



Department of
Environmental
Conservation

PERIODIC REVIEW REPORT

ETE Sanitation and Landfill

Site Number: 961005

Broughton Road, Gainesville, NY

September 21, 2020

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Introduction

1.1 Location

The ETE Sanitation and Landfill site is located in the Town of Gainesville, Wyoming County, New York, in a rural agricultural area on Broughton Road. The site is approximately 2 miles west of Silver Springs and 1 mile north of the Village of Gainesville. Figure 1 shows the location of the site.

The site occupies an approximately 25.48-acre area, and consists of a 7-acre landfill area situated on two parcels: (1) 20.57-acre parcel SBL121-1-54 owned by the estate of the defunct ETE Sanitation and Landfill Corporation to the north, east and west and (2) 5.495-acre parcel SBL 121-1-55 owned by a local private resident to the south (Figure 2).

1.2 Site Background

According to the 1994 Preliminary Site Investigation Report, the site was owned and operated by ETE Corporation from 1972 – 1979. However, the site may have been in operation prior to 1972. The site was a non-permitted private landfill which accepted municipal and industrial waste from surrounding towns in Wyoming County. Almor Corporation of Warsaw, New York, disposed approximately 150 tons of leaded paint sludge on-site. Plating wastes from Mallory Timers in Warsaw, New York, may also have been disposed on-site. Additional industrial waste included halite (salt) and possibly other salts produced by Morton Salt, located in the nearby community of Silver Springs.

1.3 Current Land Use

The site is surrounded by woodland buffer which separates the landfill from undeveloped agricultural land on all sides. The southern boundary is situated on private, undeveloped land. Broughton Road runs east to west to the south of the landfill, and State Route 19 runs north to south to the west of the landfill. The property to the southeast is owned by Broughton Farms LLC and contains buildings for the storage of farm equipment.

Two constructed ponds were previously located around the landfill, including the upgradient South Pond (3.5-acres) formerly situated at the southern property line, and the downgradient North Pond (0.5-acres, also known as the leachate collection pond) located along the northern property line. The South Pond was drained as part of the remedial construction activities. The North Pond receives water from the western drainage channel and groundwater discharge. Surface water from the North Pond discharges via a spillway in the northeast of the site and flows off-site and north towards Cotton Creek, located approximately 0.75 miles north of the site.

1.4 Geology and Hydrogeology

The landfill appears to have been constructed in a natural depression running north to south between the former North and South Ponds. Fill material at the site is primarily composed of municipal and industrial solid waste. Prior to remediation, the thickness of waste was approximately 15 feet at the center of the landfill, with the thickness decreasing to approximately 5 feet toward the perimeter. Waste was covered with a silty clay soil approximately 1 to 2 feet thick, with waste exposed within portions of the northern slope of the landfill.

The landfill was constructed on top of unconsolidated glacial sediments which are primarily composed of clay rich glacial tills (poorly stratified deposits composed of poorly sorted very fine sands, silts, gravels, and occasional clay lenses) with minor beds of more permeable sand and gravel. A well log from a municipal well located 3 miles west of the site indicates that overburden is approximately 160 feet thick. The bedrock of Wyoming County is comprised of flat lying to gently dipping shale and siltstone of the Genesee, Sonyea, West Falls, and Canadaway groups deposited during the middle-to-late-Devonian period. The groups are described as thick layers of black shale.

Surface water drainage from the landfill is generally south to north, with surface water flowing into a small tributary of Cotton Creek located 0.75 miles north of the site. The hydraulic conductivity of native soils ranges from 1×10^{-4} to 1×10^{-6} centimeters per second. Since remediation, groundwater elevations and interpolated contour maps for shallow and deep groundwater intervals indicate that overburden groundwater flow is to the north or northeast. The depth to water at the site is relatively shallow, with water encountered in shallow wells ranging from approximately 7 to 19 feet below ground surface.

2.0 Remedial History

2.1 Remedial Investigation

The NYSDEC and NYSDOH conducted a number of site inspections between 1987 and 1990 during which soil, surface water, waste, and tap water samples from nearby residences were collected and analyzed for hazardous waste compounds. A Preliminary Site Assessment (PSA) of the site was performed in 1990. As a result of the PSA, approximately 25 drums were removed in a drum removal activity completed in September 1991. Drums were found to contain leaded paint sludge and industrial solvents including 1,2 dichloroethane, carbon tetrachloride, trichloroethane, and 2-butanone.

A Second Phase PSA was completed in February 1994. The PSA included collection of on-site sediment, leachate, and soil samples in addition to the installation and sampling of seven groundwater monitoring wells. Overall, the investigations confirmed the presence of hazardous waste and that waste constituents were being released to the environment. In addition, groundwater is used as a drinking water source in the

surrounding area. Because of the continuing releases to the environment and potential threats to public health, the site was listed as Class 2 in March 1995.

The Remedial Investigation (RI) was conducted between March and June 1998. RI data indicated that approximately 7-acres of the site contained landfilled waste. The maximum thickness of the waste is approximately 15 feet at the center of the landfill and tended to thin towards the perimeter of the landfill. A portion of the landfilled material was found to extend under the northern portion of the South Pond.

Seventeen test pits were completed to investigate potential drum disposal areas and to define the limits of the landfill. Four surface soil samples were also collected near leachate seeps. Both municipal and industrial wastes were found in the test pits. The northern portion of the landfill contained co-mingled wastes whereas the southern portion appeared to be predominantly municipal wastes. Volatile organic compounds (VOCs) detected above standards, criteria, and guidance (SCGs) in the soil samples included acetone, 2-butanone, ethylbenzene, and xylene. Inorganic contaminants included arsenic, beryllium, copper, iron, nickel, and zinc. Surface soils along the northern toe of the landfill near leachate seeps were contaminated above SCGs with organic compounds (e.g., xylenes, ethylbenzene, acetone) and metals (e.g., aluminum, iron, nickel, sodium, and zinc).

Exceedances of NYSDEC Class GA groundwater quality standards were noted in all monitoring wells which were screened within the landfill wastes and shallow water table aquifer. Monitoring well MW-8S, screened in the shallow aquifer and waste material, exhibited the highest VOC concentrations with a total VOC concentration of 5,394 µg/L. Site contaminants were not found in residential wells that were sampled by NYSDOH in the vicinity of the landfill.

Clay-rich glacial tills which comprise a majority of site soils appear to limit the downward vertical migration of groundwater contamination within the site. However, several VOCs were observed in deep downgradient monitoring wells, indicating that some vertical contaminant migration had occurred. The principal organic contaminants of concern in the groundwater include: acetone, 2-butanone, benzene, 4-methyl-2-pentanone, 2-hexane, toluene, trichloroethene, 1,2-dichloroethene, chlorobenzene, ethylbenzene, xylenes, phenol, 2-methylphenol, 4-methylphenol, and 2,4-dimethylphenol. The principal inorganic contaminants of concern in groundwater include: antimony, barium, cadmium, iron, lead, magnesium, manganese, sodium, and thallium.

Surface water and sediments in the North Pond were contaminated with iron, sodium and zinc. The sediments in the North Pond were also contaminated with acetone, methylene chloride, 2-butanone, ethylbenzene, and xylene. The west-central portion of the landfill appeared to be actively producing landfill gas. VOC analysis of four soil gas samples indicated VOCs to be present within landfill gas. The highest concentration was observed at GP-4 with a total VOC concentration of 113,490 parts per billion by volume of air (ppbv).

The majority of VOCs detected within the site are associated with paint manufacturing and paint solvents and were attributed to the documented disposal of drummed paint sludge. The high levels of sodium and other inorganic contaminants present within leachate, groundwater, and surface water were attributed to waste salt landfilled at the site.

2.2 Remedial Action

The site was remediated from 2006 through 2007 in accordance with the NYSDEC approved Remedial Design. The results of the Remedial Action are described in detail in the *Remedial Action Report, ETE Sanitation and Landfill Site State Superfund Remediation*, dated July 2008, as prepared by NYSDEC Region 9 Division of Environmental Remediation.

2.2.1 Remedial Construction

Approximately 10,595 cubic yards of contaminated soil and 42,000 cubic yards of uncontaminated soil were excavated. Most of the waste and debris were at the surface; however, an 18-inch thick layer from scrap/debris areas was also excavated and consolidated under the landfill cap area. Waste white goods and metal debris were segregated and collected by a scrap metal operator. Approximately 400 waste tires of various sizes were collected, stockpiled, and disposed of at a permitted off-site disposal facility. The balance of waste at the site was excavated and consolidated under the landfill cap area.

The North Pond was drained to remove contaminated sediments and the sediments were consolidated under the landfill cap. Upon completion of sediment removal, soil samples were collected to confirm that all impacted sediments and soils were removed and consolidated under the landfill cap. The North Pond was regraded and lined with stone as part of the final cap and cover construction.

During subgrade preparation, two additional areas of buried waste were discovered outside the cap limits of the landfill, with one situated along the southeast perimeter of the cap, and the other along the southwest perimeter of the cap. The waste in these areas were excavated and consolidated under the landfill cap. Following excavation, the areas were backfilled with on-site soil.

2.2.2 Landfill Cap and Cover

The cap and cover were installed in accordance with the Remedial Design and consists of the following from top to bottom:

- Six-inch topsoil layer consisting of material stripped from the site prior to grade work, and stabilized with a turf-type grass and wildflower seed mixture;
- Six-inch soil barrier protection layer consisting of unscreened, on-site borrow soils;
- Twelve-inch soil layer soil barrier protection consisting of on-site borrow soils screened to less than three-inch to remove larger stones;

- Geonet composite drainage layer consisting of double-sided nonwoven geotextile fabric/geonet composite installed to drain cover soil pore water and ensure stability of the slopes. Water transmitted along the geonet layer is accommodated through a relief underdrain;
- Forty-mil linear low-density polyethylene geomembrane. Smooth membrane was used on the gently sloped top areas, and textured membrane was used on the steeper side sloped areas along the northern end of the landfill area;
- Combination geotextile – geonet composite gas venting layer, with the geotextile layer consisting of non-woven polypropylene fabric and geonet composite networked between the gas vents and the edge of the landfill cap. Geonet strips were an addition to the final design plans to ensure positive venting of landfill gas through the gas vents; and
- Six-inch sub-base soil layer with a gradation requirement of 3 inch and less.

2.2.3 Passive Gas Venting

Nine gas vents (GV) consisting of 6-inch diameter PVC pipe extending a minimum of 8 feet into the waste were installed on the landfill prior to installation of the cover system components. The vents extended above the subgrade through the landfill geomembrane cover system and were terminated with an inverted “U” to prevent rainwater from entering the vent. Passive GV are located within the landfill boundaries and serve to vent gases that accumulate under the landfill cap.

2.2.4 Remaining Contamination

Contaminated material remaining on-site is under a multi-layered geomembrane landfill cover system placed over the 7-acre landfill area to minimize the infiltration of precipitation and prevent exposure to contamination. The cap covers approximately 18 ft of consolidated waste totaling an estimated 200,000 cubic yards of waste material. The capped landfill represents the sole source area remaining at the site. Groundwater in the immediate vicinity of the landfill exhibits low levels of contamination.

2.2.5 Groundwater Monitoring

A network of 14 monitoring wells was installed to monitor both upgradient and downgradient groundwater conditions at the site after remediation. The network of on-site monitoring wells was designed based on the requirements of NYSDEC Part 360 Subpart 2-11(c). Monitoring well screens were installed within the first water-bearing unit in the overburden soils (i.e., till) to depths ranging from 15 to 74.5 feet below ground surface. The wells were generally installed as shallow and deep well clusters.

MW-10S and MW-10D were removed from the monitoring program on January 7, 2018. The wells were decommissioned according to *Commissioner Policy (CP)-43 Groundwater Monitoring Well Decommissioning Policy*.

3.0 Site Management Plan

A Site Management Plan (SMP) is a required element of the site remedy to ensure that the remedy remains in place and effective. The SMP was prepared by EA Engineering, P.C. and its affiliate EA Science and Technology (EA), on behalf of NYSDEC, in accordance with the requirements of the NYSDEC's DER-10 (NYSDEC 2010) and the revised SMP guidelines (NYSDEC 2015). The SMP was approved on November 30, 2015. The groundwater monitoring requirements of the SMP were modified by the NYSDEC in a memo work plan dated September 24, 2019. A copy of this memo is included as Appendix 2 of this PRR.

3.1 Institutional Controls

Institutional controls in the form of Environmental Notices were placed on the two parcels that make up the site. These notices require that

- The site is subject to the above referenced SMP;
- there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results in, or may result in, a significantly increased threat of harm or damage at any site as a result of exposure to soils;
- no person shall disturb, remove, or otherwise interfere with the installation, use, operations, and maintenance of engineering controls required for the remedy;
- use of the property is restricted to commercial or industrial uses; and
- a groundwater use restriction.

The notices were filed with the Wyoming County Clerk's Office on March 3, 2014.

3.1.1 Site-Wide Inspections

The SMP requires that a site-wide inspection be completed annually at the site. Due to sudden changes in DEC personnel, the site file does not clearly indicate if all of the required inspections were completed. During the certifying period there is only documentation of the inspection completed on December 10, 2019. Inspection forms are included in Appendix 3.

3.1.2 Groundwater Monitoring

The site management plan required annual groundwater monitoring, however, due to sudden changes in DEC personnel, it appears that this sampling was only completed during 2018. In review of the 2018 data, DEC issued a memo revising the groundwater sampling frequency to semi-annual (Appendix 2).

3.1.2.1 Groundwater Elevations

Groundwater elevations were measured on September 18, 2018 and December 10, 2019, and a summarized in Table 5. In 2018 the groundwater elevations in the shallow wells ranged from 1670.63 (MW-2S) to 1574.95 (MW-11S) feet

above mean sea level (ft amsl) and deep wells ranged from 1656.64 (MW-2D) to 1552.49 (MW-11D) ft amsl.

In 2019 the groundwater elevations in the shallow wells ranged from 1644.5 (MW-6S) to 1636.99 (MW-3S) ft amsl and deep wells ranged from 1637.55 (MW-6D) to 1618.55 (MW-7D) ft amsl. Note that the MW-2 and MW-11 clusters were not gaged in 2019. Groundwater flow in both the shallow and deep intervals tends to the north, consistent with past observations.

3.1.2.2 Analytical Results

Groundwater samples were collected on September 18-20 and 27, 2018 by Groundwater & Environmental Services, Inc. (GES) under contract to DEC. Groundwater results are summarized in Table 1 through 4 (as prepared by GES). All samples were analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260C, semi-volatile organic compounds (SVOCs) via USEPA Method 8270D, metals with mercury via USEPA Method 6010C/7470A, and cyanide via USEPA Method 9012B. In addition, MW-2S, MW-7S and MW-11S were analyzed for emerging contaminants 1,4-dioxane via USEPA Method 8270D SIM and PFAS via USEPA Method 537 Modified. Sample results are summarized in Tables 2 – 5 (as modified from GES).

Cis-1,2-dichloroethene (16 µg/L) and trichloroethene (19 µg/L) were the only VOCs detected above their respective groundwater quality standards, both in MW-3S. The metals iron (up to 16,700 µg/L) and magnesium (up to 63,900 µg/L) were detected above their respective groundwater quality standards in at least two wells.

PFAS were only detected in MW-7S with the total PFAS concentration of 19.5 ng/L. No SVOCs were detected exceeding groundwater quality standards and 1,4-dioxane was not detected above reporting limits in any of the sampled wells.

3.1.2.3 Groundwater Summary

Though monitoring during the certifying period did not fully comply with the requirements of the SMP, the results available show that the remedy remains effective at controlling contaminant releases from the landfill to groundwater. Groundwater concentrations remain very low for all contaminants of concern and based on the direction of groundwater flow are not migrating a substantial distance from the site.

3.2 Engineering Controls

3.2.1 Landfill Cap and Cover

During the 2019 inspection the cap was reported to be in satisfactory condition and thickly vegetated. There was some stressed vegetation observed in the southwest portion of the site outside of the cap area, but this does not appear to have resulted in any erosion issues.

3.2.2 Passive Gas Venting

During the 2019 inspection GV-6 could not be located. The remaining gas vents were all found to be in good condition. Based on field monitoring none of the gas vents appear to be producing landfill gas or releasing other VOCs. This is consistent with gas vent monitoring completed in 2015.

3.2.3 Monitoring Wells

During the 2019 inspection all monitoring wells inspected were usable, though MW-7S could not be unlocked. Both wells in the MW-6 cluster had their locks cut, and both of the protective casings in the MW-9 cluster were damaged and cannot be locked.

4.0 Conclusions

Overall the remedy continues to remain in place and effective ten years after the completion of remedial construction. Specifically:

- The landfill cap and surrounding cover are in good condition and do not require any repair or replacement. There are no signs that there have been unapproved penetrations through the cap and cover system;
- The landfill appears to be producing little, if any, landfill gas. One of the gas vents has been destroyed but given the lack of gas production does not require repair at this time;
- Groundwater sampling indicates that natural attenuation of groundwater contamination has been effective, with VOCs only detected in one well near the capped portion of the landfill; and
- Groundwater elevations are largely consistent with past gaging events.

5.0 Recommendations

During the certifying period there was a failure to meet the monitoring and inspection requirements of the SMP. This is attributed to loss of funding and personnel issues. Moving forward the regular inspection and monitoring of the landfill needs to be improved. Given the current pandemic it is not likely that substantial increases in funding will be obtained. Considering this, it is recommended that regional DEC staff complete the

required inspections and groundwater monitoring to minimize costs and allow for better scheduling controls.

Minor damage or missing locks were reported at several monitoring wells during the December 2019 site inspection. The locks should be replaced during the next site inspection and/or groundwater sampling event. The damaged wells should be further assessed to determine if they are still usable monitoring points or require repair.

6.0 References

- New York State Department of Environmental Conservation (NYSDEC). *Record of Decision. ETE Sanitation and Landfill Site, Gainesville (T) Wyoming County, Site Number 9-61-005*. March 1, 1999.
- New York State Department of Environmental Conservation (NYSDEC). *Memo – Environmental Notices*. February 24, 2014.
- EA Engineering, P.C. and Its Affiliate EA Science and Technology (EA). *Site Management Plan*. November 11, 2015.
- Groundwater & Environmental Services, Inc. *Well Decommissioning Summary Report*. March 1, 2019.
- Groundwater & Environmental Services, Inc. *Emerging Contaminants Sampling Report*. May 9, 2019.
- New York State Department of Environmental Conservation (NYSDEC). *Memo – Reduction in Groundwater Monitoring*. September 19, 2019.
- New York State Department of Environmental Conservation (NYSDEC). *Landfill Inspection Report*. December 10, 2019.

Tables



Table 1
PFAS and 1,4-Dioxane Groundwater Data Summary

Group	CAS No.	Emerging Contaminant	Abbreviation	Sample ID: Lab Sample ID: Date Sampled: DTW (ft btoc)	MW-2R	MW-7S	MW-11S	MW-11S DUP	EB
					480-142503-1 & 320-43696-1	480-142274-1	480-142274-2	480-142274-3	480-142274-4
					09/27/2018	09/18/2018	09/20/2018	09/20/2018	9/20/2018
					14.00	9.17	8.67	8.67	NA
Perfluoroalkyl carboxylates	375-22-4	Perfluorobutanoic Acid	PFBA	(ng/L)	ND<1.8 UJ	4.5	ND<2.0 U	ND<1.9 U	ND<2.0 U
	2706-90-3	Perfluoropentanoic Acid	PFPeA	(ng/L)	ND<1.8 U	ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	307-24-4	Perfluorohexanoic Acid	PFHxA	(ng/L)	ND<1.8 U	ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	375-85-9	Perfluoroheptanoic Acid	PFHpA	(ng/L)	ND<1.8 U	ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	335-67-1	Perfluorooctanoic Acid	PFOA	(ng/L)	ND<1.8 U	7.8	ND<2.0 U	ND<1.9 U	ND<2.0 U
	375-95-1	Perfluorononanoic Acid	PFNA	(ng/L)	ND<1.8 UJ	ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	335-76-2	Perfluorodecanoic Acid	PFDA	(ng/L)	ND<1.8 UJ	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	2058-94-8	Perfluoroundecanoic Acid	PFUnA	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	307-55-1	Perfluorododecanoic Acid	PFDoA	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	72629-94-8	Perfluorotridecanoic Acid	PFTriA	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
Perfluoroalkyl sulfonates	376-06-7	Perfluorotetradecanoic Acid	PFTeA	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	375-73-5	Perfluorobutanesulfonic Acid	PFBS	(ng/L)	ND<1.8 U	ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	355-46-4	Perfluorohexanesulfonic Acid	PFHxS	(ng/L)	ND<1.8 UJB	ND<1.9 UJB	ND<2.0 UJB	ND<1.9 UJB	ND<2.0 UJB
	375-92-8	Perfluoroheptanesulfonic Acid	PFHpS	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	1763-23-1	Perfluorooctanesulfonic Acid	PFOS	(ng/L)	ND<1.8 U	7.2	ND<2.0 U	ND<1.9 U	ND<2.0 U
Perfluorooctane- sulfonamides	335-77-3	Perfluorodecanesulfonic Acid	PFDS	(ng/L)	ND<1.8 UJ	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	754-91-6	Perfluorooctane Sulfonamide	FOSA	(ng/L)	ND<1.8 U	ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	2355-31-9	N-methyl Perfluorooctane Sulfonamidoacetic Acid	NMeFOSAA	(ng/L)	ND<1.8 U	ND<19 U	ND<20 U	ND<19 U	ND<20 U
Fluorinated Telomer Sulfonates	2991-50-6	N-ethyl Perfluorooctane Sulfonamidoacetic Acid	NEtFOSAA	(ng/L)	ND<1.8 U	ND<19 U	ND<20 U	ND<19 U	ND<20 U
	27619-97-2	6:2FTS	6:2FTS	(ng/L)	ND<18 U	ND<19 U	ND<20 UJ	ND<19 U	ND<20 UJ
1,4-Dioxane	39108-34-4	8:2FTS	8:2FTS	(ng/L)	ND<18 U	ND<19 U	ND<20 U	ND<19 U	ND<20 U
	123-91-1	1,4-Dioxane	1,4-Dioxane	(µg/L)	ND<0.20 U	ND<0.20 U	ND<0.20 U	ND<0.20 U	ND<0.20 U

Notes:
 ft btoc = Feet below top of casing
 µg/L = Micrograms per liter
 ng/L = Nanograms per liter
 NA = Not applicable
 ND<# = Not detected at or above indicated laboratory reporting limit.
 U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
 B = An analyte identified in method blank
 UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample



Table 4
Metals Groundwater Data Summary

COMPOUND	NYSDEC TOGS 1.1.1 Class GA AWQS	Sample ID:	MW-2R	MW-2DR	MW-3S	MW-3D	MW-6S	MW-6D	MW-7S	MW-7D	MW-9S	MW-9D	MW-11S	MW-11S DUP	MW-11D	EB	
		Lab Sample ID:	480-142503-1	NA	480-142273-1	480-142273-2	480-142273-3	480-142273-4	480-142273-5	480-142273-6	480-142273-7	480-142273-8	480-142273-9	480-142273-10	480-142503-2	480-142273-11	
		Depth to Water (ft btoc):	14.00	27.65	14.24	19.31	19.20	21.33	9.17	16.28	8.61	11.70	8.67	8.67	31.35	NA	
		Matrix:	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		Date Sampled:	9/27/2018	9/27/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/19/2018	9/19/2018	9/20/2018	9/21/2018	9/27/2018	9/21/2018
UNITS:																	
Metals																	
Aluminium	-	(µg/L)	2500	NA	ND (<200) U	ND (<200) UJ	5000	1300	1900	1300	ND (<200) U	200	ND (<200) U	ND (<200) U	4400	ND (<200) U	
Antimony	6	(µg/L)	ND (<20) UJ	NA	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	
Arsenic	50	(µg/L)	ND (<15) UJ	NA	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	
Barium	2,000	(µg/L)	220 J	NA	340 J	1100 J	160 J	190 J	32 J	1500 J	620 J	390 J	8.7 J	8.6 J	140 J	ND (<2) UJ	
Beryllium	3.0	(µg/L)	ND (<20) UJ	NA	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	
Cadmium	10.0	(µg/L)	ND (<20) UJ	NA	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	
Calcium	-	(µg/L)	127000	NA	95100 J	237000 J	143000 J	55800 J	34700 J	153000 J	50400 J	78900 J	28100 J	27800 J	72600	ND (<500) UJ	
Chromium, Total	100	(µg/L)	4.4 J	NA	ND (<4) UJ	ND (<4) UJ	28 J	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	6.5 J	ND (<4) UJ	
Cobalt	-	(µg/L)	ND (<4.0) UJ	NA	ND (<4) UJ	ND (<4) UJ	30 J	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	0.24 J	ND (<4) UJ	
Copper	1,000	(µg/L)	ND (<10) UJ	NA	ND (<10) UJ	ND (<10) UJ	10 J	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	6.6 J	ND (<10) UJ	
Cyanide, Total	200	(µg/L)	ND (<10) UJ	NA	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) U	ND (<10) UJ	ND (<10) U	
Iron	600	(µg/L)	3400	NA	2100	2400	16700	2400	1800	3900	2400	2300	ND (<50) UJ	ND (<50) UJ	10500	ND (<50) U	
Lead	50	(µg/L)	ND (<10) UJ	NA	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	5.0 J	ND (<10) UJ	
Magnesium	35,000	(µg/L)	32700	NA	23500 J	63900 J	20000 J	15100 J	4100 J	39700 J	8100 J	17300 J	5500 J	5400 J	17800	ND (<200) UJ	
Manganese	600	(µg/L)	640 JB	NA	940 JB	120 B	8000 B	54 B	70 B	100 B	130 B	100 B	ND (<3) UJB	ND (<3) UJB	170 B	ND (<3) UJB	
Mercury	1.4	(µg/L)	ND (<0.2) U	NA	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	
Nickel	200	(µg/L)	ND (<10) UJ	NA	ND (<10) UJ	ND (<10) UJ	13 J	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	13 J	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	6.6 J	ND (<10) UJ	
Potassium	-	(µg/L)	2500	NA	2000	2500	1900	1200	2700	3400	21400	1200	ND (<500) UJ	ND (<500) UJ	2100	ND (<500) U	
Selenium	20.0	(µg/L)	ND (<25) U	NA	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	
Silver	100	(µg/L)	ND (<6) U	NA	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	ND (<6) UJ	
Sodium	-	(µg/L)	134000	NA	67500 J	199000 J	3600 J	5400 J	97800 J	1520000 J	3760000 J	8500 J	1800 J	1700 J	14300	ND (<1000) UJ	
Thallium	0.5	(µg/L)	ND (<20) UJ	NA	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	
Vanadium	-	(µg/L)	ND (<5) UJ	NA	ND (<5) UJ	ND (<5) UJ	9.5 J	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	7.2 J	ND (<5) UJ	
Zinc	5,000	(µg/L)	18 JB	NA	ND (<10) UJB	ND (<10) UJB	34 JB	ND (<10) UJB	15 JB	170 JB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	19 B	ND (<10) UJB	

Bold values indicate analytical result exceeds TOGS 1.1.1 WQS

TOGS 1.1.1 WQS = Ambient Water Quality Standards Guidance Values and Groundwater Effluent Limitations, amended April 2000

µg/L = micrograms per liter

- = no published regulatory standard

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample or Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

B = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

F1= MS and or MSD Recovery is outside acceptable limits

NA = not analyzed

**Table 5 - Grouwater Elevations
ETE Sanitation and Landfill, #961005**

	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
Well Identification	11/1/2015		9/18/2018		12/10/2019	
MW-02D	18.47	1665.82	27.65	1656.64	NM	NM
MW-02S	16.15	1668.48	14.00	1670.63	NM	NM
MW-03D	17.45	1631.35	19.31	1629.49	17.80	1631.00
MW-03S	15.05	1633.85	14.24	1634.66	11.91	1636.99
MW-06D	20.46	1637.17	21.33	1636.30	20.08	1637.55
MW-06S	15.70	1639.99	19.20	1636.49	11.19	1644.50
MW-07D	14.65	1619.95	16.28	1618.32	16.05	1618.55
MW-07S	6.80	1627.80	9.17	1625.43	NM	NM
MW-09D	10.91	1633.41	11.70	1632.62	10.85	1633.47
MW-09S	8.24	1636.83	8.61	1636.46	7.15	1637.92
MW-10D ¹	NM	NM	NA	NA	NA	NA
MW-10S ¹	3.71	1584.33	NA	NA	NA	NA
MW-11D	30.96	1552.88	31.35	1552.49	NM	NM
MW-11S	6.50	1577.12	8.67	1574.95	NM	NM

Notes:

NA not applicable

NM Not measured

ft btoc feet below top of interior well casing.

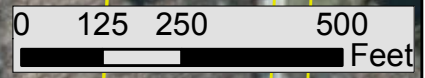
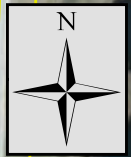
ft amsl feet above mean sea level.

1 the MW-10 cluster was decomissioned on January 7, 2018.

Figures

Legend *(all locations are approximate)*

- Site Boundary
- Tax Parcels



1 inch = 300 feet



Figure 1 - Site Location
ETE Sanitation and Landfill
 Gainesville, NY 14066
 Site #961005
 September 2020

Legend (all locations are approximate)

Site Boundary

Tax Parcels



1 inch = 175 feet



Figure 2 - Tax Parcels
ETE Sanitation and Landfill
 Gainesville, NY 14066
 Site #961005
 September 2020



Legend *(all locations are approximate)*

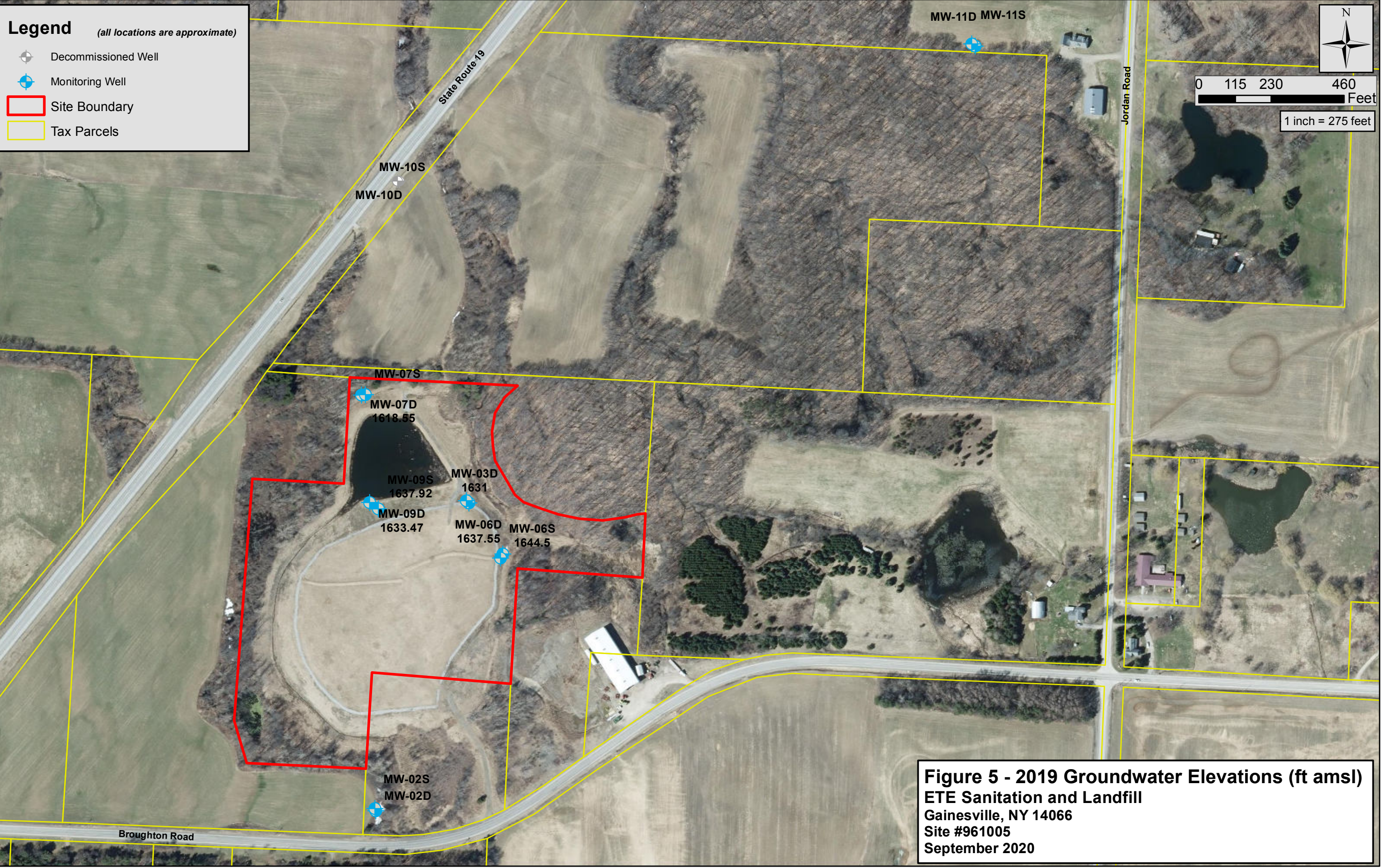
- Decommissioned Well
- Monitoring Well
- Landfill Gas Vent
- Site Boundary

0 120 240 480 Feet

1 inch = 283 feet

Figure 3 - Site Features
ETE Sanitation and Landfill
 Gainesville, NY 14066
 Site #961005
 September 2020





Appendices

Appendix 1

IC/EC Certification Form



**Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form**



	Site Details			Box 1
Site No. 961005				
Site Name ETE Sanitation and Landfill				
Site Address: Broughton Road	Zip Code: 14066			
City/Town: Gainesville				
County: Wyoming				
Site Acreage: 25.5				
Reporting Period: July 17, 2017 to July 17, 2020				
		YES	NO	
1. Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
If NO, include handwritten above or on a separate sheet.				
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.				
5. To your knowledge is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
				Box 2
		YES	NO	
6. Is the current site use consistent with the use(s) listed below? Closed Landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7. Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.				
_____ Signature of Standby Consultant/Contractor		_____ Date		

SITE NO. 961005

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
121.-1-54	ETE CORPORATION	Ground Water Use Restriction Site Management Plan

A series of ICs are required to implement, maintain and monitor the ECs. The Environmental Notice (EN) requires compliance with the ICs. The EN for this parcel of the site was recorded on 03/03/14 in Wyoming County as document #0000571 on Liber 77, Page 696 in Miscellaneous Records Book.

The EN ensures that:

- All ECs must be operated and maintained as specified in the SMP
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
- Environmental monitoring must be performed as defined in the SMP
- Data and information pertinent to SM for the Controlled Property must be reported at the frequency and in a manner defined in the SMP
- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the Environmental Notice places the following restrictions on the property:

- Required compliance with the approved SMP. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC
- The owner of the Property shall provide information to the NYSDEC to assist it in carrying out its obligation to provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC or Relevant Agency, which will certify that the IC/ECs put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired
- The owner of the Property shall continue in full force and effect any IC/ECs required for the Remedy and shall not, through any act or omission, interfere with the NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from the NYSDEC or Relevant Agency, in compliance with the approved SMP subject to modifications as approved by the NYSDEC or Relevant Agency
- Limit the use and development of the property to Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).

121.-1-55	Mr. David Keenan	Ground Water Use Restriction Site Management Plan
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A series of ICs are required to implement, maintain and monitor the ECs. The Environmental Notice (EN) requires compliance with the ICs. The EN for this parcel of the site was recorded on 03/03/14 in Wyoming County as document #0000572 on Liber 77, Page 696 in Miscellaneous Records Book.

The EN ensures that:

- All ECs must be operated and maintained as specified in the SMP
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
- Environmental monitoring must be performed as defined in the SMP
- Data and information pertinent to SM for the Controlled Property must be reported at the frequency and in a manner defined in the SMP

- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the Environmental Notice places the following restrictions on the property:

- Required compliance with the approved SMP. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC
- The owner of the Property shall provide information to the NYSDEC to assist it in carrying out its obligation to provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC or Relevant Agency, which will certify that the IC/ECs put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired
- The owner of the Property shall continue in full force and effect any IC/ECs required for the Remedy and shall not, through any act or omission, interfere with the NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from the NYSDEC or Relevant Agency, in compliance with the approved SMP subject to modifications as approved by the NYSDEC or Relevant Agency
- Limit the use and development of the property to Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).

Description of Engineering Controls

Parcel

Engineering Control

121.-1-54

Cover System

Because remaining contamination is present at this Site, ECs and ICs have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has the following ECs:

- a cover system placed over the landfilled waste
- storm water/surface water management and drainage conveyance
- site monitoring system including monitoring wells and landfill gas vents

121.-1-55

Cover System

Because remaining contamination is present at this Site, ECs and ICs have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has the following ECs:

- a cover system placed over the landfilled waste
- storm water/surface water management and drainage conveyance
- site monitoring system including monitoring wells and landfill gas vents

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES NO

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

Date

IC/EC CERTIFICATIONS

Qualified Environmental Professional Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Benjamin McPherson at 270 Michigan Avenue, Buffalo NY 14203,
print name print business address

am certifying as a Qualified Environmental Professional.



Digitally signed by Benjamin McPherson
DN: cn=Benjamin McPherson, o=NYSDEC,
ou=DER - Region 9,
email=benjamin.mcpherson@dec.ny.gov, c=US
Date: 2020.09.21 14:20:25 -0400

Signature of Qualified Environmental Professional

Stamp
(Required for PE)

9/21/2020
Date

Appendix 2

Groundwater Monitoring Reduction Memo

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION


Division of Environmental Remediation, Region 9


270 Michigan Avenue, Buffalo, NY 14203-2915

P: (716) 851-7220 | F: (716) 851-7226

www.dec.ny.gov

MEMORANDUM

TO: Chad Staniszewski, Regional Engineer  2019.09.24
15:24:12 -04'00'

FROM: Benjamin McPherson, Project Manager  Digitally signed by Benjamin McPherson
DN: cn=Benjamin McPherson, o=Department of
Environmental Conservation, ou=Division of
Environmental Remediation,
email=benjamin.mcpherson@dec.ny.gov, c=US
Date: 2019.09.19 14:36:52 -04'00'

DATE: September 19, 2019

SUBJECT: ETE Sanitation and Landfill, #961005
Gainesville, Wyoming County
Reduction in Groundwater Monitoring

The ETE Sanitation and Landfill site was a privately-operated landfill that ceased operation in 1979. Chlorinated solvents were discovered within the landfill, and the site was subsequently remediated under State Superfund and closed to meet 6 NYCRR Part 360 landfill cap requirements. Closure of the landfill was substantially complete in 2007, with some limited repair to the landfill cap completed in 2008.

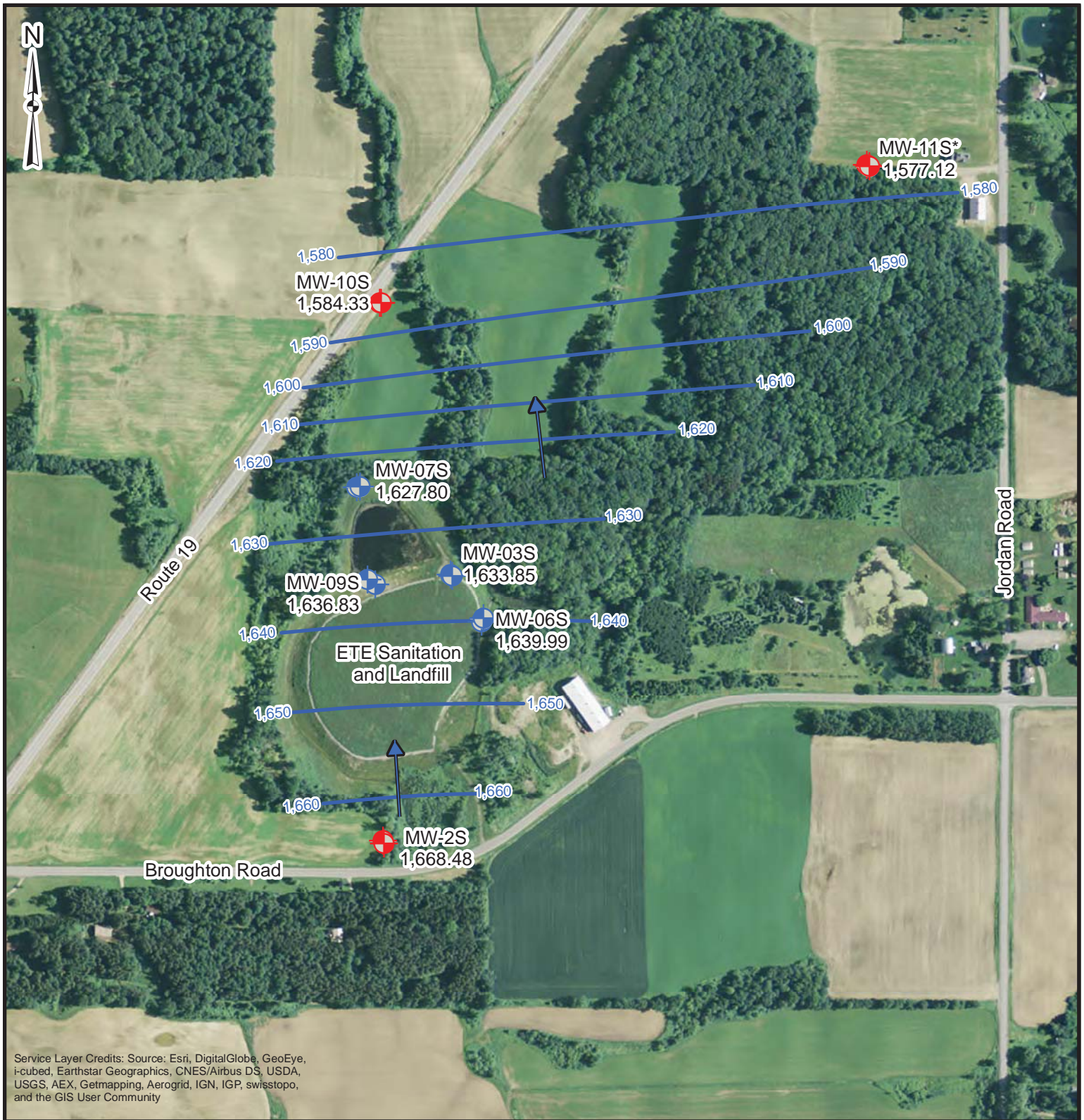
The 2008 Operations and Maintenance Plan (CDM Smith) and subsequent 2015 Site Management Plan (EA Science and Technology) included annual groundwater monitoring for VOCs, SVOCs, metals, and leachate parameters. Post construction groundwater monitoring only occurred in 2014 and 2018. Groundwater results from both of these events, documented that wells downgradient from the landfill meet groundwater quality standards for all compounds except some naturally occurring metals (iron, magnesium, manganese, and sodium). Note that the 2018 event also included emerging contaminants but did not analyze for the leachate parameters.

Considering that site contaminants of concern have not been detected in downgradient wells since post-closure, the frequency of groundwater monitoring required per the 2015 SMP will be reduced to semiannual with analysis of VOCs and metals only (reflective of the contaminants of concern at the site). This reduction in monitoring will still allow DER to determine if the remedy remains protective of public health and the environment.

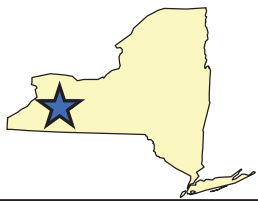
In addition, the site will be inspected annually per the 2015 Site Management Plan and a periodic review report will be completed triennially.

Attachments:

site figures [2], 2014 Groundwater Results, 2018 Groundwater Results

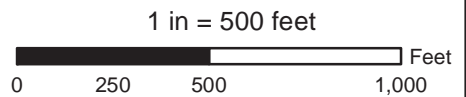


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



- Offsite Groundwater Monitoring Well
- Onsite Groundwater Monitoring Well
- Inferred Groundwater Contour (ft AMSL)
- Groundwater Flow Direction

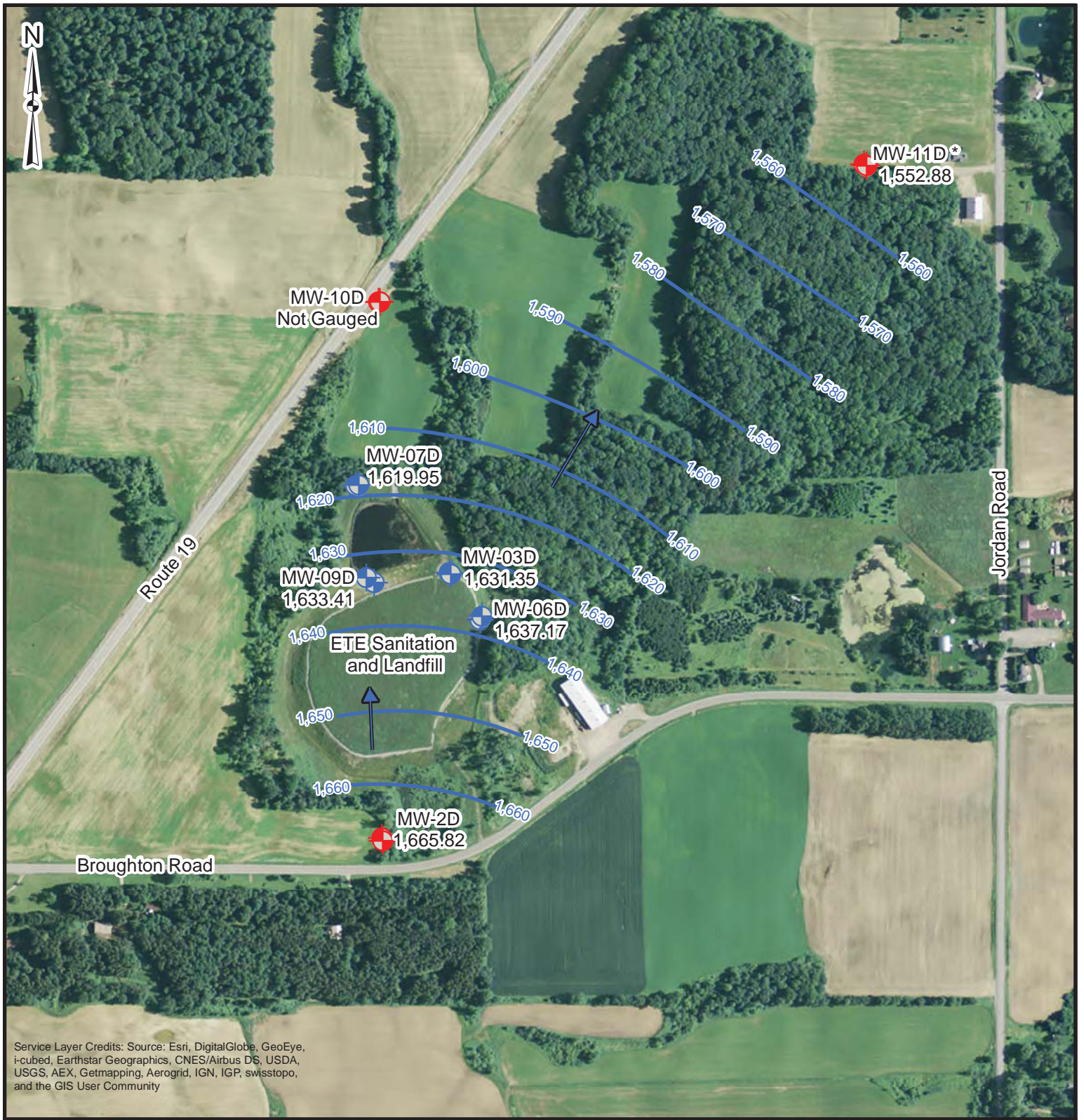
* MW-11S Gauged in January 2015



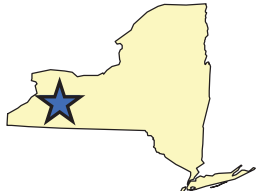
ETE SANITATION AND LANDFILL
(SITE NO. 961005)
GAINESVILLE, NEW YORK





FIGURE 4
SHALLOW GROUNDWATER
CONTOURS (DECEMBER 2014)

PROJECT MGR: CJS	DESIGNED BY: CJS	CREATED BY: ALK	CHECKED BY: CJS	SCALE: AS SHOWN	DATE: NOVEMBER 2015	PROJECT NO: 14907.27	FILE NO: GIS\FIGURES\14907.27 ETE\GIS\MXDs
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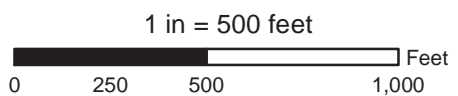


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DE, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



-  Offsite Groundwater Monitoring Well
-  Onsite Groundwater Monitoring Well
-  Inferred Groundwater Contour (ft AMSL)
-  Groundwater Flow Direction

* MW-11D Gauged in January 2015



**ETE SANITATION AND LANDFILL
(SITE NO. 961005)
GAINESVILLE, NEW YORK**

**FIGURE 5
DEEP GROUNDWATER
CONTOURS (DECEMBER 2014)**

PROJECT MGR: CJS	DESIGNED BY: CJS	CREATED BY: ALK	CHECKED BY: CJS	SCALE: AS SHOWN	DATE: NOVEMBER 2015	PROJECT NO: 14907.27	FILE NO: GIS\FIGURES\14907.27 ETE\GIS\MXDs
---------------------	---------------------	--------------------	--------------------	--------------------	------------------------	-------------------------	--

Table 8 Summary of Groundwater Analytical Results Inorganic Compounds

Parameters List USEPA Method 8260B	MW-ID	MW-02D	MW-03S	MW-03D	MW-06S	MW-06D	MW-07S	MW-07D	NYSDEC AWQS (µg/L)	
	Lab ID	N2474-12	N2474-01	N2474-02	N2474-05	N2474-06	N2474-08	N2474-09		
	Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
	Sample Date	12/29/2014	12/30/2014	12/30/2014	12/30/2014	12/30/2014	12/29/2014	12/29/2014		
Acetone	µg/L	(<4.4)	U	(<2.2)	U	(<2.2)	U	(<2.2)	U	50 (g)
cis-1,2- Dichloroethene	(µg/L)	(<0.48)	U	(<0.48)	U	(<0.48)	U	(<0.48)	U	5 (s)
Trichloroethene	(µg/L)	(<0.36)	U	(<0.36)	U	(<0.36)	U	(<0.36)	U	5 (s)
Vinyl chloride	(µg/L)	(<0.50)	U	2.0	U	(<0.50)	U	(<0.50)	U	2 (s)
Parameters List USEPA Method 8260B	MW-ID	MW-09S	MW-09D	MW-10S	MW-11S	MW-11D	DUPLICATE	RINSE BLANK	NYSDEC AWQS (µg/L)	
Lab ID	N2474-03	N2474-04	N2474-13	P0007-01A	P0007-02A	N2474-11	N2474-07	N2474-11		
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Sample Date	12/30/2014	12/30/2014	12/29/2014	1/5/2015	1/5/2015	12/30/2014	12/30/2014	12/29/2014		
Acetone	(µg/L)	(<2.2)	U	(<2.2)	U	(<2.2)	U	4.9	J	50 (g)
cis-1,2- Dichloroethene	(µg/L)	(<0.48)	U	(<0.48)	U	(<0.48)	U	(<0.48)	U	5 (s)
Trichloroethene	(µg/L)	(<0.36)	U	(<0.36)	U	(<0.36)	U	(<0.36)	U	5 (s)
Vinyl chloride	(µg/L)	(<0.50)	U	(<0.50)	U	(<0.50)	U	2.2	U	2 (s)

NOTE: NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standard
µg/L = Micrograms per liter
J = Analyte detected below the practical quantification limit (PQL)
U = Analyte was analyzed for, but not detected above the associated method detection limit.
(g) = guidance value
(s) = standard
Analytical data results provided by Spectrum Analytical. Validation services are provided by Meridian Consultant Group, Inc.
Bold values indicate that the analyte was detected greater than the NYSDEC Ambient Water Quality Standards.
DUPLICATE sample was collected at MW-03D.

Table 8 Summary of Groundwater Analytical Results Inorganic Compounds

Parameters List USEPA Method 8270C	MW ID	MW-02D	MW-03S	MW-03D	MW-06S	MW-06D	MW-07S	MW-07D	NYSDEC AWQS (µg/L)	
	Lab ID	N2474-12	N2474-01	N2474-02	N2474-05	N2474-06	N2474-08	N2474-09		
	Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
	Sample Date	12/29/2014	12/30/2014	12/30/2014	12/30/2014	12/30/2014	12/29/2014	12/29/2014		
4- Methylphenol Bis(2-ethylhexyl)phthalate	µg/L	4.2	J	<1.4	U	<1.4	U	<1.4	U	1 (6)
	(µg/L)	1.3	J	<1.3	U	<1.3	U	<1.3	U	5 (6)
Parameters List USEPA Method 8270C	MW ID	MW-09S	MW-09D	MW-10S	MW-11S	MW-11D	DUPLICATE	RINSE BLANK	NYSDEC AWQS (µg/L)	
	Lab ID	N2474-03	N2474-04	N2474-13	P0007-01A	P0007-02A	N2474-07	N2474-11		
	Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
	Sample Date	12/30/2014	12/30/2014	12/29/2014	1/5/2015	1/5/2015	12/30/2014	12/29/2014		
4- Methylphenol Bis(2-ethylhexyl)phthalate	µg/L	<1.4	U	<1.4	U	<1.4	U	<1.4	U	1 (6)
	(µg/L)	<1.3	U	<1.3	U	<1.3	U	<1.3	U	5 (6)

NOTE: NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standard
µg/L = Micrograms per liter
J = Analyte detected below the practical quantification limit (PQL).
U = Analyte was analyzed for, but not detected above the associated method detection limit.
(g) = NYSDEC Ambient Water Quality Standards guidance value
(s) = NYSDEC Ambient Water Quality Standards standard value
Analytical data results provided by Spectram Analytical. Validation services are provided by Meridian Consultant Group, Inc.
Bold values indicate that the analyte was detected greater than the NYSDEC Ambient Water Quality Standards.
DUPLICATE sample was collected at MW-03D.

Table 8 Summary Of Groundwater Analytical Results Inorganic Compounds

Parameters List USEPA Method 6010 / 7470	MW-02D		MW-03D		MW-06S		MW-06D		MW-07S		MW-07D		NYSDEC AWQS (µg/L)	
	Lab ID	N2474-12	N2474-01	N2474-02	N2474-05	N2474-06	N2474-08	N2474-09	Groundwater	Groundwater	Groundwater	Groundwater		
	Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Aluminum	µg/L	498	J	163	J	(-66)	U	4,830	U	2,270	U	189	J	---
Arsenic	µg/L	(-5.6)	U	(-4.3)	U	(-8.8)	U	(-4.3)	U	(-4.3)	U	(-4.3)	U	---
Barium	µg/L	163	J	112	J	34.6	J	236	J	26.0	J	1,940	J	1,000 (s)
Beryllium	µg/L	(-0.26)	U	(-0.26)	U	(-0.26)	U	0.26	J	(-0.26)	U	(-0.26)	U	3 (g)
Cadmium	µg/L	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	5 (s)
Calcium	µg/L	141,000	J	124,000	J	192,000	J	67,900	J	47,200	J	195,000	J	---
Chromium	µg/L	52.7	J	4.7	J	3.4	J	13.4	J	6.5	J	6.1	J	50 (s)
Cobalt	µg/L	0.8	J	14.2	J	(-0.67)	U	3.8	J	1.4	J	(-0.67)	U	---
Copper	µg/L	18.3	J	15.4	J	(-3.6)	U	11.7	J	14.3	J	6.3	J	200 (s)
Iron	µg/L	4,040	J	15,900	J	6,950	J	756	J	5,190	J	3,180	J	300 (s)
Magnesium	µg/L	34,500	J	15,900	J	26,600	J	19,200	J	32.7	J	46,400	J	35,000 (g)
Manganese	µg/L	144	J	5,660	J	1,570	J	197	J	(-0.028)	U	(-0.028)	U	0.7 (s)
Mercury	µg/L	(-0.028)	U	(-0.17)	U	(-0.16)	U	(-0.028)	U	(-0.032)	U	(-0.028)	U	0.7 (s)
Nickel	µg/L	30.9	J	83.3	J	3.0	J	12.4	J	6.1	J	6.0	J	100 (s)
Potassium	µg/L	1,750	J	4,430	J	2,450	J	2,170	J	1,770	J	4,340	J	---
Selenium	µg/L	(-12)	U	(-12)	U	(-12)	U	(-12)	U	(-12)	U	(-12)	U	10 (s)
Sodium	µg/L	19,500	J	16,300	J	8,090	J	6,440	J	41,800	J	1,910,000	J	20,000 (s)
Thallium	µg/L	(-6.2)	U	7.2	J	(-6.2)	U	(-6.2)	U	(-6.2)	U	(-6.2)	U	0.5 (g)
Vanadium	µg/L	(-1.1)	U	1.2	J	(-1.1)	U	8.6	J	3.5	J	(-1.1)	U	---
Zinc	µg/L	112	J+	(-27.8)	U	(-36.6)	U	(-44.9)	U	(-30)	U	(-46)	U	2,000 (g)
Parameters List USEPA Method 6010 / 7470	MW ID	MW-09S	MW-09D	MW-10S	MW-11S	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D		
	Lab ID	N2474-03	N2474-04	N2474-13	P0007-01A	P0007-02A	P0007-02A	P0007-02A	P0007-02A	P0007-02A	P0007-02A	P0007-02A		
Aluminum	µg/L	110	J	476	J	150	J	540	J	185	J	(-66)	U	---
	µg/L	(-4.3)	U	(-4.3)	U	(-4.3)	U	4.5	J	(-4.3)	U	(-4.3)	U	---
Barium	µg/L	487	J	458	J	10	J	130	J	1,030	J	(-1.1)	U	1,000 (s)
	µg/L	(-0.26)	U	(-0.26)	U	(-0.26)	U	(-0.26)	U	(-0.26)	U	(-0.26)	U	3 (g)
Cadmium	µg/L	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	(-0.89)	U	5 (s)
	µg/L	155,000	J	89,200	J	76,000	J	201,000	J	201,000	J	(-110)	U	---
Chromium	µg/L	2.3	J	2.5	J	1.6	J	2.5	J	5.4	J	(-0.64)	U	50 (s)
	µg/L	0.9	J	(-0.67)	U	(-0.67)	U	1.2	J	0.8	J	(-0.67)	U	---
Copper	µg/L	9.0	J	(-3.6)	U	(-3.6)	U	(-3.6)	U	(-3.6)	U	(-3.6)	U	200 (s)
	µg/L	1,360	J	3,740	J	470	J	4,800	J	9,680	J	(-31)	U	300 (s)
Magnesium	µg/L	28,400	J	20,200	J	5,600	J	17,000	J	51,300	J	(-31)	U	35,000 (g)
	µg/L	257	J	154	J	(-10)	U	150	J	166	J	(-10)	U	300 (s)
Mercury	µg/L	(-0.14)	U	(-0.028)	U	0.140	J	0.032	J	(-0.028)	U	(-0.028)	U	0.7 (s)
	µg/L	14.8	J	1.0	J	(-0.85)	U	1.7	J	4.8	J	(-0.85)	U	100 (s)
Nickel	µg/L	17,200	J	12,10	J	110	J	1,100	J	4,160	J	(-76)	U	---
	µg/L	(-12)	U	(-12)	U	(-12)	U	(-12)	U	12.1	J	(-12)	U	10 (s)
Selenium	µg/L	3,300,000	J	9,370	J	1,900	J	22,000	J	291,000	J	551	J	20,000 (s)
	µg/L	(-6.2)	U	(-6.2)	U	(-6.2)	U	(-6.2)	U	(-6.2)	U	(-6.2)	U	0.5 (g)
Thallium	µg/L	(-1.1)	U	(-1.1)	U	(-1.1)	U	1.5	J	1.2	J	(-1.1)	U	---
	µg/L	(-16.9)	U	(-9.4)	U	7.1	J	10.0	J	(-34)	U	(-1.1)	U	2,000 (g)

NOTE: NYSDEC = New York State Department of Environmental Conservation
 AWQS = Ambient Water Quality Standard
 µg/L = Micrograms per liter
 --- = no applicable screening value.
 J = Analyte detected below the practical quantification limit (POL).
 J+ = Analyte was analyzed for, but not detected below the laboratory reporting limit.
 J+ = Analyte present. Reported value may be biased high. Result is estimated high.
 (g) = NYSDEC Ambient Water Quality Standards guidance value
 (s) = NYSDEC Ambient Water Quality Standards standard value
 Analytical data results provided by Spectrum Analytical. Validation services are provided by Meridian Consultant Group, Inc.
Bold values indicate that the analyte was detected greater than the NYSDEC Ambient Water Quality Standards.
 DUPLICATE sample was collected at MW-03D.

Table 8 Summary of Groundwater Analytical Results
Groundwater Quality Parameters

Parameters List USEPA Method	MW ID	MW-02D	MW-03S	MW-03D	MW-06S	MW-06D	MW-07S	MW-07D	NYSDEC AWQS (µg/L)
	Lab ID	N2474-12	N2474-01	N2474-02	N2474-05	N2474-06	N2474-08	N2474-09	
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Sample Date	12/29/2014	12/30/2014	12/30/2014	12/30/2014	12/30/2014	12/30/2014	12/29/2014	12/29/2014	
Organic Carbon, Total	µg/L	16,000	J- (<5,000)	U (<2,500)	U (<6,100)	U (<2,200)	U (<6,500)	U (<9,200)	---
Chemical Oxygen Demand	µg/L	71,000	U (<10,000)	U 13,000	J 11,000	U (<10,000)	U 12,000	J 70,000	---
Nitrogen, Kjeldahl, Total	µg/L	8,890	420	840	350	280	350	1,330	---
Ammonia	µg/L	1,960	J+ (<210)	U (<420)	U (<210)	U (<210)	U (<140)	U (<770)	2,000 (s)
Total Dissolved Solids	µg/L	441,000	457,000	1,540,000	688,000	185,000	212,000	4,420,000	---
Total Hardness	µg/L	490,000	380,000	440,000	590,000	550,000	140,000	680,000	---
Phenolics, Total Recoverable	µg/L	21	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	1 (s)
Nitrogen, Nitrate-Nitrite	µg/L	(<990)	U (<500)	U (<2,020)	U (<1,020)	U (<990)	U (<495)	U (<990)	10,000 (s)
Bromide	µg/L	69	J (<60)	U 730	J (<60)	U (<60)	U (<60)	U	3,100
Chloride	µg/L	59,000	2,300	510,000	1,300	J 17,000	3,100	2,800,000	250,000 (s)
Sulfate	µg/L	58,000	72,000	9,300	310,000	J 20,000	44,000	27,000	250,000 (s)
Alkalinity, Total (As CaCO ₃)	µg CaCO ₃ /L	320,000	350,000	230,000	250,000	170,000	220,000	500,000	---
Color	color unit	15	U (<10)	U 35	J 10	25	85	35	---
Parameters List USEPA Method	MW ID	MW-09S	MW-09D	MW-10S	MW-11S	MW-11D	DUPLICATE	RINSE BLANK	
Lab ID	N2474-03	N2474-04	N2474-13	P0007-01A	P0007-02A	N2474-07	N2474-11		
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Sample Date	12/30/2014	12/30/2014	12/29/2014	1/5/2015	1/5/2015	12/30/2014	12/29/2014		
Organic Carbon, Total	µg/L	12,000	J- (<7,300)	U (<2,800)	U (<2.0)	U (<2,000)	U (<3,400)	U (<2,000)	---
Chemical Oxygen Demand	µg/L	49,000	11,000	U (<10,000)	U (<10)	U (<10,000)	U 12,000	J (<10,000)	---
Nitrogen, Kjeldahl, Total	µg/L	3,780	490	U (<166)	U 210	J 350	J 980	U (<166)	---
Ammonia	µg/L	3,150	J+ (<280)	U (<210)	U (<118)	U (<118)	U (<700)	U 210	2,000 (s)
Total Dissolved Solids	µg/L	7,920	336,000	422,000	87,000	251,000	1,590,000	13,000	---
Total Hardness	µg/L	500,000	310,000	200,000	89,000	260,000	710,000	J (<300)	---
Phenolics, Total Recoverable	µg/L	(<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	U (<5.0)	1 (s)
Nitrogen, Nitrate-Nitrite	µg/L	(<495)	U (<495)	U (<495)	1,390	U (<248)	U (<406)	U 657	10,000 (s)
Bromide	µg/L	880	J 88	J 130	U (<60)	U (<60)	U 210	J (<60)	2,000 (g)
Chloride	µg/L	4,800,000	61,000	82,000	1,900	J 24,000	650,000	J (<280)	250,000 (s)
Sulfate	µg/L	54,000	U (<1,000)	U 44,000	7,100	36,000	5,300	J 370	250,000 (s)
Alkalinity, Total (As CaCO ₃)	µg CaCO ₃ /L	670,000	250,000	240,000	75,000	180,000	260,000	U (<20,000)	---
Color	color unit	45	55	U (<10)	U (<10)	35	U (<10)	U (<10)	---

NOTE: NYSDEC = New York State Department of Environmental Conservation
 AWQS = Ambient Water Quality Standard
 µg/L = Micrograms per liter
 J+ = Analyte detected below the practical quantification limit (PQL).
 J = Analyte present. Reported value may be biased high. Result is estimated high.
 U = Analyte was analyzed for, but not detected below the laboratory reporting limit.
 J- = Analyte present. Reported value may be biased low. Result is estimated low.
 D = Indicates the compound concentration is the result of a dilution.
 (g) = NYSDEC Ambient Water Quality Standards guidance value
 (s) = NYSDEC Ambient Water Quality Standards standard value
 Analytical data results provided by Spectrum Analytical. Validation services are provided by Meridian Consultant Group, Inc.
Bold values indicate that the analyte was detected greater than the NYSDEC Ambient Water Quality Standards.
 DUPLICATE sample was collected at MW-03D.



Table 1
PFAS and 1,4-Dioxane Groundwater Data Summary

Group	CAS No.	Emerging Contaminant	Abbreviation	Sample ID:	MW-7S	MW-11S	MW-11S DUP	EB
	375-22-4	Perfluorobutanoic Acid	PFBA	480-142503-1 & 320-43696-1	480-142274-1	480-142274-2	480-142274-3	480-142274-4
	2706-90-3	Perfluoropentanoic Acid	PFPA	Lab Sample ID:	09/18/2018	09/20/2018	09/20/2018	9/20/2018
	307-24-4	Perfluorohexanoic Acid	PFHA	Date Sampled:	9.17	8.67	8.67	NA
	375-85-9	Perfluoroheptanoic Acid	PFHpA	D/TW (ft btoc)				
	335-67-1	Perfluorooctanoic Acid	PFOA		4.5	ND<2.0 U	ND<1.9 U	ND<2.0 U
	375-95-1	Perfluorononanoic Acid	PFNA		ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	335-76-2	Perfluorodecanoic Acid	PFDA		ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	2058-94-8	Perfluoroundecanoic Acid	PFUaA		7.8	ND<2.0 U	ND<1.9 U	ND<2.0 U
	307-55-1	Perfluorododecanoic Acid	PFDOA		ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	72629-94-8	Perfluorotridecanoic Acid	PFTriA		ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	376-06-7	Perfluorotetradecanoic Acid	PFTeA		ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	375-73-5	Perfluorobutanesulfonic Acid	PFBS		ND<1.9 UJ	ND<2.0 U	ND<1.9 U	ND<2.0 U
	355-46-4	Perfluorohexanesulfonic Acid	PFHxS		ND<1.9 UJ	ND<2.0 U	ND<1.9 UJ	ND<2.0 U
	375-92-8	Perfluoroheptanesulfonic Acid	PFHpS		ND<1.9 UJ	ND<2.0 U	ND<1.9 UJ	ND<2.0 U
	1763-23-1	Perfluorooctanesulfonic Acid	PFOS		7.2	ND<2.0 U	ND<1.9 U	ND<2.0 U
	335-77-3	Perfluorodecane sulfonic Acid	PFDS		ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	754-91-6	Perfluorooctane Sulfonamide	FOSA		ND<1.9 U	ND<2.0 U	ND<1.9 U	ND<2.0 U
	2355-31-9	N-methyl Perfluorooctane Sulfonamidoacetic Acid	NMeFOSAA		ND<19 U	ND<20 U	ND<19 U	ND<20 U
	2991-50-6	N-ethyl Perfluorooctane Sulfonamidoacetic Acid	NEtFOSAA		ND<19 U	ND<20 U	ND<19 U	ND<20 U
	27619-97-2	6:2FTS	6:2FTS		ND<19 U	ND<20 UJ	ND<19 U	ND<20 UJ
	39108-34-4	8:2FTS	8:2FTS		ND<19 U	ND<20 U	ND<19 U	ND<20 U
	123-91-1	1,4-Dioxane	1,4-Dioxane		ND<0.20 U	ND<0.20 U	ND<0.20 U	ND<0.20 U

Notes:

ft btoc = Feet below top of casing

µg/L = Micrograms per liter

ng/L = Nanograms per liter

NA = Not applicable

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

B = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

UJ = An analyte identified in method blank

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample



Table 4
Metals Groundwater Data Summary

COMPOUND	NYSDEC TOGS 1.1.1.1 Class GA AWOQS	Sample ID:		MW-2DR	MW-3S	MW-3D	MW-6S	MW-6D	MW-7S	MW-7D	MW-9S	MW-9D	MW-11S	MW-11S DUP	MW-11D	EB
		Lab Sample ID:	Depth to Water (ft btoc):													
		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		27.65	14.24	19.31	19.20	19.20	21.33	16.28	9.17	16.28	8.61	11.70	8.67	8.67	31.35	NA
		WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		9/27/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/19/2018	9/19/2018	9/20/2018	9/21/2018	9/27/2018	9/21/2018
		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		2500	ND (<200) U	ND (<200) UJ	5000	1300	1900	1300	1900	1300	ND (<200) U	200	ND (<200) U	ND (<200) U	4400	ND (<200) U
Aluminum	6	ND (<20) UJ	ND (<20) U	ND (<20) UJ	ND (<20) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ
Antimony	50	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ	ND (<15) UJ
Arsenic	2,000	220 J	340 J	1100 J	160 J	190 J	32 J	1500 J	620 J	1500 J	620 J	390 J	8.6 J	140 J	140 J	ND (<2) UJ
Barium	3.0	ND (<20) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ
Beryllium	10.0	ND (<20) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ	ND (<2) UJ
Cadmium	10.0	127000	95100 J	237000 J	143000 J	55800 J	34700 J	153000 J	59400 J	153000 J	59400 J	78900 J	28100 J	27800 J	72600	ND (<500) UJ
Calcium	-	4.4 J	ND (<4) UJ	ND (<4) UJ	28 J	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	6.5 J	ND (<4) UJ
Chromium, Total	100	ND (<40) UJ	ND (<4) UJ	ND (<4) UJ	30 J	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	ND (<4) UJ	0.24 J	ND (<4) UJ
Cobalt	1,000	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	10 J	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	6.6 J	ND (<10) UJ
Copper	200	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ
Cyanide, Total	600	3400	2100	2400	16700	2400	1800	3900	2400	3900	2400	2300	ND (<50) UJ	ND (<50) UJ	10500	ND (<50) UJ
Iron	50	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	5.0 J	ND (<10) UJ
Lead	35,000	32700	23500 J	63900 J	20000 J	15100 J	4100 J	39700 J	8100 J	39700 J	8100 J	17900 J	5900 J	5400 J	17800	ND (<200) UJ
Magnesium	600	640 JB	940 JB	120 B	8000 B	54 B	70 B	100 B	130 B	100 B	130 B	100 B	ND (<3) UJB	ND (<3) UJB	170 B	ND (<3) UJB
Manganese	1.4	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U	ND (<0.2) U
Mercury	200	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	13 J	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	ND (<10) UJ	6.6 J	ND (<10) UJ
Nickel	200	2500	2000	2500	1900	1200	2700	3400	21400	3400	21400	1200	ND (<500) UJ	ND (<500) UJ	2100	ND (<500) UJ
Potassium	20.0	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ	ND (<25) UJ
Selenium	100	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ
Silver	100	134000	67500 J	199000 J	3600 J	5400 J	97800 J	1520000 J	3760000 J	1520000 J	3760000 J	8500 J	1800 J	1700 J	14300	ND (<1000) UJ
Sodium	-	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ	ND (<20) UJ
Thallium	0.5	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	9.5 J	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	ND (<5) UJ	7.2 J	ND (<5) UJ
Vanadium	-	18 JB	ND (<10) UJB	ND (<10) UJB	34 JB	ND (<10) UJB	15 JB	170 JB	ND (<10) UJB	170 JB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	19 B	ND (<10) UJB
Zinc	5,000	18 JB	ND (<10) UJB	ND (<10) UJB	34 JB	ND (<10) UJB	15 JB	170 JB	ND (<10) UJB	170 JB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	ND (<10) UJB	19 B	ND (<10) UJB

Bad values indicate analytical result exceeds TOGS 1.1.1 WQS
TOGS 1.1.1 WQS = Ambient Water Quality Standards Guidance Values and Groundwater Effluent Limitations, amended April 2000


µg/L = micrograms per liter
- = no published regulatory standard
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample or Analyte not detected above the sample quantitation limit, the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
B = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blank (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
F = MS and or MSD Recovery is outside acceptable limits
NA = not analyzed

Appendix 3

Site Inspection Forms

LANDFILL INSPECTION REPORT

Day: Tuesday **Date:** 12/10/2019

	NYSDEC	Temperature: (F)	(am)	25	(pm)
		Wind Direction:	(am)	w 20 mph	(pm)
ETE SANITATION AND LANDFILL		Weather:	(am)	Overcast	
NYSDEC Site # 9-61-005			(pm)		
Contract # 14907.27		Arrive at site	1:30 pm		
Gainesville, New York		Leave site:	3:30 pm		
Site Security					
Evidence of vandalism (wells, vents, protective cover damage):					
Protective covers on MW-9S and MW-9D either by corrosion or vandalism are broken. Locks on MW-6S and MW-6D are cut off, but set on top of casing.					
Evidence of cover system intrusion (ruts, burrows, excavations):					
None					
Evidence of penetrations (poles, posts, stakes):					
None					
Evidence of human encroachment (trash, fire pits, tire/footprints):					
None					
General site condition:					
Cap is in great condition with thick vegetative cover.					
Additional Comments:					
Gas vent GV-6 has been removed/lost. There is no sign of a stub or hole from the original gas vent.					

Vegetative Cover and Geosynthetics

Evidence of erosion, settlement, rutting, potholes, slippage:

None

Evidence of stressed vegetation or bare spots:

some stressed vegetation outside the cap in areas that were not restored with topsoil. No erosion found.

Exposed geosynthetics, if so, any visible signs of damage to geosynthetics:

None

Additional Comments:

Gas Venting System & Groundwater Monitoring Points

Evidence of damage to wells/vents or surrounding area (cracking, misalignment, missing pieces):

GV-6 is missing

Evidence of cover system subsidence or upheaval near wells/vents:

None

Evidence of wildlife intrusion (nests, burrows, wasp nests):

None

Evidence of spilled liquids (well tampering/vent blowout):

None

GAS VENTS: Unusual conditions – belching, whistling, excessive gas (odor) production:

no evidence of gas production at all

MONITORING WELLS: Well covers in place and secure:

Monitoring well cluster 3 have a new type of protective casing than other wells. Both in good shape and locked. Monitoring well cluster 6 are in good physical condition, but the locks were cut off and left on top of protective casing. Monitoring well cluster 7 protective casing in good shape, could not open lock on 7S. Monitoring well cluster 9 the top of both protective casings are broken and unable to lock.

Additional Comments:

Monitoring well water elevations from top of PVC casing/ total depth (ft):

3S	11.91/31.60	6S	11.19/21.96	9S	7.15/17.12
3D	17.80/56.20	6D	20.08/76.51	7D	16.05/46.90
				9D	10.85/76.20

Landfill/Gas Vent Monitoring Data

All 20.9% oxygen, 0.0ppm PID and 0% LEL

LANDFILL INSPECTION REPORT

Day: Tuesday Date: 12/10/2019

Landfill Monitoring			Gas Vent Monitoring		
Area	CO	FID Reading (ppm)	Gas Vent	CO	FID Reading (ppm)
	%LEL	O ₂		%LEL	O ₂
South			1		0
				0	20.9
West			2		0
				0	20.9
North			3		0
				0	20.9
East			4		0
				0	20.9
Top of Landfill			5		0
				0	20.9
			6		
			7		0
				0	20.9
			8		0
				0	20.9
			9		0
				0	20.9

Inspector: Kevin Glaser

Reviewer: 
Digitally signed by Benjamin McPherson
 DN: cn=Benjamin McPherson, o=Department of
 Environmental Conservation, ou=Division of
 Environmental Remediation,
 email=benjamin.mcpherson@dec.ny.gov, c=US
 Date: 2020.01.09 14:49:37 -0500

Date: 1/9/2020



Photo 1: Gasvent#2.jpg



Photo 2: LookingatNface.jpg



Photo 3: LookingatNface2.jpg



Photo 4: MW3SD.jpg



Photo 5: MW3SorD.jpg



Photo 6: MW6SD.jpg



Photo 7: MW6SDlookingN.jpg



Photo 8: MW6SDlookingW.jpg



Photo 9: MW7SD.jpg



Photo 10: MW9S.jpg



Photo 11: MW9Sinside.jpg



Photo 12: NEcornerlookingE.jpg



Photo 13: NEcornerlookingNW.jpg



Photo 14: NEcornerlookingS.jpg



Photo 15: NEcornerlookingSE.jpg



Photo 16: NEcornerlookingW.jpg



Photo 17: NofLFlookingatNEcorner.jpg



Photo 18: NsideofpondNsideLF.jpg



Photo 19: NsidepondNsideLF2.jpg



Photo 20: NW%20lookingE.jpg



Photo 21: NW%20lookingNW.jpg



Photo 22: NWlookingE.jpg



Photo 23: NWlookingNE.jpg



Photo 24: RipRapspillwayfacingE.jpg



Photo 25: SEcornerlookingN.jpg



Photo 26: SEcornerlookingW.jpg



Photo 27: SpillwallfacingS.jpg



Photo 28: Spillway.jpg



Photo 29: SWcornerlooking%20SW.jpg



Photo 30: SWcornerlookingW.jpg



Photo 31: SWlooinNE.jpg



Photo 32: SWlookingN.jpg



Photo 33: WlookingN.jpg