OPERATION AND MAINTENANCE PLAN
STOUGHTON CITY LANDFILL
STOUGHTON, WISCONSIN

Updated and Revised
July 2005

Prepared by Wisconsin DNR

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SECTION 1

1 INTRODUCTION

1.1 OBJECTIVE AND SCOPE

The objective of this Operation and Maintenance (O&M) Plan is to describe the inspection and maintenance activities required to maintain the effectiveness of the landfill final cover and its associated management systems for the duration of the Superfund post-closure operation period. This plan will be followed by the O&M Contractor (also referred to as the contractor) selected by the Wisconsin Department of Natural Resources (WDNR) to perform the O&M work and is considered part of the Scope of Work for the O&M work. The O&M Plan is intended to be used in conjunction with a Quality Assurance Project Plan (QAPP), prepared by the O&M contractor after the contractor receives a notice to proceed from WDNR, which describes the sampling and monitoring activities related to the remedial action.

This O&M Plan has been prepared in accordance with the Record of Decision (ROD) and the remedial action design. The O&M Contractor shall be responsible for recommending any needed repairs and materials for repairs. Material types for use in conducting any maintenance and restoration activities will be approved by WDNR in advance, after WDNR agrees mutually with the U.S. Environmental Protection Agency (USEPA) on the materials used. The O&M Contractor will not be responsible for carrying out any recommended repairs, except as specifically identified in this O&M Plan as being the responsibility of the O&M Contactor (or contractor, as referred to in this plan), as part of the O&M contract. WDNR will contract with a repair contractor separately for recommended repairs on a cost and materials basis, as identified in this O&M Plan wherever the Repair Contractor is shown to have the responsibility.

1.2 SITE LOCATION/BACKGROUND INFORMATION

The Stoughton City Landfill (SCL) site is located in the northeast portion of the City of Stoughton, approximately 13 miles southeast of Madison, in Dane County, Wisconsin (Figure 1-1, a reproduction of a USGS quadrangle map, does not show the exact site extent).

Figure 1-2 is an existing site layout map showing important features, monitoring wells and gas probes. The property containing the site encompasses approximately 27 acres and occupies portions of the west half of the southwest quarter and the southwest quarter of the northwest quarter of Section 4, Township 5 North, Range 11 East. A wetlands area located along the southeast portion of the present property boundary was the initial area of waste disposal. Wetlands are also located in the north portion of the site and west of the site along the Yahara River. The Yahara River is located west of the site and is within approximately 400 feet of the site at its closest distance.

Background and historical information about the site is available at the USEPA Region 5 web site:

Summary:

http://www.epa.gov/region5superfund/npl/wisconsin/WID980901219.htm

Five Year Review Document:

http://www.epa.gov/region5superfund/fiveyear/reviews_pdf/wisconsin/stoughton_city_landfill.pdf

1.3 SUMMARY OF THE REMEDIAL ACTION

The landfill remedial action identified in the EPA Record of Decision (ROD) includes fencing, land use restrictions, construction of an access road, excavation and relocation of waste in contact with groundwater, waste consolidation under final cover system, and placement of a new multilayer soil cover system with a passive landfill gas vent system over the relocated wastes and the landfill.

Permanent fencing and gates were installed around the perimeter of the waste disposal area to restrict access and to eliminate the potential for exposure to contaminants in the landfill. Chain-

link fencing with a locking gate at the landfill entrance was installed. [Note to bidders: The exact location and construction of the fence should be confirmed at the pre-bid site visit.] The need to restrict site access during remedial construction activities was evaluated, and a temporary fence was included as part of the remedial action plan for the site.

Wisconsin Administrative Code requirements prevent the installation of public or private water supply wells within 1,200 feet of the landfill. These requirements also restrict building structures on the site.

A permanent site access road was built to provide access to the site during waste consolidation and capping activities. The access road was constructed along the southern border of the site. [Note to bidders: The exact location of existing access roads should be confirmed at the pre-bid visit.]

Waste consolidation consisted of excavating wastes in contact with the groundwater along the landfill's northeastern and southeastern boundaries, as well as consolidating the wastes on top of the landfill along the site's western boundary. This minimized the direct contact of wastes with the groundwater and will result in a reduced impact to the wetlands adjacent to the site's eastern border. Prior to excavation, a dewatering pad was constructed to dewater the saturated waste. This pad consisted of a temporary clay-lined basin on top of the landfill, into which the excavated wastes were placed. The wastes were allowed to drain to a lower portion of the basin, and the water was collected. The dewatered wastes were then placed and compacted on the top of the landfill during the regrading phase. Areas impacted by waste consolidation activities were backfilled with hydric soil and reseeded with vegetation consistent with existing wetlands species.

A landfill multilayer soil cover system was placed over the existing landfill cover and the relocated waste. The areas from which waste was relocated were not capped, but backfilled with grading layer material. The final cover system meets the requirements of the Wisconsin

Administrative Code (WAC) NR 504.07 regulations on cover systems for solid waste disposal facilities. The cap consists of a 2-foot grading layer, a 2-foot clay barrier layer, a 2-foot vegetative support layer, and a reinstalled 0.5-foot topsoil layer. The grading layer was constructed from the existing cap and off-site imported borrow material. The clay barrier layer was designed to have a saturated hydraulic conductivity of 1×10^{-7} centimeters per second (cm/sec) or less. A passive landfill gas vent system was installed to vent gas from beneath the cap.

1.4 ELEMENTS OF THE O&M PLAN

This plan generally consists of the following elements:

- Description of main remedial components to include the final cover system, the stormwater management systems, and the passive landfill gas venting systems.
- Frequency of inspection and monitoring tasks.
- Identification of potential problems and corrective actions to be implemented by the O&M contractor.
- Description of safety precautions and recommendations.
- Description of record-keeping and documentation requirements.

1.5 ROLES AND RESPONSIBILITIES

Successful implementation of this O&M Plan will depend on a clear understanding of the roles and responsibilities of each member of the O&M team. The team is made of members responsible for implementing, operating, and overseeing the completion of the remediation of the site. The following list identifies the key personnel from each organization responsible for implementation of this remedial action:

- U.S. EPA Remedial Project Manager
  Name: Mr. Bernard Schorle
  Phone: (312) 886-4746
  Address: 77 West Jackson Boulevard
  Chicago, Illinois 60604

- WDNR Project Manager
  Name: Mr. Gary A. Edelstein, P.E.
  Phone: (608) 267-7563
  Address: PO 7921, 101 S. Webster St. RR/3
  Madison, WI 53707

The WDNR project manager will coordinate the contracting for the O&M work following this O&M plan, in accordance with the CERCLA National Contingency Plan. The WDNR will be considered U.S. EPA's designated representative.

1.6 HEALTH AND SAFETY

Inspection and maintenance activities shall be conducted in accordance with a site-specific health and safety plan (HASP) to be prepared by the O&M contractor. The HASP shall be prepared in accordance with all state and federal regulations, and shall conform with applicable USEPA and Occupational Health and Safety Administration (OSHA) construction safety standards including 29 Code of Federal Regulations (CFR) 1910.120. The HASP shall be submitted to WDNR prior to starting any work at the site.

SECTION 2

2 OPERATION AND MAINTENANCE ACTIVITIES

2.1 LANDFILL FINAL COVER O&M

The final cover for the landfill is a multi-layer soil system consisting of a 2-foot grading layer, a 2-foot clay barrier layer, a 2-foot vegetative support layer, and a 0.5-foot topsoil layer. The cover system has been designed in accordance with WAC NR 504 standards. The objective of this inspection activity is to maintain the quality of the cover system to ensure the performance objectives dictated in WAC NR 504 are being met.

The final cover is intended to reduce the volume of liquids that enter the landfill from precipitation that falls within the landfill limits. The grading plan was prepared to maximize the ability of the surface to shed water to the perimeter stormwater management system, as well as to minimize the potential for erosion damage. During the inspection process, the contractor shall document the quality of the cover system and areas where the performance objectives are not being maintained.

Specifications for materials used for repair shall be proposed by the O&M contractor prior to use. Material types for use in conducting any maintenance and restoration activities will be approved by WDNR in advance, after WDNR agrees mutually with the U.S. Environmental Protection Agency (USEPA) on the materials used. Once material types are approved for a specific repair purpose, the same materials need not be approved again if they are to be used for the same purpose. Any repairs will be carried out by the Repair Contractor.

The clay barrier layer component of the final cover is the primary barrier to water movement and was designed to have a saturated hydraulic conductivity of 1×10^{-7} centimeters per second (cm/sec) or less.. This is accomplished through the use of suitable soil and by compacting to a degree necessary to meet this infiltration requirement. Material and compaction requirements are listed in the construction specifications. The cover soil layer is intended to provide protection to

the clay barrier layer from desiccation (drying out of the clay), root penetration damage, burrowing animals, and frost damage. Each of the above items can reduce the clay's ability to limit infiltration of water through the cover system. The topsoil layer is provided as a highly organic layer that can support vigorous plant growth, which in turn will minimize erosion damage from precipitation events, and maximize evaporation and transpiration.

2.1.1 Landfill Final Cover O&M Inspection Requirements

The landfill cover shall be inspected twice a year, in April and October. The April inspection will coincide with the annual groundwater sampling. During the inspection process, the contractor will evaluate the quality of the vegetative cover across the landfill surface. A satisfactory area of vegetation shall be defined as an area of 10,000 square feet that has:

- No bare spots larger than 3 square feet.
- Not more than 10 percent of area with bare spots larger than 1 square foot.

Areas that show signs of erosion or sparse vegetation will be repaired by the Repair Contractor. The surface will be graded and/or filled to match the surrounding grade with topsoil material. The area will be reseeded and mulched. The Repair Contractor will sufficiently water the area as needed to restore vegetation to an acceptable level.

The contractor will inspect the cover system for areas of significant erosion. Significant erosion is defined as an erosion gully 6 inches deep or loss of vegetation and multiple gullies 3 inches deep. Each layer of the final cover will be repaired. If significant erosion is discovered and damage or cracking of the clay barrier layer is suspected, the Repair Contractor will overexcavate, place, and recompact clay materials to restore the damaged section. The cover soil and the topsoil shall be replaced immediately following completion of the clay barrier layer to minimize damage from desiccation.

The contractor will inspect the final cover for signs of settlement or subsidence. Areas showing signs of potential ponding or continued settlement will be backfilled with protective cover soil and topsoil and will be seeded/mulched by the Repair Contractor. The O&M Contractor will mow the final cover vegetated areas as needed and at least once per year. Mowing activities shall be conducted to maintain a maximum vegetation height of 12 inches. Mowing of the final cover will also inhibit the growth of deep-rooted vegetation that could impact the efficiency and integrity of the clay barrier layer.

Damaged areas of the final cover will be documented by the Repair Contractor to include method and scope of the repairs conducted. The locations and suppliers of materials will be included in the documentation.

2.2 STORMWATER MANAGEMENT SYSTEM O&M

The stormwater management system is intended to provide control of runoff generated from precipitation events over the operating life of the landfill closure. The system consists of two main drainage channels directing runoff into the wetlands on the north and east sides of the landfill.

One channel is located along the northwest edge of the final cover system. This channel collects stormwater from the western side of the landfill and directs it into the wetlands. A minimal volume of flow enters this channel because a limited surface area is included in its watershed. The channel begins on the north side of the permanent access road and drains north.

The second channel begins on the south side of the permanent access road along the west side of the site; this channel drains south, then east along the south boundary of the site. This channel directs runoff from the south and west sides of the site into the wetlands. A larger volume of flow is managed by this channel because of the larger size of the watershed and the additional flow added by the two storm drains servicing the Venevoll, Inc. property to the south.

2.2.1 Stormwater Control O&M Inspection Requirements

The contractor shall inspect each component of the stormwater control system during the semi annual cover inspection. The contractor shall visually inspect the drainage channels for excessive erosion damage or lack of suitable vegetation. Erosion gullies will be backfilled, seeded, and mulched by the Repair Contractor. Additional straw bale barriers may be required to protect the repaired area until vegetation is reestablished. The presence of cattails or other pond-type vegetation will be a sign that appropriate drainage through that length of channel is not occurring. Regrading and backfilling may be required by the Repair Contractor to correct the slope or erosion along the channel lengths. Materials used for backfilling and restoration will be in accordance with the construction specifications for that element of work. The O&M Contractor will evaluate areas of continual erosion damage and will determine the need for permanent riprap structures in these areas. The contractor will also inspect the culvert for damage or erosion at the end sections. Riprap will be replaced as necessary by the Repair Contractor, and any debris will be removed to maintain a free-flowing condition.

2.3 LANDFILL GAS VENTING SYSTEM

The landfill gas venting system is designed to release gases from under the final cover system that have been generated from natural biological activity and the decomposition of waste materials. Landfill gas has the potential to degrade the clay barrier layer by drying out the surface of the clay from below the cover system. Through this desiccation, the effectiveness of the clay layer would be reduced. The primary components of landfill gas are methane and carbon dioxide. In a venting system that is not functioning properly, gas pressure within the landfill could increase to such a point that methane gas, an explosive gas, could migrate underground to structures outside the landfill limits, causing an explosion hazard.

2.3.1 Landfill Gas Venting System O&M Inspection Requirements

The contractor shall inspect the gas venting system for its overall condition and operational effectiveness during the semi-annual inspection. Each vent pipe shall be individually inspected.

Vent screens that limit entry of foreign objects should be installed securely. Vent screens shall be checked to assure they are not blocking gas flow and shall be unblocked by the O&M Contractor if necessary. The O&M Contractor shall inspect the riser for damage. If the riser is damaged and needs to be removed, the Repair Contractor shall excavate and repair the riser with like materials and workmanship, and shall then repair the final cover in accordance with Subsection 2.1 of this O&M Plan.

2.3.2 Landfill Gas Probe Monitoring

The 3 landfill gas probes at the edge of the site will be monitored in accordance with the QAPP. The monitoring program has the objective of monitoring the concentration of the landfill gases at the site boundary to assure that gas migration away from the site towards nearby buildings is not a problem. All the probes shall be tested bi-monthly, 6 times a year, in April, June, August, October, December and February.

The probes shall be tested for percent LEL as methane, percent oxygen, percent carbon dioxide, PID in parts per million, and pressure in inches of water.

2.4 Security Fence O&M Inspection Requirements

Chain-link fencing is provided around the perimeter of the landfill waste disposal area to limit potential public contact with waste materials under the final cover and to limit exposure to landfill gas being vented from the gas venting system. In addition, the fencing provides protection for the gas vent risers and the cover system as a whole. Excessive vehicle or recreational use without the appropriate maintenance can contribute to erosion or limited vegetation.

The O&M contractor shall inspect the fence semi-annually, at the same time the other inspections occur. The contractor shall inspect the fence for serviceability and for signs of tampering. The chain-link fence fabric shall be securely attached to each post and end rail. The posts shall be solidly installed in concrete pads with the necessary support posts and top rails

detailed in the specifications. Each section of fencing shall have three strands of barbed wire angled correctly to limit entrance to the site. Barbed wire shall be completely secured and taut. Barbs shall be present and spaced appropriately. Any damaged or missing material shall be replaced with new material by the Repair Contractor. Any signage located along the fence limit or attached to the fence fabric will be inspected. Any damaged or unreadable signs will be replaced. The O&M contractor will review the information on each sign, to include contact name and phone number. Outdated information will be removed, or the sign will be replaced. The O&M Contractor may use WDNR NR 714 signs, which can be picked up from the WDNR Project Manager. Hand written information on the NR 714 signs that has faded shall be renewed by the O&M Contractor at the semi-annual inspections.

2.5 Routine Groundwater Monitoring

The routine groundwater monitoring will be conducted annually in April. The monitoring schedule is below in Table 1.

Monitoring shall be in accordance with QAPP, DNR Groundwater Sampling Field Manual (DG038, available at http://dnr.wi.gov/org/aw/rr/archives/pubs/DG038.pdf) and DNR Groundwater Sampling Desk Reference (DG037a.pdf, DG037b.pdf, available at http://dnr.wi.gov/org/aw/rr/archives/pubs/DG037a.pdf and http://dnr.wi.gov/org/aw/rr/archives/pubs/DG037b.pdf).

The O&M Contractor shall use a Chapter NR 149 approved laboratory for all groundwater sample analysis. Analysis shall be in accordance with SW846 – SW8260B. The limit of quantification for all volatile organic compounds (VOCs) must be 10 ug/l or lower.

Data shall be submitted in report format and electronically in accordance with the requirements of the WDNR Waste Management Program for the Groundwater and Environmental Monitoring (GEMS) system.

The O&M Contractor shall be responsible for the proper off site disposal of all contaminated purge and development water.

The O&M Contactor shall develop their own QAPP, which will contain a Sampling and Analysis Plan (SAP). For QAPP development cost purposes, the selected lab must submit their own analytical SOPs; they may not simply reference SW846. The selected lab shall prepare an entire data package, complete with QC information. The selected lab will retain and have available for distribution, the data package for a minimum of 5 (five) years, in the event WDNR or USEPA would wish to have data validated.

2.5.1 Table 1 Groundwater Monitoring Schedule

Well	Parameters
MW03D	Water elevation – MSL, FI, DCDFM, THF
MW04D	Water elevation – MSL, FI, DCDFM, THF
MW05D	Water elevation – MSL, FI, DCDFM, THF
MW07I	Water elevation – MSL, FI, DCDFM, THF
MW08I	Water elevation – MSL, FI, DCDFM, THF
MW09S	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW09I	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW09D	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW10S	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW10I	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW13I	Water elevation – MSL, FI, DCDFM, THF
MW14S	Water elevation – MSL, FI, Full VOCs including DCDFM, THF
MW14I	Water elevation – MSL, FI, Full VOCs including DCDFM, THF

In addition, four (4) QA/QC samples which are a trip blank, field blank, duplicate QA/QC sample for full VOCs including DCDFM and THF and duplicate QA/QC sample for just DCDFM and THF

Key: MSL = Mean Sea Level; DCDFM = Dichlorodifluoromethane; THF = Tetrahydrofuran; FI = Field Indicators = pH, temperature and specific conductance

SECTION 3

3 DOCUMENTATION AND SUBMITTALS

This section describes the documentation and submittals that will be used to document the O&M activities performed.

3.1 SEMI-ANNUAL INSPECTION REPORT

The O&M contractor will document and submit the semi-annual inspection using the report form provided below or the Contractor's own report form that is approved in advance by WDNR. The semi-annual inspection report shall contain a narrative summarizing the results of the work, recommendations for follow up or repairs, and the completed form. The O&M contractor will take photographs of all problems noted and provide them in the inspection report. All photographs taken by the O&M contractor must be recorded on a photograph documentation log that will include, at a minimum, the following information:

- A unique identifying number for cross referencing and document control.
- Date, time, location, and current weather conditions at the time the photograph was taken.
- Purpose or intent of the photograph.
- Signature of the photographer.

Two copies of the semi-annual report shall be submitted to WDNR and an additional copy submitted to USEPA. A single electronic copy in Portable Document Format (.pdf) shall also be submitted to WDNR on CD or floppy disk.

3.2 GAS PROBE REPORT

The O&M contractor will document and submit the last 3 bi-monthly results of the gas probe sampling with the semi-annual report (Section 3.1) using the report form provided below or the Contractor's own report form that is approved in advance by WDNR.

3.3 GROUNDWATER MONITORING REPORT

The O&M contractor will document and submit annual groundwater monitoring results in a narrative report as well as tabular data presentation format. The report will identify any results that exceed ch. NR 140 groundwater Preventative Action Limits (PALs) or Enforcement Standards (ESs). The tabular format shall be described in the QAPP/SAP and subject to prior approval by WDNR. The results shall also be submitted in proper electronic form on a single floppy disk to WDNR for entry into the WDNR Waste Management Program GEMS system. Two copies of the groundwater monitoring report shall be submitted to WDNR and an additional copy submitted to USEPA. A single electronic copy of the narrative report and tables in Portable Document Format (.pdf) shall also be submitted to WDNR on CD or floppy disk.

Operation and Maintenance Semi Annual Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin

Inspector _____

Company _____

Project _____

Location _____

Date/Time _____

Project No. _____

Weather	Clear	P. Cloudy	Cloudy	Fog
Temperature	High	F	---	---
Wind	Calm	Medium	High	---
Precipitation	Rain	Light	Moderate	Heavy
	Snow	Light	Moderate	Heavy

Type of Inspection Routine ☐ Special ☐

Persons/Equipment Present: _____

General Description of Site Conditions: _____

Specific Inspection Items	Potential Problem Areas	Status *	Notes
Perimeter Security Fencing	Missing barbed wire, torn fabric.		
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative.		
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing.		
Final Cover Vegetation	Bare spots, stressed vegetation, deep rooted vegetation.		
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding.		
Evidence of Burrowing Animals	Damage to final cover, evidence of waste.		
Stormwater Drainage Channels	Gullies, erosion, debris, culvert blocked.		
Landfill Gas Venting System	Damaged or blocked vent risers, stressed vegetation.		
Access Road	Ponding, rutting, erosion.		

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

Summary of Deficiencies and/or Corrective Actions: _____

Signature of Inspector _____

Date _____

Edelstein, Gary A.

From: Edelstein, Gary A.
Sent: Wednesday, August 24, 2005 5:28 PM
To: 'Schorle.Bernard@epamail.epa.gov'
Cc: Schmoller, Michael R.
Subject: Stoughton City Landfill Inspection

Attachments: Stoughton_LF_inspection_8_24_05.pdf

Stoughton_LF_inspection_8_24_0...

I performed a site inspection today. Here are the results for your files.

There were tornadoes in the area recently, but was no tornado damage to the site. The cover is in good condition. It hasn't been mowed since May, which is OK, given we've had a fairly dry summer. Additional mowing can wait until spring.

Gary E

Gary A. Edelstein, P.E., Waste Management Engineer Wisconsin Department of Natural Resources Bureau for Remediation and Redevelopment - RR/3 P.O. Box 7921 Madison, WI 53707
(608)267-7563
Internet E-Mail => Gary.Edelstein@dnr.state.wi.us

Operation and Maintenance Semi Annual Inspection Report
Stoughton City Landfill
Stoughton, Wisconsin

Inspector: A. Edelstein
Company: WDNR
Project:
Location:
Date/Time: 8/24/05 9:40A
Project No.:

Weather	(Clear)	P. Cloudy	Cloudy	Fog
Temperature	High 60° F	X F	---	---
Wind	Calm	(Medium)	High	---
Precipitation N/A	Rain	Light	Moderate	Heavy
	Snow	Light	Moderate	Heavy

Type of Inspection Routine ☒ Special ☐

Persons/Equipment Present:

General Description of Site Conditions: Good. No tornado damage in area.

Specific Inspection Items	Potential Problem Areas	Status *	Notes
Perimeter Security Fencing	Missing barbed wire, torn fabric.	(1)	
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative.	(1)	
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing.	(1)	My keys didn't work on all locks
Final Cover Vegetation	Bare spots, stressed vegetation, deep rooted vegetation.	(1)	Not mowed since May
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.	(1)	
Landfill Gas Venting System	Damaged or blocked vent risers, stressed vegetation.	(1)	
Access Road	Ponding, rutting, erosion.	(1)	

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

Summary of Deficiencies and/or Corrective Actions: It's been a fairly dry summer and mowing again may do more harm than good. It can wait until spring

Signature of Inspector: A. Edelstein

Date: 8/24/05

Photos attached & Photo key

Notes: 9 hole disc (frisbee) "golf" course noted on west side of site
Purge H_2O tank seen in photo 10. Sandhill cranes in 4.

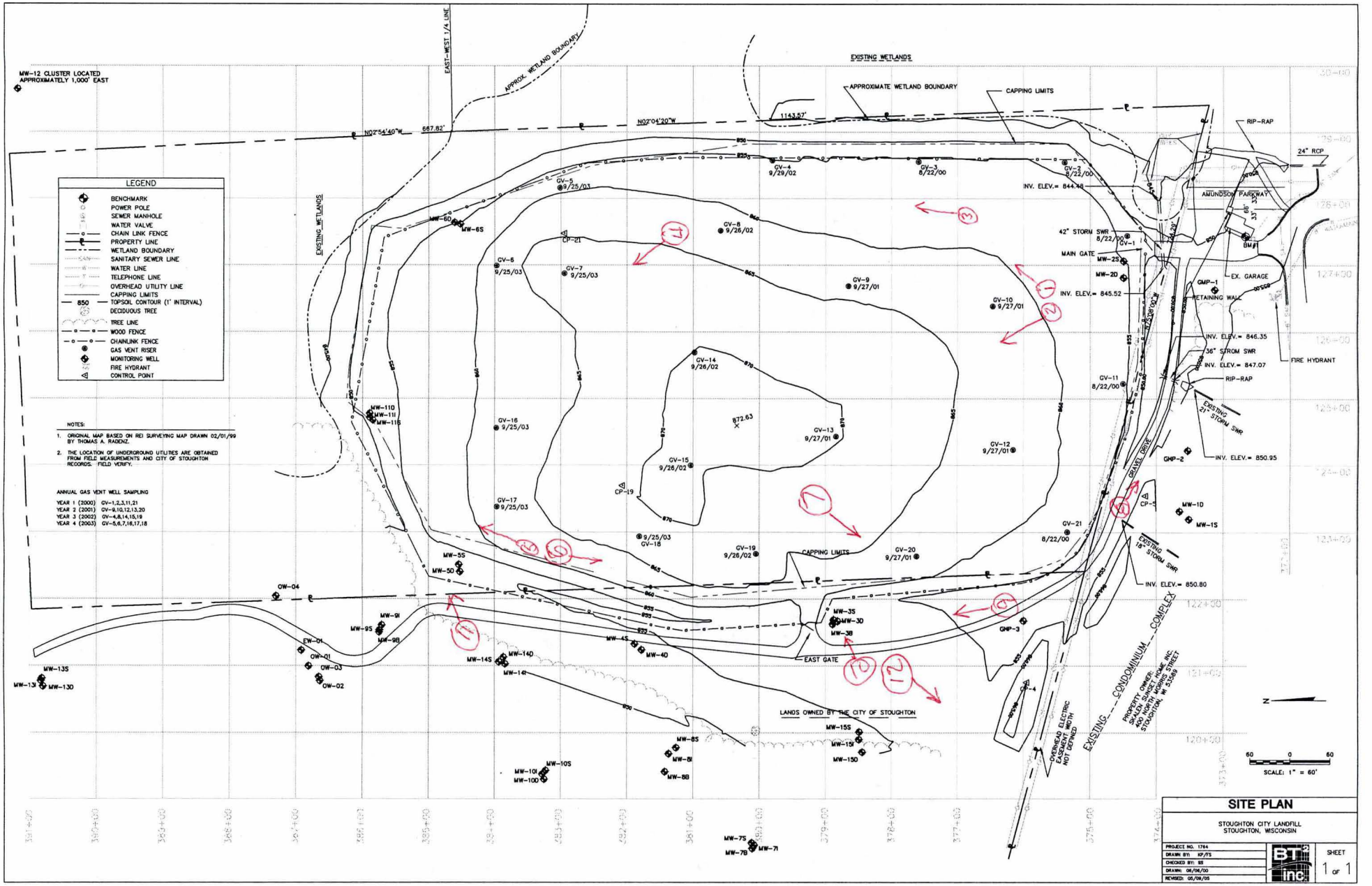

Photo Key 8/24/05 Gate

(1)

(5)

(12)

Gas Probe Monitoring Report
Stoughton City Landfill
Stoughton, Wisconsin

Probe	%LEL (as methane)	% Oxygen	%CO2	PID (ppm)	Pressure (inches of water)
GMP-1					
GMP-2					
GMP-3					

Instruments Used:_____

Operator:_____ Date:_____

Weather Conditions:

Barometric Pressure (inches of Hg):_____ Temperature (Degrees F):_____

Relative Humidity (%):_____ Dewpoint (Degrees F):_____ Wind: _____

Sky Conditions:_____

Ground Conditions:

____ Snow ____No Snow ____Frozen Ground/Frost

3.4 DRAWINGS

The O&M contractor will prepare and maintain a site map or maps showing all significant site features. If necessary, a land survey will be conducted or aerial photos used to prepare the map or maps. The map or maps shall be provided with each submittal as appropriate. An elecronic version of the map or maps shall be provided to WDNR once it is first prepared. The map or maps shall have a scale of at least 1"=150' and shall show, at a minium:

- Site contours
- Existing cover extent
- Fence
- All monitoring wells
- Onsite trails and roads
- Nearby roads, power lines and buildings
- The Yahara River
- All gas vents and probes

Maintenance of the map or maps will include revisions when the following site features change or are moved or removed:

- Fence
- All monitoring wells
- Onsite trails and roads

- All gas vents and probes

3.5 STORAGE AND DISPOSTION OF RECORDS

During post-closure activities, the O&M contractor will be responsible for maintaining a complete set of maps, analytical data, and inspection reports. The O&M contractor shall transfer all changes to the record documents following each maintenance activity at the site.

The O&M contractor will maintain a complete set of all laboratory quality assurance documentation produced as a function of each sampling event. The documents will be maintained at the O&M contractor's home office, in accordance with approved document control methods.

RFB #F-009-08
BID PRICE SHEET
OPERATION AND MAINTENANCE STOUGHTON CITY LANDFILL
STOUGHTON, DANE COUNTY, WISCONSIN

NOTE TO BIDDERS: All blank spaces requiring input below must be filled in, in BLACK INK. Bid items are described in the Scope of Work.

The bidder agrees to accept as full payment for the work proposed under this project (as shown in the Scope of Work and as based upon the undersigned's own estimate of quantities and costs) the following bid amounts:

BID ITEM	DESCRIPTION	UNIT	QUAN TITY	UNIT COST	TOTAL COST
1	Semi annual inspection of facility components	Total $ amount per inspection	4		
2	Semi annual preparation of facility components inspection report including gas probe results	Total $ amount per report	4		
3	Bi monthly gas probe monitoring & testing	Total $ amount per test period	12		
4	Annual groundwater monitoring sampling and analysis	Total $ amount per year	2		
5	Annual preparation of a groundwater monitoring report	Total $ amount per year	2		
6	Monitoring well purge water containerization and disposal	Total $ amount per year	2		
7	Electronic submittal of data to GEMS system	Total $ amount per year	2		
8	Annual landfill cover mowing	Total $ amount per year	2		
9	QAPP/SAP preparation	Total $ amount per contract term	1		
10	Preparation and maintenance of site maps over contract period	Total $ amount per contract term	1		
11	Preparation of HSP	Total $ amount per contract term	1		
12	Total Bid Amount (sum of items 1-11 above)				$

Company Name _____

Address _____

_____

Name _____

Title _____

Signature _____