OPERATIONS AND MAINTENANCE

MANUAL

ETE SANITATION AND LANDFILL SITE STATE SUPERFUND REMEDIATION NYSDEC SITE NO. 9-61-005

Town of Gainesville, Wyoming County

Prepared for:

Prepared by:

Camp Dresser & McKee
100 Crossways Park West, Suite 450
Woodbury, New York 11797

JULY 2000

Updated JULY 2008

David A. Paterson, Governor **Alexander B. Grannis**, Commissioner

ETE Sanitation and Landfill
Town of Gainesville, New York

Operations and Maintenance Manual

NYSDEC Site #9-61-005
Work Assignment #D002925-30

Prepared for:

New York State
Department of Environmental Conservation
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July 2000

Contents

List of Tables

List of Figures

Section 1
Introduction

This operation and maintenance manual (O&M Manual) was prepared for the New York State Department of Environmental Conservation (NYSDEC) for post-remediation groundwater monitoring and maintenance of the ETE Sanitation and Landfill site (No. 9-61-005) in Wyoming County, New York.

The remainder of this section describes the landfill project and the purpose of this manual; Section 2 provides background information on the site; Section 3 discusses remedial action; Section 4 presents the groundwater monitoring process; Section 5 describes the site inspection and maintenance activities; Section 6 presents health and safety issues and procedures; and Section 7 discusses the emergency contingency plan for the site.

1.1 Project Description

The remedial design portion of this project was developed to reduce off-site contaminant migration to protect both human health and the environment.

1.2 Purpose of the O&M Manual

This manual should serve as a tool to monitor and evaluate the performance and effectiveness of the selected remedial action. The performance and effectiveness is evaluated by monitoring contaminants of concern contained in groundwater and by monitoring leachate generation rates. The manual is intended to provide detailed guidance and direction for the post-closure phase of the project.

Section 2
Site Description

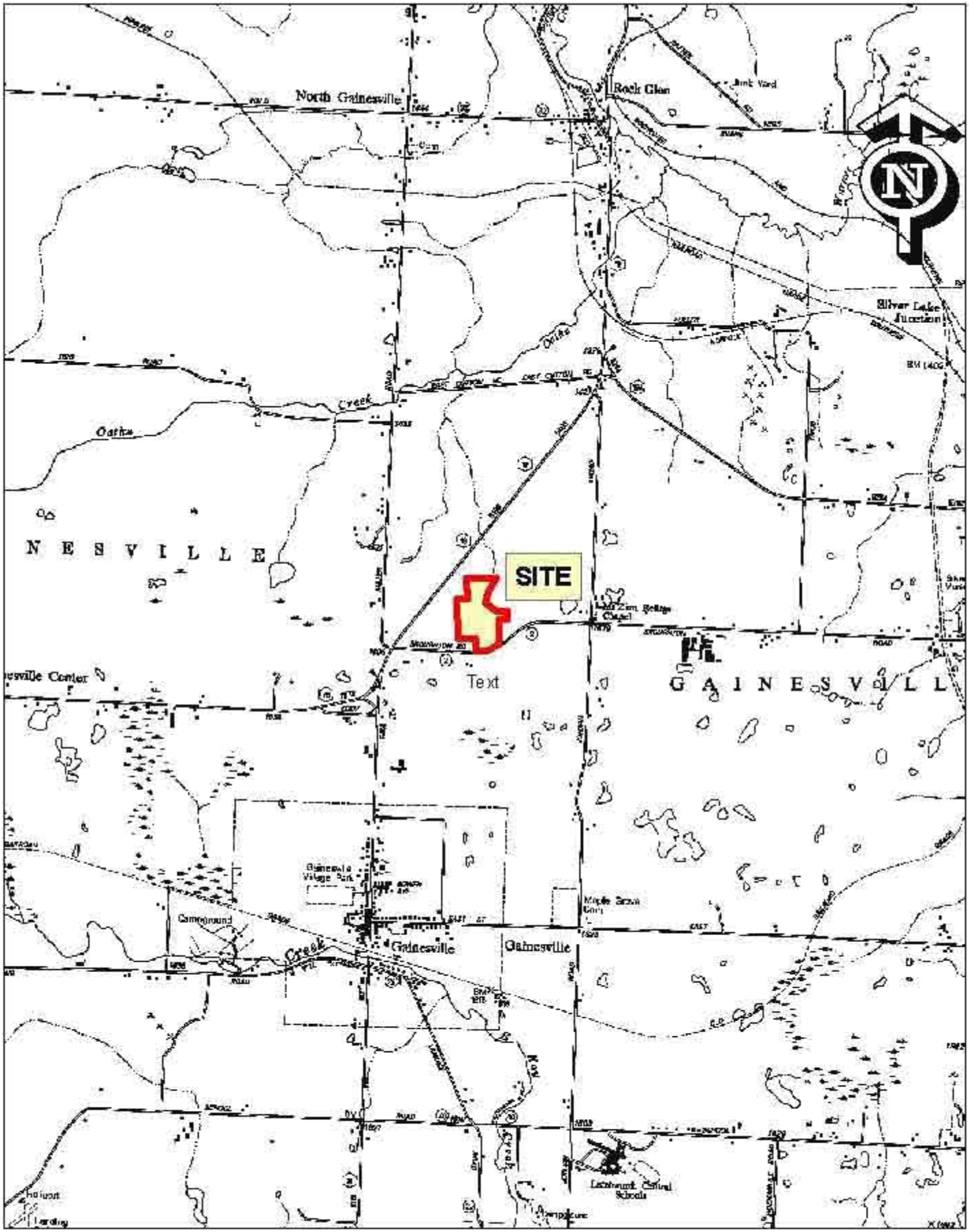
The ETE Sanitation and Landfill (ETE Landfill) site is located in a rural agricultural area on Broughton Road in the Town of Gainesville, Wyoming County, New York, approximately 2 miles west of Silver Springs and 1-mile north of the Village of Gainesville. Figure 2-1 shows the location of the site. The 20-acre site is surrounded by woodland buffer, which separates the landfill from undeveloped agricultural land on all sides. Broughton Road runs east to west to the south of the landfill and Route 19 runs north to south to the west side of the landfill. Two ponds are located within the subject area. The first being situated at the southern property line, referred to as South Pond, and the second located on the northern property line, referred to as North Pond. The landfill accounts for about seven acres of the 20-acre site. The Town of Gainesville Highway Department Garage is located in the southeast corner of the subject area.

According to the 1994 Preliminary Site Investigation Report, the ETE Landfill site was owned and operated by ETE Corporation from 1972 to 1979. The site may have been in operation prior to 1972. The ETE site was a non-permitted private landfill which accepted municipal and industrial waste from surrounding towns in Wyoming County. The ETE Corporation declared bankruptcy in 1979. A number of violations cited by the New York State Department of Environmental Conservation (NYSDEC) included refuse burned on site; refuse not spread, compacted, or covered; refuse protruding through the cover soils; insufficient grading; uncontrolled release of leachate; and blowing papers.

Almor Corporation of Warsaw, New York, disposed of approximately 150 tons of leaded paint sludge on site. Plating wastes may also have been disposed on site. Additional industrial waste included halite (salt) and possibly other salts produced by Morton Salt. An estimated 4 to 5 truckloads of salt were disposed per week for an undetermined length of time.

Based on site history, findings of NYSDEC site inspections and sample results, NYSDEC elected to perform a Preliminary Site Assessment (PSA) of the site in 1990 and a Second Phase PSA in May of 1993. The PSAs included collection of onsite sediment, leachate and soil samples in addition to the installation and sampling of seven groundwater monitoring wells. These investigations confirmed that hazardous wastes were disposed onsite, groundwater standards were violated, and the contaminants have migrated into nearby surface waters.

To further evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to public health and the environment posed by the presence of hazardous waste, NYSDEC conducted a Remedial Investigation/ Feasibility Study (RI/FS) of the site between March and June 1998. A final RI/FS report was submitted in September 1998.

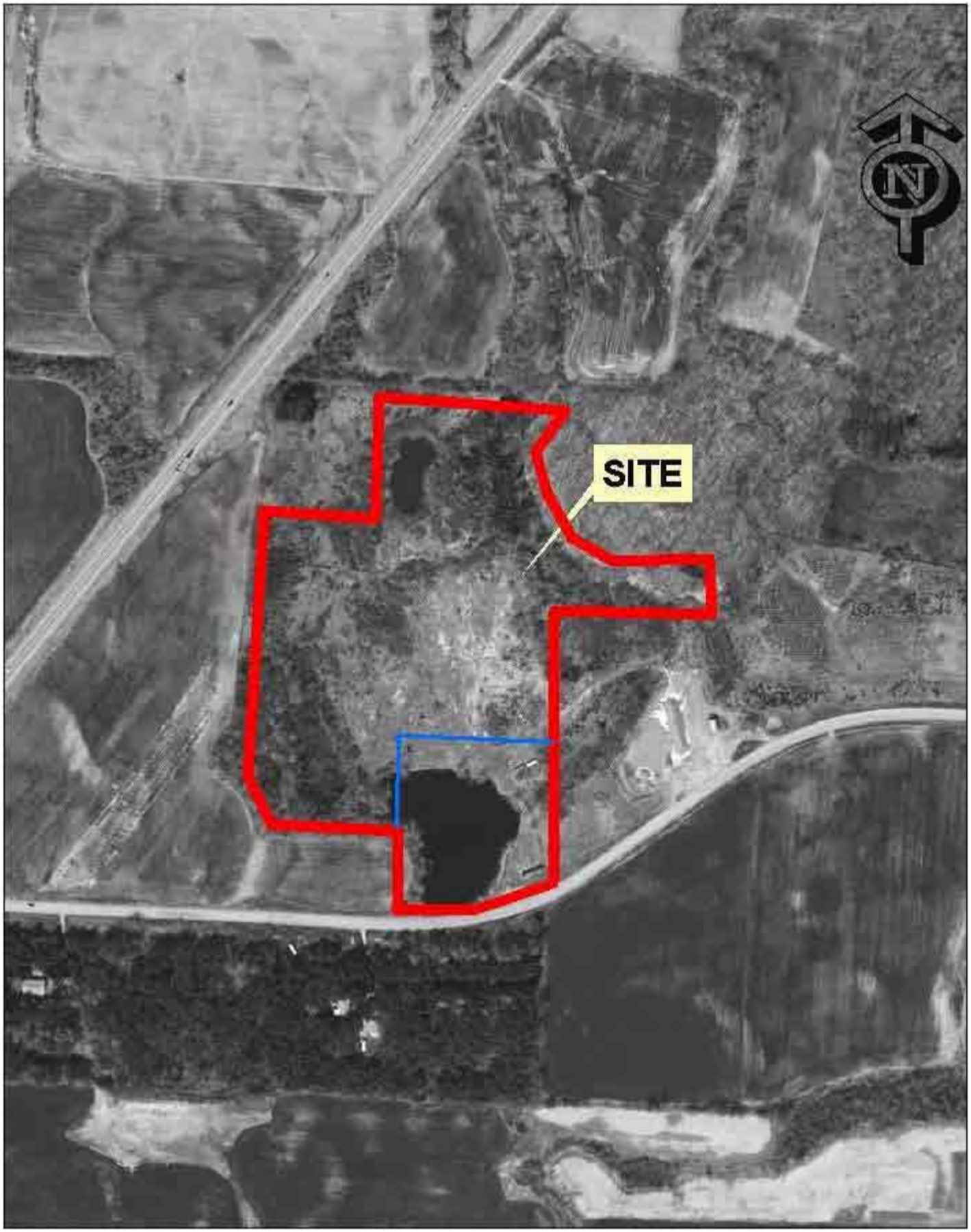


ETE Landfill Site

0 1,900 3,800 5,700 7,600 Feet

Figure 2 - 1

Site Location Map

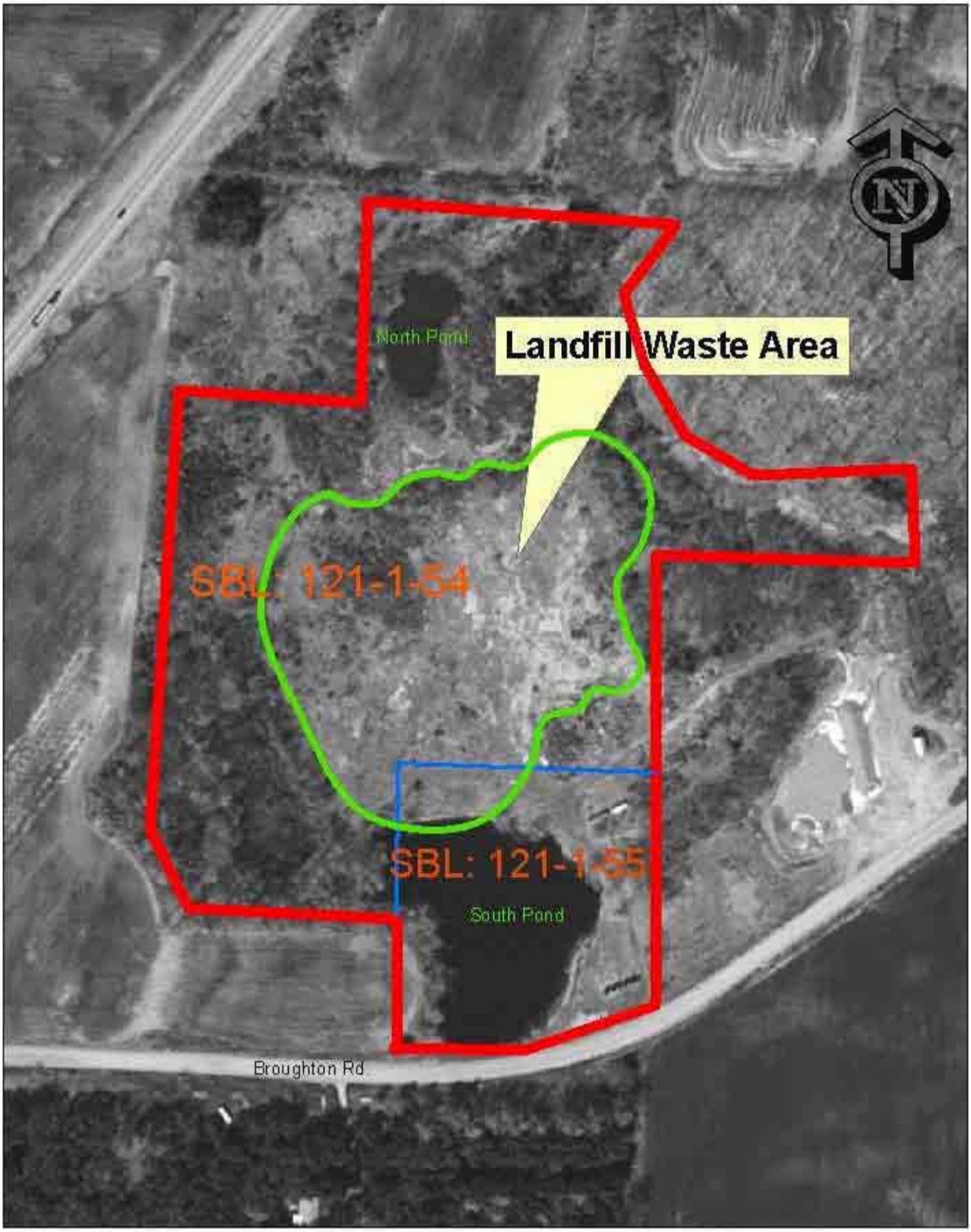


ETE Landfill Site

0 275 550 825 1,100 Feet

Figure 2 - 2

Site Plan



ETE Landfill Site

Figure 2 - 3

Site Plan

The results of the RI indicated that approximately seven acres of the site contain landfilled waste, with a maximum thickness of 15 feet. A portion of the waste is believed to extend under the northern slope of the South Pond.

2.1 Hydrogeologic Characteristics of the Site

This section summarizes the history and physical characteristics of the site.

- The ETE Landfill site is located in a rural area where private water wells and springs are used for drinking water by residents living within a one mile radius of the site.

- Operating as a private landfill by ETE Corporation from 1972 to 1979, industrial and municipal solid wastes were landfilled at the site. Landfilling activities ceased by 1979 though the landfill was not closed in accordance with NYSDEC regulations. Historical records document the disposal of drums containing leaded paint sludge and waste salt. Drummed plating wastes and solvents may have also been landfilled onsite. In 1991, NYSDEC performed a drum removal action at the site.

- The landfill was constructed on top of unconsolidated glacial sediments which are primarily composed of clay rich Glacial tills, with minor beds of more permeable sand and gravel. The hydraulic conductivity of native soils ranged from $1x10^{-4}$ to $1x10^{-6}$ cm/sec. The landfill appears to have been constructed in a natural depression running north to south between two small ponds, referred to as the North and South Ponds.

- Groundwater flow direction is controlled by regional topography and local hydrogeology. In response to regional topography, groundwater tends to flow north-northeast towards the Cotton Creek valley. Local hydrogeologic effects on groundwater flow direction include local groundwater recharge due to the hydraulic head of the South Pond and the slight mounding of water which occurs within the saturated waste. As a result, groundwater flow direction within the western portion of the site appears to be north-northwest. 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.

2.2 Nature and Extent of Contamination

This section describes the nature and extent of contamination that has been documented at the ETE Landfill site. Based on completed test pits and borings, approximately seven acres of the site contains landfilled material consisting of both municipal and industrial solid wastes. With only two borings drilled through the landfilled area of the site, only a rough approximation of the landfill volume could be made. The estimated volume of waste has been made using limited data points and should, therefore, be considered a crude estimate of the volume of waste. It is estimated that the ETE Landfill contains roughly 2.5 million cubic feet of waste.

Approximately 1.5 million cubic feet of waste lies below the water table. These estimates assume that the central portion of the landfill averages a waste thickness of 12 feet with outlying waste areas averaging 5 feet in thickness. Waste appears to extend underneath the South Pond along the ponds northern edge into an offsite property. The extent of waste lying beneath the South Pond could not be accurately determined. Based upon limited site data, a rough estimate of the waste volume extending offsite was calculated to be 336,000 to 448,000 cubic feet of waste using waste thicknesses of 6 to 8 feet underlying the northern portion of the South Pond. No other offsite disposal areas were identified. The waste is approximately fifteen (15) feet thick within the center of the landfill and tends to thin towards the perimeter of the landfill. Due to the relatively shallow water table at the site, the majority of the waste is situated below the water table. Wastes are covered with a silty clay soil approximately one to two feet in thickness, though waste is exposed within portions of the landfill's northern slope.

Section 3
Site Remedial Action

Based upon information presented in the RI/FS, the NYSDEC has identified a selected remedy. This is documented in the March 31, 1999 Record of Decision (ROD), and includes:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved.

2. Waste consolidation and site regrading, to minimize the footprint of the site. Design of a modified part 360 cover system in accordance with applicable regulations and guidance including a gas collection layer and a passive gas collection and venting system. Design of surface water controls.

3. Permanently drain the South Pond to reduce leachate production. Design of drainage ditches and/or pipe conduits to drain the South Pond area. Reclamation of the South Pond area to the extent necessary. Consolidation of the wastes currently under the South Pond to the extent necessary for the remedy.

4. Excavation of contaminated sediments from the North Pond and placement under the final cover of the landfill. Extension of North Pond by approximately one acre to partially compensate for the loss of South Pond aquatic habitat and/or wetlands.

5. Installation and monitoring of two additional well clusters down gradient of the site to detect any future off-site migration of groundwater contamination towards residences.

6. Preparation of a long-term operation, monitoring, and maintenance plan (OM&M plan). The OM&M plan will include periodic sampling of the groundwater, surface water, private wells and landfill gas vents. The plan will also include periodic inspection and maintenance of the cover system and surface water controls to maintain the effectiveness of the remedy.

Section 4
Groundwater Monitoring Plan

This section describes detailed post-closure groundwater monitoring procedures for the ETE Landfill site. The major objective of the groundwater monitoring program is to collect samples that are representative of actual conditions in the field. Primary elements of a monitoring program include sample collection, sample preservation and handling, analytical procedures, quality assurance and quality control, and evaluation of the groundwater quality data. Site-specific health and safety issues for personal protection of sampling team members will be considered.

Groundwater monitoring at the ETE Landfill will consist of collecting groundwater samples from monitoring wells. Monitoring locations are shown on Figures 4-1 and 4-2.

4.1 Sample Collection

Groundwater sample collection procedures are discussed in four steps: (1) measurement of static water elevation, (2) purging, (3) measurement of field parameters, (4) sample withdrawal and cleaning. Due to the potential presence of explosive (methane) or organic vapors, ambient air in the well must be checked for their presence before the well is evacuated.

4.1.1 Measurement of Static Water Elevation

Measurements of static water elevations are used to calculate water volumes in the well. They are also used to determine groundwater hydraulic gradients, which in turn are used to predict groundwater flow directions and velocities. Steps in the measurement process are described below.

- Remove the lock from the locking cap covering the well. The measurement reference point (MRP) is the top of the PVC casing below the locking cap. The elevation of the MRP has been established by a survey within an accuracy of ±0.01 foot.

- Lower the thoroughly cleaned probe from an electronic water-level measurement instrument to the water surface. The electronic probe should give an audible or visual signal (a light or a milliammeter) upon contact with the water surface.

- Record the distance from the MRP to the water surface, rounding to the nearest 0.01 foot.

- Remove the measurement probe, cleaning the measurement line and the probe as it is brought to the surface.

O:\KALNY\ETE\ETE PS\ETE_Figure 1-1.PM6 0897-22149/T2.GEOP *Issued: December 1998.*

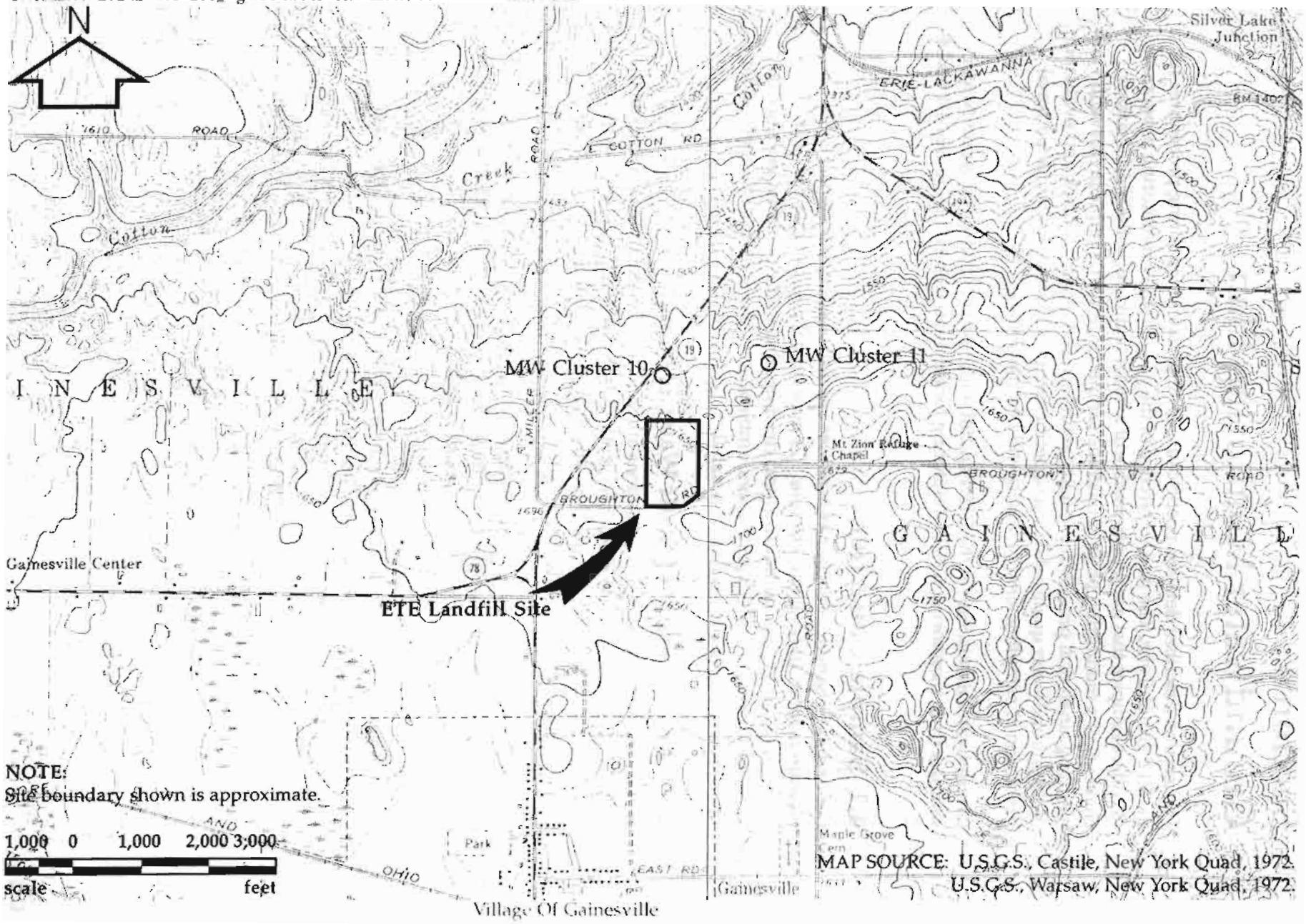
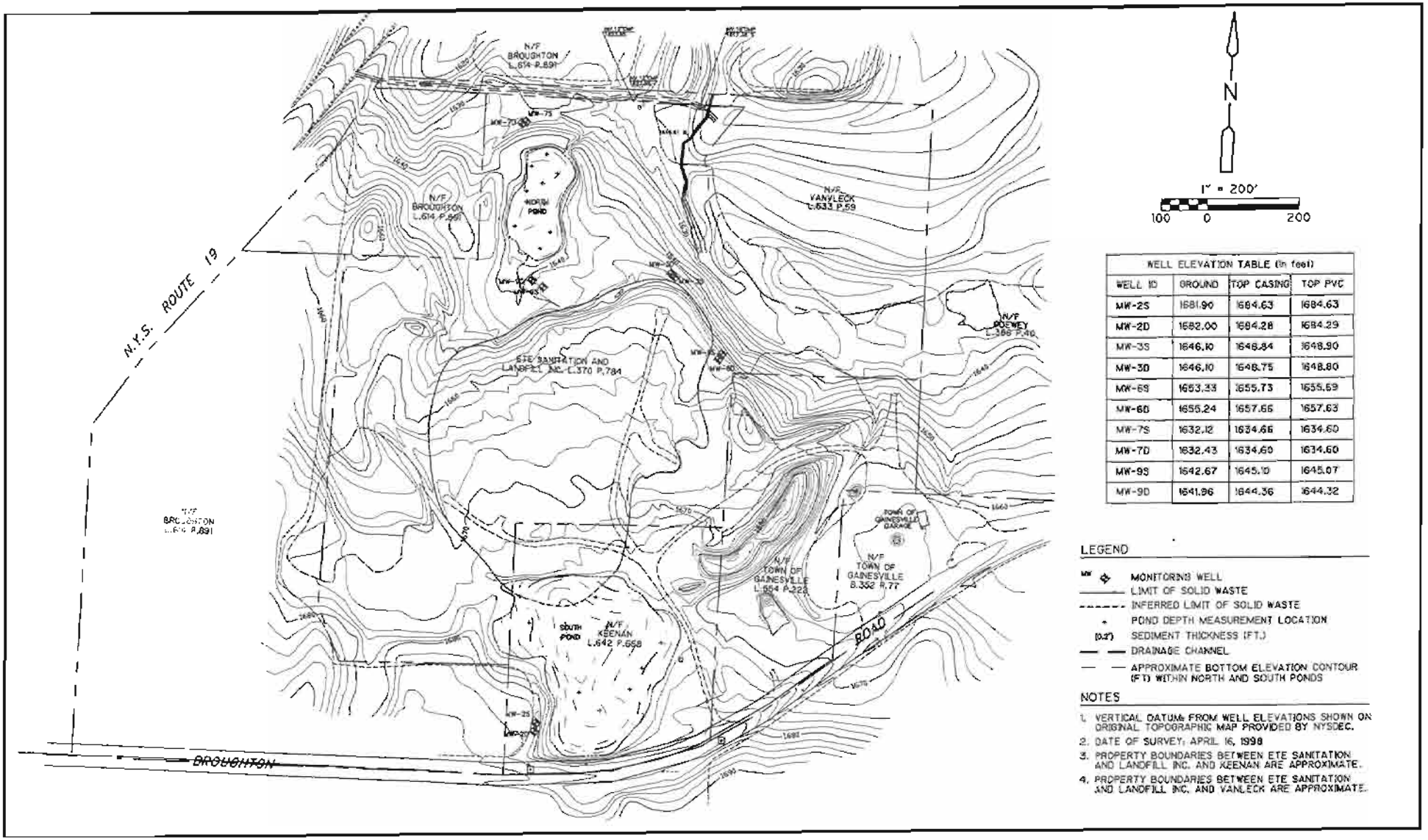


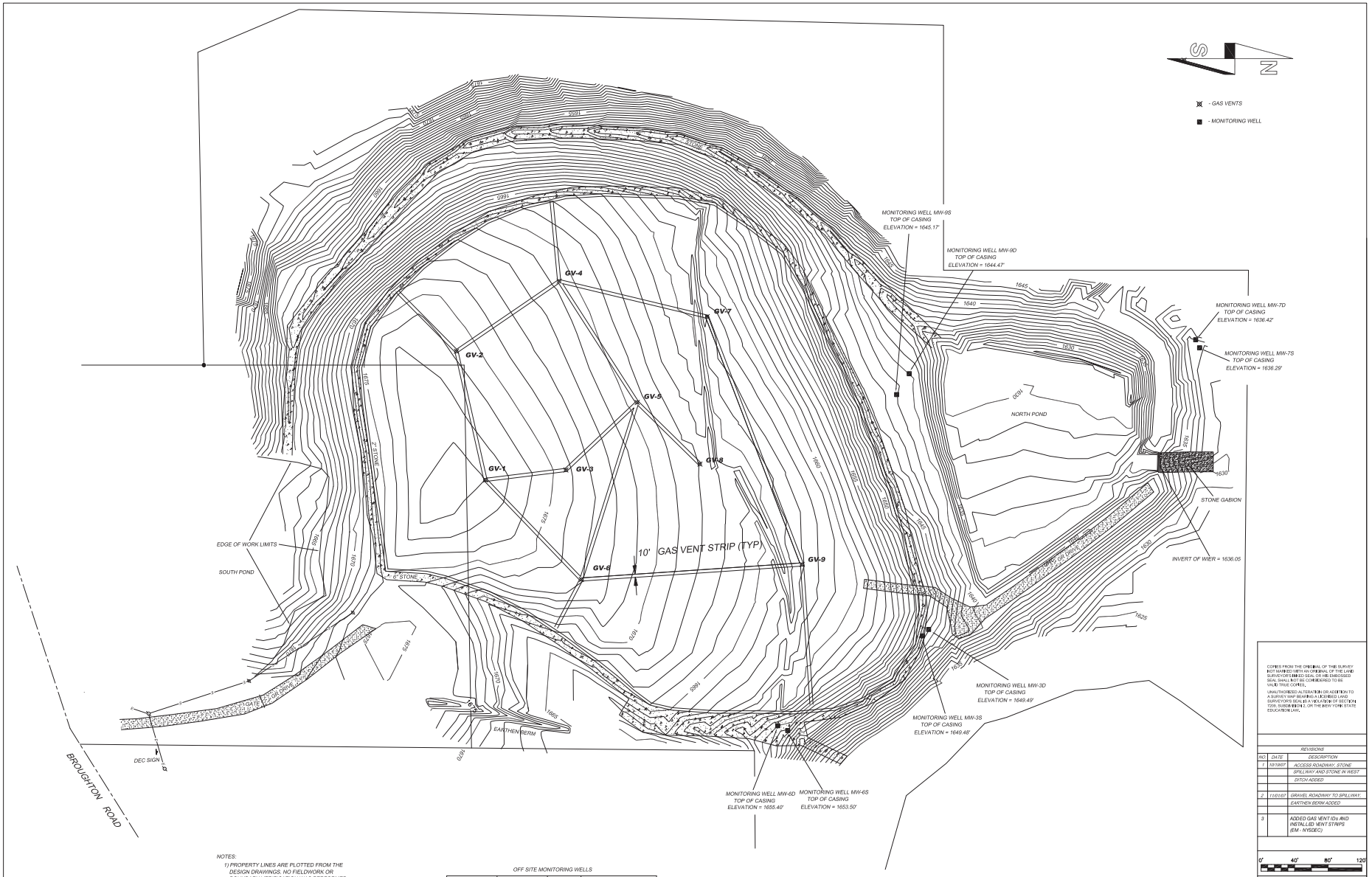
Figure 4-1
Off-site Monitoring Well Location
ETE Sanitation and Landfill



WELL ELEVATION TABLE (in feet)

WELL ID	GROUND	TOP CASING	TOP PVC
MW-2S	1681.90	1684.63	1684.63
MW-2D	1682.00	1684.28	1684.29
MW-3S	1646.10	1648.84	1648.90
MW-3D	1646.10	1648.75	1648.80
MW-6S	1653.33	1655.73	1655.69
MW-6D	1655.24	1657.66	1657.63
MW-7S	1632.12	1634.66	1634.60
MW-7D	1632.43	1634.60	1634.60
MW-9S	1642.67	1645.10	1645.07
MW-9D	1641.96	1644.36	1644.32

Figure No. 4-2
ON-SITE MONITORING WELL LOCATIONS
ETE Sanitation and Landfill



NOTES:

1) PROPERTY LINES ARE PLOTTED FROM THE DESIGN DRAWINGS. NO FIELDWORK OR BOUNDARY VERIFICATION WAS PERFORMED.

2) WELLS NUMBERED 10S & 10D HAVE NO LABELS ON THE CASING. THERE WAS NO WAY TO IDENTIFY WHICH WAS WHICH. WE HAVE LABELED THE NORTHERN MOST WELL MW10S AND THE SOUTHERN MOST WELL MW10D.

3) WELLS 11S & 11D ARE ALSO UNLABELED, WE PUT MW-11D AS THE EASTERLY WELL. MW-11S AS THE WESTERLY WELL .

OFF SITE MONITORING WELLS

NORTHING	EASTHING	ELEVATION	DESCRIPTION
970104.710	1270976.414	1585.659'	GROUND
970105.090	1270976.275	1589.027'	MONITORING WELL 10D
970110.137	1270981.420	1584.984'	GROUND
970110.527	1270981.394	1586.043'	MONITORING WELL 10S
970613.204	1272784.375	1581.127'	GROUND
970613.132	1272784.053	1583.840'	MONITORING WELL 11D
970613.418	1272776.051	1579.952'	GROUND
970613.527	1272775.740	1583.620'	MONITORING WELL 11S

STATE OF NEW YORK
DANA C. GROVER
No. 49812
Licensed Land Surveyor

Dana C. Grover, PLS No. 49812

LOCATION:

ETE SANITATION & LANDFILL SITE
BROUGHTON ROAD
TOWN OF GAINESVILLE
WYOMING COUNTY, NEW YORK

SURVEY PREPARED FOR:

PATRICK CONTRACTORS
P.O. BOX 188
BLOOMFIELD, NEW YORK 14469

GROVER & BATES ASSOCIATES
69 SOUTH MAIN STREET
PERRY, NEW YORK 14530
585-237-3550

REVISIONS

NO	DATE	DESCRIPTION
1	10/19/07	ACCESS ROADWAY, STONE
		SPILLWAY AND STONE IN WEST
		DITCH ADDED
2	11/01/07	GRAVEL ROADWAY TO SPILLWAY.
		EARTHEN BERM ADDED
3		ADDED GAS VENT IDs AND INSTALLED VENT STRIPS (DM - NYSDEC)

0' 40' 80' 120'

SCALE: 1 IN = 40 FT

FINAL GRADE TOPO

DATE: SEPT. 20, 2007

PROJECT NUMBER: NYSDEC PROJECT 9-61-005

DRAWN BY: DCG

ASBUILT SURVEY
ETE SANITATION & LANDFILL SITE
SBL # 121-1-54 & 55

JOB No. 06-W92

SHEET GB-3

DRAWING No. 06W92ASBUILT

4.1.2 Purging

Standing water will be purged from the well, allowing formation water representative of in situ conditions to flow into the well for sampling. Pumps or a hand bailer will be used to purge the standing water from the wells. Purging procedures vary depending on the yield of the well. A high-yielding well recharges rapidly enough to be purged continuously until it is sampled. A low-yielding well is purged until the well is dry; the water level is then allowed to recover sufficiently so that an adequate volume of water for sampling reenters the wen. The procedure for purging is as follows:

- Calculate the volume of water in the well, multiplying the height of the water column (depth of the well minus the depth to the water surface) by the inside area of the well. Well volumes per foot for typical (inside) diameter wells at the site are 0.163 gallons/ft for 2-inch wells and 1.47 gallons/ft for 6-inch wells.

- Connect pump discharge and air line to the driver/controller mechanism. Start the pump and adjust the recharge cycle for maximum flow rate while still maintaining the water level in the well above the pump intake, if possible, so as not to pump the well dry.

- Collect the discharge in a graduated container for volume measurements.

- Measure pH, specific conductivity, and temperature after each well volume of purge water or after the well has recharged from being pumped dry.

4.1.3 Measurement of Field Parameters

These parameters may be physically or chemically unstable when groundwater is exposed to the atmosphere; therefore, they will be measured in-line in an air-tight chamber connected to the discharge tubing.

- Record field measurements in a table; table format is shown in Table 4-1. Continue purging until the conductivity, temperature, and pH values vary by less than ± 10 percent for three consecutive well volumes, or until the well is purged dry.

- Purged water will be properly disposed of and, if uncontaminated, allowed to infiltrate on the ground surface away from the well. Water will not be disposed of in surface waters or in the well. Purged water suspected of having contamination will be containerized and removed for proper treatment and disposal.

- When field parameter stability criteria are met or the well is pumped dry, the pump may be shut off.

4.1.4 Sample Withdrawal and Cleaning

Groundwater samples will be withdrawn with the bladder pump from each of the monitoring wells. After the purging process for the well is complete, disconnect the

Table 4-1: Well Sampling Log
Field Parameters

Job Name:		Job Number:	
Well Number:		Date:	
Total Well Depth:	feet from T.O.C.	3 Well Volumes:	gallons
Depth to Water	feet from T.O.C.	Purging Initiated:	
Water Column:	feet	Purging Completed:	
Well Diameter:	inches	Total Gallons Purged:	

Time	Volume Purged (gallons)	Temperature (oC)	pH	Specific Conductivity (u ohms)	Comments (water color, odor, pump used, sediment, cloudy, etc.)

discharge line from the air-tight chamber so as to collect the groundwater sample directly from the pump's discharge line.

Sample collection bottles will be filled in the following order: (1) total organic halogens (TOX), (2) total organic carbon (TOC), (3) cations (lead, iron, and sodium, which will be collected in a bottle appropriate for metals), (4) hardness, and (5) chloride. Special procedures are required for TOX analysis samples and filtered samples, as described below.

- TOX Analysis Samples--The pump discharge must be adjusted to achieve a flow rate low enough to fill a TOX bottle without aerating the sample (approximate flow rate of 100 ml/min). Invert the filled TOX bottles and check for air bubbles. Refill the bottle if any air bubbles are present.

- Filtering Samples--When sampling for dissolved metal constituents (sodium, iron, and lead), samples will be filtered before preservation. To filter samples, attach the pump discharge tubing to the inlet side of an in-line, disposable, 0.45-micron filtering apparatus. Discharge from the filter should flow directly into the appropriate sample container. Discard the disposable filter after use at each well.

The sample discharge tube is reconnected to the field parameter measurement chamber after sample collection. A final set of temperature, pH, and conductivity measurements will be taken. The sample discharge tube will be decontaminated prior to reuse.

4.2 Sample Preservation and Handling

In the time between sample collection and laboratory analysis, the concentration and distribution of constituents in the sample could be altered through contamination, reaction, degradation, volatilization, sorption, and other processes. The section on sample collection specifies the type of container to use for specific analysis, the proper temperature control, pH control required preservatives, and maximum acceptable sample holding times between collection and analysis. Regulations require that sample handling and analysis methods conform to EPA document SW-846, *Test Methods for the Evaluation of Solid Waste*. The required containers, preservation techniques, and holding times for appropriate chemical analyses are provided in Table 4-2. The laboratory will provide the appropriate containers that have been laboratory-cleaned and contain the proper preservatives.

4.3 Field Labeling and Documentation

Field sampling activities should be documented using field logs, sample labels, and chain-of-custody procedures. Logs will be maintained for field activities. All entries should be made in indelible ink. Notes will be taken in the bound log books for each sample; the notes will indicate the sampling time and date, station number and location, name of sample collector, procedures used in sample collection, and instrument readings. Example information is contained in Table 4-3. Weather

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 4-2: Required Containers, Preservation Techniques and Holding Times

Parameter[a]	Container[b]	Preservation[c]	Maximum Holding Time
Coliform, Fecal and Total	P,G	4°C, 0.008%, $Na_2S_2O_3$	6 Hours
pH and Temperature	P, G	None	Analyze immediately
DO	G	None	Analyze immediately
BOD, Color, Turbidity, Nitrate	P, G	4°C, H_2/SO_4 to pH	48 Hours
Alkalinity	P, G	4°C	14 Days
COD, Nitrate-Nitrite, TOC, Ammonia, TKN, Total Phosphorus	P, G	4°C, H_2/SO_4 to pH <2	28 Days
Chloride	P, G	None	28 Days
Cyanide	P, G	4°C, NaOH to pH >12, 0.6 g ascorbic acid	14 Days
Fluoride	P	None	28 Days
Chromium VI	P, G	4°C	24 Hours
Mercury[d]	P, G	HNO_3 to pH <2	28 Days
Metals[d], Hardness	P, G	HNO_3 to pH <2	6 Months
Oil and Grease	G	4°C, H_2/SO_4 to pH <2	28 Days
Conductivity Sulfate	P, G	4°C	28 Days
VOC	G, Teflon-lined septum	4°C	14 Days
PAH, TCDD, Pesticides	G, Teflon-lined septum	4°C	40 Days after extraction
TOX	G, Teflon-lined septum	4°C, H_2/SO_4 to pH <2	7 Days

[a]DO = Dissolved oxygen
BOD = Biological oxygen demand
COD = Chemical oxygen demand
TOC = Total organic carbon
TKN = Total Kjeldahl nitrogen
VOC = Volatile organic compounds
PCB = Polychlorinated biphenyl
TCDD = Dioxin
TOX = Total organic halogens
PAH = Polynuclear aromatic hydrocarbon

[b]Polyethylene (P) or glass (G). Glass bottles for PAHs, PCBs, TCDD, pesticides, and TOX must be amber colored.

[c]Use ice during shipping to keep samples near 4°C.

[d]Dissolved metals and mercury should be filtered in the field prior to preservation for groundwater samples, but not for surface water samples.

Reference: *Test Methods for the Evaluation of Solid Wastes*, U.S. EPA, SW-846, 1986.

Sheet ___ of ___

Table 4-3: Well Sample Collection Log

Job Name: _____ Job Number: _____

Well Number: _____ Date: _____

Sample Number	Sample Collection Time	Sample Parameter	Sample Container	Sample Preservative

Samples Shipped by: _____

Laboratory: _____

Sampler Signature: _____

Comments:

conditions, results of measurements taken in the field, instrument calibration results, presence of immiscible layers, observable characteristics of samples taken, the internal temperature of the shipping container, and cleaning procedures will also be noted. A copy of the log books will be filed and available for review.

Sample labels will be glued and taped onto the bottle with transparent, waterproof tape to keep the label from coming off if the label gets wet. Labels will be durable and remain legible when wet. The following information will be included on the sample labels:

- Site location
- Sample identification number
- Preservative added (may be filled out in the laboratory if the preservative is added to sample containers prior to sample collection in the field)
- Type of analysis requested
- Date and time of sampling
- Name and signature of sample collector

Chain-of-custody procedures will be used to track samples, discourage tampering, and provide a sampling summary. A chain-of-custody form includes general information about the locations of the activity and the members of the sampling team, as well as specific information about the type of sample, sample location, number of sample containers from each station, and analyses to be performed. The remarks section of the form may include the internal temperature of the shipping container when samples were placed in it, the maximum and minimum temperatures within the container during shipment, and the internal temperature of the container upon opening at the laboratory. Each time the sample is relinquished or received, the party involved signs the form and indicates the time and date. The chain-of-custody form will be sealed in a waterproof bag and taped inside the cooler if it is shipped to an outside laboratory. A chain-of-custody seal will be placed across the gap between the cooler lid and body if the samples are shipped to a laboratory to document that samples have not been disturbed during transportation.

4.4 Analytical Procedures

A baseline monitoring program, as defined by the NYSDEC regulations, will be implemented for the initial monitoring at the ETE Landfill. The parameters for analysis during baseline monitoring include those given in the NYSDEC regulations. These parameters are identified Table 4-4.

After the first year of monitoring, samples will be collected and analyzed for baseline parameters quarterly.

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 4-4: Water Quality Analysis Baseline Parameters[1]

Common Name[2]	CAS RN[3]	Suggested Methods	PQL[4]
Static Water Level (in wells and sumps)			
Specific conductance		9050	
Temperature			
Floaters or Sinkers[5]			
pH		9040 9041	
Eh			
Dissolved Oxygen[6]			
Field Observations[7]			
Turbidity		180.1	
Leachate Indicators:			
Total Kjeldahl Nitrogen		351.1 351.2 351.3 351.4	
Ammonia		350.1 350.2 350.3	
Nitrate		9200	
Chemical Oxygen Demand		410.1 410.2 410.3 410.4	
Biological Oxygen Demand (BOD_5)		405.1	
Total Organic Carbon		0060	
Total Dissolved Solids		160.1	40000
Sulfate		9035 9036 9038	
Alkalinity		310.1 310.2	20000 6000
Phenols	108-95-2	8040	
Chloride		9250 9251 9252	
Bromide	24959-67-9	320.1	2000
Total hardness as $CaCO_3$		130.1 130.2	20000 30000
Color		110.1 110.2 110.3	80
Inorganic Parameters:			
Aluminum	(Total)	7020	10
Antimony	(Total)	6010 7040	300 2000

Common Name[2]	CAS RN[3]	Suggested Methods	PQL[4]
		7041	30
Arsenic	(Total)	6010	500
		7060	10
		7061	20
Barium	(Total)	6010	20
		7080	1000
Beryllium	(Total)	6010	3
		7190	50
		7191	2
Boron	7440-42-8		
Cadmium	(Total)	6010	40
		7130	50
		7131	1
Calcium	(Total)	7140	40
Chromium	(Total)	6010	70
		7190	500
		7191	10
Chromium (Hexavalent)*	185040-29-9	7195	
		7196	600
		7197	30
		7198	
Cobalt	(Total)	6010	70
		7200	500
		7201	10
Copper	(Total)	6010	60
		7210	200
		7211	10
Cyanide	(Total)	9010	200
Iron	(Total)	7380	100
		7381	4
Lead	(Total)	6010	400
		7420	1000
		7421	10
Magnesium	(Total)	7450	4
Manganese	(Total)	7460	40
		7461	0.8
Mercury	(Total)	7470	2
Nickel	(Total)	6010	150
		7520	400
Potassium	(Total)	7610	40
Selenium	(Total)	6010	750
		7740	20
		7741	20
Silver	(Total)	6010	70
		76760	100
		7761	10
Sodium	(Total)	7770	8
Thallium	(Total)	6010	400
		7840	1000

Common Name[2]	CAS RN[3]	Suggested Methods	PQL[4]
		7841	10
Vanadium	(Total)	6010	80
		7910	2000
		7911	40
Zinc	(Total)	6010	20
		7950	50
		7951	0.5
Organic Parameters:			
Acetone	67-64-1	8260	100
Acrylonitrile	107-13-1	8030	5
		8260	200
Benzene	71-43-2	8020	2
		8021	0.1
		8260	5
Bromochloromethane	74-97-5	8021	0.1
		8260	5
Bromodichloromethane	75-27-4	8010	1
		8021	0.2
		8260	5
Bromoform; Tribromomethane	75-25-2	8010	2
		8021	15
		8260	5
Carbon disulfide	75-15-0	8260	100
Carbon tetrachloride	56-23-5	8010	1
		8021	0.1
		8260	10
Chlorobenzene	108-90-7	8010	2
		8020	2
		8021	0.1
		8260	5
Chloroethane; Ethyl chloride	75-00-3	8010	5
		8021	1
Chloroform; Trichloromethane	67-66-3	8010	0.5
		8021	0.2
		8260	5
Dibromochloromethane; Chlorodibromomethane	124-48-1	8010	1
		8021	0.3
		8260	5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	8011	0 1
		8021	30
		8260	25
1,2-Dibromoethane' Ethylene dibromide; EDB	106-93-4	8011	0.1
		8021	10
		8260	5
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	8010	2
		8020	5
		8021	0.5
		8120	10
		8260	5

Common Name[2]	CAS RN[3]	Suggested Methods	PQL[4]
		8270	10
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	8010	2
		8020	5
		8021	0.1
		8120	15
		8260	5
		8270	10
trans-1,4-Dichloro-2-butene	110-57-6	8260	100
1,1-Dichloroethane; Ethylidene dichloride	75-34-3	8010	1
		8021	0.5
		8260	5
1,2-Dichloroethane; Ethylene dichloride	107-06-2	8010	0.5
		8021	3
		8260	5
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4	8010	1
		8021	0.5
		8260	5
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	8021	0.2
		8260	5
cis-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	8010	1
		8021	0.5
		8260	5
1,2-Dichloropropane; Propylene dichloride	78-87-5	8010	0.5
		8021	0.05
		8260	5
cis-1,3-Dichloropropene	10061-01-5	8010	20
		8260	10
trans-1,3-Dichloropropene	10061-02-6	8010	5
		8260	10
Ethylbenzene	100-41-4	8010	2
		8260	0.05
		8260	5
2-Hexanone; Methyl butyl ketone	591-78-6	8260	50
Methyl bromide; Bromomethane	74-83-9	8010	20
		8021	10
Methyl chloride; Chloromethane	74-87-3	8010	1
		8021	0.3
Methlyene bromide; Dibromomethane	74-95-3	8010	15
		8021	20
		8260	10
Methylene chloride; Dichloromethane	75-09-2	8010	5
		8021	0.2
		8260	10
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	8015	10
		8260	100
Methyl iodide; Iodomethane	74-88-4	8010	40
		8260	10
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	8015	5
		8260	100

Common Name[2]	CAS RN[3]	Suggested Methods	PQL[4]
Styrene	100-42-5	8020	1
		8021	0.1
		8260	10
1,1,2-Tetrachloroethane	630-20-6	8010	5
		8021	0.05
		8260	5
1,1,2,2-Tetratchloroethane	79-34-5	8010	0.5
		8021	0.1
		8260	5
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	8010	0.5
		8021	0.5
		8260	5
Toluene	108-88-3	8020	2
		8021	0.1
		8260	5
1,1,1-Trichloroethane; Methylchloroform	71-55-6	8010	0.3
		8021	0.3
		8260	5
1,1,2-Trichloroethane	79-005	8010	0.2
		8260	5
Trichloroethylene; Trichloroethene	79-01-6	8010	1
		8021	0.2
		8260	5
Trichlorofluoromethane; CFC-11	75-69-4	8010	10
		8021	0.3
		8260	5
1,2,3-Trichloropropane	96-18-4	8010	10
		8021	5
		8260	15
Vinyl acetate	108-05-4	8260	50
Vinyl Chloride; Chloroethene	75-01-4	8010	2
		8021	0.4
		8260	10
Xylenes	1330-20-7	8020	5
		8021	0.2
		8260	5

The Department may modify this list as necessary.

Notes:

[1] This list contains 47 volatile organics for which possible analytical procedures provided in EPA Report SW-846 Test Methods for Evaluating Solid Waste, third edition, November 1986, as revised December 1987, includes Method 8260; 25 metals for which SW-846 provides either 6010 or a method from the 7000 series of methods; and additional parameters for which possible procedures are provided in Methods for Chemical Analysis of Water and Wastes, USEPA-600/4-79-020, March 1979. The regulatory requirements pertain only to the list of parameters; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnote 4.

[2] Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3] Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4] Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

[5] Any floaters or sinkers found must be analyzed separately for baseline parameters.

[6] Surface water only.

[7] Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

* The Department may waive the requirement to analyze Hexavalent Chromium provided that Total and Hexavalent and Trivalent Chromium values do not exceed 0.05 mg/l.

At the end of each year's sampling, data will be compared to upgradient and background water-quality data by using the appropriate statistical test. If a statistically significant increase in concentration (or change in pH) is observed, then an expanded monitoring program may be required.

The analytical procedures that will be used for each of the baseline parameters are identified in Table 4-4.

4.5 Quality Assurance/Quality Control Procedures

Quality assurance and quality control (QA/QC) for field procedures involve collection and analysis of an adequate number of trip blanks, equipment blanks, and duplicate samples. Trip blanks are used to test cleaning procedures for sample containers and laboratory glassware as well as for determining the purity of reagents. Equipment blanks test the effectiveness of field cleaning procedures for sampling equipment. Duplicate samples provide a check for variability caused by the method of sample collection and laboratory performance and are an important element of laboratory QA/QC.

Duplicate samples will be collected by filling separate sample containers in immediate succession, without shutting off the pump. Duplicate samples will not be identified as duplicates when sending them to the laboratory, this will provide a check on the quality of the laboratory analyses. However, field notes will specify the special sample number of the duplicate. Approximately 10 percent of the total number of samples will be duplicate samples.

When analyzing TOX the laboratory that prepares precleaned sample containers will be requested to fill one TOX bottle with organic-free water, using the same source of water used in laboratory operations. Trip blanks will be carried to the site and returned unopened to the laboratory for analysis with the other samples. One trip blank per shipment of TOX will be implemented.

Equipment blanks are not necessary at this site because dedicated sampling equipment is used. However, if non-dedicated sampling equipment is required, equipment blanks will be obtained for groundwater samples collected with portable sampling equipment. All sampling equipment will be cleaned following standard procedures used between wells before collecting the equipment blank. One equipment blank per sampling event will be completed.

Equipment used to measure pH, conductivity, and temperature in the field will be calibrated prior to field use and recalibrated prior to measuring these parameters at each sample location. Equipment calibration will be as per the manufacturer's recommendation and will be recorded as being performed in the logbook.

The laboratory performing the analyses for the groundwater monitoring program will have a laboratory QA/QC plan that will provide the use of standards, laboratory blanks, duplicates, and spiked samples for calibration.

Section 5
Site Inspection and Maintenance

5.1 Inspection Plan

Inspection of the ETE Sanitation and Landfill (ETE Landfill) site will be performed to ensure that post-closure requirements are met. The following activities will be included in the post-closure inspection program:

- The final cap will be inspected and maintained to remediate any effects of settlement, subsidence, and erosion.
- LFG venting and groundwater monitoring systems will be inspected and maintained to properly monitor the facility in accordance with the closure plan.
- Drainage structures will be inspected and maintained to prevent settlement and erosion, and to ensure proper drainage.
- Sedimentation ponds will be cleaned, as necessary, to remove silt that accumulates during the closure period. It is anticipated that yearly cleanings will occur until the site is stabilized. Cleanings will then be scheduled as needed.
- Permanent survey benchmarks will be protected and maintained.

To ensure that the above activities are conducted in their entirety, a scheduled site inspection will be performed. The site inspections will be performed by qualified personnel assigned to inspect the items and systems noted above. The inspections will be performed at least monthly until a full stand of vegetation has been provided over the closed area. Once vegetation has been established, inspections will be performed quarterly. Additional inspections may be performed after periods of extremely wet or dry weather and after major storm events. Where possible, the area should be mowed just before the inspection to allow better visual inspection of the surface area.

The inspection findings will be recorded on a standard Post-Closure Inspection Log (see Table 5-1). Copies of all Post-Closure Inspection Reports will be maintained on file in a location suitable for review.

After a 2-year period has passed with little or no required landfill maintenance, the frequency of the inspections will be decreased to semi-annual. These semi-annual inspections should occur in the early spring and in the late summer. The semi-annual inspections will continue for the remainder of the post-closure care period, unless conditions noted between or during the semi-annual inspections indicate that more frequent inspections and maintenance are required.

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-1: Post-Closure Inspection Log

Item	Types of Problems	Status		Observations
		Acceptable	Unacceptable	
Security Control Devices				
Gates and Locks	Corrosion, damage to gate, vandalism			
Warning Signs	Damaged, corrosion			
Erosion Damage				
Run-off Diversion Channels	Obstruction to flow, bank erosion, deterioration, excessive silting			
Drainage Ditches and Pipes	Erosion, clogging, obstruction of culverts			
Access Roads	Erosion, cracks, deterioration, excessive rutting, loss of aggregate (where utilized)			
Cover Settlement, Subsistence, and Displacement				
Cover Material	Uneven settlement, subsidence, erosion			
Vegetative Cover Conditions				
Cover Material	Inadequate vegetative cover			
Integrity of Cap Drainage, Run-on and Run-off Control Measures				
Run-off Diversion Channels	Obstructions to flow, deterioration, excessive silting, inadequate protective lining			
Drainage Ditches and Pipes	Clogging, obstruction of culverts, inadequate protective lining			
Storm Water Outlet Structure	Corrosion, deterioration, silting, blockage, clogging			
Detention/Sedimentation Pond	Sediment level, riprap at outlet			
LFG Venting System				
LFG Venting System	Damaged wells or headers			
Locks on Groundwater Monitoring Wells	Corrosion, broken			
PVC LFG Vents	Damaged pipe or concrete, plugged vent pipe			
Benchmark Integrity				
Benchmarks	Dislocation, damage			

Date of Inspection _____

Name of Inspector _____

Comments:

5.2 Site Maintenance

If the inspection of the facility indicates that corrective action is required to repair or restore a component of the facility to a condition so it can fulfill its intended function, maintenance will be required. The following sections present specific problems that may occur and the corresponding maintenance procedure, as well as heavy equipment and materials that may be required to perform the maintenance.

Information on maintenance performed will be documented and the information retained in a site file. The following information will be recorded.

- Type of maintenance performed
- Location of maintenance performed
- Maintenance personnel
- Time and date of performed maintenance
- Method maintenance was performed
- Materials and equipment used for performing maintenance

5.2.1 Cover System

The cover system consists of a rough grading soil cover layer over the waste, a geotextile gas venting layer, a 40-mil geomembrane, a composite drainage layer, an 18-inch-thick barrier soil protection layer, a 6-inch-thick vegetative layer and vegetative cover material (i.e., grasses). The purpose of this system is to:

- Eliminate the potential for direct human or animal contact with fill material and contaminated site soils;
- Mitigate migration of contaminants from the landfill; and
- Aid the gas venting system in the controlling of gas generated by the fill material.

Inspection and Maintenance

Inspection of the cover system should focus on the following areas:

- The existence of seeps/breaching of cover;
- Cover subsidence or ponding;
- Erosion of the cover soil layers;
- Cover slope stability;

- Cover vegetation; and
- Vectors.

The condition of the cover system and its immediate surroundings should be documented for each inspection. The recommended maintenance actions for these areas are presented in Table 5-2.

5.2.2 Gas Venting System

The gas venting system consists of the geotextile gas venting layer and 6-inch-diameter PVC gas venting pipes. This is a passive venting system. The purpose of this system is to:

- Increase the stability of the cover system by reducing the potential for cover lifting caused by landfill gas building up below the geomembrane; and
- Minimize the potential for landfill gas to migrate laterally.

Inspection and Maintenance

Inspection of the gas venting system should focus on the vents. Recommended maintenance actions for the system are presented in Table 5-3.

5.2.3 Stormwater System

The stormwater system consists of swales, ditches, culverts, and detention ponds, both around the landfill and in the northern portion of the site where waste has been relocated. The purpose of this system is to:

- Direct stormwater away from the cover and leachate systems;
- Minimize erosion potential;
- Reduce the production of leachate; and
- Reduce the impact of site improvements to off-site areas.

Inspection and Maintenance

Inspection of the stormwater system should focus on the following areas:

- Ditches and swales (including those in the former fill areas);
- Cover system drainage;
- Culverts; and
- Detention ponds.

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-2: Cover System Maintenance Items

Inspection Area	*Item Noted*	*Action*	***Preventive Maintenance***
1. Subsidence/ ponding/heaving	a. Formation of small depressions in cover ground surface	Fill area with clean common fill to surrounding grade and re-establish vegetation layer.	Quarterly inspection
	b. Formation of large depressions in cover ground surface	Fill area with clean common fill to surrounding grade and re-establish vegetation layer. Conduct subsurface investigation if problem persists.	
	c. Formation of large bubbles in cover ground surface	Install a gas vent in the area after informing NYSDEC and verifying correct design and procedure for such.	
2. Erosion	a. Formation of erosion gullies	Grade gully with clean common fill to smooth v-shaped cross sections and re-establish vegetation cover.	Quarterly inspection
	b. Chronic fully formation	Smooth gully sides and install geotextile filter fabric or erosion control matting. Backfill gully to original grade with NYSDOT medium stone fill (NYSDOT Specification Section 620).	Ensure vehicles on cover keep wheels perpendicular to slope (i.e., mowing tractors, inspection vehicles, etc.) to prevent ruts.
3. Slope Stability	a. Erosion, cover failure, slippage, slope	All slopes are to remain less than 14% of inclination. Develop and submit for NYSDEC approval a detailed plan to reconstruct cover to reduce slope to less than 14%. If needed, install berm at base of slope to facilitate regrading.	Quarterly inspection

Table 5-2: Cover System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
4. Vegetation	a. Lack of vegetation	Prepare area for vegetation establishment by fertilizing and placement of topsoil. Apply seed – fescue and ryegrass varieties – either by hydroseeding or manual application. Cover seed with mulch to allow establishment of roots and to minimize seed loss. Reseeding should preferably occur in late August through October or April through June.	Quarterly inspection Annual fertilization and liming, if necessary
	b. Excessive vegetation	Mowing – preferable in June after the spring growth or in September before autumn.	Annual mowing (vary cutting pattern to avoid causing ruts)
	c. Chronically weak and vulnerable vegetation	Perform soil analyses to identify nutrient deficiencies, pH. Evaluation of soil water-holding properties and drainage. Application of required nutrients.	Quarterly inspection
	d. Undesirable species or scrubs on cover	Physical removal of vegetation and root system. Repair topsoil after root system removal. Fertilization of soil and reseed. If uncontrollable, judicious application of herbicides may be necessary.	Quarterly inspection Annual mowing
	e. Scrubs or trees obstructing roads or inspection routes	Physical removal and disposal off site.	Quarterly inspection Annual mowing
5. Vectors	a. Large population of burrowing animals	Backfill burrow with clean soil. Reseed affected area(s). Capture animals in traps if problem becomes chronic. Remove animals to distant location for release.	Quarterly inspection

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-3: Gas Venting System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
1. Vents	a. Odors/methane/organic vapors	Measure VOC and methane concentration at each vent. Discuss problem and VOC results with NYSDEC/NYSDOH to determine if further action is required (e.g , review gas treatment options, additional air sampling and analyses to determine individual parameter concentrations).	Inspect and monitor quarterly
	b. Vent condition	Repair/replace defective items.	
	c. Screen	Repair/replace as needed.	

Recommended maintenance actions for these areas are presented in Table 5-4.

5.2.4 Groundwater Monitoring System

The groundwater monitoring system consists of four sets of wells: bedrock wells and overburden wells. The purpose of this system is to provide points at which the groundwater characteristics can be determined.

Determination of groundwater characteristics is discussed in Section 4.

Inspection and Maintenance

Inspection of the groundwater monitoring system should focus on the following areas:

- Caps;
- Lock;
- Surface seals/pads; and
- Markings.

Recommended maintenance actions for these areas are presented in Table 5-5.

5.2.5 Facility Access System

The facility access system consists of on-site gravel roads and a gate. The purpose of the system is to facilitate inspection and maintenance access to the site and limit public use of the access roads. A gravel road also exists that provides access to the area north of the site. This road is not part of the facility access system.

Inspection and Maintenance

Inspection of the facility access system should focus on the condition of the road and gate. Recommended maintenance actions for the system are provided in Table 5-6.

5.3 Disposal of Wastes

5.3.1 Stormwater Collection System Silt

Silt removed from the stormwater collection system should be spread on site and seeded to minimize erosion.

5.3.2 Monitoring/Sampling-Derived Waste

Well purge water and liquid decontamination wastes may be disposed of in the landfill leachate collection system. All expendable materials (e.g., Tyvek, gloves, etc.) generated during sampling should be bagged and disposed off site as solid waste.

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-4: Stormwater System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
1. Detention ponds	a. Over-topping	Check outflow structures for blockage/restriction. Remove excessive silt (greater than 1 foot deep) and regrade, revegetate/repair. Reinspect after 30 days.	Quarterly inspection
	b. Erosion	Regrade area, revegetate/repair. Reinspect after 30 days. Install erosion control matting. Backfill gully to original grade with NYSDOT medium stone fill (NYSDOT specification Section 620).	
	c. Excessive vegetation	Mow area	Annual mowing
	d. Weak vegetation	Test soil, refertilize, adjust pH (if necessary), reseed, mulch. Reinspect after 30 days.	
	e. Embankments	Check for cracks, excessive seepage, rodents. Repair damage, reseed, mulch. Reinspect after 30 days.	
	f. Control structure	Check control structure for obstructions and structural integrity. Remove obstructions, repair damage.	
2. Ditches and swales	a. Pooling	Regrade, revegetate/repair. Reinspect after 30 days.	Quarterly inspection
	b. Erosion	Regrade, revegetate/repair. Reinspect after 30 days.	
	c. Excessive vegetation, woody plants	Mow area.	

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-4: Stormwater System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
3. Cover system drainage	a. Cover soils excessively wet, slope failure without evidence of fill subsidence	Replace geocomposite drainage layer in affected area. Inspect geomembrane for dmage; repair cover system, revegetate. Reinspect after 30 days.	Quarterly inspection
	b. Geocomposite drainage layer visible at perimeter ditch/swale	Repair ditch/swale erosion protection.	

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-5: Groundwater Monitoring System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
1. Caps	a. Cracked or broken	Replace.	Quarterly inspection
2. Locks	a. Will not open	Break open and replace	Lubricate quarterly
	b. Rusted		
	c. Different key for each well	Replace with same lock number	
3. Surface seals	a. Cracked	Re-grout	Quarterly inspection
4. Markings	a. None	Re-mark	
	b. Mislabeled		
5. Water level	a. Dry	NYSDEC/NYSDOH to determine if redrilling to a greater depth is warranted.	Check during sampling.
	b. Silted in or blocked	NYSDEC/NYSDOH to determine if redrilling to a greater depth is warranted. Abandon in-place and/or install new well.	

ETE Sanitation and Landfill
Operations and Maintenance Plan
Table 5-6: Facility Access System Maintenance Items

Inspection Area	*Item Noted*	*Action*	*Preventive Maintenance*
1. Access road	a. Pot holes	Fill and compact holes with crushed gravel or stone (NYSDOT material designation 703-0201 or 703-0202 with a minimum 50% crushed count, size 2).	Quarterly inspection
	b. Inadequate drainage	Regrade road surface and place grade crushed gravel or stone over area of concern.	
2. Access gate	b. Hinges or gate worn or damaged	Replace with galvanized equipment for corrosion protection as needed.	Quarterly inspection and lubrication
	c. Locks damaged or corroded	Replace with new padlocks; all locks are to use a common key.	

Section 6
Health and Safety Plan

A Health and Safety Plan (HASP) for maintenance activities at the facility should be developed and appended to this manual to provide personnel and public safety guidelines. The Remedial Contractor is responsible for developing the HASP. It is recommended that the facility-specific HASP should contain and/or address, at a minimum, the following items in accordance with 29 CFR 1910.120:

- Health and safety organization;
- Site description and hazard assessment;
- Training;
- Medical surveillance;
- Work areas;
- Standard operating safety procedures and engineering controls;
- Personal protective equipment (PPE);
- Personnel hygiene and decontamination;
- Equipment decontamination;
- Air monitoring;
- Emergency equipment and first aid requirements;
- Emergency response and contingency plan;
- Permit-required confined-space entry procedures
- Spill containment plan;
- Heat and cold stress;
- Record keeping; and
- Community protection plan.

Site-specific information should be used to develop the HASP. The remedial investigation report provides information on contaminants and concentrations.

Section 7
Emergency Contingency Plan

This Emergency Contingency Plan has been developed in order to minimize the danger to human health and the environment from any spill or accident occurring at the facility. This facility was designed and constructed in such a way to minimize the possibility of a fire, explosion, or release of hazardous waste or hazardous waste constituents to air, soil, or surface water that would threaten human health or the environment.

This Emergency Contingency Plan is directed primarily at the possibility of spills. The materials to be handled at this facility are non-flammable, so that the possibility of a fire is considered unlikely. However, these situations have been included in the contingency plans.

7.1 Emergency Response Coordinator Responsiblities and Activities

7.1.1 Emergency Coordinator

The site is unmanned, therefore the only persons at the site will be maintenance and monitoring personnel. These persons should be trained in emergency response measures. An Emergency Response Coordinator should be appointed by the NYSDEC and should be on call to coordinate all emergency response measures. The emergency coordinator should be thoroughly familiar with all aspects of the facility contingency plan, all operations and activities at the facility, and the characteristics of the waste and leachate, In addition, this person should have the authority to commit the resources needed to carry out the contingency plan.

During an emergency, the Emergency Response Coordinator (EC) is responsible for the following:

- Evaluating the seriousness of emergency, and then:
    - Evacuating facility or take other necessary action to stabilize the situation and/or protect personnel;
    - Notifying police/fire/rescue squad as necessary;
    - Notifying Wyoming County, if appropriate;
    - Notifying proper government agencies/authorities as necessary; and
    - Coordinating and supervising containment and/or cleanup of spill.

7.1.2 Individual Safety/Emergency Equipment

Everyone working at the landfill facility during an emergency event should be issued and expected to use the following:

- Disposable plasticized coveralls,
- Disposable rubber gloves,
- Industrial respirator with a variety of respiratory contingencies,
- Goggles,
- Safety glasses,
- Heavy-duty rubber gloves,
- Hard hat, and
- Noise protection.

7.1.3 Emergency Spill Response

Arrangements with Police

A copy of this plan and any revisions should be presented to the local police department. Tours of the facilities should be provided as requested for local police personnel for familiarization with the layout and materials.

Arrangement with Fire Departments

A copy of this plan and any revisions should be presented to the local fire department. Tours of the facilities should be provided as requested fbr local firefighters for familiarization with site layout and materials. A listing of chemicals and wastes that may be associated with the facility should be provided to firefighters as requested.

Arrangements with Local Hospitals

A copy of this plan and any revisions should be presented to local hospitals. Descriptions of waste materials and their characteristics should be provided as requested.

7.2 Emergency Procedures

Whenever there is an imminent or actual emergency, the coordinator (or his/her designee) should immediately:

1. Notify necessary local police and/or fire department depending on the type of emergency.

2. Notify the New York State Department of Environmental Conservation in case of release or spill.

3. Notify personnel on and off site of the emergency conditions and their need of assistance.

Whenever there is a release, fire, or spill, the emergency coordinator should immediately identify the character, exact source, amount, and extent of any emergency.

The emergency coordinator should assess the possible hazards to human health or the environment that may result from the release, fire, or spill. This assessment should consider both direct and indirect effects of the release, fire, or spill (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoff from water or chemical agents used to control the fire).

The emergency coordinator should stop all operations during emergencies until it can be verified that proceeding with operations will not affect the emergency adversely.

7.2.1 Initial Emergency Procedures

Personnel who are not trained and/or equipped for emergency response can still perform critical functions. In the absence of sufficiently trained personnel and/or proper personal protective equipment (PPE) and rescue equipment, use the following procedures for emergency response:

1. Call for assistance from responding authorities (i.e., the fire department, state police, and ambulance dispatch), and give the following information to the operator or other contact:

   - A brief description of situation,
   - The number of people involved,
   - Location of the emergency,
   - Your name, and
   - Your location.

2. Do not permit non-emergency personnel to enter the incident area.

3. Evacuate to a safe area upwind of the emergency.

4. If practical under incident conditions, ensure that access is available for responding vehicles. Do not unnecessarily jeopardize personnel or passersby.

5. Wait for emergency personnel, and direct them to the emergency.

The first and best response in an emergency is to minimize the number of people affected. Rescue attempts by untrained, improperly equipped, and/or unassisted personnel jeopardize the effectiveness of the overall response and may cause additional injury/death.

7.2.2 Spill Emergency Procedures

In all circumstances, personnel should perform only those tasks that they have been trained and properly equipped to perform.

- Shut off sources of spill if possible;
- Contain or minimize the run off of possible; and
- If spill is larger than can be contained or has possibility of extending off site, notify the EC.

7.2.3 Fire Emergency Procedures

- Shut off and remove any fuel sources, if this can be done safety.
- Activate the alarm. Notify EC who will initiate emergency notifications. When reporting a fire, clearly state the following:
- Type of fire,
- Location,
- Injuries if any, and
- Type of assistance needed.
- If personal health and is not compromised: Contain the fire with a fire extinguisher. If the fire cannot be contained after using one fire extinguisher, do not attempt to extinguish the fire any further. Retreat and evacuate to a designated area upwind of the fire.

7.2.4 Off-Site Explosive Gas Emergency Procedures

- Most likely detected during a quarterly monitoring.
- Notify EC and follow procedures in HASP.