



November 14, 2000

Mr. Michael Schmoller
WDNR South Central Region Office
3911 Fish Hatchery Road
Fitchburg, WI 53711

SUBJECT: Tri-Annual Facility Inspection Report
Bid Item #1
Stoughton City Landfill
FID # 113005950 - License #133
BT² Project #1764

Dear Mr. Schmoller:

BT², Inc. has prepared the first of three facility inspection reports for the Stoughton City Landfill site. We inspected the site on July 5, 2000 and on August 22, 2000. The attached Inspection Reports detail our findings on both dates. The Passive Gas Vent monitoring results for organic vapors and combustible gases was completed on August 22, 2000. Summaries of both facility inspections follow.

July 5, 2000 Inspection

A periodic inspection was performed at the Stoughton City Landfill by BT², Inc. personnel on July 5, 2000. The general site condition was good and the ground cover of clover is ready to be cut. The City of Stoughton owned areas of the gravel road skirting the landfill to the south and southeast are in need of mowing and maintenance. The gravel roads providing access to the MW9 and MW10 well clusters are very wet and muddy due to recent rains.

Perimeter Security Fencing: The condition of the perimeter fence and both entrance gates was good. There is no evidence of vandalism at the site. The wooden fence planks are in good condition. The chain link fencing and the padlocks on both gates are in good working order.

Monitoring Wells and Wellhead Covers: There are no evident signs of tampering to any of the site monitoring wells. As noted by Paul Kozol of the WDNR, the wellhead cover of the stickup for well EW-1 (artesian) no longer locks down and is in need of replacement. During the semiannual groundwater monitoring event, BT² personnel found the stainless steel riser pipe for well MW7B to be kinked approximately 1 foot below grade and is in need of repair. The concrete pad is also split open and in need of replacement. The well was last sampled by Roy F. Weston on 4/13/99. Monitoring well MW9B is also kinked below grade and is in need of repair. We will discuss the repairs for these wells in a letter to the WDNR Project Manager.

Final Cover Vegetation and Slope: The clover has thickened and there are no evident bare spots. No signs of erosion, settlement, or subsidence. BT², Inc. has hired *Sunset Restoration, LLC* from Stoughton, WI to provide mowing services at the landfill. A mowing event will be scheduled as soon as possible to

mow the cover vegetation to a height of less than 12 inches. No evidence of burrowing animals observed on the cover.

Stormwater Drainage Channels: An erosion gully is observed to have formed along the south side of the gravel access road at the point where the storm sewer pipe discharges to the second drainage channel. Significant ponding is occurring on the north side of the same access road along with cattail growth. Rip-rap placement services will be addressed in a Change Order. The drainage channel along the northwest edge of the landfill is in good shape. The silt fencing in place along the northwest edge of the landfill is no longer needed. Also, the hay bales inside and outside the fencing are no longer needed and the removal of both the silt fence and the hay bales will be discussed with the WDNR Project Manager.

Landfill Gas Venting System: Gas vent pipes were inspected and found to be in good shape. None of the gas vent risers were labelled, so BT² will label each riser with a paint pencil and transfer the labels to the Site Map.

Access Gravel Roads: The City of Stoughton needs to perform mowing of the roads and weed control. The roads are overgrown and are hard to follow. The access roads that lead to well clusters MW15, MW8, MW10, and MW13 are nearly non-useable.

August 22, 2000 Inspection

A periodic inspection was performed at the Stoughton City Landfill by BT², Inc. personnel on August 22, 2000. The general site condition was good. The City of Stoughton owned areas of the gravel road skirting the landfill to the south and southeast are in need of mowing and maintenance.

Perimeter Security Fencing: The condition of the perimeter fence and both entrance gates was good. There is no evidence of vandalism at the site. The wooden fence planks are in good condition. The chain link fencing is also in good condition. The padlocks on both gates are in good working order.

Monitoring Wells and Wellhead Covers: Except for the three wells mentioned in the July 5 inspection report, there are no evident signs of tampering or damage to any of the site monitoring wells.

Final Cover Vegetation and Slope: BT², Inc. has hired *Sunset Restoration, LLC* from Stoughton, WI to provide mowing services at the landfill. The first of two mowing of the cover occurred on July 12, 2000. The clover was cut to a height of less than 12 inches. No signs of erosion, settlement, or subsidence. No evidence of burrowing animals observed on the cover.

Stormwater Drainage Channels: The erosion gully along the south side of the gravel access road at the point where the storm sewer pipe discharges to the second drainage channel is still present and will be repaired. The ponding on the north side of the same access road will also be repaired. The drainage channel along the northwest edge of the landfill is in good shape. Removal and proper disposal of both the silt fence and the hay bales will be done. Ponding was noticed in the runoff culvert to the east of the main gate. Rip-rap placement will be conducted to repair this area.

Landfill Gas Venting System: Gas vent pipes were inspected and found to be in good shape. A Thermo Environmental PID and a LMS_x Landfill Gas meter were used to collect the organic vapor and combustible gas readings. The readings are summarized on the attached Passive Gas Vent Monitoring Report. A cordless drill was used to tap the 5 gas vent risers for the annual gas vent sampling to be performed in September 2000.


Access Gravel Roads: The City of Stoughton needs to perform mowing of the roads and weed control. The roads are overgrown and are hard to follow. The access roads that lead to well clusters MW15, MW8, MW10, and MW13 are nearly non-useable.

The next Facility Site Inspection is scheduled for January 2001. A CD-ROM is also enclosed containing a copy of this report and all the attachments and can be opened by Corel WordPerfect. Please call me if you have any questions at (608) 224-2830 ext. 239.

Sincerely,
BT², Inc.



Jan C. Kucher
Project Manager



Steven B. Smith
Senior Technical Specialist

Attachment: CD-ROM
O&M Facility Inspection Reports
Passive Gas Vent Monitoring Report
Site Photographs

I:\1764\001110FacilityReport.wpd

**Operation and Maintenance Report
Passive Gas Vent Monitoring
Stoughton City Landfill / BT² Project #1764**

Probe	% LEL	% Oxygen	PID (ppm)	Gas Flow (m ³ /hr)	Other Gasses
GV-1	0.0	21.2	3.5	0	
GV-2	0.0	21.0	2.9	0	
GV-3	0.0	21.0	2.3	0	
GV-4	0.0	21.1	2.3	0	
GV-5	0.0	21.0	2.6	0	
GV-6	0.0	21.0	2.9	0	
GV-7	0.0	20.8	2.9	0	
GV-8	0.0	21.0	2.92.3	0	
GV-9	0.0	15.5	2.3	0	CO ₂ = 2.8 %
GV-10	0.7	15.9	1.9	0	CO ₂ = 3.8 %
GV-11	0.0	20.7	2.1	0	
GV-12	11.5	3.7	0.0	0	CO ₂ = 13.0 %
GV-13	12.0	4.8	0.8	0	CO ₂ = 13.0 %
GV-14	0.0	20.8	1.8	0	
GV-15	0.0	20.8	1.8	0	
GV-16	6.7	8.0	0.2	2.0	CO ₂ = 10.0 %
GV-17	0.0	20.8	1.8	2.0	
GV-18	0.0	20.8	2.1	2.0	
GV-19	0.0	20.8	2.1	2.0	
GV-20	5.5	3.9	0.0	0	CO ₂ = 14.0 %
GV-21	0.0	20.8	1.6	2.0	

Field Meters: Thermo Environmental PID, LMS_x Landfill Gas Meter

Operator: Steven Smith

Barometric Pressure: 30.10 inches mercury

Temperature: 68° F

Ground Surface: Dry

Date: 8/22/00

Weather: Calm, humid, hazy, no rain

Notes:

1. % LEL as measured as Methane.
2. Other gases - detected gases other than % O₂ and % LEL as Methane.

**Operation and Maintenance Periodic Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin**

Inspector S. Smith
 Company BT², Inc.
 Project Stoughton L.F. #1764
 Location Stoughton, WI
 Date/Time 09:25 7/5/00
 Project No. #1764

Weather	(9am) 73% humidity	<u>Clear</u>	P. Cloudy	Cloudy	Fog
Temperature	70°F ↑	High	F	---	---
Wind	ENE at 3 mph	<u>Calm</u>	Medium	High	---
Precipitation	29.99 in. pressure	Rain	Light	Moderate	Heavy
	no precipitation	Snow	Light	Moderate	Heavy

Type of Inspection Routine Special

Persons/Equipment Present: S. Smith - no equipment needed

General Description of Site Conditions: L.F. cover closer ready to be cut; City covered area needs to be cut down also; very wet and muddy over the 2 access roads to the furrows.

Specific Inspection Items	Potential Problem Areas	Status*	Notes
Perimeter Security Fencing	Broken boards/vandalism	①	Good shape
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative	①	Good shape
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing or damaged	①	EW-1 - stackup well casing cap doesn't have lock down. Needs to be replaced.
Final Cover Vegetation	Bare spots, stressed vegetation, deep-rooted vegetation	①	will inspect again after the 1st mowing
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding	①	
Evidence of Burrowing Animals	Damage to final cover, evidence of waste	①	
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked	②	Rip-rap work needed by culvert close to access road gate.
Landfill Gas Venting System	Damaged vent risers, stressed vegetation	①	
Access Road	Ponding, rutting, erosion	①	Some ponding between road and furrow.

* (1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: Mowing to be scheduled ASAP; rip-rap bids

Signature of Inspector [Signature]

Date 7/5/00

**Operation and Maintenance Periodic Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin**

Inspector S. Smith
 Company BT² Inc.
 Project Stoughton City L.F.
 Location Stoughton, WI
 Date/Time 8/22/00 10:30am
 Project No. #1764

Weather	Haze, (clear)	<u>Clear</u>	P. Cloudy	Cloudy	Fog
Temperature	71°F (84% humidity)	High	F	---	---
Wind	South 7mph	Calm	<u>Medium</u>	High	---
Precipitation	None (dewpt. 66°F)	Rain	Light	Moderate	Heavy
	Pressure = 30.10 in.	Snow	Light	Moderate	Heavy

Type of Inspection Routine Special

Persons/Equipment Present: S. Smith, BT² Equipment → LMS, L.F. Gas meter, Thermo
 PID #1, Scientific 4 Gas meter, cordless drill + taps

General Description of Site Conditions: Cover was mowed 7/2/00 - still OK; grass weeds outside the
 fence is very thick, tall and heavy. Gravel road is heavily grain over.

Specific Inspection Items	Potential Problem Areas	Status*	Notes
Perimeter Security Fencing	Broken boards/vandalism	1	Fence in good shape; no signs of vandalism
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative	1	Chain is a little rusty; lock is good.
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing or damaged	1	None
Final Cover Vegetation	Bare spots, stressed vegetation, deep-rooted vegetation	1	No noticeable bare spots, cover vegetation is good
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding	<u>(2)</u>	Some ponding in runoff culvert by main gate
Evidence of Burrowing Animals	Damage to final cover, evidence of waste	1	None
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked	2	Rip-rap work needed by culvert near main gate (some erosion, ponding)
Landfill Gas Venting System	Damaged vent risers, stressed vegetation	1	None
Access Road	Ponding, rutting, erosion	2	Some heavily overgrown; city of Stoughton has not taken care of area.

* (1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: Rip-rap work will be done in mid to late September

Signature of Inspector Steve Arnold

Date 8/22/00



Figure 1

Vegetative cover on landfill after mowing.
October 5, 2000



Figure 2

Rip-rap placement at the west culvert
October 5, 2000



Figure 3

Rip-rap placement on the north side of the gravel access road on the southern edge of the landfill.

October 5, 2000



Figure 4

Rip-rap placement at the storm water culvert on the south side of the gravel access road on the southern edge of the landfill.
October 5, 2000



March 9, 2001

Mr. Michael Schmoller
WDNR South Central Region Office
3911 Fish Hatchery Road
Fitchburg, WI 53711

SUBJECT: Tri-Annual Facility Inspection Report
Bid Item #1
Stoughton City Landfill
FID # 113005950 - License #133
BT² Project #1764

Dear Mr. Schmoller:

BT², Inc. has prepared the second of three facility inspection reports for the Stoughton City Landfill site. We inspected the site on January 24, 2001. The attached Inspection Report details our findings on that date. The Passive Gas Vent monitoring results for organic vapors and combustible gases was also completed on January 24, 2001. Summaries of the facility inspection are as follows.

January 24, 2001 Inspection

A periodic inspection was performed at the Stoughton City Landfill by BT², Inc. personnel on January 24, 2001. The general site condition was good and the ground was covered by a heavy layer of snow. The main gate was plowed in and the City-of-Stoughton-owned areas of the gravel road skirting the landfill to the south and southeast were buried with snow. The gravel roads providing access to the well clusters were unuseable due to heavy snow.

Perimeter Security Fencing: The condition of the perimeter fence and both entrance gates was good. There was no evidence of vandalism at the site. The wooden fence planks were in good condition. The chain link fencing on both gates was in good working order. Both gate padlocks were frozen and both gates were inaccessible by truck due to heavy snow.

Monitoring Wells and Wellhead Covers: There were no evident signs of tampering at any of the site monitoring wells. Monitoring well MW9B was repaired on February 14, 2001 by BT² and Boart Longyear personnel. The stainless steel riser pipe for well MW7B is still kinked approximately 1 foot below the top of casing. As discussed with the WDNR Project Manager on February 14, 2001, the monitoring well will be abandoned by NR 141.25 requirements at the next site visit. Once completed, the monitoring well abandonment forms will be sent to the WDNR Project Manager.

Final Cover Vegetation and Slope: The ground surface had a heavy covering of snow. No evidence of burrowing animals was observed on the cover. The second mowing of the ground cover was performed on October 4, 2000.

Mr. Michael Schmoller
March 9, 2001
Page 2

Stormwater Drainage Channels: Rip-rap repair and placement services occurred on October 5, 2000 to address the erosion gulleys along the gravel access road (to the north and south) and the discharge point to the east of the main gate. The drainage channel along the northwest edge of the landfill was in good shape on the inspection date. The silt fencing and staking along with the hay bales and staking was removed on October 5, 2000.

Landfill Gas Venting System: Gas vent pipes were inspected and found to be in good shape. None of the gas vent risers were labelled, so BT² personnel labelled each riser with a paint pencil and transferred the labels to the Site Map.

Access Gravel Roads: All access roads leading around the south edge of the landfill and to the various well nests were unuseable due to heavy snow.

The next Facility Site Inspection is scheduled for May 2001. A CD-ROM is also enclosed containing a copy of this report and the attachments as a PDF file. Please call us at (608) 224-2830 if you have any questions.

Sincerely,
BT², Inc.

Jan C. Kucher
Project Manager

Steven B. Smith
Senior Technical Specialist

Attachment: CD-ROM
O&M Facility Inspection Report
Passive Gas Vent Monitoring Report

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Operation and Maintenance Periodic Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin

Inspector S. Smith
 Company B.T. Inc.
 Project Stoughton City L.F.
 Location Stoughton, WI
 Date/Time 1/2/01 11:05am
 Project No. # 1764

Weather	<u>P. Cloudy</u>	Clear	P. Cloudy	Cloudy	Fog
Temperature	<u>23°F</u>	High	F	---	---
Wind	<u>NW at 10mph</u>	Calm	<u>Medium</u>	High	---
Precipitation	<u>Lt. snow flurries</u>	Rain	Light	Moderate	Heavy
		Snow	Light	Moderate	Heavy

Type of Inspection Routine Special

Persons/Equipment Present: S. Smith present with the LMSX landfill gas meter and the Thomas P.I.O.

General Description of Site Conditions: Site is heavily covered in snow; main gate is placed on access road & buried in snow

Specific Inspection Items	Potential Problem Areas	Status*	Notes
Perimeter Security Fencing	Broken boards/vandalism	(1)	Fence is in good shape, no vandalized boards.
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative	(1)	Gate OK, locks are good.
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing or damaged	(1)	All wells OK, no signs of tampering.
Final Cover Vegetation	Bare spots, stressed vegetation, deep-rooted vegetation	(1)	Cover is completely buried in approx 11" of snow.
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding	(1)	↓
Evidence of Burrowing Animals	Damage to final cover, evidence of waste	(1)	NO evidence of burrowing.
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked	(1)	Repair repairs previously done, drainage channels in good shape.
Landfill Gas Venting System	Damaged vent risers, stressed vegetation	(1)	Risers are in good shape; no vegetation.
Access Road	Ponding, rutting, erosion	(1)	Buried with snow.

* (1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: None to correct
 Signature of Inspector [Signature]
 Date 1/2/01

Operation and Maintenance Report
 Passive Gas Vent Monitoring
 Stoughton City Landfill / BT³ Project #1764

Probe	% LEL	% Oxygen	PID (ppm)	Gas Flow (m ³ /hr)	Other Gasses
GV-1	0.0	21.5	0.0	2	
GV-2	0.0	21.3	0.0	0	
GV-3	0.0	21.5	2.6	0	
GV-4	0.0	21.5	0.0	0	
GV-5	0.0	21.2	0.0	0	
GV-6	0.5	21.1	0.9	0	
GV-7	0.0	21.3	0.0	0	
GV-8	0.0	21.1	0.0	0	
GV-9	0.0	21.1 21.1	1.1	0	
GV-10	2.1	21.2	0.0	1	CO ₂ = 1.9%
GV-11	0.0	21.5	0.0	0	
GV-12	0.0	21.1	0.0	0	
GV-13	18.0	1.1	0.0	2	CO ₂ = 15% N ₂ = 66.2%
GV-14	0.0	21.5	1.1	0	
GV-15	0.0	21.1	0.0	0	
GV-16	8.8	21.2	0.0	2	CO ₂ = 9.9%
GV-17	0.0	21.2	0.0	0	
GV-18	0.0	21.2	0.0	0	
GV-19	0.0	21.2	0.0	0	
GV-20	0.0	21.1	0.0	2	
GV-21	0.0	21.1	0.5	0	

PID: Terra #1 Operator: S. Smith
 Barometric Pressure: 30.15 in Hg
 Temperature: 24°F
 Ground Surface: Snow covered
 Date: 1/24/01
 Weather: cloudy, light breeze, breezy

- Notes:
 1. % LEL as measured as Methane.
 2. Other gases - detected gases other than % O₂ and % LEL as Methane.



August 3, 2001

Mr. Michael Schmoller
WDNR South Central Region Office
3911 Fish Hatchery Road
Fitchburg, WI 53711

SUBJECT: Tri-Annual Facility Inspection Report and Semi-Annual Gas Monitoring Probe Report
Bid Item #1 and #11a
Stoughton City Landfill
FID # 113005950 - License #133
BT² Project #1764

Dear Mr. Schmoller:

BT², Inc. has prepared the third of three facility inspection reports and the semi-annual gas monitoring probe report for the first year O&M at the Stoughton City Landfill site. We inspected the site on May 24, 2001. The attached Inspection Report details our findings on that date. The Passive Gas Vent monitoring results for organic vapors and combustible gases was also completed on May 24, 2001. The first six monthly summaries of the three gas monitoring probes are also included. Summaries of the facility inspection are as follows.

May 24, 2001 Inspection

A periodic inspection was performed at the Stoughton City Landfill by BT², Inc. personnel on May 24, 2001. The general site condition was good and the ground was covered by a good cover layer of grass and clover approximately 4 inches tall. The main gate was and the City-of-Stoughton-owned areas of the gravel road skirting the landfill to the south and southeast were in good condition with no obvious erosion problems. The gravel roads providing access to the well clusters were accessible. The Periodic Inspection Report is included as **Attachment A**.

Perimeter Security Fencing: The condition of the perimeter fence and both entrance gates was good. There was no evidence of vandalism at the site. The wooden fence planks were in good condition. The chain link fencing on both gates was in good working order. Both gate padlocks were in good condition.

Monitoring Wells and Wellhead Covers: There were no evident signs of tampering at any of the site monitoring wells. Monitoring well MW7B was repaired instead of abandoned per Mr. Michael Schmoller. Repairing the well was chosen due to the anticipated high cost to abandon the well; well MW7B is a flowing artesian well. We would have had to pack off the well to stop the flow then over-drill the double-cased well.

Final Cover Vegetation and Slope: The ground surface had a decent cover layer of grass and clover approximately 4 inches tall. No evidence of stressed vegetation. No evidence of burrowing animals was observed on the cover. Due to the heavy rains the previous weeks, the truck got stuck on the south-west

Mr. Michael Schmoller
August 3, 2001
Page 2

edge of the cover. In getting the truck out, ruts approximately 1 foot deep were created. A trip was made for repair supplies that included topsoil, grass seed, and fertilizer. The ruts were shovelled in and smoothed out. The area was covered in new topsoil, re-seeded, and fertilized. By the next monthly gas monitoring point inspection, the seeding had took hold and the area was filling in nicely. Future visits involving driving on the cover will be carefully monitored to avoid future damage to the cover vegetation. The first cover mowing of Year 2 O&M was completed on July 18, 2001. The second of two mowing's is tentatively scheduled for late September 2001.

Stormwater Drainage Channels: The stormwater drainage channels were in good shape with no debris or blockages even with all the rain we have received the last month.

Landfill Gas Venting System: Gas vent pipes were inspected and found to be in good shape. The 21 passive gas vents were analyzed for percent LEL (as methane), percent oxygen, carbon dioxide, PID, and gas flow rate. The results are summarized on the Passive Gas Vent Report included as **Attachment B**.

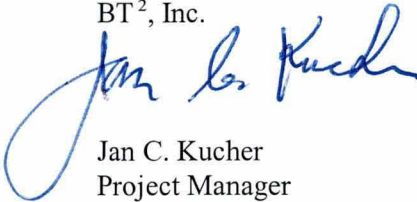
Access Gravel Roads: All access roads leading around the south edge of the landfill and to the various well nests were accessible and in good condition.

Monthly Gas Monitoring Probe results


The Gas Monitoring Probe monthly check includes percent LEL (as methane), percent oxygen, percent carbon dioxide, PID, gas flow rate, and well head pressure. Summaries of these reports are included as **Attachment C**.

The first Facility Site Inspection of Year 2 O&M is scheduled for September 2001. A CD-ROM is also enclosed containing a copy of this report and the attachments as a PDF file. Please call us at (608) 224-2830 if you have any questions.

Sincerely,
BT², Inc.



Jan C. Kucher
Project Manager



Steven B. Smith
Senior Technical Specialist

Attachments: CD-ROM

- A - O&M Facility Inspection Report
- B - Passive Gas Vent Monitoring Report
- C - Monthly Gas Monitoring Probe Reports

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**Operation and Maintenance Periodic Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin**

Inspector S. Smith
 Company BT² Inc.
 Project # 1764
 Location Stoughton, WI
 Date/Time 5/24/01 09:10
 Project No. # 1764

Weather	<u>Cloudy, Lt.-rain</u>	Clear	P. Cloudy	Cloudy	Fog
Temperature	<u>48.2°F</u>	High	F	---	---
Wind	<u>4.6 mph</u>	Calm	<u>Medium</u>	High	---
Precipitation	<u>Occasional sprinkles</u>	Rain	Light	Moderate	Heavy
		Snow	Light	Moderate	Heavy

Type of Inspection Routine Special

Persons/Equipment Present: S. Smith - BT² , LMSx L.F. Gas meter, Thermo Environmental
PID

General Description of Site Conditions: Cover is in good shape. Grass/cover is approx. 4" tall. NO visible damage anywhere.

Specific Inspection Items	Potential Problem Areas	Status*	Notes
Perimeter Security Fencing	Broken boards/vandalism	1	None
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative	1	None
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing or damaged	1	None
Final Cover Vegetation	Bare spots, stressed vegetation, deep-rooted vegetation	1	In very good shape, 4" tall
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding	2	Minor rts created by truck getting stuck. Repaired and reseeded.
Evidence of Burrowing Animals	Damage to final cover, evidence of waste	1	None
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked	1	In good shape
Landfill Gas Venting System	Damaged vent risers, stressed vegetation	1	None
Access Road	Ponding, rutting, erosion	1	None

*(1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: Check reseeding of rts next month

Signature of Inspector Steve Smith

Date 5/24/01

Operation and Maintenance Report
Passive Gas Vent Monitoring
Stoughton City Landfill / BT² Project #1764

Probe	% LEL	% Oxygen	PID (ppm)	Gas Flow (m ³ /hr)	Other Gasses
GV-1	0.0	21.0	0.0	0	
GV-2	0.0	21.0	0.0	0	
GV-3	0.0	20.7	0.6	0	
GV-4	0.0	20.9	0.0	2	
GV-5	0.0	20.9	0.0	0	
GV-6	0.0	20.8	0.0	2	
GV-7	0.0	21.0	0.0	0	
GV-8	0.0	21.0	0.0	0	
GV-9	0.0	20.8	0.2	2	
GV-10	0.0	20.8	0.0	0	
GV-11	0.0	21.0	0.0	2	
GV-12	0.0	21.1	0.0	2	
GV-13	0.0	20.8	0.0	3	
GV-14	0.0	20.7	0.2	2	
GV-15	0.0	20.9	0.0	2	
GV-16	0.0	20.9	0.0	3	
GV-17	1.3	13.3	0.8	2	CO ₂ = 7.1%
GV-18	0.0	21.0	0.0	2	
GV-19	0.0	21.0	0.6	2	
GV-20	0.0	21.1%	0.0	3	
GV-21	0.0	10.2%	0.2	2	CO ₂ = 7.7%

Files: 211 Thermo Environmental #1, LMS, L.F. Gas Meter Operator: S. Smith

Barometric Pressure: 29.77 in. Hg

Temperature: 48.2°F

Ground Surface: Grass covered, wet

Date: 5/24/01

Weather: lt. rain, breezy, cloudy

- Notes:
- 1. % LEL as measured as Methane.
 - 2. Other gases - detected gases other than % O₂ and % LEL as Methane.



Sheet No. _____

Calc. No. _____

Rev. No. _____

Job No. #1764 Job Staughton City L.F.

By ss Date _____

Client WDPF Subject Monthly GMP monitoring

Chk'd. Date _____

T.76 → Monthly Report
Gas Monitoring Probes
Staughton City Landfill
BT2 Project #1764

Probe	% LEL (Gas Methane)	% O ₂	% CO ₂	PIA (ppm)	Gas Flow (m ³ /hr)	Pressure (inches H ₂ O)
GMP-1	0.0	20.7	0.0	2.2	2.0	0.60
GMP-2	0.4	20.2	0.3	4.1 0.6	3.0	0.70
GMP-3	0.0	20.3	0.1	0.6 4.1	3.0	0.80

Instruments Used: LMSx L.F. Gas Meter, Thermo PIA

Operator: S. Smith, BT2 Inc. Date: 2/14/01

Weather Data
Barometric Pressure: 29.97 in. Temperature: 24°F, 9°F WC
Humidity: 58% Dewpoint: 21°F Wind: North at 10 mph
Ground Surface: Snow and ice Conditions: Overcast, Light snow

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**Monthly Report
Gas Monitoring Probes
Stoughton City Landfill
BT² Project #1764**

Probe	% LEL (as Methane)	% Oxygen	% CO ₂	PID (ppm)	Gas Flow (m ³ /hr)	① Pressure (inches H ₂ O)
GMP-1	0.0	21.0	0.0	0.0	5	0.0
GMP-2	0.0	19.8	0.8	1.9	3	0.0
GMP-3	0.0	20.1	0.5	1.5	4	0.0

Instruments Used: Thermo (#1) PID, LMSx Landfill Gas Meter
 Operator: S. Smith Date: 3/28/01

Weather Data

Barometric Pressure: 30.04 inches Hg Temperature: 42°F
 Humidity: 65% Dewpoint: 17.6°F Wind: 10.4 mph
 Ground Surface: No snow, wet ground Conditions: Cloudy, no precipitation

① As static pressure

Monthly Report
Gas Monitoring Probes
Stoughton City Landfill
BT² Project #1764

Probe	% LEL (as Methane)	% Oxygen	% CO ₂	PID (ppm)	Gas Flow (m ³ /hr)	① Pressure (inches H ₂ O)
GMP-1	0.4	20.7	0.0	0.6	2	0
GMP-2	0.6	20.8	0.4	0.2	0	0
GMP-3	0.3	20.9	0.0	0.5	2	0

Instruments Used: LMS_x LIF Gas meter, Temo PID
 Operator: S. Smith Date: 4/26/01

Weather Data (at 11am)

Barometric Pressure: 30.12 in Temperature: 53.8°F
 Humidity: 36% Dewpoint: 42.8°F Wind: 9.2 mph WSW
 Ground Surface: moist to damp, grass growing nicely Conditions: Beautiful day, sunny, warm

① Static pressure

**Monthly Report
Gas Monitoring Probes
Stoughton City Landfill
BT² Project #1764**

Probe	% LEL (as Methane)	% Oxygen	% CO ₂	PID (ppm)	Gas Flow (m ³ /hr)	Pressure (inches H ₂ O)
GMP-1	0.5	20.5	0.4	0.0	2.	+ 1.5
GMP-2	0.5	20.6	0.4	0.6	3	+ 1.0
GMP-3	0.0	20.9	0.0	0.2	1	0

Instruments Used: LMS, L.F. Gas Meter, Terno PID

Operator: S.Smith

Date: 5/24/01

Weather Data

Barometric Pressure: 29.77 in. Hg.

Temperature: 48.2°F

Humidity: 60%

Dewpoint: 44.6°F

Wind: 4.6 mph from ESE

Ground Surface: Soft, wet, grass approx. 4" tall

Conditions: Lt. rain, cloudy

**Monthly Report
Gas Monitoring Probes
Stoughton City Landfill
BT² Project #1764**

Probe	% LEL (as Methane)	% Oxygen	% CO ₂	PID (ppm)	Gas Flow (m ³ /hr)	Pressure (inches H ₂ O)
GMP-1	0.0	21.1	0.0	0.6	2	0.00
GMP-2	0.4	20.5	0.1	0.2	2	0.00
GMP-3	0.2	20.6	0.0	0.8	2	0.02

Instruments Used: LMS_x L.F. Gas meter, Termo PID

Operator: S. Smith, BT²

Date: 6/28/01

Weather Data

Barometric Pressure: 30.15 in.

Temperature: 71°F

Humidity: NA

Dewpoint: 61.3°F

Wind: 9.2 mph

Ground Surface: Dry, tall grass

Conditions: Good

Monthly Report
Gas Monitoring Probes
Stoughton City Landfill
BT² Project #1764

Probe	% LEL (as Methane)	% Oxygen	% CO ₂	PID (ppm)	Gas Flow (m ³ /hr)	Pressure (inches H ₂ O)
GMP-1	0.2	20.7	0.0	0.6	2	0.0
GMP-2	0.0	20.9	0.0	0.6	2	0.0
GMP-3	0.2	20.8	0.0	0.2	3	0.0

Instruments Used: LMS_x Landfill Gas Meter, Thermo PID

Operator: S. Smith

Date: 7/30/01

Weather Data

Barometric Pressure: 30.04 inches

Temperature: 90° F

Humidity: 52%

Dewpoint: 70° F

Wind: NE at 7 mph

Ground Surface: Very dry, mowed recently (7/15/01)

Conditions: Hot, humid, very dry