Drumlin Environmental, LLC

Hydrogeologic and Engineering Consultants

March 21, 2011

Paul First
Town Planner
Town of New Gloucester
385 Intervale Road
New Gloucester, ME 04260

Chris Swain
Maine Department of Environmental Protection
State House Station #17
Augusta, Maine 04333-0017

Subject: Summary of Pumping Test of the Deep Aquifer
Fairgrounds Property, New Gloucester

Dear Mr. First & Mr. Swain:

In accordance with the 2010 agreements between Drumlin Environmental, LLC (Drumlin), the Town of New Gloucester and the Maine Department of Environmental Protection (MDEP), Drumlin conducted hydrogeologic explorations and a 7 day pumping test of a well screened in the deep sand and gravel and shallow bedrock aquifer underlying the Fairgrounds property owned by the Town and located on Bald Hill Road.

We have prepared this letter to provide the Town and the MDEP with information from the additional explorations and to summarize the data and findings from the pumping test.

Evaluation of Shallow Groundwater Quality Adjacent to the Maine Turnpike. Previous hydrogeologic investigations on the Fairgrounds property, and other properties to the west of the Fairgrounds, identified a deep sand and gravel aquifer with high water quality and a potential for significant well yield. The deep aquifer is separated from a shallow sand and gravel aquifer by an intervening low permeability unit consisting of fine sand, silt and clay. Based on water level data, this finer grained unit appeared to provide a hydrologic barrier between the shallow and deep aquifers.

In our letter of April 28, 2010, we recommended that a prolonged pumping test of the deeper aquifer be conducted in the vicinity of MW-10A, located east of the Maine Turnpike, because this well exhibited the highest specific capacity of the small diameter monitoring wells installed in the deep aquifer. As a precaution, prior to installing a test pumping well, a shallow well was installed at this location (identified as MW-10) and groundwater was sampled from wells screened in the shallow aquifer on the west (MW-8) and east (MW-10) side of the Turnpike. A sample of groundwater from the deep aquifer was also collected from MW-10A to assist in this assessment. The data from this sampling event are summarized in Table 1.

P.O. Box 392, Portland, Maine 04112-0392---Tel. (207) 771-5546---Fax (207) 771-5547—E-mail: info@drumlinllc.com

Table 1
Water Quality in Shallow Groundwater West of the Fairgrounds

Parameter:	**MW-8** *Shallow Aquifer (W of Turnpike)*	**MW-10** *Shallow Aquifer (E of Turnpike)*	**MW-10** *Deep Aquifer (E of Turnpike)*
Calcium (mg/L)	NA	18.4	NA
Magnesium (mg/L)	NA	1.7	NA
Sodium (mg/L)	1.1	286	2.3
Chloride (mg/L)	1.1	520	1.9
Bromide (mg/L)	<0.1	< 0.1	NA
Nitrate (mg/L)	NA	0.9	NA
VOCs (ug/L)	NA	No VOCs Detected	NA

Note: NA = Not Analyzed, See Attachment A for Lab Reports

Data from MW-10 shows elevated concentrations of sodium and chloride in shallow groundwater immediately east of the Turnpike. The concentration of these constituents is low in the deep aquifer (MW-10A) below MW-10 and in the shallow aquifer (MW-8) west of the Turnpike.

The water quality data from MW-10A in the deep aquifer is representative of other data from the deep aquifer and does not indicate any influence from road treatment practices along the Turnpike. This water quality data suggests that the fine sand, silt and clay unit separates the shallow aquifer from the deep aquifer.

The water quality data in Table 1 were reviewed with representatives of the Town and the MDEP as well as a representative of the Maine Drinking Water Program (DWP). After discussing the data, it was decided to move the location of the prolonged pumping test well to the Fairgrounds property, rather than conduct the test in close proximity to the Turnpike.

Test Well Installation and Initial Testing. As described in correspondence from May and June 2010, the prolonged pumping test was to be conducted using a 6-inch diameter test pumping well to be installed in the deep aquifer. Drumlin retained Goodwin Water & Well, Inc. (Goodwin) of Turner, Maine to install the test pumping well. Difficult drilling and well installation conditions were encountered, delaying the successful installation of the well until December 2010. A brief summary of drilling and well installation activities is described below.

- An initial 6-inch well was drilled adjacent to monitoring well MW-3A on the Fairgrounds. This boring encountered approximately 8 feet of sand and gravel at a depth of approximately 142 to 150 feet below ground surface. A well was constructed with a 6 foot long heavy duty screen that was recommended for the planned depth (144 to 150 feet below ground) by Johnson Well Screen. The well was developed by jetting and pumping and had an initial yield of approximately 100 gallons per minute (gpm). However during the development process the well screen broke, allowing sand to enter the well and preventing further development. An attempt was made to install a new screen in this borehole, however the yield remained low.

- A second 6-inch boring was drilled approximately 20 feet north of the initial boring, however, the sand and gravel in this boring had a high percentage of fine grained materials and the yield of this replacement well was low.

- A successful well (TW-1) was installed approximately 220 feet southwest of MW-3A. The successful well encountered the deep sand and gravel aquifer material at a depth of approximately 143 feet below ground and bedrock at approximately 146 feet below ground. The shallow bedrock was test pumped and found to have a high yield. The well was completed with casing to the top of bedrock at 146 feet below ground and an open hole in bedrock to a depth of 151 feet.

  According to the drillers, the majority of groundwater flow entered the well from the 146 to 149 foot interval. Pumping from the top of the bedrock had a direct influence on groundwater in the deep sand and gravel material demonstrating that the deep aquifer includes both the sand and gravel and shallow fractured bedrock.

TW-1 was developed by alternately jetting and pumping at rates of between 45 and 105 gpm. During the development process, water level data were collected at MW-3A and MW-6A, where fluctuations in water levels confirmed the hydraulic connection of TW-1throughout the deep aquifer.

Following development, TW-1 was test pumped at a rate of 90 gpm for approximately 2 hours to estimate potential drawdown in the well. During this testing, the drawdown in TW-1 was approximately 14 feet. Between 8 and 9 feet of drawdown was observed in MW-3A and MW-6A during this pumping. The static water level in TW-1 was approximately 27 feet below ground, (versus the well depth of approximately 146 feet below ground. The observed drawdown of 14 feet in this initial test is small compared to the available drawdown of more than 100 feet. This information confirms that there would be a potential to pump the deep aquifer at significantly higher rates for at least short periods of time.

Overview of the Deep Aquifer Pumping Test. In order to select a rate for the prolonged pumping test, an estimate was developed of the potential average water demand for the Upper Village water system. This assessment utilized recent information collected by the Town on the number and type of potential service connections. Attachment B to this letter provides a summary of this assessment, which indicated that the average demand would be approximately 20 to 25 gpm.

Using the projected demand assessment and allowing for future growth in demand on the water system, a pumping rate of 40 gpm was selected for the prolonged aquifer test. This rate was well within the potential yield of TW-1 and also appeared to have the potential to reach stabilization after a pumping period of a few days. Therefore, a contingency was included to increase pumping to a higher rate during the latter part of the test.

Specific elements of the pumping test setup are summarized in Table 2. The location of the monitoring wells in the area is depicted in Figure 1.

Table 2
Pumping Test Setup and Monitoring

Well Pumped:	TW-1
Water Discharge:	700 feet southeast of TW-1 near Royal River
Deep Aquifer Monitoring	MW-3A, -4A,- 6A, -7A, -8A, -10A
Shallow Aquifer Monitoring	MW-1, -2, -3, -4, - 5, -8, -10
Other Monitoring of the Deep Aquifer	McCann Residential Well & Wayfarer Village Supply Well

The aquifer test was conducted between January 18 and January 25, 2011. Table 3 describes the test activities and intervals.

Table 3
New Gloucester Aquifer Testing Program
Fairgrounds Site

Date/Time	Test Phase	Notes
December 2010 and January 2011	Ambient Monitoring	Collection of Groundwater Level Data from MW-3 and MW-3A to Establish Baseline Trends
January 18 to 21, 2011	Constant Rate Test	40 gpm
January 21, 2011	Stabilization	Collect Water Quality Samples
January 21 to 25, 2011	Constant Rate Test	60 gpm
January 25 to February 1, 2011	Recovery and Ambient Monitoring	Pump Off

Manual water levels were collected at TW-1 and at the 13 monitoring wells and two off-site supply wells during the aquifer testing program. During the initial 400 minutes of the test, manual water level data were collected at up to 1 minute intervals in selected deep monitoring wells. After this initial period, manual water levels were measured daily.

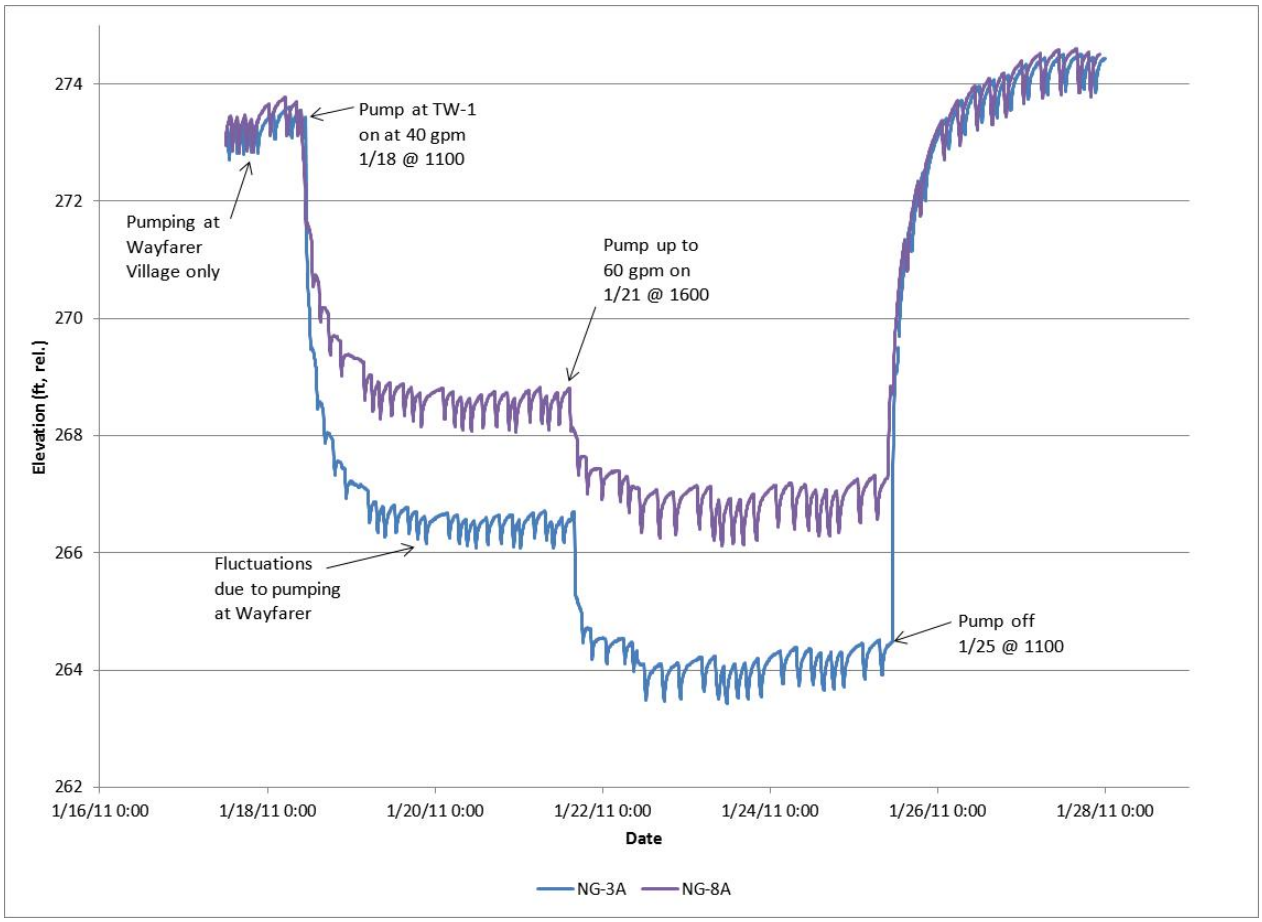
In addition to manual measurements, automatic pressure transducers (Schlumberger Divers) were deployed in selected wells to record water level data throughout the aquifer testing program. The transducers recorded data at 5 minute intervals. After compensating the transducer data for natural barometric changes, these data were used to evaluate ambient trends as well as determine aquifer parameters.

Aquifer Test Results. A 7-day, constant-rate pumping test was conducted at TW-1 from January 18 to 25, 2001. During the test period, the pump operated continuously and approximately 512,130 gallons of water were pumped from TW-1 to stress the deep aquifer. Figure 2 is a hydrograph from MW-6A and MW-8A showing the water level fluctuation in the deep aquifer before the aquifer test, during the aquifer test and during the recovery period following pumping. MW-6A is the closest well to TW-1, located approximately 160 feet southeast. MW-8A is the

farthest well from TW-1, located west of the Maine Turnpike approximately 1,140 feet west of TW-1.

Figure 2 and other hydrographs of data from the deep aquifer include a cyclical fluctuation in the water level before, during and following the test period. This fluctuation is due to pumping that occurs at the Wayfarer Village supply well, which is completed in the same aquifer. The Wayfarer Village well is used to supply water to the 38 trailers in the park. According to Philip Fournier, owner of Wayfarer Village, the well pump operates at approximately 20 gpm. Water level data show that the well typically pumps for a 30 to 40 minute period and typically cycles on 5 to 6 times per 24 hours. Based on this, it appears that the Wayfarer Village supply well currently withdraws an average of 2 to 3 gpm from the deep aquifer.

Figure 2
Pre-Pumping, Drawdown and Recovery at MW-6A and MW-8A



Similar responses to pumping were observed in all of the wells monitoring the deep aquifer. The maximum drawdown in the deep aquifer (i.e., the difference between the water elevation starting the test and the water elevation before shutting off the pump at the end of the test) ranged from

approximately 11.8 feet in the TW-1 pumping well to approximately 6.4 feet at MW-8A, located 1,140 feet west of TW-1.

Figure 3 shows a hydrograph of monitoring wells screened in the shallow aquifer during the same period of time as shown in Figure 2. These wells do not show any significant influence from pumping the deep aquifer.

Figure 3
Pre-Pumping, Drawdown and Recovery Shallow Aquifer

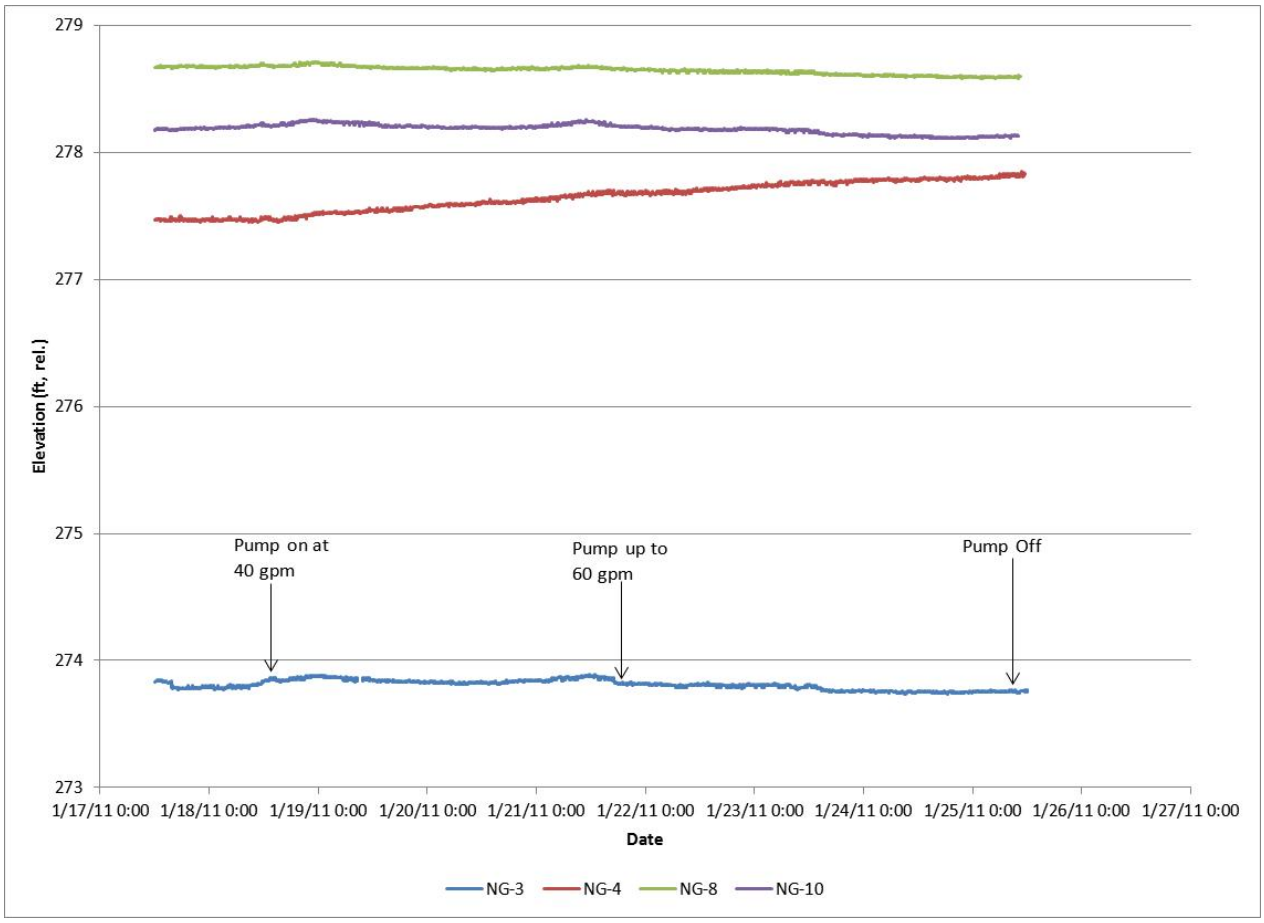


Figure 4, attached to this letter, depicts the groundwater equipotentials in the deep aquifer on January 18, prior to the start of pumping. Figure 5 (attached) depicts the groundwater drawdown in the deep aquifer on January 25, near the end of pumping.

Groundwater Quality Data. As shown in Figure 2, the drawdown in the aquifer in response to pumping at 40 gpm had stabilized after a period of approximately 48 to 72 hours (i.e., January 20 and 21). After the initial 48 hours of pumping, there is little or no decrease in groundwater elevation beyond the cyclical variations caused by the Wayfarer Village supply well. On January 21, after pumping TW-1 at 40 gpm for approximately 75 hours, water samples were collected for

analysis of drinking water parameters in accordance with the requirements for New Well Approval by the Maine DWP.

Copies of the laboratory reports from the Maine Health and Environmental Testing Laboratory are included as Attachment C to this letter. Table 4 summarizes the water quality data and includes data collected from MW-3A in 2010. Table 4 also lists the allowable maximum drinking water concentration (i.e., the MCL) applicable to a public water supply.

Table 4 shows that the groundwater in the deep aquifer is of high quality, as was indicated by previous sampling data from MW-3A. All parameters analyzed from TW-1 are within the allowable concentration range or below the MCL, with the exception of radon. Radon removal can readily be accommodated in the design of a future supply well and pump station.

The concentration reported for Gross Alpha is below the MCL of 15 pCi/L. However the Maine DWP has specified that Radium also be analyzed for water sources with Gross Alpha concentrations above 5 pCi/L. Radium is not a required parameter for New Well Approval and so was not included in the analytical suite collected for TW-1. However, a follow-on sample should be collected from TW-1 and submitted for Radium analysis to verify that the concentration of this parameter is acceptable. (In 2005, the Wayfarer Village supply well was analyzed for gross alpha and radium. The concentrations of these parameters were 6.79 pCi/L and 0.265 pCi/L, respectively, according to the DWP database. Historical water quality data from the Wayfarer Village supply well is similar to the data from TW-1 summarized in Table 4. Therefore, low radium concentrations would also be anticipated at TW-1.)

Table 4
Deep Aquifer Water Quality Data

Compound	***MCL***	**NG-TW Concentration**	**MW-3A Concentration**
Inorganics:		*(January 21, 2011)*	*(__, __2010)*
pH	*6.0-8.5*	8.3	8.1
Color (PCU)	*15*	< 5	< 5
Chloride (mg/L)	*250*	2	2
Fluoride (mg/L)	*1.7*	0.1	<0.1
Hardness (mg/L)		56.3	43.9
Nitrate (mg/L)	*10*	<0.05	<0.05
Nitrite (mg/L)	*1*	<0.05	<0.05
Sulfate (mg/L)	*250*	11	11
Antimony (ug/L)	*6*	<0.5	<1
Arsenic (ug/L)	*10*	4.8	5.8
Barium (mg/L)	*2*	0.0016	0.0022
Beryllium (ug/L)	*4*	<0.5	<0.5
Cadmium (ug/L)	*5*	<0.5	<0.5
Calcium (mg/L)		19	15
Chromium (mg/L)	*0.1*	0.00061	<0.0005
Copper (mg/L)	*1.3*	<0.0005	<0.0005
Cyanide (ug/L)	*200*	<25	<25
Iron (mg/L)	*0.3*	<0.05	<0.05
Lead (ug/L)	*15*	<0.5	<0.5
Magnesium (mg/L)		2.2	1.8
Manganese (mg/L)	*0.05*	0.024	0.013
Mercury (ug/L)	*2*	<0.05	<0.05
Nickel (mg/L)		<0.0005	<0.0005
Selenium (mg/L)	*0.05*	<0.002	<0.002
Silver (mg/L)	*0.1*	<0.0005	<0.002
Sodium (mg/L)		2.6	2.2
Turbidity (NTU)		<0.6	0.89
Thallium (mg/L)	*0.002*	<0.0005	<0.0005
Uranium (ug/L)	*30*	6.6	10
Zinc (mg/L)	*5*	<0.002	<0.002
Radiological:			
Radon (pCi/L)	*4000*	8220	3110
Gross Alpha (pCi/L)	*15*	7.1	9.13
Radium (pCi/L)	*5*	NA	NA
Organics:			
Volatile Organic Cmpds (ug/L)	*Varies*	MEK = 7.7B[3]	All ND
Semivol. Organic Cmpd (ug/L)	*Varies*	All ND	All ND
PCBs/ Chlorinated Pesticides	*Varies*	All ND	All ND
Chlorinated Acids Herbicides	*Varies*	All ND	NA
Carbamate Pesticides	*Varies*	All ND	NA

Notes: 1. < "X" = not detected (ND) at a reporting limit of "X". NA = Parameter not analyzed.
2. MCL = Primary or Secondary Drinking Water Standard Maximum Concentration Limit
3. All VOCs = ND except Methyl Ethyl Ketone (MEK). A "B" qualifier indicates compounds also detected in the laboratory blank sample.

Discussion and Conclusions from the Aquifer Test. The response of the deep aquifer below the Fairgrounds was favorable to development of a water supply well for the Upper Village water supply system. The primary aquifer responses to pumping at TW-1 are summarized below.

- The test well TW-1 was pumped at a rate of 90 gpm for several hours and over that time exhibited a specific capacity of approximately 6 gpm/ft. Since the available drawdown in TW-1 is on the order of 100 feet, these data indicate that the deep aquifer could conservatively be pumped at several hundred gallons per minute over the period of several hours.

- At a pumping rate of 40 gpm, water levels stabilized within approximately 48 hours in all monitoring wells screened in the deep aquifer. After that time, water levels in the wells fluctuated due to the influence of the active supply well at Wayfarer Village.

- When the pumping rate was increased to 60 gpm, water levels dropped, but stabilized again after approximately 48 hours.

- During pumping, there were no changes in the water levels measured in the shallow aquifer that could be attributed to pumping in the deep aquifer. Data from the shallow aquifer (i.e., Figure 3) indicate that there is a significant hydrogeologic barrier between the shallow and deep aquifers. Some communication would be anticipated between the shallow and deep aquifers over time, based on the texture of the fine sand, silt and clay soil observed in the borings. However, this communication appears to be limited, and would provide significant barrier between the deep aquifer and overlying land uses.

- The effects of pumping at 60 gpm induced a drawdown of 7 feet that extended approximately 1000 feet to the west and 500 feet to the north. This response is consistent with earlier data measuring the influence of the Wayfarer Village well and indicates that the deep aquifer extends beneath a wide area around the Fairgrounds property.

  Based on this area of observed drawdown, it appears that the zone of influence of a pumping well in the deep aquifer would extend from the Royal River toward the west, beneath the Maine Turnpike and toward Bald Hill.

- The aquifer recovered rapidly after the pump was shut down. Water levels in nearby wells rose to within 10 % of the pre-pumping levels after a 8- to 9-hour period.

- Preliminary analysis of the pumping test data was conducted to estimate numerical aquifer parameters. Attachment D contains a summary of these preliminary data. Further evaluation of the data will be conducted during preparation of the New Well Approval process to identify wellhead protection areas, etc.

- Pumping from the deep aquifer at a rate of 60 gpm induced a drawdown in the test well of approximately 12 feet and a drawdown of less than 10 feet in the vicinity of the existing supply wells at Wayfarer Village and the McCann residence. This drawdown is modest in comparison to the available drawdown in the deep aquifer of 50 to 100 feet. Pumping during

the aquifer test did not have any negative effect on the operation of these existing supply wells. Depending on the ultimate demand, it appears that the deep aquifer could supply the Upper Village water system with the continued operation of the existing supply wells at McCann and Wayfarer Village.

- Sampling during the aquifer pumping test indicated that groundwater from the deep aquifer has good water quality. There were no detections of compounds that would indicate an influence of development (e.g., petroleum, wastewater, road maintenance, etc.). The concentration of naturally occurring minerals (e.g. iron, manganese, arsenic) is also low. Radon is the only compound that was detected at a concentration above the MCL. Radon is a volatile compound that can be removed from groundwater with an aeration system that is relatively simple and inexpensive and should be included in the design of the pump station.

Recommendations for Next Steps. The data gathered during the deep aquifer pumping test indicates that this aquifer can be used to supply the current and reasonably foreseeable future demand of an Upper Village water system. The aquifer stabilized relatively rapidly with steady pumping of up to 60 gpm. Testing of TW-1 indicated that higher pumping rates are feasible for shorter periods of time.

Based on these findings, we recommend that planning for development of an Upper Village water system continue and include the following actions.

1. Conduct radium sampling from TW-1 to confirm that the concentration of this compound meets the required MCL. (Based on data from Wayfarer Village, the water sampling would be expected to provide this confirmation.)

2. Present information to Town representatives and citizens on the potential for using (a) the deep aquifer beneath the Fairgrounds or (b) the Auburn Water District supply to supply the Upper Village water system. Based on input from the Town, identify the primary and secondary source of supply.

3. Conduct initial engineering design for an Upper Village water system, including initial layout and design of the water transmission and distribution network, water storage and source water pump station. (Drumlin will collaborate with a design engineering firm for this activity.)

4. Review options for administration of the Upper Village water system (e.g., Town Department, independent Water District, operation by an existing Water District, etc.), including communication and discussion with likely Water District partners).

5. Identify sources and requirements for funding the Upper Village water system.

During the design process, additional information and data (geologic, hydrogeologic, survey, etc.) will be needed to support ultimate design and approval of the Upper Village water system. The sequencing for collecting this information can be developed as part of the initial engineering design process and conducted as the project proceeds.

The favorable response of the deep aquifer pumping test means that New Gloucester has a local water source available to supply an Upper Village water system, in addition to a potential connection to the Auburn Water District. We hope that this information is viewed positively by the Town. We look forward to working with representatives of New Gloucester and the MDEP as the water system continues to be planned, designed and developed.

Very truly yours,

Drumlin Environmental, LLC

Matthew D. Reynolds, P.E., C.G.

Encl. Figures 4, 5
Attachment A: Lab Reports for Groundwater Near Turnpike (MW-8, -10 and -10A)
Attachment B: Estimate of Upper Village Water Demand
Attachment C: HETL Lab Reports
Attachment D: Preliminary Analysis of Aquifer Parameters

Cc: Bruce Hunter, MDEP

FIGURE 4
INTERPRETIVE PRE-PUMPING GROUNDWATER FLOW REGIME

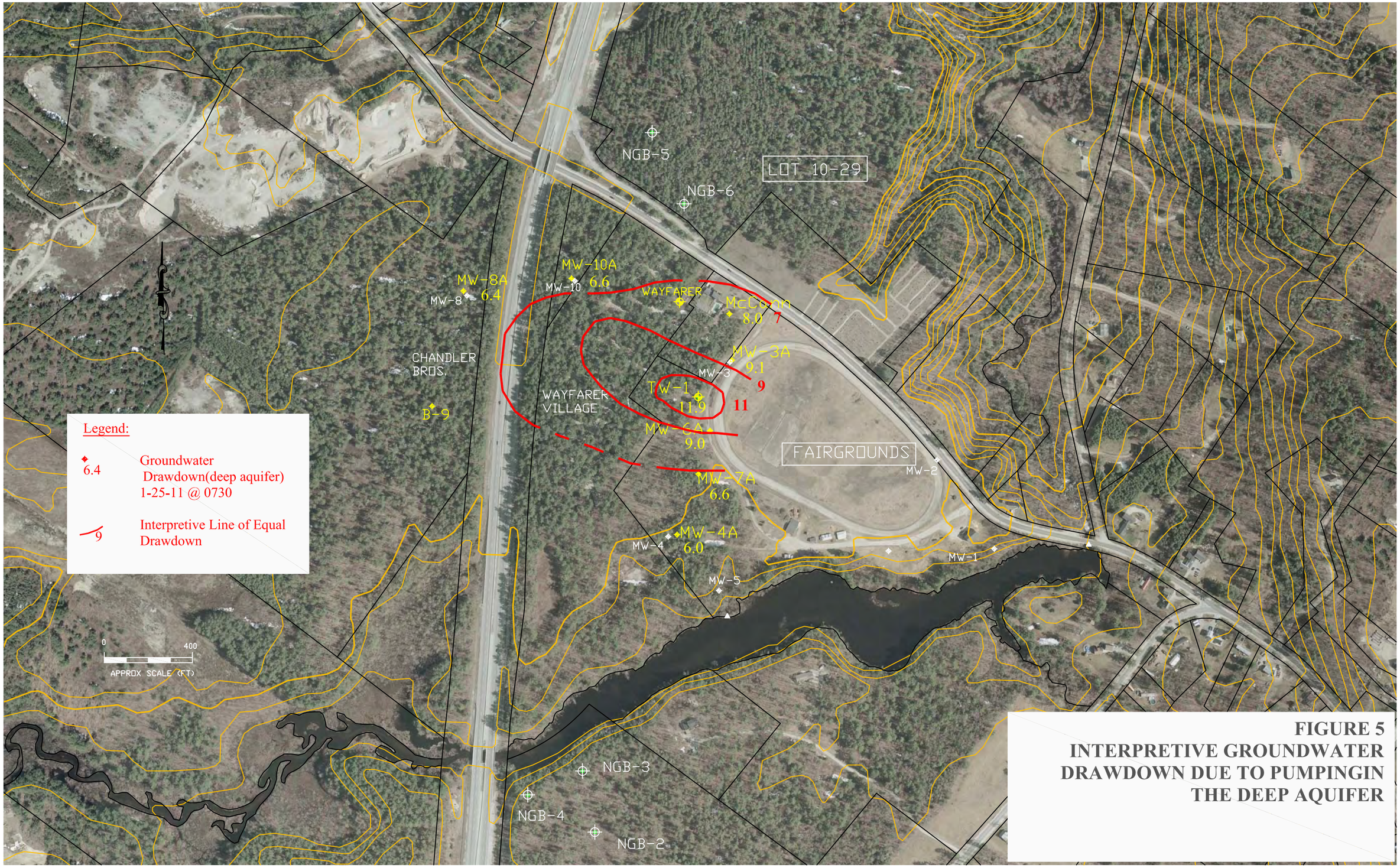


FIGURE 5
INTERPRETIVE GROUNDWATER DRAWDOWN DUE TO PUMPINGIN THE DEEP AQUIFER

ATTACHMENT A

LABORATORY DATA FROM

MW-8, MW-10 AND MW-10A

Maine Environmental Laboratory

One Main Street Yarmouth, Maine 04096-1107 Tel (207) 846-6569 Fax (207) 846-9066 e-mail: melab@maine.rr.com

Report of Analyses

M. Reynolds
Drumlin Environmental LLC
PO Box 392
Portland, Maine 04112-0392

June 16, 2010

Report No.: DRU226-10

Enclosed are the results of the analyses requested on your samples as received by the laboratory. Samples were received in acceptable condition and analyzed within method holding times with all quality control data within laboratory acceptance limits unless noted. Reporting detection limits are the minimum levels for reporting quantitative data. These limits are 3.18 times the method detection limit as defined in CFR 40 Part 136, Appendix B. Data reported between the reporting and method detection limits are J flagged (estimated). Maine Environmental Laboratory is certified by Maine (cert. #200904) and New Hampshire NELAP (NHELAP) (cert. #2031). A list of certified parameters is available on request. The results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the report. This report shall not be reproduced, except in full, without the written consent of the laboratory.

The complete report consists of the following sections:

- Maine Environmental Laboratory report
- Chain of custody form
- Analytics Environmental Laboratory report

References

EPA - EPA600/4-79-020, Methods for Chemical Analysis of Water and Wastes, USEPA, Cincinnati, Ohio, March 1983.
SW8 - SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition, 1986.
STM - Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA,AWWA,WPCF, 1992.
CLP - USEPA CLP Statement of Work for Inorganics, ILMO3.0.
EPA1 - EPA/600/R-93/100 Methods for the Determination of Inorganic Substances in Environmental Samples, Aug. 1993.
HEX - EPA-821-R-98-002, Method 1664, Rev. A: N-Hexane Extractable Material by Extraction and Gravimetry, Feb. 1999.
EPA2 - EPA/600R-94/111, Methods for the Determination of Metals in Environmental Samples, Supplement 1, May, 1994.

Authorized signature _____

Herbert S. Kodis, laboratory director

Maine Environmental Laboratory

One Main Street Yarmouth, Maine 04096-1107 Tel (207) 846-6569 Fax (207) 846-9066 e-mail: melab@maine.rr.com

Report of Analyses

M. Reynolds
Drumlin Environmental LLC
PO Box 392
Portland, Maine 04112-0392

June 16, 2010

Report No:	DRU226-10	Sampler:	M. Reynolds
Date received:	06/02/10	Sampling date:	06/02/10
Project ID:	NG 06	Sample matrix:	Aqueous
Laboratory ID:	DRU22610-01	Sample ID:	MW-8

Parameter	Results	units	Date Analyzed	Method Detection Limit	Reporting Detection Limit	Method	Reference
Sodium, total	1.1	mg/L	06/04/10	0.1	0.3	200.2/200.7	EPA2
Chloride	1.1	mg/L	06/04/10	0.3	1.0	300.0	EPA1
Bromide	ND	mg/L	06/09/10	0.03	0.1	300.0	EPA1

ND = not detected J = estimated B = detected in blank S = RDL increased due to sample matrix

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096-1107 Tel (207) 846-6569 Fax (207) 846-9066 e-mail: melab@maine.rr.com

M. Reynolds
Drumlin Environmental LLC
PO Box 392
Portland, Maine 04112-0392

June 16, 2010

Report No:	DRU226-10	Sampler:	M. Reynolds
Date received:	06/02/10	Sampling date & time:	06/02/10-1500
Project ID:	NG 06	Sample matrix:	Aqueous
Laboratory ID:	DRU22610-02	Sample ID:	MW-10

Parameter	Results		units	Date-Time Analyzed	Method Detection Limit	Reporting Detection Limit	Method	Reference
Calcium, total	18.4		mg/L	06/04/10	0.1	0.3	200.2/200.7	EPA2
Magnesium, total	1.7		mg/L	06/04/10	0.1	0.3	200.2/200.7	EPA2
Sodium, total	286		mg/L	06/04/10	1	3	200.2/200.7	EPA2
Chloride	520		mg/L	06/04/10	1.5	5.0	300.0	EPA1
Nitrate-N	0.9	J	mg/L	06/04/10-0711	0.5	1.5	300.0	EPA1
Bromide	ND		mg/L	06/09/10	0.03	0.1	300.0	EPA1

ND = not detected J = estimated B = detected in blank S = RDL increased due to sample matrix

analytics environmental laboratory LLC

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Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

Report Number: 66839

Revision: Rev. 0

Re: DRU 226-10

Enclosed are the results of the analyses on your sample(s). Samples were received on 03 June 2010 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
66839-1	06/02/10	MW-10	EPA 524.2 Volatile Organics	
66839-2	06/02/10	TB2Q10	EPA 524.2 Volatile Organics	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, and is accredited by the Deparment of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/14/2010

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analytics environmental laboratory LLC

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Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

June 13, 2010

SAMPLE DATA

Lab Sample ID: 66839-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 06/02/10
Lab Receipt Date: 06/03/10
Analysis Date: 06/04/10

CLIENT SAMPLE ID

Project Name: DRU 226-10

Project Number:

Field Sample ID: MW-10

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	0.5	U	1,3-Dichloropropane	0.5	U
Bromobenzene	0.5	U	cis-1,3-Dichloropropene	0.5	U
Bromochloromethane	0.5	U	trans-1,3-Dichloropropene	0.5	U
Bromodichloromethane	0.5	U	2,2-Dichloropropane	0.5	U
Bromoform	0.5	U	1,1-Dichloropropene	0.5	U
Bromomethane	0.5	U	Ethylbenzene	0.5	U
n-butylbenzene	0.5	U	Hexachlorobutadiene	0.5	U
sec-butylbenzene	0.5	U	Isopropylbenzene	0.5	U
tert-butylbenzene	0.5	U	p-isopropyltoluene	0.5	U
Carbon Tetrachloride	0.5	U	Methylene Chloride	0.5	U
Chlorobenzene	0.5	U	Methyl-tert-butyl ether	0.5	U
Chloroethane	0.5	U	Naphthalene	0.5	U
Chloroform	0.5	U	n-Propylbenzene	0.5	U
Chloromethane	0.5	U	Styrene	0.5	U
2-Chlorotoluene	0.5	U	1,1,1,2-Tetrachloroethane	0.5	U
4-Chlorotoluene	0.5	U	1,1,2,2-Tetrachloroethane	0.5	U
Dibromochloromethane	0.5	U	Tetrachloroethene	0.5	U
1,2-Dibromo-3-chloropropane	0.5	U	Toluene	0.5	U
1,2-Dibromoethane	0.5	U	1,2,3-Trichlorobenzene	0.5	U
Dibromomethane	0.5	U	1,2,4-Trichlorobenzene	0.5	U
1,2-Dichlorobenzene	0.5	U	1,1,1-Trichloroethane	0.5	U
1,3-Dichlorobenzene	0.5	U	1,1,2-Trichloroethane	0.5	U
1,4-Dichlorobenzene	0.5	U	Trichloroethene	0.5	U
Dichlorodifluoromethane	0.5	U	Trichlorofluoromethane	0.5	U
1,1-Dichloroethane	0.5	U	1,2,3-Trichloropropane	0.5	U
1,2-Dichloroethane	0.5	U	1,2,4-Trimethylbenzene	0.5	U
1,1-Dichloroethene	0.5	U	1,3,5-Trimethylbenzene	0.5	U
cis-1,2-Dichloroethene	0.5	U	Vinyl Chloride	0.5	U
trans-1,2-Dichloroethene	0.5	U	o-Xylene	0.5	U
1,2-Dichloropropane	0.5	U	m,p-Xylene	0.5	U
Acetone	5	U	Diethyl ether	0.5	U
Carbon Disulfide	0.5	U	2-Hexanone	5	U
Tetrahydrofuran	2.5	U	Methyl isobutyl ketone	5	U
Methyl ethyl ketone	5	U	Di-isopropyl ether (DIPE)	0.5	U
t-Butyl alcohol (TBA)	10	U	Ethyl t-butyl ether (ETBE)	0.5	U
t-Amyl methyl ether (TAME)	0.5	U	1,3,5-Trichlorobenzene	0.5	U

Surrogate Standard Recovery

1,4-Difluorobenzene	105 %	Bromofluorobenzene	98 %	1,2-Dichlorobenzene-d4	98 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to EPA 600, Method 524.2

COMMENTS:

524NH 200975)

Authorized signature

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Mr. Herb Kodis
Maine Environmental Laboratory, Inc.
PO Box 1107
Yarmouth, ME 04096-1107

June 13, 2010

SAMPLE DATA

Lab Sample ID:	66839-2
Matrix:	Aqueous
Percent Solid:	N/A
Dilution Factor:	1
Collection Date:	06/02/10
Lab Receipt Date:	06/03/10
Analysis Date:	06/04/10

CLIENT SAMPLE ID

Project Name: DRU 226-10

Project Number:

Field Sample ID: TB2Q10

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	0.5	U	1,3-Dichloropropane	0.5	U
Bromobenzene	0.5	U	cis-1,3-Dichloropropene	0.5	U
Bromochloromethane	0.5	U	trans-1,3-Dichloropropene	0.5	U
Bromodichloromethane	0.5	U	2,2-Dichloropropane	0.5	U
Bromoform	0.5	U	1,1-Dichloropropene	0.5	U
Bromomethane	0.5	U	Ethylbenzene	0.5	U
n-butylbenzene	0.5	U	Hexachlorobutadiene	0.5	U
sec-butylbenzene	0.5	U	Isopropylbenzene	0.5	U
tert-butylbenzene	0.5	U	p-isopropyltoluene	0.5	U
Carbon Tetrachloride	0.5	U	Methylene Chloride	0.5	U
Chlorobenzene	0.5	U	Methyl-tert-butyl ether	0.5	U
Chloroethane	0.5	U	Naphthalene	0.5	U
Chloroform	0.5	U	n-Propylbenzene	0.5	U
Chloromethane	0.5	U	Styrene	0.5	U
2-Chlorotoluene	0.5	U	1,1,1,2-Tetrachloroethane	0.5	U
4-Chlorotoluene	0.5	U	1,1,2,2-Tetrachloroethane	0.5	U
Dibromochloromethane	0.5	U	Tetrachloroethene	0.5	U
1,2-Dibromo-3-chloropropane	0.5	U	Toluene	0.5	U
1,2-Dibromoethane	0.5	U	1,2,3-Trichlorobenzene	0.5	U
Dibromomethane	0.5	U	1,2,4-Trichlorobenzene	0.5	U
1,2-Dichlorobenzene	0.5	U	1,1,1-Trichloroethane	0.5	U
1,3-Dichlorobenzene	0.5	U	1,1,2-Trichloroethane	0.5	U
1,4-Dichlorobenzene	0.5	U	Trichloroethene	0.5	U
Dichlorodifluoromethane	0.5	U	Trichlorofluoromethane	0.5	U
1,1-Dichloroethane	0.5	U	1,2,3-Trichloropropane	0.5	U
1,2-Dichloroethane	0.5	U	1,2,4-Trimethylbenzene	0.5	U
1,1-Dichloroethene	0.5	U	1,3,5-Trimethylbenzene	0.5	U
cis-1,2-Dichloroethene	0.5	U	Vinyl Chloride	0.5	U
trans-1,2-Dichloroethene	0.5	U	o-Xylene	0.5	U
1,2-Dichloropropane	0.5	U	m,p-Xylene	0.5	U
Acetone	5	U	Diethyl ether	0.5	U
Carbon Disulfide	0.5	U	2-Hexanone	5	U
Tetrahydrofuran	2.5	U	Methyl isobutyl ketone	5	U
Methyl ethyl ketone	5	U	Di-isopropyl ether (DIPE)	0.5	U
t-Butyl alcohol (TBA)	10	U	Ethyl t-butyl ether (ETBE)	0.5	U
t-Amyl methyl ether (TAME)	0.5	U	1,3,5-Trichlorobenzene	0.5	U

Surrogate Standard Recovery

1,4-Difluorobenzene	103 %	Bromofluorobenzene	102 %	1,2-Dichlorobenzene-d4	100 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to EPA 600, Method 524.2

COMMENTS:

524NH 200975)

Authorized signature

AEL

MAINE ENVIRONMENTAL LABORATORY- Chain of Custody

One Main Street Yarmouth, Maine 04096-6716 (207) 846-6569 fax: (207) 846-9066
e-mail: melab@maine.rr.com

PROJECT MANAGER: M. Reynolds
TELEPHONE:
FAX # / E-MAIL:
COMPANY:
PURCHASE ORDER # / BILL TO:
ADDRESS:
PROJECT NAME: DRU 226-10
SAMPLER NAME: M. Reynolds

LABORATORY REPORT #:

Delivered by:

TURNAROUND REQUEST
☒ Standard 6/14
☐ Priority (SURCHARGE)

Quote # MEL3120101-35

SAMPLE IDENTIFICATION	# CONTAINERS	TYPE OF CONTAINERS	FIELD FILTRATION YES	FIELD FILTRATION NO	SAMPLE MATRIX	GRAB	COMP.	METHOD PRESERVED	SAMPLING DATE	SAMPLING TIME	ANALYSES: VOA 524.2	LABORATORY IDENTIFICATION/ SUBCONTRACTOR
~~MW-8 KHW2~~												66839-1
MW-10	3	VOA		X	AQ			HCL/4°C	6/2/10	1500	X	-1
TB2Q10	1	VOA		X	"			"	—	—	X	-2

Analytics Report 66839 page 0004 of 4

AQ 6/3/10

Received within hold time ☑ yes ☐ no ☐ N/A
Received in good condition ☑ yes ☐ no ☐ N/A
Temp. Blank °C 2-4°C /Frozen ice packs ☐ N/A
Samples received preserved ☑ yes ☐ no ☐ N/A
Custody seal present ☐ yes ☑ no
Labels ✓ by KB 6/3/10

COMMENTS: TB2Q10 is a trip Blank

RELINQUISHED BY SAMPLER: DATE AQ 6/3/10 TIME
RELINQUISHED BY: [signature] DATE 6/3/10 TIME 10:20
RELINQUISHED BY: DATE AQ 6/3/10 TIME

RECEIVED BY:
RECEIVED BY: [signature]
RECEIVED BY LABORATORY:

COC-04

Maine Environmental Laboratory

One Main Street Yarmouth, Maine 04096-1107 Tel (207) 846-6569 Fax (207) 846-9066 e-mail: melab@maine.rr.com

Report of Analyses

M. Reynolds
Drumlin Environmental LLC
PO Box 392
Portland, Maine 04112-0392

July 01, 2010

Report No.: DRU229-10

Enclosed are the results of the analyses requested on your samples as received by the laboratory. Samples were received in acceptable condition and analyzed within method holding times with all quality control data within laboratory acceptance limits unless noted. Reporting detection limits are the minimum levels for reporting quantitative data. These limits are 3.18 times the method detection limit as defined in CFR 40 Part 136, Appendix B. Data reported between the reporting and method detection limits are J flagged (estimated). Maine Environmental Laboratory is certified by Maine (cert. #200904) and New Hampshire NELAP (NHELAP) (cert. #2031). A list of certified parameters is available on request. The results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the report. This report shall not be reproduced, except in full, without the written consent of the laboratory.

The complete report consists of the following sections:

Maine Environmental Laboratory report
Chain of custody form

References

EPA - EPA600/4-79-020, Methods for Chemical Analysis of Water and Wastes, USEPA, Cincinnati, Ohio, March 1983.
SW8 - SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition, 1986.
STM - Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA,AWWA,WPCF, 1992.
CLP - USEPA CLP Statement of Work for Inorganics, ILMO3.0.
EPA1 - EPA/600/R-93/100 Methods for the Determination of Inorganic Substances in Environmental Samples, Aug. 1993.
HEX - EPA-821-R-98-002, Method 1664, Rev. A: N-Hexane Extractable Material by Extraction and Gravimetry, Feb. 1999.
EPA2 - EPA/600R-94/111, Methods for the Determination of Metals in Environmental Samples, Supplement 1, May, 1994.

Authorized signature _____

Herbert S. Kodis, laboratory director

Maine Environmental Laboratory

One Main Street Yarmouth, Maine 04096-1107 Tel (207) 846-6569 Fax (207) 846-9066 e-mail: melab@maine.rr.com

Report of Analyses

M. Reynolds
Drumlin Environmental LLC
PO Box 392
Portland, Maine 04112-0392

July 01, 2010

Report No:	DRU229-10	Sampler:	M. Reynolds
Date received:	06/24/10	Sampling date:	06/23/10
Project ID:	NG-06	Sample matrix:	Aqueous
Laboratory ID:	DRU22910-01	Sample ID:	MW-10A

Parameter	Results	units	Date Analyzed	Method Detection Limit	Reporting Detection Limit	Method	Reference
Sodium, total	2.3	mg/L	06/29/10	0.1	0.3	200.2/200.7	EPA2
Chloride	1.9	mg/L	06/29/10	0.3	1.0	300.0	EPA1

ND = not detected J = estimated B = detected in blank S = RDL increased due to sample matrix

ATTACHMENT B

ESTIMATE OF UPPER VILLAGE WATER SYSTEM AVERAGE DEMAND

Estimate of Average Water Use
Upper Village Water System

Activity/ Customer Type	Estimated	Daily Use[1]	Estimated
	Number	10-144CMR241	**Demand**
		(Tables 501.1 & 501.2)	
		gpd	gpd
Residences (3 bedrm)	63	270	17010
Wayfarer Village (2 bdrm)[2]	38	180	6840
Memorial School			
Students	209	7	1463
Staff	30	15	450
Businesses			
McCann	30	15	450
Public Works	8	15	120
Car Dealer	3	15	45
Auto Repair	2	15	30
Auto Repair	2	15	30
Auto Repair	2	15	30
Salon (1 chair)	1	100	100
Links Variety (deli, 150meals)	1	200	200
McCloutiers Variety (150 mls)	1	200	200
Hodson Custard	1	200	200
Marios Pizza (30 seats)	30	20	600
Marios Pizza (10 employees)	10	15	150
H & S Daycare (69 children, 8 adults)	77	15	1155
R & S Daycare (56 children, 10 adults)	66	15	990
WW Daycare (12 children, 4 adults)	16	15	240
UnnameDaycare (10 children, 2 adults)	12	15	180
		Estimated GPD:	30483
		Estimated GPM:	**21**

Notes:

1. Daily Use Derived from Tables 501.1 & 501.2 of the Maine Subsurface Wastewater Disposal Regulations
2. Actual demand at Wayfarer Village is 2 to 3 gpm or 2,800 to 4,300 gpd

ATTACHMENT C

HETL LABORATORY WATER QUALITY REPORT

TW-1

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:22:00AM
Folder/ Invoice # G002427

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 Fax#:

Office Use Only:
Line Item
DE1
Private

Released: 3/2/2011
Case #:

Project Name:
No. of Samples in Folder 4
G002427001, G002427002, G002427003
G002427004

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

3/2/2011 10:48:20AM

Continued from Previous Page HETL Sample Number: **G002427001**

HETL Sample Number: G002427001 Description: **NG-TW**

Matrix: **Potable Water** Sample Point:

Herbicides

Sampler: MATTHEW REYNOLDS Sample Date: **1/21/2011** Time: **14:50:00**

Method: **515.3** Analyst **CHRISTINE BLAIS** Analysis Datetime: 02/08/2011

Preparation Method: **Prepared by:** CHRISTINE BLAIS

Date Prepared	Time Prepared	Amount Extracted	Extraction pH	Final Amount of Extract
02/07/2011	09:00	40 mL	<0.5	3 mL

Analyte	Result	Units	RL	MCL	Qualifiers
2,4,5-T	<1.5	ug/L	1.5		
2,4-D	<4	ug/L	4.0	70	
Aciflorfen	<3	ug/L	3.0		
Dalapon	<3	ug/L	3.0	200	
Dicamba	<0.5	ug/L	0.5		
Dinoseb	<0.8	ug/L	0.8	7.0	
Garlon	<1.5	ug/L	1.5		
Pentachlorophenol	<0.2	ug/L	0.2	1.0	
Picloram	<4	ug/L	4.0	500	
Silvex	<0.5	ug/L	0.5	50	

Surrogate Analytes (added as part of testing to verify performance)	Result	Amount	% Rec	Low % Rec	High % Rec	Qualifiers
DCAA	36.8	25.0	147.3	70	130	HiRec

Attached By James Curlett **Date** 2/14/2011 12:00:00AM **Time** 10:49

Comment : Surrogate recoveries high on batch on which there were no target analytes.
If there had been a hit it would have erred on the side of caution.

Continued from Previous Page HETL Sample Number: **G002427001**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * "** is placed to indicate any results that **exceed** this MCL.

If there are no " * " in the "Qualifier" column, your water is considered satisfactory for those tests.

All solid results are reported on a "**Dry Weight**" basis.

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit is the lowest concentration which can be reliably reported on a routine basis.
"<" = Less than ">" = Greater than

MCL - Maximum Contaminant Level is the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and J are considered satisfactory for that parameter.

Disclaimer

Your report consists of the number of pages listed on the cover page. Any attachments after the last numbered page are for informational purposes only and not part of the formal report.
The results in this report are for the submitted sample(s) only.
This report shall not be reproduced, except in full, without written permission from the Maine Health and Environmental Testing Laboratory.

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:22:00AM

Folder/ Invoice # G002427

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Released: 3/2/2011

Case #:

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 **Fax#:**

Project Name:

No. of Samples in Folder 4

G002427001, G002427002, G002427003
G002427004

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

3/2/2011 10:48:20AM

Continued from Previous Page HETL Sample Number: **G002427002**

HETL Sample Number: G002427002 Description: NG-TW

Matrix: **Potable Water** Sample Point:

Sampler: MATTHEW REYNOLDS Carbamate Pesticides Sample Date: 1/21/2011 Time: **14:50:00**

Method: **531.1** Analyst **CHRISTINE BLAIS** Analysis Datetime: 02/17/2011

Analyte	Result	Units	RL	MCL	Qualifiers
Aldicarb	<3	ug/L	3.0		
Aldicarb Sulfone	<3	ug/L	3.0		
Aldicarb Sulfoxide	<3	ug/L	3.0		
Carbaryl	<1.5	ug/L	1.5		
Carbofuran	<3	ug/L	3.0	40	
3-Hydroxycarbofuran	<3	ug/L	3.0		
Methomyl	<3	ug/L	3.0		
Oxamyl	<3	ug/L	3.0	200	

Continued from Previous Page HETL Sample Number: **G002427002**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * "** is placed to indicate any results that **exceed** this MCL.

If there are no " * " in the "Qualifier" column, your water is considered satisfactory for those tests.

All solid results are reported on a "**Dry Weight**" basis.

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit is the lowest concentration which can be reliably reported on a routine basis.
"<" = Less than ">" = Greater than

MCL - Maximum Contaminant Level is the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and J are considered satisfactory for that parameter.

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Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:22:00AM

Folder/ Invoice # G002427

Office Use Only:
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DE1
Private

Released: 3/2/2011

Case #:

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 **Fax#:**

Project Name:

No. of Samples in Folder 4

G002427001, G002427002, G002427003
G002427004

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

3/2/2011 10:48:20AM

Continued from Previous Page HETL Sample Number: **G002427003**

HETL Sample Number: G002427003 Description: **NG-TW**

Matrix: **Potable Water** Sample Point:

Sampler: MATTHEW REYNOLDS PCBs total Cu Sample Date: **1/21/2011** Time: **14:50:00**

Method: **508.1** Analyst **CHRISTINE BLAIS** Analysis Datetime: **02/01/2011**

Preparation Method: **Prepared by:** CHRISTINE BLAIS

Date Prepared	Time Prepared	Amount Extracted	Extraction pH	Final Amount of Extract
01/31/2011	09:00	1 L	<2.0	3 mL

Analyte	Result	Units	RL	MCL	Qualifiers
Aroclor 1016	<0.2	ug/L	0.20		
Aroclor 1221	<0.2	ug/L	0.20		
Aroclor 1232	<0.2	ug/L	0.20		
Aroclor 1242	<0.2	ug/L	0.20		
Aroclor 1248	<0.2	ug/L	0.20		
Aroclor 1254	<0.2	ug/L	0.20		
Aroclor 1260	<0.2	ug/L	0.20		
Chlordane	<0.25	ug/L	0.25	2.0	
Toxaphene	<1.5	ug/L	1.5	3.0	

Surrogate Analytes (added as part of testing to verify performance)	Result	Amount	% Rec	Low % Rec	High % Rec	Qualifiers
4,4-Dibromobiphenyl	2.83	2.5	113.2	70	130	

Continued from Previous Page HETL Sample Number: **G002427003**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * "** is placed to indicate any results that **exceed** this MCL.

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All solid results are reported on a "**Dry Weight**" basis.

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit is the lowest concentration which can be reliably reported on a routine basis.
"<" = Less than ">" = Greater than

MCL - Maximum Contaminant Level is the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and J are considered satisfactory for that parameter.

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Maine Center for Disease Control and Prevention
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Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:22:00AM

Folder/ Invoice # G002427

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Released: 3/2/2011

Case #:

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 **Fax#:**

Project Name:

No. of Samples in Folder 4

G002427001, G002427002, G002427003
G002427004

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

3/2/2011 10:48:20AM

Continued from Previous Page HETL Sample Number: **G002427004**

HETL Sample Number: G002427004 Description: **NG-TW**

Matrix: **Potable Water** Sample Point:

Sampler: MATTHEW REYNOLDS Sample Date: **1/21/2011** Time: **14:50:00**

Method: **525.2** Analyst **N.Ingalls** Analysis Datetime: 02/01/2011

Preparation Method: **Prepared by:** CHRISTINE BLAIS

Date Prepared	Time Prepared	Amount Extracted	Extraction pH	Final Amount of Extract
01/31/2011	09:00	1 L	<2.0	1 mL

Analyte	Result	Units	RL	MCL	Qualifiers
Acenaphthylene	<0.5	ug/L	0.5		
Alachlor	<0.5	ug/L	0.5	2	
Aldrin	<0.5	ug/L	0.5		
Anthracene	<0.5	ug/L	0.5		
Atrazine	<0.5	ug/L	0.5	3	
Benzo(a)anthracene	<0.5	ug/L	0.5		
Benzo(a)pyrene	<0.2	ug/L	0.2	0.2	
Benzo(b)fluoranthene	<0.5	ug/L	0.5		
Benzo(g,h,i)perylene	<1	ug/L	1.0		
Benzo(k)fluoranthene	<0.5	ug/L	0.5		
Butachlor	<0.5	ug/L	0.5		
Butyl benzyl phthalate	<2	ug/L	2.0		
Chlorothalonil (Bravo)	<0.5	ug/L	0.5		
Chlorpyrifos (Dursban)	<0.5	ug/L	0.5		
Chrysene	<0.5	ug/L	0.5		
Diazinon (Spectracide)	<0.5	ug/L	0.5		
Dibenzo(a,h)anthracene	<1	ug/L	1.0		
Dieldrin	<0.5	ug/L	0.5		
Diethyl phthalate	<2	ug/L	2.0		
Dimethyl phthalate	<2	ug/L	2.0		
Di-n-butyl phthalate	<5	ug/L	5.0		
Endosulfan I	<0.5	ug/L	0.5		
Endosulfan II	<0.5	ug/L	0.5		
Endosulfan sulfate	<1	ug/L	1.0		
Endrin	<0.5	ug/L	0.5	2	
Endrin ketone	<0.5	ug/L	0.5		
Ethoprop	<1	ug/L	1.0		
Fluorene	<0.5	ug/L	0.5		
Heptachlor	<0.4	ug/L	0.4	0.4	

Continued from Previous Page HETL Sample Number: **G002427004**

Heptachlor epoxide	<0.2	ug/L	0.2	0.2
Hexachlorobenzene	<0.5	ug/L	0.5	1
Indeno(1,2,3-cd)pyrene	<1	ug/L	1.0	
Lindane	<0.2	ug/L	0.2	0.2
Methoxychlor	<1	ug/L	1	40
Metolachlor	<0.5	ug/L	0.5	
Metribuzin	<5	ug/L	5.0	
p,p-DDD	<0.5	ug/L	0.5	
p,p-DDE	<0.5	ug/L	0.5	
p,p-DDT	<0.5	ug/L	0.5	
Phenanthrene	<0.5	ug/L	0.5	
Propachlor	<1	ug/L	1.0	
Pyrene	<0.5	ug/L	0.5	
Simazine	<1	ug/L	1	4
Velpar/Hexazinone	<1	ug/L	1.0	
Hexachlorocyclopentadiene	<5	ug/L	5.0	50
Cyanazine (Bladex)	<1	ug/L	1.0	
bis(2-ethylhexyl)phthalate	<2	ug/L	2.0	6
Di-(2-ethylhexyl)adipate	<2	ug/L	5.0	400

Surrogate Analytes (added as part of testing to verify performance)	**Result**	**Amount**	**% Rec**	**Low % Rec**	**High % Rec**	**Qualifiers**
Perylene-d12	4.2	5.0	84.0	70	130	
Pyrene-d10	5.5	5.0	110.0	70	130	
Triphenylphosphate	5.1	5.0	102.0	70	130	
1,3-Dimethyl-2-nitrobenzene	5.1	5.0	102.0	70	130	

Continued from Previous Page HETL Sample Number: **G002427004**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * "** is placed to indicate any results that **exceed** this MCL.

If there are no " * " in the "Qualifier" column, your water is considered satisfactory for those tests.

All solid results are reported on a "**Dry Weight**" basis.

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit is the lowest concentration which can be reliably reported on a routine basis.
"<" = Less than ">" = Greater than

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Note: Results below the advisory limit, including < and J are considered satisfactory for that parameter.

Disclaimer

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Revised 05/2007

See back for sampling instructions and when to expect laboratory results.

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY
TEL : (207) 287-1716 FAX: (207) 287-1884

DATE REC'D JAN 24 2011 AM 8:14

TEMP UPON ARRIVAL @ LAB 7 C

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

Kit # 174134

CHLORINATED ACIDS G002427
DE1

( ) NAME AND ADDRESS (IF NOT ON LABEL)
( ) CHANGE OF NAME OR ADDRESS
( )SEND REPORT TO ADDITIONAL ADDRESS:

NAME: Drumlin Environmental LLC
STREET: P O Box 392
TOWN: Portland ME
ZIP CODE: 04112
PHONE (EVE): 771-5546
FAX 771-5547 - info@drumlinllc.com

PHONE (DAY): 242-2812

CHLORINATED ACI=001
CARBAM_531=002
PEST_CL_PCBS_508=003
SVO_525=004

MPLETE THIS SECTION

DATE SAMPLED 1/21/11

TIME SAMPLED 1450 AM / PM

SAMPLED BY Matthew Reynolds
(PERSON TAKING SAMPLE

SUPPLY LOCATION New Gloucester
(CITY OR TOWN)

STATE NG-TW

ZIP

SAMPLE POINT
( ) BEFORE FILTER
( ) BETWEEN FILTER
( ) AFTER FILTER
(✓) OTHER

TREATMENT TYPE
( ) CHLORINATOR
( ) SOFTENER
(✓) OTHER NA

SAMPLE SOURCE
( ) DUG WELL
(✓) DRILLED WELL
IF WELL PLEASE INDICATE
DEPTH
( ) OTHER

WATER USED BY
( ) PRIVATE HOME
( ) DAY CARE
( ) EATING PLACE
( ) LODGING PLACE
( ) FOSTER CARE CHILDREN
( ) MOBILE HOME PARK
( ) ADULT RESIDENTIAL CARE
(✓) OTHER TEST well

COMMENTS (Please indicate any problems you are having with your water. Examples: taste, odor, color or staining. If you are aware of a suspected contaminant, please indicate.)

PLEASE RECORD AND KEEP YOUR SAMPLE NUMBER FROM THE BARCODE FOR YOUR RECORDS

EXAMPLE: C123456 DO NOT REMOVE BARCODED LABEL FROM THIS FORM OR BOTTLES

SAMPLE NUMBER

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:24:00AM

Folder/ Invoice # G002426

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 **Fax#:**

Office Use Only:
Line Item
DE1
Private

Project Name:

Released: 2/28/2011

No. of Samples in Folder 1

Case #:

G002426001

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

2/28/2011 9:26:26AM

Continued from Previous Page HETL Sample Number: **G002426001**

HETL Sample Number: G002426001
Description: **NG-TW**
Matrix: **Potable Water**
Sample Point:
Sampler: MATTHEW REYNOLDS
Sample Date: **1/21/2011** Time: **14:50:00**
Method: **ME355.01** Analyst **JIM EATON** Analysis Datetime: **1/27/2011**

Analyte	Result	Units	RL	MCL	Qualifiers
Cyanide	<25	ug/L	25	200	

Continued from Previous Page HETL Sample Number: **G002426001**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * "** is placed to indicate any results that **exceed** this MCL.

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All solid results are reported on a "**Dry Weight**" basis.

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RL-Reporting Limit is the lowest concentration which can be reliably reported on a routine basis.
"**<**" = Less than "**>**" = Greater than

MCL - Maximum Contaminant Level is the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and J are considered satisfactory for that parameter.

Disclaimer

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DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY
TEL: (207) 287-1716 FAX: (207) 287-1884

DATE REC'D @ LAB JAN 24 2011 AM 8:17

TEMP UPON ARRIVAL @ LAB 7 C

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

Kit # 174133

CN by Headspace GC MS G002426
DE1

( ) NAME AND ADDRESS (IF NOT ON LABEL)
( ) CHANGE OF NAME OR ADDRESS

NAME: Drumlin Environmental LLC
STREET: P O Box 392
TOWN: Portland ME 04112
ZIP CODE:
PHONE (EVE): 207 771-5546
FAX 207 771-5547 info@drumlinllc.com

PHONE (DAY): 207 242-2812

( ) PLEASE CHECK HERE IF YOU WOULD LIKE A SIMPLIFIED FINAL REPORT

Date Collected: 1/21/11 **Sampler Name:** Matthew Reynolds

Time Collected: 1450 **A.M. or P.M.** (circle one)

Test Address: NG-TL **City:** New Gloucester **Zip:**

Chlorine Treatment: (✓) None ( ) Bleach ( ) Chlorinator ( ) Other

Location: (Kitchen faucet, Outside Spigot, Pressure Tank, etc...) Test Well

Sample Source: (Circle one) Drilled Well, Dug Well, Spring, Lake, Other

Comments:

COLLECTION PROCEDURE

Whenever possible, collect the sample from a faucet. It is difficult to obtain a satisfactory sample directly from the well or spring or from a hand pump. If the faucet is equipped with a strainer or aerator, remove before collecting sample. Allow water to run 5 minutes to clear pipes. **All bottles must be filled to the shoulder and filled from the same sample point. Do not rinse out bottles.**
Fill in all requested information above especially the date and time collected. Without the sample date and time we will have to reject your sample(s) and mail you a replacement kit.
We must receive your sample within 30 hours of collection. DO NOT COLLECT AND MAIL YOUR SAMPLE ON A FRIDAY OR SATURDAY, THE DAY BEFORE OR ON A HOLIDAY, AND NOT THE DAY BEFORE A STATE SHUT DOWN DAY. A list of State Holidays and Shut Down days are on the back of this form.

See back for additional instructions and when to expect laboratory results

Revised November 2009

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727, Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:23:00AM

Folder/ Invoice # G002425

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 **Fax#:**

Office Use Only:
Line Item
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Private

Project Name:

No. of Samples in Folder 1

G002425001

Released: 1/28/2011

Case #:

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

James E. Curlett
Organics Supervisor/Chemist III

CC:

1/28/2011 12:27:42PM

Continued from Previous Page HETL Sample Number: **G002425001**

HETL Sample Number: G002425001 Description: **NG-TW**

Matrix: **Potable Water** Sample Point:

Sampler: MATTHEW REYNOLDS Sample Date: **1/21/2011** Time: **14:50:00**

Method: **524.2** Analyst **WAYNE BUCK** Analysis Datetime: 01/25/2011

Analyte	Result	Units	RL	MCL	Qualifiers
Ethylbenzene	<.5	ug/L	0.50	700	
Styrene	<.5	ug/L	0.50	100	
cis-1,3-Dichloropropene	<.5	ug/L	0.50		
trans-1,3-Dichloropropene	<.5	ug/L	0.50		
n-Propylbenzene	<.5	ug/L	0.50		
n-Butylbenzene	<.5	ug/L	0.50		
4-Chlorotoluene	<.5	ug/L	0.50		
1,4-Dichlorobenzene	<.5	ug/L	0.5	75	
1,2-Dibromoethane	<.5	ug/L	0.50		
1,2-Dichloroethane	<.5	ug/L	0.50	5	
1,3,5-Trimethylbenzene	<.5	ug/L	0.50		
Bromobenzene	<.5	ug/L	0.50		
Toluene	<.5	ug/L	0.50	100	
Chlorobenzene	<.5	ug/L	0.50	100	
1,2,4-Trichlorobenzene	<.5	ug/L	0.50	70	
Dibromochloromethane	<1	ug/L	1.0		
Tetrachloroethene	<.5	ug/L	0.50	5	
sec-Butylbenzene	<.5	ug/L	0.50		
m,p-Xylenes	<1	ug/L	1.0		
1,3-Dichloropropane	<.5	ug/L	0.50		
cis-1,2-Dichloroethene	<.5	ug/L	0.50	70	
trans-1,2-Dichloroethene	<.5	ug/L	0.50	100	
Methyl tert-Butyl Ether	<1	ug/L	1.0		
1,3-Dichlorobenzene	<.5	ug/L	0.50		
Carbon Tetrachloride	<1	ug/L	1.0	5	
1,1-Dichloropropene	<.5	ug/L	0.50		
2,2-Dichloropropane	<.5	ug/L	0.50		
1,1,1,2-Tetrachloroethane	<.5	ug/L	0.50		
Chloroform	<1	ug/L	1.0		
Benzene	<.5	ug/L	0.50	5	
1,1,1-Trichloroethane	<.5	ug/L	0.50	200	

Continued from Previous Page HETL Sample Number: **G002425001**

Bromomethane	<.5	ug/L	0.5		
Chloromethane	<.5	ug/L	0.50		
Dibromomethane	<.5	ug/L	0.50		
Bromochloromethane	<.5	ug/L	0.50		
Chloroethane	<.5	ug/L	0.50		
Vinyl Chloride	<.5	ug/L	0.50	2	
Bromoform	<1	ug/L	1.0		
Bromodichloromethane	<1	ug/L	1.0		
1,1-Dichloroethane	<.5	ug/L	0.50		
1,1-Dichloroethene	<.5	ug/L	0.50	7	
Trichlorofluoromethane	<.5	ug/L	0.50		
Dichlorodifluoromethane	<.5	ug/L	0.50		
1,2-Dichloropropane	<.5	ug/L	0.50	5	
1,1,2-Trichloroethane	<.5	ug/L	0.50	5	
Trichloroethene	<.5	ug/L	0.50	5	
1,1,2,2-Tetrachloroethane	<.5	ug/L	0.50		
Hexachlorobutadiene	<.5	ug/L	0.50		
Naphthalene	<.5	ug/L	0.50		
o-Xylene	<.5	ug/L	0.50		
2-Chlorotoluene	<.5	ug/L	0.50		
1,2-Dichlorobenzene	<.5	ug/L	0.50	600	
1,2,4-Trimethylbenzene	<.5	ug/L	0.50		
1,2-Dibromo-3-chloropropane	<1	ug/L	1.0	0.2	
1,2,3-Trichloropropane	<.5	ug/L	0.50		
tert-Butylbenzene	<.5	ug/L	0.50		
Isopropylbenzene	<.5	ug/L	0.50		
4-Isopropyltoluene	<.5	ug/L	0.50		
Methyl Ethyl Ketone	7.7	ug/L	5.0		B
Dichloromethane	<1	ug/L	1.0	5	
Carbon disulfide	<1	ug/L	1.0		
MIBK	<1	ug/L	1.0		
2-Hexanone	<1	ug/L	1.0		
Nitrobenzene	<10	ug/L	10		
1,2,3-Trichlorobenzene	<.5	ug/L	0.50		

Surrogate Analytes (added as part of testing to verify performance)	**Result**	**Amount**	**% Rec**	**Low % Rec**	**High % Rec**	**Qualifiers**
4-Bromofluorobenzene	1.0	1.0	100.0	70	130	
1,2-Dichlorobenzene-d4	1.1	1.0	110.0	70	130	

Continued from Previous Page HETL Sample Number: **G002425001**

Attached By WAYNE BUCK **Date** 1/26/2011 12:00:00AM **Time** 10:25

Comment : MEK confirmed as lab contaminant and unlikely from water source.

Continued from Previous Page HETL Sample Number: **G002425001**

Units & Measurement

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Revised 05/2007

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JAN 24 2011 AM 8:15

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY
TEL : (207) 287-1716 FAX: (207) 287-1884

DATE REC'D

TEMP UPON ARRIVAL @ LAB 7 C

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

Kit # 174132
G002425
DE1

VOC_524

( ) NAME AND ADDRESS (IF NOT ON LABEL)
( ) CHANGE OF NAME OR ADDRESS
( )SEND REPORT TO ADDITIONAL ADDRESS:

NAME: Drumlin Environmental LLC
STREET: P O Box 392
TOWN: Portland ME
ZIP CODE: 04112
PHONE (EVE): 207 771-5546
FAX 771-5547

PHONE (DAY): 207 242-2812

PLEASE COMPLETE THIS SECTION

DATE SAMPLED 1/21/11
TIME SAMPLED 1450 AM (PM)
SAMPLED BY Matthew Reynolds
(PERSON TAKING SAMPLE
SUPPLY LOCATION NG-TW
(CITY OR TOWN)
STATE New Gloucester
ZIP

SAMPLE POINT
( ) BEFORE FILTER
( ) BETWEEN FILTER
( ) AFTER FILTER
(X) OTHER NA

TREATMENT TYPE
( ) CHLORINATOR
( ) SOFTENER
(X) OTHER NA

SAMPLE SOURCE
( ) DUG WELL
(X) DRILLED WELL
IF WELL PLEASE INDICATE
DEPTH
( ) OTHER

WATER USED BY
( ) PRIVATE HOME
( ) DAY CARE
( ) EATING PLACE
( ) LODGING PLACE
( ) FOSTER CARE CHILDREN
( ) MOBILE HOME PARK
( ) ADULT RESIDENTIAL CARE
(X) OTHER Test Well

COMMENTS (Please indicate any problems you are having with your water. Examples: taste, odor, color or staining. If you are aware of a suspected contaminant, please indicate.)

PLEASE RECORD AND KEEP YOUR SAMPLE NUMBER FROM THE BARCODE FOR YOUR RECORDS

EXAMPLE: C123456 DO NOT REMOVE BARCODED LABEL FROM THIS FORM OR BOTTLES

SAMPLE NUMBER

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:21:00AM

Folder/ Invoice #: G002429

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112

Fax#:

Office Use Only:
Line Item
DE1
Private

Project Name:

No. of Samples in Folder: 1

Released: 2/11/2011

Case #:

G002429001

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director

Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by:

Christopher Montagna
Forensic Supervisor/Chemist III

CC:

Continued from Previous Page

HETL Sample Number: **G002429001** Description: **NG-TW**

Matrix: **Potable Water** Sample Date: **1/21/2011** Time: **14:50:00**

Method: **00-02** Analyst **PATB** Analysis Date: **02/09/2011**

Analyte	Result	Unit	+/-	MDC	Qualifiers
GROSS ALPHA	7.10	pCi/L	1.35	0.802	

GROSS ALPHA
A picocurie is a standard unit for measuring radioactivity and is one trillionth of a curie. "+/-" represents the 2 sigma uncertainty (95% confidence level) in the result. "pCi" = picocuries. "pCi/L" = picocuries per liter. "MDC" = minimum detectable concentration.

If you have a private water supply and desire additional clarification of your report or further information concerning methods of corrective action,please contact the Radiation Control Program at
1-800-232-0842. If you represent a public water supply and desire addition clarification of your report,please contact the Radionuclide Coordinator of the Drinking Water Program at 287-2070.

GROSS ALPHA FACT SHEET
Alpha radiation in water is due to dissolved,naturally occurring elements such as radium and uranium. Radon is also an alpha emitter but is not measured in this screening test.
Because this is a screening test,an elevated gross alpha may indicate the necessity for further testing to determine which elements are present.

1. If the gross alpha result is less than 5 picocuries per liter,no further action is necessary.

2. If alpha gross alpha result is greater than 5 picocuries per liter but less than 15 picocuries per liter,a radium test is recommended.
Public water systems are required to test for radium at this concentration. The USEPA has set a drinking water limit for radium at 5 picocuries per liter.

3. If the gross alpha result is greater than 15 picocuries per liter,public water systems are required to retest for gross alpha and to
test for radium,radon,and uranium. It is recommended that private home owners test for radium at these concentrations.

Because of the expense of testing non-public water supplies,most homeowners assume that if the source of the gorss aplha
radiation is not radium than it is uranium. There is a slight possibility that the radiation could be due to other elements such as polonium.

Current regulations governing public water systems state that the gross alpha concentration minus the uranium concentartion must
not exceed 15 picocuries per liter. EPA has also adopted a maximum contaminant level for uranium of 30 micrograms per liter.

Kits for the required retesting of public water systems will be shipped within two weeks of this letter.

Continued from Previous Page HETL Sample Number: G002429

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * " is** placed to indicate any results that **exceed** this MCL.

If there are no " * " in the "Qualifier" column, your sample is considered satisfactory for those tests.

All solid results on a "**Dry Weight**" basis

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit, the lowest concentration which can be reliably reported on a routine basis
"<" = Less than ">" = Greater than

Note: Results below the advisory limit, including < and K are considered satisfactory for that parameter.

Disclaimer

Your report consists of the number of pages listed on the cover page. Any attachments after the last numbered page are for informational purposes only and not part of the formal report.

The results in this report are for the submitted sample(s) only.

This report shall not be reproduced, except in full, without written permission from the Maine Health and Environmental Testing Laboratory.

SG

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY
221 STATE STREET – STATION 12
AUGUSTA, MAINE 04333
(207) 287-1716

JAN 24 2011 AM 8:13 SG

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

GROSS ALPHA PPT

Kit # 174136
G002429
DE1

NAME: Drumlin Environmental LLC
MAILING ADDRESS: P O Box 392
TOWN: Portland, ME
ZIP CODE: 04112
PHONE: 207-771-5546/242-2812

INSTRUCTIONS FOR OBTAINING THE WATER SAMPLE ARE ON THE BACK OF THIS SHEET

THIS BOX SECTION MUST BE FULLY COMPLETED

Date Sample Collected: 1/21/11 Test Address: New Gloucester

Time Sample Collected: 1450 AM: (PM): City Town: New Gloucester State: ME Zip:

Sampled by: Matthew Reynolds Collection Point: NG-TW

Water is used by:

- ☐ Private Home
- ☐ Public Water System
- ☐ Eating/Lodging Place
- ☐ Mobile Home Park
- ☐ School
- ☑ Other Test Well

Returned to Lab by
✓ Walk In
___ USPS
___ Fed Ex
___ UPS

Condition of Sample Upon Receipt
✓ OK ___ NOT OK
Reason NOT OK:

FOR LABORATORY USE ONLY

RESULTS:

Gross Alpha	_____	pCi/L±	_____	pCi/L
Gross Beta	_____	pCi/L±	_____	pCi/L
Radon	_____	pCi/L±	_____	pCi/L
	_____	pCi/L±	_____	pCi/L
	_____	pCi/L±	_____	pCi/L

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:17:00AM
Folder/ Invoice # **G002430**

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 Fax#:

Office Use Only:
Line Item
DE1
Private

Project Name:

No. of Samples in Folder: 1

Released: 1/26/2011
Case #:

G002430001 **TE6**

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation, and holding times unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by: Thomas Crosby

Thomas Crosby
Inorganics Supervisor/Chemist III

CC:

1/26/2011 11:15:20AM

Continued from Previous Page HETL Folder Number: **G002430**

HETL Sample Number: G002430001 Description: NG-TW DW-H20

Matrix: Potable Water Sample Point:

Sampler: MATTHEW REYNOLDS Sample Date: 1/21/2011 Time: 14:50:00

Analyte	Result	Units	Qualifier	High Limit	Low Limit	RL	MCL	Method	Analyst	Analysis Datetime
pH	8.3	S.U.		8.5	6.0			4500-H+B	apelotte	1/24/2011 16:03
Color	< 5	PCU				5.0	15	L-10-308-00-1-A	ddegone	01/26/2011, 08:36
Chloride	2	mg/L				1.0	250	300.0	dbrann	1/24/2011, 12:44
Fluoride	0.1	mg/L				0.10	1.7	300.0	dbrann	1/24/2011, 12:44
Total Hardness	56.3	mg/L				.331		200.8	cheryl	01/25/2011
Nitrate Nitrogen	Not Analyzed	mg/L					10.0	300.0	dbrann	1/24/2011, 12:44
Nitrite Nitrogen	Not Analyzed	mg/L					1.0	300.0	dbrann	1/24/2011, 12:44
Sulfate	11	mg/L				1.0	250	300.0	dbrann	1/24/2011, 12:44
Antimony	<.5	ug/L				.5	6	200.8	cheryl	01/25/2011
Arsenic	4.8	ug/L				.5	10	200.8	cheryl	01/25/2011
Barium	.0016	mg/L				.0005	2	200.8	cheryl	01/25/2011
Beryllium	<.5	ug/L				.5	4	200.8	cheryl	01/25/2011
Cadmium	<.5	ug/L				.5	5	200.8	cheryl	01/25/2011
Calcium	19.	mg/L				.05		200.8	cheryl	01/25/2011
Chromium	.00061	mg/L				.0005	0.1	200.8	cheryl	01/25/2011
Copper	<.0005	mg/L				.0005	1.3	200.8	cheryl	01/25/2011
Iron	<.05	mg/L				.05	.3	200.8	cheryl	01/25/2011
Lead	<.5	ug/L				.5	15	200.8	cheryl	01/25/2011
Magnesium	2.2	mg/L				.05		200.8	cheryl	01/25/2011
Manganese	.024	mg/L				.0005	.05	200.8	cheryl	01/25/2011
Nickel	<.0005	mg/L				.0005		200.8	cheryl	01/25/2011
Selenium	<.002	mg/L				.002	.05	200.8	cheryl	01/25/2011
Silver	<.0005	mg/L				.0005	.10	200.8	cheryl	01/25/2011
Sodium	2.6	mg/L				.05		200.8	cheryl	01/25/2011
Turbidity	Not Analyzed	NTU						180.1	apelotte	1/24/2011 16:03
Thallium	<.0005	mg/L				.0005	.002	200.8	cheryl	01/25/2011
Uranium	6.6	ug/L				.5	30	200.8	cheryl	01/25/2011
Zinc	<.002	mg/L				.002	2	200.8	cheryl	01/25/2011

Continued from Previous Page HETL Folder Number: **G002430**

Mercury	<.05	ug/L	.05	2	200.8	cheryl	01/25/2011

Comment

Attached By Darren Brann **Date** 1/25/2011 12:00:00AM **Time** 11:40

Comment : The sample was received past the 48 hour holding time for nitrate and nitrite. No results were reported for nitrate and nitrite.

Attached By Andrea Pelotte **Date** 1/25/2011 12:00:00AM **Time** 08:31

Comment : The sample was not analyzed for turbidity because it was outside the 48 hour holding time when recieved by the laboratory.

☑ **Your water is considered satisfactory for all tests analyzed and listed above.**
(Does not apply to unanalyzed or rejected samples - see results column and any comments.)

The term 'Satisfactory' is based on the Maine Drinking Water Regulations, State Toxicologist's Guidelines and/or the Federal Safe Drinking Water Act

Continued from Previous Page HETL Folder Number: **G002430**

The EPA states that pH must be taken immediately,so the laboratory result is an estimate.

The Secondary Drinking Water Standards are set only for aesthetic reasons and the EPA has not updated their approved methods for these parameters to reflect current technologies. Thus Total Hardness by 200.8 is an accredited, but non-approved method.

The Secondary Drinking Water Standards are set only for aesthetic reasons and the EPA has not updated their approved methods for these parameters to reflect current technologies. Thus Calcium by 200.8 is an accredited, but non-approved method.

The Secondary Drinking Water Standards are set only for aesthetic reasons and the EPA has not updated their approved methods for these parameters to reflect current technologies. Thus Magnesium by 200.8 is an accredited,but non-approved method.

The Secondary Drinking Water Standards are set only for aesthetic reasons and the EPA has not updated their approved methods for these parameters to reflect current technologies. Thus Sodium by 200.8 is an accredited, but non-approved method.

The Secondary Drinking Water Standards are set only for aesthetic reasons and the EPA has not updated their approved methods for these parameters to reflect current technologies. Thus Iron by 200.8 is an accredited, but non-approved method.

Color is performed by a non-approved, non-accredited method

Continued from Previous Page HETL Folder Number: **G002430**

EXPLANATION OF FLUORIDE RESULTS

This fact sheet is to help you understand what your fluoride test result means for you and your family. Fluoride is a mineral that helps protect teeth against tooth decay when it is present in water in the correct amount. Children benefit the most,but this benefit will continue through life for everyone who drinks fluoridated water.

If your test result says your water is "Satisfactory" for fluoride,this means that the fluoride level is less than or equal to 1.7 parts per million. If your test result says your water is "Unsatisfactory" for fluoride,this means that the fluoride level is greater than 1.7 parts per million. You should compare your test result ("Analytical Results") to the explanations on this page to see what your test result means for you and your family.

If your lab results ("Analytical Results") are:

<.2 - .29 ppm*

Your fluoride test result shows a very small amount of fluoride in your water. This is not enough fluoride to help protect children's teeth against decay. If there are children in your family,you should talk with your family dentist or doctor to get a prescription for fluoride drops or tablets for your child(ren).

.3 - .6 ppm

Your fluoride test result shows that there is some fluoride in your water,but it may not be enough to protect your children's teeth against decay. You should talk with your family dentist or doctor to see if you need a prescription for fluoride drops or tablets for your child(ren).

>.6 ppm or higher*

Your fluoride test result shows that there is enough fluoride in your water to help protect your children's teeth against decay. You should talk with your family dentist or doctor about this result.

* This symbol ("<") means "less than." This symbol (">") means "greater than."
* "ppm" means "parts per million." "Parts per million" is also written "mg/L" which means "milligrams per liter."

Dietary Fluoride Supplementation Dosage Schedule in mg F/day. *+

Age of child (years)	Water fluoride concentration (ppm or mg/L**) Less than 0.30 ppm	0.3 - 0.6 ppm	Greater than 0.60 ppm
6 months - 3 years	0.25	0	0
3 - 6 years	0.50	0.25	0
6 - at least 16 years	1.00	0.50	0

* 2.2 mg. sodium fluoride provides 1 mg. fluoride
+ Recommended by the American Dental Association (1994)
** ppm - parts per million is equivalent to mg./L

For more information contact the Maine Department of Human Services,Bureau of Health Oral Health Program
Tel #: (207) 287-2361; Fax #: (207) 287-4631; TTY#: (207) 287-8015

Continued from Previous Page HETL Folder Number: **G002430**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

All solid results on a "**Dry Weight**" basis

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

RL-Reporting Limit, the lowest concentration which can be reliably reported on a routine basis
"<" = Less than ">" = Greater than

MCL - Maximum Contaminant Level, the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and K are considered satisfactory for that parameter.

Disclaimer

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TO BE BILLED

JAN 24 2011 AM 8:15 JG

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY DATE REC'D @ LAB
TEL: (207) 287-1716 FAX: (207) 287-1884

TEMP UPON ARRIVAL @ LAB 11 C

SG

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

TE6 8-14 Kit # 174137
G002430
DE1

( ) NAME AND ADDRESS (IF NOT ON LABEL)
( ) CHANGE OF NAME OR ADDRESS

NO3 & NO2 + turb out of Hold time Retest Theory

NAME: Drumlin Environmental LLC
STREET: P O Box 392
TOWN: Portland ME 04112
ZIP CODE:
PHONE (EVE): 207 771-5346
FAX 207 771-5347 info@drumlinllc.com

PHONE (DAY): 242-2812

( ) PLEASE CHECK HERE IF YOU WOULD LIKE A SIMPLIFIED FINAL REPORT

Date Collected: 1/21/11 **Sampled by:** Matthew Reynolds

Time Collected: 1450 **A.M. or P.M. (circle one)**

Test Address: NG-TW **City:** New Gloucester **Zip:** ~~0444~~

Chlorine Treatment: (✓) None ( ) Bleach ( ) Chlorinator ( ) Other

Location: (Kitchen faucet, Outside Spigot, Pressure Tank, etc...) test well

Sample Source: (Circle one) Drilled Well, Dug Well, Spring, Lake, Other

Comments:

COLLECTION PROCEDURE

Whenever possible, collect the sample from a faucet. It is difficult to obtain a satisfactory sample directly from the well or spring or from a hand pump. If the faucet is equipped with a strainer or aerator, remove before collecting sample. Allow water to run 5 minutes to clear pipes. **All bottles must be filled to the shoulder and filled from the same sample point. Do not rinse out bottles.**
Fill in all requested information above especially the date and time collected. Without the sample date and time we will have to reject your sample(s) and mail you a replacement kit.
We must receive your sample within 30 hours of collection. DO NOT COLLECT AND MAIL YOUR SAMPLE ON A FRIDAY OR SATURDAY, THE DAY BEFORE OR ON A HOLIDAY, AND NOT THE DAY BEFORE A STATE SHUT DOWN DAY. A list of State Holidays and Shut Down days are on the back of this form.

See back for additional instructions and when to expect laboratory results

Revised OCTOBER 2010

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
#12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/25/2011 9:36:00AM

Folder/ Invoice # **G003458**

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 Fax#:

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Line Item
DEL
Private
FEE WAIVED

Project Name:

No. of Samples in Folder: 2

G003458001
G003458002

Released: 1/27/2011

Case #:

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation, and holding times unless otherwise indicated.

Kenneth G. Pote, PhD., Director Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by: Thomas Crosby

Thomas Crosby
Inorganics Supervisor/Chemist III

CC:

1/27/2011 10:56:33AM

Continued from Previous Page HETL Folder Number: **G003458**

HETL Sample Number: G003458001 Description: TEST WELL DW-H20

Matrix: Potable Water Sample Point:

Sampler: MATTHEW REYNOLDS Sample Date: 1/24/2011 Time: 16:05:00

Analyte	Result	Units	Qualifier	High Limit	Low Limit	RL	MCL	Method	Analyst	Analysis Datetime
Nitrate Nitrogen	**< 0.05**	**mg/L**				0.050	10.0	300.0	dbrann	1/25/2011, 12:21
Nitrite Nitrogen	**< 0.05**	**mg/L**				0.050	1.0	300.0	dbrann	1/25/2011, 12:21

☑ **Your water is considered satisfactory for all tests analyzed and listed above.**
(Does not apply to unanalyzed or rejected samples - see results column and any comments.)

The term 'Satisfactory' is based on the Maine Drinking Water Regulations, State Toxicologist's Guidelines and/or the Federal Safe Drinking Water Act

HETL Sample Number: G003458002 Description: TEST WELL DW-H20

Matrix: Potable Water Sample Point:

Sampler: MATTHEW REYNOLDS Sample Date: 1/24/2011 Time: 16:05:00

Analyte	Result	Units	Qualifier	High Limit	Low Limit	RL	MCL	Method	Analyst	Analysis Datetime
Turbidity	**<0.6**	**NTU**				0.6		180.1	apelotte	1/25/2011 15:56

☑ **Your water is considered satisfactory for all tests analyzed and listed above.**
(Does not apply to unanalyzed or rejected samples - see results column and any comments.)

The term 'Satisfactory' is based on the Maine Drinking Water Regulations, State Toxicologist's Guidelines and/or the Federal Safe Drinking Water Act

Continued from Previous Page HETL Folder Number: **G003458**

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

All solid results on a "**Dry Weight**" basis

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RL-Reporting Limit, the lowest concentration which can be reliably reported on a routine basis
"<" = Less than ">" = Greater than

MCL - Maximum Contaminant Level, the highest level allowed by EPA for public water supplies. Also used here as the maximum advisory limit set by the Maine Centers for Disease Control and Prevention.

Note: Results below the advisory limit, including < and K are considered satisfactory for that parameter.

Disclaimer

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FEE WAIVED

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH & ENVIRONMENTAL TESTING LABORATORY DATE REC'D @ LAB
TEL: (207) 287-1716 FAX: (207) 287-1884

JAN 25 2011 AM 8:42

TEMP UPON ARRIVAL @ LAB 9 C

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

Kit # 174454

Nitrate Nitrogen 4+N3, N1-01 DE1 PH-19

G003458

( ) NAME AND ADDRESS (IF NOT ON LABEL)
( ) CHANGE OF NAME OR ADDRESS

NAME: Drumlin Environmental
STREET: P O Box 392
TOWN: Portland ME
ZIP CODE: 04112
PHONE (EVE): 771-5546
FAX 771-5547

PHONE (DAY): 242-2812

( ) PLEASE CHECK HERE IF YOU WOULD LIKE A SIMPLIFIED FINAL REPORT

Date Collected: 1/24/11 **Sampled by:** Matthew Reynolds

Time Collected: 1605 **A.M. or P.M. (circle one)**

Test Address: New Gloucester **City:** _____ **Zip:** _____

Chlorine Treatment: (✓) None ( ) Bleach ( ) Chlorinator ( ) Other

Location: (Kitchen faucet, Outside Spigot, Pressure Tank, etc...) Test Well

Sample Source: (Circle one) Drilled Well, Dug Well, Spring, Lake, Other

Comments: _____

COLLECTION PROCEDURE

Whenever possible, collect the sample from a faucet. It is difficult to obtain a satisfactory sample directly from the well or spring or from a hand pump. If the faucet is equipped with a strainer or aerator, remove before collecting sample. Allow water to run 5 minutes to clear pipes. **All bottles must be filled to the shoulder and filled from the same sample point. Do not rinse out bottles.**
Fill in all requested information above especially the date and time collected. Without the sample date and time we will have to reject your sample(s) and mail you a replacement kit.
We must receive your sample within 30 hours of collection. DO NOT COLLECT AND MAIL YOUR SAMPLE ON A FRIDAY OR SATURDAY, THE DAY BEFORE OR ON A HOLIDAY, AND NOT THE DAY BEFORE A STATE SHUT DOWN DAY. A list of State Holidays and Shut Down days are on the back of this form.

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Revised OCTOBER 2010

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Department of Health and Human Services
Health and Environmental Testing Laboratory
221 State Street
12 State House Station
Augusta, Maine 04333-0012
Tel: (207) 287-2727; Fax: (207) 287-6832
TTY: 1-800-606-0215

Logged: 1/24/2011 8:20:00AM

Folder/ Invoice #: G002428

REYNOLDS, MATT
DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
PORTLAND ME 04112 Fax#:

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DE1
Private

Project Name:

Released: 1/25/2011

No. of Samples in Folder: 1

Case #:

G002428001

CERTIFICATION

The HETL hereby certifies that all test results for this sample were analyzed by the method listed, including preservation, preparation , and holding times, unless otherwise indicated.

Kenneth G. Pote, PhD., Director

Richard French, Quality Assurance Officer

If we can be of further assistance to you, Please Call us at 287-1716

Approved by: Thomas Crosby

Thomas Crosby
Inorganics Supervisor/Chemist III

CC:

Continued from Previous Page

HETL Sample Number: **G002428001** Description: **NEW GLOUCESTER NG-TW**

Matrix: **Potable Water** Sample Date: **1/21/2011** Time: **14:50:00**

Method: **7500-RNB** Analyst **PATB** Analysis Date: **01/25/2011**

Analyte	Result	Unit	+/-	MDC	Qualifiers
Radon	8220	pCi/L	131	26.1	*

RADON IN WATER
These results are expressed as picocuries per liter of water. A picocurie is a standard unit for measuring radioactivity and is one trillionth of a curie. "+/-" represents the 2 sigma uncertainty (95% confidence level) in the result. "MDC" = minimum detectable concentration.

While no level of radiation is considered completely safe,the Radiation Control Program recommends that corrective action be taken when the radon concentration in water exceeds 4000 pCi/L.

The USEPA is currently considering establishing a maximum contaminant level for radon in public water supplies at 300 to 4,000 pCi/L.
Also,if your water supply is a drilled well,consider having a gross alpha test performed on the water.
If you have a private water supply and desire additional clarification of your report or further information concerning methods of corrective action,please contact the Radiation Control Program at 1-800-232-0842. If you represent a public water supply and desire addition clarification of your report,please contact the Radionuclide Coordinator of the Drinking Water Program at 287-2070.

EPA / NELAP currently does not certify laboratories for radon in water.

Continued from Previous Page HETL Sample Number: G002428

Units & Measurement

"**mg/L**" = Milligrams per liter; "**ug/L**" = Micrograms per Liter; "**mg/Kg**" = Milligrams per Kilogram;
"**ug/Kg**" = Micrograms per Kilogram; "**PPM**" = Parts per Million; "**NTU**" = Nephelometric Turbidity Units;

The MCL, Maximum Contaminant Level is listed for comparing your results with recommended levels.
In the "**Qualifier**" column, **an " * " is** placed to indicate any results that **exceed** this MCL.

If there are no " * " in the "Qualifier" column, your sample is considered satisfactory for those tests.

All solid results on a "**Dry Weight**" basis

NC = Not confirmed **NQ** = Not Quantitated **NA** = Not Analyzed **J** = Approximately **U** = Undetected **R** = Rejected

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DEPARTMENT OF HEALTH & HUMAN SERVICES

TO BE BILLED
SG

HEALTH & ENVIRONMENTAL TESTING LABORATORY
221 STATE STREET – STATION 12
AUGUSTA, MAINE 04333
(207) 287-1716

JAN 24 2011 AM 8:14 SG

DRUMLIN ENVIRONMENTAL LLC
PO BOX 392
REYNOLDS, MATT
PORTLAND, ME 04112

RADON IN WATER

Kit # 174135
G002428
DE1

NAME: Drumlin Environmental LLC
MAILING ADDRESS: P O Box 392
TOWN: Portland ME
ZIP CODE: 04112
PHONE: 207-771-5546 / 242-2812

INSTRUCTIONS FOR OBTAINING THE WATER SAMPLE ARE ON THE BACK OF THIS SHEET

THIS BOX SECTION MUST BE FULLY COMPLETED

Date Sample Collected: 1/21/11 Test Address: New Gloucester

Time Sample Collected: 1450 AM: PM: City Town: State: ME Zip:

Sampled by: Matthew Reynolds Collection Point: NG-Tes

Water is used by: ☐ Private Home ☐ Public Water System ☐ Eating/Lodging Place ☐ Mobile Home Park ☐ School ☒ Other

Test Well

Returned to Lab by
✓ Walk In
___ USPS
___ Fed Ex
___ UPS

Condition of Sample Upon Receipt
✓ OK ___ NOT OK
Reason NOT OK:

FOR LABORATORY USE ONLY

RESULTS:

Gross Alpha	_____	pCi/L±	_____	pCi/L
Gross Beta	_____	pCi/L±	_____	pCi/L
Radon	_____	pCi/L±	_____	pCi/L
	_____	pCi/L±	_____	pCi/L
	_____	pCi/L±	_____	pCi/L

Katahdin
ANALYTICAL SERVICES

nelac
Cert. No. E87604

January 24, 2011

Mr. Matt Reynolds
Drumlin Environmental, LLC
75 York St.
PO Box 392
Portland,ME 04112-0342

RE: Katahdin Lab Number: SE0327
Project ID: New Gloucester
Project Manager: Ms. Shelly Brown
Sample Receipt Date(s): January 21, 2011

Dear Mr. Reynolds:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Deborah J Nadeau
Authorized Signature

01/24/2011
Date

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Contact: Matt Reynolds
Client: Drumlin Environmental, LLC
Address: 75 York St.
Portland,ME 04112-0342

SDG: SE0327
Project:
Client PO:
Report Date: 24-JAN-11

Lab ID: SE0327-1 **Client ID:** NG-TW **Collected Date:** 21-JAN-11 **Received Date:** 21-JAN-11

Sample Description:
Sample Comment:

Compound	Result	Prep. Date	Analysis Date	Prep. By	Analyst	Analysis Method
Total Coliforms	Absent /100mL	21-JAN-11	22-JAN-11 16:50:00	JJ	SBF	SM 9223B

This report has been electronically signed:
Deborah Nadeau
Laboratory Operations Manager

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Drumlin Environmental
Contact: Matt Reynolds
Phone #: (207) 721-5546
Fax #: ( )
Address: PO Box 392
City: Portland
State: Me
Zip Code: 04112
Purchase Order #:
Proj. Name / No.: New Gloucester
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Rick Forton / Richard Forton
Copies To: Matt Reynolds

LAB USE ONLY
WORK ORDER #: SE0327
KATAHDIN PROJECT NUMBER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Coliform Bacteria (Filt. ☐Y ☒N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	NG-TW	11/21/11/1450	water	1	X									
		/												
		/												
		/												
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Richard Forton	11/21/11 1630	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 24, 2011
08:34 AM

Login Number: SE0327

Account: DRUMLI001 NoWeb
Drumlin Environmental, LLC

Project:

Primary Report Address:
Matt Reynolds
Drumlin Environmental, LLC
75 York St.
PO Box 392
Portland,ME 04112-0342
info@drumlinllc.com

Primary Invoice Address:
Accounts Payable
Drumlin Environmental, LLC
75 York St.
PO Box 392
Portland,ME 04112-0342

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming:

Login Information

ANALYSIS INSTRUCTIONS	:	
CHECK NO.	:	
CLIENT PO#	:	
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	n/a
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	
LOGIN INITIALS	:	
PM	:	SMB
PROJECT NAME	:	New Gloucester
QC LEVEL	:	I
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	email pdf and invoice to matt at Drumlinm, no HC
SDG ID	:	
SDG STATUS	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE0327-1	NG-TW	21-JAN-11 14:50	21-JAN-11			28-JAN-11	

Matrix		*Product*	*Hold Date (shortest)*	*Bottle Type*	*Bottle Count*	*Comments*
Aqueous	S	EM_COLIFORMS_COL	22-JAN-11			

Total Samples: *1* ***Total Analyses:*** *1*

ATTACHMENT D

INITIAL ANALYSIS OF AQUIFER PARAMETERS

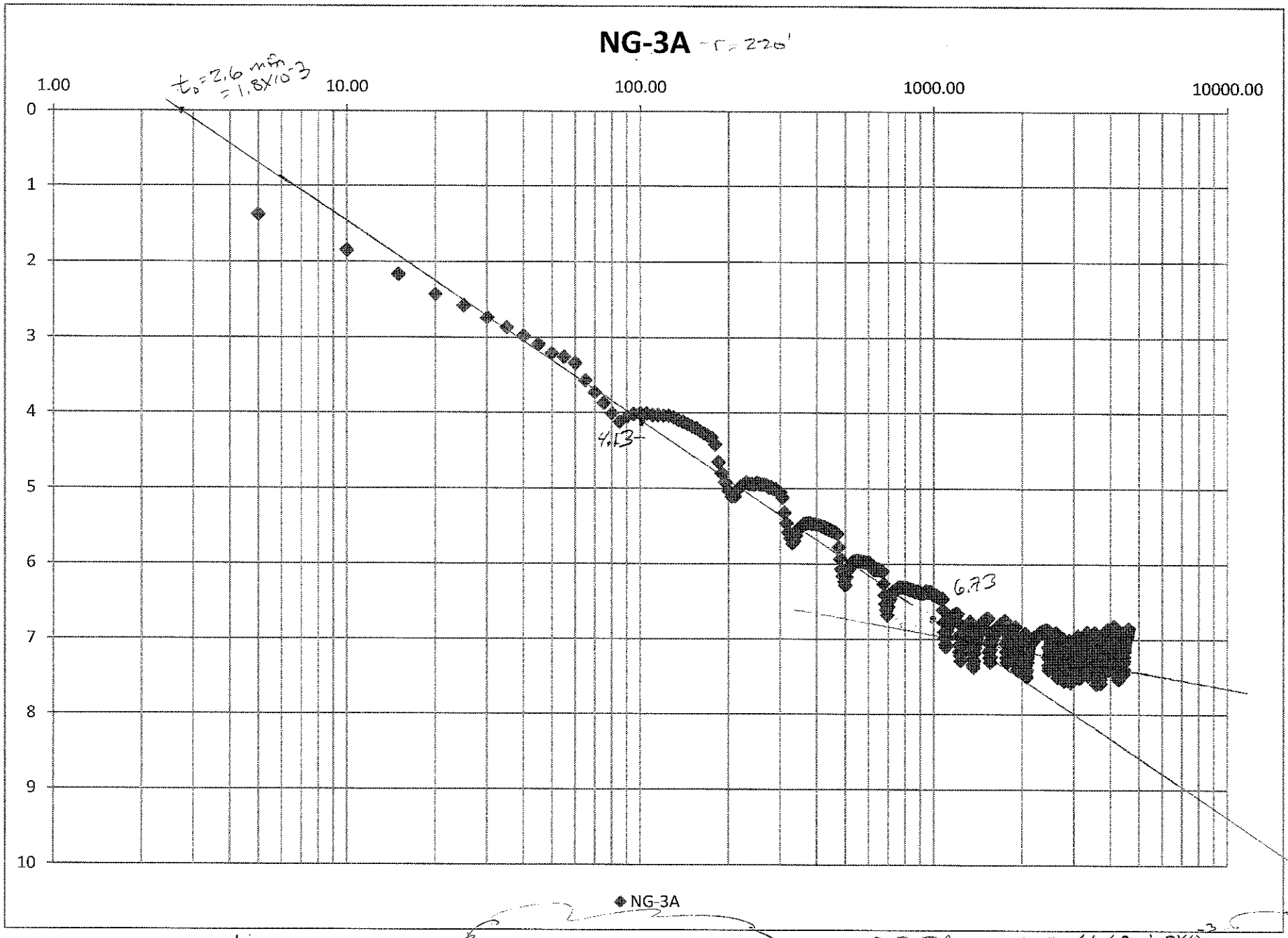
Preliminary Aquifer Parameter Summary
TW-1 Pumping Test

Well	**Radius** (ft)	**Transmissivity** (gpd/ft)	**Specific Storage**
NG-3A	220	4,100	0.00005
NG-4A	620	5,000	0.00002
NG-6A	160	4,100	0.00009
NG-10A	770	3,900	0.00001

Note: Transmissivity & Specific Storage calculated using Cooper & Jacob (1946)

$T = 264\ Q/s$ & $S = 0.3*T*t_o/r^2$

See Attached SemiLog Plots



$T = \frac{264 \cdot Q}{\Delta s}$ T = gpd/ft

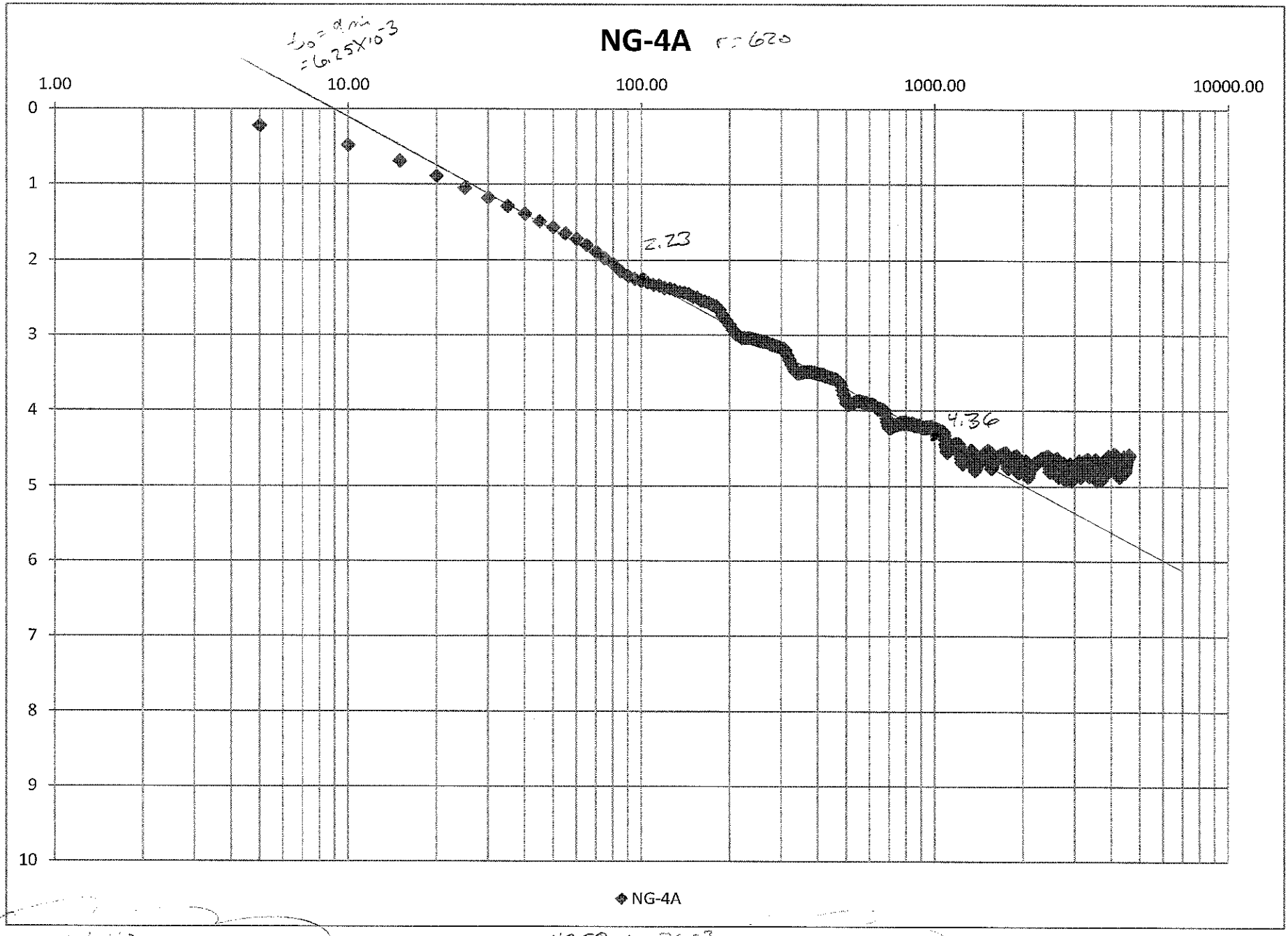
Q = 2 fm = 40 gpm

Δs = 7.45 - 4.27 = 3.15

$T = \frac{264 \cdot 40}{2.60} = 4062$ gpd/ft

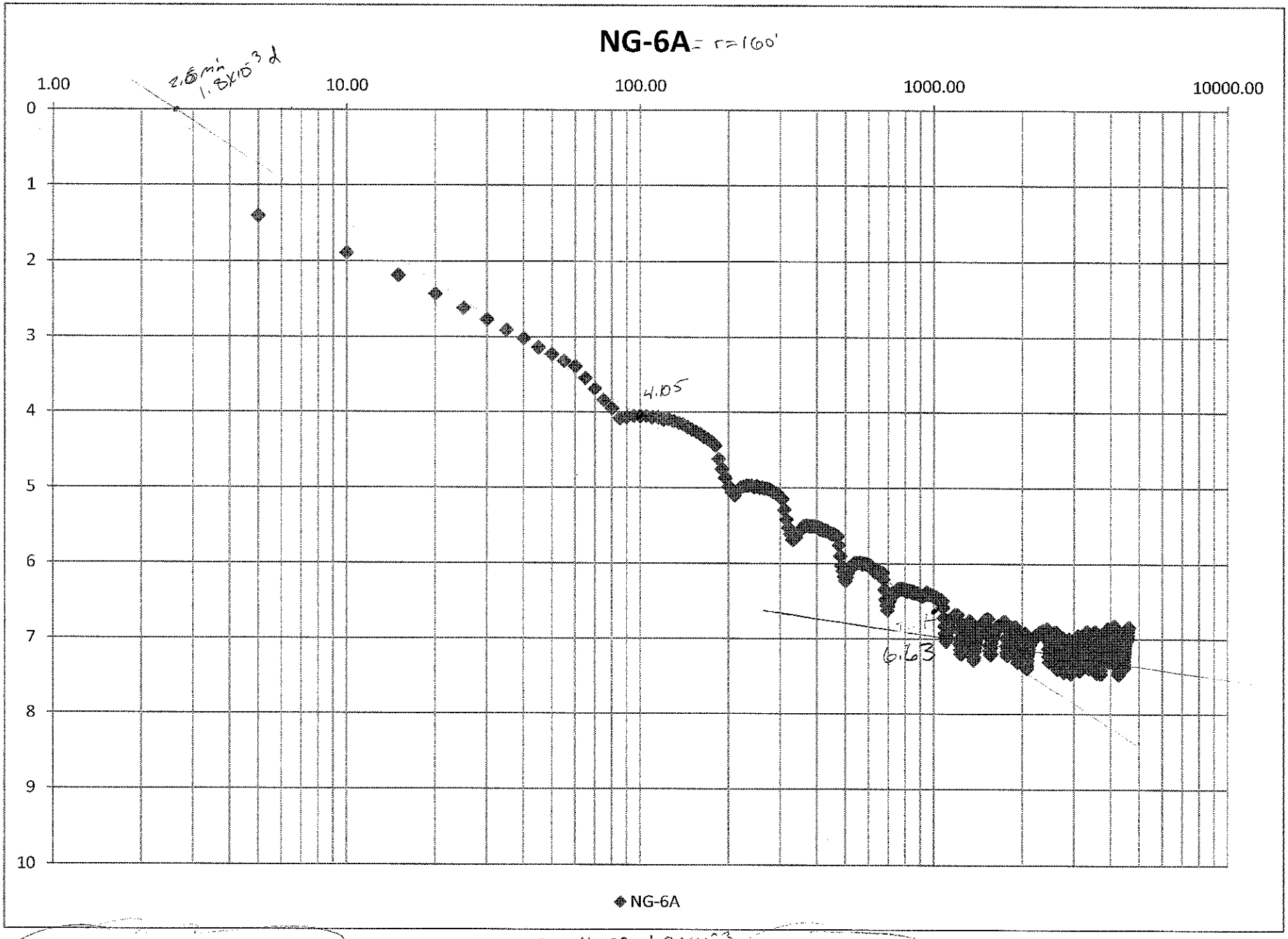
$S = \frac{0.3\, T t_0}{r^2}$

$\frac{0.3 \cdot 4062 \cdot 1.8X10^{-3}}{220^2} = 4.5X10^{-5} = S$



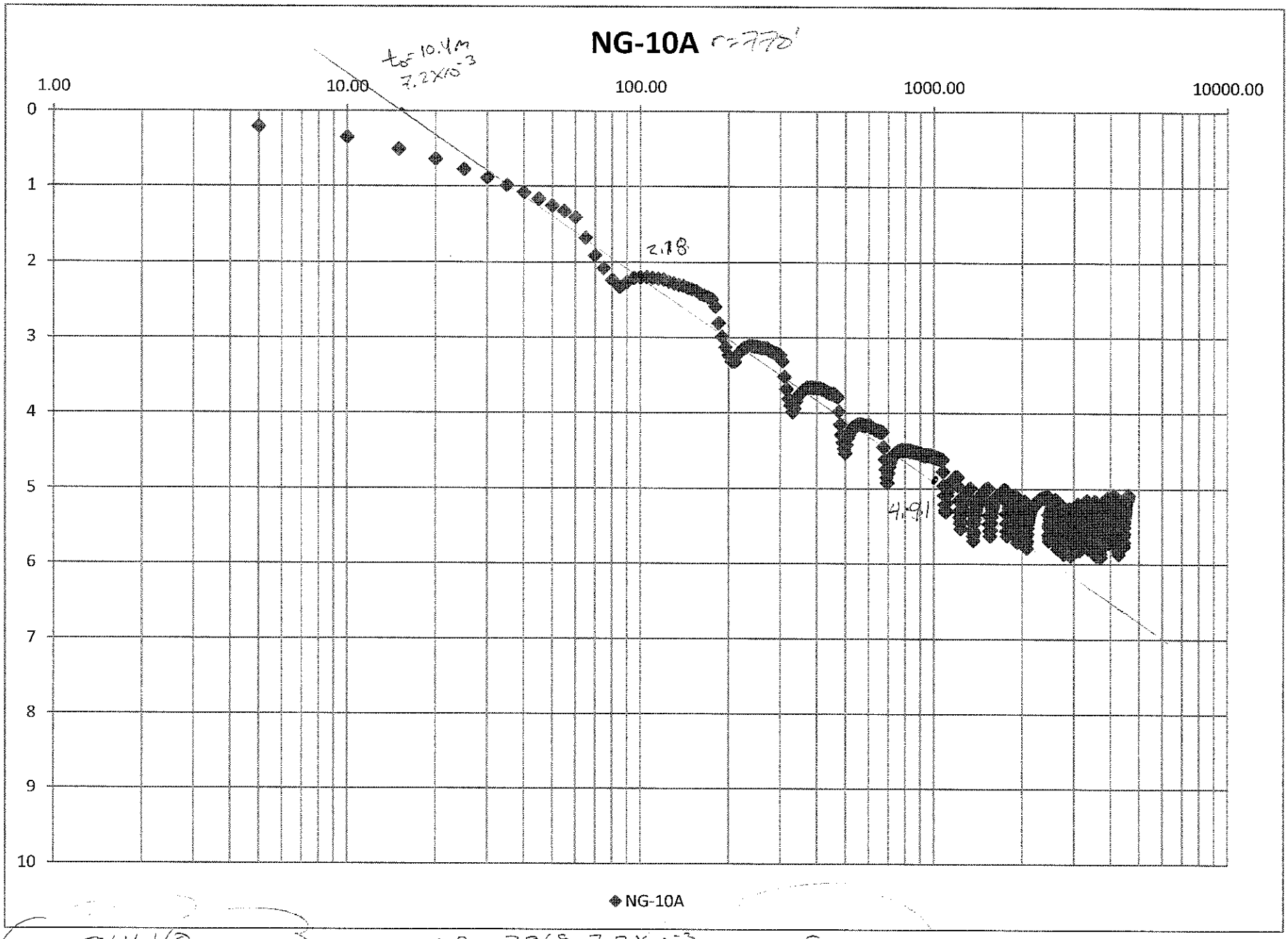
$T = \frac{264 \cdot Q}{2.13} = 4{,}958$ gpd/ft

$S = \frac{0.3 \cdot 4958 \cdot 6.25 \times 10^{-3}}{620^2} = 2.42 \times 10^{-5} = S$



$T = \frac{264.40}{2.58} = 4{,}093 \ \frac{gpd}{ft}$

$S = \frac{0.3 \cdot 4093 \cdot 1.8\times10^{-3}}{(160)^2} = 8.6\times10^{-5} = S$



$$T = \frac{264.40}{2.73} = 3{,}868$$

$$S = \frac{0.3 \cdot 3868 \cdot 7.2 \times 10^{-3}}{(770)^2} = 1.41 \times 10^{-5} = S$$