AES NORTHEAST
Architecture, Engineering, and Land Surveying Northeast, PLLC

July 29, 2019

Mr. Russ Huyck, PE
NYS Department of Environmental Conservation
1115 NYS Route 86, PO Box 296
Ray Brook, NY 12977

RE: Town of Beekmantown
Salt Contamination Investigation
2nd Quarter 2019 Progress Report
AES Project No. 4461B

Dear Russ:

We have enclosed an electronic copy of the 2nd Quarter 2019 Progress Report for the Town of Beekmantown Salt Contamination Investigation, which was prepared in accordance with the approved Corrective Action Plan for the Town of Beekmantown and as requested by NYS DEC Region 5 staff letter dated November 19, 2018.

If you have any questions regarding the results, please feel free to contact me at your convenience.

Sincerely,

Wayne P. Ryan, PE
Project Manager

Enclosure (1)

c/w/enc.: Mr. Samuel Dyer , Town Supervisor
Mr. Joseph M. Zalewski, PE, Regional Engineer, NYSDEC
Mr. John Kanoza, PE, CPG, CCHD

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Town of Beekmantown

Salt Contamination Investigation

(2nd Quarter 2019)

Prepared for:
Town of Beekmantown
571 Spellman Road
West Chazy, NY 12992

July 29, 2019

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1) INTRODUCTION / PURPOSE / BACKGROUND

The Town of Beekmantown (hereinafter "Town") owns and operates a salt storage facility as part of the overall Town's road maintenance program shown in Exhibit A provided in prior Quarterly Reports. The facility has been in operation for decades and has historically used sodium chloride (salt) as a means for maintaining the road system within the Town during winter conditions. Currently, the facility stores a mixture of salt/sand on-site, typically ranging between 10,000 to 12,000 cubic yards (CY) per year. In 2010, the Town was awarded a $500,000 grant from the State of New York, through Round 12 of the NYSDEC-Water Quality Improvement Program (WQIP) to construct an enclosure to store salt/sand products and for processing. In December 2017, the project was completed and now stores both salt and salt/sand mixed products in an enclosed building, protected from the weather elements (wind, rain, snow).

As a result of documented salt contamination found in surrounding residential drinking water private wells (PW) and the proximity to the Town owned salt storage facility, in 2017 the NYSDEC directed the Town to prepare a Corrective Action Plan (CAP) to investigate the extent of salt contamination. In accordance with the approved CAP, investigations were initiated in October 2017 also known as the 2nd Quarter Report-2017. As documented in that initial Report, samples from (Town Well) TW-3, (Private Wells) PW-2, PW-3, PW-4, PW-5, (Surface water) SW-6, and (Monitoring Well) MW-7 exceeded regulations cited in *NYS DOH Part 5, Subpart 5-1 Public Water Systems* (hereinafter called "Standards") for maximum limits of chloride (250 mg/l) and/or sodium (270 mg/l). Monitoring Well (MW-7), immediately south of the prior open salt/sand storage facility, had highly elevated levels of both sodium (5,020 mg/l) and chloride (11,700 mg/l). The remaining monitoring wells located along the southern property line did not exhibit any elevated sodium or chloride levels. Sample points PW-2, PW-3, PW-4, and PW-5 exhibited elevated levels of sodium and/or chloride shown in Exhibit D provided in prior Quarterly Reports. PW-4 and TW-3 had chloride levels of 4,490 mg/l and 6,950 mg/l, respectively. PW-2, PW-3, and PW-5 had elevated levels of sodium and/or chloride ranging from 602 mg/l to 1,950 mg/l.

As recommended in the 2nd Quarter Report 2018, the Town issued letters to all residents along Route 22 between the intersection of NYS Rte. 22 and Ashley Road and the intersection of NYS Rte. 22 and Spellman Road along O'Neil Road approximately ¼ mile, requesting permission to sample individual private drinking water wells (PW) for presence of Total Dissolved Solids (TDS) using a handheld TDS Meter. The presence of high levels of TDS often is an indicator of levels of contamination, that of Sodium and/or Chlorides. As of the 3rd Quarter 2018 sampling event, (3) residents have responded to the Town's letter granting permission to sample their private drinking water wells under the new scope noted above. As sampling events continue and residents come forward requesting sampling of their water supply, AES staff contacted the residents and requested to access properties for sampling. In addition, as a result of the October 5, 2018 meeting with NYSDEC and Clinton County Health Department (CCHD), a request was made to continue

Surfacewater sampling efforts on a Quarterly basis, with reporting as previously done in prior quarters of 2017 and 2018. During October 2018, a sampling event took place by AES staff to sample all surrounding locations of Rae Brook to identify any reductions of contamination impacts as time passes. The levels of Sodium, Chloride, and Total Dissolved Solids were below Standards during both the 3rd Quarter of 2017 and the 3rd Quarter of 2018 testing. There was a significant decrease across the sampling locations in the Sodium and Chloride parameters and a nominal change in the TDS parameter. No additional Monitoring Wells, Town Wells, and Test Pits were sampled during the 3rd Quarter 2018 sampling event. A summary of all testing locations is provided in Exhibit G of the prior Quarterly Reports. AES has also been provided with a history of the Beekmantown Central School water tests from 2011 to 2017. The results of these tests are shown in prior Quarterly Reports as Exhibit I (not included as part of this quarterly report, but referred to).

On November 19, 2019 NYSDEC issued a letter to the Town of Beekmantown officials indicating that no further quarterly sampling would be required, except for new wells that are sampled as a result of residents coming forward requesting such sampling. In addition, the letter requires the town to provide a response as to the progress of the town moving forward on a public water supply project and any updates as to changes to potable water being supplied to the residents. This data and information will be required on a Quarterly basis until NYSDEC issues a notice of release from future Quarterly Reports.

2) SAMPLING METHODOLOGY

2.1 Water Sampling Efforts

2.1.1 Second Quarter-2019

During the second Quarter 2019 only one additional sampling was obtained by AES staff. The sample was taken at the previously sampling point PW-25. The results of this sampling are listed in Exhibit A of this report.

2.2 Soil Sampling Efforts

No further soil sampling has or will occur.

3) SUMMARY OF LABORATORY RESULTS

3.1 Water Sampling Results-Second Quarter-2019

During the second Quarter 2019 only one additional sampling was obtained by AES staff. The sample was taken at the previously sampling point PW-25. The results are shown in Exhibit A of this report.

4) FINDINGS

The following presents the findings of the field investigations thus far:

4.1 Well Information

There have been no updates to well information.

4.2 Direction of Groundwater Flow

There has been no further data obtained to determine any changes in the direction of flow of the contaminated groundwater plume.

4.3 Extent of Contamination

Since no additional residents have come forward to the town at this time requesting testing of their private wells, it is assumed that the extent of contamination has not changed or increased in geographical area.

4.4 Potential Impacted Area(s)

As indicated in 4.3 above, since there have been no new sampling requests (only a repeat of previously sampled location, PW-25), it is assumed that the areas of impact from the contamination plume remains as it was found during the previous reporting periods.

5) Public Water Supply Project

5.1 Status:

During the spring of 2018 the town officials contracted with AES Northeast to compile an Engineering Report of Water Source Alternatives. This report was completed and issued on August 29, 2018. The report was submitted to NYSDOH. A NYS WATER INFRASTRUCTURE IMPROVEMENT ACT (WIIA) Grant application was submitted on September 9, 2018 to NYSDOH for funding of the project scope under the terms of the Grant (Shown as Exhibit 1 of the 2018 Fourth Quarter Report). The full Engineering Report is available as a separate document on request.

The recommendation of the Engineering Report was to locate a groundwater source remote from the contamination source and plume and provide infrastructure to serve ultimately up to approximately (82) properties that are currently impacted by the contamination plume or could be in future years. The anticipated project cost of the recommended alternative was estimated at $6,662,502 (2018 dollars). This cost with no grant funding and with a (30) year interest free loan from NYSEFC would cost each property approximately $2,708/year for debt service alone. An added cost for Operations and Maintenance (O & M) is estimated to add an additional cost of $297 per property per year. This cost is unaffordable to the residents of the impacted areas and would not be acceptable or allowed by the NYS Comptroller's Office to continue as a Special District (i.e. Water District).

The Grant application was reviewed by NYSEFC and NYSDOH staff. Funding was rejected due to an incomplete application since a Water District had not yet been formed and approved by a Town Board Resolution (Shown as Exhibit 2 of the 2018 Fourth Quarter Report). Once the rejection notice was received by the town, the town's Attorney submitted a legal opinion as to the reason the town could not comply with NYSEFC requirements to make the application complete (Shown as Exhibit 3 of the 2018 Fourth Quarter Report). To date this opinion has not been responded to by NYSDOH or NYSEFC staff.

During the first quarter 2019 the town supervisor reached out to the Beekmantown Central School District and begun discussions for teaming with the school district for an interim solution to provide a public water supply to the current impacted properties (approximately 9) by connection to the current school's water supply. On March 7, 2019 Wayne P. Ryan attended a conference call with Sam Dyer, Supervisor and Town Council person Sharron Garden (in attendance at the town hall) and Beekmantown Central School Superintendent Dan Mannix and Dan Noonan, Maintenance Supervisor (at the District Office).

Mr. Ryan explained the intent of the possible temporary connection to the school's water supply to support the (9) currently contaminated private wells until a permanent water source and distribution system could be constructed. The connection could possibly be required for 2-3 years. However, prior to even considering this project approach the town was requesting to fund and conduct up to an 8-hour pumping test of one of the current school groundwater wells. Since the school and Clinton County Health Department had no safe yield data of either of the wells a short-term pumping test would be required.

After lengthy discussions, it became quite clear that the school district was not comfortable providing water to the town residents (even if the testing indicated adequate well yield). Based on that conference call results, town officials decided not to pursue this method of providing a temporary water supply for the affected residents.

After the conference call concluded the discussion revolved around the possible temporary connection being made to the town well (TW-2). This well had never had exceedances of the groundwater standards (although Chlorides had been found to be at 206 mg/l in September 2017 but reduced to 130 mg/l in July 2018) no further testing had been conducted since then. The town well TW-2 has little use

other than toilets and sinks at the town hall, due to the aesthetics of the water (smell). Based on current water meter readings (beginning in May 2019) at the town hall the town consumption currently is approximately 80 GPD. Currently the town uses a 5-gallon bottled water dispenser for consumption by the public. Based on the discussions after the conference call, the town directed AES Northeast to develop a plan of the possible use of well TW-2 for the temporary connection and service to the impacted residents (even though additional treatment may be necessary for the aesthetics issues).

During the last part of March, AES Northeast had discussions with Hydrosource Associates staff as well as the local well driller the town officials would like to work with on conducting the testing of the well for possible temporary connection. Based on these discussions the following schedule of tasks was developed and the current status of each, discussed and annotated in **Bold** text:

- Collect water samples of TW-2 for analysis of parameters for VOC's, metals, inorganics, and radiologicals-**Completed and provided in Exhibit C**
- Once results are obtained and if the water quality is acceptable a rudimentary short-term pumping test (2-4 hours) would be conducted using the current well pump with an attempted pumping rate of approximately 8-10 gpm (anticipated town use and (9) residential units)-**This formal step was not conducted, as a rudimentary test was done and found to flow at a rate in excess of 5 GPM (very short term) from a utility sink faucet.**
- The results would be analyzed to verify if the well has an acceptable yield-**Based on the rudimentary test and results of the lab analysis it was decided to undergo a full (72) hour constant rate pumping test. At the end of the pumping test a "Part 5" water quality sampling and analysis was completed and is shown in Exhibit D.**
- If the short-term pumping results are found acceptable a long-term pumping test (8 hours) would be conducted and results analyzed. On completion of this pumping test a complete water analysis would be conducted for determining proper water quality-**The short-term pump test was not conducted. The results of the (72) hour pump test and opinion of Hydrosource Associates of the pumping test result indicated that it appeared to yield a quantity of water to support the (9) properties and town hall complex. The results and Report are included in Exhibit E.**
- If all results appear acceptable, AES Northeast would develop schematic plans (acceptable to the Clinton County Health Department) that would portray the layout of the water distribution system to connect the impacted properties and any updates/upgrades to the current town water treatment processes to meet the increased demand of the (9) impacted properties-**Based on the tests and opinion of the results, the Town Board contracted with AES Northeast to prepare construction documents to construct the distribution system and water treatment facilities for the affected properties noted in Exhibit A, that exceed the MCL limits**.
- The town officials have committed the town highway department to the task of installation of the temporary distribution system with oversight by AES Northeast staff. The upgrades to the water treatment process will need formal plans and specifications (including a possible building addition to house the new treatment process(s)) so that the town could competitively bid that

portion of the overall project.-**Due to the lack of resources (i.e. labor and equipment) the town Highway Department is unable to construct the water distribution system in the timeframe required by the town board (i.e. by the end of 2019). Consequently, a standard design-bid-build project is being prepared by AES Northeast for the water distribution and water treatment plant.**

6) CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions:

The town's prior methods of storage of salt has resulted in the contamination of both private and public wells within the project areas. It has been determined that the most cost effective solution is to provide a public water supply source that will provide potable water to as many as (82) properties in the future, but it is also been determined that without significant grant funding, the project will not progress in a timely manner. This is due to the costs associated with the overall improvements being borne by such a small geographic region of property owners that were not the cause of the original contamination and a Water District cannot be formed that will allow the funding stream for completion of the project to open up to the town. Therefore, the town must move forward utilizing town funds at this time.

6.2 Recommendations:

Based on the most recent testing and analysis of the Town Well TW-2, the decision to move forward with a "temporary" water supply (TW-2) and a permanent water treatment building, water process and treatment, storage and distribution must be accomplished. Therefore, to accomplish this goal in a timely manner it is recommended that:

- The town continue to conduct sampling efforts as requested by residents located in the impacted areas to more clearly define the suspected plume. *As additional residents come forward and request sampling to be conducted, AES Northeast will be advised, and those locations will be added to future sampling and evaluation efforts.*
- Continue maintaining records of water distribution to residents of the impacted areas for review by NYSDEC and CCHD officials, as requested. The current distribution of bottled water is included as Exhibit F to this report. *We would recommend that the town be allowed to suspend this requirement once the temporary water system is up and running.*
- *Complete the investigations to locate a public water supply source (i.e. groundwater supply) adequate to meet the demands of up to a possible (82) properties located within the impacted areas and begin a test well drilling program to locate future production well(s). This is recommended to be completed during the fall/winter 2019-20.*
- *Continue researching and applying for Grant funding opportunities to fund the location, drilling, testing and transmission of production wells to replace the to be temporary TW-2 well which will*

support up to the possible (82) properties that may eventually be affected by the contamination plume.

- *With assistance from town counsel review and if appropriate create a water district which will encapsulate the affected properties that will be served by the new town water service areas.*
- Lastly, *we would recommend that since a temporary (and future permanent wells) and infrastructure will become a reality and providing water to the affected properties, that the town be relieved from providing any future quarterly reports. This is predicated on the fact that the town will provide service to affected homes/properties (exceeding the MCL limits) in the Ashley Road and Haynes Road areas listed in Exhibit A or new properties as they are found to exceed the MCL for Sodium and Chloride levels.*

7) EXHIBITS

Exhibit A: Analytical Data Summary

Exhibit B: Endyne, Inc. Environmental Laboratories-Water Analysis for Sodium and Chlorides for PW-25

Exhibit C: National Testing Laboratories, Ltd.-Preliminary Water Quality Analysis for TW-2

Exhibit D: Endyne, Inc. Environmental Laboratories-Water Analysis for TW-2

Exhibit E: Hydrosource Associates, Inc.-Analysis and Report of Findings of Testing of Well TW-2

Exhibit F: Town provided listing of Bottled Water Distribution for 2019-2nd Quarter Report

Exhibit A

Analytical Data Summary

Town of Beekmantown Salt Contamination Investigation
Analytical Data Summary
Exhibit A

Sampling	Sodium (mg/l)									Chloride (mg/l)								Total Dissolved Solids (TDS) (mg/l)						
Location	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	Dec 2018	March 201	June 2019	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	March 201	June 2019	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	March 201	June 2019
TW-1	45.6	36.8	45.4	51.1	39.9	N/A	N/A	N/A	N/A	72.0	75.8	78.3	65.0	60.1	N/A	N/A	N/A	440	450	470	460	N/A	N/A	N/A
TW-2	66.7	91.0	121	76.6	70.4	N/A	N/A	N/A	N/A	120.0	206	196	105	130	N/A	N/A	N/A	690	720	590	560	N/A	N/A	N/A
TW-3	4810.0	6600.0	(a)	(a)	5280	N/A	N/A	N/A	N/A	6950.0	6150.0	(a)	(a)	5840	N/A	N/A	N/A	20000	(a)	(a)	14000	N/A	N/A	N/A
BSW-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BSW-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1	<20.0	14.0	(f)	(f)	10.4	N/A	N/A	N/A	N/A	12.3	12.6	(f)	(f)	11.4	N/A	N/A	N/A	460	(f)	(f)	380	N/A	N/A	N/A
MW-2	<100.0	22.9	(f)	(f)	64.1	N/A	N/A	N/A	N/A	15.9	6.0	(f)	(f)	4.9	N/A	N/A	N/A	420	(f)	(f)	410	N/A	N/A	N/A
MW-3	<100.0	19.9	(f)	(f)	20.9	N/A	N/A	N/A	N/A	22.1	10.2	(f)	(f)	7.5	N/A	N/A	N/A	520	(f)	(f)	480	N/A	N/A	N/A
MW-4	22.0	29.6	(f)	(f)	20.9	N/A	N/A	N/A	N/A	39.8	17.8	(f)	(f)	7.4	N/A	N/A	N/A	500	(f)	(f)	460	N/A	N/A	N/A
MW-5	21.8	549.0	(b)	(b)	(b)	N/A	N/A	N/A	N/A	28.6	1470.0	(b)	(b)	(b)	N/A	N/A	N/A	2600	(b)	(b)	(b)	N/A	N/A	N/A
MW-6	16.2	32.7	(f)	(f)	9.73	N/A	N/A	N/A	N/A	21.4	4.9	(f)	(f)	< 3.0	N/A	N/A	N/A	250	(f)	(f)	210	N/A	N/A	N/A
MW-7	5020	8600	8250	8680	6100	N/A	N/A	N/A	N/A	11700	15800	14100	4030	10100	N/A	N/A	N/A	23000	24000	19000	14000	N/A	N/A	N/A
MW-8	N/A	N/A	2960	182	67.5	N/A	N/A	N/A	N/A	N/A	N/A	4820	118	39.7	N/A	N/A	N/A	N/A	8700	560	350	N/A	N/A	N/A
SW-1	13.3 / 14.3*	26.0	(f)	(f)	19.5	22.3	N/A	N/A	N/A	18.9 / 23.7*	44.5	(f)	(f)	32.5	42.5	N/A	N/A	330	(f)	(f)	270	320	N/A	N/A
SW-2	13.6 / 15.2*	27.9	(f)	(f)	19.9	22.3	N/A	N/A	N/A	18.3 / 24.2*	45.6	(f)	(f)	31.2	39.1	N/A	N/A	320	(f)	(f)	280	330	N/A	N/A
SW-3	13.9 / 15.7*	29.1	(f)	(f)	19.6	23.1	N/A	N/A	N/A	19.9 / 24.4*	47.5	(f)	(f)	31.6	39.3	N/A	N/A	320	(f)	(f)	290	320	N/A	N/A
SW-4	175 / 15.9*	112.0	1670	580	1230	N/A	N/A	N/A	N/A	245 / 24.0*	196	2570	915	1890	N/A	N/A	N/A	590	4500	1900	3800	2910	N/A	N/A
SW-5	20 / 17.8*	65.0	37.2	23.9	30.7	47.4	N/A	N/A	N/A	29.8 / 28.8*	124	60.9	36.7	69.5	78.1	N/A	N/A	490	320	270	320	380	N/A	N/A
SW-6	647	1590	1460	423	961	N/A	N/A	N/A	N/A	952	3190	2340	700	1720.0	N/A	N/A	N/A	5400	4000	1400	3300	2960	N/A	N/A
SW-7	19.5	60.9	31.2	20.7	26.1	41.4	N/A	N/A	N/A	25.6	113.0	50.2	36.3	38.1	70.4	N/A	N/A	420	320	250	280	370	N/A	N/A
SW-8	14.0	23.7	(f)	(f)	19.6	20.6	N/A	N/A	N/A	22.3	42.2	(f)	(f)	37.3	35.2	N/A	N/A	320	(f)	(f)	280	310	N/A	N/A
SW-9	N/A	N/A	N/A	N/A	N/A	21.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	34.2	N/A	N/A	N/A	N/A	N/A	N/A	490	N/A	N/A
SW-10	N/A	N/A	N/A	N/A	N/A	96.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	130.0	N/A	N/A	N/A	N/A	N/A	N/A	520	N/A	N/A
SW-11	N/A	N/A	N/A	N/A	N/A	22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.7	N/A	N/A	N/A	N/A	N/A	N/A	310	N/A	N/A
SW-12	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26	N/A	N/A	N/A	N/A	N/A	N/A	290	N/A	N/A
SW-13	N/A	N/A	N/A	N/A	N/A	15.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.8	N/A	N/A	N/A	N/A	N/A	N/A	280	N/A	N/A
SW-14	N/A	N/A	N/A	N/A	N/A	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75.3	N/A	N/A	N/A	N/A	N/A	N/A	380	N/A	N/A
SW-15	N/A	N/A	N/A	N/A	N/A	47.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	84.1	N/A	N/A	N/A	N/A	N/A	N/A	400	N/A	N/A
BSW-1	N/A	N/A	N/A	N/A	5.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	N/A	N/A	N/A	N/A	N/A	N/A	180	N/A	N/A	N/A
BSW-2	N/A	N/A	N/A	N/A	8.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	168	N/A	N/A	N/A	N/A	N/A	N/A	460	N/A	N/A	N/A
PW-1	8.0	72.7 / 3950	6.6	10.0	3.92	N/A	N/A	N/A	N/A	8.5	2147 / 5800	21.1	19.5	8.7	N/A	N/A	N/A	830 / 848	340	320	260	N/A	N/A	N/A
PW-2	781	720	767	1010	1780	N/A	N/A	N/A	N/A	1900	2640	2070	3300	1610	N/A	N/A	N/A	4500	3800	5000	5200	N/A	N/A	N/A
PW-3	678	400	1320	989	1000	N/A	N/A	N/A	N/A	1950	1140	2000	752	2770	N/A	N/A	N/A	2100	3600	4100	4900	N/A	N/A	N/A
PW-4	193	411	960	439	1680	N/A	N/A	N/A	N/A	602	1770	3010	1030	4370	N/A	N/A	N/A	3300	5000	2300	11000	N/A	N/A	N/A
PW-5	1200	588	1290	1680	957	N/A	N/A	N/A	N/A	4490	2810	4470	9300	3760	N/A	N/A	N/A	4100	7100	9300	8900	N/A	N/A	N/A
PW-6	N/A	144	158	24.6	28	N/A	N/A	N/A	N/A	N/A	149	98.4	150	210	N/A	N/A	N/A	400	380	440	590	N/A	N/A	N/A
PW-7 (e)	N/A	231	203	(g)	218	N/A	N/A	N/A	N/A	N/A	410	329	(g)	323	N/A	N/A	N/A	1200	960	(g)	960	N/A	N/A	N/A
PW-8	N/A	4.7	(f)	(f)	4.21	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	200	(f)	(f)	290	N/A	N/A	N/A

Town of Beekmantown Salt Contamination Investigation
Analytical Data Summary
Exhibit A

Sampling	Sodium (mg/l)									Chloride (mg/l)								Total Dissolved Solids (TDS) (mg/l)						
Location	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	Dec 2018	March 201	June 2019	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	March 201	June 2019	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	arch 201	June 2019
PW-9	N/A	N/A	5.5	5.06	5.17	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	< 3.0	< 3.0	N/A	N/A	N/A	N/A	170	190	160	N/A	N/A	N/A
PW-10	N/A	10.1	(f)	(f)	135	N/A	N/A	N/A	N/A	N/A	9.7	(f)	(f)	12.0	N/A	N/A	N/A	330	(f)	(f)	350	N/A	N/A	N/A
PW-11	N/A	10.3	12.7	9.74	11.8	N/A	N/A	N/A	N/A	N/A	48.8	48.9	40.9	73.0	N/A	N/A	N/A	250	250	240	270	N/A	N/A	N/A
PW-12	N/A	5.2	(f)	(f)	4.89	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	160	(f)	(f)	200	N/A	N/A	N/A
PW-13	N/A	6.0	(f)	(f)	5.49	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	190	(f)	(f)	180	N/A	N/A	N/A
PW-14	N/A	101.0	252.0	21.9	19.6	N/A	N/A	N/A	N/A	N/A	342	663	94.0	33.7	N/A	N/A	N/A	870	1400	470	380	N/A	N/A	N/A
PW-15	N/A	95.8	96.1	183	1630	N/A	N/A	N/A	N/A	N/A	1280	1260	1760	2040	N/A	N/A	N/A	2000	2200	3300	4900	N/A	N/A	N/A
PW-16	N/A	74.7	80.5	81.8	233	N/A	N/A	N/A	N/A	N/A	118	27.2	130	130	N/A	N/A	N/A	600	640	680	580	N/A	N/A	N/A
PW-17	N/A	9.3	(f)	(f)	17.5	N/A	N/A	N/A	N/A	N/A	11.0	(f)	(f)	10.0	N/A	N/A	N/A	220	(f)	(f)	230	N/A	N/A	N/A
PW-18	N/A	82.7	(f)	(f)	7.10	N/A	N/A	N/A	N/A	N/A	228.0	(f)	(f)	5.5	N/A	N/A	N/A	560	(f)	(f)	190	N/A	N/A	N/A
PW-19	N/A	N/A	(f)	(f)	5.49	N/A	N/A	N/A	N/A	N/A	N/A	(f)	(f)	< 3.0	N/A	N/A	N/A	N/A	(f)	(f)	180	N/A	N/A	N/A
PW-20	N/A	5.5	(f)	(f)	10.2	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	190	(f)	(f)	180	N/A	N/A	N/A
PW-21	N/A	8.9	(f)	(f)	8.36	N/A	N/A	N/A	N/A	N/A	20.2	(f)	(f)	21.8	N/A	N/A	N/A	440	(f)	(f)	450	N/A	N/A	N/A
PW-22	N/A	N/A	86.0	87.5	155	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	< 3.0	< 3.0	N/A	N/A	N/A	N/A	220	210	220	N/A	N/A	N/A
PW-23	N/A	5.6	(d)	5.64	5.30	N/A	N/A	N/A	N/A	N/A	<3.0	(d)	4.3	< 3.0	N/A	N/A	N/A	200	(d)	200	190	N/A	N/A	N/A
PW-24	N/A	4.6	(f)	(f)	3.93	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	190	(f)	(f)	160	N/A	N/A	N/A
PW-25	N/A	55.0	61.3	73.1	56.6	N/A	N/A	N/A	120.0	N/A	130	130	173	129	N/A	N/A	250.0	490	490	700	450	N/A	N/A	720.0
PW-26	N/A	N/A	539	108	448	N/A	N/A	N/A	N/A	N/A	N/A	915	1570	2130	N/A	N/A	N/A	N/A	1600	2900	3800	N/A	N/A	N/A
PW-27	N/A	14.6	(f)	(f)	12.0	N/A	N/A	N/A	N/A	N/A	10.3	(f)	(f)	9.2	N/A	N/A	N/A	380	(f)	(f)	360	N/A	N/A	N/A
PW-28	N/A	41.1	(c)	43.6	50.7	N/A	N/A	N/A	N/A	N/A	62.2	(c)	62.4	88.4	N/A	N/A	N/A	560	530	480	520	N/A	N/A	N/A
PW-29	N/A	12.7	(f)	(f)	12.7	N/A	N/A	N/A	N/A	N/A	9.0	(f)	(f)	8.0	N/A	N/A	N/A	310	(f)	(f)	280	N/A	N/A	N/A
PW-30	N/A	4.9	(f)	(f)	4.59	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	190	(f)	(f)	170	N/A	N/A	N/A
PW-31	N/A	N/A	5.1	4.56	4.84	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	< 3.0	< 3.0	N/A	N/A	N/A	N/A	170	180	180	N/A	N/A	N/A
PW-32	N/A	16.4	(f)	(f)	17.6	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	3.1	N/A	N/A	N/A	210	(f)	(f)	210	N/A	N/A	N/A
PW-33	N/A	5.5	(f)	(f)	5.31	N/A	N/A	N/A	N/A	N/A	<3.0	(f)	(f)	< 3.0	N/A	N/A	N/A	190	(f)	(f)	170	N/A	N/A	N/A
PW-34	N/A	22.7	6.6	22.1	37.1	N/A	N/A	N/A	N/A	N/A	265	8.8	158	294	N/A	N/A	N/A	710	360	330	750	N/A	N/A	N/A
PW-35	N/A	48.4	46.3	49.8	45.7	N/A	N/A	N/A	N/A	N/A	70.8	63.5	57.5	62.4	N/A	N/A	N/A	470	420	460	460	N/A	N/A	N/A
PW-36	N/A	N/A	5.5	5.88	6.93	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	3.0	9.2	N/A	N/A	N/A	N/A	170	190	200	N/A	N/A	N/A
PW-37	N/A	N/A	10.1	13.3	7.18	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	5.1	< 3.0	N/A	N/A	N/A	N/A	200	220	180	N/A	N/A	N/A
PW-38	N/A	N/A	9.6	8.88	8.63	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	5.3	< 3.0	N/A	N/A	N/A	N/A	200	270	200	N/A	N/A	N/A
PW-39	N/A	N/A	6.7	6.10	6.59	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	< 3.0	< 3.0	N/A	N/A	N/A	N/A	190	220	190	N/A	N/A	N/A
PW-40	N/A	N/A	82.7	96.8	4.94	N/A	N/A	N/A	N/A	N/A	N/A	< 6.0	< 3.0	< 3.0	N/A	N/A	N/A	N/A	10	200	180	N/A	N/A	N/A
PW-41	N/A	N/A	59.5	221	255	N/A	N/A	N/A	N/A	N/A	N/A	131.0	124	122	N/A	N/A	N/A	N/A	660	630	680	N/A	N/A	N/A
PW-42	N/A	N/A	14.2	16.0	22.2	N/A	N/A	N/A	N/A	N/A	N/A	53.8	83.7	97.9	N/A	N/A	N/A	N/A	260	310	320	N/A	N/A	N/A
PW-43	N/A	N/A	N/A	915	1080	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2740	2550	N/A	N/A	N/A	N/A	N/A	4900	6400	N/A	N/A	N/A
PW-44	N/A	N/A	N/A	50.0	19.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	151	20.7	N/A	N/A	N/A	N/A	N/A	510	240	N/A	N/A	N/A
PW-45	N/A	N/A	N/A	397	446	N/A	N/A	N/A	N/A	N/A	N/A	N/A	616	792	N/A	N/A	N/A	N/A	N/A	1900	1800	N/A	N/A	N/A

Town of Beekmantown Salt Contamination Investigation
Analytical Data Summary
Exhibit A

Sampling	Sodium (mg/l)									Chloride (mg/l)								Total Dissolved Solids (TDS) (mg/l)						
Location	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	Dec 2018	March 201	June 2019	July-2017	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	March 201	June 2019	Sept-2017	Dec-2017	Mar-2018	July-2018	Sept-2018	March 201	June 2019
PW-46	N/A	N/A	N/A	N/A	6.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	N/A	N/A	N/A	N/A	N/A	N/A	190	N/A	N/A	N/A
PW-47	N/A	N/A	N/A	N/A	5.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	N/A	N/A	N/A	N/A	N/A	N/A	190	N/A	N/A	N/A
PW-48	N/A	N/A	N/A	N/A	6.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.0	N/A	N/A	N/A	N/A	N/A	N/A	200	N/A	N/A	N/A
TP-1A	N/A	N/A	1080	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	534	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-1B	N/A	N/A	1380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	617	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-1C	N/A	N/A	1440	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-2A	N/A	N/A	1820	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	265	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-2B	N/A	N/A	845	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	417	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-2C	N/A	N/A	603	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	334	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-3A	N/A	N/A	2090	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	279	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-3B	N/A	N/A	1930	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	254	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-3C	N/A	N/A	666	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-4A	N/A	N/A	1650	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	354	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-4B	N/A	N/A	1370	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	494	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-4C	N/A	N/A	1170	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-5A	N/A	N/A	578	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-5B	N/A	N/A	776	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	313	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TP-5C	N/A	N/A	954	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	591	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PWTDS-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	185	N/A	N/A
PWTDS-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1250	N/A	N/A
PWTDS-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	158	N/A	N/A
PWTDS-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	299	N/A	N/A

Indicates sample exceeds sodium limit of 270 mg/l

Indicates sample exceeds chloride limit of 250 mg/l

Notes:

(a) TW-3 not sampled due to well shutdown for winter

(b) MW-5 not sampled due to bailer damage

(c) Well not located - Owner believes it is below grade

(d) Not accessible due to homeowner not allowing access

(e) Sample grabbed from Sump Pump

(f) Removed from quarterly sampling based on prior test results and NYSDEC approval to test on annual basis (2nd Quarter)

(g) Homeowners were out of town

Test Pit (TP) Sampling Depth is indicated by the suffix: (A)-2' bfg, (B) 4' bfg & (C) 6' bfg (below finish grade)

TW=Town Well; PW=Private Well; SW=Surfacewater Sample;TP=Test Pit Soils Sample; MW=Monitoring Well; BSW=Beekmantown School Well; PWTDS=Private Well Total Dissolved Solids Location

* Indicates a second sample collected by Atlantic Testing Laboratories on July 14, 2017 (first number shown)

Exhibit B

Endyne, Inc.

Environmental

Laboratories-Water

Analysis for Sodium and

Chlorides for PW-25

ENDYNE Inc.
Environmental Laboratories

Laboratory Report

AES Northeast	200034
10 - 12 City Hall Place	
Plattsburgh, NY 12901	
Atten: Erik Falkengren/ Jen Weeks	

PROJECT: PW-25 TDS,Na,Cl
WORK ORDER: **1906-15420**
DATE RECEIVED: June 27, 2019
DATE REPORTED: July 12, 2019
SAMPLER: Erik

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody located at the end of this report.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

This NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory.

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Christina A Lafountain
Laboratory Director Plattsburgh, NY

Laboratory Report

CLIENT: AES Northeast
PROJECT: PW-25 TDS,Na,Cl

WORK ORDER: **1906-15420**
DATE RECEIVED: 6/27/19

001 Site: PW25 Date Sampled: 6/27/19 Time: 9:40

Parameter	Result	Units	Method	Analysis Date/Time		Lab/Tech	NELAC	Qual.
Chloride	250	mg/L	SM21-22 4500-Cl-E(97)	7/5/19	15:34	N JGM	A	
Solids, Total Dissolved	720	mg/L	SM21-23 2540C(97)	7/2/19	13:44	N CL	A	
Sodium, Total	120	mg/L	EPA 200.7	7/11/19		W FAA	A	

Report Summary of Qualifiers and Notes

Samples were received at the laboratory with a temperature of greater than 10 degrees Celsius. Samples must be received in a cooler with sufficient ice to attain a temperature of 10 degrees Celsius or below. Samples must not be frozen. Sample does not meet EPA or NYS ELAP collection requirements. Results may be inaccurate.

Endyne, Inc. - Plattsburgh Lab

LAB USE ONLY
Due Date: 12 Jul 19

315 New York Road
Plattsburgh, NY 12903
Phone (518)563-1720
Fax (518)563-0052
info@endynelabs.com
ELAP #11892

Client: AES Northeast | Account #: 200034

Email Address: erik.folkengren@aesnortheast.com

Contact Person:

Phone:

Mailing Address: 10-12 City Hall Place

City: Plattsburgh State: NY Zip:

Project Name

Quote #

PO #

Fax: Fax or MAIL (+ $3 ea)

Page 1 of 1

SAMPLE SUPPLY INFORMATION

Sample Source: Well, Spring, Surface, Waste, Other

PWS # SPDES#

Collection Address:

City: Beekmantown (per cust.) State: Zip:

Collector's Name: Erik (per cust.)

SAMPLE MATRIX CODES

DW=drinking water; WW=waste water; MW=monitoring well; HW=hazardous waste; SW=Surface Water; SO=solid; SO=soil; SL=sludge

Compliance? Y / N
Mtg / Daycare / Other
Check / Repeat
BWO Samples?

TURNAROUND TIME REQUESTED

Standard

RUSH (Charges Apply)

Lab Manager RUSH Approval:

Sample ID / Collection Site	Date/Time	Chlorine Residual by Client at Collection	Sample Matrix	Grab or Composite	Bottle Type / Vol	Preservation	Analysis Requested: TDS	Cl	Na										Lab Use Only: Sample #
PW25	6/27 9140		DW	G	250mL P	UC	X	X											001
			DW	G	250mL P	HNO3			X	pH<2									

Client Instructions/Comments/Special Requirements:

Samples that the Endyne, Inc Labs are not ELAP accredited for will be subcontracted to a NYS accredited lab.

SAMPLE RECEIPT (Lab Use Only)	Date	Time	Sample Relinquished By (SIGN HERE)	Initials: Samples Received By
On Ice Y (N) N/A	27 Jun 19	1159		
Temperature 26.7° C				
Seal Intact Y N (N/A)				
# of Containers 2				

1906-15420

AES Northeast
PW-25 TDS, Na, Cl

Lab Notes:

Temp > 10
Not Iced

OFFICE USE ONLY
Analysis Fee $ _____ or A/R

Terms are net 30 days with an open, up to date account
Payment Method ☐ Cash ☐ Check ☐ MC/Visa ☐ Money Order Check, MO, Receipt # _____

Exhibit C

National Testing Laboratories, Ltd.- Preliminary Water Quality Analysis for TW-2

Informational Water Quality Report

Watercheck w/PO

Client:
AES Northeast Wayne Ryan 10 City Hall Place Plattsburgh, NY 12901

Ordered By:
Hydrosource 10 City Hall Place Suite 210 Pittsburgh, NY 12901 ATTN: Wayne Ryan

National Testing Laboratories, Ltd.
Quality Water Analysis
6571 Wilson Mills Rd
Cleveland, Ohio 44143
1-800-458-3330

Sample Number: 897394

Location:	TH Well- GW
Type of Water:	
Collection Date and Time:	
Received Date and Time:	4/4/2019 10:10 AM
Date Completed:	5/14/2019

Definition and Legend

This informational water quality report compares the actual test result to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

Primary Standards:	Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.
Secondary standards:	Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor,or color) in drinking water. Individual states may choose to adopt them as enforceable standards.
Action levels:	Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.
mg/L (ppm):	Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.
Minimum Detection Level (MDL):	The lowest level that the laboratory can detect a contaminant.
ND:	The contaminant was not detected above the minimum detection level.
NA:	The contaminant was not analyzed.


The contaminant was not detected in the sample above the minimum detection level.


The contaminant was detected at or above the minimum detection level, but not above the referenced standard.


The contaminant was detected above the standard, which is not an EPA enforceable MCL.


The contaminant was detected above the EPA enforceable MCL.


These results may be invalid.

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
			Microbiologicals			
✓✗	Total Coliform by P/A	Total Coliform and E.coli were ABSENT, however bacteria results may be invalid due to lack of collection information or because sample has exceeded 30 hour holding time.				
			Inorganic Analytes - Metals			
✓	Aluminum	ND	mg/L	0.2	EPA Secondary	0.1
✓	Arsenic	ND	mg/L	0.010	EPA Primary	0.005
✓	Barium	ND	mg/L	2	EPA Primary	0.30
✓	Cadmium	ND	mg/L	0.005	EPA Primary	0.002
●	Calcium	72.3	mg/L	--		2.0
✓	Chromium	ND	mg/L	0.1	EPA Primary	0.010
●	Copper	0.076	mg/L	1.3	EPA Action Level	0.004
✓	Iron	ND	mg/L	0.3	EPA Secondary	0.020
✓	Lead	ND	mg/L	0.015	EPA Action Level	0.002
●	Lithium	0.022	mg/L	--		0.001
●	Magnesium	41.90	mg/L	--		0.10
●	Manganese	0.028	mg/L	0.05	EPA Secondary	0.004
✓	Mercury	ND	mg/L	0.002	EPA Primary	0.001
✓	Nickel	ND	mg/L	--		0.020
●	Potassium	6.0	mg/L	--		1.0
✓	Selenium	ND	mg/L	0.05	EPA Primary	0.020
●	Silica	13.7	mg/L	--		0.1
✓	Silver	ND	mg/L	0.100	EPA Secondary	0.002
●	Sodium	72	mg/L	--		1
●	Strontium	1.090	mg/L	--		0.001
✓	Uranium	ND	mg/L	0.030	EPA Primary	0.001
●	Zinc	0.038	mg/L	5	EPA Secondary	0.004
			Physical Factors			
●	Alkalinity (Total as CaCO3)	280	mg/L	--		20

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
▲	Hardness	350	mg/L	100	NTL Internal	10
✓	pH	7.3	pH Units	6.5 to 8.5	EPA Secondary	
●	Total Dissolved Solids	490	mg/L	500	EPA Secondary	20
▲	Turbidity	1.2	NTU	1.0	EPA Action Level	0.1
			Inorganic Analytes - Other			
✓	Bromide	ND	mg/L	--		0.5
●	Chloride	87.0	mg/L	250	EPA Secondary	5.0
✓	Fluoride	ND	mg/L	4.0	EPA Primary	0.5
✓	Nitrate as N	ND	mg/L	10	EPA Primary	0.5
✓	Nitrite as N	ND	mg/L	1	EPA Primary	0.5
✓	Ortho Phosphate	ND	mg/L	--		2.0
●	Sulfate	28.0	mg/L	250	EPA Secondary	5.0
			Organic Analytes - Trihalomethanes			
✓	Bromodichloromethane	ND	mg/L	--		0.002
✓	Bromoform	ND	mg/L	--		0.004
✓	Chloroform	ND	mg/L	--		0.002
✓	Dibromochloromethane	ND	mg/L	--		0.004
✓	Total THMs	ND	mg/L	0.080	EPA Primary	0.002
			Organic Analytes - Volatiles			
✓	1,1,1,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,1-Trichloroethane	ND	mg/L	0.2	EPA Primary	0.001
✓	1,1,2,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,2-Trichloroethane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,1-Dichloroethane	ND	mg/L	--		0.002
✓	1,1-Dichloroethene	ND	mg/L	0.007	EPA Primary	0.001
✓	1,1-Dichloropropene	ND	mg/L	--		0.002
✓	1,2,3-Trichlorobenzene	ND	mg/L	--		0.002
✓	1,2,3-Trichloropropane	ND	mg/L	--		0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	1,2,4-Trichlorobenzene	ND	mg/L	0.07	EPA Primary	0.002
✓	1,2-Dichlorobenzene	ND	mg/L	0.6	EPA Primary	0.001
✓	1,2-Dichloroethane	ND	mg/L	0.005	EPA Primary	0.001
✓	1,2-Dichloropropane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,3-Dichlorobenzene	ND	mg/L	--		0.001
✓	1,3-Dichloropropane	ND	mg/L	--		0.002
✓	1,4-Dichlorobenzene	ND	mg/L	0.075	EPA Primary	0.001
✓	2,2-Dichloropropane	ND	mg/L	--		0.002
✓	2-Chlorotoluene	ND	mg/L	--		0.001
✓	4-Chlorotoluene	ND	mg/L	--		0.001
✓	Acetone	ND	mg/L	--		0.01
✓	Benzene	ND	mg/L	0.005	EPA Primary	0.001
✓	Bromobenzene	ND	mg/L	--		0.002
✓	Bromomethane	ND	mg/L	--		0.002
✓	Carbon Tetrachloride	ND	mg/L	0.005	EPA Primary	0.001
✓	Chlorobenzene	ND	mg/L	0.1	EPA Primary	0.001
✓	Chloroethane	ND	mg/L	--		0.002
✓	Chloromethane	ND	mg/L	--		0.002
✓	cis-1,2-Dichloroethene	ND	mg/L	0.07	EPA Primary	0.002
✓	cis-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	DBCP	ND	mg/L	--		0.001
✓	Dibromomethane	ND	mg/L	--		0.002
✓	Dichlorodifluoromethane	ND	mg/L	--		0.002
✓	Dichloromethane	ND	mg/L	0.005	EPA Primary	0.002
✓	EDB	ND	mg/L	--		0.001
✓	Ethylbenzene	ND	mg/L	0.7	EPA Primary	0.001
✓	Methyl Tert Butyl Ether	ND	mg/L	--		0.004
✓	Methyl-Ethyl Ketone	ND	mg/L	--		0.01

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Styrene	ND	mg/L	0.1	EPA Primary	0.001
✓	Tetrachloroethene	ND	mg/L	0.005	EPA Primary	0.002
✓	Tetrahydrofuran	ND	mg/L	--		0.01
✓	Toluene	ND	mg/L	1	EPA Primary	0.001
✓	trans-1,2-Dichloroethene	ND	mg/L	0.1	EPA Primary	0.002
✓	trans-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	Trichloroethene	ND	mg/L	0.005	EPA Primary	0.001
✓	Trichlorofluoromethane	ND	mg/L	--		0.002
✓	Vinyl Chloride	ND	mg/L	0.002	EPA Primary	0.001
✓	Xylenes (Total)	ND	mg/L	10	EPA Primary	0.001
			Organic Analytes - Others			
✓	2,4-D	ND	mg/L	0.07	EPA Primary	0.010
✓	Alachlor	ND	mg/L	0.002	EPA Primary	0.001
✓	Aldrin	ND	mg/L	--		0.002
✓	Atrazine	ND	mg/L	0.003	EPA Primary	0.002
✓	Chlordane	ND	mg/L	0.002	EPA Primary	0.001
✓	Dichloran	ND	mg/L	--		0.002
✓	Dieldrin	ND	mg/L	--		0.001
✓	Endrin	ND	mg/L	0.002	EPA Primary	0.0001
✓	Heptachlor	ND	mg/L	0.0004	EPA Primary	0.0004
✓	Heptachlor Epoxide	ND	mg/L	0.0002	EPA Primary	0.0001
✓	Hexachlorobenzene	ND	mg/L	0.001	EPA Primary	0.0005
✓	Hexachlorocyclopentadiene	ND	mg/L	0.05	EPA Primary	0.001
✓	Lindane	ND	mg/L	0.0002	EPA Primary	0.0002
✓	Methoxychlor	ND	mg/L	0.04	EPA Primary	0.002
✓	Pentachloronitrobenzene	ND	mg/L	--		0.002
✓	Silvex 2,4,5-TP	ND	mg/L	0.05	EPA Primary	0.005
✓	Simazine	ND	mg/L	0.004	EPA Primary	0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Total PCBs	ND	mg/L	0.0005	EPA Primary	0.0005
✓	Toxaphene	ND	mg/L	0.003	EPA Primary	0.001
✓	Trifluralin	ND	mg/L	--		0.002

We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.

NATIONAL TESTING LABORATORIES, LTD

Exhibit D

Endyne, Inc.

Environmental

Laboratories-Water

Analysis for TW-2

ENDYNE Inc.
Environmental Laboratories

Laboratory Report

AES Northeast	200034
10 - 12 City Hall Place	
Plattsburgh, NY 12901	
Atten: Erik Falkengren/ Jen Weeks	

PROJECT: 571 Spellman Rd-Part 5 Project
WORK ORDER: **1905-12206**
DATE RECEIVED: May 30, 2019
DATE REPORTED: June 28, 2019
SAMPLER: Erik Falkengren

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody located at the end of this report.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

This NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory.

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Christina A Lafountain
Laboratory Director Plattsburgh, NY

Laboratory Report

CLIENT: AES Northeast
PROJECT: 571 Spellman Rd-Part 5 Project

WORK ORDER: **1905-12206**
DATE RECEIVED: 5/30/19

001 Site: TW2 — Date Sampled: 5/30/19 Time: 8:00

Parameter	Result	Units	Method	Analysis Date/Time		Lab/Tech	NELAC	Qual.
Chloride	120	mg/L	SM21-22 4500-Cl-E(97)	5/31/19		N JGM	A	
Solids, Total Dissolved	490	mg/L	SM 2540C-2011	6/3/19	14:30	N CL	A	
Metals Digestion HNO3-HCl	Digested		EPA 200.7/200.8	6/4/19		W SJM	A	
Sodium, Total	59	mg/L	EPA 200.7	6/13/19		W MGT	A	

002 Site: TW3 — Date Sampled: 5/30/19 Time: 8:10

Parameter	Result	Units	Method	Analysis Date/Time		Lab/Tech	NELAC	Qual.
Chloride	5.7	mg/L	SM21-22 4500-Cl-E(97)	5/31/19		N JGM	A	
Solids, Total Dissolved	380	mg/L	SM 2540C-2011	6/3/19	14:30	N CL	A	
Metals Digestion HNO3-HCl	Digested		EPA 200.7/200.8	6/4/19		W SJM	A	
Sodium, Total	5.7	mg/L	EPA 200.7	6/13/19		W MGT	A	

003 Site: TW1 Pump — Date Sampled: 5/30/19 Time: 10:00

Parameter	Result	Units	Method	Analysis Date/Time		Lab/Tech	NELAC	Qual.
EDB	Attached		EPA 504.1	6/7/19		SNSUB	A	SMB
Chlorinated Acids	Attached		EPA 515.4	6/7/19		SNSUB	A	SMB
CARBAMATES	Attached		EPA 531.1	6/6/19		SNSUB	A	SMB
Organochlorine Pesticides	Attached		EPA 505	6/7/19		SNSUB	A	SMB
Total Coliform	Absent	100mls	SM20,21-23 9223B(04)	5/30/19	11:39	N CL	A	
E. coli	Absent	100mls	SM20,21-23 9223B(04)	5/30/19	11:39	N CL	A	
Chloride	92	mg/L	SM21-22 4500-Cl-E(97)	5/31/19		N JGM	A	
Cyanide	< 0.004	mg/L	EPA 335.4, R.1	6/3/19		N JGM	A	
Fluoride	0.19	mg/L	SM21-23 4500F-D(97)	5/31/19	13:56	N CL	A	
Nitrate as N	< 0.03	mg/L	EPA 353.2, R.2	5/31/19	9:02	N JGM	A	
Nitrite as N	< 0.02	mg/L	EPA 353.2, R.2	5/31/19	9:02	N JGM	A	
Sulfate	30	mg/L	ASTM D516-07,11,16	6/18/19		N JGM	A	
Antimony, Total	< 0.0004	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Arsenic, Total	< 0.0010	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Barium, Total	0.15	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Beryllium, Total	< 0.0003	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Cadmium, Total	< 0.0020	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Chromium, Total	< 0.0050	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Mercury, Total	< 0.0002	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Nickel, Total	0.0017	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Selenium, Total	< 0.0020	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
Sodium, Total	60	mg/L	EPA 200.7	6/4/19		W FAA	A	
Thallium, Total	< 0.0003	mg/L	EPA 200.8	6/5/19	11:56	W SJM	A	
TRIHALOMETHANES			EPA 524.2	6/4/19		W EEP		
Chloroform	< 0.5	ug/L	EPA 524.2	6/4/19		W EEP	A	
Bromodichloromethane	< 0.5	ug/L	EPA 524.2	6/4/19		W EEP	A	
Dibromochloromethane	< 0.5	ug/L	EPA 524.2	6/4/19		W EEP	A	
Bromoform	< 0.5	ug/L	EPA 524.2	6/4/19		W EEP	A	
Total Trihalomethanes	< 2.0	ug/L	EPA 524.2	6/4/19		W EEP	A	
Surr. 1 (4-Bromofluorobenzene)	95	%	EPA 524.2	6/4/19		W EEP	A	
Surr. 2 (1,2-Dichlorobenzene d4)	98	%	EPA 524.2	6/4/19		W EEP	A	
SEMI-VOLATILE ORGANICS			EPA 525.2	6/7/19		W EEP		
525.2 Extraction	Completed		EPA 525.2	6/5/19		W KAS	A	
Hexachlorocyclopentadiene	< 0.1	ug/L	EPA 525.2	6/7/19		W EEP	A	
Propachlor	< 1.0	ug/L	EPA 525.2	6/7/19		W EEP	A	
Hexachlorobenzene	< 0.1	ug/L	EPA 525.2	6/7/19		W EEP	A	

Laboratory Report

CLIENT: AES Northeast
PROJECT: 571 Spellman Rd-Part 5 Project

WORK ORDER: **1905-12206**
DATE RECEIVED: 5/30/19

Simazine	< 0.1	ug/L	EPA 525.2	6/7/19	W EEP	A
Atrazine	< 0.1	ug/L	EPA 525.2	6/7/19	W EEP	A
Metribuzin	< 2.0	ug/L	EPA 525.2	6/7/19	W EEP	A
Alachlor	< 0.2	ug/L	EPA 525.2	6/7/19	W EEP	A
Metolachlor	< 1.0	ug/L	EPA 525.2	6/7/19	W EEP	A
Butachlor	< 1.0	ug/L	EPA 525.2	6/7/19	W EEP	A
Bis(2-ethylhexyl)adipate	< 0.6	ug/L	EPA 525.2	6/7/19	W EEP	A
Bis(2-ethylhexyl)phthalate	< 2.0	ug/L	EPA 525.2	6/7/19	W EEP	A
Benzo(a)pyrene	< 0.05	ug/L	EPA 525.2	6/7/19	W EEP	A
Surrogate 1	94	%	EPA 525.2	6/7/19	W EEP	A
Surrogate 2	92	%	EPA 525.2	6/7/19	W EEP	A
Surrogate 3	103	%	EPA 525.2	6/7/19	W EEP	A

Report Summary of Qualifiers and Notes

SMB: Analysis performed by subcontracted laboratory, Microbac Laboratory Inc. Dayville, CT, VT/NH/NY 11549. Results are presented here for your convenience. Refer to the complete subcontracted report, which has been appended to this report, for detailed information regarding this result.

Endyne, Inc. - Plattsburgh Lab

LAB USE ONLY
Due Date: 13JUN19

315 New York Road
Plattsburgh, NY 12903
Phone (518)563-1720
Fax (518)563-0052
info@endynelabs.com
ELAP #11892

Client: AES | Account #: 200034 | SAMPLE SUPPLY INFORMATION

Email Address: on file | Sample Source: Well, Spring, Surface, Waste, Other

Contact Person: Erik | Project Name | PWS # | SPDES#

Phone: | | Collection Address: 571 Spellman Rd

Mailing Address: | Quote #

City: State: Zip: | PO # | City: West Chazy State: NY Zip: 12992

Fax: Fax or MAIL (+ $3 ea) | Page 1 of 2 | Collector's Name: Erik Falkengren

SAMPLE MATRIX CODES
DW=drinking water; WW=waste water; MW=monitoring well; HW=hazardous waste; SW=Surface Water; SD=solid; SO=soil; SL=sludge

Compliance? Y / N
Mtg / Daycare / Other
Check / Repeat
BWO Samples?

TURNAROUND TIME REQUESTED
Standard X
RUSH (Charges Apply)
Lab Manager RUSH Approval:

Sample ID / Collection Site	Date/Time	Chlorine Residual by Client at Collection	Sample Matrix	Grab or Composite	Bottle Type / Vol	Preservation	Analysis Requested: NA*	C, TDS	EPA 515 QC	EPA 531 QC	EPA 504 QC	EPA 605 QC	TCEC	NO2/NO3	Sodium	Chloride	EPA 524 QB	tabulate	Lab Use Only Sample #
TW2	5/30 ~~8:00AM~~	N/A	DW	G	250mL	NA	X	X											001
TW3	5/30 8:00AM	↓	DW	G	250mL	NA	X	X											002
TW1 Pump	5/30 10:00	↓	DW	G	120mL	Thio							X						003
		↓	↓	↓	100mL	NA								X		X			003
		↓	↓	↓	500mL	HNO3 *1									X			X	003
																			003

Client Instructions/Comments/Special Requirements:

See notes on next page for testing parameters per Erik Amberg

Samples that the Endyne, Inc Labs are not ELAP accredited for will be subcontracted to a NYS accredited lab. Initials

SAMPLE RECEIPT (Lab Use Only)		Date	Time	Sample Relinquished By (SIGN HERE)	Samples Received By
On Ice	Y (N) N/A	30May19	1024		Brittany Brown
Temperature	8.1°C				
Seal Intact	Y N (N/A)				
# of Containers	22				

Lab Notes:

ENTERED

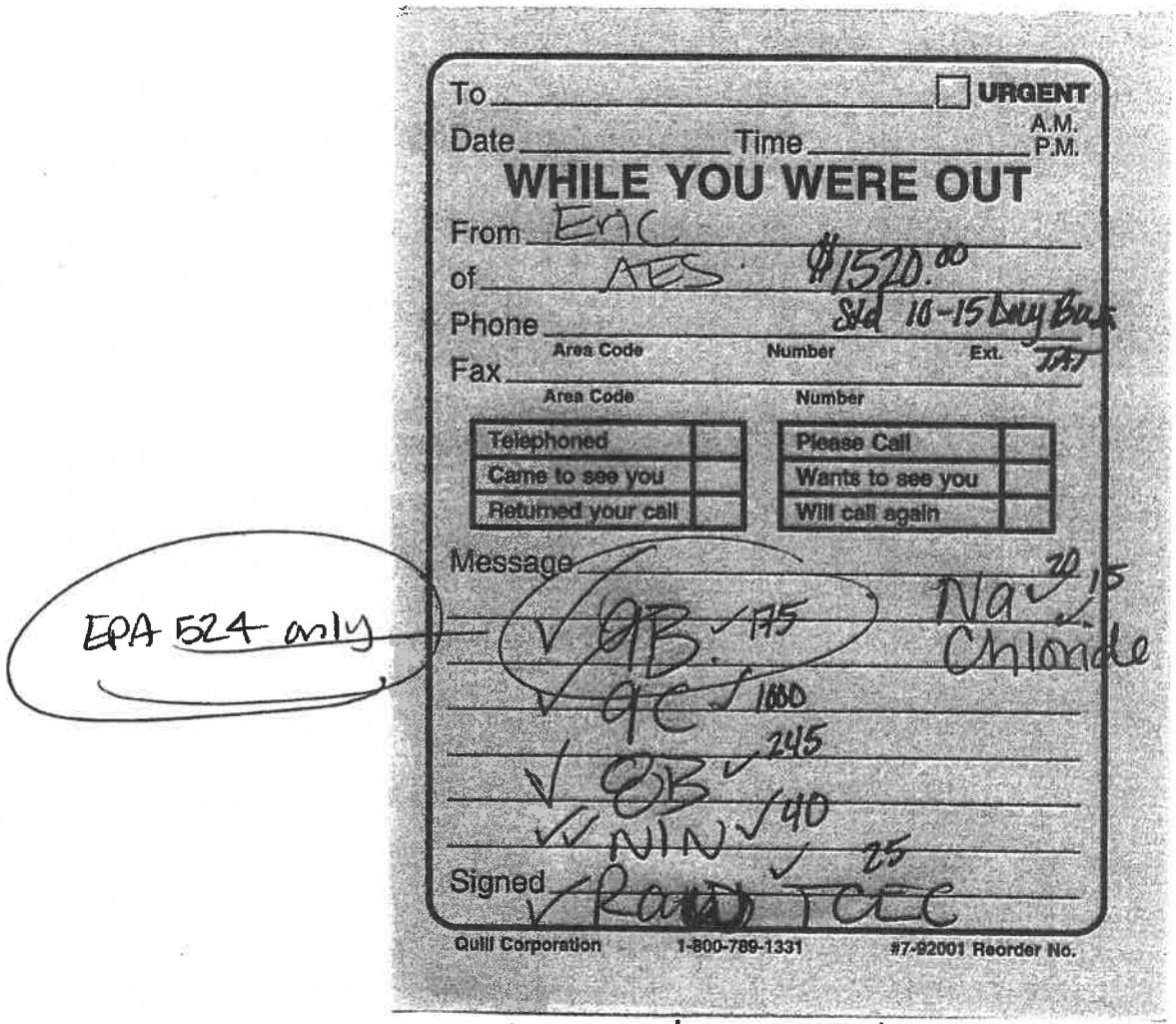
1905-12206

1905-12206

AES Northeast
571 Spellman Rd-Part 5 Project

OFFICE USE ONLY
Analysis Fee $_____ or A/R

Terms are net 30 days with an open, up to date account
Payment Method ☐ Cash ☐ Check ☐ MC/Visa ☐ Money Order Check, MO, Receipt # _____



To _____ ☐ URGENT

Date _____ Time _____ A.M. P.M.

WHILE YOU WERE OUT

From ERC

of AES $1520.00

Phone _____ Std 10-15 Day Bac

Area Code Number Ext. TAT

Fax _____

Area Code Number

Telephoned		Please Call	
Came to see you		Wants to see you	
Returned your call		Will call again	

Message

EPA 524 only

✓ QB ✓175

✓ QC ✓180

✓ EB ✓245

✓✓ NIN ✓40

Signed ✓ Rand ✓25 TCLC

Na ✓20 ✓15 Chloride

Quill Corporation 1-800-789-1331 #7-92001 Reorder No.

Added Sulfate to WO

page 2 of 2

MICROBAC

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D9F0413

Endyne, Inc. - Plattsburgh

Chris Lafountain
315 New York Road
Plattsburgh, NY 12903

Project Name: 1905-12206-003

Project / PO Number: 1905-12206-003
Received: 06/05/2019
Reported: 06/28/2019

Case Narrative

The temperature of sample(s) was 7.6°C upon receipt at the laboratory. The accepted temperature range is ≤ 6 °C for chemistry analyses and ≤ 10 °C for microbiology analyses.

Analytical Testing Parameters

Client Sample ID: 1905-12206-003
Sample Matrix: Drinking Water
Lab Sample ID: D9F0413-01
Collected By: Customer
Collection Date: 05/30/2019 10:00

Herbicides - GC/ECD	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 515.3, Rv 1.0								
2,4-D	<0.100	70 MCL	0.100	ug/L		06/07/19 0900	06/21/19 0108	MRB
Dalapon	<1.00	200 MCL	1.00	ug/L		06/07/19 0900	06/21/19 0108	MRB
Dicamba	<0.100		0.100	ug/L		06/07/19 0900	06/21/19 0108	MRB
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	<0.200	7 MCL	0.200	ug/L		06/07/19 0900	06/21/19 0108	MRB
Pentachlorophenol	<0.0400	1 MCL	0.0400	ug/L		06/07/19 0900	06/21/19 0108	MRB
Picloram	<0.100	500 MCL	0.100	ug/L		06/07/19 0900	06/21/19 0108	MRB
2,4,5-TP (Silvex)	<0.200	50 MCL	0.200	ug/L		06/07/19 0900	06/21/19 0108	MRB
Surrogate: 2,4-Dichloropenylacetic acid	99.3	Limit: 70-130		% Rec		06/07/19 0900	06/21/19 0108	MRB

Pesticides and Polychlorinated Biphenyls (PCBs) - GC/ECD	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 505, Rv 2.1								
Alachlor	<0.200	2 MCL	0.200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aldrin [2C]	<0.0500		0.0500	ug/L		06/06/19 1100	06/07/19 0117	MRB
gamma-BHC (Lindane) [2C]	<0.0200	0.2 MCL	0.0200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Chlordane (tech.) [2C]	<0.200	2 MCL	0.200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Dieldrin [2C]	<0.0200	0.2 MCL	0.0200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Endrin [2C]	<0.0100	2 MCL	0.0100	ug/L		06/06/19 1100	06/07/19 0117	MRB
Heptachlor [2C]	<0.0200	0.400 MCL	0.0200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Heptachlor epoxide [2C]	<0.0200	0.2 MCL	0.0200	ug/L		06/06/19 1100	06/07/19 0117	MRB
Hexachlorobenzene [2C]	<0.0500	1 MCL	0.0500	ug/L		06/06/19 1100	06/07/19 0117	MRB
Hexachlorocyclopentadiene [2C]	<0.100	50 MCL	0.100	ug/L	M2	06/06/19 1100	06/07/19 0117	MRB
Methoxychlor [2C]	<0.0500	40 MCL	0.0500	ug/L		06/06/19 1100	06/07/19 0117	MRB
Toxaphene [2C]	<1.00	3 MCL	1.00	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1016 (PCB-1016) [2C]	<0.0800		0.0800	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1221 (PCB-1221) [2C]	<20.0		20.0	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1232 (PCB-1232) [2C]	<0.500		0.500	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1242 (PCB-1242) [2C]	<0.300		0.300	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1248 (PCB-1248) [2C]	<0.100		0.100	ug/L		06/06/19 1100	06/07/19 0117	MRB
Aroclor-1254 (PCB-1254) [2C]	<0.100		0.100	ug/L		06/06/19 1100	06/07/19 0117	MRB

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D9F0413

Client Sample ID:	1905-12206-003		
Sample Matrix:	Drinking Water	**Collected By:**	Customer
Lab Sample ID:	D9F0413-01	**Collection Date:**	05/30/2019 10:00

Pesticides and Polychlorinated Biphenyls (PCBs) - GC/ECD	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Aroclor-1260 (PCB-1260) [2C]	<0.100		0.100	ug/L		06/06/19 1100	06/07/19 0117	MRB
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	87.0	Limit: 70-130		% Rec		06/06/19 1100	06/07/19 0117	MRB
Surrogate: 2,4,5,6-Tetrachloro-m-xylene [2C]	85.0	Limit: 70-130		% Rec		06/06/19 1100	06/07/19 0117	MRB

Semi-Volatile Organic Compounds - GC/ECD	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 504.1, Rv 1.1								
1,2-Dibromo-3-chloropropane (DBCP) [2C]	<0.0100	0.200 MCL	0.0100	ug/L		06/06/19 1300	06/07/19 1343	MRB
1,2-Dibromoethane (Ethylene dibromide, EDB) [2C]	<0.0100	0.0500 MCL	0.0100	ug/L		06/06/19 1300	06/07/19 1343	MRB
Surrogate: 2,4,5,6-Tetrachloro-m-xylene [2C]	127	Limit: 70-130		% Rec		06/06/19 1300	06/07/19 1343	MRB

Semi-Volatile Organic Compounds - HPLC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 531.2, Rv 1.0								
Aldicarb sulfoxide	<0.500		0.500	ug/L		06/06/19 0919	06/06/19 2030	RSD
Aldicarb sulfone	<0.800		0.800	ug/L		06/06/19 0919	06/06/19 2030	RSD
Oxamyl	<2.00	200 MCL	2.00	ug/L		06/06/19 0919	06/06/19 2030	RSD
Methomyl (Lannate)	<0.500		0.500	ug/L		06/06/19 0919	06/06/19 2030	RSD
3-Hydroxycarbofuran	<0.500		0.500	ug/L		06/06/19 0919	06/06/19 2030	RSD
Aldicarb (Temik)	<0.500		0.500	ug/L		06/06/19 0919	06/06/19 2030	RSD
Carbofuran (Furaden)	<0.900	40 MCL	0.900	ug/L		06/06/19 0919	06/06/19 2030	RSD
Carbaryl (Sevin)	<0.500		0.500	ug/L		06/06/19 0919	06/06/19 2030	RSD
Surrogate: 4-Bromo-3,5-dimethylphenyl-N-methylcarbamate	100	Limit: 70-130		% Rec		06/06/19 0919	06/06/19 2030	RSD

*Results in **bold** have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.*

Definitions

M2:	Matrix spike recovery is below acceptance limits.
MCL:	US EPA Maximum Contaminant Level
RL:	Reporting Limit

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville	
11549	New York State Department of Health

MICROBAC

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D9F0413

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Melisa L. Montgomery
QA Officer
Reported: 06/28/2019 10:14

Endyne - Plattsburgh

Endyne, Inc.

315 New York Road
Plattsburgh, NY 12903
Phone (518)563-1720

Fax
Info
ELAP #11892

E ONLY
te:
L-Premier

Client: Endyne, Inc	Bill To: Endyne, Inc	SAMPLE SUPPLY INFORMATION
Email Address: EndyneP@yahoo.com	315 New York Rd	Other Pertinent Sample Information:
Contact Person: Chris Lafountain	Plattsburgh, NY 12903	
Phone: 518-563-1720		* New York State Sample. Please report to NYS MDL *
Mailing Address: 315 New York Road	Quote #	
City Plattsburgh State: NY Zip: 12903	PO #	
Fax: 518-563-0052	Page 1 of 1	SPDES or PWS Number:

SAMPLE MATRIX CODES
DW=drinking water SW=Surface Water
WW=waste water SD=solid
MW=monitoring well SO=soil
HW=hazardous waste SL=sludge

Compliance? (Y) N

TURNAROUND TIME REQUESTED
Standard XXXXX
RUSH
Special

Sample ID / Collection Site	Date/Time	Chlorine Residual by Client at Collection	Sample Matrix	Grab or Composite	Bottle Type / Vol	Preservation	Analysis Requested: EPA 524	EPA 525	EPA 515	EPA 531	Lab Use Only: Sample #
1905-12206-003	30 May 19 1000		DW	G	2x40	Thio	X				
			DW	G	2x40	Thio		X			
			DW	G	3x40A	Thio			X		
			DW	G	2x40A	XDO				X	

Client Instructions/Comments/Special Requirements: E-mail Results to EndyneP@yahoo.com

PLEASE REPORT BY NYS ACCREDITED METHOD, WITHIN CALIBRATION RANGE, AS PER NYS ELAP

SAMPLE RECEIPT (Lab Use Only)	Date	Time	Sample(s) Relinquished By (SIGN HERE)	Samples Received By
On Ice (Y) N N/A	03 Jun 19	1030	Amber Keen	UPS
Temperature C			Amber A. St. Peter	
Seal Intact Y N (N/A)			Cathy Cook	6-5-19 1045
# of Containers 9				

Lab Notes:

WO# 1905-12206

7.6° IR0

OFFICE USE ONLY
Analysis Fee $_ (AVR) ☐ Cash ☐ Check ☐ MO/Visa ☐ Money Order Check, MO, Receipt #

Sample Subcontract Terms
(READ BEFORE LOGGING SAMPLES INTO LIMS)

Date: 03 Jun 19

Samples: 1905-12206

Endyne, Inc agrees to subcontract these samples to Microbac - Premier under the following conditions:

The samples in this cooler are from New York State! Analysis must be in accordance with **NY ELAP**, including but not limited to accreditation, holding times, bottle/temperature/preservation requirements, calibration requirements, required NY reporting limits, and qualifiers. Please notify Endyne immediately if these conditions can not be met for the enclosed samples.

Assume that all of the analysis requested in this subcontract work order is for compliance monitoring. ALL tests must be run according to NELAC and NY ELAP regulations and by labs that are currently NYS accredited to run those tests. **No sample may be subcontracted to another lab** without the **written** consent of Endyne, Inc and must not be sent to a lab that is not NY ELAP approved for that testing.

In the event that an instrument is out of service, or another problem occurs, please contact us immediately. To arrange for the subcontracting of any of these tests, call us at (518) 563-1720 **and** fax this form to (518) 563-0052 with the testing information filled out below. This form must be signed and returned by Endyne staff before any samples may be subcontracted.

By logging these samples into LIMS, you are acknowledging that you have read and understand these requirements. Endyne reserves the right to refuse payment to the subcontract lab if these conditions are not met, as our data would not be usable to our client.

Sample ID #	Tests Requesting to Subcontract	Subcontract Lab	Endyne Staff Signature

Exhibit E

Hydrosource Associates, Inc.-Analysis and Report of Findings of Testing of Well TW-2

HydroSource Associates, Inc.
Post Office Box 609 • 50 Winter Street • Ashland, NH 03217
Telephone: (603) 968-3733 • Fax: (603) 968-7605
www.teamhydrosource.com

June 12, 2019

Mr. Samuel R. Dyer, Town Supervisor
Beekmantown Town Hall
571 Spellman Rd
West Chazy, NY 12992

Dear Mr. Dyer:

This letter accompanies our report on the recent 72-hour pumping test done on the Town Hall well, which is referred to as Well TW-1 in the report. The purpose of the test was to determine the capability of the well to supply water to a set of nearby homes whose wells have been affected by salt contamination, while still meeting the needs of the Town Hall itself. The pumping test was carried out by Mike Parsons and personnel of AES Northeast. Based on the results of the test, it appears likely that Well TW-1 will be able to satisfy the demand AES Northeast is projecting for the planned system. However, the Town should be aware of the risk that the increased demand could result in rising chloride levels in Well TW-1. There is also a risk that the proposed new use of the well could produce changes in the water table that have unexpected consequences on the distribution of the contaminant plume. Please let me know if you have questions.

Sincerely yours,

Fred E. Bickford

cc: Wayne Ryan, AES Northeast

DRAFT
Hydrogeological Report
Proposed New Groundwater Source
Town of Beekmantown, New York,

June 12, 2019

Introduction

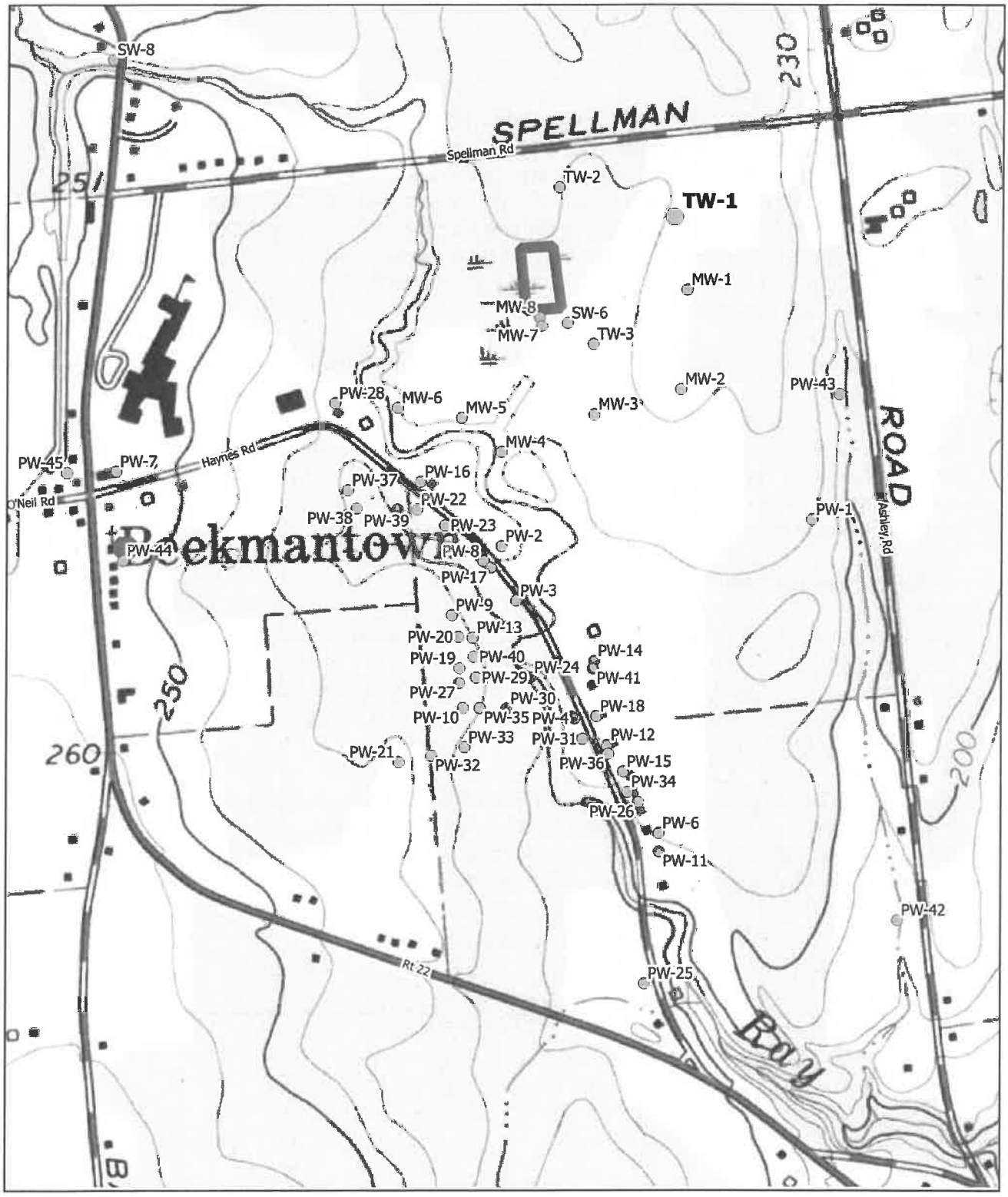
This is a hydrogeological report on a well that is to be used as a public water supply in Beekmantown. This well has been used as the water source for the Beekmantown Town Hall for many years. Domestic wells serving 10 homes near the Town Hall have been affected by salt contamination in recent years, and the Town proposes to use the Town Hall well, named Well TW-1, to supply these homes on a temporary basis while it works to obtain the funding needed to develop a permanent solution to the contamination problem. The temporary system is expected to be used for two to three years.

The Town hired HydroSource Associates to look for promising sites for a supply well for a public water supply that would be far enough upgradient from the salt contamination to have minimal contamination risk. A hydrogeological assessment of the contaminated area and proposed locations for new well development were described in HSA's report dated 5/30/18. The Town decided not to try to develop a well at any of these sites until it could find funding for the project, and the purpose of this project is to provide a supply for some of the most-affected homeowners until the larger project can be funded.

Measurements made by AES Northeast, the Town's engineering consultants, indicate that Town Hall usage of the well averages 200 gallons per day. Assuming that the average home has 2.5 bedrooms, and that water consumption amounts to 70 gallons per day per bedroom, AES estimated that average daily demand is likely to be about 2,160 gallons per day, or 1.5 gallons per minute (gpm).

Monitoring Program

AES Northeast has been monitoring levels of chloride, sodium, and total dissolved solids in a group of more than 40 wells in and near the area affected by salt contamination. A series of quarterly monitoring rounds have been carried out, the first in July of 2017. The purpose of the monitoring has been to characterize the contamination as part of the process of coming up with a solution. Figure 1 is a map showing the location of Well TW-1, the site of the salt storage pile, and wells monitored as part of the salt contamination monitoring program.



Legend

- Well TW-1
- Wells monitored for chloride
- Salt storage area

0 500 ft

N

Figure 1 - Location Map

Well TW-1

Well TW-1 construction details were not available when the decision was made to consider using the well to supply the homes whose wells had been impacted by the salt contamination. Mike Parsons, the drill contractor responsible for testing the well, sounded it after he removed the Town's pump from the well, so it is known that the depth is 100 feet. The well is completed in the Beekmantown limestone. Presumably the depth to bedrock is similar to that of nearby wells, probably no more than 20 feet. We do not know how much casing was installed, how far the casing goes into bedrock, or whether the casing was grouted in place.
insert figure 1 - location map

An informal test of the well was conducted by the drill contractor on May 20. During that test, the driller could hear water cascading into the well when the water level reached 55 feet. He estimated that this fracture zone occurred in the depth range from 55 to 57 feet. He could hear increased inflow at a deeper level, and he estimated that an additional water-bearing zone exists between 65 and 70 feet. Although these estimates are imprecise, it is at least reasonable to conclude that the top of the uppermost fracture zone is near 55 feet, where he first noticed the sound of cascading water.

72-Hour Pumping Test

The test started at 8:10 on the morning of May 27. A transducer had been installed in Well TW-1 the night before pumping started. Water level measurements were made using only the transducer, not a Solinst-type electronic probe. Since the transducer remained in place throughout the monitoring period and could not be downloaded from the surface, the water level was unknown while the test was underway.

Weather - Weather information came from the weather station maintained at the Beekmantown High School (KNYPLATT4), as reported by Weather Underground. Figure 2 is a graph of the precipitation rate during the monitoring period, with a table of daily accumulations. Rain totaling 0.23 inches fell in the first part of the day before the test began. A second storm with total accumulation of 0.33 inches occurred on the morning of the second day of the test.

Figure 2 - Precipitation

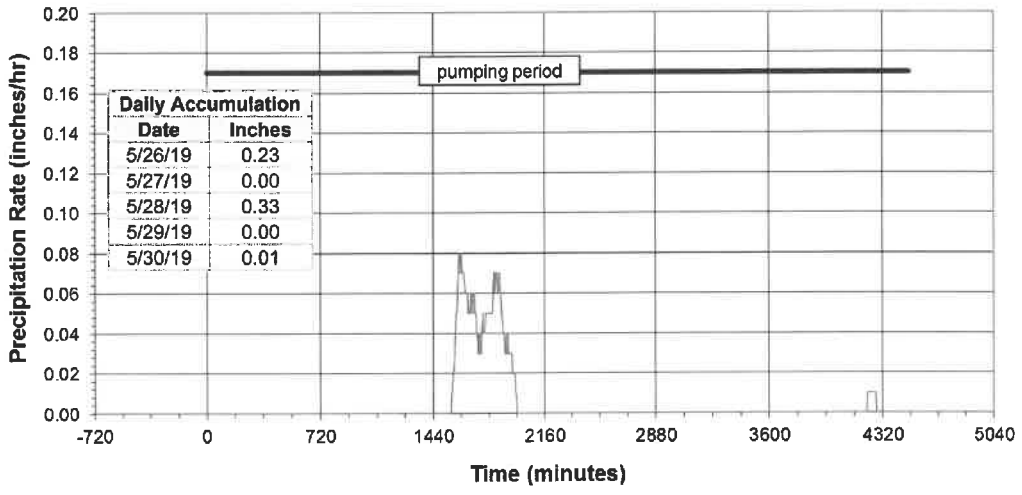
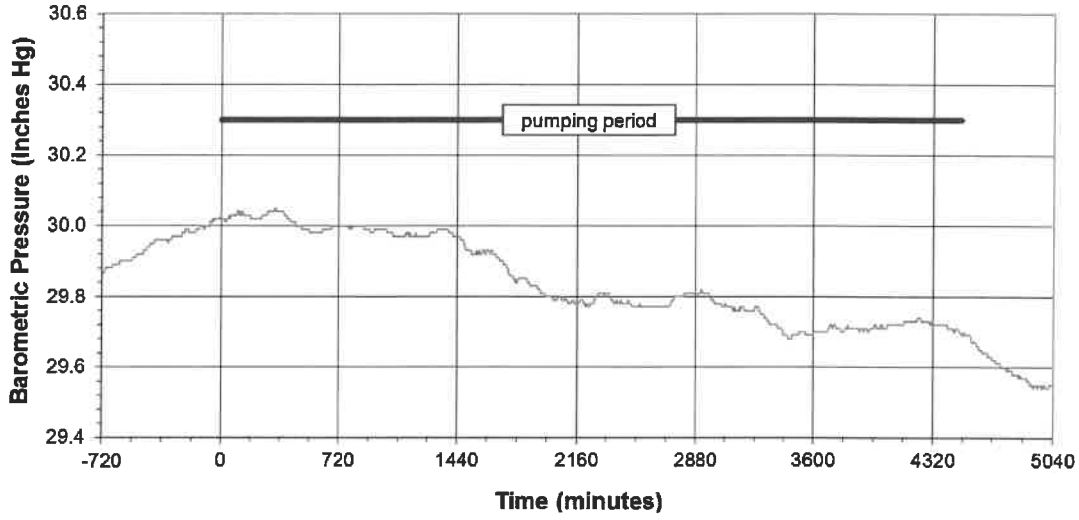


Figure 3 is a graph of barometric pressure. The pressure data was used to make a barometric correction of the data from the transducer used to measure water levels in Well TW-1.

Figure 3 - Barometric Pressure



Monitoring Points - Water levels were measured manually in a collection of seven additional wells near TW-1. All of these wells had been part of the program of quarterly sampling for chloride contamination. Figure 4 shows the locations of all the wells monitored during the test. Table 1 lists the wells monitored during the test, and gives their distance from the pumping well.

Table 1 - Monitoring Points

Well	Dist. (ft)
TW-1	-
MW-1	389
TW-2	640
TW-3	799
MW-2	911
MW-7	913
MW-3	1123
MW-4	1543

Monitoring Schedule - Water levels were measured in the hand-monitored wells frequently during the early hours of the pumping test. Measurements were made three times a day in each well on the second and third days of the test. Frequent measurements were made on the first day of the recovery period. Well water levels shown in the following series of graphs represent measurements made from the top of the well casing, which is generally one to two feet above ground surface.

Figure 4 - Monitoring Points

Flow Rate - The target pumping rate chosen for the 72-hour test was 3.5 gallons per minute (gpm). The driller was responsible for monitoring the flow rate, and maintaining the rate within 5% of 3.5 gpm. However, he was not continuously present at the site after the first eight hours of the test, and AES Northeast employees checked the rate and adjusted the valve as necessary during periodic visits to the site. The flow rate had a tendency to decline over time, as the water level declined in response to pumping, and the pump had to work harder to pump the same volume of water. Flow rates were not monitored overnight, and there were many multi-hour periods when the rate was not checked. Consequently, the flow rate declined more than 5% on several occasions, sometimes declining as much as 25%.

An AES Northeast employee was responsible for shutting down the test at the end of 72 hours. When he arrived on the morning of May 30 shortly before the planned end of the test, he found that the flow rate had fallen to 2.6 gpm. Rather than terminate the test when the flow rate was so far below the intended rate, he increased the flow rate back to 3.5 gpm, and then allowed the pump to continue running until 11:00 before shutting the pump down. The total pumping time was thus 4,490 minutes, rather than the planned 4,320 minutes.

Well TW-1 Observations - Figure 5 shows water levels in Well TW-1 during the monitoring period for the 72-hour test. In addition to water levels in the well (continuous magenta line), the graph shows the flow rate at selected times during the pumping period (black diamond points). Water levels are read from the scale at the left side of the graph. Flow rates are read from the scale at the right-hand side. Flow rate readings also are presented in tabular form at the right edge of the graph.

Considering the variation of flow rates over the course of the test, the flow rate was maintained at 3.5 gpm during the first 10 hours of the test (the end of that period being marked by the first flow rate point on the graph, at 615 minutes). After that, the site was unattended until a check was made on Tuesday afternoon (1,785 minutes), when the rate had declined to about 2.7 gpm. The rate was returned to 3.5 gpm, but following each upward adjustment, the flow rate gradually declined again, which resulted in a corresponding rebound in water levels. The final set of four flow-rate points marks the flow rate measurements and adjustments made by the AES Northeast employee on the final morning of the test, between 7:30 (4,280 minutes) when he found the rate at 2.6 gpm, and 9:19 (4,389) when he succeeded in returning the rate to 3.5 gpm after making several adjustments.

The flow meter showed that a total of 14,449 gallons was pumped during the test. Since the test lasted 4,490 minutes, the average flow rate over the course of the test was 3.2 gpm.

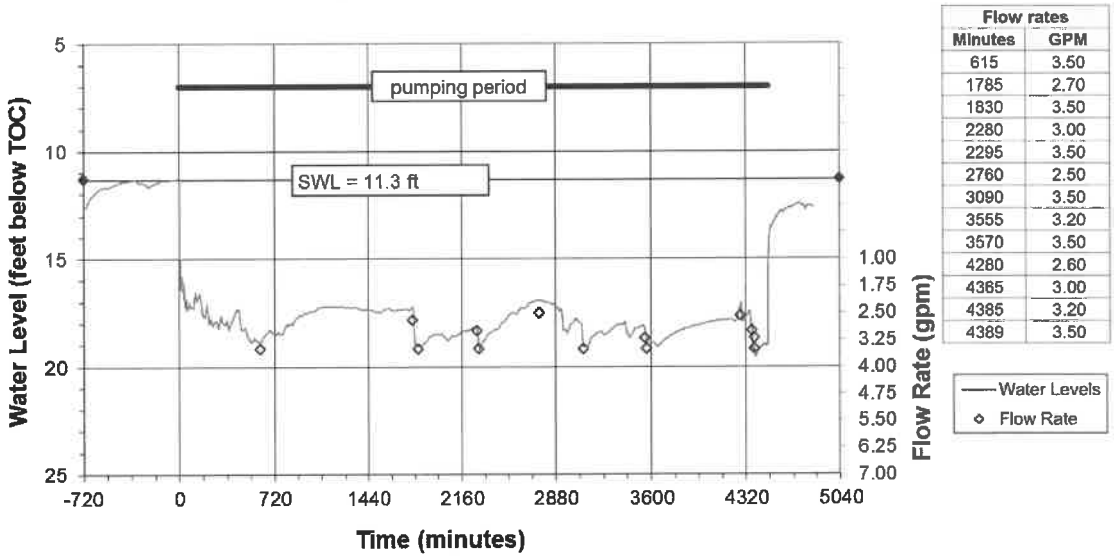
The water level in Well TW-1 was 11.3 feet below the measuring point. When the test started, the water level fell to approximately 15 feet within the first few minutes. It then continued a generally steady decline to about 19 feet 10 hours into the test. After that, the water level gradually rebounded in response to the decline of the flow rate in the absence of human intervention to adjust the valve. The level then stabilized until the flow rate was adjusted around 14:00 on the second afternoon of the test. The remainder of the pumping period shows a repetition of this pattern, as a series of flow rate declines were accompanied by a water level rebound. The deepest water level recorded near the end of the pumping period was 19.55 feet, at

9:23 on Thursday morning. Using the average flow rate of 3.2 gpm, this results in a 73-hour specific capacity of 0.39 gpm/ft.

It is not clear that the rain event on the second day of the test had any influence on water levels in the limestone aquifer, based on inspection of Figure 5. The water level fluctuations caused by the varying flow rate overwhelm any rain-induced water table changes.

When the pump was shut off, the water level rebounded by about 5 feet in the first 10 minutes. After that, the recovery was more gradual, and when recovery measurements terminated after about six hours, the water level was still about 2.5 feet lower than it had been when the test started. Although this is not promising behavior, it has to be remembered that the test was not actually run at a constant rate; a prolonged period of pumping at less than 3 gpm was followed by a brief period of pumping at 3.5 gpm, and this complicates interpretation of the recovery curve. A comparison of drawdown and recovery at corresponding times appears more promising. The first 240 minutes of pumping Well TW-1 produced drawdown of 6.51 feet. The first 240 minutes of recovery produced a water level rebound of 6.56 feet. Overall, this may suggest there is a lower risk that the well would decline in yield.

Figure 5 - Water Levels in Well TW-1



Flow rates	
Minutes	GPM
615	3.50
1785	2.70
1830	3.50
2280	3.00
2295	3.50
2760	2.50
3090	3.50
3555	3.20
3570	3.50
4280	2.60
4365	3.00
4385	3.20
4389	3.50

Figure 6 is a semilog plot of pumping-period water levels, with time plotted using a logarithmic axis. Although the data is somewhat "noisy" because of the variations produced by the variable pumping rate, inspection of the graph shows that a generally linear trend developed during the first thousand minutes of the test. The graph at least suggests a shallowing trend after 1,000 minutes, but the spikiness of the data makes it difficult to say for sure.

Figure 6 - TW-1 Pumping Period Water Levels

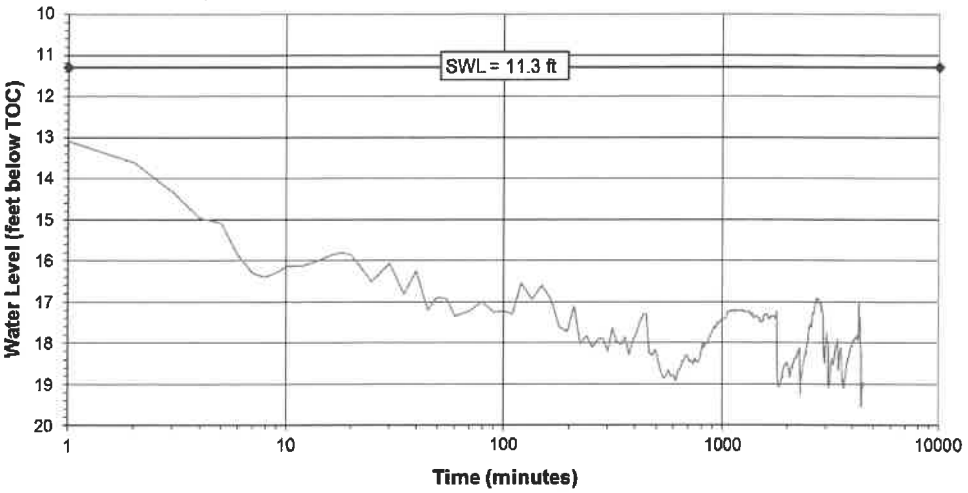


Figure 7 is a semilog graph of recovery water levels, in terms of minutes since the pump was shut off. The slope of the recovery curve is similar to that of the drawdown curve of Figure 6.

Figure 7 - TW-1 Recovery Water Levels

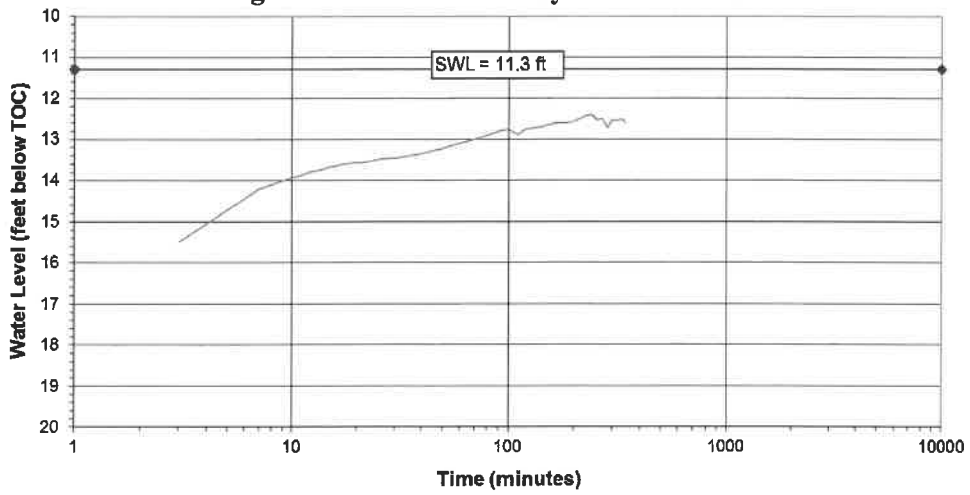


Figure 8 is a semilog graph comparing the drawdown trend with the recovery trend. To produce this graph, the graph of Figure 6 was used as the base, and the recovery water levels were adjusted by inverting the curve and adding an arbitrary offset value to produce the best match of the trends for the time from 10 minutes to 300 minutes. The graph shows that recovery performance was a close match for drawdown performance, after accounting for the spikes in the drawdown data caused by flow rate adjustments. By this measure, recovery performance could be judged as adequate, for the average flow rate of 3.2 gpm.

Figure 8- Comparison of Drawdown and Adjusted Recovery

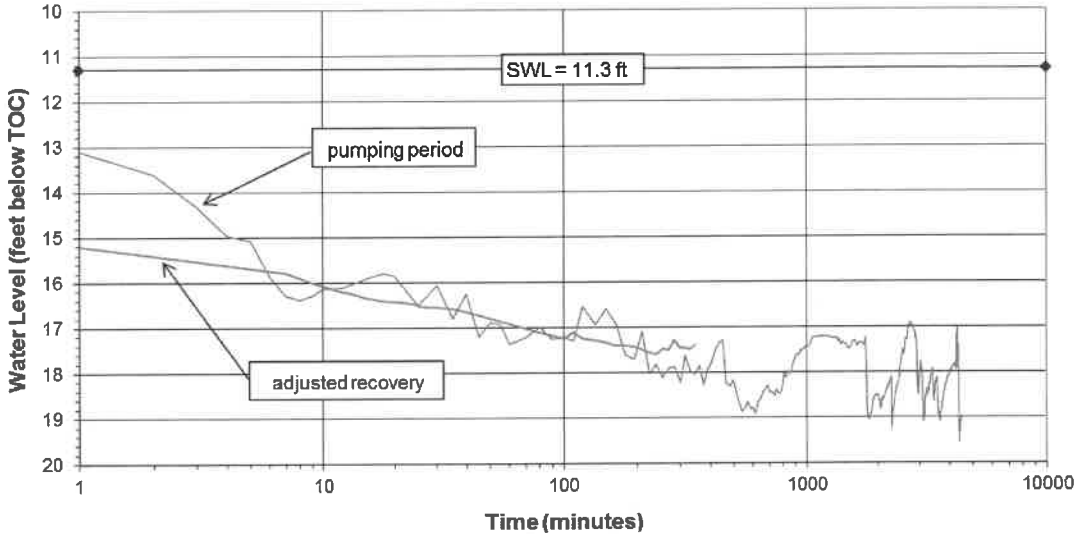
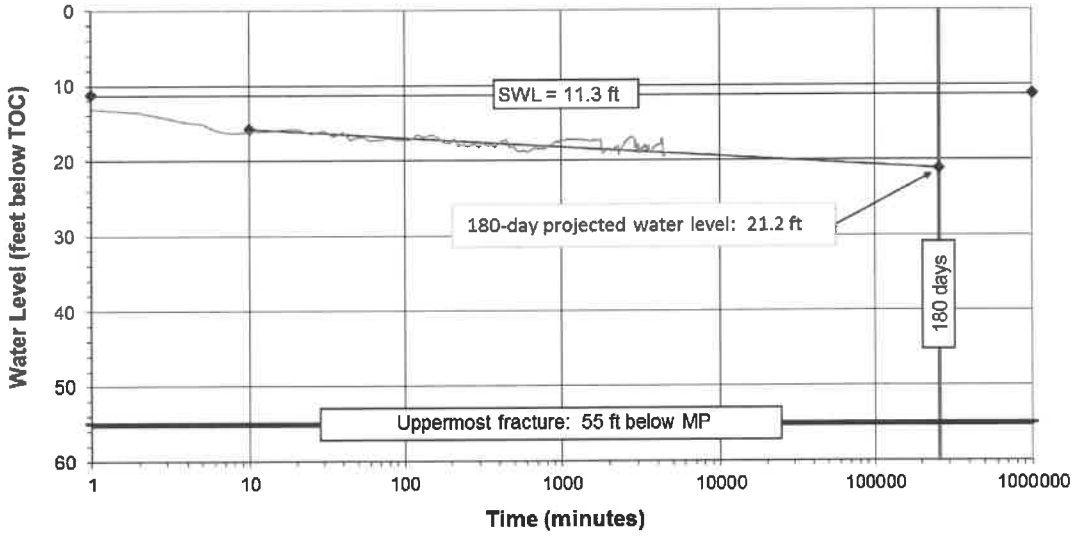


Figure 9 is a 180-day projection of the water level trend that developed over the course of the three-day test. The flow rate variations that occurred during the test make it difficult to discern any meaningful late-time changes in the trend. Therefore, the projection is an "eyeball" fit of the trendline to the data points from 10 minutes on. The projection indicates that pumping the well at 3.2 gpm steadily for six months would be expected to result in a water level of 21.2 feet, amounting to 9.9 feet of drawdown. We assume the uppermost fractures begin at 55 feet below the monitoring point. Using the static water level of 11.3 feet, this yields an available drawdown of about 44 feet. This means that 180 days of pumping would result in consumption of 23% of available drawdown, if the observed trend persisted. Our normal test of a sustainable yield is that it consume no more than about two-thirds of available drawdown. By this test, the flow rate of 3.2 gpm would appear to be sustainable.

Figure 9 - 180-Day Projection



Water Levels at Other Monitoring Points - Wells TW-2 and TW-3 are Town-owned supply wells that, like Well TW-1, receive water from fractures in the Beekmantown Formation. TW-2 serves the Town garage. TW-3 provides water for the bathrooms at the playing fields south of Town Hall. The five wells whose names contain the "MW-" prefix are monitoring wells completed in the unconsolidated sediments for the purpose of monitoring the salt contamination.

Pumping of Well TW-1 produced maximum drawdown of 2.3 feet in Well TW-2 (Figure 10), and 1.6 feet in Well TW-3 (Figure 11). Variations in water levels in these two wells show a degree of correlation with the water level variations seen in TW-1, though the low frequency of measuring water levels in the these two wells after the first day of the test mean that the changes are only crudely imitated. There is no evidence that the rain event of Day 2 influenced water levels in these two wells. It is also possible that some of the water level variations seen in all three "TW-" series wells were caused by interference from normal operation of neighboring domestic wells.

Figure 10 - Well TW-2

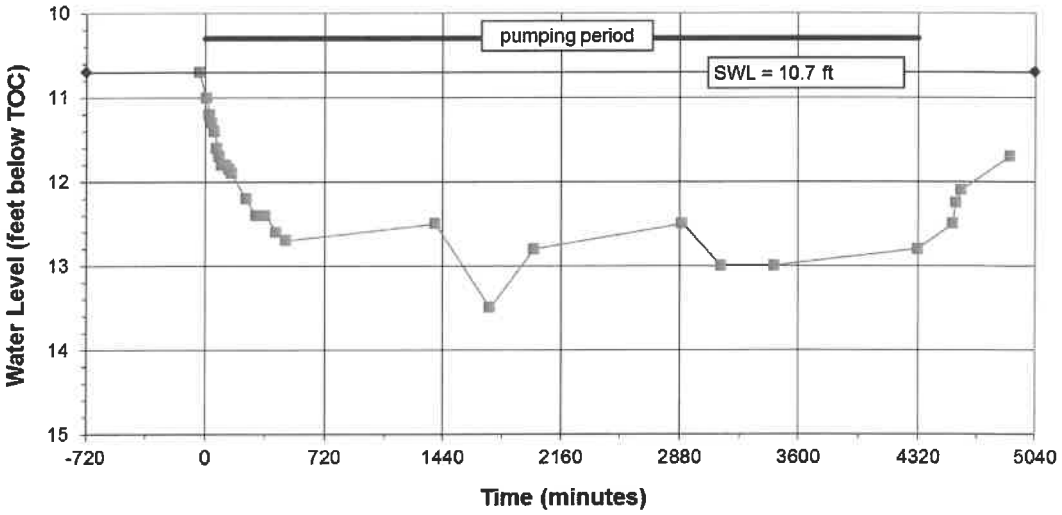
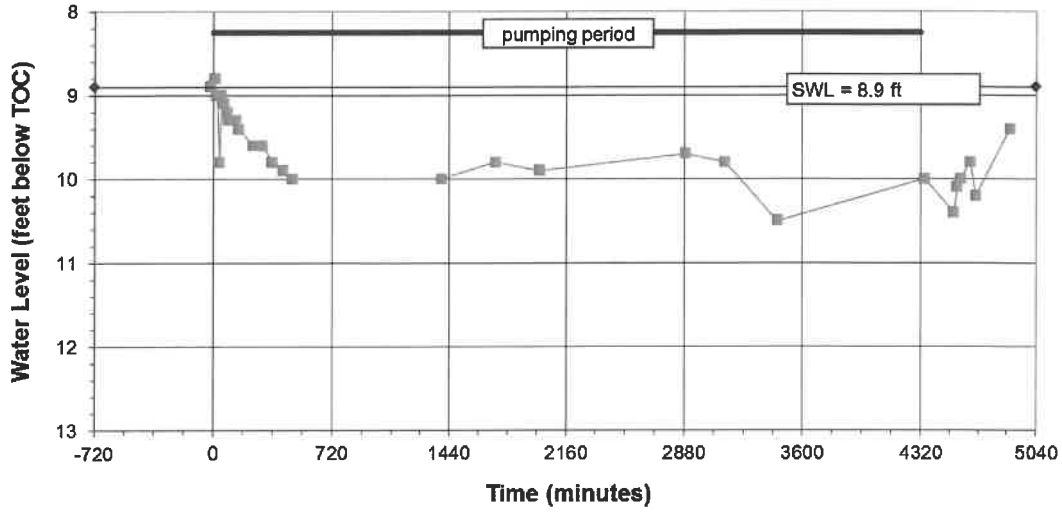


Figure 11 - Well TW-3



Water levels in the monitoring wells of the "MW-" series are shown in Figures 12 through 16. None of these wells show evidence of impacts from Well TW-1 pumping. However, all of them show a rise in water levels corresponding to the Day 2 rain event, followed by a more-or-less gradual decline. Several data points in the Well MW-1 graph show levels substantially lower than the static water level in the well (Figure 12). These might be related to pumping events in a nearby domestic well to the east. If that well is a well tapping the Beekmantown Formation, it is clear that the fractures in the Beekmantown that feed that particular well must have a close hydraulic connection to the overburden, even though no such overburden connection is seen with TW-1.

Figure 12 - Well MW-1

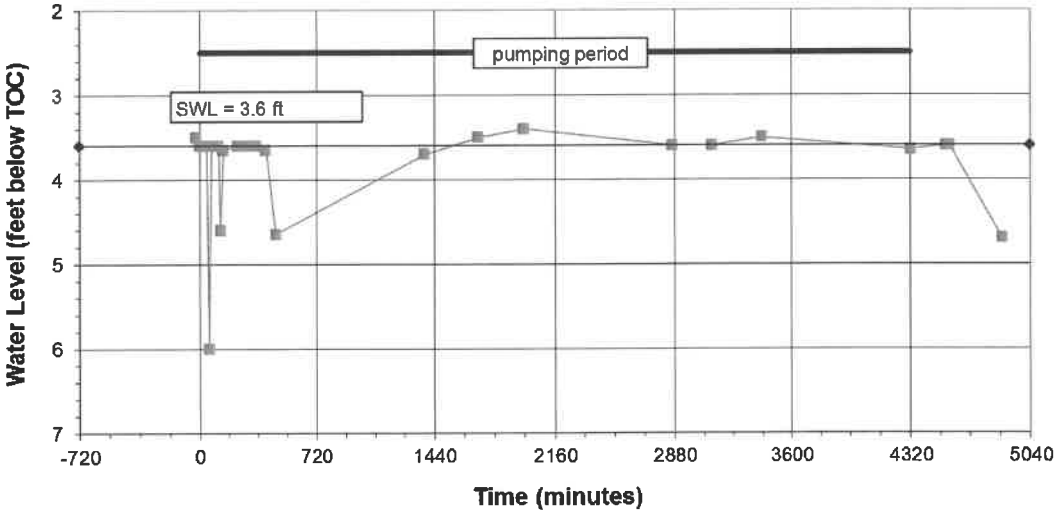


Figure 13 - Well MW-2

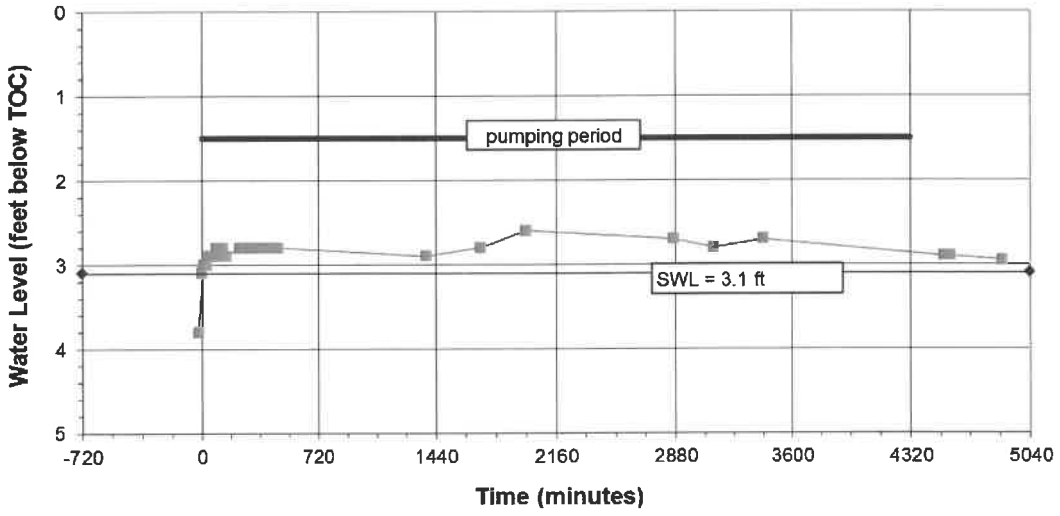


Figure 14 - Well MW-3

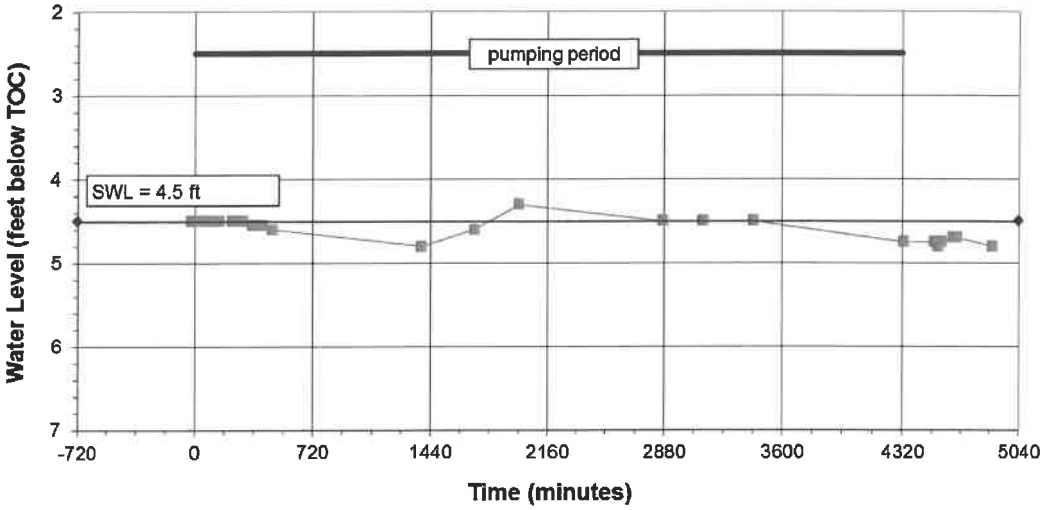


Figure 15 - Well MW-4

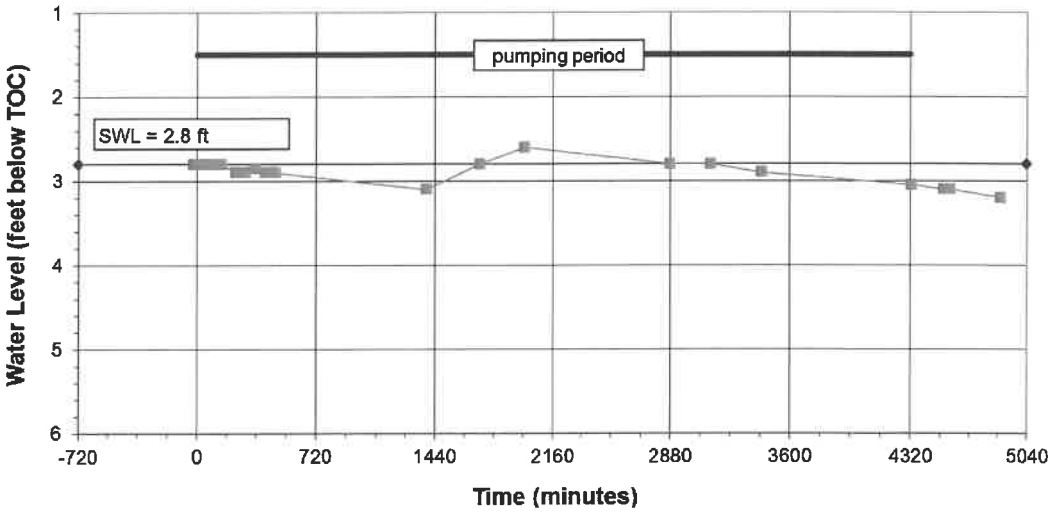


Figure 16 - Well MW-7

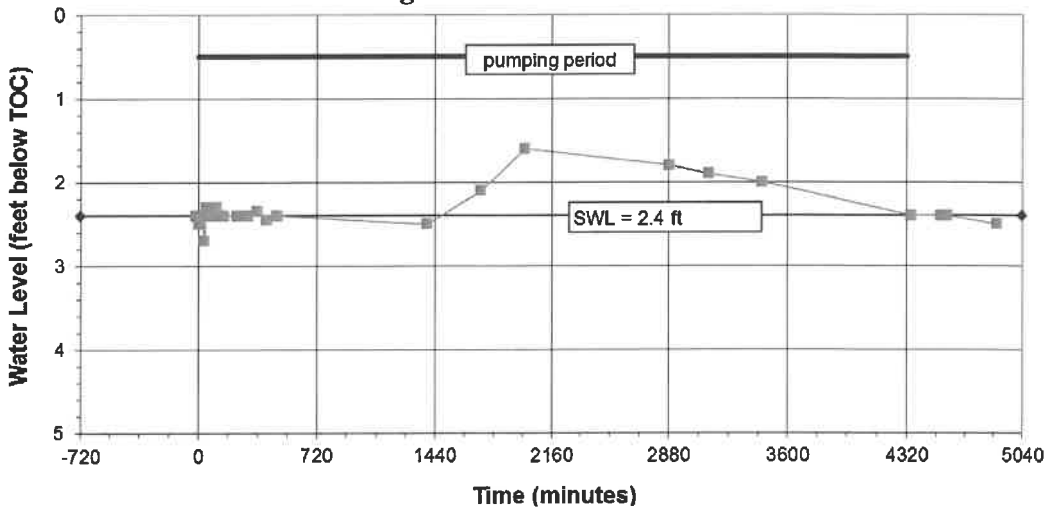
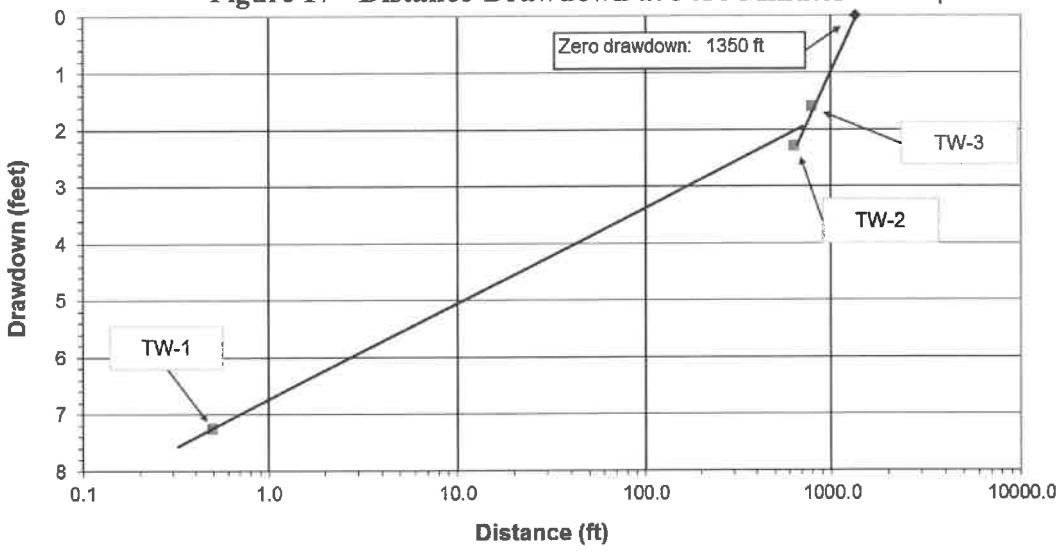


Figure 17 is a distance-drawdown graph, based on drawdown values at the three wells that showed an impact from Well TW-1. In evaluating this diagram, it should be kept in mind that an accurate characterization of distance-drawdown relations around a pumping well cannot be produced based on a data set consisting of only three points, one of which is the pumping well itself. This would be especially true for a fractured bedrock aquifer, which can be expected to be strongly anisotropic (that is, the amount of drawdown in any particular direction is heavily influenced by the orientations of bedrock fractures). Nonetheless, Figure 17 makes it clear that the cone of depression surrounding TW-1 when the well is pumping at a rate of 3.2 gpm extends at least 1,350 feet from the well. Since the center of the salt storage area is only 800 feet from the well, this means that any residual dissolved salt beneath the storage area will be within the well's capture zone.

Figure 17 - Distance-Drawdown at 3450 Minutes



Conclusions

Observations made during the 72-hour test indicate that an average flow rate of 1.5 gpm is likely to be sustainable. However, the cone of depression of Well TW-1 extends well beyond the area occupied by the former salt pile. Under conditions of long-term pumping at the proposed rate, the well is quite likely to capture such salt contamination as remains near the contaminant source. If that happens, the chloride level could be expected to rise. The increase in Well TW-1 demand could also produce changes in the distribution of the chloride plume downgradient from the Town property, perhaps causing contamination to appear at wells that had not previously been affected. If the Town moves ahead with the plan to use TW-1 to supply water to salt-impacted households, it should conduct routine monitoring of chloride levels in the well (probably using total dissolved solids as a proxy for chloride because it is easy to measure using a cheap field meter), and it should have a backup plan in place in the event that a rising chloride trend is detected.

Exhibit F

Town Provided
listing of Bottle
Water Distribution
for 2019-2nd
Quarter Report

Town of Beekmantown 2017
Salt Mitigation - Water Distribtuion

Name	Address	# Cases	Start Date					
Denny, Jon and Juliet	1 Brooks Bend	9 per week	09/15/17	suspend 5/10/18				
Yanulavich, Sally	114 Haynes Rd.	6 cases	09/15/17	1 time on 5/13/19				9/6/2018
McCasland, Greg & Tammy	56 Haynes Rd.	4 per week	10/16/17	5-5gal bottles plus 4 cases of 1 gal.-8/7/18				
Chotkoski, Patricia	60 Haynes Rd.	5 per week	10/16/17					
Fredette, Joe & Julie	74 Haynes Rd.	1 per week	10/16/17	suspend	6/3/2019			
Ashline, Leeward & Ruth	75 Haynes Rd.	2 per week	09/15/17					
Lattrelle, Debra & Joe	86 Haynes Rd.	2 per week	10/16/17	2 from 5 starting 7/1/19				
Sponable, Kevin & Kathy	181 Ashley Rd.	10 per week	10/16/17					
Myatt, Tricia	52 Haynes Rd.	7 per week	05/21/18	stopped on 7/5/18 resume on 8/6/18				
Facteau, Byran	207 Ashley Rd.	8 per week	5/28/2018					
Total cases per week	**$2.50/case**	**34**						
	Total Cost/week	**$85.00**						
Total 5 gal. bottles/week	**$4.99/bottle**	**5**						
	Total Cost/week	**$24.95**	**plus $6/bottle depos**	**it =$30**				