1.7	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	1.7	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.20	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.30	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.50	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	1.1	J	5.0	0.30	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	1.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.72	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.80	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	1.7	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.10	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	1.7	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.20	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.30	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 MDL 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" * = Reportable result (only when report all runs)

Volatile Organic Compounds by GC/MS

Client: NCDENR - DWM - DSCA	Laboratory ID: NE04005-002
Description: N-1	Matrix: Aqueous
Date Sampled: 05/03/2012 0900	
Date Received: 05/04/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/15/2012 2259	DD		84858

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	-	ND	5.0	0.30	ug/L	1
Trichlorofluoromethane	75-69-4	8260B		ND	5.0	0.30	ug/L	1
Vinyl chloride	75-01-4	8260B		ND	2.0	0.10	ug/L	1
Xylenes (total)	1330-20-7	8260B		ND	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		100	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
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June 4, 2012

Donald & Vicky Jones
6516 Vintage Ridge Ln
Fuquay-Varina, NC 27526

RE: Water Supply Well Sampling Results – Needmore General Store (NONCD0002882)
6516 Vintage Ridge Ln – Well ID #N-2
Fuquay-Varina, NC 27526

Dear Mr. or Ms. Jones:

Please find attached the Sample Analytical Results for a water sample collected from your well located at the address referenced above, on May 3, 2012. The sample was submitted for laboratory analyses for Volatile Organic Compounds (VOCs). VOCs were detected in the water sample as shown on the attached sheets.

Because VOCs were detected in the water sample, a Health Risk Evaluation (HRE) of the water supply was performed by our toxicologist. The HRE, which is enclosed, compares the concentration of detected contaminants to acceptable concentrations and provides a recommendation for acceptable uses of the water. We will continue to provide bottled water until we can resolve a permanent solution.

In accordance with the residential property disclosure act, it is your responsibility to disclose this contamination as part of the property sale. You should also notify all current and future tenants of your property of the contamination detected in your well.

If you have any questions regarding the Health Risk Evaluation, please contact Hanna Assefa at (919) 707-8351 or me at (919) 707-8353.

Sincerely,

Vincent Antrilli, Jr.
Environmental Specialist
Inactive Hazardous Sites Branch
Superfund Section

Enclosure

CC: Wake County Health Department

June 1, 2012

MEMORANDUM

TO: Vince Antrilli
Inactive Hazardous Sites Branch
Superfund Section

FROM: Hanna Assefa, Industrial Hygiene Consultant 
Inactive Hazardous Sites Branch
Superfund Section

RE: Health Risk Evaluation
Needmore General Store Site
6516 Vintage Ridge Ln.
Fuquay Varina, Wake County
NONCD 0002882

A water sample was collected from the subject well on May 03, 2012. The concentration of 1,2-dichloropropane exceeded its applicable standard. The standards used to determine if the water is suitable for drinking and cooking are the federal drinking water standards (USEPA MCL), or where there is no MCL, the North Carolina Groundwater Quality Standard (NC 2L). If there is no USEPA MCL or health-based North Carolina 2L available a health-based concentration is calculated.

If contaminant concentrations exceed the applicable standards for using the water for drinking and cooking, the 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. **Therefore, based on this evaluation the water from this well should not be used for drinking or cooking, the water from this well can be used for all other uses described above.** The table below compares the detected contaminant concentrations with the applicable standards:

Well ID	Compound	Concentration (ug/L)	US EPA MCL (ug/L)	NC 2L (ug/L)	Health-based Concentration (ug/l)
NE04005-003	1,2-Dichloropropane	6	5	**	**
	1,1-Dichloroethane	0.90 J	5	**	**

Shaded area indicates exceedance

J- Estimated Concentration

** Not Applicable

ug/L= Micrograms of contaminant per liter of water.

Volatile Organic Compounds by GC/MS

Client: **NCDENR - DWM - DSCA**

Laboratory ID: **NE04005-003**

Description: **N-2**

Matrix: **Aqueous**

Date Sampled: **05/03/2012 0945**

Date Received: **05/04/2012**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/15/2012 2322	DD		84858

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	1.7	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.30	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	1.7	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.50	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	1.7	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.30	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.98	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.60	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	1.7	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.30	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	1.7	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	1.7	ug/L	1
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Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.20	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.30	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	0.90	J	5.0	0.30	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.50	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	6.0		5.0	0.30	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	1.0	ug/L	1
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Methylene chloride	75-09-2	8260B	ND		5.0	1.7	ug/L	1
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Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	1.7	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.20	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.30	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 MDL

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"

* = Reportable result (only when report all runs)

Volatile Organic Compounds by GC/MS

Client: NCDENR - DWM - DSCA	Laboratory ID: NE04005-003
Description: N-2	Matrix: Aqueous
Date Sampled: 05/03/2012 0945	
Date Received: 05/04/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/15/2012 2322	DD		84858

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.30	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.10	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

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