



October 27, 2021
Project No.: 33.0083061.10

James Hargy
Solid Waste Management Division
New Hampshire Department of Environmental Services
P.O. Box 95
29 Hazen Drive
Concord, NH 03302-0095

**RE: Incomplete Application Response to NHDES (Application No. 2021-55885) -
Application for Type 1-B Modification to Solid Waste Management Facility Permit,
New Hampton Landfill, 4285 River Road, Solid Waste Facility Permit Number DES-SW-
TP-95-014; NHDES Site#: 198704078**

Dear Mr. Hargy,

Emery & Garrett Groundwater Investigations (EGGI), a Division of GZA GeoEnvironmental, Inc. (GZA) has prepared this response to the New Hampshire Department of Environmental Services (NHDES) letter dated October 14, 2021. This letter address's the Application for a Type 1-B Modification to Solid Waste Management Facility Permit submitted on behalf of the Town of New Hampton, New Hampshire on August 24th, 2021. The Town is requesting modification of the current post-closure monitoring requirements at the New Hampton Landfill as issued by the New Hampshire Department of Environmental Services (NHDES) in January 2006.

Below are the responses to the NHDES request for additional information (1-4).

1. *Revised Design Plans - Pursuant to Env-Sw 315.05(4)(a), provide proposed modifications to the facility design plan(s) prepared in accordance with Env-Sw 1103.05. NHDES records indicate that the last approved design plans for the active gas management system are those prepared by Nelson, Ward & Associates, Inc. and titled New Hampton Landfill Closure, Bristol, New Hampshire, GP2 and GP5 Gas Extraction System Plan and Details, dated April 1999.*

Response:

Please find attached, Nelson, Ward & Associates, Inc. approved design plan for the active gas management system at the New Hampton Landfill (**Appendix A**). The August 24, 2021 Type 1-B Modification Application requests the decommission of this active management system.

This decommissioning will entail the removal of the following:

- The blower box and blower
- The PVC pipe fittings and valves that attach to the blower box and blower
- The suction hose that attaches the blower to GP2 and GP5



October 27, 2021

Application for Modification of Permit, New Hampton Landfill

33.0083061.10

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- The valves and suction hose connection to GP2 and GP5, (leaving the 1" schedule-40 PVC that is located just below the 1"x1"x1" schedule 40 PVC Tee. This 1" PVC pipe will be cut below the top of casing and retro fitted with a valve that can be used during future methane gas sampling, see **Appendix A**).
 - Electrical box and active power source, the local power company will be notified and asked to disconnect the electrical box, so that the electrical box can be removed safely.
2. *Revised Closure Plan - Pursuant to Env-Sw 315.05(4)(c), provide proposed modifications to the facility closure plan.*

Response:

See **Appendix B** for the Revised/Updated Closure Plan with cross-outs (red) and additions (green) as requested by the NHDES.

3. *Required Notice of Filing - The proposed activity is within the corridor of a designated river as defined in RSA 483:4. Provide notice to the local river advisory committee and NHDES' rivers coordinator in accordance with to Env-Sw 303.11. Provide proof of filing to NHDES pursuant to Env-Sw 315.05(k).*

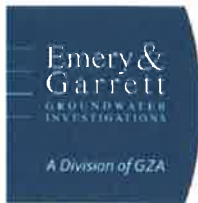
Response:

The August 24th, 2021 Type 1-B Modification to Solid Waste Management Facility Permit application will be sent to The Pemigewasset River LAC. A copy of the application is not required to be sent to the NHDES rivers coordinator. The NHDES rivers coordinator only requests that the cover sheet of the application and this document be emailed.

4. *Potential Notice of Filing - It is unclear if the proposed activity is located in an area of threatened or endangered species. Evaluate the presence of threatened or endangered species at the landfill and, if necessary, provide notice in accordance with Env-Sw 303.09. The Natural Heritage Bureau's online DataCheck tool may be used to screen projects for potential impacts to the State of New Hampshire's protected species and habitats. Additional assessment may be warranted. Proof of filing shall be provided to NHDES if notice is required.*

Response:

On October 18, 2021, a Natural Heritage Bureau Online DataCheck search was performed for the New Hampton Landfill parcel. The results show that there are no records in the NHB's database that there are threatened or endangered species (**Appendix C**).



Please do not hesitate to contact us, if you require any further information.

Very truly yours,

EMERY & GARRETT GROUNDWATER INVESTIGATIONS, A DIVISION OF GZA

Ryan Allen
Project Manager

Daniel J. Tinkham, P.G.
Senior Consultant/Hydrogeologist

RPA/DJT:bar

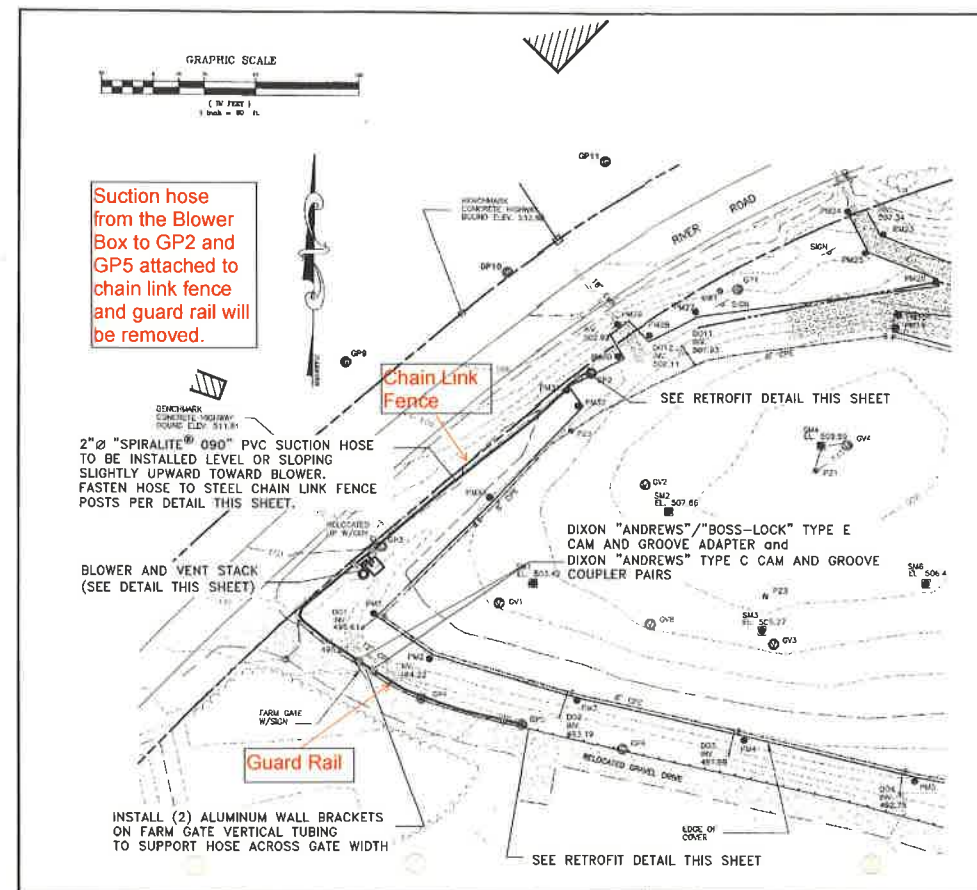
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Attachments:

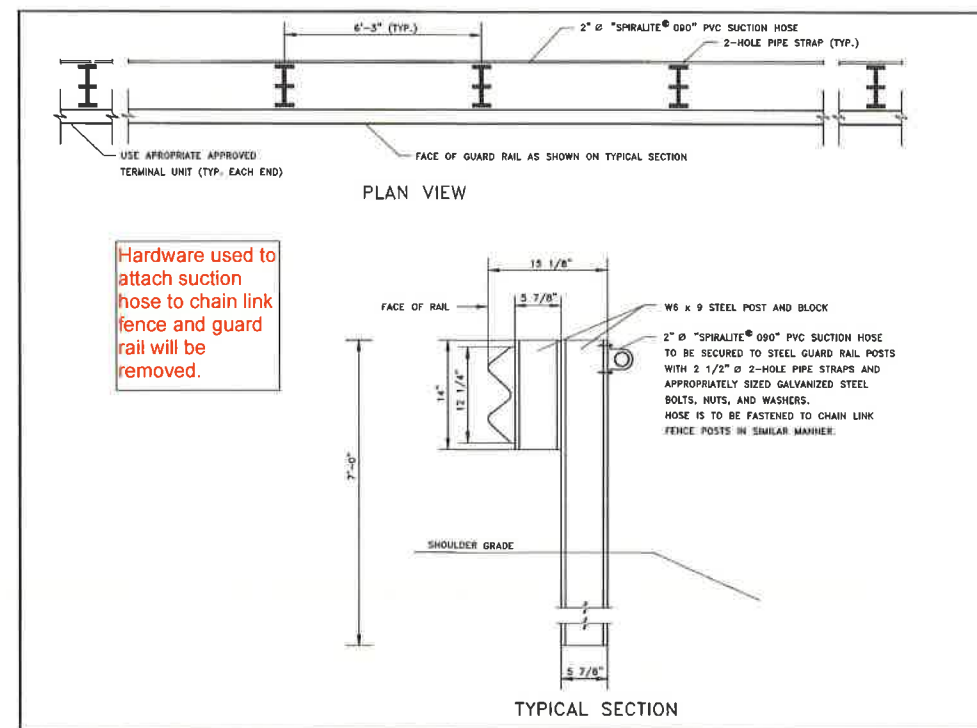
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|------------|--|
| Appendix A | GP2 and GP5 Gas Extraction System Plan and Details |
| Appendix B | Updated Landfill Post-Closure Monitoring and Maintenance Plan – October 2021 |
| Appendix C | Natural Heritage Bureau Online DataCheck Search |



Appendix A – GP2 and GP5 Extraction System Plan and Details



SITE PLAN

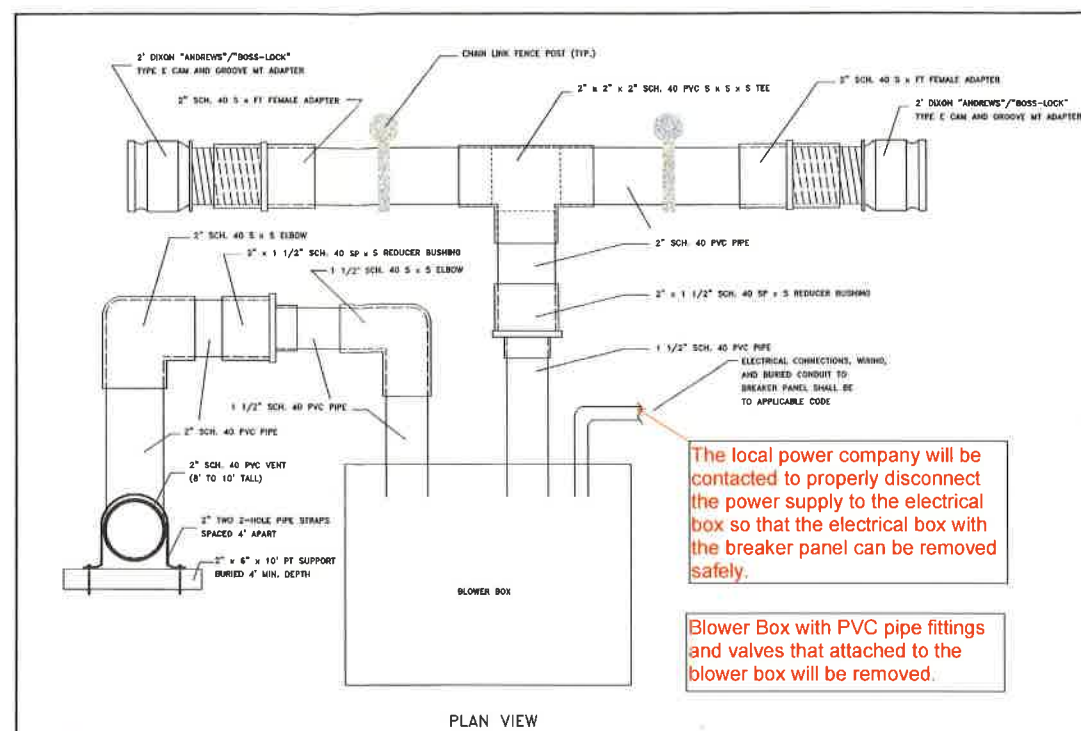


SUCTION HOSE FASTENING DETAILS

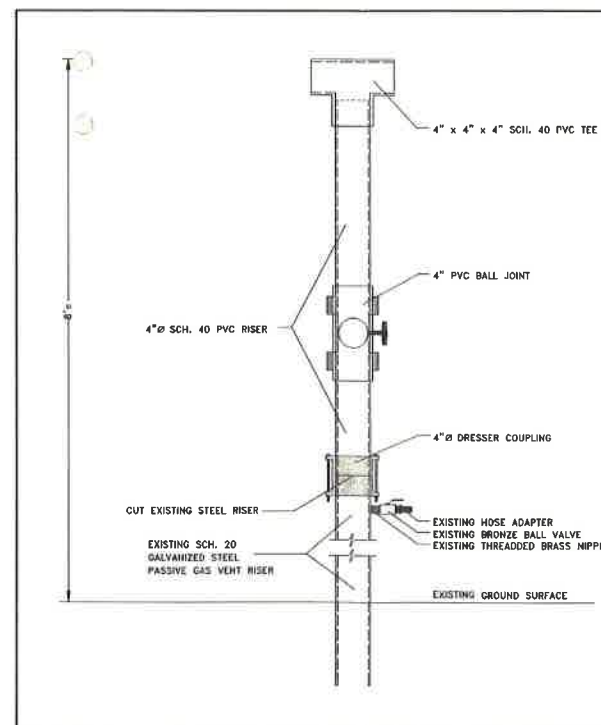
Emery & Garrett Groundwater, Inc.

56 Main Street, Meredith, NH 03253

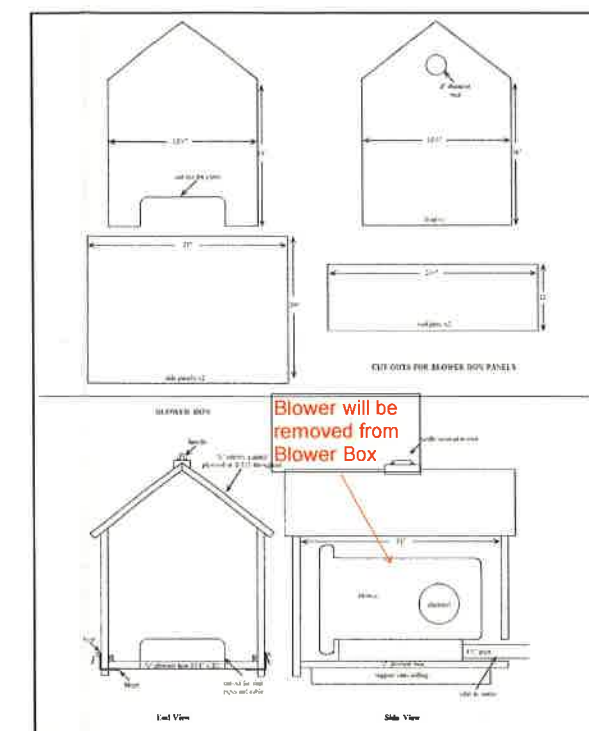
Comments in red were added by EGGI, October 2021.



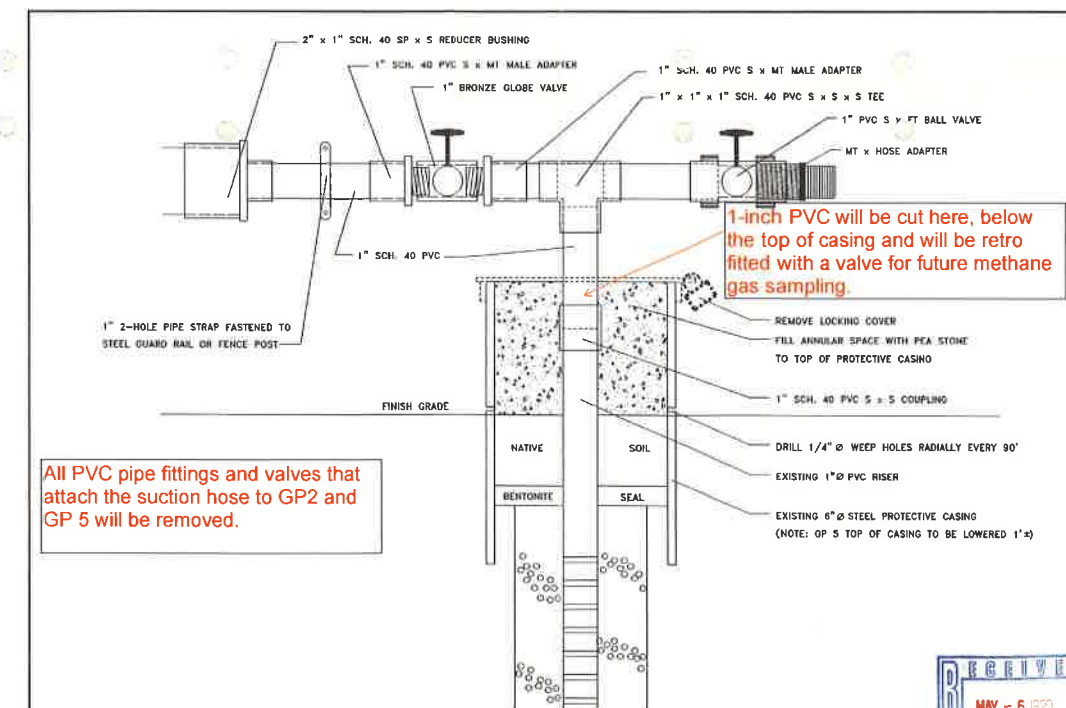
PASSIVE GAS VENT VALVE



PASSIVE GAS VENT VALVE
RETROFIT DETAIL

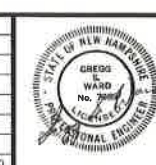


BLOWER BOX DETAIL



GP 2 AND GP 5 VALVING AND SUCTION HOSE CONNECTION
RETROFIT DETAIL

NO.	DATE	REVISION	BY	CHK'D

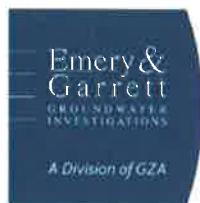


NELSON, WARD & ASSOCIATES, INC.
ENVIRONMENTAL AND CIVIL ENGINEERING

Post Office Box 276
Contooscook, New Hampshire 03229
(603) 456-2758

NEW HAMPTON LANDFILL CLOSURE
BRISTOL, NEW HAMPSHIRE
GP2 AND GP5 GAS EXTRACTION
SYSTEM PLAN AND DETAILS
PREPARED FOR:
TOWN OF NEW HAMPTON
NEW HAMPSHIRE

DATE APR. 1999	PROJ. NO. J99-001
ENG. BY GSW	DRAWN BY KLF
CHK'D BY GSW	DRWG. NO. 99-001-003
SHEET 1 OF 1	



Appendix B – Updated Landfill Post-Closure Monitoring and Maintenance Plan – October 2021

~~Emery & Garrett Groundwater, Inc.~~

Emery & Garrett Groundwater Investigations, A Division of GZA

56 Main Street • P.O. Box 1578

Meredith, New Hampshire 03253

(603) 279-4425

www.gza.com

Fax (603) 279-8717

NEW HAMPTON LANDFILL

~~Updated~~ Revised Landfill Post-Closure Monitoring and Maintenance Plan

~~January 2006~~ October 27, 2021

~~This revised plan reflects recent changes in protocol for gas migration monitoring and mitigation at the New Hampton Landfill, as set forth by the NHDES. Replacement of the Gas Tech Safe-T Net 100 methane gas alarm system with three GasAware residential methane alarms at the Rivest residence prompted the need for an up-dated plan.~~

This revised plan reflects the requested decommission of the active gas management system at the New Hampton Landfill because of the significant decrease in methane levels in gas probes that are expected to remain low or below detection.

Facility Identification

New Hampton Landfill (Solid Waste Facility Permit Number DES-SW-TP-95-014; NHDES Site#: 198704078)

Landfill Address: 4285 River Road in Bristol, New Hampshire

Mailing Address: Town of New Hampton, 6 Pinnacle Hill Road, New Hampton, New Hampshire 03256

~~Monitoring Frequency/Inspection/Maintenance~~ Post Closure Requirements

All gas probes (GP1 through GP 11) (**Figure 1**) will be monitored ~~once a month~~ on a quarterly basis in March, June, September, and December. Currently, the landfill gas meter is rented therefore calibration of the meter is not required. Instructions on how to operate the landfill gas meter can be found in **Appendix A** and readings should be entered into the Landfill Gas Data Collection Form in **Appendix B**. Landfill inspections will be performed at least twice a year in accordance with the NHDES Annual Post-Closure Report for Inactive (Closed) Solid Waste Landfills (NHDES-S-05-057). The landfill cap must be mowed once a year. Two mowing events are recommended in late spring/early summer and late summer/early fall. Mowing should be done during dry periods so that tire ruts will not be a concern. ~~in January, February, and March then quarterly for the rest of the year by town employees for concentrations of methane gas, oxygen, and hydrogen sulfide per the monitoring and calibration instructions in Appendix A and B. Readings will no longer be recorded from the gas meter installed at the Rivest residence. A completed data sheet (Appendix C) shall be faxed to Emery & Garrett Groundwater, Inc. (EGGI) (or other firm chosen by the Town of New Hampton) following each landfill gas monitoring event.~~

Report Frequency Record Keeping and Recording

EGGI will submit annual post-closure summary reports in March of each year to the NHDES including the description of the methane levels in the 11 gas probes. Offsite gas probe readings equal to or greater than 50% LEL lower explosive level constitute a violation of the New Hampshire Solid Waste Rules. In the event that landfill gas levels exceed regulatory standards in GP-7, 8, 9, 10, or 11 (i.e., off-site probes), data will be reported immediately to the NHDES (Figure 1). Town of New Hampton contacts have been updated and can be found in Table 1 of this document. A landfill inspection report will be submitted to the NHDES within 30 days of the inspection.

Post-Closure Cost Estimate

Landfill Gas Migration Monitoring: \$920.00
Groundwater Sampling & Analysis \$1,640.00
Groundwater Monitoring Report: \$1,500.00
General Maintenance including Mowing: \$500.00
Annual Report-Landfill Post Closure Report: \$460.00
Annual Site Inspections \$920.00

Total Post-Closure Cost Estimate: \$5,940.00
Contingency (10% minimum): \$594.00
Total Yearly Cost: \$6,534.00
Total 30-Year Cost: \$196,020.00

Methane Concentrations Exceeding Regulatory Standards

~~Offsite gas probe readings equal to or greater than 50% LEL lower explosive level) constitute a violation of the New Hampshire Solid Waste Rules. Landfill gas concentrations equal to 25% LEL within an offsite building exceed regulatory standards and present a serious safety issue. The following paragraphs outline what actions are necessary to mitigate/prevent gas concentrations from reaching regulatory threshold levels.~~

~~To prevent gas levels from violating regulatory standards, active venting measures shall be taken in the event that gas levels reach 25% LEL in any of the off-site gas probes. (The procedure for actively venting the landfill is documented in Appendix D.) If methane gas equals or exceeds 25% LEL for any of the following wells: GP 9, GP 10 and GP 11, then the GP-2 venting system should be activated (Appendix D—page 2—Emergency Operation). If methane equals or exceeds 25% LEL for gas monitoring probes GP 7 or GP 8, then the GP-5 venting system should be activated (Appendix D—page 2—Emergency Operation).~~

~~EGGI installed three residential methane gas alarms at the Rivest Residence to replace the Gas Tech Safe T Net 100 alarm system. These alarms (CCI GasAware Model 7550) were installed on July 20, 2005 as follows: 1) one in the basement; 2) one on the first floor (living area); and 3) one on the second floor/attic area. These units use a standard 120 volt A/C outlet~~

~~and have a built-in battery back-up that can power the unit for up to 10 hours during interruption of electrical service. An 85-decibel alarm sounds at a concentration of methane of approximately 17% of the LEL. Calibration is not necessary for the GasAware alarms to properly function. EGGI recommends that these GasAware alarms be replaced at the end of the 5-year warranty period (July 2010). A guide to the use of the GasAware alarm was provided to Mr. Rivest and is included in Appendix E.~~

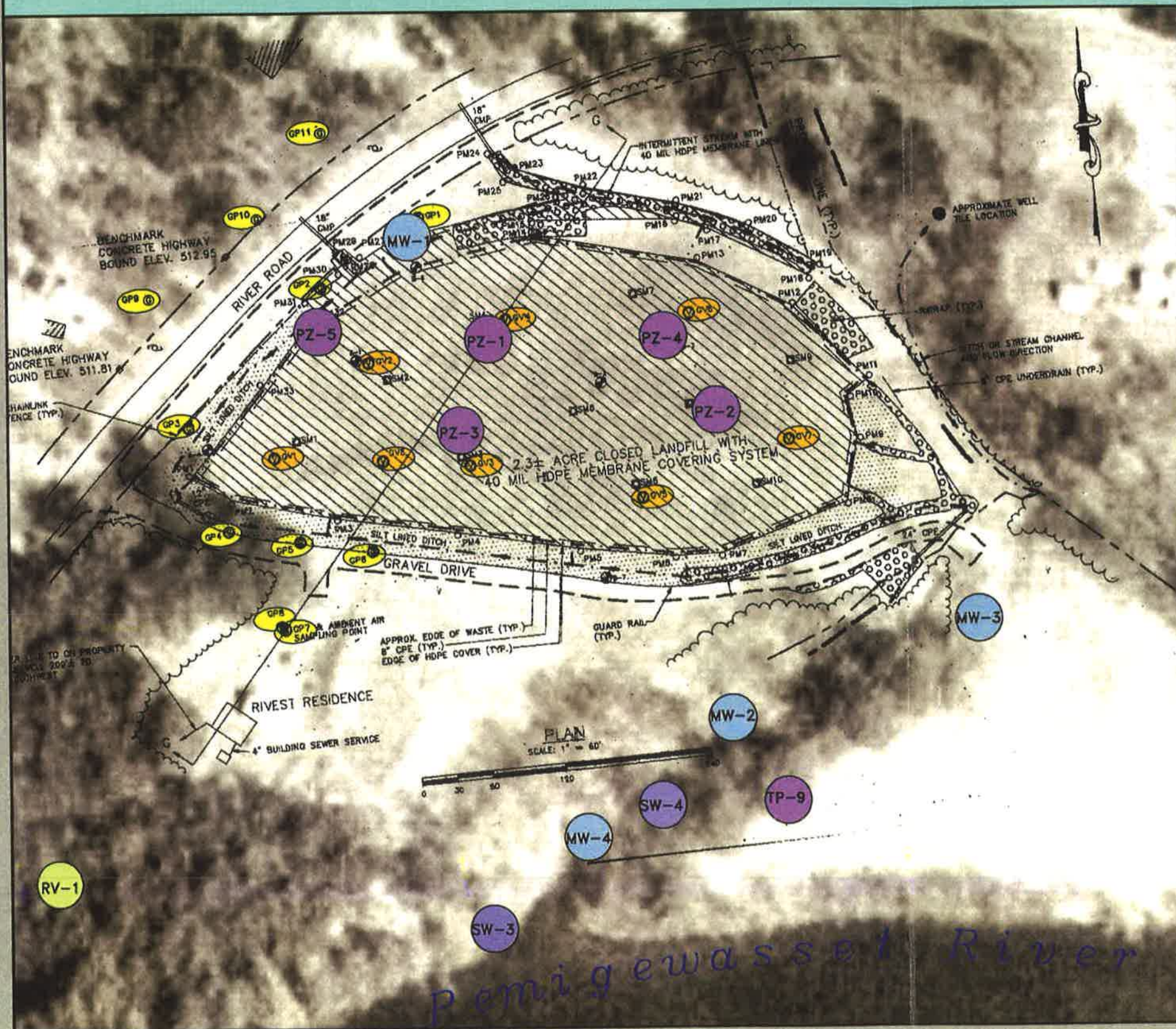
~~——— In the event of alarm activation, 911 should be immediately contacted. Both New Hampton and Bristol Fire departments will be dispatched to the Rivest home and the Emergency Action Plan For Methane Alarm (Appendix F) will be implemented. The New Hampton Police will follow SOP #98-1 (Appendix F), which includes notifying a Town official. The Town official will then notify the Town's engineer or Jeff Marts (of Emery & Garrett Groundwater, Inc. at 603-279-4425) to schedule a site inspection. Alarm activation with confirmed methane will also necessitate immediate active venting of landfill gas monitoring probe GP-5 once the Incident Commander (IC—Fire Officer in charge) terminates command or if the IC agrees to actively vent during the fire emergency.~~

~~Inspection and Maintenance of Active Venting System~~

~~—— EGGI will inspect and test the active venting system twice annually, once in May and once in August, during routine landfill inspections. The test will involve operating the blower to see that suction is generated at both gas monitoring probes GP-2 and GP-5. The town employees shall immediately repair any leaks, blockages, loose fittings, or other problems.~~

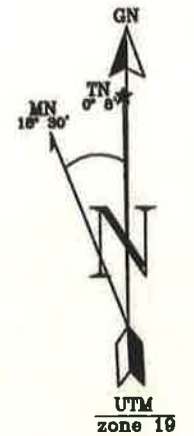
FIGURE 1 -- Map of Landfill with Gas Vent Wells, Gas Monitoring Probes, Monitoring Wells, Piezometers, and Surface Water Points for the New Hampton Landfill, Bristol, New Hampshire

Location of Gas Vent Wells and Gas Monitoring Probes Scale = 1:1200, 1" = 100'



Legend

- GV3 Gas Vent Well With Horizontal Screens
- GP5 Gas Monitoring Probe
- MW-3 Monitoring Well
- SW-2 Surface Water Monitoring Point
- PZ-2 Piezometer
- RV-1 Rivest Well
- SM8 Settling Monument



Tax Map

Scale = 1:6000, 1" = 500'

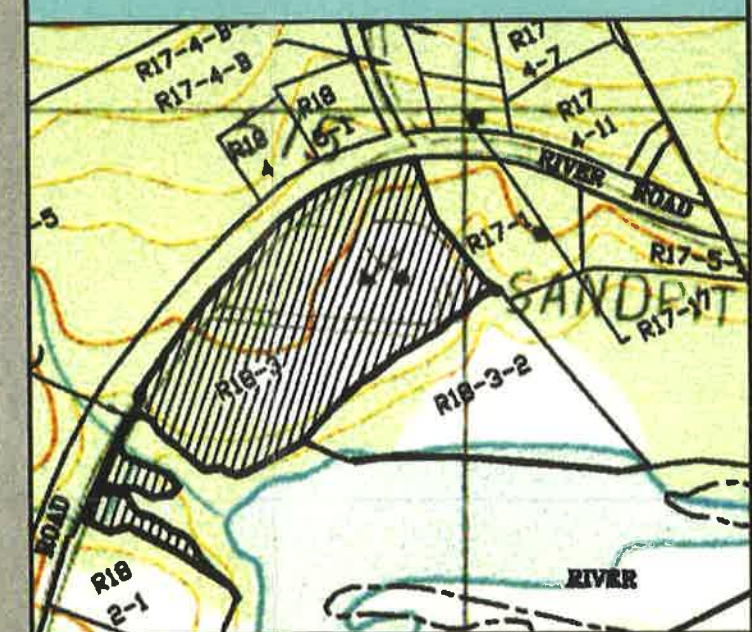


Figure 1

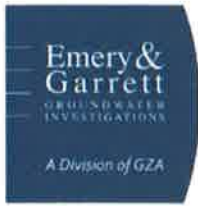


Table 1 – Contact Information

New Hampton Landfill Contact Information

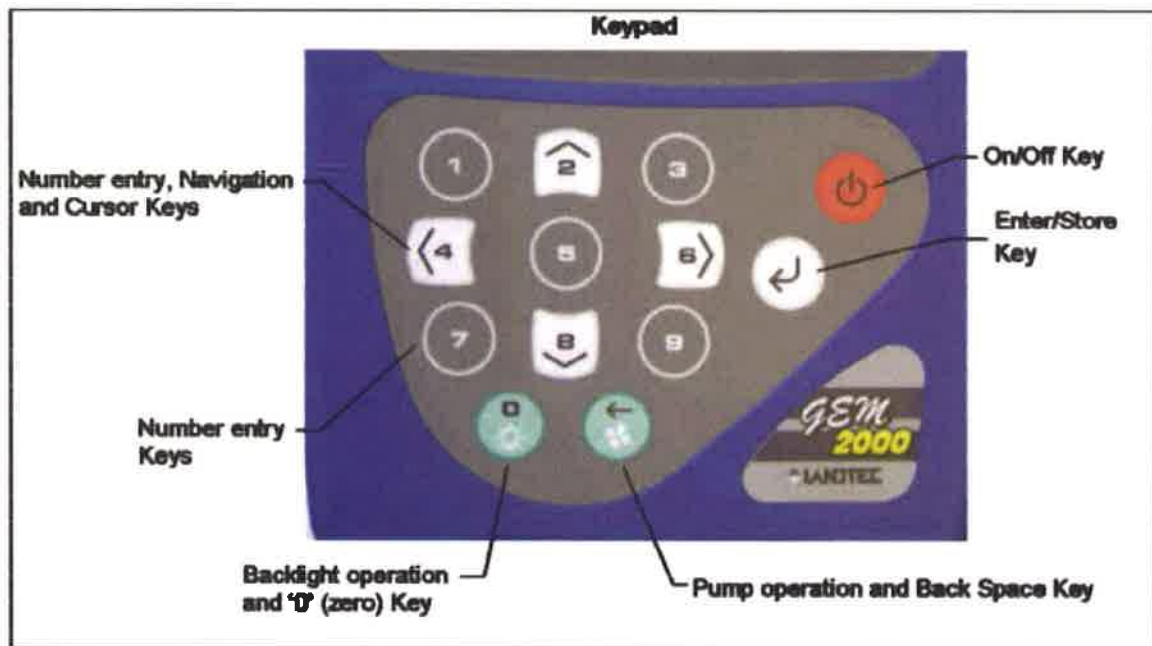
Name	Title	Phone Number	Address
Neil Irvine	New Hampton Town Administrator	603-744-3559	26 NH Route 132, New Hampton, New Hampshire 03256
Jim Boucher	Public Works Director	603-744-8025	6 Pinnacle Hill Road, New Hampton, New Hampshire 03256

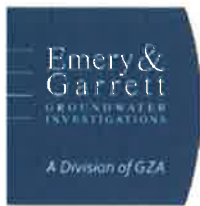


Appendix A – Operation of Lantec GEM 2000 Landfill Gas Meter

Operation of Lantec GEM 2000 Landfill Gas Meter

1. Hit the red on/off key for 2-3 sections to turn gas meter on.
2. Once meter is on, it will run a self-test sequence that will take approximately 30 seconds. If any warnings or errors occur after the self-test, please contact who you rented the meter from.
3. Once self-test has completed, the service information screen will be displayed, push the enter/store key to exit from this screen.
4. The Technician ID screen is displayed after the service information screen. It is not necessary to enter any information here, bypass this screen by pressing the #1 key on the gas meter.
5. This will take you to the Gas Reading screen or the normal operation screen.
6. Attach tubing from the gas meter to the gas probe barbed adapter and open the valve on the gas probe, next hit the pump operation key, this will turn the pump on and the gas meter will start to measure.
7. Run the pump until % Oxygen (O₂), % Carbon Dioxide (CO₂), and % Methane (CH₄) readings stabilize.
8. Record these readings in Gas Probe Monitoring Data Collection Sheet along with the time once stabilization is reached.





Appendix B – Gas Data Collection Form

Gas Probe Monitoring Data Collection Sheet

New Hampton Landfill
New Hampton, New Hampshire

Date:	Barometer Reading:
Sampler's Name:	Weather:

		Methane	CO ₂	Oxygen	Comments
Well	Time	% gas	(% volume)	(% volume)	
GP-1					
GP-2					
GP-3					
GP-4					
GP-5					
GP-6					
GP-7					
GP-8					
GP-9					
GP-10					
GP-11					
Ambient					

Notes:

APPENDIX A

**METHODOLOGY FOR MONITORING GAS
PROBES WITH GASTECH GT LAND SURVEYOR
AT NEW HAMPTON LANDFILL**

Emery & Garrett Groundwater, Inc.

56 Main Street • P.O. Box 1578

Meredith, New Hampshire 03253

(603) 279-4425

www.eggi.com

Fax (603) 279-8717

January 16, 2006

Subject: Monitoring Gas Probes with GASTECH GT Land Surveyor

1. Calibrate unit at the shop.
2. At landfill, turn on unit and press **Enter** when it reads "*Warm-up Complete.*"
3. Set unit to Gas Mode by holding **Range** until it says "*%Gas.*"
4. Connect the hose to the Gas Probe.
5. Open the valve on the Gas Probe.
6. Wait until the readings stop changing (this might take 5 minutes or longer).
7. Write down the readings on the datasheet.
8. If the oxygen reading is larger than 15% and the % Gas is less than 5%, then use the **Range** key to switch to %LEL. Record the %LEL on the datasheet.

- Measure the gas at all of the GP wells.
- Write down the Barometer Reading
- Fax datasheet to:

Jeff Marts

Emery & Garrett Groundwater, Inc.

Fax: 279-8717

APPENDIX B
**METHODOLOGY TO CALIBRATE
GASTECH GT LAND SURVEYOR**

Emery & Garrett Groundwater, Inc.

56 Main Street • P.O. Box 1578

Meredith, New Hampshire 03253

(603) 279-4425

www.eggi.com

Fax (603) 279-8717

January 16, 2006

Subject: Calibration of GASTECH GT Land Surveyor

1. Connect hose to unit (do not operate unit without filter assembly on the end of the hose).
2. Press **On/Off** to turn on unit; after warm-up is complete; press **Enter**.
3. Press **Reset** and **Backlight** together 3 times to enter calibration mode. Unit will display "Version 2.54 Calibrate".
4. Be sure hose is collecting fresh air, free of exhaust.
5. Press **Enter**.
6. The unit will display "Zero Gas XXXX ppm COMB" (XXXX will be a number displayed by the meter). If the reading is negative, use the **Func.\+** key to raise the reading to "0000 ppm COMB". If the reading is positive, use the **Backlight** key to get reading to "0000 ppm COMB".
7. Press **Enter**.
8. The unit will display "Zero Gas XXX ppm H2S". As in Step 6, adjust reading to "000 ppm H2S".
9. Press **Enter**.
10. The unit will display "Zero Gas XXX %VOL OXY". Do the following:
 - A. Connect Regulator to "Nitrogen Zero" air cylinder.
 - B. Connect bag assembly to regulator using clear tube.
 - C. Connect unit to bag assembly (green tube) until all the air is drawn out of the bag.
 - D. When the pump is about to stop, open the valve and allow bag to fill then close valve.
 - E. When bag is half empty, adjust the reading to "000 %VOL OXY".
11. Press **Enter**.
12. The unit will display "Span Gas XXX %LEL COMB". Follow parts A – D in step 10 using the "Methane 2.5%" cylinder, making sure the bag is empty before filling with Methane.
13. When bag is half empty, adjust the reading to "50 % LEL COMB".
14. Press **Enter**.
15. The unit will display "Span Gas XXX PPM H2S". Follow parts A – D in step 10 using the "Hydrogen Sulfide 25 ppm" cylinder.
16. When bag is half empty, adjust the reading to "25 PPM H2S".
17. Press **Enter**.
18. The unit will display "Span Gas XXX %VOL OXY". With unit collecting fresh air (no bag), wait 90 seconds and then adjust to "20.9 %VOL OXY".
19. Press **Enter**.
20. Press any key to exit. You are now ready to take readings.

APPENDIX C

**EXAMPLE REPORTING DATA SHEET
FOR MEASURED LANDFILL GASES
NEW HAMPTON LANDFILL**

Gas Probe Monitoring Data Collection Sheet

New Hampton Landfill
New Hampton, New Hampshire

Date:	Barometer Reading:
Sampler's Name:	Calibration Time:

Well	Time	Methane		or	Methane	Oxygen	H ₂ S
		%LEL	ppm		% gas	(% volume)	(ppm)
GP-1							
GP-2							
GP-3							
GP-4							
GP-5							
GP-6							
GP-7							
GP-8							
GP-9							
GP-10							
GP-11							

Notes: _____

1. Calibrate unit at the shop.
2. At landfill, turn on unit and press **Enter** when it reads "Warm-up Complete."
3. Set unit to Gas Mode by holding **Range** until it says "%Gas."
4. Connect the hose to the Gas Probe.
5. Open the valve on the Gas Probe.
6. Wait until the readings stop changing (this might take 5 minutes or longer).
7. Write down the readings on the datasheet.
8. If the oxygen reading is larger than 15% and the % Gas is less than 5%, then use the **Range** key to switch to %LEL. Record the %LEL on the datasheet.

APPENDIX D

**METHODOLOGY FOR OPERATING
THE ACTIVE VENTING SYSTEM
AT THE NEW HAMPTON LANDFILL**

Emery & Garrett Groundwater, Inc.

56 Main Street • P.O. Box 1578

Meredith, New Hampshire 03253

(603) 279-4425

www.eggi.com

Fax (603) 279-8717

January 16, 2006

Re: Operation of the Active Venting (Vacuum) System at the Landfill in Bristol, NH

The Active Venting (Vacuum) System, now in place at the closed New Hampton Landfill on River Road in Bristol, mitigates off-site migration of explosive gas generated by decaying waste. Emergency operation of the system will now be performed by the Town of New Hampton and EGGI will test the system during post-closure inspections. This document is intended to give you sufficient background to the design and operation of the system, and to serve as a brief operations manual.

Background

Methane, the potentially explosive component of landfill gas, has been detected at monitoring points away from the closed landfill. This occurs especially in winter when the ground is frozen, thus preventing the free passage of air through soils around the landfill. The State has ordered the Town to institute remedial measures to prevent migration from the landfill toward the Rivest residence to the south, and across River Road to the west. The landfill was tested and a remedial system designed. It will utilize two gas monitoring probes located on the perimeter of the landfill to draw the gas back towards the landfill.

Description of the System

The system consists of the following parts:

Passive Gas Vents (GV-x) (see Figure 1 for locations) emerge through the cover of the landfill. There are 8 such vents. They have been modified with a 4-inch ball valve with a large red handle. The tops of the vents have been fitted with a tee having a flapper valve on one side and a cap on the other side. The flapper valve is passively operated by pressure of gas emerging from the landfill. There is a brass nipple with a petcock on the side of each vent for sampling landfill gas. However, no gas monitoring of the vents is called for under this active venting plan.

Gas Monitoring Points (GP-x) are located outside the landfill footprint. There are 11 points (see Figure 1 for locations). Their design has been simplified. They are all 1-inch diameter PVC wells set inside steel protective casings. They are now all capped with rubber stoppers with 1/4-inch ID LDPE tubing extending down to within 1-foot of the bottom of each well, in the screened section of the well. At the top of each piece of tubing is a small piece of

silicone tubing with a petcock, and another piece of silicone tubing (to connect to the meter). The petcock is normally closed.

The **blower assembly** is located close to the electrical service box along the River Road fence. The blower is connected to GP-5 to the south and GP-2 to the northeast via 2-inch diameter insulated pipes that run around the perimeter fence. There is a quick-connect coupling to remove a section of this pipe at the gate to the landfill. Access onto the landfill should not be needed until the summer months when it is time to mow.

To operate the blower you will need a heavy gauge, 15-foot extension cord. Similar to the type used for air conditioners or refrigerators would be best. This should be connected between an outlet below the box and the cord hanging beneath the blower. You will also need to unlock the box (with an EGGI master key) to turn on the main breaker and circuit to power the outlet used (outlets and corresponding breakers are numbered 1, 2, 3...etc.). You only need to use one breaker. We suggest #1.

The **wellheads of GP-5 and GP-2** are set up in the same manner. There is a tee on top of the 1-inch PVC well pipe, with the suction pipe from the blower is connected to one side and a sampling nipple and valve on the other. Also, there is a gate valve on the suction side to close the well when the blower is not on.

Emergency Operation

In the event that methane levels reach 25% LEL in any of the following gas probes 7, 8, 9, 10, or 11 then the active venting system should be operated immediately. The system will be on for two hours, once every two weeks until the methane in the offsite probes stays below 25% LEL. If the high readings are in GP-7 or 8, then GP-5 will be actively vented. If the high readings occur in GP-9, 10, or 11, then GP-2 will be mechanically vented. Both GP-2 and 5 should be vented together if nearby wells for each have high readings. To operate the system, all you have to do is:

1. Measure gas concentrations at all GP wells to be monitored. (When GP-5 is being actively vented (vacuumed), GP-4, 5, 6, 7, and 8 will be monitored. When GP-2 is being vented, GP-1, 2, 3, 9, 10, and 11 will be monitored. When both GP-5 and GP-2 are being vacuumed, all GP wells will be monitored.)
2. Shut off valves at all GV vent stacks on the landfill.
3. Open the valves in the suction pipeline between the blower and the well that you want to vent, making sure the other valves are closed.
4. Plug the blower into the power at the site to turn it on.
5. Leave the site for 1.5 hours.
6. When you return, monitor gas concentrations at all GP wells being monitored. (Readings for the well(s) being vented can be obtained from the fitting on the vent stack behind the blower.)
7. Just prior to unplugging the blower, close the valve at the well(s) that is being vented, so that when the blower is shut off air won't rush back down in the well.
8. Unplug the blower.

9. Leave the site for 2-3 hours.
10. When you return, monitor gas concentrations at all GP wells being monitored (plus the well that was actively vented (vacuumed) at the wellhead).
11. Open the GV vent stack valves.
12. Leave the site.
13. Return once the next day to monitor gas concentrations in all GP wells monitored previously.
14. Send and fax all data sheets to EGGI (attention Jeff Marts, PO Box 1578, Meredith, NH 03252; Fax: 603-279-8717).
15. Repeat two weeks later if gas concentrations in the offsite wells are still above 25%.

Routine Operation

The active venting system should be tested two times per year by EGGI. The tests should occur during post-closure inspections: May and August. The following procedure should be used to check the system.

1. Shut off valves at all GV vent stacks on the landfill.
2. Open the valves in the suction pipeline between the two wells.
3. Turn on the blower.
4. At both GP-2 and 5, open the sampling valve and check for suction, then close sampling valves.
5. Just prior to unplugging the blower, close the valves at the wells, so that when the blower is shut off air won't rush back down in the well.
6. Shut down the blower.
7. Check for loose fittings and troubleshoot the system if there was no suction at either of the venting probes.
8. Open the GV vent stack valves.

If you have further questions, please contact any of the following people at EGGI:

Jeff Marts - work: 603-279-4425 cell: 703-297-7549
James Emery - work: 603-279-4425 home: 603-968-3232
Peter Garrett - work: 207-872-0613 home: 207-873-6443

APPENDIX E

**GASAWARE MODEL 7550
BASIC OPERATION INFORMATION**

Emery & Garrett Groundwater, Inc.

56 Main Street • P.O. Box 1578

Meredith, New Hampshire 03253

(603) 279-4425

www.eggi.com

Fax (603) 279-8717

July 15, 2005

GasAware Model 7550 – Basic Operation Information

Normal Operating Conditions:

- Green “Power” light will stay on constantly when powered by AC electricity.
- Green “Power” light will flash when operating on battery back up. Batteries should last for 8 hours without power.
- Green “Power” light is out, yellow “Battery” light is flashing, alert beep sounding every 30 seconds indicates no AC power and low battery power – *Replace batteries immediately for continued operation of gas alarm. Re-install original rechargeable batteries when electrical service is restored.*
- Green “Power” light is on, yellow “Battery” light is flashing indicates that the batteries are being recharged.

Emergency - Methane Gas Detected:

- Red “Alarm” light flashing with constant alarm sounding – gas detected! *Evacuate the building and call 911 from a neighbor’s phone or a cell phone away from the building. Tell the 911 operator that you have a **methane gas** alarm activation.*

Trouble Indications:

- Green “Power” light is off, yellow “Fault” light is flashing, alarm beeps every 30 seconds – unit is out of service! *Unplug unit and remove batteries, then call Jeff Marts at EGGI - 603-279-4425 and Barbara Lucas (New Hampton Town Office) 603-744-3559.*
- Green “Power” light is on, yellow “Battery” light is on constantly – batteries need replacement. *Call Jeff Marts at EGGI - 603-279-4425 and Barbara Lucas (New Hampton Town Office) 603-744-3559. The alarm is in service as long as the unit is supplied with AC Power.*

Please refer to the GasAware model 7550 instruction booklet for more detailed information.

APPENDIX F
EMERGENCY ACTION PLAN
METHANE GAS

METHANE GAS PROCEDURE

The New Hampton Police Department has a Statement of Procedure (S.O.P. #98-1) to follow in the event of a E-9-1-1 call that the methane alarm system is activated at Mr. Rivest's home located at 4285 River Road, Bristol, NH at the site of the New Hampton Landfill. The alarm is presently set at 4% LEL. If a Selectman or the Town Administrator is contacted by a New Hampton Police Officer in the event that there has been an alarm activation, they should contact immediately the New Hampton Fire Chief to request the status of the situation and then immediately notify the engineer or Jamie Emery 279-4425 to schedule an inspection of the site. An inside reading should be taken of the residence as well as a reading of the closest gas probes.

Listed below are the phone numbers and cell phone numbers that may also be necessary:

	Home #	Cellphone#
Theodore Rivest, Jr.	744-5077	
Barbara Lucas - Town Admin.	744-6152	455-7075
Thomas Smith - Selectman	968-9488	520-0348
Merritt "Doug" Salmon - Selectman	279-5611	
Paul Tierney - Selectman	968-9506	520-5023
Jim Boucher - Public Works Dir.	536-1005	455-9330
Police Chief Nathaniel Sawyer	744-9584	455-5382
Sgt. George Huckins	968-4430	707-7429
Fire Chief David Clement	744-3160	455-5752
Deputy Chief Bruce Harvey	744-9711	455-5753
Deputy Chief Steve Marsh	744-0147	344-8630



Town of New Hampton

Fire Department

P.O. Box 368, New Hampton, New Hampshire 03256 • 744-2735

Emergency Action Plan For Methane Alarm

Purpose

The purpose of this emergency action plan is to define roles and describe actions in the event that an alarm is received from the residence located adjacent to the remediated landfill in the town of Bristol, but owned by the town of New Hampton.

Background

The alarm was installed in the residence to provide early warning in the event that the naturally occurring Methane gas from the remediated landfill were to migrate through the various soil layers into the basement. The landfill is equipped with many vents and also is monitored weekly.

Methane is an extremely flammable gas. Any other hazard that may be associated with this gas is outweighed by its potential for fire. A Material Safety Data Sheet is attached and should be reviewed prior to taking any offensive action.

Action Plan

In the event that the alarm is activated, both Bristol and New Hampton Fire Departments would be toned as part of an already established automatic response agreement. Even though this property is maintained by the town of New Hampton, it is still within the town of Bristol and they would have overall command. Command should maintain a defensive posture until more information is gathered by properly trained and equipped personnel.

Alarm with no fire, Command would take the following actions:

1. Insure that responding personnel maintain a safe distance from the residence until it is deemed safe for entry.
2. Insure that all of the landfill area has been evacuated.
3. Remove all ignition sources.
4. Have the Central New Hampshire Hazmat Team respond for entry and monitoring.

5. Depending on the levels found and the conditions present, take the appropriate actions consistent with national standards to bring the residence and the area to a safe level prior to termination of command.

In the event that the residence is involved in a fire, either as a result of the accumulation of Methane gas or not, actions taken would be similar to any other structure fire with the following exceptions;

1. Keep all personnel involved in the fire attack in self-contained breathing apparatus at all times.
2. Insure that all unnecessary personnel are safely away from the residence until the area has been made safe.
3. Contact the Hazmat team for post-fire monitoring.

Prepared and approved by both New Hampton Fire Chief David Clement and Bristol Fire Chief Norman Skantze.

5/02



Appendix C – Natural Heritage Bureau Online DataCheck Search

New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

To: Ryan Allen
56 Main Street
PO Box 1578
Meredith, NH 03253

From: NH Natural Heritage Bureau

Date: 10/18/2021 (This letter is valid through 10/18/2022)

Re: Review by NH Natural Heritage Bureau of request dated 10/18/2021

Permit Type: New Hampton Landfill

NHB ID: NHB21-3263

Applicant: Ryan Allen

Location: Bristol
Tax Map: 209, Tax Lot: 58.1
Address: 4285 River Road

Proj. Description: I am applying to remove the active gas management system that is no longer used at the New Hampton Landfill, located in Bristol, NH. If approved, the vacuum hoses that are located along the western fence line and along the southwestern guard rail will be removed. The blower system which creates the vacuum and electrical box, located on the western side of the landfill, near to River Road will also be removed.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: NHB21-3263

