CONNECTICUT RESOURCES RECOVERY AUTHORITY

ADDENDUM NO. 1
Issued April 25, 2013

TO

REQUEST FOR PROPOSALS
("RFP")

FOR

OPERATION AND MAINTENANCE OF THE LANDFILL GAS COLLECTION SYSTEM AND THERMAL OXIDIZER STATION FOR THE ELLINGTON AND SHELTON LANDFILLS

(RFP Number FY13-EN-004)
(RFP Issued March 26, 2013)

Note: **Proposers are required to acknowledge this and all Addenda in Section 5(a) of the SOQ Form**.

1. ANSWERS TO SUBMITTED QUESTIONS

This Addendum consists of the Connecticut Resources Recovery Authority's responses to written questions that were received by CRRA by 3PM, Wednesday, April 17, 2013.

1.	Question	Please clarify that the Price and Payment form for the Shelton landfill project should be completed as follows: a. Part 1: O&M price: should include scope of services tasks 1, 2, 3, Should task 6 also be included? Please confirm that a single amount lump sum monthly fee is the expected billing format for these tasks. b. Part 2: Applies to Non routine and Emergency services (task 4) and purchase of any spare parts (task 5), provided on a time and materials basis. No budget estimate for these services is to be provided.
	Answer	Task 6 should be included in Section 1 "Routine Operations & Maintenance" of the Proposal Price and Payment Rate Schedule Form, as it is considered a routine work task. All routine work tasks should be included in Section 1. A single, monthly lump sum amount is the expected billing format for the routine tasks.
2.	Question	Please clarify that the Price and payment form for Ellington project should be completed as follows: a. Part 1: O&M price: should include scope of services tasks 1, 2, 3, Should task 6 also be included? Please confirm that a single amount lump sum monthly fee is the expected billing format for these tasks. b. Part 2: Applies to Non routine and Emergency services (task 4) and purchase of any spare parts (task 5), provided on a time and materials basis. No budget estimate for these services is to be provided.
	Answer	Task 6 should be included in Section 1 "Routine Operations & Maintenance" of the Proposal Price and Payment Rate Schedule Form, as it is considered a routine work task. All routine work tasks should be included in Section 1. A single, monthly lump sum amount is the expected billing format for the routine tasks.
3.	Question	Please clarify regarding the Proposal Security: In accordance with Section 2.10 of the subject RFP; a. Are separate proposal securities required for each of the two projects (i.e. one for Shelton Project and one for Ellington Projects)? b. Does the proposal security need to be in an amount equal to cover/include the Full 5-year contract period (years 1 through 5) or a single contract year of services provided. c. Does the Contract amount covered by the proposal security include just the sum of Routine O&M project costs - Section 1 of Price and payment rate schedule form (1. O&M Price), or should it also include some additional amount for Non routine Maintenance and Repair service (Section 2); if so how should this additional amount be estimated since these additional services are provided on a time and materials basis as needed by CRRA.

	Answer	a. One proposal security is required for each proposal, not each site. b. For the full contract period. c. The proposal security should be based on just the sum of the Routine O&M project costs.
4.	Question	Please clarify regarding the Performance Bond: in accordance with Section 6.7 of the subject RFP; a. Are separate performance bonds required for each of the two projects (i.e. one for Shelton Project and one for Ellington Projects)? b. Can the Performance Bond be for a one year period and be renewed each year to cover the next year's contract value or Does the performance bond need in an amount equal to cover/include the Full 5-year contract period (years 1 through 5), provided in the full amount at the contract start? c. Does the Contract amount covered by the performance include only the Routine O&M project cost (Section 1 of Price and Payment form), or should it also include some additional amount for Non routine maintenance and Repair service; if so how should this additional amount be estimated since these additional services are provided on a time and materials basis as needed.
	Answer	a. If only one site awarded, one performance bond is required. If both sites are awarded to the same proposer, CRRA will accept either two separate performance bonds, one for each site, or one performance bond in an amount sufficient to cover both sites. b. For the full contract period. c. The Performance Bond would be based on just the sum of the Routine O&M project costs.
5.	Question	Please provide interpretation/clarification regarding the Minimum Limits Section 6.6.2: Can CRRA provide exceptions to the Minimum Limits (Section 6.2) for any Subcontractor to the Prime Contractor General liability Insurance & Automotive liability. This may apply to any subcontractors utilized for future Non routine services not identified at this time but may be required by CRRA through these contracts at some point in the future (i.e. electricians, mechanical, construction labor etc.) . Note that the high Limits are restrictive and may limit use of small minority or woman owned businesses to be used as subcontractors (where required).
	Answer	CRRA requires that the minimum limits (Section 6.2) be met for the Contractor and all Subcontractors. Contractor may cover any and all of its subcontractors or require that their subcontractors comply with the insurance provisions outlined in the Agreement.
6.	Question	Condensate Disposal: can CRRA provide the names of the current subcontractor companies whom provide condensate removal/disposal services for the Shelton and Ellington LFG O&M contracts?
	Answer	United Industrial Services from Meriden, CT.

7.	Question	Can CRRA provide a copy of the Landfill Gas Operations and Gas Migration Monitoring plan for the Shelton Landfill, revised March, 2010 by SCS Engineers, made available in time to be useful in preparing our response and pricing for this RFP?
	Answer	See attached
8.	Question	Can CRRA please provide an example of a recent complete copy of a monthly status report for the Shelton Landfill, including attachments, made available in time to be useful in preparing our response and pricing for this RFP?
	Answer	See attached
9.	Question	Can CRRA clarify whether submitters may provide additional supplemental information, not specifically requested in the RFP forms, related to our firm's background, experience, capabilities, project experience? This information could be provided in either the cover letter and/or as a supplemental appendix to the Proposal package if allowed by CRRA.
	Answer	As noted in Section 11 of the Instructions to Proposer (Section 2 of the RFP Package Documents), "A Proposers may include additional information as an addendum/appendix to its proposal if the Proposers thinks that it will assist CRRA in evaluating the Proposers's proposal. A Proposers should not include information that is not directly related to the subject matter of this solicitation."
10.	Question	Can CRRA provide approximate amount invoiced for Non routine & emergency Services during the past 3 year contract period for Shelton and Ellington projects?
	Answer	The amount invoiced in the past three year contract period for non-routine and emergency services is estimated to be approximately $115,000 for the Ellington Landfill and approximately $165,000 for the Shelton Landfill.
11.	Question	Who is currently providing the service for the present contract "Operation and Maintenance of the Landfill Gas Collection System and Thermal Oxidizer Station at the Ellington and Shelton Landfills"?
	Answer	The Board package write up and resolution approved by the Board of Directors for the Ellington Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/2008/Board%20Package%204-24-08.PDF The Board package write up and resolution approved by the Board of Directors for the Shelton Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/5-29-08.pdf
12.	Question	Where can we obtain a list of the previous contract bidder's for this scope of work?

	Answer	The Board package write up and resolution approved by the Board of Directors for the Ellington Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/2008/Board%20Package%204-24-08.PDF The Board package write up and resolution approved by the Board of Directors for the Shelton Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/5-29-08.pdf
13.	Question	Where can we get a copy of the winning bids and any price related information such as "The Board of Directors Resolution" for the previous contract?
	Answer	The Board package write up and resolution approved by the Board of Directors for the Ellington Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/2008/Board%20Package%204-24-08.PDF The Board package write up and resolution approved by the Board of Directors for the Shelton Landfill can be found on CRRA's website at http://www.crra.org/documents/public_records/board/board_packages/5-29-08.pdf
14.	Question	Question: Surety Bonds and Letters of Credit for Performance and Bid Security are typically valid for one year. Banking Regulations do not permit Letters of Credit to extend for projects of this type for more than 365 days. Is CRRA requiring five separate performance bonds, one for each of the option years, or just one for the base year?
	Answer	Please see section 7.4 of the Form of the Agreement that was included with this RFP (Section 6 of the RFP Package Documents).
15.	Question	Criteria for a Small Business Enterprise - Item #2 specifies, for this contract, that the bidding contractor shall not have a gross revenue exceeding $15,000,000. It is our understanding that this Schedule A item was present in the previous contract, however, the incumbent corporation, as a whole, as it is headquartered in Long Beach, California, and does not have a separate business license and incorporation within the State of Connecticut, would be considered, under Federal Acquisition rules, to be wholly owned and controlled only by its parent whose advertised gross receipts for last year were in excess of $120,000,000. Our question is, will Schedule A be binding to all bidders?
	Answer	Schedule A applies to Proposers who wish to be considered as a Small Business Enterprise. PA 11-229 revises the criteria for schedule A such that a Small Business Enterprise "does not include any person who is affiliated with another person if both persons considered together have a gross revenue exceeding fifteen million dollars."
16.	Question	Insurance: Item #4 - Property and Equipment Insurance states that "Property and Equipment insurance covering all property and equipment owned or leased by Contractor".

		Question: Some companies, such as ours, have a vast amount of property and equipment including real estate and equipment totally unrelated to this scope of work. Insuring all of our equipment and all of our property for loss would result in an insurance payment many times the value of this contract. As such, is it proper to have insurance upon the property and equipment that pertains to this project only?
	Answer	CRRA's requirement for evidence of property & equipment refers to the policy (and/or rider) that would cover equipment used for this project.
17.	Question	Insurance: Item #4 - Property and Equipment Insurance states that "Property and Equipment insurance covering all property and equipment owned or leased by Contractor". Question: Automobile Liability Insurance, as specified by the recent version of ISO - Is CRRA ISO certified? If not, it may be impossible to fulfill this item because ISO states that insurance for a non-ISO rated entity is only valid when working with ISO certified concerns. In addition, Motor Carrier Act Endorsement applies to Federally Registered Motor Carriers registered under ICC. This endorsement is not available unless the contractor is a common carrier. Is it the intent of CRRA to hire only contractors that are motor carriers?
	Answer	CRRA requires all Contractors who own borrow or rent vehicles to provide evidence of auto insurance for the limits requested, and CRRA should be an additional insured. The ISO referred to in the documents is an acronym for Insurance Services Office. Further, The MCS-90 is essentially an endorsement that makes the insurer a surety to the public. The Act requires the MCS-90 endorsement be attached to any liability policy issued to motor carriers operating commercial motor vehicles that are transporting property in interstate or foreign commerce. If the work you are doing for CRRA does not require a commercial motor vehicle to transport property as described, this provision would not be enforced.
18.	Question	Insurance: Item #4 - Property and Equipment Insurance states that "Property and Equipment insurance covering all property and equipment owned or leased by Contractor". Question: Contractor's Pollution Liability Insurance, a copy of the insurance requirements has been sent to our agent for review. They question Item #5 - Contractor' Pollution Liability Insurance and have asked us to clarify the need for this insurance as the contract has no scope of work involving hazardous material remediation, work with asbestos or lead abatement or performing underground work. Since none of these items are in the scope of the contract, the insurance agents we have contacted are hesitant to issue insurance of this type. Does this contract include asbestos, lead abatement or require similar work? Please clarify this so we can present it to our insurance agent properly.
	Answer	Contractors' Pollution Liability Insurance policies cover more than hazardous materials remediation and/or work with asbestos or lead abatement. Claims can arise out of pollution conditions caused by the insured's covered operations

		for bodily injury, property damage and remediation. Policies also customarily cover defense and investigation of claims.

2. ATTACHMENTS:

Attached hereto and incorporated herein this Addendum 1 are the following documents:

- The sign-in sheet from the Mandatory Pre-Proposal Conference and Site Tour held on April 10, 2013.
- Landfill Gas Operations and Gas Migration Monitoring plan for the Shelton Landfill.
- Shelton Landfill Gas Collection System Operations, Monitoring, and Maintenance Montly Status Report for February 2013.

END OF ADDENDUM 1

MANDATORY SITE TOUR SIGN-IN SHEET
OPERATION & MAINTENANCE OF THE LANDFILL GAS COLLECTION SYSTEM & THERMAL OXIDIZER STATION
SHELTON LANDFILL
866 River Road (Route 110), Shelton, Connecticut 06484
10:00 a.m., Wednesday, April 10, 2013
(PLEASE PRINT)

Initial if in Attendance	Name	Company	Address	Email Address	Telephone Number
RA	Russell Anderson	Civil & Environmental Consultants, Inc.	31 Bellows Road Raynham, MA 02767	randerson@cecinc.com	(774) 501-2176
	James Davis	Northern Engineering	37 Corneau Way South Windsor, CT 06074	northernengineering@comcast.net	(860) 528-7652
BB	Brian Basconi	SCS Field Services	400 Chapel Road, Unit 3H, South Windsor, CT 06074	bbasconi@scsfieldservices.com	(860) 372-4973

MANDATORY SITE TOUR SIGN-IN SHEET

OPERATION & MAINTENANCE OF THE LANDFILL GAS COLLECTION SYSTEM & THERMAL OXIDIZER STATION

ELLINGTON LANDFILL,

217 Sadds Mill Road (State Route 140), Ellington, Connecticut 06029
3:00 p.m., Wednesday, April 10, 2013

(PLEASE PRINT)

Initial if in Attendance	Name	Company	Address	Email Address	Telephone Number
RAA	Russell Anderson	Civil & Environmental Consultants, Inc.	31 Bellows Road Raynham, MA 02767	randerson@cecinc.com	(774) 501-2176
JFD	James Davis	Northern Engineering	37 Corneau Way South Windsor, CT 06074	northernengineering@comcast.net	(860) 528-7652
BB	Brian Basconi	SCS Field Services	400 Chapel Road, Unit 3H, South Windsor, CT 06074	bbasconi@scsfieldservices.com	(860) 372-4973

CRRA SHELTON LANDFILL
LANDFILL GAS SYSTEM OPERATIONS
And
GAS MIGRATION MONITORING PLAN
SHELTON, CONNECTICUT

Prepared for:

CONNECTICUT RESOURCES RECOVERY AUTHORITY
100 Constitution Plaza, 6th Floor
Hartford, Connecticut 06103

Prepared by:

SCS ENGINEERS, PC
2 Crosfield Avenue, Suite 422
West Nyack, NY 10994
914-353-5727

Revision 3: March 2010
Revision 2: October 2009
Revision 1: February 27, 2002
Original Issue: April 20, 2000
File No. 1399017.02

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPROVAL

June 28, 2010

RECEIVED
JUN 30 2010
CRRA
ENVIRONMENTAL

Mr. Peter Egan
Director of Environmental Affairs & Development
Connecticut Resources Recovery Authority
100 Constitution Plaza, 6th Floor
Hartford, CT 06103-1722

RE: **Gas Monitoring Plan**
Stewardship Permit DEP/HWM/CS-126-005
Connecticut Resources Recovery Authority (CRRA)
Shelton Landfill, 866 River Road, Shelton, Connecticut

Dear Mr. Egan:

Staff from the Department of Environmental Protection's (DEP) Bureau of Materials Management and Compliance Assurance's Waste Engineering and Enforcement Division (WEED) has completed their review of the report titled: *CRRA Shelton Landfill Landfill Gas System Operations and Gas Migration Monitoring Plan Shelton, Connecticut*, dated April 20, 2000, revised to March 2010, prepared on behalf of the Connecticut Resources Recovery Authority (CRRA) by SCS Engineers, PC (SCS), West Nyack, New York.

The referenced gas monitoring plan was submitted pursuant to Section III.C.3 of the Stewardship Permit issued on September 16, 2009. As required by Section II.A.11.(b) of the permit, the revised gas monitoring plan was prepared to reflect current site conditions at the Shelton Landfill. The purpose of the revised gas monitoring plan is: to document the goals of the landfill gas control (LFG) and monitoring systems; to describe the LFG control and monitoring systems; to specify operational and monitoring requirements; to specify record keeping and reporting requirements; and to describe contingency plans.

Based upon review of the available information, the above referenced gas monitoring plan is hereby approved.

Nothing in this approval shall affect the Commissioner's authority to institute any proceeding, or take any action to prevent or abate pollution, to recover costs and natural resource damages, and to impose penalties for violations of law. If at any time the Commissioner determines that the approved actions have not fully characterized the extent and degree of pollution or have not successfully abated or prevented pollution, the Commissioner may institute any proceeding, or take any action to require further investigation or further action to prevent or abate pollution. This approval relates only to pollution or contamination identified in the above referenced report.

In addition, nothing in this approval shall relieve any person of his or her obligations under applicable federal, state and local law.

If you have any questions pertaining to this matter, please contact David McKeegan of my staff at (860) 424-3313.

Sincerely,

Robert C. Isner, Director
Waste Engineering and Enforcement Division
Bureau of Materials Management and Compliance Assurance
RCI:dm

cc: David Bodendorf, CRRA

REMEMBER TO REDUCE, REUSE, AND RECYCLE It's a *first* step towards a more sustainable world and in Connecticut, it's the Law. To learn more about what you can do, go to www.ct.gov/dep/swmp, or call (860) 424-3365.

CRRA SHELTON LANDFILL
LANDFILL GAS SYSTEM OPERATIONS
And
GAS MIGRATION MONITORING PLAN

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SECTION 1

INTRODUCTION

This Landfill Gas Systems Operations and Gas Migration Monitoring Plan has been developed for the Connecticut Resources Recovery Authority's (CRRA) Shelton Landfill in accordance with the requirements of applicable state and federal regulations. The purpose of the monitoring plan is:

- To document the goals of the LFG control and monitoring systems.
- To describe the LFG control and monitoring systems.
- To specify operational and monitoring requirements.
- To specify record keeping and reporting requirements.
- To describe contingency plans.

OPERATIONAL GOALS

The goals of the LFG control and monitoring systems are as follows:

- Extract LFG at a sufficient rate to prevent migration off-site.
- Extract LFG at a sufficient rate to prevent odors and excessive surface emissions of LFG.
- Extract LFG at a sufficient quality to enable combustion in the enclosed gas flare without the use of excessive quantities of supplemental fuel.
- Monitor for the presence of landfill gas (methane) in on-site and off-site structures and at the property line to protect public health and safety, and
- Provide for a written contingency and notification plan to rapidly identify any migration, notify the proper authorities and remediate the migration as rapidly as possible.

REGULATORY REQUIREMENTS

USEPA and Connecticut DEP require owners or operators of municipal solid waste landfills to implement a routine methane monitoring program to ensure that the concentration of methane is below regulatory levels at the facility boundary and in on-site structures, excluding gas control or recovery system components. Regulatory levels at the facility boundary and in on- and off-site structures are listed here in Table 1.

Regulatory concentrations are specified as a percentage of the lower explosive limit (LEL) for methane. LEL is defined as the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25°C and atmospheric pressure. The LEL for methane is 5 percent by volume in air.

Federal

On October 9, 1991, the EPA promulgated standards for new and existing municipal solid waste landfills (MSWLFs) under the Resource Conservation and Recovery Act (RCRA) Subtitle D (40 CFR 258). The rule established minimum national criteria for the location, design, cleanup and closure of MSWLFs. With EPA authorization, states were permitted to develop their own standards and exercise some flexibility in implementing the new criteria.

40 CFR 258.23 requires owners or operators of regulated MSWLFs to implement a routine methane monitoring program to ensure that the concentration of methane is below regulatory levels at the facility boundary and in on-site structures, excluding gas control or recovery system components. Regulatory levels at the facility boundary and in on-site structures are established in 40 CFR 258.23(a) and are listed here in Table 1.

The type and frequency of monitoring must be determined based on site-specific conditions as outlined in 40 CFR 258.23(b), including:

- Soil conditions.
- Hydrogeologic conditions surrounding the facility.
- Hydraulic conditions surrounding the facility.
- Location of facility structures and property boundaries.

The minimum required frequency of monitoring per regulation is quarterly.

Owner/operators must take the following actions if methane levels exceed the regulatory limits:

- Immediately take all necessary steps to protect human health and notify the State Director (i.e., CTDEP).
- Within seven days, place in the operating record the methane levels detected and a description of the steps taken to protect human health.
- Within 60 days of detection, implement a remediation plan, place a copy in the operating record, and inform the CT DEP that the plan has been implemented. The plan shall describe the nature and extent of the problem, and the proposed remedy.

The Connecticut DEP may establish alternative schedules for demonstrating compliance with the last two items above.

State

Connecticut's solid waste management program was released by the DEP on December 28, 2006. Regulated MSWLFs in Connecticut must comply with state standards in addition to the federal Subtitle D requirements.

Connecticut Solid Waste Management Regulations under Section 22a-209-7(n)(2) require that:

> "The concentration of methane gases generated by the solid waste disposal area shall not exceed: (A) Twenty five percent (25%) of the lower explosive limit for methane in on-site or off-site structures including buildings, sheds and utility drainage lines, but excluding gas control or recovery system components; or (B) The lower explosive limit for methane in the ground at the property boundary of the solid waste disposal area."

Connecticut regulations define the same limits as Subtitle D for methane concentrations in the subsurface at the property boundary and in on-site structures. In addition, the State also established a maximum methane concentration in off-site structures (shown in Table 1).

Table 1

Maximum Allowable Methane Concentrations

Location	Maximum Concentration Allowed (% LEL)	Equivalent Methane Concentration in Air (% Volume)
On-site Structures (excluding gas control or recovery system components)	25	1.25
Off-site Structures (excluding gas control or recovery system components)	25	1.25
Facility Property Boundary	100	5.0

SECTION 2

SITE INFORMATION

LOCATION

The Shelton Landfill is located on a 110 acre parcel of land at 866 River Road (Route 110) in Shelton, Connecticut. It is bounded to the south by the Far Mill River and United Technologies Sikorsky Aircraft manufacturing plant; to the east by the Housatonic River; to the north by the Family Golf Center, also known as the Former Crump Property; and to the west by River Road (Route 110). Several commercial and light industrial properties line the western side of Route 110. A residential area is located to the west of the commercial properties. Figure 1 and Drawing 1 (in pocket at end of report) present a site location map and a site plan, respectively.

SITE HISTORY

The landfill site was formally used for sand and gravel excavation and was subsequently filled with municipal solid waste (MSW) by the City of Shelton through 1982. CRRA assumed ownership in 1983, and continued landfilling MSW until 1987. Thereafter, the landfill received ash residue from the Bridgeport Resco Resource Recovery Facility until 1998.

MSW disposal took place in a 42 acre unlined area in the central portion of the site. Incinerator ash from the Bridgeport Facility was subsequently place over the MSW. Disposal of ash in the central site ceased in August 1994.

Incinerator ash disposal continued in lined monofill areas known as the Southeast and Northeast Ash Areas. The Southeast Ash Area operated from August 1994 until June 1996. The Northeast Ash Area operated from June 1996 until February 1998. Both areas were capped with a synthetic liner in the fall of 1999.

The site also contains a 1.7-acre area, which accepted metal hydroxide sludge, a hazardous waste, from 1980 to 1983. This cell was certified closed in October 1989 in accordance with applicable regulatory criteria at the time.

GEOLOGIC SETTING

Information on the site geologic setting is based on a report prepared by Malcolm Pirnie entitled "Landfill Gas Monitoring Plan", September 1996.

Two types of water-deposited sediments overlie bedrock at the Shelton Landfill. Sediments in the northern portion of the site consist of ice-contact stratified drift. The southern portion consists of post-glacial swamp deposits.

The ice-contact stratified drift is the result of stream and local ephemeral lake deposits associated with the melting of glacial ice. This material is generally unconsolidated, poorly sorted sand,

gravel, silt, and clay with abrupt changes in grain size. Variability in the sediments, both laterally and vertically, indicates changes in the depositional environments. These deposits vary in thickness, from zero feet in areas of bedrock outcrops to 70 feet in the southeastern portion of the landfill. The stratified sediments generally grade from coarser sands and gravel to finer sands and gravel with increased depth.

Swamp deposit sediments exist in the vicinity of the tidal wetlands areas along the Far Mill River in the southern portion of the site. These sediments consist silt, sand, clay, and organic matter. The deposits occur at approximately six feet below grade and extend approximately eight feet in thickness.

Bedrock beneath the Shelton Landfill consists primarily of metamorphic schist at depths ranging from 0 to 70 feet below the surface. The bedrock, characterized by the Wepawaug Schist, is interlayered medium light-gray to dark-gray phyllitic schist and medium to dark gray quartz rich paragneiss. Bedrock outcrops are located adjacent to the Family Golf Center, at the northwest corner of the property, and beneath the Southeast Ash Area. A bedrock valley is located just southeast of the landfill.

A site plan and geologic cross-sections of the landfill are presented in Appendix A.

Groundwater in the overburden unconsolidated deposits generally flows to the southeast. The Housatonic River tidally influences groundwater flow. Groundwater elevations in the unconsolidated deposits during low (June 1988) and high (August 1988) tide are shown graphically in Appendix A. Historical water level survey results from previous investigation reports are presented in Appendix A. Based on the available groundwater monitoring data, the seasonal fluctuations in groundwater elevations, including tidal influences, can be on the order of approximately 6 feet.

Observed hydraulic conductivities at the site range from 44.94 gallons per day per square foot (gpd/ft^2) to 280.40 gpd/ft^2. The porosity of sediments at the site ranges from 0.20 to 0.41.

The MSW disposal area located in the central portion of the site governs site topography. Surface drainage generally flows east into the Housatonic River Lagoon and the Housatonic River, or south towards the Far Mill River.

SECTION 3

LFG SYSTEMS DESCRIPTION

The existing LFG systems for the MSW landfill include a control system and a monitoring system. The control system includes the following components:

- A perimeter LFG collection system including vertical extraction wells and extraction trenches in native soil, horizontal collectors, and an above grade header.
- A central LFG collection system including vertical extraction wells in the waste mass and a below grade header.
- A permanent blower/flare station inside a fenced compound at the south end of the landfill.

The monitoring system includes the following components:

- A perimeter monitoring well system including 12 monitoring ports equipped with continuous methane detectors, 7 monitoring probes without detectors and 16 bar punch probes off-site without detectors.
- Continuous methane detectors located in certain off-site structures.
- Continuous methane detectors located in certain on-site structures.

CONTROL SYSTEM

The perimeter gas collection system was installed in 1989. The perimeter system originally consisted of 42 wells, approximately 50 feet apart along the north and west property boundaries. In 1999, two gravel-filled trenches (labeled 43 and 44) were added to the perimeter system, east of Well 42. In October 2001 four new perimeter wells (45, 46, 47 & 48) were added to the perimeter collection system at the northern end of the landfill. In 2006, two horizontal gas collectors were added to the perimeter system. Each end of the horizontal collectors was tied into the perimeter collection system at a wellhead (HC01, HC02, HC03, HC04). The total number of perimeter wells and trenches is now 52. The wells and trenches are connected by an above grade header that is connected to the permanent blower/flare station.

The original central collection system, installed in 1989 or 1990, included 10 wells on the western side of the landfill, and 8 wells on the eastern side. The central system was upgraded in 1995 during which time the original 18 wells were abandoned. Resource Technology Corporation (RTC), CRRA's LFG developer, reportedly installed a total of 55 extraction wells and an underground header during the upgrade. In summer 2000, ten wells were installed on the north and west side slopes and four wells were installed to replace non-functioning existing

wells. In October 2001, five new wells were added to the central well collection system. Currently, the central well system has 68 wells online. The central system is connected to the permanent blower/flare station for the combustion of LFG.

In August 1999, as a result of reduced operation of the central and perimeter collection systems, methane was detected on both sides of River Road (Rte 110) and on adjacent commercial and residential properties. Methane concentrations at levels in excess of the regulatory limits were detected in the ground at various off-site locations.

In response to this methane migration event, all on-site gas controls, including the existing flare and gas-to-energy facilities were inspected. The existing flare and gas-to-energy facilities were found to be inoperable. Therefore, the two temporary flare systems were delivered to the site. Repairs were made to both the perimeter and central collection systems. Two shallow, extraction trenches were installed on the north side of the site, to the east of the existing perimeter extraction wells.

An upgrade of the existing permanent blower/flare station was completed at the end of March 2002. The blower/flare station was upgraded to include a new enclosed flare and two blowers that are each capable of extracting 100 percent of the estimated LFG necessary to control migration. The new flare handles all of the LFG collected by the perimeter and central collection systems. The two temporary flares were removed The new flare system includes an emergency bypass vent to allow venting of LFG during emergency conditions and during maintenance and inspection of the flare unit (when such conditions require a flare outage in excess of 4 hours and when mobilization of a temporary flare to the site is not warranted).

Drawing 1 illustrates the layout of the perimeter and central collection systems, including the Summer 2000, October 2001, and December 2006 additions to the central and perimeter systems.

MONITORING SYSTEM

The perimeter gas monitoring port system includes 12 vertical gas ports drilled to the groundwater table and fitted with continuous methane monitoring sensors (see Appendix B for drilling logs). The sensors are wired to a central alarm panel and automatic dialer. The system is designed to provide 24 hour monitoring of LFG migration and alert personnel to the presence of methane at the perimeter of the landfill.

The western and northern perimeter of the landfill is also equipped with several permanently installed gas monitoring ports that are not equipped with continuous gas monitoring equipment. These ports consist of 4 ports (GP-1 through GP-4) along the western property line and 3 ports (MW-B1, B2, B3) along the western property line.

Most of the on-site structures at the Shelton Landfill are equipped with permanently installed, continuous gas monitoring sensors. The sensors are designed to provide 24-hour monitoring of each structure and alert personnel to the presence of methane in the building. Table 2 lists an inventory of on-site structures at Shelton Landfill, the general use of the structure, the gas

detection device installed, and the proposed monitoring schedule. Drawing No. 1 shows the locations of the on-site structures.

Several off-site structures bordering the landfill are equipped with continuous methane monitoring sensors. Each sensor is designed to provide 24-hour monitoring of each business and alert personnel to the presence of methane in the building. Table 3 lists an inventory of the off-site structures with monitoring sensors, the general use of the structure, the gas detection device installed, and the monitoring requirements. Drawing No. 1 shows the locations of most off-site structures.

In addition, a small number of residences to the west of the Landfill are also fitted with permanent gas monitoring devices. These devices are installed in residences and maintained by CRRA, when requested by the resident.

SECTION 4

CONTROL SYSTEM REQUIREMENTS

CRRA will perform routine operation, monitoring, and maintenance tasks on the following control sub-systems:

- Central Collection System
- Perimeter Collection System
- Blower/Flare Station

CRRA may utilize its own staff or may direct other qualified personnel or consultants to perform this work. All personnel operating the flare will be trained in the proper operation of the flare per the manufacturer's operating procedures and trouble shooting techniques. Operators of the gas collection system shall also be properly trained in its operation.

INSTRUMENTATION

Parameters monitored under this plan will be measured with the following instruments, or equivalent:

- **Methane Gas Concentration** –Landtec GEM-2000 Infrared Landfill Gas Analyzer, Gastech Model 1939 Landfill Monitor, or an equivalent instrument. The instrument used will be capable of displaying the gas concentration as a percent of LEL and as a percent by volume (dual range). The meter will be maintained, calibrated, and operated according to the manufacturer's recommendations. The gas standard used for calibration will be a known gas mixture of 2.5 percent methane (50 percent LEL), balance air.

- **Pressure** –Landtec GEM-2000 Infrared Landfill Gas Analyzer, Dwyer analog Magnehelic gauge, Dwyer Series 475 Mark II electronic manometer, or an equivalent instrument. The instrument will be capable of measuring pressure in the range of –5.9" w.c. to +5.9" w.c. The meter used will be maintained, calibrated, and operated according to the manufacturer's recommendations.

- **Barometric Pressure** –Oakton temperature compensated aneroid barometer or equivalent instrument. The barometer used will be maintained, calibrated, and operated according to the manufacturer's recommendations.

- **Ambient Temperature** –Landtec GEM-2000 equipped with a thermocouple probe, a handheld thermometer, or equivalent instrument.

- **Gas Flow** – Fluid Components International mass flow meter, or an equivalent instrument will be used to continuously measure and monitor the volumetric flow of

waste gas into the flare. The instrument will be capable of measuring flows from 0 SCFM to 1100 SCFM. The measurement environment pressure will range from 0 psig to 1 psig and the temperature from 100°F to 160°F. The device will be maintained and routinely calibrated according to the manufacturer's recommendations. The flow measurements will be continuously recorded on a Honeywell chart recorder.

CENTRAL COLLECTION SYSTEM

Monitoring

The central collection system includes header piping, lateral piping, and LFG extraction wells drilled in refuse and designed to collect LFG from the interior portions of the landfill. This system will be monitored and adjusted weekly to insure that the wells are operating properly to control migration or emission of LFG while minimizing air infiltration into the landfill to maintain LFG quality for flare operation.

The central collection system is required to be monitored once per month, but CRRA directs its O&M contractor to perform this work once each week. Monitoring is performed using a properly calibrated and maintained Landtec GEM-2000 Infrared Landfill Gas Analyzer or equivalent instrument. The gas analyzer is calibrated with a known gas mixture of 50% by volume methane, 35% by volume carbon dioxide, balance nitrogen. The oxygen sensor is calibrated with a known gas mixture of 4% by volume oxygen, balance nitrogen.

Weekly monitoring and maintenance of the central collection system include the following tasks:

1. Observe the condition of all above ground piping, including header lines, laterals, wellheads, and flexible connections. Note any needed repairs, such as loose fitting, cracked, worn, or damaged piping.

2. Observe the condition of the wellhead components, including monitoring ports, valves, dust caps, and thermometers. Note any needed repairs.

3. Immediately repair damaged piping or wellhead components which are needed to collect monitoring information from the extraction well. These repairs could include such items as replacement of monitoring ports or thermometers, or repair of damaged piping. Record any repairs made.

4. Observe the condition of the area surrounding the wellhead. Note the occurrence of any settlement, ponding of water, cracking or erosion of the surface cover, or distressed vegetation.

5. Collect the following information from each extraction well:
   - Valve position
   - Gas quality, including methane, carbon dioxide, oxygen and balance gas (nitrogen)
   - Wellhead static pressure (inches of water column)

- Velocity pressure (inches of water column) and/or gas flowrate (SCFM)
- Gas temperature
- System pressure (inches of water column)

6. Make adjustments to the extraction wells as detailed in the following section. Record all data, observations, and adjustments on the *Central Collection System Monitoring Form* (see Appendix C for all monitoring forms).

Extraction Well Adjustments

Adjustments to the central collection system extraction wells are necessary to extract the maximum amount of LFG while maintaining good gas quality and minimizing air infiltration. Due to the complex nature of LFG generation, ongoing adjustments will be needed to maximize the collection system's effectiveness.

Increasing the vacuum at a LFG well typically causes the methane concentration to decrease and the oxygen and balance gas (nitrogen) concentrations to increase. Decreasing the vacuum generally results in the opposite effect.

Central LFG wellheads will be adjusted to the maximum flowrate possible while maintaining the gas quality, temperature, and static pressure within the specified target ranges listed in Table 4. Wells with parameters that cannot be maintained within the acceptable ranges, despite repeated adjustment, shall be considered for possible replacement.

Table 4
Adjustment Parameters for Central LFG Extraction Wells

Parameter	Acceptable Range	Target Range
Temperature	< 131°F	<= 125°F
Static Pressure	<= 0"w.c.	< 0"w.c.
Methane	> 35% vol.	>= 50% vol.
Oxygen	< 5% vol.	< 2.5% vol.
Balance Gas (Nitrogen)	< 20% vol.	<= 10% vol.

PERIMETER COLLECTION SYSTEM

Monitoring

The perimeter collection system includes header piping, lateral piping, and extraction wells drilled in soil. The system is designed to prevent LFG from migrating beyond the perimeter of the landfill. This system must be monitored and adjusted weekly to insure that the wells are operating properly to control migration or emission of LFG.

The perimeter collection system is required to be monitored and adjusted monthly. However, CRRA requires its O&M contractor to perform this work once each week or as needed to

Flare:
- Stack temperature
- Gas flow rate, quality and temperature
- Pressure differential across flame arrestor
- Propane supply tank pressure or level

Maintenance

The components of the blower/flare station are maintained according to the manufacturers' recommendations. The *Blower/Flare Station Routine Maintenance Schedule* is included in Appendix C.

Operation

Trained personnel operate the blower/flare station according to the manufacturer's operating procedures and trouble shooting techniques.

REDUNDANCY, SPARE PARTS, AND STANDBY EQUIPMENT

The blower/flare station is equipped with two blowers, each providing 100 percent system capacity. One blower will be operated (lead) and one will remain on standby. The standby blower will be operated should the lead blower be shut down due to failure or maintenance requirements. The blowers' duty status (lead or lag) are cycled to balance the wear and tear.

CRRA maintains an inventory of spare parts and supplies for use during routine maintenance as well as emergency repair of the blower/flare station and wellfield components. The inventory will include items and quantities as recommended by the component manufacturers.

CRRA can, either on its own, or through its subcontracted system operator, or by other means, provide a system of standby and redundant equipment that can be rapidly placed into service in the event of operational problems with the flare or landfill gas collection system, or in the event of another system malfunction. Standby mechanisms to be maintained by CRRA will include:

1. Portable emergency generator that can provide power in the event of a long-term power outage or other problem which affects electrical service to the blowers and flare.
2. Portable and temporary flare systems are available through landfill gas vendors. In the event that the flare is out of service for an extended length of time, CRRA would mobilize a temporary flare to the site.
3. Portable and temporary blower units, vacuum trucks and other equipment suitable for extracting gas and maintaining vacuum on the gas systems are available through local contractors and equipment rental sources to supplement on-site equipment if needed.
4. Other major equipment and supplies are available through local contractors, equipment rental facilities and local supply houses when needed.

SECTION 5

MONITORING SYSTEM REQUIREMENTS

CRRA will perform routine methane gas monitoring at the Shelton Landfill, including in on-site structures and off-site structures, and in the ground at the property boundary. Additionally, surface emissions monitoring will be performed in accordance with the conditions of NSR Air Permit No. 163/0119-0091 to ensure methane concentrations do not exceed 500 ppmv above background at any location on the landfill surface. CRRA may utilize its own staff or may direct other qualified personnel or consultants to perform this work. The New Source Review Air Permit of the enclosed flare allows Surface Emission Monitoring frequency to be reduced to annually, provided no exceedances of the applicable limit (500 ppmv) are identified in three successive monitoring events.

INSTRUMENTATION

Parameters monitored under this plan are measured with the following instruments, or equivalent:

- **Methane Gas Concentration** –Landtec GEM-2000 Infrared Landfill Gas Analyzer, Gastech Model 1939 Landfill Monitor, or an equivalent instrument. The instrument used will be capable of displaying the gas concentration as a percent of LEL and as a percent by volume (dual range). The meter will be maintained, calibrated, and operated according to the manufacturer's recommendations. The gas standard used for calibration will be a known gas mixture of 2.5 percent methane (50 percent LEL), balance air.

- **Pressure** –Landtec GEM-2000 Infrared Landfill Gas Analyzer, Dwyer analog Magnehelic gauge, Dwyer Series 475 Mark II electronic manometer, or an equivalent instrument. The instrument will be capable of measuring pressure in the range of –5.0" w.c. to +5.0" w.c. The meter used will be maintained, calibrated, and operated according to the manufacturer's recommendations.

- **Barometric Pressure** –Oakton temperature compensated aneroid barometer or equivalent instrument. The barometer used will be maintained, calibrated, and operated according to the manufacturer's recommendations.

- **Ambient Temperature** –Landtec GEM-2000 equipped with a thermocouple probe, a handheld thermometer, or equivalent instrument.

- **Surface Emissions Monitoring** – Foxboro TVA-1000B flame ionization detector or an equivalent instrument. The instrument will be maintained, calibrated and operated in accordance with manufacturer's recommendations.

ON-SITE STRUCTURE MONITORING

Table 2 lists an inventory of on-site structures at Shelton Landfill, the general use of the structure, the gas detection device installed, and the proposed monitoring schedule. Drawing No. 1 shows the locations of the on-site structures. Most of the on-site structures at the Shelton Landfill are equipped with permanently installed, continuous gas monitoring and detection devices. The devices are designed to provide 24-hour monitoring of each structure and alert personnel to the presence of methane in the building.

At a minimum, on a quarterly basis, all on-site structures are monitored for methane gas using a properly calibrated and maintained hand-held instrument, regardless of the presence of a continuous gas monitoring device. The portable instrument is calibrated using a known gas standard (2.5 percent methane by volume, balance air). The technician monitors the atmosphere of each on-site structure, both at the floor level and the ceiling level. The technician also tests areas where the entrance and/or accumulation of explosive gases would be likely. These areas include such places as utility conduit and plumbing entrances, foundation cracks and seams, sumps, pits, drains, corners, and other poorly ventilated areas.

The continuous methane sensor and monitoring equipment at each structure is inspected once each quarter by a technician. The technician observes the condition of the sensor, wiring, and appurtenant equipment and reports any problems, malfunctions, etc. to CRRA. Maintenance of the equipment as recommended by the manufacturer is also performed. All on-site permanent gas detection equipment is tested and calibrated semi-annually. Each sensor is tested according to the manufacturer's recommendations by exposing the sensor to a known gas mixture of 2.5 percent methane by volume, balance air. Monitoring systems that fail to respond to the test are repaired or replaced as soon as possible.

Results of the monthly monitoring, testing, and observation are recorded on the *On-Site Structures Monitoring Form* (see Appendix C for all forms).

OFF-SITE STRUCTURE MONITORING

Several off-site businesses immediately bordering the landfill are equipped with continuous methane monitoring sensors located in an area of each building where accumulation of migrating LFG would likely occur. Each sensor is designed to provide 24-hour monitoring of each business and alert these businesses' personnel to the presence of methane in the building. Table 3 lists an inventory of those businesses with monitoring sensors, the general nature of the business, the gas detection device installed, and the monitoring requirements. Drawing No. 1 shows the locations of the off-site businesses.

The methane sensor and monitoring equipment at each business are inspected once each month by a technician. The technician observes the condition of the sensor, wiring, and appurtenant equipment. Maintenance of the equipment as recommended by the manufacturer is also

performed. Once each quarter, each business monitoring system is tested according to the manufacturer's recommendations by exposing the sensor to a known gas mixture of 2.5 percent methane by volume, balance air. Monitoring systems that fail to respond to the test are repaired or replaced as soon as possible.

During the monthly inspection, each business is monitored for the presence of methane using a properly calibrated and maintained hand-held instrument. The portable instrument is calibrated using a known gas standard (2.5 percent methane by volume, balance air). The technician monitors the atmosphere of each structure, both at the floor level and the ceiling level. The technician also tests areas where the entrance and/or accumulation of explosive gases would be likely. These areas include such places as utility conduit and plumbing entrances, foundation cracks and seams, sumps, pits, drains, corners, and other poorly ventilated areas.

Results of the monthly monitoring, testing, and observation are recorded on the *Off-site Structure Monitoring Form* (See Appendix C for all forms).

In addition, the CRRA has installed permanent gas monitoring devices in a small number of private residences in the areas surrounding the landfill, when requested by the resident. These devices are monitored and maintained by CRRA pursuant to a separate agreement with each resident.

PROPERTY BOUNDARY MONITORING

Property boundary monitoring is accomplished using a combination of monitoring wells, some with and some without continuous sensors, and shallow bar probing.

Continuously-monitored Gas Ports

Twelve (12) perimeter monitoring ports are fitted with Bacharach Gas Sentinel continuous methane monitoring sensors. The ports are located along the western (9 ports) and northern (3 ports) property lines at approximately 200-foot intervals, between the perimeter collection system and the property line. Each sensor is hard-wired to a central alarm panel and automatic phone dialer located in the scalehouse. The system is designed to provide continuous monitoring for methane and alert personnel to the presence of methane at the perimeter of the landfill. The locations of the perimeter monitoring ports are shown on Drawing No. 1 (MW-1 through MW-12).

The perimeter monitoring port system is inspected weekly, including visual inspection of each wellhead and for any damage to the port and sensor wiring. Damage is repaired as soon as possible. As a check, each monitoring port is tested for methane using a properly calibrated and maintained instrument. The instrument is calibrated using a known gas standard (2.5 percent methane by volume, balance air).

Once each month, the infrared sensors are tested for proper operation according to the manufacturer's recommendation. This is done by exposing the sensor to a known methane gas

mixture (2.5 percent methane by volume, balance air) to assure that the sensor responds to the gas and causes an alarm to be issued by the automatic dialer. If a sensor does not respond to the test gas, the integrity of the wiring between the sensor and the central alarm panel will be confirmed. If the sensor still fails to respond after the integrity of the wiring and equipment is confirmed, it will be replaced immediately.

The results of weekly inspection and testing, and monthly sensor testing are recorded on the *Continuously-monitored Well Monitoring Form* (see Appendix C for all forms).

Other Monitoring Gas Ports

The western and northern perimeter of the landfill is also equipped with several permanently installed gas monitoring ports that are not equipped with continuous gas monitoring equipment. These ports consist of 4 ports (GP-1 through GP-4) along the western property line and 3 ports (MW-B1, B2, B3) along the western property line. Each monitoring port is tested weekly for methane (percent LEL) using a properly calibrated and maintained instrument. The gas analyzer is calibrated using a known gas standard (2.5 percent methane by volume, balance air).

Results of the weekly inspection and testing are recorded on the *Other Well Monitoring Form* (See Appendix C for all forms).

Bar Punch Survey

Once each week, the areas adjacent to the northern and western boundaries of the landfill will be surveyed for the presence of methane in the soil. Using a bar punch, or similar tool, the technician will install temporary probes every 300 feet along the western and northern boundaries, outside the property line. On the western boundary, bar punch probes will be installed and tested every 300 feet along both sides of River Road (Route 110).

To monitor soil gas, the bar punch will be driven to a depth of at least 36 inches. Soil gas will be tested in each probe using a properly calibrated and maintained instrument. The gas analyzer will be calibrated using a known gas standard (2.5 percent methane by volume, balance air). Each probe will be tested for a minimum of two minutes, or until the gas reading stabilizes.

All soil gas readings will be recorded on the *Bar Punch Monitoring Form* (see Appendix C for all forms).

LANDFILL SURFACE MAINTENANCE AND MONITORING

The landfill surface (e.g., grass, cover material) is maintained as required to assure effective LFG collection to reduce odors and to minimize the venting of LFG at the landfill surface.

Monitoring of the landfill surface methane concentrations will be performed to demonstrate that methane concentrations do not exceed 500 ppmv above background concentrations. The surface emissions monitoring will be performed in accordance with the provisions of 40 CFR Part

60.755(c). If there are no monitored exceedances for 3 consecutive monitoring periods, the quarterly monitoring can be changed to an annual schedule. If there is an exceedance during an annual monitoring event, the location of the exceedance shall be remediated and monitored in accordance with 40 CFR Part 60.755(c)(4).

SECTION 6

RECORD KEEPING AND REPORTING

CRRA will provide any and all monitoring data to the CTDEP upon request. CRRA will notify the CT DEP immediately if any property line monitoring results exceed the regulatory limits. CRRA will notify the CTDEP and City of Shelton immediately, if any off-site monitoring results exceed the regulatory limits.

A central file of monthly reports is maintained on-site. All monitoring data and maintenance records recorded in the monthly reports and are collected on an on-going basis. Included in the monthly reports is a record of all monthly criteria pollutant emissions calculations. These records are available for review by CTDEP and City of Shelton personnel at all times and will include historical data for up to 5 years.

An annual report will be submitted to the CTDEP Compliance Assurance and Coordination Unit of the Bureau of Air Management. The annual report will document all exceedances of operational conditions required to be monitored by Part 1, Item C of the permit (see Appendix D). The report will also include details of any remedial action taken as a result of the exceedances.

SECTION 7

CONTINGENCY PLAN

Contingency measures will be implemented if methane is detected above regulatory limits within on- or off-site structures, or in the ground at the property boundary. Contingency measures will be implemented for other reasons as well, as noted below.

ON- AND OFF-SITE STRUCTURES

If a continuous monitoring device in an offsite structure is triggered due to the presence of methane in excess of 25 percent LEL and an alarm sounds, the occupant of the structure must notify both CRRA and the City emergency personnel (CRRA has instructed occupants to do this). If, during a routine check as described in Section 5, CRRA's technician detects methane above the regulatory limit with a hand-held instrument, the technician will notify City emergency personnel and CRRA. CRRA has provided hand-held meters and ventilation equipment to the City so that the City can confirm the alarm and ventilate the structure, if necessary. The City will notify CRRA in the event that City personnel respond to any reported gas detection event.

Habitable on-site structures at the Shelton Landfill include Building 866, the Vehicle Maintenance Garage, the Recycling Trailer, the Town Recycling Center, the Scale House Trailer, the Vehicle Wheel Wash, the Restroom North, the Restroom South, the Leachate System Control Room, the Leachate System Treatment Room, and the Gas-to-Energy Facility. These structures will be evacuated if methane is detected at levels equal to or exceeding 25% LEL.

Non-habitable on-site structures at the Shelton Landfill include the Scale Pit North, the Scale Pit South, the Pump Station, the Southeast Leachate Lift Station, the Dog House, the Southeast Control Vault, the Northeast Leachate Lift Station and the Northeast Control Vault. These structures will be ventilated and monitored if methane is detected at levels equal to or exceeding 25% LEL.

City emergency personnel will direct evacuation of the structure, if necessary. Re-entry into the affected structure will not be permitted, except by emergency response personnel, until safe conditions are restored, as determined by City emergency personnel.

CRRA will mobilize personnel and equipment to evaluate and monitor the situation. Based on monitoring results and evaluation of potential sources and causes for the gas detection, CRRA will consider mitigative measures including, but not limited to, the following:

- Increased LFG extraction from the perimeter and central collection systems.
- Subsurface soil ventilation.
- Installation of cut-off trenches.

- Installation of extraction wells.

PROPERTY BOUNDARY

Twelve (12) of the perimeter gas monitoring ports are equipped with a continuous methane sensor, connected to an automatic dialer system. The dialer system will be activated upon detection of the presence of methane in the gas port above 75 percent LEL. Upon notification of an alarm condition at the perimeter, CRRA will respond by dispatching a technician to the landfill within 2 hours.

The technician will confirm the presence of LFG in the monitoring port utilizing portable gas monitoring equipment (GEM-2000 or equivalent). Upon confirmation of the presence of methane in the gas port, gas ports on either side of the affected gas port(s) will also be monitored for the presence of methane. Based on the results of this monitoring, additional gas monitoring will be conducted through the use of a bar punch to obtain soil gas readings in the vicinity of the affected ports. The perimeter extraction wells in the vicinity of the affected ports will be monitored and adjusted to increase the vacuum and gas extraction flow rate to control the elevated levels of LFG.

The perimeter gas monitoring port and the collection wells adjusted as a result of the detection of LFG migration will be monitored daily until the migration is controlled.

Similarly, if methane is detected in the soil, in any other monitoring port, or any bar punch probe above 75 percent LEL, additional bar punch probes will be installed and tested as needed to determine the extent of the elevated LFG levels. The perimeter extraction well(s) nearest the indicating bar punch probe(s) will be monitored and adjusted to increase the vacuum and gas extraction flow rate to control the LFG. The indicating bar punch probes and the perimeter collection wells will be monitored daily until the LFG migration is controlled.

In instances where methane is detected in perimeter gas monitoring ports at elevated levels (above 75% LEL) and/or gas levels in soil (bar-hole) testing exceed 75% LEL, CRRA will take immediate action to mitigate the elevated LFG levels and return the levels to below 75% LEL.

If methane is detected in any monitoring port or bar punch above 100 percent LEL, the perimeter collection well(s) nearest the indicating bar punch probe(s) will be monitored and adjusted to increase the vacuum and gas extraction flow rate to control the LFG migration. CRRA will also mobilize additional personnel and equipment to monitor the situation. Based on monitoring results, CRRA will consider additional mitigative measures including, but not limited to, the following:

- Increased LFG extraction from the perimeter and central collection systems.
- Subsurface soil ventilation.
- Installation of cut-off trenches.

- Installation of extraction wells.

If methane is detected in perimeter monitoring ports above 100% LEL, CRRA will provide DEP immediate, verbal notification, written notification within seven days and a written remediation plan within 60 days.

BLOWER/FLARE STATION

The Blower/Flare station is equipped with a system failure alarm and an automatic dialer system. In the event that the flare station experiences an outage due to a power failure, a blower failure, interrupted gas flow, or a flare outage, the auto dialer will automatically dial CRRA and the system operator to notify of the outage. Upon notification of an operating problem at the blower/flare station, CRRA will respond by dispatching qualified operating personnel to the landfill within 2 hours. CRRA will make repairs to the blower/flare station and/or gas collection system to return the station to operation as soon as possible. If the needed repairs necessitate the blower/flare station to be non-operational for an extended period of time, CRRA will mobilize standby equipment as needed to assure continued operation of the perimeter system and to provide gas collection and destruction. City of Shelton personnel will be immediately notified in the event that the flare station is to be non-operational for an extended period of time due to equipment problems.

If the failure involves a flare outage that cannot be corrected within 4 hours, the emergency vent will be utilized. In this scenario, the blower will operate and push LFG through the emergency vent. A valve will be closed to isolate the flare from the rest of the system and to allow repairs to be made. City of Shelton personnel will be notified in the event that the bypass vent is utilized for periods in the excess of 4 hours. DEP notification will be made based on the requirements found in RCSA 22a-174-7 **Air pollution control equipment and monitoring equipment operation**.

VEHICULAR OR OTHER DAMAGE TO THE WEST PERIMETER HEADER

The west perimeter header will operate under vacuum at all times. If the header is damaged, air will be drawn into the system initially. Depending on the location and severity of the damage, this air may cause the flare flame to go out. If flame is lost, the blower will shut down, which may cause positive pressure to build in the header.

City emergency personnel should notify CRRA and its operator immediately if the header is damaged due to vehicular accident or otherwise. As an immediate response, the City should "cap" the damaged header section with duct tape or other means. Methane monitoring devices should be used to assess levels of methane in the ambient air in the immediate vicinity of the damage.

ON-SITE FIRE

The locations of the on-site control systems, including flare systems, are shown on the site plan along with locations of on-site and off-site hydrants. System valve locations are shown as well. In case of fire at one of the flare systems, City emergency personnel should notify CRRA and its operator immediately. System valves should be closed to the extent possible, depending on the location and severity of the fire.

REMEDIATION PLAN

In accordance with regulatory requirements, a remediation plan will be developed within 60 days of detection of methane gas exceeding regulatory levels. The plan will provide an evaluation of the nature and extent of the LFG migration, and describe proposed remedies. The plan will be submitted to the CTDEP and the City of Shelton.

Table 2
INVENTORY OF ON-SITE STRUCTURES

Building/Structure	General Use	Monitoring Device Installed	Monitoring Requirement
Bldg. 866 – Office Bldg.	Office	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Maintenance Garage	Vehicle Maintenance	none	Quarterly check with hand-held meter.
Scalehouse Trailer	Office	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Scale pit north	Landfill Scale (below grade)	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Town Recycling Center	Recycling Transfer Station	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Vehicle Wheel Wash Facility	Vehicle Wheel Washing	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Leachate Treatment Facility	Leachate Treatment	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Gas-to-Energy Facility	Equipment Housing	none	Quarterly check with hand-held meter.

Table 2 (continued)
INVENTORY OF ON-SITE STRUCTURES

Building/Structure	General Use	Monitoring Device Installed	Monitoring Requirement
Recycling Trailer	Office	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Treatment Facility – North Restroom	Restroom	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter..
Treatment Facility- South Restroom	Restroom	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Scale pit south	Landfill Scale (below grade)	none	Quarterly check with hand-held meter
Leachate Treatment – Control Room	Recycling Transfer Station	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Dog House	Vehicle Wheel Washing	none	Quarterly check with hand-held meter

Table 2 (continued)
INVENTORY OF ON-SITE STRUCTURES

Building/Structure	General Use	Monitoring Device Installed	Monitoring Requirement
Leachate Concrete Vault (SE Expansion Area)	Leachate Control Housing	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Leachate Concrete Vault (NE Expansion Area)	Leachate Control Housing	Bacharach Gas Sentinel	Continuous plus quarterly confirmation with hand-held meter.
Leachate Lift Station (NE Expansion Area)	Leachate Pumping Manhole	none	Quarterly confirmation with hand-held meter.
Pump Station (west side of leachate treatment facility)	Leachate Pumping Station	none	Quarterly confirmation with hand-held meter.
Leachate Lift Station (NE Side of Leachate Treatment Facility)	Leachate Lift Station	none	Quarterly confirmation with hand-held meter.

Table 3
INVENTORY OF OFF-SITE STRUCTURES

Building/Structure	General Use	Monitoring Device Installed	Monitoring Requirement
Cumberland Farms 825 River Road	Gas Station/Convenience Store	Bacharach Gas Sentinel	Continuous plus monthly confirmation with hand-held meter.
On The Rocks Spirits Shop 813-821 River Road	Liquor Store	Bacharach Gas Sentinel (1 sensor)	Continuous plus monthly confirmation with hand-held meter.
Subway 813-821 River Road	Restaurant	Bacharach Gas Sentinel	Continuous plus monthly confirmation with hand-held meter.
Pro-Lube Auto Service/Car Wash 811 River Road	Vehicle Service/Car Wash	Bacharach Gas Sentinel (2 sensors)	Continuous plus monthly confirmation with hand-held meter.
Family Golf Center 784 River Road	Driving Range/Retail	Bacharach Gas Sentinel	Continuous plus monthly confirmation with hand-held meter.
Centrix, Inc. 770 River Road	Manufacturing	Bacharach Gas Sentinel	Continuous plus monthly confirmation with hand-held meter.

RESTAURANT
PINE ROCK DELI
MORGAN CARPET
MOHAWK DRIVE
SPIRIT SHOP
PROPERTY LINE
LANDFILL ENTRANCE
SENECA TRAIL
LONG HILL AVE
GAS CANOPY
CUMBERLAND FARMS STORE
SUBWAY SHOP
CAR WASH
PERIMETER GAS COLLECTION (ABOVE GROUND)
BELOW GRADE CONDENSATE TRAP AND STORAGE TANK
CENTRIX
RIVER ROAD (CONN. ROUTE 110)
EXISTING MONITORING WELLS (TYP.)
POLE 6
POLE 6580
POLE 6578
POLE 1461
POLE 1460
POLE 1459
POLE 1458
FAMILY GOLF CENTER
STRATFORD
SHELTON
SHELTON LANDFILL
AREA=102 ACRES +/-
HDPE GAS HEADER
CONDENSATE MOISTURE TRAP AND SUMP
PERMANENT BLOWER AND ENCLOSED FLARE STATION
CONDENSATE STORAGE TANKS
TEMPORARY SOUTH BLOWER AND CANDLE FLARE STATION AND CONDENSATE MOISTURE TRAP
TEMPORARY NORTH BLOWER AND CANDLE FLARE STATION AND CONDENSATE MOISTURE TRAP
BELOW GRADE CONDENSATE STORAGE TANK
METAL HYDROXIDE CELL (CLOSED)
EXISTING LFG TRENCH
S.E. ASH AREA
N.E. ASH AREA
SEDIMENTATION BASIN #001
SEDIMENTATION BASIN #002
SEDIMENTATION BASIN #004
SEDIMENTATION BASIN #005
LEACHATE FORCE MAIN APPROXIMATE LOCATION
LEACHATE LIFT STATION
POND
CONTROL VAULT
PROPERTY LINE = HIGH WATER MARK
DSN 005
HOUSATONIC RIVER
TIE-OFF POST

LEGEND
- EDGE OF ROAD
- FENCE
- EXISTING PERIMETER WELLS
- CENTRAL COLLECTION WELLS
- GW23 ABANDONED WELLS
- MW-12 / MW-BR5 PERIMETER MONITORING SYSTEM
- EXISTING STRUCTURES
- EXISTING HEADER
- V-3 VALVE
- PROPERTY LINE (HIGH WATER MARK)
- PROPERTY LINE

NOTES:
1. BASEMAP PROVIDED BY FUSS & O'NEILL "TOPOGRAPHIC SURVEY" DATED AUGUST 1998.
2. EXISTING CENTRAL WELLS AND PIPING FROM ANCHOR (NOT RECORD DRAWINGS).
3. ABANDONED WELLS ARE EXISTING CASINGS WITH CAPS PER IT GROUP REPORT "MONTHLY STATUS REPORT - DECEMBER 2000" DATED JANUARY 9, 2001.
4. ALL SIDESLOPE PERIMETER AND CENTRAL WELLS HAVE FLOW CONTROL VALVES.
5. WELLS GW-24, G-53 AND GW-54 DO NOT EXIST PER IT GROUP REPORT "MONTHLY STATUS REPORT - DECEMBER 2000" DATED JANUARY 9, 2001.
6. WELLS GW-56 THROUGH GW-65 AND MONITORING WELLS MW-1 THROUGH MW-12 FROM "GENERAL LOCATION SURVEY OF THE GAS EXTRACTION SYSTEM" BY CONKLIN & SOROKA, INC. DATED 9/12/00
7. BASED ON SCS ENGINEERS DRAWING ENTITLED "SITE PLAN" REVISED 2/21/01, EXISTING CONDITIONS

REV.	DATE	DESCRIPTION	CK. BY
1	2/18/02	UPDATED GCCS-12/01 STATUS REPORT	GPM

SHEET TITLE: SITE PLAN
PROJECT TITLE: SHELTON LANDFILL

CLIENT: CONNECTICUT RESOURCES RECOVERY AUTHORITY
100 CONSTITUTION PLAZA
HARTFORD, CT 06103

SCS ENGINEERS, PC
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
2 CRISFIELD AVENUE WEST NYACK, NY 10994
PH. (914) 353-2727 FAX NO. (914) 353-2731

PROJ. NO. 1399017.05
DSN. BY: BCL
DRN. BY: BCL
CHK. BY: GPM
APP. BY:
D/A R/W BY:

CADD FILE: BASEMAP
DATE: 2/16/2000
SCALE: 1"=100'

DATE: 03/04/2002 03:23:32PM

APPENDIX A

BACKGROUND GEOLOGIC AND HYDROGEOLOGIC DATA

ACCESS GATE

OLD OFFICE

PAVED ENTRY ROAD

PAVED EXIT ROAD

RIVER ROAD — ROUTE 110

OFFICE

FARMILL RIVER

WETLANDS

CITIZEN'S DROP-OFF AREA

PROPOSED O & G EXPANSION AREA

HOUSATONIC RIVER LAGOON

HOUSATONIC RIVER

N/F KRUPP PROPERTY

AREA 1

AREA 2

CLOSED HAZARDOUS WASTE DISPOSAL AREA

PROPOSED NORTHEAST EXPANSION AREA

SW-1

SW-2

LEGEND

- LIMIT OF SURFACE WATER
- APPROXIMATE PROPERTY LINE
- 120 FINAL SURFACE CONTOURS, MSL
- SURFACE WATER SAMPLING POINT
- BEDROCK OUTCROP
- BR-1 GROUNDWATER MONITOR WELL
- GP-2 GAS PORT
- D-1 DIOXIN WELL
- PORTION OF WETLANDS INUNDATED TWICE DAILY

NOTE:

TOPOGRAPHIC DATA TAKEN FROM AERIAL PHOTOGRAPHY FLOWN AUGUST 6, 1988.

NOT RELEASED FOR CONSTRUCTION

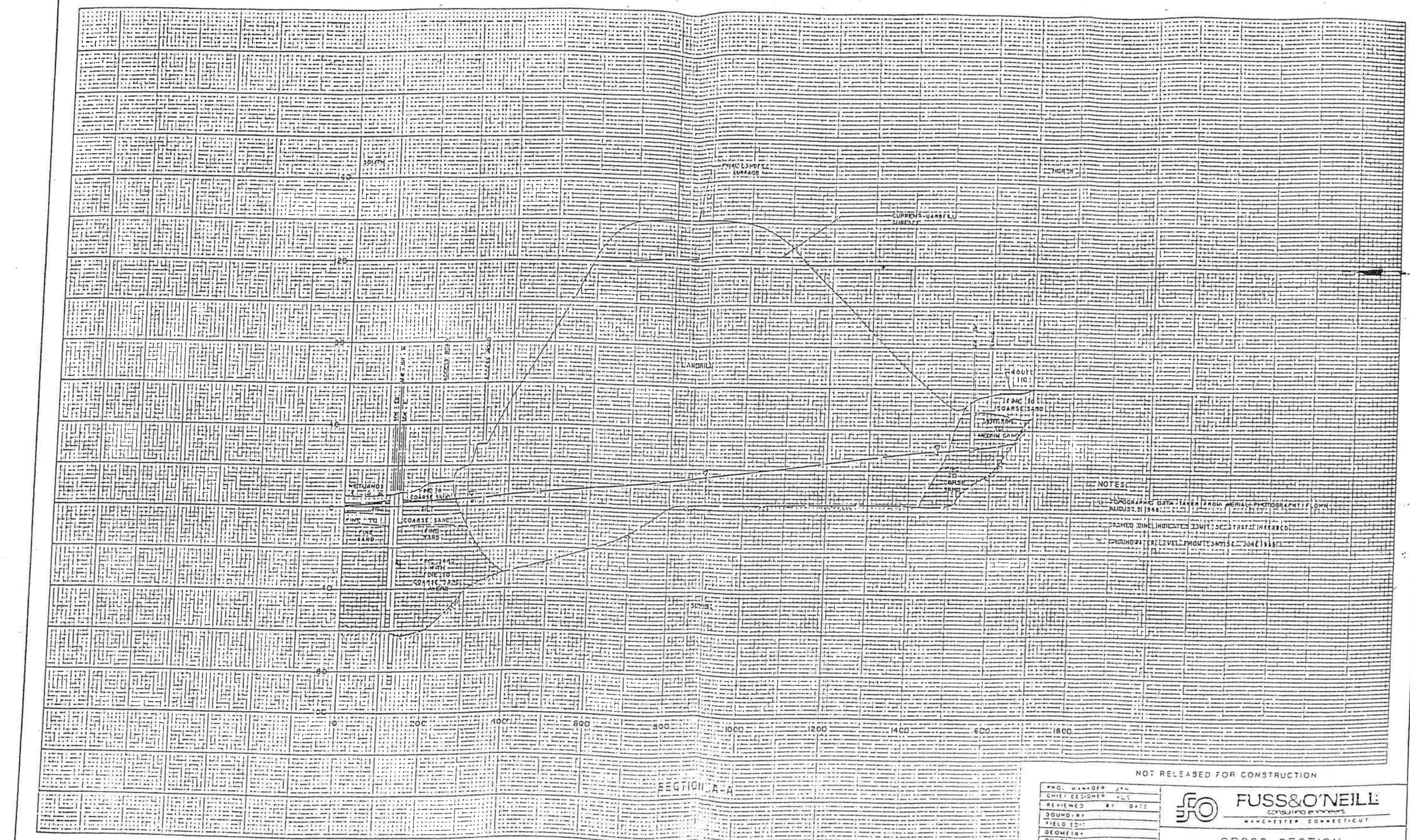
PROJ. MANAGER: JPM		
CHIEF DESIGNER: VLG		
REVIEWED	BY	DATE
BOUNDARY		
FIELD EDIT		
GEOMETRY		
DRAFTING		
REVISION DATE:		
SCALE HOR. 1 IN. = 100 FT.		
VER. IN. = FT.		

FUSS&O'NEILL consulting engineers
MANCHESTER, CONNECTICUT

SITE PLAN
SHELTON LANDFILL

866 RIVER ROAD (ROUTE 110) SHELTON, CONNECTICUT

DATE	FLD. BK.	PROJECT	PLATE NO.
JUNE 1989		89-248	2-1



NOT RELEASED FOR CONSTRUCTION

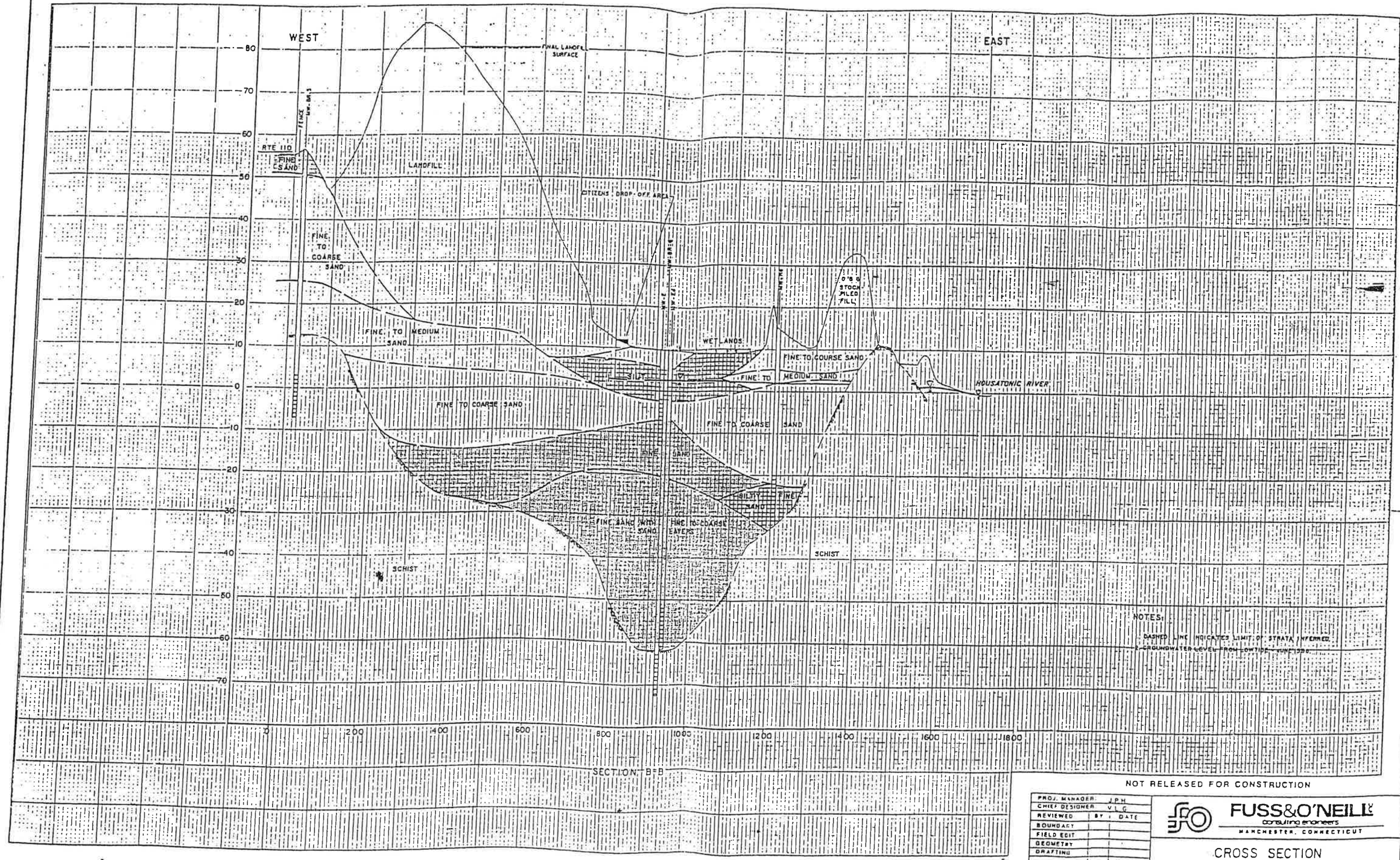
PROJ. MANAGER	
CHIEF DESIGNER	
REVIEWED BY	DATE
DRAWN BY	
FIELD CHK	
GEOMETRY	
DRAFTING	
REVISION DATE	
3	
2	
1	
SCALE	HOR 1 IN = 100 FT VER 1 IN = 20 FT
DATE	JAN 1989
FILE BY	
PROJECT	89-745

FUSS&O'NEILL
CONSULTING ENGINEERS
MANCHESTER CONNECTICUT

CROSS SECTION
SHELTON LANDFILL

965 RIVER ROAD (RTE 110) SHELTON, CONNECTICUT

PLATE 110 4



SECTION B-B

NOTES:
1. DASHED LINE INDICATES LIMIT OF STRATA INFERRED.
2. GROUNDWATER LEVEL FROM LOW TIDE JUNE 1986.

NOT RELEASED FOR CONSTRUCTION

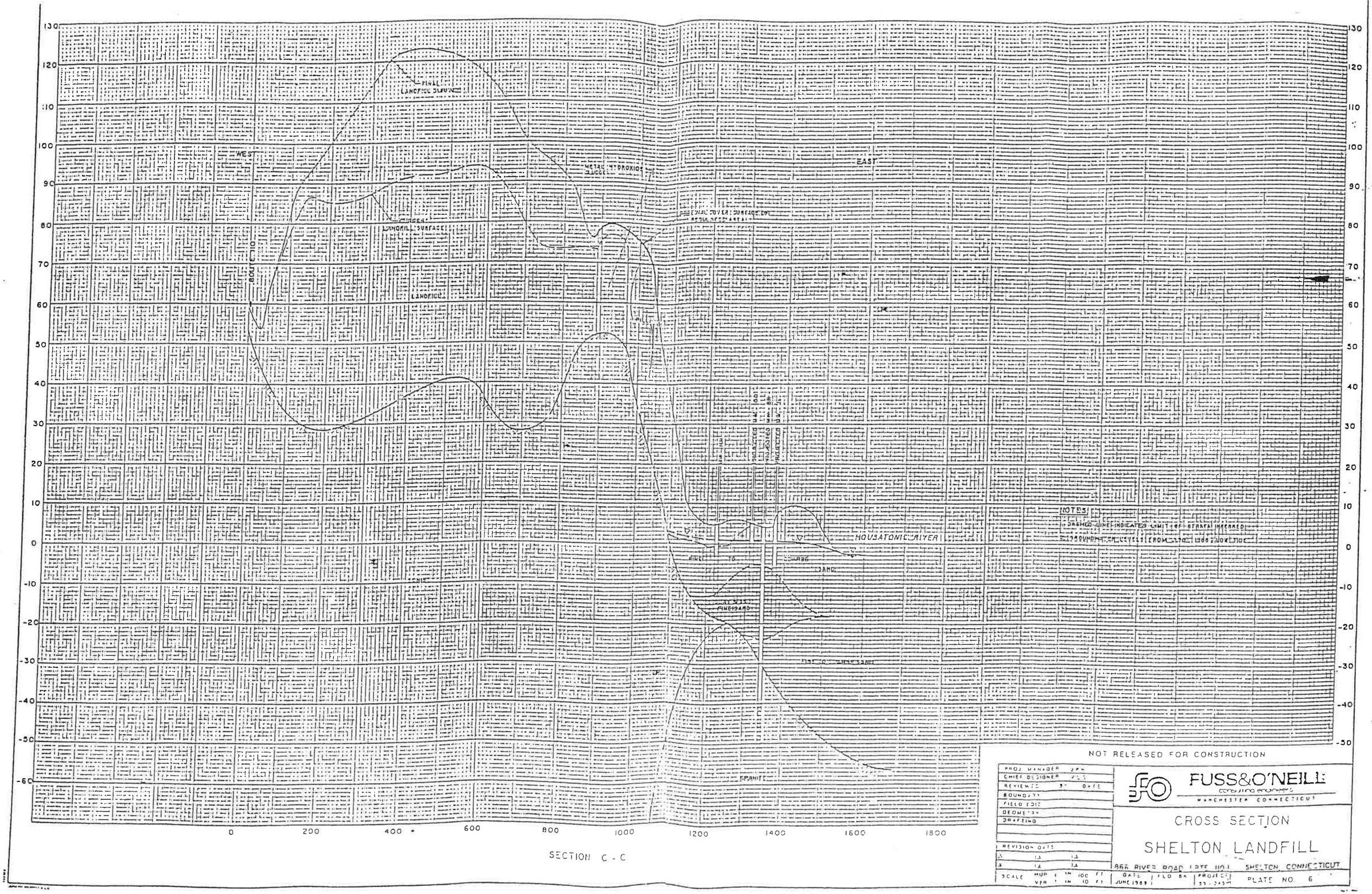
PROJ. MANAGER	JPH		
CHIEF DESIGNER	VLG		
REVIEWED	BY	DATE	
BOUNDARY			
FIELD EDIT			
GEOMETRY			
DRAFTING			
REVISION DATE			
3			
2			
1			
SCALE: HOR 1 IN = 100 FT. VER 1 IN = 10 FT.			

FUSS&O'NEILL
consulting engineers
MANCHESTER, CONNECTICUT

CROSS SECTION
SHELTON LANDFILL

866 RIVER ROAD (RTE 110) SHELTON, CONNECTICUT

DATE	FLD BK.	PROJECT	PLATE NO.
JUNE 1989		89-243	5



SECTION C - C

NOT RELEASED FOR CONSTRUCTION

PROJ MANAGER	JPM	
CHIEF DESIGNER	JPM	
REVIEWED	JPM	DATE
BOUNDARY		
FIELD EDIT		
GEOMETRY		
DRAFTING		
REVISION DATE		
1.	JA	JA
2.	JA	JA

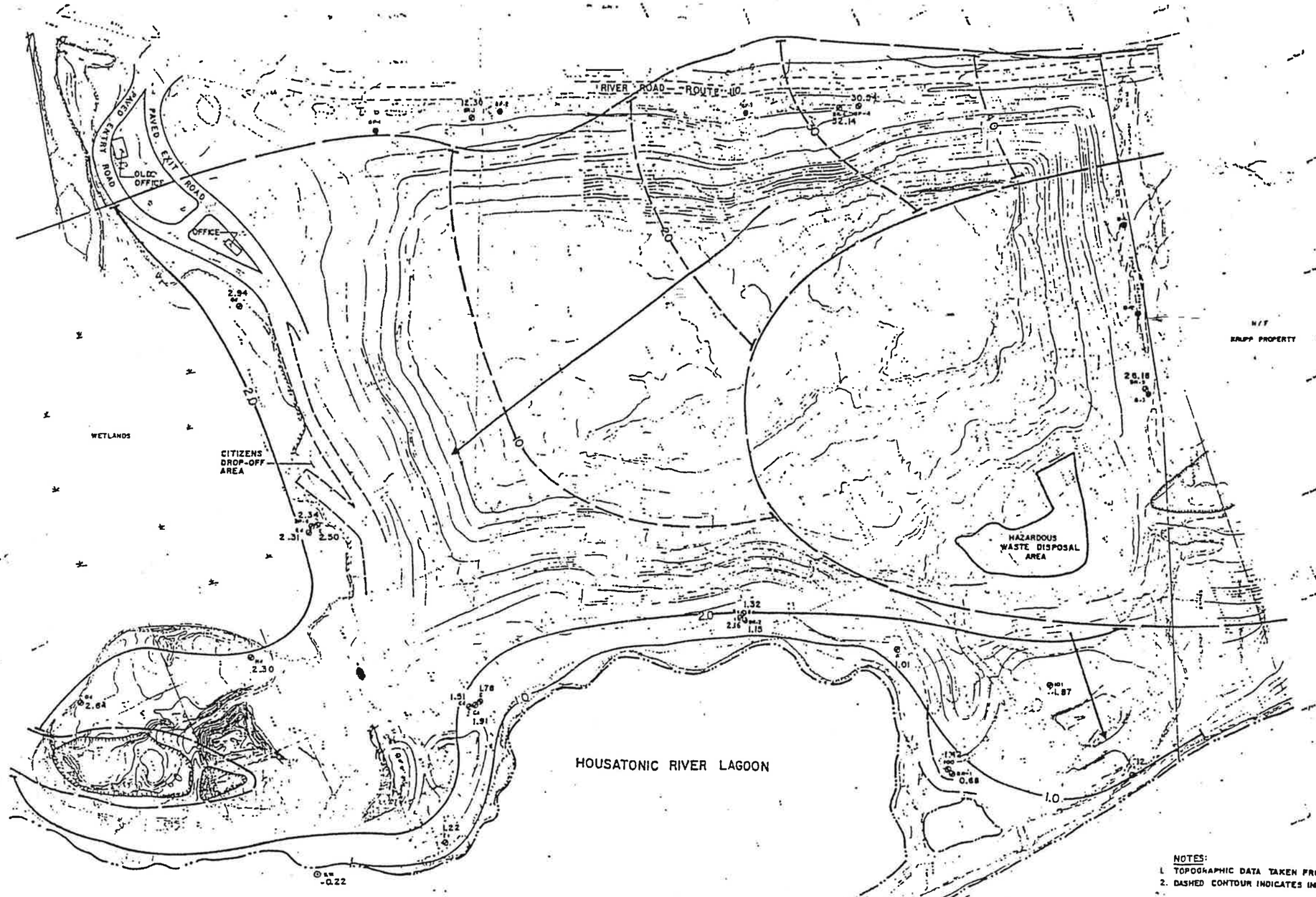
FUSS&O'NEILL
consulting engineers
MANCHESTER CONNECTICUT

CROSS SECTION
SHELTON LANDFILL

868 RIVER ROAD (RTE 110) SHELTON, CONNECTICUT

SCALE	HOR 1 IN 100 FT VER 1 IN 10 FT	DATE JUNE 1989	FILE BA	PROJECT 33-243

PLATE NO. 6



LEGEND

- LIMIT OF SURFACE WATER
- APPROXIMATE PROPERTY LINE
- GROUNDWATER MONITOR WELL
- GAS PORTS
- SURFACE WATER ELEVATION REFER POINT
- 10 GROUNDWATER ELEVATION CONTOUR, MSL
- LIMIT OF UNCONSOLIDATED GROUNDWATER FLOW
- BEDROCK OUTCROP
- DIRECTION OF GROUNDWATER FLOW

NOTES:

1. TOPOGRAPHIC DATA TAKEN FROM AERIAL PHOTOGRAPHY FLOWN AUGUST 1, 1987.
2. DASHED CONTOUR INDICATES INFERRED GROUNDWATER CONTOUR.

NOT RELEASED FOR CONSTRUCTION

RECORD MYLAR 11/26/91

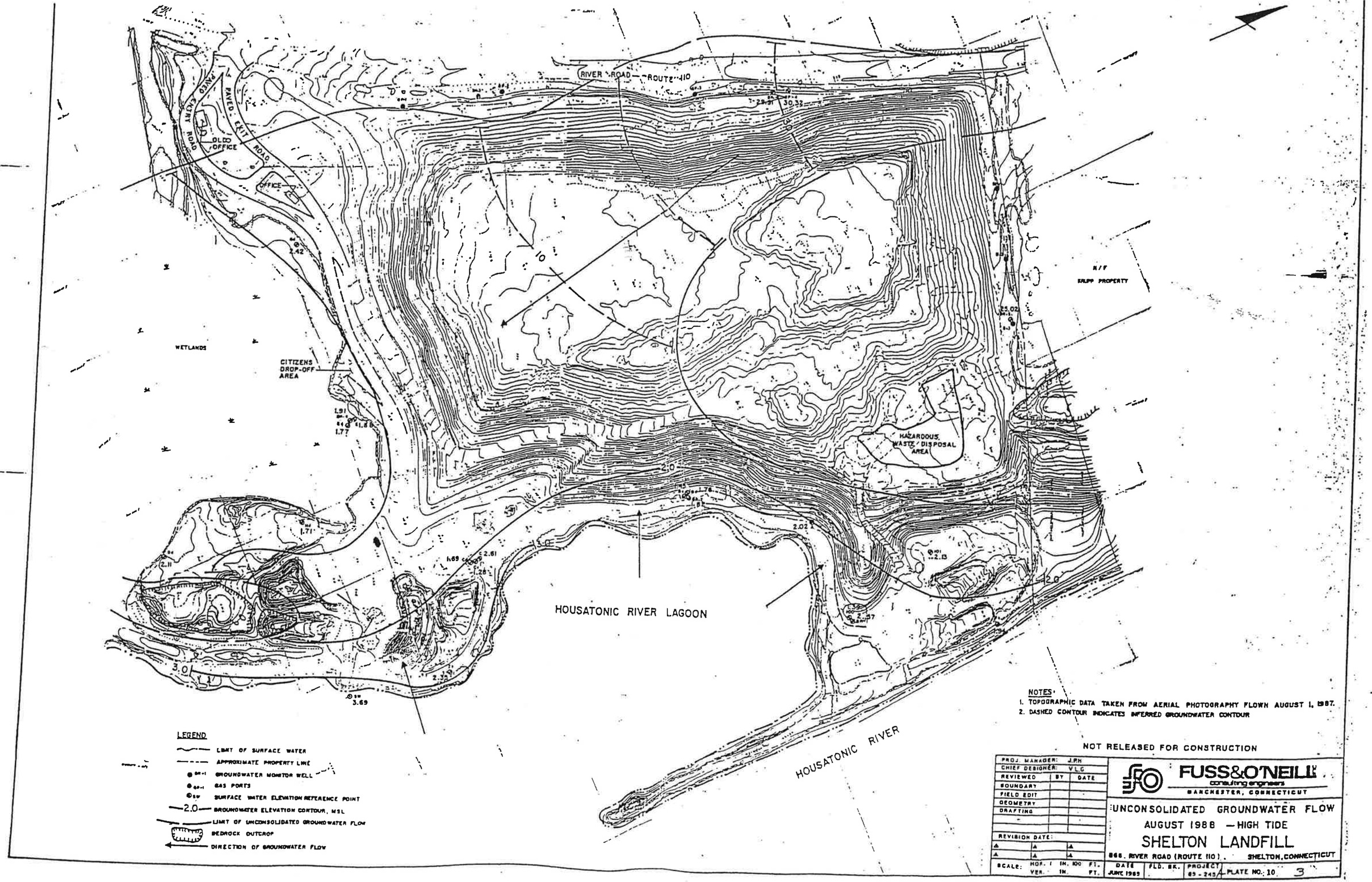
PROJ. MANAGER:	J.P.H	
CHIEF DESIGNER:	V.L.G	
REVIEWED	BY	DATE
BOUNDARY		
FIELD EDIT		
GEOMETRY		
DRAFTING		
REVISION DATE		
SCALE: HOR. 1 IN 100 FT. VER IN. FT.		

FUSS&O'NEILL
consulting engineers
MANCHESTER, CONNECTICUT

UNCONSOLIDATED GROUNDWATER FLOW
JUNE 1988—LOW TIDE
SHELTON LANDFILL

866, RIVER ROAD (ROUTE 110) SHELTON, CONNECTICUT

DATE	FLD. BK.	PROJECT	PLATE NO.
JUNE 1988		89-248	2



NOTES:
1. TOPOGRAPHIC DATA TAKEN FROM AERIAL PHOTOGRAPHY FLOWN AUGUST 1, 1987.
2. DASHED CONTOUR INDICATES INFERRED GROUNDWATER CONTOUR

NOT RELEASED FOR CONSTRUCTION

PROJ. MANAGER:	J.P.H	
CHIEF DESIGNER:	V.L.G	
REVIEWED	BY	DATE
BOUNDARY		
FIELD EDIT		
GEOMETRY		
DRAFTING		
REVISION DATE:		

SCALE: HOR. 1 IN. 100 FT. VER. IN. FT.

FUSS&O'NEILL consulting engineers
MANCHESTER, CONNECTICUT

UNCONSOLIDATED GROUNDWATER FLOW
AUGUST 1988 — HIGH TIDE
SHELTON LANDFILL

866 RIVER ROAD (ROUTE 110) . SHELTON, CONNECTICUT

DATE JUNE 1989 | FLD. BK. | PROJECT 89-245 | PLATE NO. 10 3

TABLE NO. II-1

SHELTON LANDFILL
GROUNDWATER ASSESSMENT

Water Level Survey Results

(all elevations reported at MSL)

Monitor Well	Depth to Water From Top of Casing June 1988 Low Tide	Depth to Water From Top of Casing July 1988 High Tide	Depth to Water From Top of Casing August 1988 High Tide	Surveyed Top of Casing	Water Table Elevation June 1988 Low Tide	Water Table Elevation July 1988 High Tide	Water Table Elevation August 1988 High Tide
Overburden Wells							
MW-A	10.85	---	9.84	11.86	1.01	---	2.02
MW-Bs	9.11	8.58	9.82	11.27	2.16	2.69	1.45
MW-Bd	10.28	8.53	9.84	11.60	1.32	3.07	1.76
MW-Cs	5.61	4.93	6.24	7.52	1.91	2.59	1.28
MW-C	6.18	5.15	5.35	7.96	1.78	2.81	2.61
MW-Cd	5.90	4.44	5.72	7.41	1.51	2.97	1.69
MW-Dd	17.73	17.55	18.26	20.37	2.64	2.82	2.11
MW-E	7.50	7.58	8.12	10.00	2.50	2.42	1.88
MW-Ed	6.74	7.03	7.28	9.05	2.31	2.02	1.77
MW-Gd	11.56	11.45	12.08	14.50	2.94	3.05	2.42
MW-Hd	13.99	14.05	14.58	16.29	2.30	2.24	1.71
MW-Is	7.68	4.32	6.57	8.90	1.22	4.58	2.33
MW-Js	4.95	2.78	4.13	6.07	1.12	3.29	1.94
MW-100	4.54	3.23	4.57	5.96	1.42	2.73	1.39
MW-GP-4	26.03	26.38	26.25	56.57	30.54	30.19	30.32
MW-101	5.09	2.38	3.83	5.96	0.87	3.58	2.13
Bedrock Wells							
MW-BR-1	3.81	1.03	1.92	4.49	0.68	3.46	2.57
MW-BR-2	9.06	7.03	8.39	10.21	1.15	3.18	1.82
MW-BR-3	45.96	48.29	47.47	58.26	12.30	9.97	10.79
MW-BR-4	23.04	25.83	25.27	55.18	32.14	29.35	29.91
MW-BR-5	42.17	43.80	43.96	68.98	26.81	25.18	25.02
MW-BR-6	6.73	6.48	7.16	9.07	2.34	2.59	1.91
Dock	8.89	---	4.98	8.67	-0.22	---	3.69

NOTE: --- = Measuring Point Inaccessible

TABLE NO. I-1

SHELTON LANDFILL
DISCHARGE PERMIT APPLICATION
JULY 1989

Groundwater Monitor Well Network
Pertinent Elevations

(all elevations reported as MSL)

Well Identificaiton	Surveyed Top of Casing Elevation	Ground Surface Elevation	Well Bottom Elevation	Top of Screen Elevation	Groundwater Elevation*	Top of Bedrock Elevation
MW-A	11.80	9.40	-16.60	-6.60	-0.35	-17.20
MW-Bs	11.27	9.32	-5.68	4.32	5.32	-18.38
MW-Bd	11.60	9.32	-15.33	-5.33	-0.68	-18.38
MW-BR-2	10.21	8.62	-38.38	-28.38	5.12	-18.38
MW-Cs	7.52	6.22	-18.78	-3.78	1.22	-64.08
MW-C	7.96	6.02	-33.98	-27.98	1.52	-64.08
MW-Cd	7.41	5.92	-64.08	-54.08	0.92	-64.08
MW-Dd	20.37	19.19	-19.81	-9.81	1.19	-20.81
MW-E	9.65	7.24	-17.34	-7.34	3.74	-62.46
MW-Ed	9.05	7.34	-62.66	-52.66	2.34	-62.46
MW-BR-6	9.07	7.54	-76.46	-66.46	1.94	-62.46
MW-Gd	14.50	12.89	-31.11	-21.11	4.39	-31.11
MW-Hd	16.29	14.60	-30.40	-20.40	-0.20	-30.40
MW-Is	8.90	7.33	-7.67	2.33	2.33	-7.67
MW-Js	6.07	4.53	-20.47	-5.47	1.53	-20.47
MW-100	5.96	3.80	-12.20	-2.20	1.30	-47.43
MW-BR-1	4.49	3.57	-67.43	-57.43	0.07	-47.43
MW-101	5.96	4.3	-11.45	-1.45	0.88	(-13
MW-BR-3	58.26	56.02	-6.98	3.02	13.02	13.02
MW-GP-4	56.57	54.35	22.52	42.52	33.18	3.55
MW-BR-4	55.18	53.55	-14.45	-4.45	32.55	3.55
MW-BR-5	68.98	67.05	18.05	28.05	29.55	41.05

NOTE: * = Groundwater elevations observed during monitor well installation

TABLE 3-1
Monitoring Well Completion Details/May '95 Groundwater Elevations (where available)

Well Number	Ground Elevation (feet NVGD)	Steel Casing Elevation (feet NVGD)	Well Diameter (inch)	Well Depth (feet)	Screen Length (feet)	Screen Depth (feet)	Screen Elevation (feet NVGD)	Bedrock Elevation (feet NVGD)	Screened Unit	Groundwater Elevation 5/2/95 (feet NVGD)
M	57.7	60.96	2	35.5	15	20.5-35.5	37.2-22.2	22.2	Sand and Gravel	33
L	16.7	19.59	2	22	10	12-22	4.7-(-5.3)	-5.3	Sand and Gravel	1.11
N	10.7	13.31	2	34.5	10	24.5-34.5	-13.8-(-23.8)	-23.8	Sand and Gravel	0.94
Js(NE)	4.8	6.84	2	25	15	10-25	-5.2-(-20.2)	-20.2	Sand and Gravel	0.43
Ts	3.1	6.17	2	9	5	4-9	-0.9-(-5.9)	-53.4	Sand and Gravel	1.56[A]
Td	3.6	6.65	2	57	5	52-57	-48.4-(-53.4)	-53.4	Sand and Gravel	1.4[A]
Rs	14.1	17.31	2	17	10	7-17	7.1-(-2.9)	-22.2	Sand and Gravel	1.33[A]
Rd	14.1	16.22	2	36.3	5	31.3-36.3	-17.2-(-22.2)	-22.2	Sand and Gravel	1.78[A]
BR-1	3.7	5.16	2	71	10	61-71	-57.3-(-67.3)	-47.3	Bedrock	0.1
BR-4	53.7	56.09	2	68	10	58-68	-4.3-(-14.3)	3.7	Bedrock	30.56
BR-5	67	69.62	2	49	10	39-49	28-18	41	Bedrock	28.49
BR-9	70.8	72.38	4	48	*	*	*	67	Bedrock	47.29
BR-10	64.1	66.29	2	42	10	32-42	32.1-22.1	41.6	Bedrock	31.98
BR-11	22	23.74	2	28.6	10	18.6-28.6	3.4-(-6.6)	10	Bedrock	1.74
BR-12	14.37	16.89	2	44	10	34-44	-19.63-(-29.63)	-19.63	Bedrock	0.72
BR-13	16.0	19.06	3	43	**	**	**	-6	Bedrock	1.85[A]

Notes:
The above monitoring wells were installed at ERL's direction.
"feet NVGD" = Feet above National Vertical Geodetic Datum.
* BR-9 was an open rock hole from 3-48 feet below grade, elevation 67.8 to 22.8 feet NVGD.
** BR-13 was an open rock hole from 23-43 feet below grade, elevation -7 to -27 feet NVGD.
A= Date groundwater measured was 9-13-95 (due to tidal influence, groundwater elevations are dependent upon time frame of measurement).

APPENDIX B

GAS PORT DRILLING LOGS

SOILTESTING, INC.

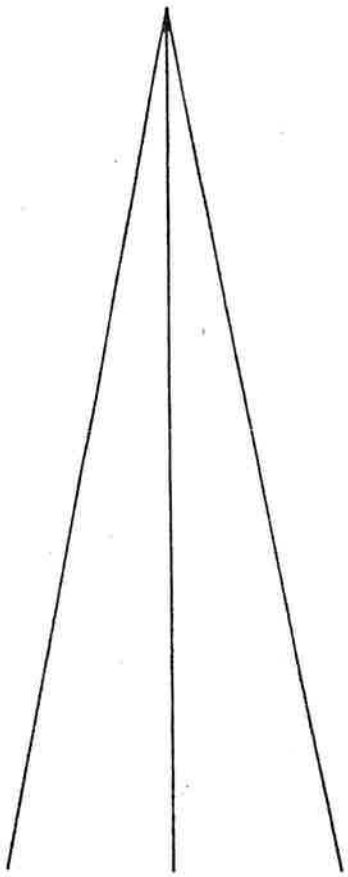
TO Organic Waste Technologies Inc. DATE January 7, 2000

ADDRESS 371 Route 17A - Tuxedo, New York 10987

SITE LOCATION Perimeter LFG Monitoring - Shelton Landfill - Route 110 - Shelton, CT

REPORT SENT TO Michael Schumaci

SAMPLES SENT TO None



140 Oxford Road
Oxford, Connecticut 06478
203-888-4531

Branch Office:
White Plains, New York 10607
914-946-4850

JOB NO. 5736

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-1
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV. BIT
GROUND WATER OBSERVATIONS AT 9' FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
										4'0"	Brn/drk-brn F-M SAND,sm F-C gravel, cobbles,lit boulders,silt (fill)
5											Brn/lt-brn F-M-C SAND & F-C GRAVEL, lit cobbles
									wet		SAME
10										10'0"	E.O.B.
15											
20											
25											
30											
35											E.O.B. 10'0"
0											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-1

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

Phone
(203) - 888-4531

Telefax
(203) - 888-6247

WHITE PLAINS, N.Y.
(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

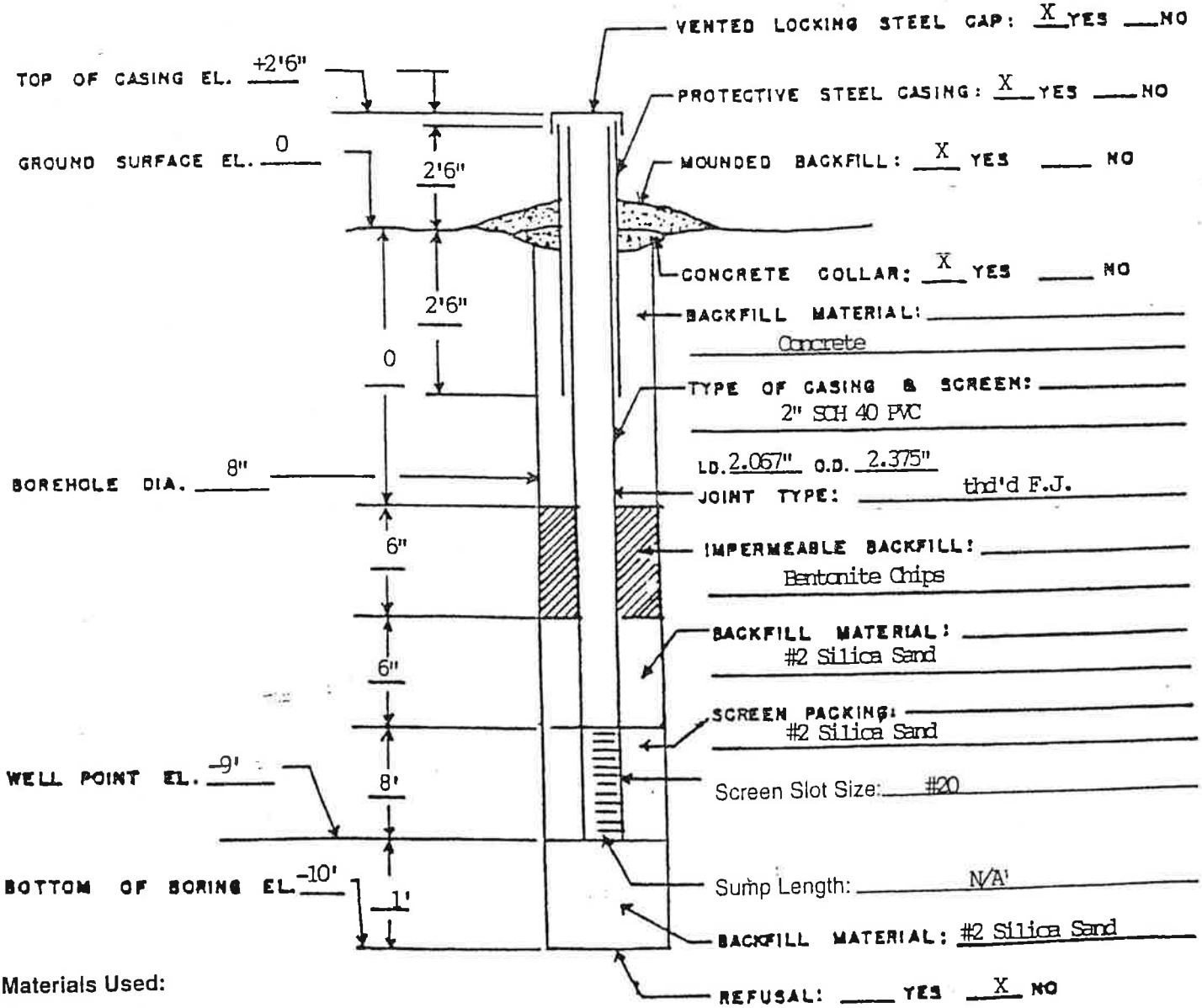
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Client: Organic Waste Technologies

Job #: E105-5736-99

MONITOR WELL # MW-1



Materials Used:

Screen	(PVC)	10'
Riser	(PVC)	5'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand	300#	
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips ½ bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O _____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-2
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
											Lt-brn F-M-C SAND & F-C GRAVEL,lit cobbles
5										5'0"	
									moist		Lt-brn/gry F-M SAND,sm F-C gravel,lit cobbles
10									moist		SAME;sm cobbles,boulders,poss. fractured decomposed rock
15										16'0"	AUGER REFUSAL E.O.B.
20											
25											
30											
35											E.O.B. 16'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-2

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

Phone
(203) - 888-4531

Telefax
(203) - 888-6247

WHITE PLAINS, N.Y.
(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

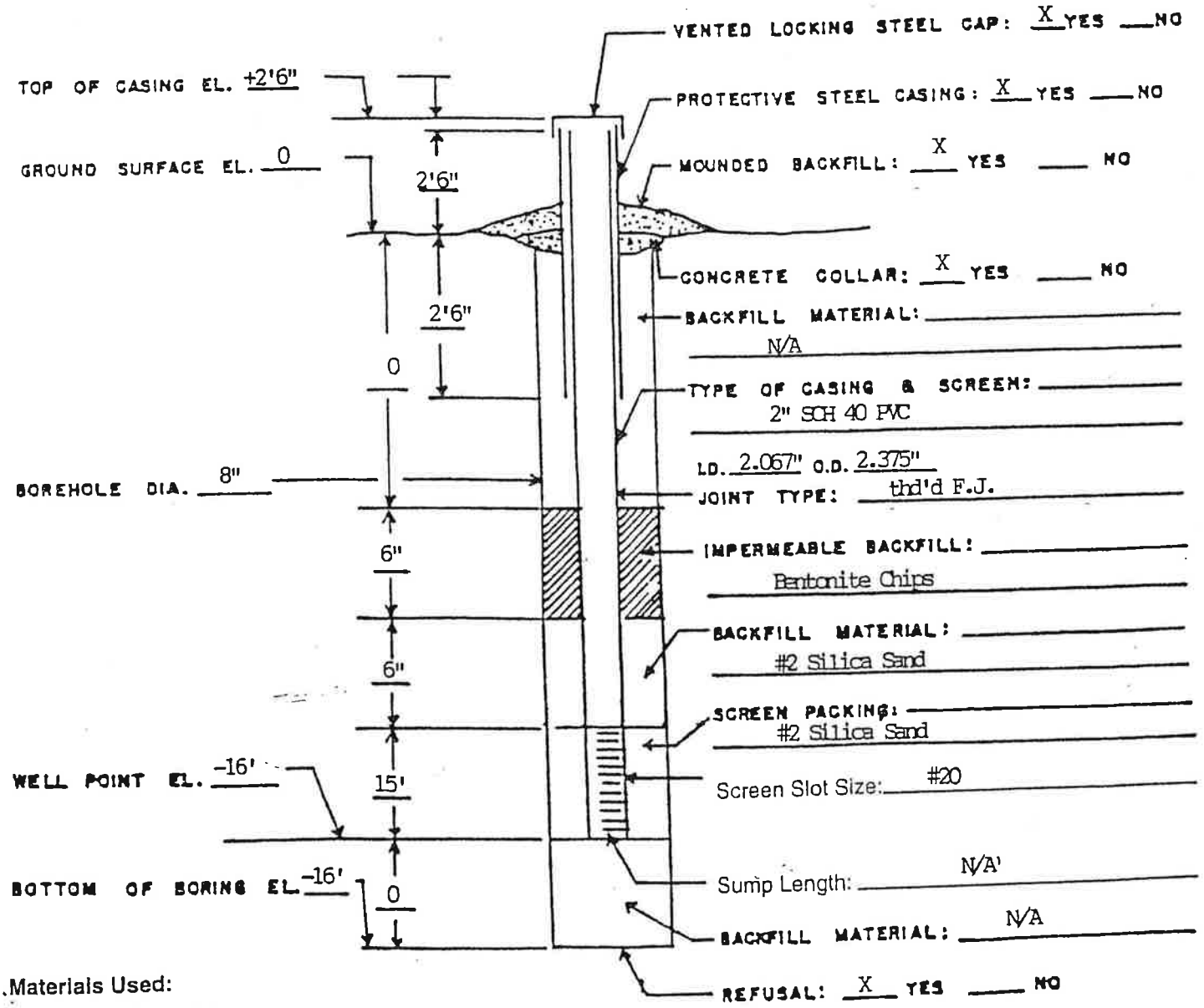
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Client: Organic Waste Technologies
Job #: E105-5736-99

MONITOR WELL # MW-2



Materials Used:

Screen	(PVC) 15'	Bentonite Pellets	Locking Exp Plug
Riser	(PVC) 5'	Bentonite Chips ½ bag	Lock
Plug	(PVC) (1)	Concrete Mix 1 bag	D/O ___"
Slipcap	(PVC)	Portland	S/U - (1)
Silica Sand	550#		
Powdered Bentonite			

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-2A
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30" BIT	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
5										7'0"	Lt-brn F-M-C SAND & F-C GRAVEL, sm cobbles
10										8'0"	DECOMPOSED FRACTURED ROCK AUGER REFUSAL E.O.B.
15											
20											
25											
30											
35											E.O.B. 8'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-2A

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-3
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
REMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30" BIT	OFFSET DATE START 1-3-00 DATE FINISH 1-3-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Brn F-C SAND & F-C GRAVEL,lit cobbles
5									moist		SAME
10									moist		Lt-brn F-C SAND & F-C GRAVEL,tr silt
15									moist		SAME
20									moist		SAME
25									moist		Gry VF-F SAND,sm silt,tr F-gravel
										29'0"	SAME
30										31'0"	POSSIBLE BEDROCK AUGER REFUSAL E.O.B.
35											E.O.B. 31'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-3

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

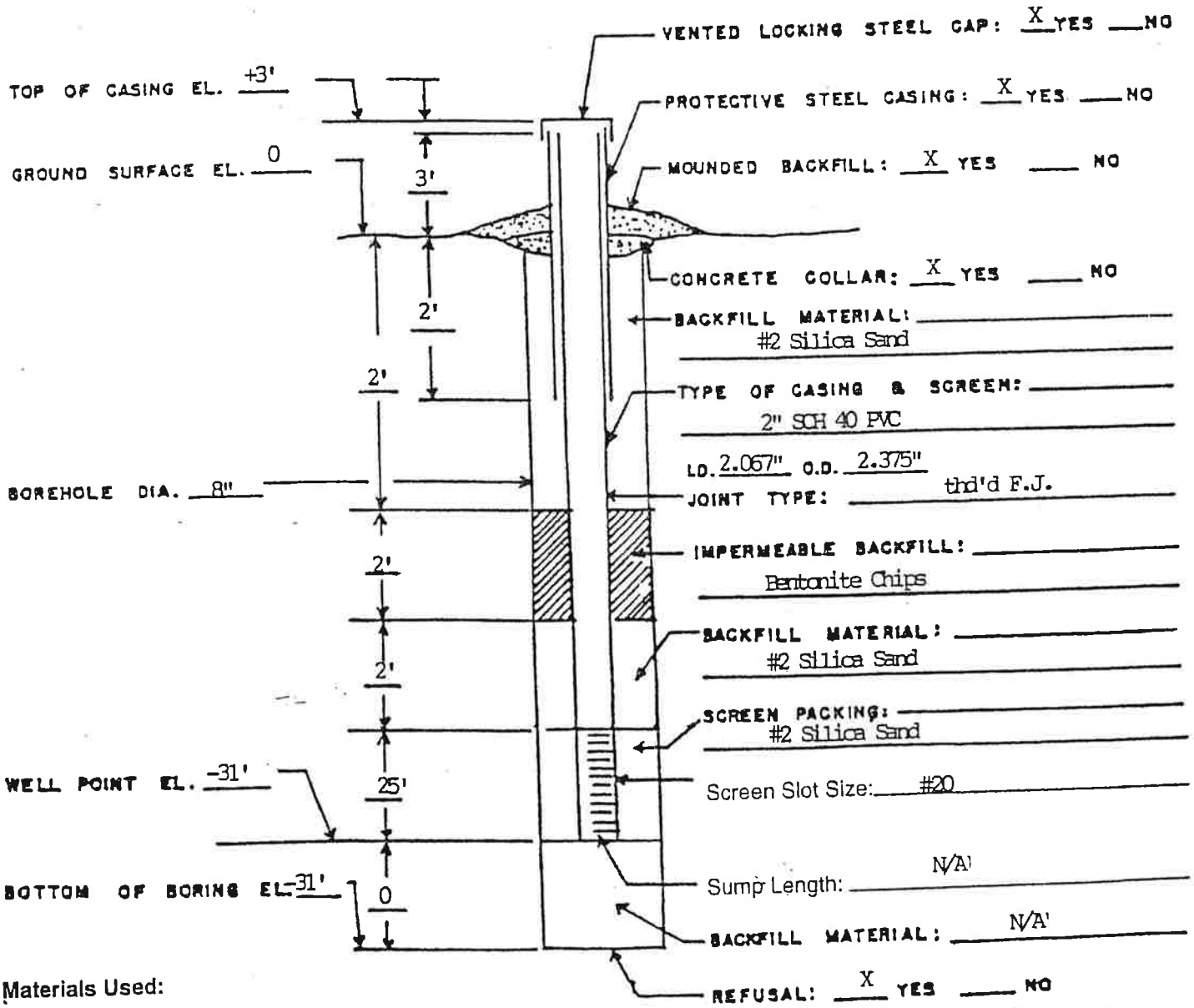
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-3

Client: Organic Waste Technologies

Job #: E105-5736-99



Materials Used:

Screen (PVC) 25'
Riser (PVC) 10'
Plug (PVC) (1)
Slipcap (PVC)
Silica Sand 1000#
Powdered Bentonite

Bentonite Pellets
Bentonite Chips 1 bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O _____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-4
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
REMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 1-3-00 DATE FINISH 1-3-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Lt-brn F-C SAND & F-C GRAVEL
5											
									moist		SAME;lit cobbles
10									moist		Gry F-C SAND & F-C GRAVEL,lit cobbles
15									moist		SAME
20									moist		SAME
25									moist	25'0"	SAME
										25'6"	Gry VF-F SAND,lit silt,sm F-gravel
										26'6"	POSSIBLE BEDROCK AUGER REFUSAL E.O.B.
30											
35											E.O.B. 26'6"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-4

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

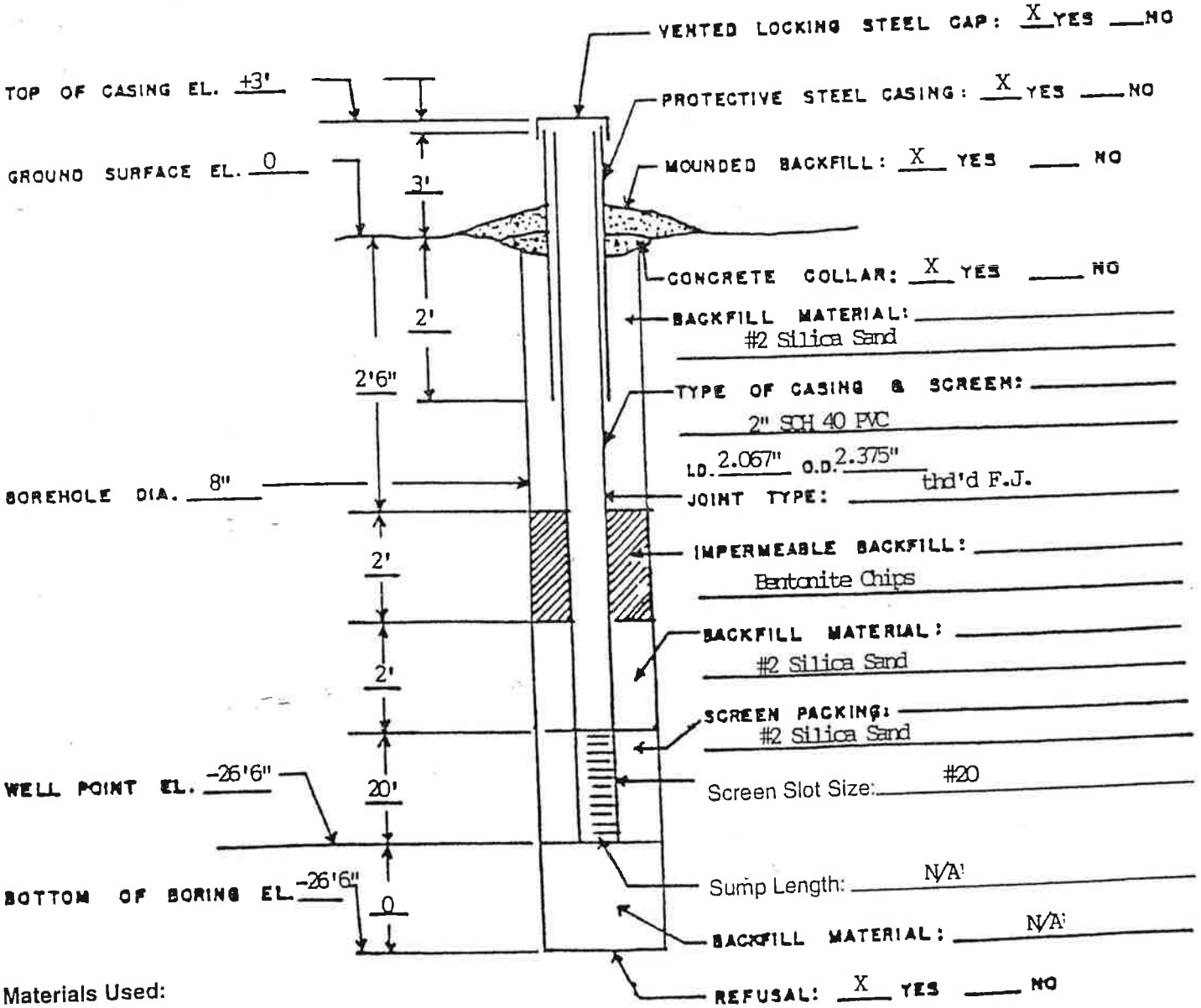
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Client: Organic Waste Technologies

Job #: E105-5736-99

MONITOR WELL # MW-4



Materials Used:

Screen	(PVC)	20'
Riser	(PVC)	10'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand		800#
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips 1 bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O ____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-5
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30" BIT	OFFSET DATE START 1-4-00 DATE FINISH 1-4-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
											Brn F-C SAND & F-C GRAVEL,lit cobbles
5											Lt-brn F-C SAND & F-C GRAVEL,sm cobbles
10											SAME
15											Lt-brn VF-F SAND,sm M-C sand,F-C gravel
20											
										23'0"	SAME
25										24'0"	POSSIBLE BEDROCK AUGER REFUSAL E.O.B.
30											
35											E.O.B. 24'0"
0											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-5

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

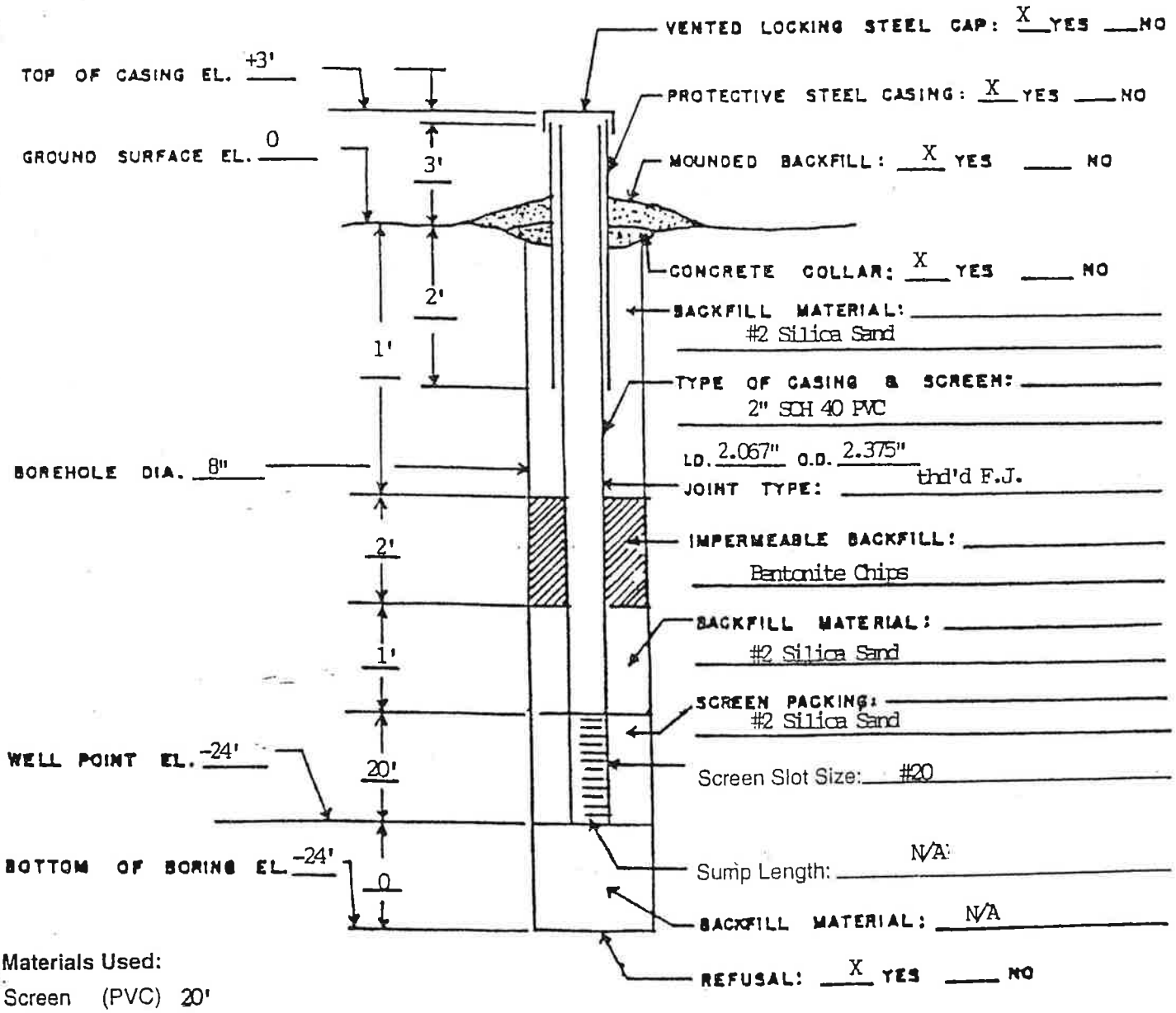
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-5

Client: Organic Waste Technologies
Job #: E105-5736-99



Materials Used:

Screen	(PVC)	20'
Riser	(PVC)	10'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand		900#
Powdered Bentonite		
Bentonite Pellets		
Bentonite Chips		1 bag
Concrete Mix		1 bag
Portland		
Locking Exp Plug		
Lock		
D/O		___"
S/U		(1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-6
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 1-4-00 DATE FINISH 1-4-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 33' FT AFTER 0 HOURS AT FT AFTER HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Brn F-C SAND & F-C GRAVEL,lit cobbles
5									moist		SAME
10									moist		Lt-brn F-C SAND & F-C GRAVEL,sm cobbles
15									moist		Lt-brn VF-F SAND,sm M-C sand & F-M gravel
20									moist		SAME
25									moist		SAME
30									wet		Gry VF-F SAND,lit M-sand,sm F-M gravel,tr silt
35									wet	35'0"	SAME E.O.B.
											E.O.B. 35'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-6

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

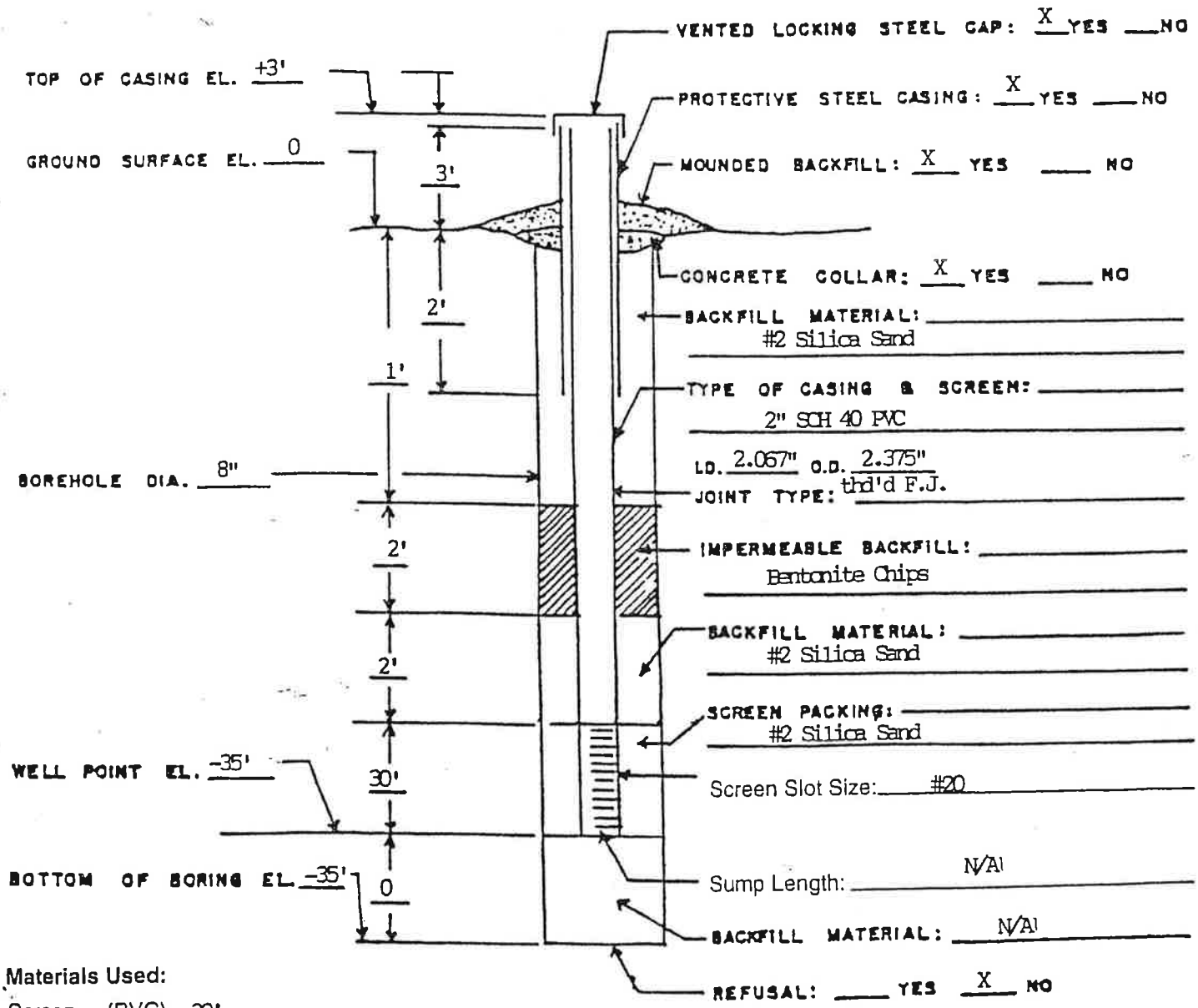
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Client: Organic Waste Technologies
Job #: E105-5736-99

MONITOR WELL # MW-6



Materials Used:

Screen	(PVC)	30'
Riser	(PVC)	10'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand		1250#
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips 1 bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O _____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-7,7A,7B
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 1-5-00 DATE FINISH 1-5-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Brn F-C SAND & F-C GRAVEL,sm cobbles,boulders
										4'0"	AUGER REFUSAL E.O.B.
											MW-7A
									moist		Brn F-C SAND & F-C GRAVEL,sm cobbles,boulders
										3'6"	AUGER REFUSAL E.O.B.
											MW-7B
									moist		Brn F-C SAND & F-C GRAVEL,sm cobbles,boulders
										3'6"	AUGER REFUSAL E.O.B.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____CASING TO _____FT. HOLE NO.MW-7,7A,7B

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-7C
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 1-5-00 DATE FINISH 1-5-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 28' FT AFTER 0 HOURS AT FT AFTER HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
0									moist		Brn F-C SAND & F-C GRAVEL,lit cobbles
5									moist		SAME; sm cobbles
10									moist		SAME
15									moist		SAME; and cobbles
20									moist		SAME
25									wet		SAME
30										30'0"	E.O.B.
35											E.O.B. 30'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-7C

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE
M = MEDIUM
F = FINE

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

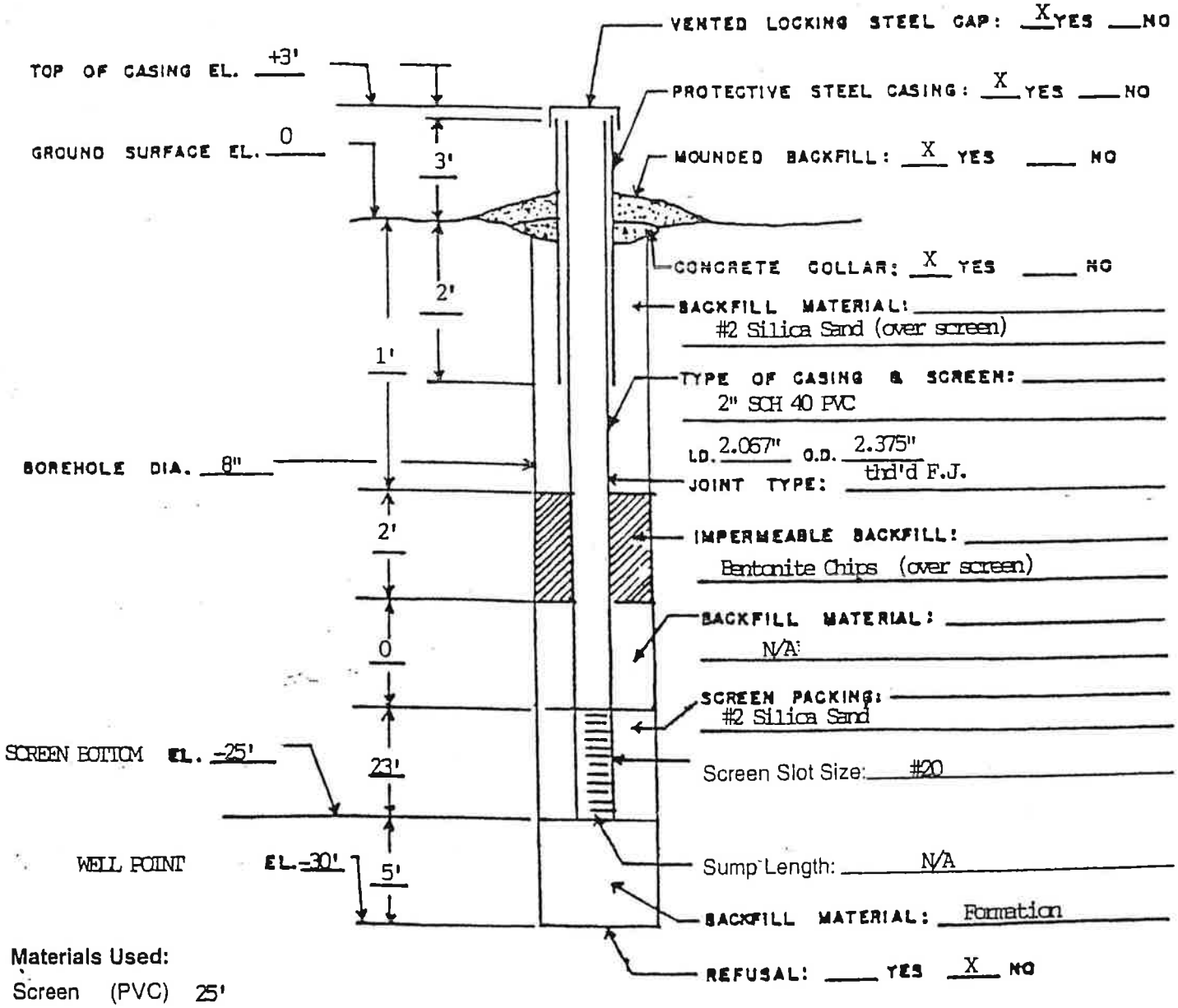
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-7C

Client: Organic Waste Technologies

Job #: E105-5736-99



Materials Used:

Screen	(PVC)	25'
Riser	(PVC)	10'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand	1000#	
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips
Concrete Mix
Portland

Locking Exp Plug
Lock
D/O ____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-8
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER JC/ts	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 1-5-00 DATE FINISH 1-5-00 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 28' FT AFTER 0 HOURS AT FT AFTER HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Drk-brn F-C SAND & F-C GRAVEL
5									moist		Brn F-C SAND & F-C GRAVEL,sm cobbles
10									moist		SAME
15									moist		Brn F-C SAND,lit F-M gravel,tr cobbles
20									moist		SAME
25									wet		SAME
30										30'0"	SAME E.O.B.
35											E.O.B. 30'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-8

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

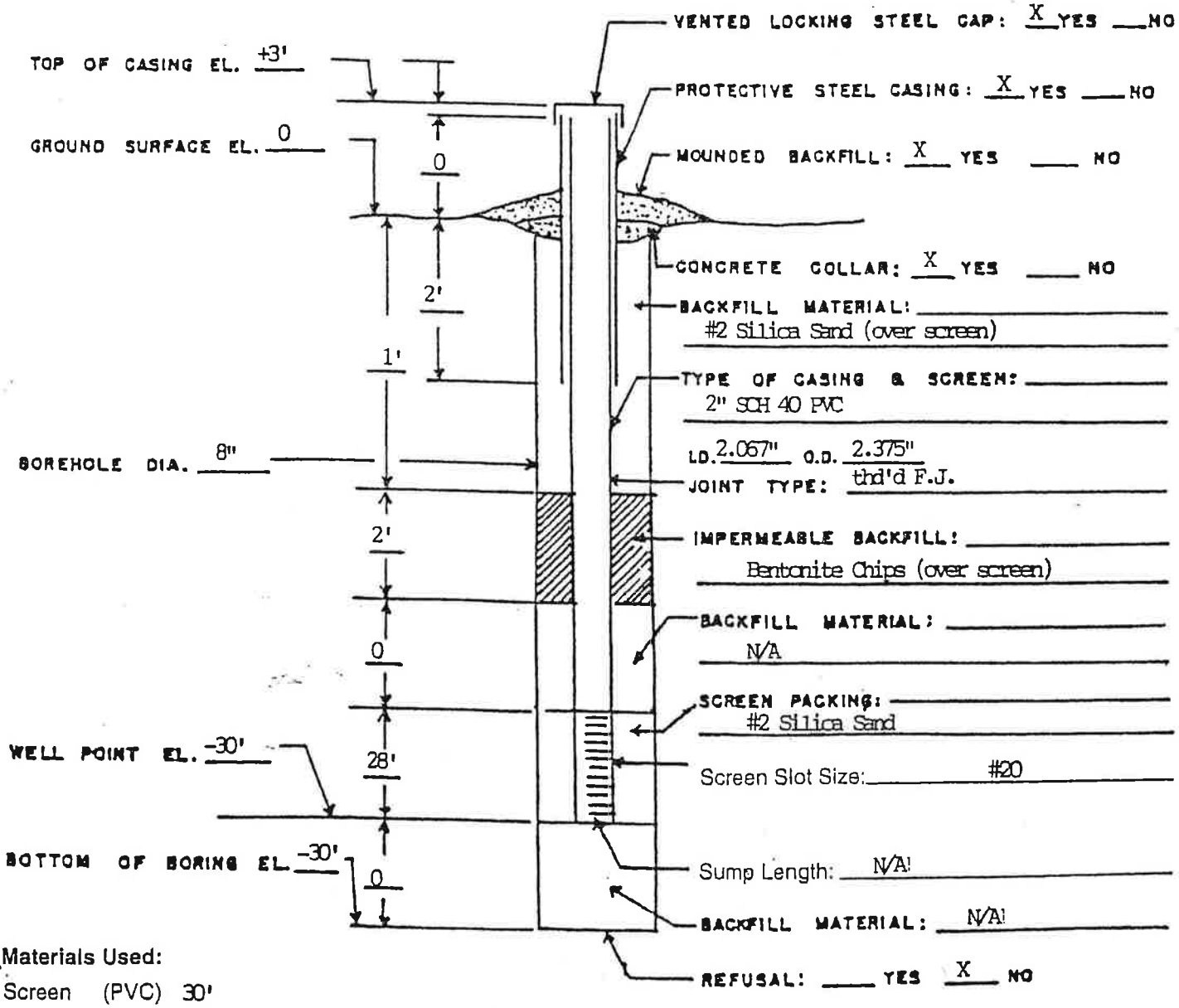
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-8

Client: Organic Waste Technologies
Job #: E105-5736-99



Materials Used:

Screen	(PVC)	30'	Bentonite Pellets	Locking Exp Plug	
Riser	(PVC)	5'	Bentonite Chips	Lock	
Plug	(PVC)	(1)	Concrete Mix	D/O _____"	
Slipcap	(PVC)		Portland	S/U - (1)	
Silica Sand	1000#				
Powdered Bentonite					

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-9
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
I EMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
										6"	TOPSOIL
											Brn F-M-C SAND & F-C GRAVEL,lit cobbles,tr silt
5									moist		Lt-brn F-M-C SAND & F-C GRAVEL,lit cobbles
10									moist		SAME
15									moist		Brn/lt-brn F-M-C SAND & F-C GRAVEL,lit cobbles
20									moist		
									moist		SAME;sm cobbles,tr boulders
25									moist/dry		DECOMPOSED FRACTURED ROCK
										27'6"	AUGER REFUSAL E.O.B.
30											
35											E.O.B. 27'6"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-9

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE
M = MEDIUM
F = FINE

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

Phone
(203) - 888-4531

Telefax
03) - 888-6247

WHITE PLAINS, N.Y.
(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

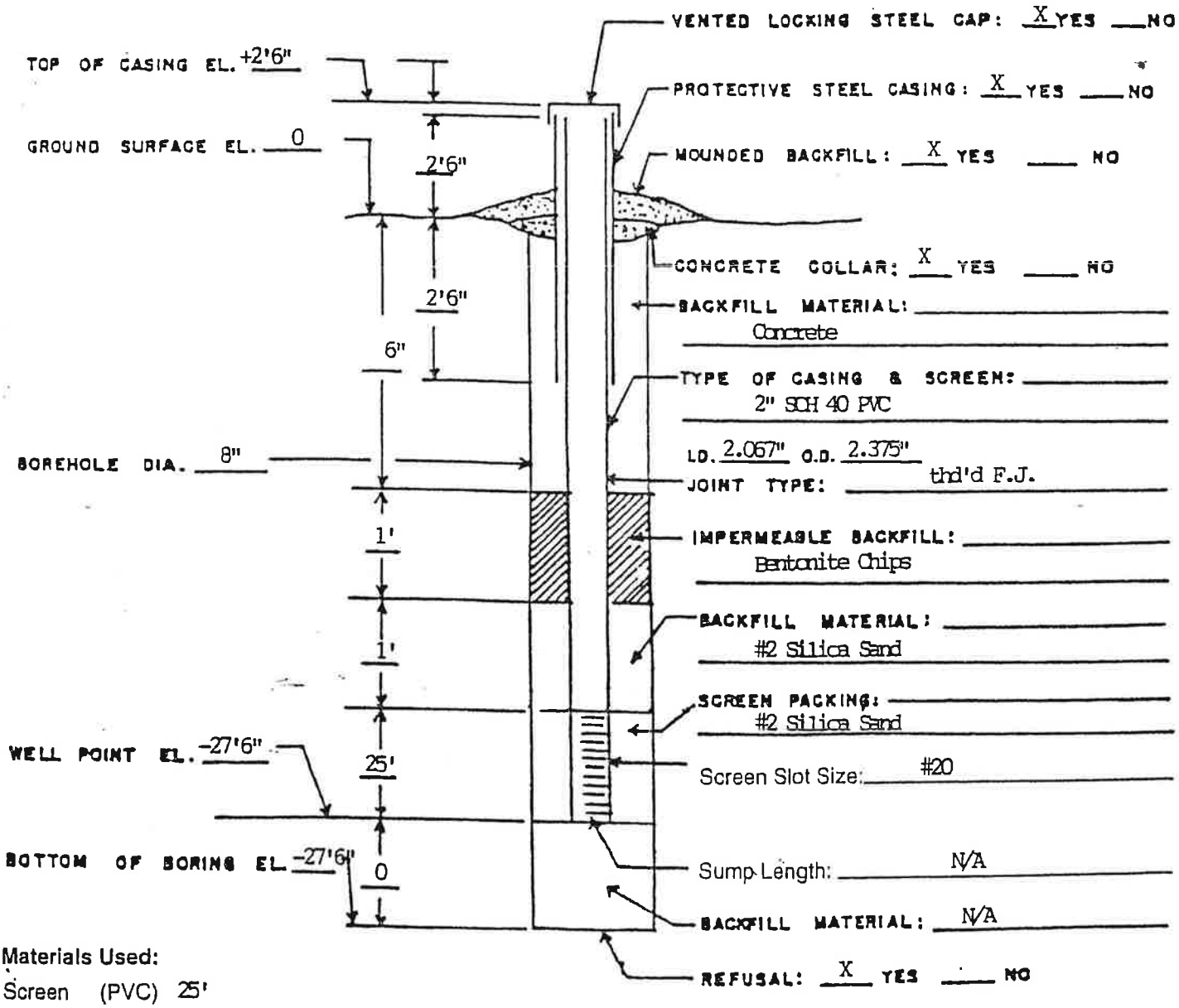
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-9

Client: Organic Waste Technologies
Job #: E105-5736-99



Materials Used:

Screen	(PVC)	25'
Riser	(PVC)	5'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand	950#	
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips ½ bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O ____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-10
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4 1/4" / 1 3/8" HAMMER WT.: 140# BIT HAMMER FALL: 30"	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 30' FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Lt-brn/lt-gry VF-F-M SAND,sm F-C gravel,cobbles,tr silt
5									moist		SAME
10									moist		Brn/lt-brn F-M-C SAND & F-C GRAVEL
15									moist		SAME
20									moist		SAME;sm cobbles
25									moist		Brn/lt-brn F-M-C SAND,sm F-C gravel,tr cobbles
30									wet	30'0"	SAME E.O.B.
35											E.O.B. 30'0"

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-10

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

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(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

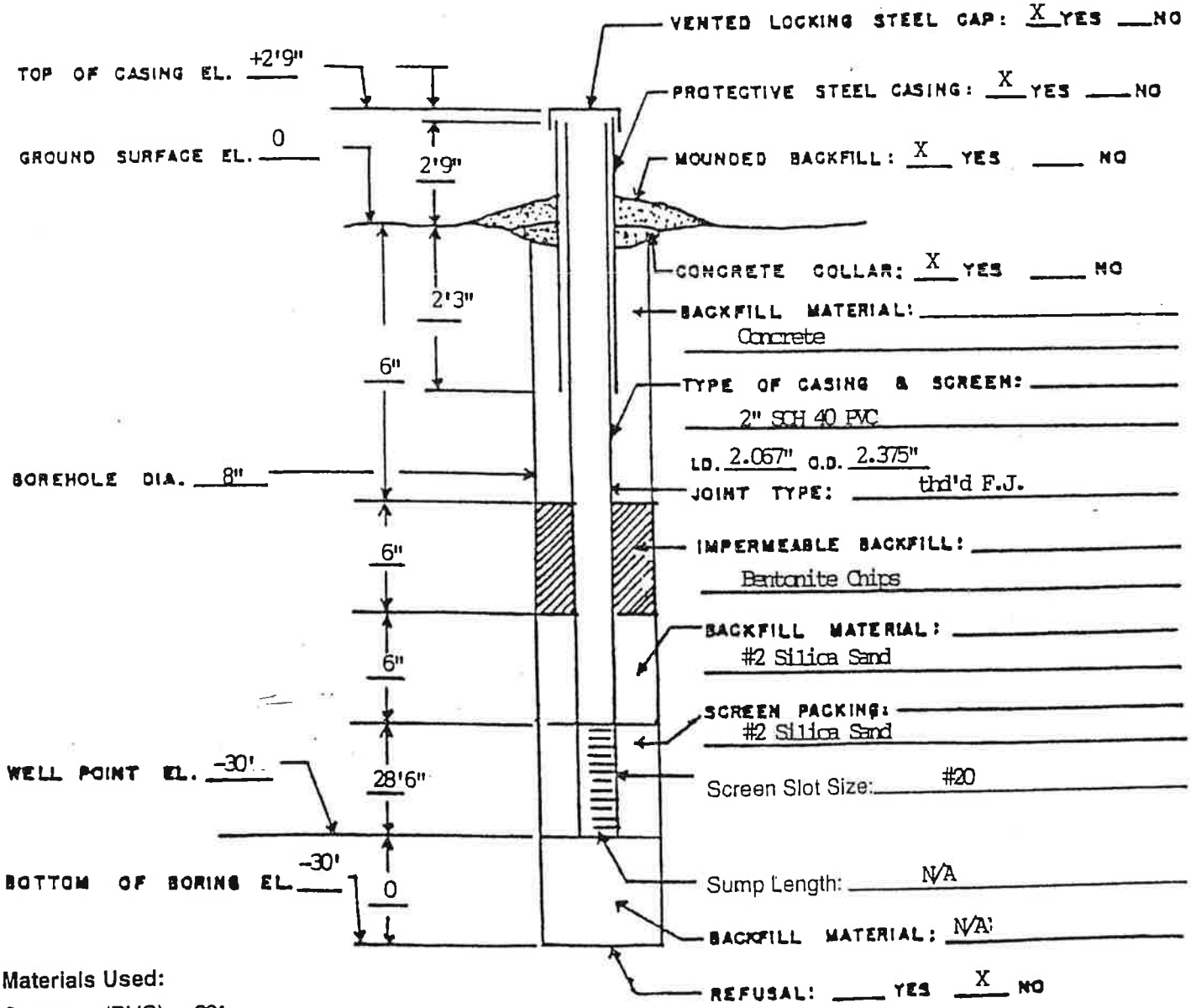
SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-10

Client: Organic Waste Technologies
Job #: E105-5736-99



Materials Used:

Screen	(PVC)	30'
Riser	(PVC)	5'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand		1050#
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips ½ bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O ____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-11
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
FOREMAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	TYPE: CASING HSA, SAMPLER SS, CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT__FT AFTER__HOURS AT__FT AFTER__HOURS	SIZE I.D.: 4 1/4", 1 3/8" HAMMER WT.: 140# HAMMER FALL: 30" BIT	DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
										1'6"	Brn/lt-brn F-M SAND,sm silt,cobbles, plastics
									moist		Lt-gry F-M SAND,sm F-C gravel,lit cobbles
5											
10									moist		Brn/lt-brn F-M-C SAND & F-C GRAVEL, sm cobbles
15									moist		SAME
20									moist		SAME
									moist/dry	24'0"	DECOMPOSED FRACTURED ROCK AUGER REFUSAL E.O.B.
25											
30											
35											E.O.B. 24'0"
0											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-11

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE M = MEDIUM F = FINE

PORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

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(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

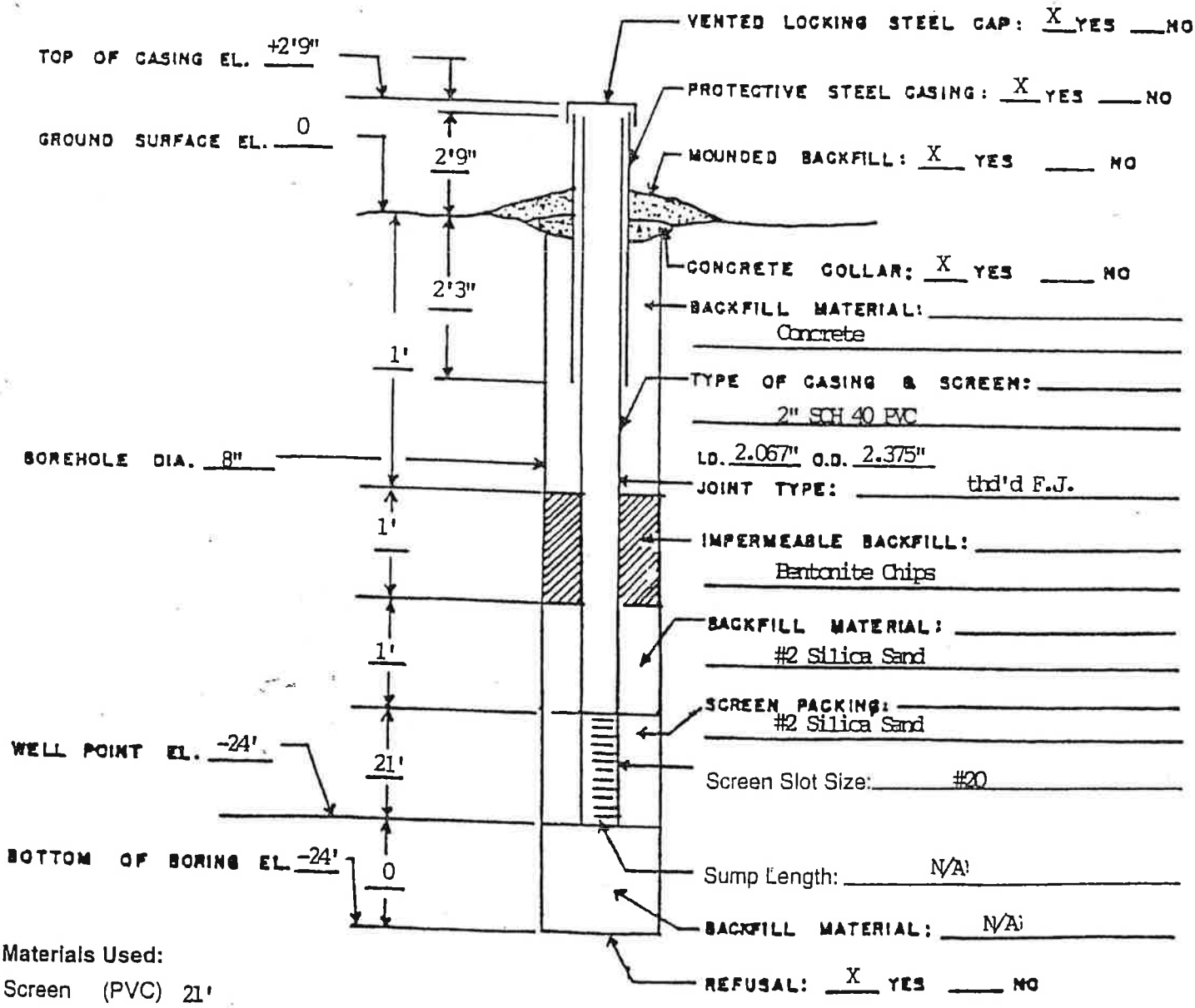
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

MONITOR WELL # MW-11

Client: Organic Waste Technologies

Job #: E105-5736-99



Materials Used:

Screen	(PVC)	21'
Riser	(PVC)	5'
Plug	(PVC)	(1)
Slipcap	(PVC)	
Silica Sand		750#
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips ½ bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O ____"
S/U - (1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Organic Waste Technologies	SHEET 1 OF 1 HOLE NO. MW-12
	PROJECT NO. E105-5736-99	
	PROJECT NAME Perimeter LFG Monitoring	BORING LOCATIONS as directed
F :MAN - DRILLER PD/vc	LOCATION Shelton Landfill-Route 110 - Shelton, CT	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS / SIZE I.D.: 4 1/4" / 1 3/8" / HAMMER WT.: / 140# / BIT HAMMER FALL: / 30" /	OFFSET DATE START 12-27-99 DATE FINISH 12-27-99 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE TYPE	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORING TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
											Brn/gry SILT,sm F-M sand,F-C gravel,lit cobbles,tr rubbish
10									moist	10'0"	Brn/lt-gry F-M SAND & F-C GRAVEL,tr cobbles
15									moist		
20									moist		Lt-brn/gry F-M-C SAND,sm F-C gravel,lit silt,cobbles
25									moist		
30									moist		
35									moist	35'0"	
										38'0"	SAME;sm cobbles,possible fractured rock
									moist/dry	41'0"	DECOMPOSED ROCK AUGER REFUSAL E.O.B.

ROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO MW-12

= AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE
M = MEDIUM
F = FINE

ORPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

Phone
(203) - 888-4531

Telefax
03) - 888-6247

WHITE PLAINS, N.Y.
(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

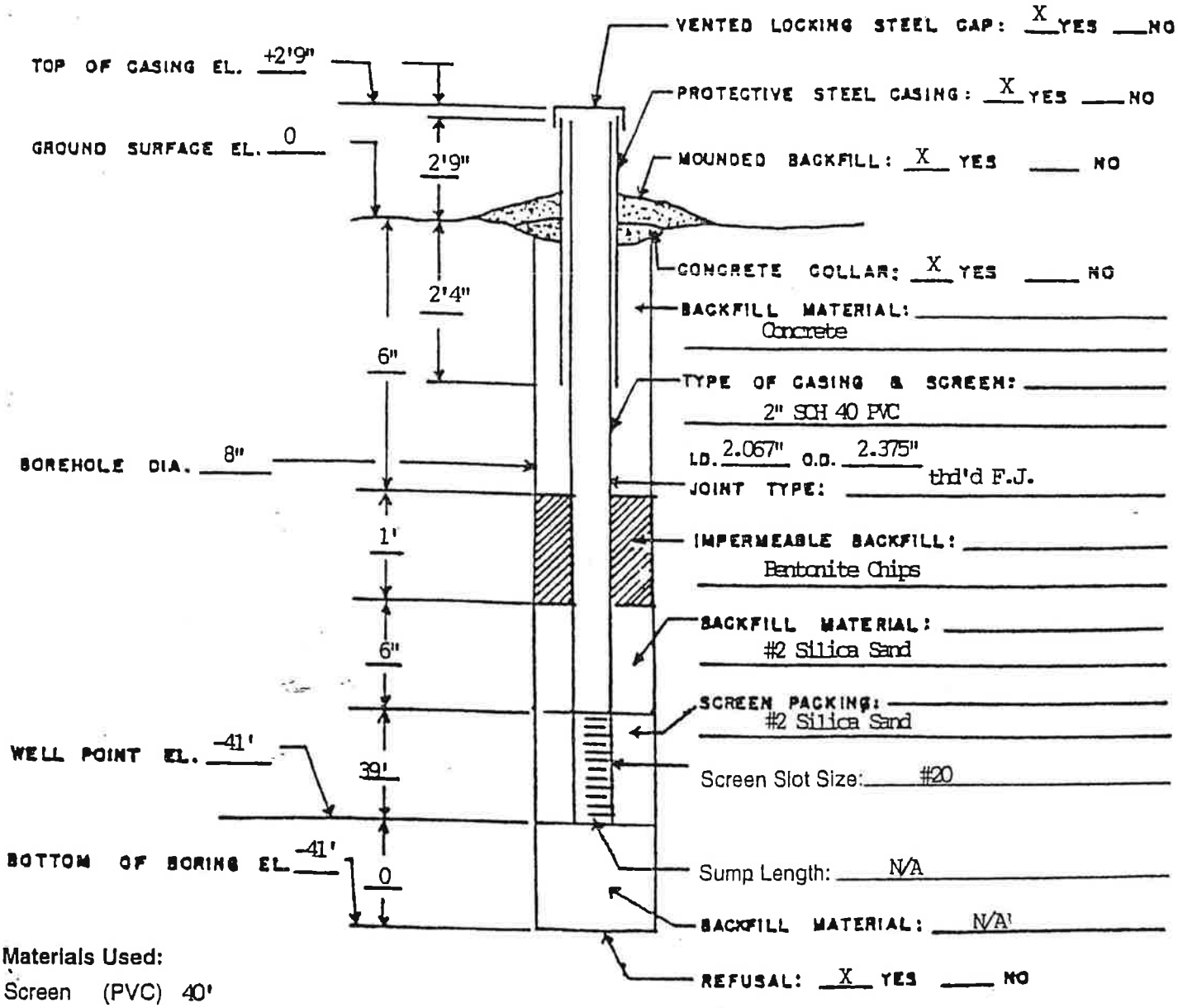
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Client: Organic Waste Technologies

MONITOR WELL # MW-12

Job #: E105-5736-99

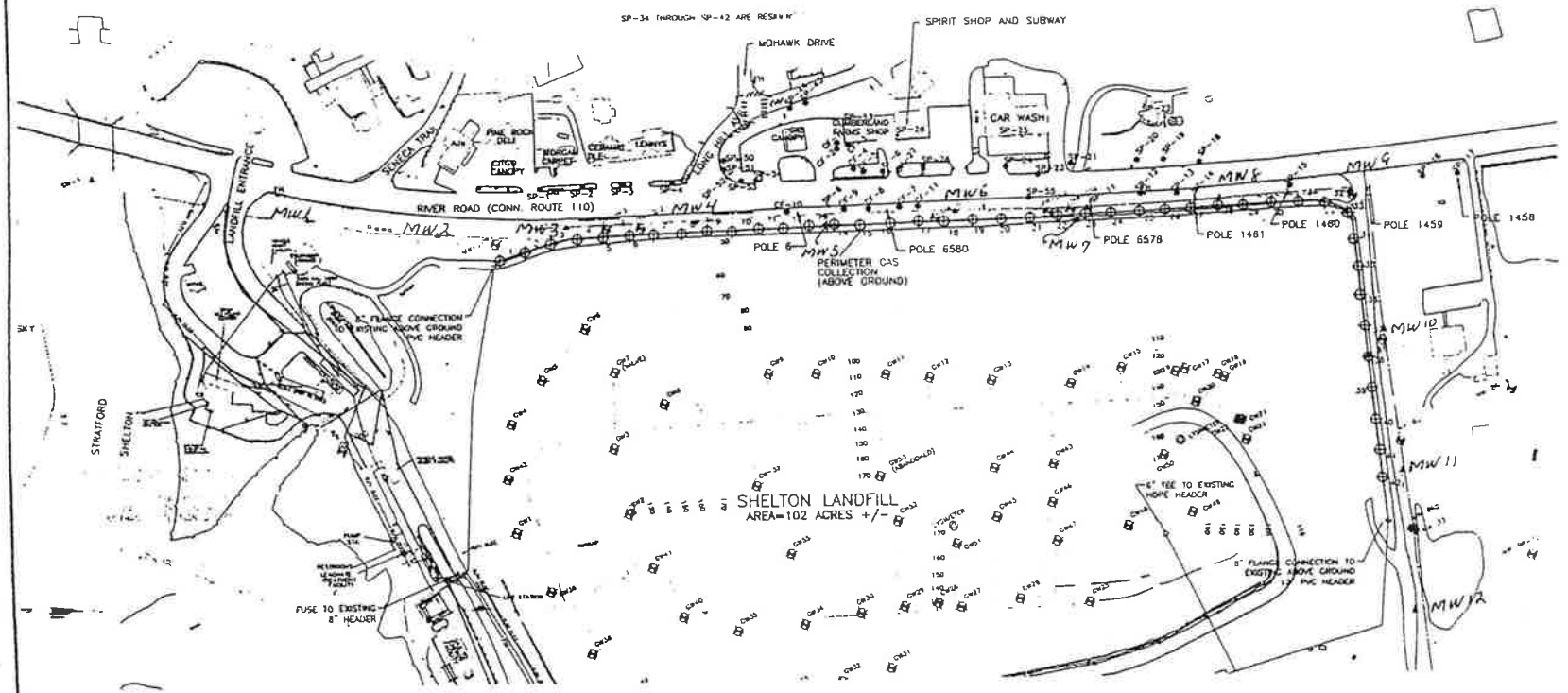


Materials Used:

Screen	(PVC)	40'
Riser	(PVC)	5'
Plug	(PVC)	1'
Slipcap	(PVC)	
Silica Sand		1150#
Powdered Bentonite		

Bentonite Pellets
Bentonite Chips 1 bag
Concrete Mix 1 bag
Portland

Locking Exp Plug
Lock
D/O _____"
S/U - (1)



LEGEND

- EDGE OF PAVEMENT
- FENCE
- PERIMETER CONTROL SYSTEM
- CENTRAL CONTROL SYSTEM
- PERIMETER MONITORING SYSTEM
- STRUCTURES
- SAMPLING POINTS
- CONTINUOUS METHANE DETECTOR

0 100 200
SCALE IN FEET

OWT

CONNECTICUT RESOURCE RECOVERY AUTHORITY
SHELTON LANDFILL
SHELTON, CONNECTICUT

PERIMETER LFG MONITORING SYSTEM
PROPOSED METHANE DETECTION SYSTEM

DRAWING NO. 1

SHELTON LANDFILL
CENTRAL COLLECTION SYSTEM MONITORING

Date: _____
Weather: _____
Temperature: _____
Barometer: _____

Monitoring Equipment: _____
_____
Personnel: _____
_____

Sample Location	CH_4	CO_2	O_2	Balance	Pressure	Velocity Pressure	Flow	Temp.	Comments
GW-1									
GW-2									
GW-3									
GW-4									
GW-5									
GW-6									
GW-7									
GW-8									
GW-9									
GW-10									
GW-11									
GW-12									
GW-13									
GW-14									
GW-15									
GW-16									
GW-17									
GW-18									
GW-19									
GW-20									
GW-21									
GW-22									
GW-23									
GW-24									
GW-25									
GW-26									
GW-27									
GW-28									

SHELTON LANDFILL
PERIMETER COLLECTION SYSTEM MONITORING

Date: ________
Weather: ________
Temperature: ________
Barometer: ________

Monitoring Equipment: ____________________
____

Personnel: ____________________
____

Location	CH_4	CO_2	O_2	Balance	Pressure	Velocity Pressure	Flow	Temp.	Comments

SHELTON LANDFILL
BLOWER/FLARE STATION
ROUTINE MAINTENANCE SCHEDULE

Component	Frequency of Service							
	Daily	Weekly	Biweekly	Monthly	Bimonthly	Semi-annually	Annually	As Needed
Condensate Knockout								
Check liquid level (sight glass)		✔						
Drain liquid								✔
Inspect internal coating and gasket							✔	
Clean demister pad							✔	
Tighten cover bolts							✔	
Check differential pressure		✔						
Header Valve System								
Check valve peformance				✔				
LFG Blower								
Inspect foundation & correct deficiencies							✔	
Check condition of isolation pads							✔	
Check motor alignment							✔	
Check piping alignment							✔	
Check bearing temperature		✔						
Check vibration level				✔				
Lubricate bearings per manufacturer				✔				
Inspect flex coupling					✔			
Clean motor ventilation openings								✔
Lubricate motor bearings							✔	
Check wire connections							✔	
Drain liquid from blower housing								✔
Piping								
Check valves for proper operation				✔				
Tighten flange bolts							✔	
Check flange gaskets for leaks						✔		
Inspect condition of expansion joints						✔		
Check piping alignment							✔	
Methane Analyzer								
Calibrate				✔				
Check filters				✔				
Sump Pump								
Check piping				✔				
Service pump per manufacturer						✔		
Check/clean electrodes						✔		

SHELTON LANDFILL
BLOWER/FLARE STATION
ROUTINE MAINTENANCE SCHEDULE (continued)

Component	Frequency of Service							
	Daily	Weekly	Biweekly	Monthly	Bimonthly	Semi-annually	Annually	As Needed
Flame Arrestor								
Clean arrestor element per manufacturer							✓	✓
Check pressure drop across element		✓						
Propane System								
Check propane supply		✓						
Check propane supply pressure		✓						
Check solenoid manual override						✓		
Clean soleniod valve							✓	
Clean pressure regulator vent						✓		
Check all connections for leaks						✓		
Flare Control Panel								
Clean & maintain instruments per manu.							✓	
Replace recorder chart paper		✓						
Replace recorder pen tip							✓	✓
Check enclosure for moisture		✓						
Check wire connections							✓	
Test panel lights				✓				
Check emergency shutdown				✓				
Check auto restart				✓				

SHELTON LANDFILL
ON-SITE STRUCTURES MONITORING FORM

Date: _____
Weather: _____
Temperature: _____
Barometer: _____

Monitoring Equipment: _____
_____
Personnel: _____
_____

TESTING AND INSPECTION OF CONTINUOUS DEVICES

Structure Name/ Location	CH_4 (% LEL)	Sensor Check	Sensor & Equipment Condition	Maintenance Performed\Repairs Needed

TESTING WITH HAND-HELD INSTRUMENT

Structure Name/ Location	CH_4 (% LEL)	Locations Checked

Calibration Gas Used for Hand-Held Instrument _____.

SHELTON LANDFILL
OFF-SITE STRUCTURES MONITORING FORM

Date: _____
Weather: _____
Temperature: _____
Barometer: _____

Monitoring Equipment: _____
_____
Personnel: _____
_____

INSPECTION

Business Name/ Location	CH_4 (% LEL)	Sensor & Equipment Condition	Maintenance Performed\Repairs Needed

TESTING

Business Name/ Location	Sensor Check	Hand-Held CH_4 (%LEL)	Locations Checked

Calibration Gas Used For Hand-Held Instrument _____.

SHELTON LANDFILL
CONTINUOUSLY-MONITORED
WELL MONITORING FORM

Date: _____
Weather: _____
Temperature: _____
Barometer: _____

Monitoring Equipment: _____
_____
Personnel: _____
_____

WEEKLY INSPECTION

Location	CH_4 (% LEL)	Wellhead\Wiring Condition	Maintenance Performed\Repairs Needed
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

MONTHLY TESTING

Location	Sensor Check	Maintenance Performed\Repairs Needed
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

SHELTON LANDFILL
OTHER WELL MONITORING FORM

Date: _____
Weather: _____
Temperature: _____
Barometer: _____

Monitoring Equipment: _____

Personnel: _____
_____
_____
_____

Location	CH_4 (% LEL)	Comments
GP-1		
GP-2		
GP-3		
GP-4		
MW-B1		
MW-B2		
MW-B3		

SHELTON LANDFILL
BAR PUNCH MONITORING FORM

Date: __________
Weather: __________
Temperature: __________
Barometer: __________

Monitoring Equipment: ______________________________
____
Personnel: ______________________________
____

Probe Location	CH_4	Comments

Probe Location	CH_4	Comments

APPENDIX D

PERMIT TO CONSTRUCT

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

OCT 18 2001

01 OCT 22 AM 9:43
RECEIVED
CONNECTICUT RESOURCES
RECOVERY AUTHORITY

Mr. Michael Tracey
Connecticut Resources Recovery Authority
100 Constitution Plaza
17th Floor
Hartford, CT 06103

Dear Mr. Tracey:

Enclosed is a certified copy of your original permit to construct a landfill gas collection and control system including a John Zink ZTOF landfill flare at the Shelton Landfill, Route 110, Shelton, CT.

This letter does not relieve you of the responsibility to comply with the requirements of other appropriate Federal, State, and municipal agencies. The permit is not transferable from one permittee to another (without prior written notification), from one location to another (unless the subject equipment is a portable rock crusher or stripping facility), or from one piece of equipment to another. The permit must be posted for easy access at the site of operation.

Upon completion of construction, Connecticut Resources Recovery Authority shall certify to the Commissioner, in writing, that the facility has been constructed in accordance with the terms and conditions of its construction permit (Construction Certification Form enclosed). Upon the Commissioner's approval of the certification and confirmation that the facility has been constructed in accordance with its construction permit, the Commissioner shall issue a permit to operate. Connecticut Resources Recovery Authority shall not operate the landfill gas collection and control system including a John Zink ZTOF landfill flare prior to the receipt of an operating permit.

Permit renewal applications must be filed at least one hundred twenty (120) days prior to the permit expiration date, if applicable. Pursuant to Section 22a-174-3 of the Regulations of Connecticut State Agencies, Connecticut Resources Recovery Authority must apply for a permit modification in writing if it plans any physical change, change in method of operation, or addition to this source which constitutes a "modification" as defined in Section 22a-174-1. Any such changes should first be discussed with Mr. Newt Rowe of the Bureau of Air Management, by calling (860) 424-4152. Such changes shall not commence prior to the issuance of a permit modification.

Sincerely,

Gary S. Rose

Gary S. Rose
Acting Director
Engineering and Technical Services
Bureau of Air Management

GSR:jad
Enclosure

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Construction Certification Form

By signing the statement below you are certifying that you are familiar with the terms and conditions of the construction permit, that you have conducted reasonable investigation, including inquiry of those individuals responsible for conducting the construction, and that the construction has been completed in accordance with the construction permit. Signing the statement below, if false, may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157b of the Connecticut General Statutes.

"I, _____ have personally examined
(Name of Applicant)

and am familiar with all terms and conditions of the construction permit and certify that based on reasonable investigation, including my inquiry of those individuals responsible for conducting all aspects of the construction, that the construction of the equipment described below is complete and has been constructed in accordance with all terms and conditions of the construction permit to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

Company Name: _____

Equipment description: _____

_____

_____
Construction Permit No.

_____ _____
Signature of Applicant Date

_____ _____
Name of Applicant (print or type) Title (if applicable)

PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL AND GAS COLLECTION AND CONTROL SYSTEM

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

1. Legal Firm Name: Connecticut Resources Recovery Authority
2. Address: 100 Constitution Plaza, 17th Floor, Hartford, CT 06106-5127
3. Equipment Location: Shelton Landfill, Route 110, Shelton, CT 06484
4. Equipment Description (Model, I.D. #): Landfill with Gas Collection & John Zink 18.6 MMbtu ZTOF Enclosed Landfill Flare

Date Issued	Exp. Date
OCT 1 8 2001	
Town No.	Premise No.
163	119
Permit No.	Stack No.
0091	01
Permit Fee	
$2,000.00	

PERMIT TO:

☒ Construct ☐ Operate ☐ Modify

FEDERAL REQUIREMENTS:*

☐ NSPS (40 CFR Part 60) Subparts:_____

☐ NESHAPS (40 CFR Part 61) Subpart:_____

☐ MACT (40 CFR Part 63) Subpart:_____

OZONE NON-ATTAINMENT STATUS:

☐ severe (Major source if VOC or NOx > 25 TPY)

☒ serious (Major source if VOC or NOx > 50 TPY)

INTERNAL COMBUSTION ENGINES ONLY:

☐ Emergency use only ☐ Non-emergency use, including self generation

TYPE OF POLLUTANT FOR WHICH THE PREMISES IS A "MAJOR SOURCE":

EPA SOURCE CLASS:	TSP	SOx	NOx	CO	VOC	PM-10	LEAD	OTHER
	☐	☐	☐	☐	☐	☐	☐	☐
New Source ☐								
Major Mod ☐								
Minor Mod ☒								

* The landfill is not subject to any New Source Performance Standard (NSPS). The landfill is subject to Subpart GGG of 40 CFR Part 62. To the extent that requirements of Subpart WWW of 40 CFR Part 60 apply, those requirements apply only because they are incorporated by reference in Subpart GGG or specifically by this permit.

I CERTIFY THAT THIS IS A TRUE COPY OF THE ORIGINAL
Jamie Dingfelder 10/18/01

ARTHUR J. ROCQUE, JR.
COMMISSIONER, DEPARTMENT OF ENVIRONMENTAL PROTECTION
OR DESIGNATED AGENT

ORIGINAL

PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL AND GAS COLLECTION AND CONTROL SYSTEM*

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

The conditions on all pages of this permit and attached appendices shall be verified at all times. Design specifications unless specifically noted elsewhere in this permit need not be verified on a continuous basis. However, demonstration of compliance shall be provided to the Commissioner upon request.

* The landfill's Gas Collection and Control System (GCCS) consists of the following components: 1) one hundred five (105) landfill gas (LFG) collection wells (sixty-three (63) in the central well field & forty-two (42) around the landfill perimeter), 2) lateral piping from the LFG collection wells to a main header, 3) condensate discharge piping, traps, sump, and storage tank, and 4) an enclosed flare (John Zink 18.6 MMbtu ZTOF Landfill Flare). Additions and/or replacements (with similar equipment) intended to improve capture and control of LFG, and remedial actions required by this permit, shall not trigger any permit modification requirements.

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS: Gas Collection and Control System

A. Design Specifications

1. Fuel Type(s): Landfill Gas
2. Maximum Fuel Consumption over any Consecutive Twelve (12) Month Period ($MMft^3$): 578
3. Trunk Line Fuel Filter Performance Specifications:
   a. Trunk Line Capture Efficiency (%): 100
   b. Removal Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 μm)
   c. Overall Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 μm)
4. Maximum Fuel Firing Rate (scfm): 1,030
5. Minimum Allowable Combustion Temperature (°F): 1,400
6. Minimum Residence Time (seconds): 0.9 @ 1,600°F
7. Maximum Gross Heat Input (MMBTU/hr): 18.6 (@ Estimated LFG Heat Content of 300 BTU/ft^3)
8. Minimum Stack Height (ft): 40
9. Maximum Exhaust Gas Flow Rate (acfm): 37,198
10. Minimum Distance from Stack to Property Line (ft): 140
11. Operating Hours: 24 hours/day; 8,760 hours per year

B. The following operating conditions shall be met at all times:

1. The enclosed flare's minimum destruction efficiency for non-methane

PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL AND GAS COLLECTION AND CONTROL SYSTEM

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS, CONTINUED:

organic compounds shall be 98% or an NMOC outlet concentration of 20 ppm by volume dry basis as hexane at 3% oxygen.

2. The enclosed flare shall be designed for and operated with no visible emissions as determined by Reference Method 22, Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

3. The permittee shall install, operate and maintain a flare pilot flame and associated pilot fuel supply to assure the timely, automatic restart of the landfill flare.

4. The enclosed flare shall be operated with a flame present at all times except as required during maintenance. The presence of a flare flame shall be monitored by a UV scanner or other equivalent device.

5. The enclosed flare shall be operated in accordance with the manufacturer's specifications and recommendations.

C. The permittee shall ensure effective and safe operation of the LFG collection system through compliance with the following operational conditions:

1. Monthly checks of all wells to ensure wellhead vacuum and proper wellhead operation is maintained. Should the positive pressure exist at a wellhead, the permittee shall take remedial action in accordance with 40 CFR 60.755(a)(3).

2. Monthly confirmation at each central wellhead demonstrating both N_2 levels are below 20% and O_2 levels are below 5%. Should the N_2 level equal or exceed 20% and O_2 level equal or exceed 5%, the permittee shall take remedial action by reducing or shutting off the vacuum to that well until such time as either the oxygen or nitrogen level drops below the relevant threshold.

3. Monthly monitoring of central wellhead LFG temperature to ensure LFG temperature is maintained below 55°C (131°F). If the temperature of a well exceeds 130°F, the permittee shall shut off the vacuum to the well. If positive pressure is measured at a high temperature well, the permittee may open the valve to the well to relieve the high pressure, regardless of temperature. The permittee shall not place the well under vacuum until such time as the temperature is below 131 °F.

4. Monitoring of landfill surface methane concentrations to demonstrate that methane concentrations at any location on the landfill surface do not exceed 500 ppmv above background in accordance with the provisions of 40 CFR 60.755(c). The permittee shall conduct the first monitoring demonstration, over the entire landfill surface, no later than 30 days

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STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

PART I. DESIGN SPECIFICATIONS AND OPERATIONAL CONDITIONS, CONTINUED:

after the receipt of the permit to construct. Subsequent to the initial demonstration, the permittee shall conduct methane landfill surface monitoring quarterly.

All locations exceeding 500 ppmv above background in any round of monitoring shall be monitored and remediated in accordance with the provisions of 40 CFR Part 60.755(c)(4). As long as the actions specified in 40 CFR part 60.755(c)(4) are taken, the exceedance is not a violation of the operational requirements of this permit.

If there are no monitored exceedances of this operational requirement for three (3) consecutive quarterly monitoring periods, thereafter the permittee shall conduct methane landfill surface monitoring annually. However, if there is an exceedance of the 500 ppm above background detected during annual monitoring, the specific location(s) exceeding 500 ppmv above background shall be monitored and remediated in accordance with the provisions of 40 CFR Part 60.755(c)(4). All other locations below the 500 ppm above background threshold may stay on the annual monitoring schedule.

The permittee shall not be required to conduct periodic methane landfill surface monitoring when the landfill is snow covered.

5. Prompt shutdown of GCCS blower whenever the enclosed flare or other in place controls are inoperable in accordance with the provisions set forth in 40 CFR 60.753(e). However, in order to prevent LFG migration, the GCCS blower may be operated when the emergency by-pass is operated.

D. The permittee shall operate the collection system with negative pressure at each central well field wellhead except as provided in 40 CFR 60.753(b).

E. All flare operating personnel shall be trained on the operation of the flare according to the manufacturer's operating procedures and trouble shooting techniques.

F. The GCCS shall be operated and maintained only by personnel properly trained in its operation.

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STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

PART II. ALLOWABLE EMISSION LIMITS: (GCCS)

The permittee shall not allow emissions from this source to exceed the emission limits stated herein at any time. Final emission limits may be established upon completion of initial compliance testing required herein and the Commissioner's acceptance of the test results.

Criteria Pollutants	#/MMBtu	TPY
TSP (Flare)	0.02	1.4
PM-10 (Flare)	0.02	1.4
SO_x (Flare)	0.06	4.9[1]
NO_x (Flare)	0.06	4.9
VOC (Flare)	0.007	0.6
VOC (Fugitive Emissions)[2]	NA	3.2[2]
CO (Flare)	0.20	16.2

1 The ton per year limitation for SO_x is not an enforceable permit condition. However should source testing indicate the annual SO_x emission is greater than five (5) tons per year the permittee shall perform a BACT analysis as required in Part VI, Item I of this permit.

2 Fugitive VOC emissions are the VOC in the landfill gas not captured by the gas collection system; this annual emission rate need not be verified by the permittee.

Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using emission factors from the following sources:

A. Initial Compliance Demonstration Test Data

B. Manufacturer's Emissions Data

C. AP-42, Fifth Edition, Section 2.4

D. SOx emissions based on 97% overall oxidation of sulfur compounds contained in the waste gas and 97% overall oxidation of reduced sulfur to oxides of sulfur

Non-Criteria Pollutants

The Permittee shall not allow emissions of any Hazardous Air Pollutant listed on any Table in Section 22a-174-29 of the Regulations of Connecticut State Agencies (hereinafter referred to as RSCA) and emitted from this flare to exceed the Maximum Allowable Stack Concentration ("MASC") as determined pursuant to the provisions of Section 22a-174-29 of the RSCA and Equation 1:

$$MASC\ (\mu g/m^3) = \frac{0.885*(HLV)*[X+1.08*V^{.64}]^{1.56}}{V} \qquad \text{<Equation 1>}$$

FIRM NAME: Connecticut Resources Recovery Authority
EQUIPMENT LOCATION: Shelton Landfill, Route 110, Shelton, CT 06484
EQUIPMENT DESCRIPTION (MODEL, I.D. #): Landfill with Gas Collection System and Enclosed Flare (John Zink 18.6 MMbtu ZTOF Flare Landfill Flare)

Town No: 163 Premise No: 119 Permit No: 0091 Stack No: 01

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STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

PART II. ALLOWABLE EMISSION LIMITS, CONTINUED:

where:

HLV= Hazard Limiting Value for each specific HAP emitted from the operation of the flare ($\mu g/m^3$)
V= The exhaust gas flowrate exiting the stack (actual m^3/second)
X= The distance from the stack to the nearest property line (meters)

or simply:

MASC (ug/m3) = 22.1 x (HLV) <Equation 2>

Equation 2 is derived using the maximum exhaust flow rate of 37,198 acfm (V = 17.55 m^3/sec) and a minimum property line distance of 140 feet (x = 42.67 meters).

For any operating period having a duration greater than 30 minutes but less than 8 hours, the Permittee may demonstrate compliance with an adjusted MASC calculated in accordance with Section 22a-174-29(i) of the RCSA; provided that actual emissions during each and every period of eight (8) consecutive hours do not exceed the value of MASC determined using the 8-hr HLV for the Hazardous Air Pollutants emitted.

Nothing in Parts II, III, or IV of this permit shall preclude the Commissioner from requiring other means (e.g. stack testing) to demonstrate compliance with Section 22a-174-29 of the RSCA, as allowed by state or federal statute, law, or regulation.

PART III. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS:

A. The permittee shall install, operate and routinely calibrate a device or devices to continuously measure and monitor the volumetric flow of waste gas into this flare.

B. The permittee shall record the quantity of waste gas burned by this flare during each calendar month. Such records shall include the date of the recording period and the quantity of waste gas, expressed in units of million cubic feet per month.

C. The permittee shall record the quantity of pilot fuel burned (propane or natural gas) by the flare during each calendar month. Such records shall include the date of the recording period and the quantity of pilot fuel. Fuel records may be used to calculate the amount of pilot fuel burned.

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STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT

PART III. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS, CONTINUED:

D. The permittee shall install and operate a device or devices to measure and monitor the number of hours of flare operation during each calendar month.

E. The permittee shall record the number of hours of flare operation during each calendar month. Such records shall include the date of the recording period and the number of flare operating hours during each recording period.

F. The permittee shall maintain monthly records of all criteria pollutant emissions calculations and supporting documentation to demonstrate compliance with the annual emission limitations set forth in Part II of this permit. Such records shall assure that the annual emissions of each criteria pollutant can be calculated over any rolling 12-month period.

G. The permittee shall maintain records of all GCCS maintenance and calibration operations listed in Part I. of this permit as detailed in the facility's amended Operations and Maintenance Plan.

H. The permittee shall maintain a complete record of all monitoring conducted pursuant to Part I. C. of this permit and all testing conducted pursuant to Part IV of this permit as well as any periodic testing required in the facility's amended Operations and Maintenance Plan.

I. The permittee shall retain any records required under this permit for a period of no less than five (5) calendar years. All records shall be made available to the Commissioner or his agent upon request.

J. The permittee shall submit a report annually to the CTDEP Compliance Assurance and Coordination Unit of the Bureau of Air Management detailing all exceedances of operational conditions monitored pursuant to Part I, Item C (1-5) of this permit. Such report shall include the remedial action taken by the permittee. The first of such reports shall be due 13 months after the issuance of the permit to operate.

PART IV. SOURCE TEST REQUIREMENTS: (Applicable if -X-Checked)

Source testing shall be required for the following pollutant(s):

☐ None at this time ☒ TSP[1] ☒ SOx[1] ☒ NOx[1] ☒ CO[1]

☒ VOC[1,2] (as NMOC) ☐ PM-10 ☐ Pb ☒ Other: (HAPS[2,3])

1 Flare Outlet Measurement
2 Flare Inlet Measurement
3 HAP measurements and MASC compliance demonstrations shall include the following HAPs common to MSW landfills: acetone, acrylonitrile, benzene, bromodichloromethane, butane, carbon disulfide, carbon tetrachloride, carbonyl sulfide, chlorobenzene, chlorodifluoromethane, chloroethane, chloroform, chloromethane, dichlorobenzenes,

FIRM NAME: Connecticut Resources Recovery Authority
EQUIPMENT LOCATION: Shelton Landfill, Route 110, Shelton, CT 06484
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STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

dichlorodifluoromethane, 1,1-dichloroethane, 1,2-dichloroethane, trans 1,2-dichloroethene, dichlorofluoromethane, dichloromethane, dimethylsulfide,ethane, ethanol, ethyl mercaptan, ethylbenzene, ethylene dibromide, fluorotrichloromethane, hexane, hydrogen sulfide, mercury, methyl ethyl ketone, methyl iso-butyl ketone, methyl mercaptan, pentane, propane, 2-propanol, propylene dichloride, 1,1,2,2-tetrachloroethane, tetrachloroethylene, toluene, 1,1,1-trichloroethane, trichloroethylene, vinyl chloride, vinylidene chloride, and xylenes

A. Pre-LFG Characterization and Stack Emissions Test, LFG Collection System Remediation and Assessment:

1. The permittee shall complete the landfill gas collection system remediation in accordance with the following timetable:

   a. Replacement of Well Head Valves by August 31, 2001 (Designated as Wells GW 2, GW3, GW8, GW15, GW17, GW18, GW19, GW21, GW22, GW23, & GW42 on Drawing 1 of 2, Dated 6/29/01)
   b. Installation of new side slope wells by October 31, 2001 (Designated as wells GW 70, GW 71, GW72, GW 73, & GW 74 on Drawing 1 of 2, Dated 6/29/01)
   c. Installation of new perimeter wells by October 31, 2001 (Designated as wells 45, 46, 47, & 48 on Drawing 1 of 2, Dated 6/29/01)

2. The permittee shall conduct a complete assessment of the effectiveness of the central well field within sixty (60) days of receipt of the permit to construct or completion of work under section IV.A. of this permit, whichever occurs later. Such assessment shall be submitted in writing to the Commissioner for review and approval forty-five (45) days after completion of the assessment. The assessment shall provide a determination as to whether or not a minimum of 90% of the LFG wells in the central well field are fully operational at that time. A fully operational well shall be defined as a well where negative pressure is maintained. The amount of vacuum applied to each well head shall be left to the discretion of the permittee.

3. Should the assessment detailed in Item 1 above indicate that less than 90% of the LFG wells in the central well field are fully operational, the permittee shall submit in writing to the Commissioner for review and approval an LFG collection system remediation plan. Such plan shall set forth those steps with associated timelines to bring the central well field to a minimum level of 90% operational effectiveness. Weather permitting, the permittee shall take all reasonable action to assure such LFG collection system remediation is completed within one hundred eighty (180) days of Commissioner's approval of the LFG collection system

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PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

remediation plan. The permitte shall notify the Commissioner in writing within one hundred fifty (150) days of the Commissioner's approval of the LFG collection system remediation plan if the permittee believes that the remediation of the LFG collection system can not be completed within the one hundred eighty (180) day period required above. Such notification shall include a revised timeline for the remediation of the LFG collection system as well as amended timelines for the submittal of a source test protocol, commencement of LFG characterization and source testing, and submittal of the LFG characterization and source test report.

4. Except as provided above, the permittee shall submit, to the Stack Test Group, a source test protocol to conduct the LFG characterization and source emission testing required in Items B and C below within one hundred eighty (180) days of the receipt of the permit to construct. All testing required in Items B and C below shall be completed within sixty (60) days of system start-up or DEP approval of the test protocol, whichever occurs later. The final report of such testing shall be submitted to the Stack Test Group no later than 45 days after the completion of the stack test.

5. All testing shall be conducted in accordance with the general guidelines of Attachment B of this permit unless specifically amended above. The following site-specific testing shall be required:

B. LFG Characterization[1]

1. Characterization of LFG with respect to total reduced sulfur, NMOC, methane, oxygen, nitrogen, and hazardous air pollutants (HAPs) common to municipal solid waste (MSW) landfills listed in footnote 3 of Part IV

2. Mass spectral tentative identification of HAPs not specifically listed above

3. Measurements of the GCCS LFG collection rates (scfm) and estimates of the gas collection system capture efficiency and total LFG production

C. Stack Emissions Testing (Enclosed Flare)[1]

1. Permit compliance demonstration of VOC (as NMOC) destruction efficiency

2. Permit compliance demonstrations for HAP, TSP, NO_x and CO flare emission rates and measurement of SO_x to determine the annual emission rate

PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL AND GAS COLLECTION AND CONTROL SYSTEM

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PART IV. SOURCE TEST REQUIREMENTS, CONTINUED:

D. Periodic Stack Emissions Testing (Enclosed Flare)[1]

The permittee shall conduct a permit compliance demonstration for NO_x and CO flare emission rates every five years.

[1] The permittee shall verify that a minimum of 90% of LFG wells in the central well field of the GCCS network are fully operational 24 hours prior to the initiation of LFG characterization and stack emissions testing.

PART V. APPLICABLE REGULATORY REFERENCES: (The Regulations of Connecticut State Agencies)

22a-174-3(a), (b), (f); 22a-174-18; 22a-174-19; 22a-174-29(b); 22a-174-22

These references are not intended to be all inclusive - other sections of the Regulations may apply.

PART VI. SPECIAL REQUIREMENTS:

A. The permittee shall operate and maintain the GCCS in accordance with the manufacturer's specifications and written recommendations.

B. The permittee shall operate the landfill and GCCS at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in Sections 22a-69-1 through 22a-69-7.4 of the RSCA.

C. The permittee shall comply with state odor regulations, as set forth in Section 22a-174-23 of the Regulations.

D. The permittee shall maintain the landfill surface (i.e. cover material) and/or replace, modify or supplement all components of the gas collection system as required to assure effective LFG collection to prevent nuisance odors, and to minimize the venting of LFG at the landfill surface.

E. The permittee shall comply with all applicable sections of 40 CFR Part 62, subpart GGG.

F. The amended Operations and Maintenance Plan shall be submitted to the Commissioner for review and approval within ninety (90) days of the effective date of the permit to construct.

G. The replacement, repair, addition, or retirement of any LFG well(s) or components (provided such components, if replaced, are replaced with components of equivalent design and performance specifications), and any remedial action taken pursuant to the terms of this permit, shall not require a modification of this permit.

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PART VI. SPECIAL REQUIREMENTS, CONTINUED:

H. The permittee shall not inject LFG condensate and/or landfill leachate into the enclosed flare.

I. The permittee shall submit a Top-Down BACT analysis for SO_x and/or NO_x if the initial performance test indicates that SO_x and/or NO_x emissions exceed 5 TPY or such level as may be required by the Commissioner.

J. Except as provided in the Public Use and Recreation Plan approved by the Commissioner, the permittee shall restrict the public from uncontrolled access to any location on the premise/landfill.

PART VII. ADDITIONAL TERMS AND CONDITIONS:

A. Upon completion of construction, the permittee shall certify to the Commissioner, in writing, that the facility has been constructed in accordance with the terms and conditions of its construction permit. Upon the Commissioner's approval of the certification and confirmation that the facility has been constructed in accordance with its construction permit, the Commissioner shall issue a permit to operate.

B. This permit does not relieve the permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.

C. Any representative of the DEP may enter the permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.

D. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.

E. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons or municipalities who are not parties to this permit.

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PART VII. ADDITIONAL TERMS AND CONDITIONS, CONTINUED:

F. Any document, including any notice, which is required to be submitted to the Commissioner under this permit shall be signed by a duly authorized representative of the permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in the documents and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense." Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157 of the Connecticut General Statutes.

G. Nothing in this permit shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the permittee by the Commissioner.

H. Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.

I. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

J. Any document required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Office of Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

PERMIT FOR MUNICIPAL SOLID WASTE LANDFILL AND GAS COLLECTION AND CONTROL SYSTEM

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

Appendices attached (Applicable if -X- checked)

☒ B Stack Emission Test Requirements

☐ C New Source Performance Standards

☒ E Control Equipment Specifications

Appendix B: SOURCE STACK TESTING GENERAL REQUIREMENTS

The owner/operator shall conduct stack testing within sixty (60) days of achieving the maximum production rate, but not later than one hundred-eighty (180) days after initial start up, unless specified otherwise within this permit.

Pursuant to the Regulations of Connecticut State Agencies, the owner/operator of this facility shall submit an Intent-to-Test (ITT) package consisting of an ITT form (Form AE404) and a test protocol. The test protocol shall be consistent with the Bureau's Emission Source Test Guideline specifying the test methodology to be followed and the conditions under which the process and its control equipment will be operated. The process shall be operated at a minimum of 90% of the permitted maximum rated capacity and the control equipment shall be operated as specified in this permit.

All proposed test methods shall comply with appropriate Federal test methods or methods acceptable to the Bureau. The ITT package must demonstrate compliance with applicable requirements of the Code of Federal Regulations (CFR) Title 40 Parts 51, 60 and 61. Any proposed test methods that deviate from those specified in these regulations must be approved by the Bureau prior to stack testing. All sampling ports shall be installed and located in compliance with 40 CFR Part 60 Appendix A, Method 1. Final plans showing the location of all sampling ports shall be submitted with the ITT package to the Air Bureau's Stack Test Group for approval prior to stack testing. Please submit an original and one copy of the ITT package to: Bureau of Air Management, New Source Review Section, 79 Elm Street, 5th Floor, Hartford, Connecticut 06106-5127.

An inspection of the source may be conducted to verify that appropriate instrumentation is available, and to determine the source process parameters, indicative of compliant operation, to be monitored during stack testing. Once the ITT package is approved, the owner/operator shall be notified, in writing, by the Bureau's Stack Test Group.

The source test must be scheduled, monitored by Bureau personnel, and completed within sixty (60) days from the date of Bureau approval of the proposed ITT package. It is the source's responsibility to conduct preparatory testing for tuning or debugging purposes prior to the Bureau-monitored stack testing. An acceptable test report must be submitted to the Bureau within forty-five (45) days of the completion of emissions testing. The owner/operator shall respond to any test report deficiency within fifteen (15) days of notification by the Bureau.

Acceptable test results will be incorporated into the final permit to operate. In the event that the stack test report is unacceptable, or the tested values show that the source is not in compliance with applicable permit conditions or regulations, a final permit to operate will be not be issued until the owner/operator responds to and corrects any deficiencies. The Bureau may issue an Administrative Order if there is a likelihood that the source may demonstrate compliance through a process modification and a retest.

APPENDIX E
Control Equipment

Air Pollution Control Equipment (applicable if -X- checked).

The following specifications need not be verified on a continuous basis, however, if requested by the Bureau, demonstration shall be shown.

☐ None

☐ Scrubber

Make and Model: _____
Reagent: _____
Reagent Flow Rate: _____
Pressure Drop (in H_2O): _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
PH: _____
Design Outlet Grain Loading (gr/dscf): _____
Design Removal Efficiency (%):

A. *Enforceable Conditions* - The following shall be verified at all times.

☐ Fabric Filter

Pressure Drop, range (in. H_2O): _____

B. *Design Specifications* - The following specifications need not be verified on a continuous basis, however, if requested by the Bureau, demonstration of compliance shall be shown.

☐ Fabric Filter

Make and Model: _____
Number of Bags in Use: _____
Air/Cloth Ratio: _____
Bag Material: _____
Cleaning Method: _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
Design Removal Efficiency (%): _____

☐ Wet Dust Suppression (ultrasonic or equivalent)

Number of Nozzles: _____
Water Flow Rate: _____
Location: _____

☐ Electrostatic Precipitator (ESP)

Make and Model: _____
Number of Fields: _____
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): _____
Design Outlet Grain Loading (gr/dscf): _____
Design Removal Efficiency (%): _____

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APPENDIX E
Control Equipment

☒ Afterburner (Enclosed Flare)
Make and Model: John Zink 18.6 MMBtu ZTOF Landfill Flare
Minimum Operating Temperature (°F): 1,400
Minimum Residence Time (sec): 0.9 @ 1,600 °F
Minimum VOC/HC Destruction Efficiency (%): 98
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm): 37,198

☒ Other - Minimum Fuel Pre-Filter Performance Specifications:

Trunk Line Capture Efficiency (%): 100
Trunk Line Removal Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 micrometers (μm))
Trunk Line Overall Efficiency (%) at Maximum Flow: 99.5 (> or = to 3 micrometers (μm))

Control Equipment Malfunction

1. Equipment or methods which control "air pollutant" "emissions" from a "stationary source" and which are necessary to the operation of such "stationary source" in compliance with applicable "emission standards" and regulations shall be maintained in operation at all times that the "stationary source" is in operation or emitting "air pollutants". This includes instruments required by permit, order, or regulation which measure those source operating parameters which affect air pollutant emissions, air pollution control equipment, or other instruments which measure meteorological data required by permit, order or regulation.

2. No "person" shall deliberately shut down any such control equipment, method or other instruments specified in subsection 22a-174-7(a) while the "source" is in operation except for such necessary maintenance as cannot be accomplished when the "stationary source" itself is not in operation and is not emitting "air pollutants".

3. In the event of breakdown, failure, or deliberate shut down of any control equipment, method, or other instrument specified in subsection 22a-174-7(a) during which time the "stationary source" will be in operation, all reasonable measures shall be taken to assure resumption of the control equipment as soon as possible. Due diligence shall be exercised to minimize "emissions" while the control equipment or method is inoperative. In the event such shutdown of control equipment or methods is expected or may reasonably be expected to continue for longer than 72 hours, and if the "source" is to be operated at any time during that period, the "Commissioner" shall be notified within twenty-four (24) hours or by 10 o'clock a.m. (10:00am) the following business day, whichever is later. Such notice shall include, but is not limited to, the following:

   a. Identification of the specific equipment or instrument taken out, or to be taken out, of service as well as its location, and, where applicable, registration or permit number;

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APPENDIX E
Control Equipment

b. The expected length of time that the "air pollution" control equipment or instrument will be out of service;

c. The nature and quantity of "emissions" of "air pollutants" likely to be emitted during the shutdown period;

d. Measures such as the use of offshift labor and equipment that will be taken to minimize the length of the shutdown period;

e. The reasons that it would be impossible or impractical to shut down the "stationary source" operation during the maintenance period;

4. The "Commissioner" may attach conditions to the operation of the "source" during the period of shutdown or breakdown.

ORIGINAL

Environmental Consultants
and Contractors

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Unit 3H
South Windsor, CT 06074

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SCS FIELD SERVICES

March 12, 2013
File No. 07204023.00

Mr. David Bodendorf, P.E.
Connecticut Resources Recovery Authority
100 Constitution Plaza- 6th Floor
Hartford, Connecticut 06103-1722

Subject: Shelton Landfill Gas Collection System Operations, Monitoring, and Maintenance Monthly Status Report for February, 2013.

Dear Mr. Bodendorf:

SCS Field Services (SCS-FS) performs Operations, Monitoring, and Maintenance (OM&M) services on the landfill gas (LFG) collection system at the Shelton Landfill (Landfill) for the Connecticut Resource Recovery Authority (CRRA). Routine site visits were conducted weekly to ascertain the status of the flare and the LFG collection system and to perform necessary system OM&M. This Monthly Status Report summarizes SCS-FS activities and observations during the month. In addition, this report addresses the non-routine diagnostics, maintenance or emergency responses that may have been performed during the month. The following attachments are included with this letter report:

- SCS Field Services Daily Work Logs (Attachment 1)
- Landfill Perimeter Gas Extraction Well Monitoring Data (Attachment 2).
- Landfill Central Gas Extraction Well Monitoring Data (Attachment 3).
- Blower/Flare Station Routine Maintenance Schedule Log (Attachment 4).
- Condensate Storage Tank Monitoring Logs (Attachment 5).
- Enclosed Flare Station Field Data Forms (Attachment 6).
- Continuous and Non-Continuous Monitoring Probe Forms (Attachment 7).
- Onsite Structure Monitoring Forms (Attachment 8).
- Offsite Perimeter Monitoring Probe Form (Attachment 9).
- Offsite Structure Methane Monitoring Forms (Attachment 10).
- Condensate Disposal Waste Manifests (Attachment 11).
- Flare Operational Chart Records (Attachment 12).
- Flare Permit Compliance Emission Logs (Attachment 13).
- Spare Parts Inventory (Attachment 14).
- Flare Station Emergency Generator Maintenance (Attachment 15).

Flare System

Flare system operational data are recorded during each weekly site visit. SCS-FS Daily Work Log sheets and Enclosed Flare Station Field Data Forms summarize our activities while on

location including routine monitoring, routine maintenance activities, and non-routine maintenance. Enclosed Flare Station Field Data Forms include flare system operational data recorded at the flare station each visit by an SCS-FS technician. LFG monitoring data are also saved electronically and maintained at our online Data Services web page. SCS Field Services Daily Work Logs and Enclosed Flare Station Field Data Forms for the period from February 1 through February 28, 2013 are included with this report as Attachment 1 and 6. Gas and probe monitoring data are included as Attachments.

Flare System Operation

There were no unscheduled shutdowns of the flare system during the month. Chart records indicate zero hours of downtime out of 672 total hours for the month. Copies of flare chart records, flare LFG flow totals, and updated emissions logs are included as Attachments 12 and 13.

Condensate Tanks

The liquid levels in the condensate tanks were measured during each weekly visit. On February 27, liquid levels in the Flare and Remote Tanks were measured at two feet seven inches and two feet nine inches, respectively.

Routine Flare System Maintenance and System Adjustments

Routine maintenance is performed on the flare system during regular weekly site visits. Routine flare maintenance is summarized on a check list provided by CRRA and included in this report as Attachment 4.

Scheduled Non-Routine Maintenance

SCS-FS did not perform non-routine maintenance during the month.

Flare System Outages/ Unscheduled Maintenance / Alarm Call-Back Response

On February 8, SCS-FS mobilized to the site to be in close proximity in the event of an alarm call during a forecasted blizzard and state road closures. SCS-FS checked the flare station backup generator fuel supply and EIT display prior to the storm. On February 9, SCS-FS checked the site and observed the flare system operating normally and no alarms on the EIT display. SCS-FS received no alarm calls during the storm and demobilized from the site on February 10.

On February 27, SCS-FS received a perimeter alarm call at 02:00. SCS-FS arrived on site at 05:15 and observed MW-4 in alarm on the EIT display. SCS-FS detected methane in probe MW-4 at 12 percent by volume with a portable gas meter (GEM 2000). Vacuum was increased to perimeter wells P-9 and -10 and SCS-FS remained on site to perform the scheduled weekly

site visit. SCS-FS continued to monitor the probe throughout the day and detected no methane in the probe with the GEM 2000 at 17:10. There were no perimeter alarms when SCS-FS departed the site at 18:00.

Wellfield Monitoring and Balancing

SCS-FS conducted wellfield monitoring and balancing during each weekly visit in February. The collected monitoring data are presented in Attachments 2 and 3.

Perimeter Probe Monitoring

Perimeter probe monitoring is routinely conducted on a weekly basis, although 12 perimeter probes are equipped with continuous monitoring sensors which notify SCS-FS and CRRA if gas is present above 75 percent of the lower explosive limit (LEL) for methane. No methane was detected in the perimeter probes during routine monitoring. The collected monitoring data are presented in Attachment 7.

Onsite Structures

SCS-FS monitors 19 onsite structures during each weekly routine site visit. No methane was detected in the onsite structures during the month. The collected monitoring data are presented in Attachment 8.

Off-Site Probe Monitoring

SCS-FS monitors 16 offsite probes during each weekly routine visit to the site. No methane was detected in the off-site probes during the month. Collected monitoring data are presented in Attachment 9.

Off-Site Structure Monitoring

SCS-FS monitors five off-site structures monthly. During the month of February, no methane was detected in the off-site structures. Collected monitoring data are presented in Attachment 10.

Flare Station Backup Generator Maintenance

SCS-FS performs basic maintenance on the flare station backup generator once a month. Monthly maintenance is summarized in the check list provided by CRRA as attachment 15.

Off-Site Residence Monitoring

The off-site residences were not monitored during the month of February.

Contingency Off-Site Gas Monitoring

The contingency offsite monitoring plan was not implemented during the month. Methane gas migration was controlled by means of the existing installed LFG control systems.

Closing

SCS-FS is pleased to have the opportunity to provide operations and maintenance services at the Shelton Landfill. Please contact either of the undersigned if you require additional information.

Sincerely,

Brian Basconi
Project Superintendent
SCS FIELD SERVICES

Aaron LeTendre
Project Manager
SCS FIELD SERVICES

BB/AL

cc Peter Egan, P.E. CRRA
Greg McCarron, SCS Engineers

Enclosures

Attachment 1

SCS Field Services Gas System Daily Logs

February 2013

SCS DataServices – Secure Environmental Data 

DAILY WORK LOG

Shelton Landfill, 1270

DATE: 02/08/2013	OPERATOR: mmccaffrey
TEMPERATURE: 30	MILEAGE: 206
WEATHER: Snow	
ARRIVAL TIME: 11:00:00 AM	DEPARTURE TIME: 03:00:00 PM

EQUIPMENT USED:

OTHER PERSONNEL:

Mobilized to Shelton LF for storm response. Arrived to check on site. Checked generator fuel, flare station, perimeter system sensors (EIT). All OK

COMMENT #1:

COMMENT #2: Checked into Hotel

COMMENT #3:

COMMENT #4:

COMMENT #5:

COMMENT #6:

COMMENT #7:

COMMENT #8:

COMMENT #9:

COMMENT #10:

COMMENT #11:

SCS DataServices – Secure Environmental Data 

DAILY WORK LOG

Shelton Landfill, 1270

DATE: 02/09/2013	OPERATOR: mmccaffrey
TEMPERATURE: 31	MILEAGE: 206
WEATHER: Snow	
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 01:00:00 PM

EQUIPMENT USED:

OTHER PERSONNEL:

COMMENT #1: Checked on the Flare Station and Control Room during the Blizzard. No alarms found on EIT. Checked Flare Station for normal operation. No power outages or alarms found.

COMMENT #2: Stayed at the hotel on standby until the highway ban was lifted and high winds stopped, rechecked the sit for normal operation. No alarms found on the EIT and the Flare was operating normal.

COMMENT #3:

COMMENT #4:

COMMENT #5:

COMMENT #6:

COMMENT #7:

COMMENT #8:

COMMENT #9:

COMMENT #10:

COMMENT #11:

SCS DataServices – Secure Environmental Data 

DAILY WORK LOG

Shelton Landfill, 1270

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 38	MILEAGE: 154
WEATHER: Raining	
ARRIVAL TIME: 05:15:00 AM	DEPARTURE TIME: 06:00:00 PM

EQUIPMENT USED:

OTHER PERSONNEL:

COMMENT #1: Upon arrival MW04 showed hot; CH4 at 12%, read at 5:25am. Opened valves to perameter wells 09 and 10 to decrese methane in probe. Recorded clearance of MW04 at 5:11pm.

COMMENT #2:

COMMENT #3:

COMMENT #4:

COMMENT #5:

COMMENT #6:

COMMENT #7:

COMMENT #8:

COMMENT #9:

COMMENT #10:

COMMENT #11:

Attachment 2

Landfill Perimeter Gas Extraction Well Monitoring Data

February 2013

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/04/13	21	29.68	Clear	Calm	9:54	11:13	7453	02/04/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
HC01	2/4/2013 10:49	0	1.2	18.7	80.1	-1.4	-1.4	
HC02	2/4/2013 10:55	0	2.2	16.4	81.4	0	-0.3	
HC03	2/4/2013 10:56	0	1.6	19.5	78.9	-1.2	-1.2	
HC04	2/4/2013 11:04	2.1	5.7	13.7	78.5	-2.2	-2	
SHLTPW01	2/4/2013 9:54	0	2.4	17.4	80.2	0	0	fully closed
SHLTPW02	2/4/2013 9:57	0	3.2	16.7	80.1	0	0	fully closed
SHLTPW03	2/4/2013 9:58	4.9	10.9	12.7	71.5	-0.6	-0.2	
SHLTPW04	2/4/2013 9:59	0	1.6	16.8	81.6	-0.1	0	fully closed
SHLTPW05	2/4/2013 10:00	0	0.7	20.3	79	0	0	fully closed
SHLTPW06	2/4/2013 10:02	0	2.5	18.3	79.2	0	-0.1	fully closed
SHLTPW07	2/4/2013 10:03	0	1.1	18.9	80	0	0	fully closed
SHLTPW08	2/4/2013 10:04	0	0.4	20.5	79.1	-0.1	0	fully closed
SHLTPW09	2/4/2013 10:06	0	1.2	19.8	79	-3.6	-2.5	Decreased vacuum
SHLTPW10	2/4/2013 10:07	0	2.4	17.8	79.8	-3.2	-2.4	Decreased vacuum
SHLTPW11	2/4/2013 10:08	18.7	13.1	13.2	55	-6.9	-6.9	
SHLTPW12	2/4/2013 10:10	8.3	8.3	14.2	69.2	-6.6	-6.5	
SHLTPW13	2/4/2013 10:11	17	14.8	13.7	54.5	-11.2	-11.3	
SHLTPW14	2/4/2013 10:12	6.1	7.4	14.9	71.6	-5.4	-5.3	
SHLTPW15	2/4/2013 10:13	7.7	11.8	11.7	68.8	-1.3	-1.3	
SHLTPW16	2/4/2013 10:15	16.7	18.8	8	56.5	-3	-3	
SHLTPW17	2/4/2013 10:17	14.8	22.7	4.5	58	-2.1	-2.2	
SHLTPW18	2/4/2013 10:19	6.5	12.4	10.5	70.6	-0.9	-0.8	
SHLTPW19	2/4/2013 10:21	0	2	17	81	0	0	fully closed
SHLTPW20	2/4/2013 10:23	0	0.5	20.3	79.2	-0.1	0	fully closed
SHLTPW21	2/4/2013 10:25	0	0.5	20.8	78.7	-0.1	-0.1	fully closed
SHLTPW22	2/4/2013 10:27	9.5	8.6	16.1	65.8	-2.2	-2.2	
SHLTPW23	2/4/2013 10:28	0	1.1	19.3	79.6	-0.1	-0.2	fully closed
SHLTPW24	2/4/2013 10:29	3.7	4.9	17.8	73.6	-0.9	-1.1	
SHLTPW25	2/4/2013 10:32	0	0.6	20.4	79	-0.2	-0.2	fully closed
SHLTPW26	2/4/2013 10:34	0	0.5	20.9	78.6	-0.1	-0.2	fully closed
SHLTPW27	2/4/2013 10:36	0	0.4	20.6	79	0	0	fully closed
SHLTPW28	2/4/2013 10:37	0	0.4	20.6	79	0	0	fully closed
SHLTPW29	2/4/2013 10:38	0	0.6	20.4	79	0	0	fully closed
SHLTPW30	2/4/2013 10:39	0	1	19.8	79.2	0	0	fully closed
SHLTPW31	2/4/2013 10:41	0	0.8	19.8	79.4	0	0	fully closed
SHLTPW32	2/4/2013 10:42	0	0.3	20.7	79	0	0	fully closed
SHLTPW33	2/4/2013 10:46	9.6	24.8	4.6	61	-5	-4.9	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
SHLTPW34	2/4/2013 10:47	20.8	18.6	1.6	59	-2.1	-1.9	
SHLTPW35	2/4/2013 10:48	1.2	10.1	11.2	77.5	0	0	
SHLTPW36	2/4/2013 10:50	11.1	11.1	14.7	63.1	-1.9	-1.9	
SHLTPW37	2/4/2013 10:52	44.4	20	3.7	31.9	-3.3	-8.7	Increased vacuum
SHLTPW38	2/4/2013 10:53	38.6	29.4	2.6	29.4	-7.5	-7.4	
SHLTPW39	2/4/2013 10:58	47.1	30.5	6.8	15.6	-5.4	-5.3	
SHLTPW40	2/4/2013 10:59	42.3	29.4	5	23.3	-12.9	-12.9	watered in
SHLTPW41	2/4/2013 11:00	59.4	36.4	3	1.2	-10.9	-11	watered in
SHLTPW42	2/4/2013 11:03	63.9	28.9	3.2	4	-4.9	-4.9	
SHLTPW43	2/4/2013 11:06	0	2.6	19.1	78.3	0	0	fully closed
SHLTPW44	2/4/2013 11:07	0	2.7	18.7	78.6	0	0	fully closed
SHLTPW45	2/4/2013 11:08	56.3	30.5	3.9	9.3	-12.6	-12.6	Surging
SHLTPW46	2/4/2013 11:10	7.4	20.9	11.2	60.5	-0.4	-0.3	
SHLTPW47	2/4/2013 11:11	0	2.1	18.8	79.1	-12.6	-12.6	
SHLTPW48	2/4/2013 11:13	10.5	11.5	11	67	-11.3	-11.4	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/14/13	40	29.87	Clear	Calm	16:20	17:08	7453	02/14/13	50% CH4, 35% CO2, 20.8% O2
B Todoriko	02/15/13	25	29.96	Clear	Calm	8:29	9:02	7453	02/15/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
HC01	2/15/2013 8:35	0	0.3	20.6	79.1	-2.7	-2.6	
HC02	2/15/2013 8:41	0	1.2	19.2	79.6	-1.7	-1.6	fully closed
HC03	2/15/2013 8:43	0	1.5	19	79.5	-1.1	-1	
HC04	2/15/2013 8:52	2.1	4.7	15.7	77.5	-1.9	-2	
SHLTPW01	2/14/2013 16:20	0	1.9	17.9	80.2	-0.1	0	fully closed
SHLTPW02	2/14/2013 16:22	0	2.8	16.7	80.5	0	0	fully closed
SHLTPW03	2/14/2013 16:24	4.5	9.7	11.1	74.7	-0.6	-0.5	
SHLTPW04	2/14/2013 16:25	0	1	19.1	79.9	0	0	fully closed
SHLTPW05	2/14/2013 16:26	0	0.6	20.4	79	0	0	fully closed
SHLTPW06	2/14/2013 16:28	0	2.3	17.5	80.2	0	0	fully closed
SHLTPW07	2/14/2013 16:29	0	1	19	80	0	0	fully closed
SHLTPW08	2/14/2013 16:31	0	0.3	20.7	79	0	0	fully closed
SHLTPW09	2/14/2013 16:33	0	1.1	19.3	79.6	-2.4	-2.1	Decreased vacuum
SHLTPW10	2/14/2013 16:34	0	2.3	17.3	80.4	-2.2	-2	Decreased vacuum
SHLTPW11	2/14/2013 16:36	18.6	12.8	11.9	56.7	-6.5	-6.5	
SHLTPW12	2/14/2013 16:38	8.7	7.4	15.4	68.5	-6.6	-4.7	Decreased vacuum
SHLTPW13	2/14/2013 16:40	20.4	16.6	11.7	51.3	-11.6	-11.6	
SHLTPW14	2/14/2013 16:41	5.5	6.7	15.9	71.9	-6.4	-6.3	
SHLTPW15	2/14/2013 16:42	10.2	12.1	11.9	65.8	-1.3	-1.2	
SHLTPW16	2/14/2013 16:44	16.1	17.8	7.9	58.2	-2.8	-2.8	
SHLTPW17	2/14/2013 16:46	13.3	21.5	4.9	60.3	-2.1	-2.2	
SHLTPW18	2/14/2013 16:47	6.9	11.5	11.6	70	-0.7	-0.7	
SHLTPW19	2/14/2013 16:49	0	1.6	18.1	80.3	0	0	fully closed
SHLTPW20	2/14/2013 16:50	0	0.4	20.5	79.1	0	0	fully closed
SHLTPW21	2/14/2013 16:52	0	0.5	20.2	79.3	0	0	fully closed
SHLTPW22	2/14/2013 16:53	8.7	8.2	16.1	67	-1.9	-2	
SHLTPW23	2/14/2013 16:55	0	0.6	20	79.4	0	0	fully closed
SHLTPW24	2/14/2013 16:56	3.6	4.7	17.5	74.2	-1.2	-1.3	
SHLTPW25	2/14/2013 16:59	0	0.3	20.7	79	0	0	fully closed
SHLTPW26	2/14/2013 17:00	0	0.4	20.5	79.1	0	0.1	fully closed
SHLTPW27	2/14/2013 17:02	0	0.4	20.4	79.2	0	0	fully closed
SHLTPW28	2/14/2013 17:03	0	0.4	20.4	79.2	0	0	fully closed
SHLTPW29	2/14/2013 17:04	0	0.5	20.2	79.3	0	0	fully closed
SHLTPW30	2/14/2013 17:05	0	1.1	19.4	79.5	0	0	fully closed
SHLTPW31	2/14/2013 17:07	0	0.7	19.8	79.5	0	0	fully closed
SHLTPW32	2/14/2013 17:08	0	0.3	20.4	79.3	0	0	fully closed

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
SHLTPW33	2/15/2013 8:29	10.3	24.6	1.8	63.3	-6.2	-6.1	
SHLTPW34	2/15/2013 8:31	20.5	17.3	2.7	59.5	-1.8	-1.8	
SHLTPW35	2/15/2013 8:32	0	6.7	15.5	77.8	0	0	fully closed
SHLTPW36	2/15/2013 8:37	10.3	10.5	13.3	65.9	-1.8	-1.8	
SHLTPW37	2/15/2013 8:38	7.5	19.3	3.1	70.1	-12.3	-12.2	
SHLTPW38	2/15/2013 8:40	32.9	25.1	5.7	36.3	-6.8	-6.7	
SHLTPW39	2/15/2013 8:45	60.8	37.4	1.7	0.1	-6	-5.9	
SHLTPW40	2/15/2013 8:46	46	30.7	3.8	19.5	-12.5	-12.5	
SHLTPW41	2/15/2013 8:48	60.7	39.1	0	0.2	-10.7	-10.9	
SHLTPW42	2/15/2013 8:51	60.8	25.6	3.6	10	-4.1	-4.1	
SHLTPW43	2/15/2013 8:54	0	1.3	19.2	79.5	0	0	fully closed
SHLTPW44	2/15/2013 8:55	0	2.3	18.6	79.1	0	0	fully closed
SHLTPW45	2/15/2013 8:57	8.1	7.8	14.9	69.2	-12.7	-12.6	
SHLTPW46	2/15/2013 8:58	7.5	19.9	12.9	59.7	-0.3	-0.3	
SHLTPW47	2/15/2013 9:00	0	2.2	18.2	79.6	-12.5	-11.6	Decreased vacuum
SHLTPW48	2/15/2013 9:02	11.5	12.1	10.4	66	-11.3	-11.4	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/18/13	18	29.97	Clear	Calm	10:14	11:31	7453	02/18/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
HC01	2/18/2013 11:06	0	1	18.4	80.6	-1.4	-1.5	
HC02	2/18/2013 11:11	0	1	18.8	80.2	-2	-1.9	fully closed
HC03	2/18/2013 11:12	0	1.2	19.9	78.9	-1.2	-1.3	
HC04	2/18/2013 11:21	0.5	2.9	15.6	81	-2.5	-2.3	
SHLTPW01	2/18/2013 10:14	0	1	20.2	78.8	0	0	fully closed
SHLTPW02	2/18/2013 10:17	0	2.7	17.4	79.9	-0.1	0	fully closed
SHLTPW03	2/18/2013 10:18	4.7	10.6	13.3	71.4	-0.7	-0.7	
SHLTPW04	2/18/2013 10:19	0	1	17.7	81.3	-0.1	0	fully closed
SHLTPW05	2/18/2013 10:20	0	0.6	20.7	78.7	0	0	fully closed
SHLTPW06	2/18/2013 10:22	0	2.3	19	78.7	-0.1	-0.1	fully closed
SHLTPW07	2/18/2013 10:23	0	0.8	19.4	79.8	0	0	fully closed
SHLTPW08	2/18/2013 10:25	0	0.3	20.9	78.8	0	0	fully closed
SHLTPW09	2/18/2013 10:26	0.2	1.1	20	78.7	-2.4	-2.4	
SHLTPW10	2/18/2013 10:27	0	2.5	18.1	79.4	-2.2	-2.2	
SHLTPW11	2/18/2013 10:28	17.3	13	13.4	56.3	-7.1	-7.1	
SHLTPW12	2/18/2013 10:30	6.5	7.4	14	72.1	-4.8	-4.8	
SHLTPW13	2/18/2013 10:31	9.4	12.6	13.6	64.4	-12.5	-12.6	
SHLTPW14	2/18/2013 10:32	4.3	6	15	74.7	-6.6	-6.5	
SHLTPW15	2/18/2013 10:33	5.9	10.6	14.1	69.4	-1.5	-1.5	
SHLTPW16	2/18/2013 10:34	14.9	16.8	9.8	58.5	-3.2	-3.2	
SHLTPW17	2/18/2013 10:37	13.6	21.4	7.4	57.6	-2.3	-2.3	
SHLTPW18	2/18/2013 10:38	6.9	12	8.3	72.8	-0.9	-0.8	
SHLTPW19	2/18/2013 10:39	0	1.7	16.6	81.7	-0.1	0	fully closed
SHLTPW20	2/18/2013 10:41	0	0.5	20.4	79.1	-0.1	0	fully closed
SHLTPW21	2/18/2013 10:42	0	0.5	20.8	78.7	-0.1	-0.2	fully closed
SHLTPW22	2/18/2013 10:43	6.6	7	17.8	68.6	-2.3	-2.4	
SHLTPW23	2/18/2013 10:45	0	0.9	19.1	80	-0.1	-0.1	fully closed
SHLTPW24	2/18/2013 10:46	2.5	4.1	18.6	74.8	-1	-1.2	
SHLTPW25	2/18/2013 10:48	0	0.4	20.5	79.1	-0.2	-0.1	fully closed
SHLTPW26	2/18/2013 10:50	0	0.4	20.5	79.1	-0.1	-0.2	fully closed
SHLTPW27	2/18/2013 10:51	0	0.4	20.6	79	-0.1	-0.1	fully closed
SHLTPW28	2/18/2013 10:52	0	0.3	20.6	79.1	-0.1	-0.1	fully closed
SHLTPW29	2/18/2013 10:54	0	0.5	20.6	78.9	-0.1	0	fully closed
SHLTPW30	2/18/2013 10:55	0	0.9	20.1	79	-0.1	-0.2	fully closed
SHLTPW31	2/18/2013 10:56	0	0.5	20.2	79.3	0	-0.1	fully closed
SHLTPW32	2/18/2013 10:57	0	0.2	20.6	79.2	0	-0.1	fully closed
SHLTPW33	2/18/2013 11:01	7.9	23.4	4	64.7	-4.3	-4.3	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
SHLTPW34	2/18/2013 11:03	26.3	18.8	0	54.9	-1.7	-2.9	Increased vacuum
SHLTPW35	2/18/2013 11:04	2.6	11.2	9.1	77.1	-0.1	-0.1	
SHLTPW36	2/18/2013 11:07	9.2	9.6	15.5	65.7	-2.2	-2.3	
SHLTPW37	2/18/2013 11:08	6	16.1	7.9	70	-12.8	-12.7	
SHLTPW38	2/18/2013 11:09	21.1	18.1	8.2	52.6	-7.1	-7	
SHLTPW39	2/18/2013 11:13	60	36	1.7	2.3	-5.6	-5.5	
SHLTPW40	2/18/2013 11:14	30.7	21.9	7.8	39.6	-13.3	-13.4	watered in
SHLTPW41	2/18/2013 11:16	32.3	31.9	2.4	33.4	-11.6	-11.6	
SHLTPW42	2/18/2013 11:20	78.5	19.4	0	2.1	-3.4	-2.5	watered in
SHLTPW43	2/18/2013 11:23	0	1.6	19.3	79.1	-0.2	-0.2	fully closed
SHLTPW44	2/18/2013 11:24	0	2.3	19	78.7	0	-0.1	fully closed
SHLTPW45	2/18/2013 11:26	6.8	6.5	17.1	69.6	-13.4	-13.5	watered in
SHLTPW46	2/18/2013 11:28	6.8	18.2	14.2	60.8	-0.8	-0.9	
SHLTPW47	2/18/2013 11:29	0	2	18.9	79.1	-6.1	-5.9	Surging
SHLTPW48	2/18/2013 11:31	8	10.1	12.4	69.5	-12.1	-11.7	Decreased vacuum

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/27/13	40	29.64	Raining	Windy	13:26	15:05	7453	02/27/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
HC01	2/27/2013 14:36	0	0.9	20	79.1	-3.2	-3	
HC02	2/27/2013 14:45	0.2	4.7	16.3	78.8	-1.8	-1.8	
HC03	2/27/2013 14:47	1.4	3.8	16.4	78.4	-0.8	-0.8	
HC04	2/27/2013 14:55	14.3	10.9	11.9	62.9	-2.1	-1.9	
SHLTPW01	2/27/2013 13:26	0	3.6	15.1	81.3	0	0	fully closed
SHLTPW02	2/27/2013 13:29	0	6	12.7	81.3	-0.1	0	fully closed
SHLTPW03	2/27/2013 13:31	5.9	11.2	8.7	74.2	-0.6	-0.7	
SHLTPW04	2/27/2013 13:33	0	3.1	17.3	79.6	0	0	fully closed
SHLTPW05	2/27/2013 13:34	0	1.2	18.9	79.9	0	0	fully closed
SHLTPW06	2/27/2013 13:36	0	2.1	16.6	81.3	0	0	fully closed
SHLTPW07	2/27/2013 13:38	0	2.4	16.8	80.8	0	0	fully closed
SHLTPW08	2/27/2013 13:39	0	1.4	16.7	81.9	-0.2	-0.1	fully closed
SHLTPW09	2/27/2013 13:41	0	1.5	16.5	82	-7.6	-3.9	Decreased vacuum
SHLTPW10	2/27/2013 13:45	1.8	4.7	12.7	80.8	-8.8	-3.7	Decreased vacuum
SHLTPW11	2/27/2013 13:47	26.1	16	8	49.9	-7.4	-7.3	
SHLTPW12	2/27/2013 13:48	26.4	14.9	8.9	49.8	-5.3	-5.4	
SHLTPW13	2/27/2013 13:49	51.9	31.6	3.2	13.3	-13.3	-13.3	
SHLTPW14	2/27/2013 13:51	25	19.5	6.3	49.2	-10.6	-10.6	
SHLTPW15	2/27/2013 13:52	28.7	20.4	6	44.9	-1.7	-1.8	
SHLTPW16	2/27/2013 13:54	31.7	25.3	5.2	37.8	-4.9	-4.8	
SHLTPW17	2/27/2013 13:57	17.1	21.8	4	57.1	-2.2	-2.1	
SHLTPW18	2/27/2013 13:59	4.8	8.1	11.6	75.5	-10.1	-10.1	
SHLTPW19	2/27/2013 14:01	0	3	16.6	80.4	0	-0.1	fully closed
SHLTPW20	2/27/2013 14:02	0	1.1	19.8	79.1	-0.1	-0.1	fully closed
SHLTPW21	2/27/2013 14:04	0	0.9	19.4	79.7	-0.1	0	fully closed
SHLTPW22	2/27/2013 14:06	24.7	15.9	10.5	48.9	-1.8	-1.8	
SHLTPW23	2/27/2013 14:09	51.7	31.6	2.7	14	0	-5.9	Increased vacuum
SHLTPW24	2/27/2013 14:11	16.6	14.6	10.6	58.2	-3.2	-3.2	
SHLTPW25	2/27/2013 14:13	0.1	3.2	18.5	78.2	-0.2	-0.1	
SHLTPW26	2/27/2013 14:14	0	1.1	19.8	79.1	0	-0.2	fully closed
SHLTPW27	2/27/2013 14:16	0	0.8	19.7	79.5	-0.1	0	fully closed
SHLTPW28	2/27/2013 14:17	0	0.7	19.1	80.2	-0.1	-0.1	fully closed
SHLTPW29	2/27/2013 14:19	0	0.8	17.9	81.3	-0.1	0	fully closed
SHLTPW30	2/27/2013 14:20	0	2.5	15.3	82.2	-0.1	0	fully closed
SHLTPW31	2/27/2013 14:22	0	2.3	15.5	82.2	-0.1	-0.2	fully closed
SHLTPW32	2/27/2013 14:23	0	0.9	19.5	79.6	-0.1	-0.1	fully closed
SHLTPW33	2/27/2013 14:27	0.9	23.4	0	75.7	-3	-2.8	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Comments
SHLTPW34	2/27/2013 14:30	34.3	16.6	0.3	48.8	-1.2	-1	
SHLTPW35	2/27/2013 14:32	10	16.2	4.9	68.9	-0.1	-0.2	
SHLTPW36	2/27/2013 14:38	20.3	15.8	9.8	54.1	-2.4	-2.5	
SHLTPW37	2/27/2013 14:40	1.1	4	17.2	77.7	-12	-10.5	Decreased vacuum
SHLTPW38	2/27/2013 14:43	57.1	37.2	0	5.7	-0.5	-12.2	Increased vacuum; watered in
SHLTPW39	2/27/2013 14:48	60.4	38.5	1	0.1	-4.3	-4.1	
SHLTPW40	2/27/2013 14:50	5.7	7.6	14.9	71.8	-12	-12.1	watered in
SHLTPW41	2/27/2013 14:51	58.4	38.3	3.1	0.2	-11	-11	
SHLTPW42	2/27/2013 14:54	45.7	13.7	7.8	32.8	-6	-5.8	
SHLTPW43	2/27/2013 14:57	0	2.9	17.7	79.4	-0.9	-0.7	fully closed
SHLTPW44	2/27/2013 14:59	0	1.7	18.7	79.6	0	0	fully closed
SHLTPW45	2/27/2013 15:00	47.5	20.9	11.6	20	-12.2	-12.1	watered in
SHLTPW46	2/27/2013 15:02	8.6	21.6	11.2	58.6	0	-0.1	
SHLTPW47	2/27/2013 15:04	5	7	13.3	74.7	-5.6	-5.1	Surging
SHLTPW48	2/27/2013 15:05	30.6	23.1	1.7	44.6	-11.7	-11.8	

Attachment 3

Landfill Central Gas Extraction Well Monitoring Data

February 2013

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/04/13	21	29.68	Clear	Calm	7:17	9:42	7453	02/04/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW01	2/4/2013 8:11	34.3	29.8	0.7	35.2	-8.3	-8.3	34	
GW02	2/4/2013 9:38	23.6	13.6	2.7	60.1	-1.4	-1.4	42	
GW03	2/4/2013 9:40	20.5	15.2	3	61.3	-0.2	-0.1	33	
GW04	2/4/2013 8:14	63.2	35.5	0.1	1.2	-12.8	-12.9	34	
GW05	2/4/2013 8:16	55.5	44.4	0	0.1	-7.5	-7.5	35	
GW06	2/4/2013 7:17	8.5	5.3	18.1	68.1	-0.2	-0.3	26	
GW07	2/4/2013 8:18	14.8	12.2	11.9	61.1	0	0	34	
GW08	2/4/2013 8:20	25.9	25.4	4.9	43.8	0	0	33	
GW09	2/4/2013 8:24	49.9	36.6	3.9	9.6	-9.5	-9.4	33	Surging
GW10	2/4/2013 8:25	21.4	18.9	10.2	49.5	0	0	31	
GW11									Abandoned
GW12	2/4/2013 8:30	49.9	30.8	2.5	16.8	-12.4	-12.3	33	
GW13	2/4/2013 8:32	53.1	33.8	2.1	11	-11.2	-11.3	31	
GW14	2/4/2013 8:34	56.4	43.1	0.4	0.1	-7.8	-7.7	31	
GW15	2/4/2013 8:35	55.2	41	0.8	3	-13.7	-13.7	32	
GW16									Abandoned
GW17	2/4/2013 8:37	43.7	21.7	5.9	28.7	-13.7	-13.7	32	
GW18	2/4/2013 8:40	10.5	7.8	14.8	66.9	0	0.1	33	
GW19	2/4/2013 8:42	23.9	11.5	13.2	51.4	0	0	33	
GW20									Abandoned
GW21	2/4/2013 8:44	0.1	5.6	13.8	80.5	0	0	33	fully closed
GW22	2/4/2013 8:45	57.2	40.3	2.3	0.2	0	0	32	
GW23	2/4/2013 8:49	12.2	14.9	7.3	65.6	0	0.1	33	fully closed
GW24									Abandoned
GW25	2/4/2013 9:19	17.8	15.4	5.8	61	-0.9	-0.3	42	Decreased vacuum
GW26	2/4/2013 9:22	67	31.1	1.7	0.2	-0.1	-0.2	44	
GW27	2/4/2013 9:24	4	5.6	13.1	77.3	-13.9	-13.8	45	watered in
GW28									Abandoned
GW29	2/4/2013 9:27	23.9	21.9	7.9	46.3	-0.2	-0.2	54	
GW30	2/4/2013 9:29	22.2	15	3	59.8	-7	-7	49	
GW31	2/4/2013 7:54	43.7	31.5	5.4	19.4	-13.9	-13.9	39	
GW32	2/4/2013 7:56	54.1	39.9	3.8	2.2	-12.6	-12.4	38	
GW33	2/4/2013 7:58	56.6	41.3	1.9	0.2	-13.3	-13.3	33	
GW34	2/4/2013 9:31	36.4	31.1	5.6	26.9	-12	-12.1	48	
GW35	2/4/2013 9:33	0.1	2.1	16.5	81.3	-0.3	-0.2	40	fully closed
GW36	2/4/2013 8:02	10.9	2	18.1	69	0	0	34	
GW37	2/4/2013 8:05	21.9	16.2	0.2	61.7	-4.6	-4.6	36	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW38	2/4/2013 8:07	5.8	3.8	14.6	75.8	-1.7	-0.7	32	Decreased vacuum
GW39	2/4/2013 8:09	52.4	30.4	0.1	17.1	-8.8	-8.9	33	
GW40	2/4/2013 9:34	23	13.6	4	59.4	-4.4	-4.4	42	
GW41	2/4/2013 9:36	35.7	31.5	3.3	29.5	-11	-11	43	
GW42	2/4/2013 8:13	56.2	43.7	0	0.1	-9.7	-9.6	36	
GW43	2/4/2013 8:54	10	7.8	8.3	73.9	-0.4	-0.3	33	
GW44	2/4/2013 8:58	58.1	28.7	13	0.2	0	0	34	
GW45	2/4/2013 9:10	35.8	50.8	0	13.4	-13.8	-13.9	35	
GW46	2/4/2013 9:11	49.7	48.3	1.8	0.2	-0.1	-0.1	36	
GW47	2/4/2013 9:13	30.3	7.7	0.1	61.9	-6	-6	38	
GW48	2/4/2013 9:14	57.3	41.8	0	0.9	-12	-12.1	35	
GW49	2/4/2013 9:16	47.3	31.3	4.4	17	-8.9	-8.9	36	
GW50	2/4/2013 8:52	7.5	1.7	2.2	88.6	0	0	34	
GW51	2/4/2013 9:08	21.1	17.8	11.7	49.4	-0.1	-0.1	37	
GW52	2/4/2013 9:06	26.6	12	7.3	54.1	-11.8	-11.8	38	
GW53	2/4/2013 9:01	38.2	36.3	5.7	19.8	-13.9	-13.8	34	
GW54									Abandoned
GW55	2/4/2013 9:03	51.1	47.6	1.1	0.2	-7.3	-7.3	65	
GW56	2/4/2013 7:19	51.8	32.5	1.4	14.3	-11.3	-11.5	26	
GW57	2/4/2013 7:23	66.7	20.5	0	12.8	2.5	-3.4	27	Increased vacuum
GW58	2/4/2013 7:27	64.1	35.8	0	0.1	-9.6	-9.6	26	
GW59	2/4/2013 7:31	59.9	35.5	1.2	3.4	-8.4	-8.3	26	
GW60	2/4/2013 7:33	50	35.5	1	13.5	-6.2	-6.3	26	
GW61	2/4/2013 7:35	29.1	26.8	1.8	42.3	-6.5	-6.5	31	
GW62	2/4/2013 7:37	33.6	26.6	0	39.8	-3.6	-3.8	32	
GW63	2/4/2013 7:41	18.7	9.9	14.5	56.9	0	0	34	
GW64	2/4/2013 7:46	73	22.3	1.7	3	0.1	0	31	fully closed
GW65	2/4/2013 7:47	0.3	4	14.6	81.1	-0.2	-0.2	32	fully closed
GW66	2/4/2013 8:00	0.8	2	18.7	78.5	0	0	32	fully closed
GW67	2/4/2013 9:42	56.3	42.1	1.4	0.2	-7.5	-7.4	39	
GW68	2/4/2013 8:22	11.3	14.8	6.1	67.8	-0.1	-0.1	31	
GW69	2/4/2013 8:28	37.3	28.3	0.5	33.9	-9.7	-9.6	32	
GW70	2/4/2013 7:21	61	38.6	0.2	0.2	-0.3	-0.4	26	
GW71	2/4/2013 7:25	56.2	39	1.8	3	-10.8	-10.7	27	
GW72	2/4/2013 7:29	61.7	38.2	0	0.1	-8.5	-8.6	25	
GW73	2/4/2013 7:39	0.1	3.3	15.5	81.1	0	0	30	fully closed
GW74	2/4/2013 7:44	68.4	31.5	0	0.1	0	0	30	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/14/13	40	29.87	Clear	Calm	13:43	16:14	7453	02/14/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW01	2/14/2013 14:39	39.6	29.7	0.3	30.4	-7.9	-7.8	47	
GW02	2/14/2013 16:10	25.9	13.3	0.9	59.9	-1.2	-1.2	50	
GW03	2/14/2013 16:13	0.3	2	13.7	84	0	0.1	49	fully closed
GW04	2/14/2013 14:43	55.3	30	1.4	13.3	-11.6	-11.6	60	
GW05	2/14/2013 14:45	56.1	38.3	1.3	4.3	-9.3	-9.3	60	
GW06	2/14/2013 13:43	12.3	6.7	16.7	64.3	-0.7	-0.6	57	Decreased vacuum
GW07	2/14/2013 14:47	17.6	11.9	14.2	56.3	0	0	58	
GW08	2/14/2013 14:50	23.6	22	5.2	49.2	0	0	62	
GW09	2/14/2013 14:54	49.4	35.3	3.1	12.2	-8.4	-8.3	60	
GW10	2/14/2013 14:56	17.4	13.7	14.1	54.8	0	-0.1	49	Surging
GW11									Abandoned
GW12	2/14/2013 15:01	42.7	26.4	4.1	26.8	-10.7	-10.6	54	
GW13	2/14/2013 15:03	49.2	31	2	17.8	-10.6	-10.5	55	
GW14	2/14/2013 15:06	57.9	42	0	0.1	-11.1	-11.2	54	
GW15	2/14/2013 15:08	46.3	31.7	5.6	16.4	-12.1	-12.3	60	
GW16									Abandoned
GW17	2/14/2013 15:12	46.9	21.6	6.3	25.2	-12.3	-12.4	60	
GW18	2/14/2013 15:14	11.5	6.8	16.4	65.3	0	0.1	58	fully closed
GW19	2/14/2013 15:16	34.3	13.9	9.3	42.5	0	0	58	
GW20									Abandoned
GW21	2/14/2013 15:17	0	4.6	13.8	81.6	0	0	55	fully closed
GW22	2/14/2013 15:20	62.8	36.4	0.6	0.2	0	0	56	
GW23	2/14/2013 15:21	15.6	14.4	10.1	59.9	0	0.1	55	
GW24									Abandoned
GW25	2/14/2013 15:51	0.4	0.8	20.5	78.3	-4.5	-4.4	46	Decreased vacuum
GW26	2/14/2013 15:54	64.1	34	1.7	0.2	0	-0.5	48	Increased vacuum
GW27	2/14/2013 15:56	0.9	3	16.3	79.8	-12.6	-12.4	50	watered in
GW28									Abandoned
GW29	2/14/2013 15:58	27.7	22.5	8.8	41	0	0	49	
GW30	2/14/2013 16:00	24.5	15.4	2.6	57.5	-5.9	-6	52	
GW31	2/14/2013 14:23	31	20.3	10.3	38.4	-12.4	-12.3	55	
GW32	2/14/2013 14:25	55.7	38	1.5	4.8	-11.3	-11.3	55	
GW33	2/14/2013 14:27	56.9	34.5	1.8	6.8	-12.1	-12.1	54	
GW34	2/14/2013 16:02	41.8	33	5.3	19.9	-11.9	-11.8	50	
GW35	2/14/2013 16:04	0	1.1	20.1	78.8	0	-0.1	48	fully closed
GW36	2/14/2013 14:31	23	3.3	14.5	59.2	0	0	55	
GW37	2/14/2013 14:33	24.3	13.9	1.1	60.7	-4.5	-4.6	68	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW38	2/14/2013 14:35	76.1	21.1	1	1.8	0	0	48	
GW39	2/14/2013 14:37	52.7	27.7	2.8	16.8	-12.4	-12.3	47	
GW40	2/14/2013 16:06	22.8	12.3	0.3	64.6	-4.1	-4	81	
GW41	2/14/2013 16:08	43.2	36	1.4	19.4	-10.8	-10.8	60	
GW42	2/14/2013 14:41	53.6	37.5	0.9	8	-8.9	-8.9	63	
GW43	2/14/2013 15:26	55.2	44.2	0.5	0.1	0	0	56	
GW44	2/14/2013 15:28	33.7	27.7	7.8	30.8	-0.1	-0.2	56	
GW45	2/14/2013 15:40	53.1	46.4	0.4	0.1	-12.6	-12.6	45	
GW46	2/14/2013 15:42	55.8	44.1	0	0.1	0	0	42	
GW47	2/14/2013 15:43	29.7	7.2	0	63.1	-5.4	-5.3	61	
GW48	2/14/2013 15:45	49.6	35.2	0.5	14.7	-12	-11.9	59	
GW49	2/14/2013 15:47	40.7	25.8	0	33.5	-12	-12	46	
GW50	2/14/2013 15:24	6.9	1	0.2	91.9	0	0	56	
GW51	2/14/2013 15:39	22.8	17.3	12.6	47.3	0	0	43	
GW52	2/14/2013 15:36	27.6	9.8	6.9	55.7	-11	-10.9	47	
GW53	2/14/2013 15:30	55.9	43.1	0.9	0.1	-12.5	-12.4	56	
GW54									Abandoned
GW55	2/14/2013 15:33	55	44.4	0.5	0.1	-7.6	-7.5	73	
GW56	2/14/2013 13:45	31.2	20.3	8.2	40.3	-10.7	-10.6	57	
GW57	2/14/2013 13:49	77.6	17.1	0	5.3	0.7	-11.7	66	Increased vacuum; watered in
GW58	2/14/2013 13:54	66.5	33.1	0.2	0.2	-11.1	-11.1	67	
GW59	2/14/2013 13:58	64.9	33.8	0.5	0.8	-5.7	-5.7	68	
GW60	2/14/2013 14:01	51.1	34.4	0.1	14.4	-6.1	-6.1	68	
GW61	2/14/2013 14:03	34.4	27.2	0.6	37.8	-6.1	-6.1	62	
GW62	2/14/2013 14:06	35.7	24	0.3	40	-3.6	-3.6	65	
GW63	2/14/2013 14:10	42.5	20.9	4.6	32	0	0	63	
GW64	2/14/2013 14:15	79.5	20.3	0.1	0.1	0	0.1	64	
GW65	2/14/2013 14:17	0	1.7	18.5	79.8	-0.3	-0.3	66	fully closed
GW66	2/14/2013 14:29	1.7	3	16.5	78.8	0	0	60	fully closed
GW67	2/14/2013 16:14	56.5	42.8	0.5	0.2	-6.8	-6.8	52	
GW68	2/14/2013 14:52	11.3	12.7	8	68	0	0	60	
GW69	2/14/2013 14:59	51.5	30.6	0	17.9	-12	-12	52	
GW70	2/14/2013 13:47	61.3	38.4	0.2	0.1	-11.1	-11.1	57	
GW71	2/14/2013 13:52	58	39.7	0.5	1.8	-12	-12.1	68	
GW72	2/14/2013 13:56	61.1	33.3	0	5.6	-9.7	-9.6	66	
GW73	2/14/2013 14:08	0.8	2.2	17.6	79.4	0	0.1	64	fully closed
GW74	2/14/2013 14:13	53.8	22	4.5	19.7	0	0	65	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/18/13	18	29.97	Clear	Calm	7:43	10:07	7453	02/18/13	50% CH4, 35% CO2, 20.8% O2

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW01	2/18/2013 8:41	48.9	37.2	0	13.9	-10.9	-11	40	
GW02	2/18/2013 10:03	27.6	12.8	2.1	57.5	-1.6	-1.7	41	
GW03	2/18/2013 10:05	0.6	1.3	12.2	85.9	0	0	38	fully closed
GW04	2/18/2013 8:44	57.4	33.7	1.9	7	-12.6	-12.5	34	
GW05	2/18/2013 8:46	53.3	45.5	1.1	0.1	-6.7	-6.7	36	
GW06	2/18/2013 7:43	8.4	4.6	18.8	68.2	-0.3	-0.4	18	
GW07	2/18/2013 8:48	14.6	12	11.1	62.3	0	0	34	
GW08	2/18/2013 8:51	27.6	28.5	4.7	39.2	0	0	34	
GW09	2/18/2013 8:54	48.8	37.9	5.5	7.8	-9.9	-9.7	34	
GW10	2/18/2013 8:57	59.3	39.8	0	0.9	0	0	35	
GW11									Abandoned
GW12	2/18/2013 9:01	43.2	30.8	2.4	23.6	-12.5	-12.5	36	
GW13	2/18/2013 9:02	53.4	36.5	1.7	8.4	-11.3	-11.3	35	
GW14	2/18/2013 9:04	53.3	46.6	0	0.1	-8.9	-8.9	32	
GW15	2/18/2013 9:06	52.5	47	0.4	0.1	-14.6	-14.6	36	
GW16									Abandoned
GW17	2/18/2013 9:08	44.1	24.6	5.5	25.8	-14.7	-14.7	35	
GW18	2/18/2013 9:10	13.4	8.6	15.3	62.7	0	0	32	fully closed
GW19	2/18/2013 9:12	11.2	7.2	15.7	65.9	0	0	32	fully closed
GW20									Abandoned
GW21	2/18/2013 9:13	0.2	3.6	16.2	80	0	0	34	fully closed
GW22	2/18/2013 9:15	7.4	6.7	13	72.9	-0.1	0	34	Decreased vacuum
GW23	2/18/2013 9:18	5.8	6.7	15.9	71.6	0	0	33	fully closed
GW24									Abandoned
GW25	2/18/2013 9:45	5.3	9.1	14	71.6	-0.2	-0.2	41	
GW26	2/18/2013 9:49	13.7	5.9	8.6	71.8	-1.8	-1.7	40	Decreased vacuum
GW27	2/18/2013 9:52	3.3	3.7	14.8	78.2	-14.5	-14.5	41	watered in
GW28									Abandoned
GW29	2/18/2013 9:53	2.3	4.1	17.8	75.8	0	0	38	
GW30	2/18/2013 9:55	21.7	13.9	4.9	59.5	-8.8	-8.8	39	
GW31	2/18/2013 8:25	36.3	28.2	8.7	26.8	-14.6	-14.6	30	
GW32	2/18/2013 8:27	52.4	47	0.4	0.2	-13.6	-13.6	40	
GW33	2/18/2013 8:29	55	44.9	0	0.1	-14.2	-14.1	31	
GW34	2/18/2013 9:56	44.1	38.1	3.7	14.1	-12.9	-13	43	
GW35	2/18/2013 9:58	0	1.3	16.2	82.5	-0.1	0	38	fully closed
GW36	2/18/2013 8:33	9.5	1.8	18.2	70.5	0	0	30	
GW37	2/18/2013 8:36	23.4	18	0	58.6	-5.8	-5.8	45	

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW38	2/18/2013 8:37	41	16.5	6.8	35.7	0	0	37	
GW39	2/18/2013 8:39	60.9	37.1	1.9	0.1	-14.7	-14.7	35	
GW40	2/18/2013 10:00	23.3	12.7	5.6	58.4	-4.8	-4.8	47	
GW41	2/18/2013 10:01	44.7	37.7	0	17.6	-13	-13	40	
GW42	2/18/2013 8:43	55.6	44.1	0	0.3	-11	-11.1	38	
GW43	2/18/2013 9:22	50.4	49.5	0	0.1	0	0	35	
GW44	2/18/2013 9:25	43.7	43.8	5.4	7.1	0.2	0	36	Increased vacuum
GW45	2/18/2013 9:35	44.2	54.1	1.5	0.2	-14.1	-14.2	38	
GW46	2/18/2013 9:38	53.2	46.7	0	0.1	0	0	39	
GW47	2/18/2013 9:40	30.6	6.6	0	62.8	-5.8	-5.7	39	
GW48	2/18/2013 9:42	53.5	45.1	1.2	0.2	-3.3	-3.3	40	
GW49	2/18/2013 9:43	45.3	32.3	0	22.4	-9.2	-9.2	40	
GW50	2/18/2013 9:20	8	1	4.9	86.1	0	0	34	fully closed
GW51	2/18/2013 9:34	21	17.6	10.8	50.6	0	0	45	
GW52	2/18/2013 9:32	29.1	11.9	7.4	51.6	-8.5	-8.6	62	
GW53	2/18/2013 9:27	50.6	48.9	0.3	0.2	-14.5	-14.5	37	
GW54									Abandoned
GW55	2/18/2013 9:30	50.2	49.7	0	0.1	-8.9	-8.8	72	
GW56	2/18/2013 7:47	34.9	23.5	9.5	32.1	-12.1	-12.1	18	
GW57	2/18/2013 7:53	1.3	2.7	18	78	-13.9	-12.4	20	Decreased vacuum
GW58	2/18/2013 7:57	57.9	33.8	2.3	6	-9.3	-9.4	21	
GW59	2/18/2013 8:01	57.4	36.6	2.4	3.6	-7.8	-7.8	19	
GW60	2/18/2013 8:04	5.4	5.7	17.7	71.2	-6.7	-4.7	20	Decreased vacuum
GW61	2/18/2013 8:06	34.4	29.6	1.9	34.1	-6.9	-6.8	22	
GW62	2/18/2013 8:08	35.3	28	0.5	36.2	-4	-4	23	
GW63	2/18/2013 8:12	0.1	1	20.4	78.5	0	0.1	25	fully closed
GW64	2/18/2013 8:19	75.9	23.9	0	0.2	0.1	0.1	25	fully closed
GW65	2/18/2013 8:21	0.4	3.2	14.3	82.1	-0.2	-0.1	25	fully closed
GW66	2/18/2013 8:31	0.8	2.2	17.1	79.9	0	0.1	30	
GW67	2/18/2013 10:07	53.3	42.9	3.6	0.2	-8.1	-8.2	38	
GW68	2/18/2013 8:53	8.6	14.1	7.2	70.1	-0.2	-0.2	33	
GW69	2/18/2013 8:59	43	29.1	2.4	25.5	-12.6	-12.5	33	
GW70	2/18/2013 7:49	59.3	39.5	1	0.2	-6.3	-6.2	19	
GW71	2/18/2013 7:55	55	43.8	1	0.2	-9.4	-9.5	20	
GW72	2/18/2013 7:59	58.2	37.1	3.6	1.1	-8.3	-8.4	20	
GW73	2/18/2013 8:11	3.1	4.7	15.7	76.5	0	0	23	fully closed
GW74	2/18/2013 8:16	54.8	25.5	4.7	15	0	-0.2	24	Increased vacuum

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Field Technician and Weather Conditions										
Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Start Time	End Time	Gem 2000 Serial Number	Calibration Date	Cal Gas Used
B Todoriko	02/27/13	40	29.64	Raining	Windy	9:27	12:27	7453	02/27/13	50% CH4, 35% CO2, 20.8% O2
Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments	
GW01	2/27/2013 10:37	35.2	26.6	6.5	31.7	-7.4	-7.4	47		
GW02	2/27/2013 12:22	38.5	19.7	0	41.8	-2.2	-2.1	46		
GW03	2/27/2013 12:24	0.7	4	15.8	79.5	-3.8	-3.6	46	fully closed	
GW04	2/27/2013 10:41	60.3	37	0	2.7	-9.2	-9.3	46		
GW05	2/27/2013 10:42	57.1	42.8	0	0.1	-6.9	-7	46		
GW06	2/27/2013 9:27	30	14.7	11.6	43.7	-1.3	-1.4	47		
GW07	2/27/2013 10:45	15.9	13.5	12.6	58	0	0	45		
GW08	2/27/2013 10:48	30.2	26.9	3.2	39.7	0	0	48		
GW09	2/27/2013 10:52	46.1	33.2	4.5	16.2	-5.4	-5.7	48		
GW10	2/27/2013 10:54	32	21.6	10.8	35.6	-10.2	-10.4	46		
GW11									Abandoned	
GW12	2/27/2013 10:59	63	35.5	0	1.5	-9.1	-9.2	46		
GW13	2/27/2013 11:02	58.9	36.1	0	5	-8.8	-8.8	46		
GW14	2/27/2013 11:05	55.1	44.8	0	0.1	-8.1	-8.1	47		
GW15	2/27/2013 11:08	16.8	17	12.2	54	-7.6	-6.9	46	Decreased vacuum	
GW16									Abandoned	
GW17	2/27/2013 11:11	68	31.8	0.1	0.1	-7.5	-7.9	46		
GW18	2/27/2013 11:13	19.1	11.5	12.4	57	0	0.1	45		
GW19	2/27/2013 11:17	13	6.7	14.1	66.2	-4.6	-4.8	46		
GW20									Abandoned	
GW21	2/27/2013 11:19	0.2	4.9	13.3	81.6	0	0	45	fully closed	
GW22	2/27/2013 11:21	23	15.8	4.5	56.7	0	0.1	46		
GW23	2/27/2013 11:23	4.2	7.9	13.6	74.3	-0.1	0	46	fully closed	
GW24									Abandoned	
GW25	2/27/2013 12:02	3.8	14	9.7	72.5	0	0.1	46		
GW26	2/27/2013 12:04	14.6	3.3	1.6	80.5	-4.5	-4.2	45	Decreased vacuum	
GW27	2/27/2013 12:06	5.7	3.4	13.2	77.7	-13.7	-13.7	47		
GW28									Abandoned	
GW29	2/27/2013 12:10	33.1	8.1	0.4	58.4	5.2	-1.5	47	Increased vacuum	
GW30	2/27/2013 12:12	30	13.4	1.3	55.3	-11.9	-12	46		
GW31	2/27/2013 10:18	61	37.9	1	0.1	-9.9	-9.8	46		
GW32	2/27/2013 10:20	59.5	40.4	0	0.1	-9.3	-9.2	47		
GW33	2/27/2013 10:22	61.1	37.9	0.9	0.1	-9.7	-9.8	47		
GW34	2/27/2013 12:14	43.8	32.7	4.6	18.9	-13.1	-12.9	47		
GW35	2/27/2013 12:15	0.3	3.6	17.8	78.3	-0.3	-0.3	46	fully closed	
GW36	2/27/2013 10:26	4	2.4	19.1	74.5	-0.2	-0.2	47		
GW37	2/27/2013 10:28	48.8	21.5	0	29.7	-8.9	-8.9	55		

Shelton Landfill - Well Data - 02/01/2013 through 02/28/2013

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Comments
GW38	2/27/2013 10:32	75.7	24.2	0	0.1	0.9	0	48	Increased vacuum
GW39	2/27/2013 10:35	60.7	29.8	2.9	6.6	-10	-10	47	
GW40	2/27/2013 12:17	22.9	11.3	0.6	65.2	-6	-6.1	50	
GW41	2/27/2013 12:20	57.2	39.7	3	0.1	-13.4	-13.3	50	
GW42	2/27/2013 10:39	55.8	44	0	0.2	-7.4	-7.2	47	
GW43	2/27/2013 11:29	27.2	20	11.1	41.7	-0.1	0.1	46	
GW44	2/27/2013 11:31	9.1	9.7	15.6	65.6	0	0.1	46	
GW45	2/27/2013 11:51	50.3	45.5	4.1	0.1	-13.6	-13.8	46	watered in
GW46	2/27/2013 11:53	15.2	8.7	8.5	67.6	-0.3	-0.2	47	Decreased vacuum
GW47	2/27/2013 11:55	32.8	6.9	0	60.3	-9.9	-9.7	50	
GW48	2/27/2013 11:57	69.7	16.5	0	13.8	-11.7	-11.8	46	
GW49	2/27/2013 11:59	55.2	33.9	1.7	9.2	-12.9	-12.8	46	
GW50	2/27/2013 11:27	7.2	2.5	2.3	88	0.5	0	45	Increased vacuum
GW51	2/27/2013 11:47	45.4	24.8	4.4	25.4	-0.2	-0.3	45	
GW52	2/27/2013 11:46	37.3	17.2	0.7	44.8	-10.2	-10.6	50	
GW53	2/27/2013 11:35	51.7	46.6	1.6	0.1	0.1	0	46	Increased vacuum
GW54									Abandoned
GW55	2/27/2013 11:43	52.6	47.3	0	0.1	4.7	-1.4	68	Increased vacuum
GW56	2/27/2013 9:29	55.8	32.2	0.6	11.4	-8.3	-8.3	51	
GW57	2/27/2013 9:37	41.6	4.6	6.9	46.9	-1.9	-1.6	45	
GW58	2/27/2013 9:43	65.1	34.5	0.2	0.2	-8.5	-8.5	46	
GW59	2/27/2013 9:47	65.5	34.3	0	0.2	-3.6	-3.6	46	
GW60	2/27/2013 9:49	61.9	36.8	0	1.3	-1.7	-1.6	46	
GW61	2/27/2013 9:53	42.8	31.9	0	25.3	-4.6	-4.7	46	
GW62	2/27/2013 9:55	41.3	27.8	0	30.9	-1.8	-1.8	47	
GW63	2/27/2013 10:01	73.6	20	0.3	6.1	0.4	0.1	44	Increased vacuum
GW64	2/27/2013 10:06	78.7	21.2	0	0.1	0	0	47	
GW65	2/27/2013 10:10	0.1	2.6	18.5	78.8	0	0	47	fully closed
GW66	2/27/2013 10:24	1.1	7.3	13.6	78	-0.1	0	46	
GW67	2/27/2013 12:27	39.6	38.3	0	22.1	-7	-7.1	46	
GW68	2/27/2013 10:50	28.8	14.8	0.2	56.2	-0.2	-0.3	46	
GW69	2/27/2013 10:57	21.8	16.7	10.6	50.9	-10.2	-10.1	46	
GW70	2/27/2013 9:32	62.6	37.1	0.1	0.2	-8.8	-8.7	51	
GW71	2/27/2013 9:40	59.4	38.6	0.8	1.2	-9.9	-9.8	46	
GW72	2/27/2013 9:45	63.8	36.1	0	0.1	-7.7	-7.7	46	
GW73	2/27/2013 9:58	1.1	6	17	75.9	-0.2	-0.3	45	fully closed
GW74	2/27/2013 10:04	66.8	25.4	1	6.8	-3.7	-3.6	45	

Attachment 4

Blower/Flare Station Routine Maintenance Schedule Log

February 2013

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko

Component	Weekly	Monthly (Each Month)	Semi-Annually (July and Jan.)	Annually (Each year, July)	As Needed
Condensate Knockout					
Check liquid level (sight glass)	Yes				
Drain Liquid					
Inspect internal coating and gasket					
Clean Demister Pad					
Tighten cover bolts					
Check heat tracing					
Check filter differential pressure	Yes				
Header Valve System					
Check valve performance					
Landfill Gas Blowers					
Inspect foundation and mounting					
Check condition of Isolation Pads					
Check motor alignment					
Check piping alignment					
Check bearing temperature/noise	Yes				
Check vibration level					
Inspect flex coupling					
Clean motor ventilation openings					
Lubricate motor bearings					
Check wire connections					
Check for leakage	Yes				
Drain liquid from blower housing					
Piping					
Check valves for proper operation					
Tighten flange bolts					
Check flange gaskets for leaks					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko

	Inspect condition of expansion joints					
	Check piping alignment					
Sump Pump						
	Check piping					
	Service pump per manufacturer					
Flame Arrestor						
	Check arrestor element per manufacturer					
	Clean/replace element					
	Check pressure drop across element	Yes				
Propane System						
	Check propane supply/pressure	Yes				
	Order propane					
	Check solenoid manual override					
	Clean solenoid valve					
	Clean pressure regulator vent					
	Check connections for leaks					
Flare Control Panel						
	Clean and maintain instruments per Manual					
	Replace chart recorder paper					Yes
	Replace chart recorder pen tips					
	Check enclosure for moisture	Yes				
	Check wire connections					
	Test panel lights/alarms	Yes				
	Check emergency shutdown					
	Clean flame scanner					
	Check auto restart					
Autodialer						
	Verify operation/test system					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko

	Update/reprogram contact list					
Condensate Tanks						
	Record liquid levels in each tank	Yes				
	Schedule condensate removal					

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko

Component	Weekly	Monthly (Each Month)	Semi-Annually (July and Jan.)	Annually (Each year, July)	As Needed
Condensate Knockout					
Check liquid level (sight glass)	Yes				
Drain Liquid					
Inspect internal coating and gasket					
Clean Demister Pad					
Tighten cover bolts					
Check heat tracing		Yes			
Check filter differential pressure	Yes				
Header Valve System					
Check valve performance		Yes			
Landfill Gas Blowers					
Inspect foundation and mounting					
Check condition of Isolation Pads					
Check motor alignment					
Check piping alignment					
Check bearing temperature/noise	Yes				
Check vibration level					
Inspect flex coupling					
Clean motor ventilation openings					
Lubricate motor bearings		Yes			
Check wire connections					
Check for leakage	Yes				
Drain liquid from blower housing					
Piping					
Check valves for proper operation					
Tighten flange bolts					
Check flange gaskets for leaks		Yes			

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko

	Inspect condition of expansion joints		Yes			
	Check piping alignment					
Sump Pump						
	Check piping		Yes			
	Service pump per manufacturer					
Flame Arrestor						
	Check arrestor element per manufacturer					
	Clean/replace element					
	Check pressure drop across element	Yes				
Propane System						
	Check propane supply/pressure	Yes				
	Order propane					
	Check solenoid manual override					
	Clean solenoid valve					
	Clean pressure regulator vent					
	Check connections for leaks		Yes			
Flare Control Panel						
	Clean and maintain instruments per Manual					
	Replace chart recorder paper					Yes
	Replace chart recorder pen tips					
	Check enclosure for moisture	Yes				
	Check wire connections					
	Test panel lights/alarms	Yes				
	Check emergency shutdown		Yes			
	Clean flame scanner		Yes			
	Check auto restart		Yes			
Autodialer						
	Verify operation/test system					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko

	Update/reprogram contact list					
Condensate Tanks						
	Record liquid levels in each tank	Yes				
	Schedule condensate removal					

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko

Component	Weekly	Monthly (Each Month)	Semi-Annually (July and Jan.)	Annually (Each year, July)	As Needed
Condensate Knockout					
Check liquid level (sight glass)	Yes				
Drain Liquid					
Inspect internal coating and gasket					
Clean Demister Pad					
Tighten cover bolts					
Check heat tracing					
Check filter differential pressure	Yes				
Header Valve System					
Check valve performance					
Landfill Gas Blowers					
Inspect foundation and mounting					
Check condition of Isolation Pads					
Check motor alignment					
Check piping alignment					
Check bearing temperature/noise	Yes				
Check vibration level					
Inspect flex coupling					
Clean motor ventilation openings					
Lubricate motor bearings					
Check wire connections					
Check for leakage	Yes				
Drain liquid from blower housing					
Piping					
Check valves for proper operation					
Tighten flange bolts					
Check flange gaskets for leaks					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko

	Inspect condition of expansion joints					
	Check piping alignment					
Sump Pump						
	Check piping					
	Service pump per manufacturer					
Flame Arrestor						
	Check arrestor element per manufacturer					
	Clean/replace element					
	Check pressure drop across element	Yes				
Propane System						
	Check propane supply/pressure	Yes				
	Order propane					
	Check solenoid manual override					
	Clean solenoid valve					
	Clean pressure regulator vent					
	Check connections for leaks					
Flare Control Panel						
	Clean and maintain instruments per Manual					
	Replace chart recorder paper					Yes
	Replace chart recorder pen tips					
	Check enclosure for moisture	Yes				
	Check wire connections					
	Test panel lights/alarms	Yes				
	Check emergency shutdown					
	Clean flame scanner					
	Check auto restart					
Autodialer						
	Verify operation/test system					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko

	Update/reprogram contact list					
Condensate Tanks						
	Record liquid levels in each tank	Yes				
	Schedule condensate removal					

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko

Component	Weekly	Monthly (Each Month)	Semi-Annually (July and Jan.)	Annually (Each year, July)	As Needed
Condensate Knockout					
Check liquid level (sight glass)	Yes				
Drain Liquid					
Inspect internal coating and gasket					
Clean Demister Pad					
Tighten cover bolts					
Check heat tracing		Yes			
Check filter differential pressure	Yes				
Header Valve System					
Check valve performance		Yes			
Landfill Gas Blowers					
Inspect foundation and mounting					
Check condition of Isolation Pads					
Check motor alignment					
Check piping alignment					
Check bearing temperature/noise	Yes				
Check vibration level					
Inspect flex coupling					
Clean motor ventilation openings					
Lubricate motor bearings					
Check wire connections					
Check for leakage	Yes				
Drain liquid from blower housing					
Piping					
Check valves for proper operation					
Tighten flange bolts					
Check flange gaskets for leaks		Yes			

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko

	Inspect condition of expansion joints		Yes			
	Check piping alignment					
Sump Pump						
	Check piping					
	Service pump per manufacturer					
Flame Arrestor						
	Check arrestor element per manufacturer					
	Clean/replace element					
	Check pressure drop across element	Yes				
Propane System						
	Check propane supply/pressure	Yes				
	Order propane					
	Check solenoid manual override					
	Clean solenoid valve					
	Clean pressure regulator vent					
	Check connections for leaks					
Flare Control Panel						
	Clean and maintain instruments per Manual					
	Replace chart recorder paper					
	Replace chart recorder pen tips					
	Check enclosure for moisture	Yes				
	Check wire connections					
	Test panel lights/alarms	Yes				
	Check emergency shutdown		Yes			
	Clean flame scanner					
	Check auto restart		Yes			
Autodialer						
	Verify operation/test system					

ATTACHMENT 4
SHELTON LANDFILL BLOWER FLARE STATION
ROUTINE MAINTENANCE SCHEDULE/LOG
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko

	Update/reprogram contact list					
Condensate Tanks						
	Record liquid levels in each tank	Yes				
	Schedule condensate removal					

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 5

Condensate Storage Tank Monitoring Logs

February 2013

ATTACHMENT 5
SHELTON LANDFILL CONDENSATE STORAGE TANK MONITORING FORM

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_5
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER		SERIAL NUMBER	
DATE LAST CALIBRATED		CALIBRATION GAS USED	

CONDENSATE TANK DATA

TANK	DEPTH OF LIQUID (FEET)	ESTIMATED GALLONS	DATE TANK LAST PUMPED
FLARE STATION 3,000 GALLON	2.1	874	11/16/2012
REMOTE 1,500 GALLON	1.8	377	01/11/2013

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 5
SHELTON LANDFILL CONDENSATE STORAGE TANK MONITORING FORM

DATE: 02/15/2013	OPERATOR: B.Todoriko
TEMPERATURE: 25	BAR. PRESSURE: 29.96
WEATHER: Clear	SITE ID: 1270_5
ARRIVAL TIME: 08:00:00 AM	DEPARTURE TIME: 12:00:00 PM

MONITORING EQUIPMENT

GAS METER		SERIAL NUMBER	
DATE LAST CALIBRATED		CALIBRATION GAS USED	

CONDENSATE TANK DATA

TANK	DEPTH OF LIQUID (FEET)	ESTIMATED GALLONS	DATE TANK LAST PUMPED
FLARE STATION 3,000 GALLON	2.5	1,077	11/16/2012
REMOTE 1,500 GALLON	2.5	628	01/11/2013

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 5
SHELTON LANDFILL CONDENSATE STORAGE TANK MONITORING FORM

DATE: 02/18/2013	OPERATOR: B.Todoriko
TEMPERATURE: 36	BAR. PRESSURE: 29.78
WEATHER: Clear	SITE ID: 1270_5
ARRIVAL TIME: 06:45:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER		SERIAL NUMBER	
DATE LAST CALIBRATED		CALIBRATION GAS USED	

CONDENSATE TANK DATA

TANK	DEPTH OF LIQUID (FEET)	ESTIMATED GALLONS	DATE TANK LAST PUMPED
FLARE STATION 3,000 GALLON	2.5	1,077	11/16/2012
REMOTE 1,500 GALLON	2.5	628	01/11/2013

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 5
SHELTON LANDFILL CONDENSATE STORAGE TANK MONITORING FORM

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.61
WEATHER: Rain	SITE ID: 1270_5
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 06:00:00 PM

MONITORING EQUIPMENT

GAS METER		SERIAL NUMBER	
DATE LAST CALIBRATED		CALIBRATION GAS USED	

CONDENSATE TANK DATA

TANK	DEPTH OF LIQUID (FEET)	ESTIMATED GALLONS	DATE TANK LAST PUMPED
FLARE STATION 3,000 GALLON	2.6	1,116	11/16/2012
REMOTE 1,500 GALLON	2.8	670	01/13/2013

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 6

Enclosed Flare Station Monitoring Forms

February 2013

ATTACHMENT 6
SHELTON LANDFILL GAS CONTROL SYSTEM
ENCLOSED FLARE STATION FIELD DATA FORM
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_6
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/04/2013	CAL. GAS USED (% CH4)	50 % CH4

FLARE DATA

Inlet Temperature (F): 40	Combustion Outlet Temp. (F): 1,587
Temperature Set Point (F): 1,600	Blower in Operation: 103
Blower 103 Amps: 13.0	Blower 104 Amps:
Blower 103 Hours: 6348	Blower 104 Hours:

GAS FLOW DATA:

Parameter	Reading
Methane %	14.3
Carbon Dioxide %	11.2
Oxygen %	12.2
Balance Gas %	62.3
Gas Temperature (F)	40
Flow Rate (SCFM)	266
Header Pressure (inches H2O)	-15.00
Filter Differential Pressure (inches H2O)	0.2
Blower Inlet Pressure (inches H2O)	-15.00
Blower Outlet Pressure (inches H2O)	3.30
Discharge Valve Position (% open)	100
Flame Arrestor Differential Pressure (inches H2O)	0.20
Flow Totalizer Reading	1,668,546
System in Vent Position	No

SITE COMMENTS: Performed weekly routine visit tuned central and perimiter wells and monitored probes and structures

BLOWER COMMENT:

FLARE COMMENT:

HEADER LINE COMMENT:

CONDENSATE COMMENT:

ATTACHMENT 6
SHELTON LANDFILL GAS CONTROL SYSTEM
ENCLOSED FLARE STATION FIELD DATA FORM
07204023.00

DATE: 02/14/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.88
WEATHER: Clear	SITE ID: 1270_6
ARRIVAL TIME: 01:00:00 PM	DEPARTURE TIME: 05:30:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/14/2013	CAL. GAS USED (% CH4)	50 % CH4

FLARE DATA

Inlet Temperature (F): 43	Combustion Outlet Temp. (F): 1,578
Temperature Set Point (F): 1,600	Blower in Operation: 103
Blower 103 Amps: 12.0	Blower 104 Amps:
Blower 103 Hours: 6595	Blower 104 Hours:

GAS FLOW DATA:

Parameter	Reading
Methane %	13.0
Carbon Dioxide %	9.8
Oxygen %	12.9
Balance Gas %	64.3
Gas Temperature (F)	43
Flow Rate (SCFM)	273
Header Pressure (inches H2O)	-13.60
Filter Differential Pressure (inches H2O)	
Blower Inlet Pressure (inches H2O)	-13.60
Blower Outlet Pressure (inches H2O)	3.80
Discharge Valve Position (% open)	100
Flame Arrestor Differential Pressure (inches H2O)	0.20
Flow Totalizer Reading	1,672,528
System in Vent Position	No

SITE COMMENTS: Performed weekly rountine, monitored well-field, probes, and structures

BLOWER COMMENT:

FLARE COMMENT:

HEADER LINE COMMENT:

CONDENSATE COMMENT:

ATTACHMENT 6
SHELTON LANDFILL GAS CONTROL SYSTEM
ENCLOSED FLARE STATION FIELD DATA FORM
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko
TEMPERATURE: 14	BAR. PRESSURE: 29.95
WEATHER: Clear	SITE ID: 1270_6
ARRIVAL TIME: 06:45:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/18/2013	CAL. GAS USED (% CH4)	50 % CH4

FLARE DATA

Inlet Temperature (F): 41	Combustion Outlet Temp. (F): 1,567
Temperature Set Point (F): 1,600	Blower in Operation: 104
Blower 103 Amps:	Blower 104 Amps: 12.0
Blower 103 Hours:	Blower 104 Hours:

GAS FLOW DATA:

Parameter	Reading
Methane %	13.6
Carbon Dioxide %	10.3
Oxygen %	12.5
Balance Gas %	63.5
Gas Temperature (F)	41
Flow Rate (SCFM)	260
Header Pressure (inches H2O)	-15.70
Filter Differential Pressure (inches H2O)	0.1
Blower Inlet Pressure (inches H2O)	-15.70
Blower Outlet Pressure (inches H2O)	3.00
Discharge Valve Position (% open)	100
Flame Arrestor Differential Pressure (inches H2O)	0.20
Flow Totalizer Reading	1,673,980
System in Vent Position	No

SITE COMMENTS: Performed weekly routine, monitored well-field, probes, and structures.

BLOWER COMMENT:

FLARE COMMENT:

HEADER LINE COMMENT:

CONDENSATE COMMENT:

ATTACHMENT 6
SHELTON LANDFILL GAS CONTROL SYSTEM
ENCLOSED FLARE STATION FIELD DATA FORM
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.61
WEATHER: Rain	SITE ID: 1270_6
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 06:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/27/2013	CAL. GAS USED (% CH4)	50 % CH4

FLARE DATA

Inlet Temperature (F): 42	Combustion Outlet Temp. (F): 1,600
Temperature Set Point (F): 1,600	Blower in Operation: 104
Blower 103 Amps:	Blower 104 Amps: 12.0
Blower 103 Hours:	Blower 104 Hours:

GAS FLOW DATA:

Parameter	Reading
Methane %	19.5
Carbon Dioxide %	12.3
Oxygen %	10.9
Balance Gas %	57.3
Gas Temperature (F)	42
Flow Rate (SCFM)	215
Header Pressure (inches H2O)	-17.30
Filter Differential Pressure (inches H2O)	0.2
Blower Inlet Pressure (inches H2O)	-17.30
Blower Outlet Pressure (inches H2O)	3.00
Discharge Valve Position (% open)	100
Flame Arrestor Differential Pressure (inches H2O)	0.20
Flow Totalizer Reading	1,677,404
System in Vent Position	No

SITE COMMENTS: Performed weekly routine visit; monitored central and perimeter wellfield, probes, and structures.

BLOWER COMMENT:

FLARE COMMENT:

HEADER LINE COMMENT:

CONDENSATE COMMENT:

Attachment 7

Continuous and Non-Continuous Monitoring Probe Forms

February 2013

ATTACHMENT 7
SHELTON LANDFILL CONTINUOUS AND NON-CONTINUOUS PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_7
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/04/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Well	% LEL Displayed	% CH4 Measured	%CO2	Probe Condition	Date of Last Calibration
Continuous Probes					
MW-1	0	0.0	1.5	Normal	02/04/2013
MW-2	0	0.0	1.0	Normal	02/04/2013
MW-3	0	0.0	0.1	Normal	02/04/2013
MW-4	0	0.0	0.1	Normal	02/04/2013
MW-5	0	0.0	0.1	Normal	02/04/2013
MW-6	0	0.0	0.1	Normal	02/04/2013
MW-7	0	0.0	0.1	Normal	02/04/2013
MW-8	0	0.0	0.2	Normal	02/04/2013
MW-9	0	0.0	0.4	Normal	02/04/2013
MW-10	0	0.0	0.1	Normal	02/04/2013
MW-11	0	0.0	0.1	Normal	02/04/2013
MW-12	0	0.0	0.1	Normal	02/04/2013
Non-Continuous Probes					
MW-GP1		0.0	0.1	Normal	
MW-GP2		0.0	0.1	Normal	
MW-GP3		0.0	0.1	Normal	
MW-GP4		0.0	0.1	Normal	
MW-B1		0.0	0.1	Normal	
MW-B2		0.0	0.1	Normal	
MW-B3		0.0	0.1	Normal	

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 7
SHELTON LANDFILL CONTINUOUS AND NON-CONTINUOUS PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko
TEMPERATURE: 25	BAR. PRESSURE: 29.96
WEATHER: Clear	SITE ID: 1270_7
ARRIVAL TIME: 08:00:00 AM	DEPARTURE TIME: 12:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/15/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Well	% LEL Displayed	% CH4 Measured	%CO2	Probe Condition	Date of Last Calibration
Continuous Probes					
MW-1	0	0.0	2.7	Normal	02/15/2013
MW-2	0	0.0	0.8	Normal	02/15/2013
MW-3	0	0.0	0.1	Normal	02/15/2013
MW-4	0	0.0	0.1	Normal	02/15/2013
MW-5	0	0.0	0.1	Normal	02/15/2013
MW-6	0	0.0	0.1	Normal	02/15/2013
MW-7	0	0.0	0.1	Normal	02/15/2013
MW-8	0	0.0	0.2	Normal	02/15/2013
MW-9	0	0.0	0.3	Normal	02/15/2013
MW-10	0	0.0	0.1	Normal	02/15/2013
MW-11	0	0.0	0.1	Normal	02/15/2013
MW-12	0	0.0	0.1	Normal	02/15/2013
Non-Continuous Probes					
MW-GP1		0.0	0.1	Normal	
MW-GP2		0.0	0.1	Normal	
MW-GP3		0.0	0.1	Normal	
MW-GP4		0.0	0.1	Normal	
MW-B1		0.0	0.1	Normal	
MW-B2		0.0	0.1	Normal	
MW-B3		0.0	0.1	Normal	

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 7
SHELTON LANDFILL CONTINUOUS AND NON-CONTINUOUS PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko
TEMPERATURE: 14	BAR. PRESSURE: 29.95
WEATHER: Clear	SITE ID: 1270_7
ARRIVAL TIME: 06:45:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/18/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Well	% LEL Displayed	% CH4 Measured	%CO2	Probe Condition	Date of Last Calibration
Continuous Probes					
MW-1	0	0.0	1.8	Normal	02/18/2013
MW-2	0	0.0	0.9	Normal	02/18/2013
MW-3	0	0.0	0.1	Normal	02/18/2013
MW-4	0	0.0	0.1	Normal	02/18/2013
MW-5	0	0.0	0.1	Normal	02/18/2013
MW-6	0	0.0	0.1	Normal	02/18/2013
MW-7	0	0.0	0.1	Normal	02/18/2013
MW-8	0	0.0	0.1	Normal	02/18/2013
MW-9	0	0.0	0.2	Normal	02/18/2013
MW-10	0	0.0	0.1	Normal	02/18/2013
MW-11	0	0.0	0.1	Normal	02/18/2013
MW-12	0	0.0	0.1	Normal	02/18/2013
Non-Continuous Probes					
MW-GP1		0.0	0.1	Normal	
MW-GP2		0.0	0.1	Normal	
MW-GP3		0.0	0.1	Normal	
MW-GP4		0.0	0.1	Normal	
MW-B1		0.0	0.1	Normal	
MW-B2		0.0	0.1	Normal	
MW-B3		0.0	0.1	Normal	

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 7
SHELTON LANDFILL CONTINUOUS AND NON-CONTINUOUS PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.61
WEATHER: Rain	SITE ID: 1270_7
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 06:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/27/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Well	% LEL Displayed	% CH4 Measured	%CO2	Probe Condition	Date of Last Calibration
Continuous Probes					
MW-1	0	0.0	1.9	Normal	02/27/2013
MW-2	0	0.0	1.1	Normal	02/27/2013
MW-3	0	0.0	0.3	Normal	02/27/2013
MW-4	0	0.0	0.1	Normal	02/27/2013
MW-5	0	0.0	0.1	Normal	02/27/2013
MW-6	0	0.0	0.1	Normal	02/27/2013
MW-7	0	0.0	0.1	Normal	02/27/2013
MW-8	0	0.0	0.1	Normal	02/27/2013
MW-9	0	0.0	0.1	Normal	02/27/2013
MW-10	0	0.0	0.1	Normal	02/27/2013
MW-11	0	0.0	0.1	Normal	02/27/2013
MW-12	0	0.0	0.2	Normal	02/27/2013
Non-Continuous Probes					
MW-GP1		0.0	0.1	Normal	
MW-GP2		0.0	0.1	Normal	
MW-GP3		0.0	0.1	Normal	
MW-GP4		0.0	0.1	Normal	
MW-B1		0.0	0.1	Normal	
MW-B2		0.0	0.1	Normal	
MW-B3		0.0	0.2	Normal	

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 8

Onsite Structure Monitoring Forms

February 2013

Environmental Contractors

SCS FIELD SERVICES

ATTACHMENT 8
SHELTON ON-SITE STRUCTURES METHANE MONITORING
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_08
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/04/2013	CAL. GAS USED (% CH4)	2.5

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
1	Building 866	0.0	0.0	NA	NA
2	Vehicle Maintenance Garage	0.0	0.0	NA	NA
3	Recycling Trailer	0.0	0.0	OK	OK
4	Town Recycling Center	0.0	0.0	NA	NA
5	Scale House Trailer	0.0	0.0	OK	OK
6	Scale Pit North	0.0	0.0	NA	NA
7	Scale Pit South	0.0	0.0	NA	NA
8	Vehicle Wheel Wash	0.0	0.0	NA	NA
9	Pump Station	0.0	0.0	NA	NA
10	Restroom North (Leachate Bldg.)	0.0	0.0	OK	OK
11	Restroom South (Leachate Bldg.)	0.0	0.0	OK	OK
12	Leachate System Control Room	0.0	0.0	OK	OK
13	Leachate System Treatment Room	0.0	0.0	OK	OK
14	Southeast Leachate Lift Station	0.0	0.0	NA	NA
15	Dog House	0.0	0.0	NA	NA
16	Gas to Energy Facility	0.0	0.0	NA	NA

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
17	Southeast Control Vault	0.0	0.0	NA	NA
18	Northeast Leachate Lift Station	0.0	0.0	OK	OK
19	Northeast Control Vault	0.0	0.0	NA	NA

COMMENT 1:

COMMENT 2:

COMMENT 3:

Environmental Contractors

SCS FIELD SERVICES

ATTACHMENT 8
SHELTON ON-SITE STRUCTURES METHANE MONITORING
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.96
WEATHER: Clear	SITE ID: 1270_08
ARRIVAL TIME: 08:00:00 AM	DEPARTURE TIME: 12:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/15/2013	CAL. GAS USED (% CH4)	2.5

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
1	Building 866	0.0	0.0	NA	NA
2	Vehicle Maintenance Garage	0.0	0.0	NA	NA
3	Recycling Trailer	0.0	0.0	OK	OK
4	Town Recycling Center	0.0	0.0	NA	NA
5	Scale House Trailer	0.0	0.0	OK	OK
6	Scale Pit North	0.0	0.0	NA	NA
7	Scale Pit South	0.0	0.0	NA	NA
8	Vehicle Wheel Wash	0.0	0.0	NA	NA
9	Pump Station	0.0	0.0	NA	NA
10	Restroom North (Leachate Bldg.)	0.0	0.0	OK	OK
11	Restroom South (Leachate Bldg.)	0.0	0.0	OK	OK
12	Leachate System Control Room	0.0	0.0	OK	OK
13	Leachate System Treatment Room	0.0	0.0	OK	OK
14	Southeast Leachate Lift Station	0.0	0.0	NA	NA
15	Dog House	0.0	0.0	NA	NA
16	Gas to Energy Facility	0.0	0.0	NA	NA

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
17	Southeast Control Vault	0.0	0.0	NA	NA
18	Northeast Leachate Lift Station	0.0	0.0	OK	OK
19	Northeast Control Vault	0.0	0.0	NA	NA

COMMENT 1:

COMMENT 2:

COMMENT 3:

Environmental Contractors

SCS FIELD SERVICES

ATTACHMENT 8
SHELTON ON-SITE STRUCTURES METHANE MONITORING
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko
TEMPERATURE: 14	BAR. PRESSURE: 29.95
WEATHER: Clear	SITE ID: 1270_08
ARRIVAL TIME: 06:45:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/18/2013	CAL. GAS USED (% CH4)	2.5

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
1	Building 866	0.0	0.0	NA	NA
2	Vehicle Maintenance Garage	0.0	0.0	NA	NA
3	Recycling Trailer	0.0	0.0	OK	OK
4	Town Recycling Center	0.0	0.0	NA	NA
5	Scale House Trailer	0.0	0.0	OK	OK
6	Scale Pit North	0.0	0.0	NA	NA
7	Scale Pit South	0.0	0.0	NA	NA
8	Vehicle Wheel Wash	0.0	0.0	NA	NA
9	Pump Station	0.0	0.0	NA	NA
10	Restroom North (Leachate Bldg.)	0.0	0.0	OK	OK
11	Restroom South (Leachate Bldg.)	0.0	0.0	OK	OK
12	Leachate System Control Room	0.0	0.0	OK	OK
13	Leachate System Treatment Room	0.0	0.0	OK	OK
14	Southeast Leachate Lift Station	0.0	0.0	NA	NA
15	Dog House	0.0	0.0	NA	NA
16	Gas to Energy Facility	0.0	0.0	NA	NA

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
17	Southeast Control Vault	0.0	0.0	NA	NA
18	Northeast Leachate Lift Station	0.0	0.0	OK	OK
19	Northeast Control Vault	0.0	0.0	NA	NA

COMMENT 1:

COMMENT 2:

COMMENT 3:

Environmental Contractors

SCS FIELD SERVICES

ATTACHMENT 8
SHELTON ON-SITE STRUCTURES METHANE MONITORING
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.61
WEATHER: Rain	SITE ID: 1270_08
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 06:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/27/2013	CAL. GAS USED (% CH4)	2.5

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
1	Building 866	0.0	0.0	NA	NA
2	Vehicle Maintenance Garage	0.0	0.0	NA	NA
3	Recycling Trailer	0.0	0.0	NA	NA
4	Town Recycling Center	0.0	0.0	OK	OK
5	Scale House Trailer	0.0	0.0	OK	OK
6	Scale Pit North	0.0	0.0	NA	NA
7	Scale Pit South	0.0	0.0	NA	NA
8	Vehicle Wheel Wash	0.0	0.0	NA	NA
9	Pump Station	0.0	0.0	NA	NA
10	Restroom North (Leachate Bldg.)	0.0	0.0	OK	OK
11	Restroom South (Leachate Bldg.)	0.0	0.0	OK	OK
12	Leachate System Control Room	0.0	0.0	OK	OK
13	Leachate System Treatment Room	0.0	0.0	OK	OK
14	Southeast Leachate Lift Station	0.0	0.0	NA	NA
15	Dog House	0.0	0.0	NA	NA
16	Gas to Energy Facility	0.0	0.0	NA	NA

No.		CH4 %	LEL %	Checked Continuous Monitor	Tested/ Calibrated Continuous Monitors
17	Southeast Control Vault	0.0	0.0	NA	NA
18	Northeast Leachate Lift Station	0.0	0.0	OK	OK
19	Northeast Control Vault	0.0	0.0	NA	NA

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 9

Offsite Perimeter Monitoring Probe Forms

February 2013

ATTACHMENT 9
SHELTON LANDFILL
OFF-SITE PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_9
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/04/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Perimeter Monitoring Point ID	Depth of Monitoring Point (in inches)	CH4 in %LEL	CO2	O2	Balance
PT-01	36	0	0.1	20.5	79.4
PT-02	36	0	0.1	20.6	79.3
PT-03	36	0	0.1	20.5	79.4
PT-04	36	0	0.2	20.4	79.4
PT-05	36	0	0.3	20.3	79.4
PT-06	36	0	0.1	20.3	79.6
PT-07	36	0	0.1	20.3	79.6
PT-08	36	0	0.1	20.6	79.3
PT-09	36	0	0.1	20.4	79.5
PT-10	36	0	0.1	20.3	79.6
PT-11	36	0	0.1	20.4	79.5
PT-12	36	0	0.3	20.4	79.3
PT-13	36	0	0.3	20.4	79.3
PT-14	36	0	0.1	20.3	79.6
PT-15	36	0	0.1	20.5	79.4
PT-16	36	0	0.2	20.4	79.4

COMMENT 1:

COMMENT 2:

COMMENT 3:

ATTACHMENT 9
SHELTON LANDFILL
OFF-SITE PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/15/2013	OPERATOR: B.Todoriko
TEMPERATURE: 25	BAR. PRESSURE: 29.96
WEATHER: Clear	SITE ID: 1270_9
ARRIVAL TIME: 08:00:00 AM	DEPARTURE TIME: 12:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/15/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Perimeter Monitoring Point ID	Depth of Monitoring Point (in inches)	CH4 in %LEL	CO2	O2	Balance
PT-01	36	0	0.1	20.3	79.6
PT-02	36	0	0.1	20.3	79.6
PT-03	36	0	0.1	20.4	79.5
PT-04	36	0	0.2	20.2	79.6
PT-05	36	0	0.2	20.2	79.6
PT-06	36	0	0.1	20.4	79.5
PT-07	36				
PT-08	36	0	0.1	20.2	79.7
PT-09	36	0	0.1	20.2	79.7
PT-10	36	0	0.1	20.4	79.5
PT-11	36				
PT-12	36	0	0.3	20.3	79.4
PT-13	36	0	0.3	20	79.7
PT-14	36				
PT-15	36	0	0.1	20.3	79.6
PT-16	36				

COMMENT 1: Could not monitor probes 7, 11, 14, 16 due to covered in snow.

COMMENT 2:

COMMENT 3:

ATTACHMENT 9
SHELTON LANDFILL
OFF-SITE PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/18/2013	OPERATOR: B.Todoriko
TEMPERATURE: 14	BAR. PRESSURE: 29.95
WEATHER: Clear	SITE ID: 1270_9
ARRIVAL TIME: 06:45:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/18/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Perimeter Monitoring Point ID	Depth of Monitoring Point (in inches)	CH4 in %LEL	CO2	O2	Balance
PT-01	36	0	0.1	20.7	79.2
PT-02	36	0	0.1	20.7	79.2
PT-03	36	0	0.1	20.6	79.3
PT-04	36	0	0.2	20.5	79.3
PT-05	36	0	0.3	20.4	79.3
PT-06	36	0	0.1	20.6	79.3
PT-07	36				
PT-08	36	0	0.1	20.5	79.4
PT-09	36	0	0.1	20.5	79.4
PT-10	36	0	0.1	20.6	79.3
PT-11	36				
PT-12	36	0	0.3	20.4	79.3
PT-13	36	0	0.3	20.4	79.3
PT-14	36				
PT-15	36	0	0.1	20.7	79.2
PT-16	36				

COMMENT 1: Probes 7, 11, 14, and 16 covered in snow and could not monitor.

COMMENT 2:

COMMENT 3:

ATTACHMENT 9
SHELTON LANDFILL
OFF-SITE PERIMETER MONITORING PROBE FORM
07204023.00

DATE: 02/27/2013	OPERATOR: B.Todoriko
TEMPERATURE: 40	BAR. PRESSURE: 29.61
WEATHER: Rain	SITE ID: 1270_9
ARRIVAL TIME: 09:00:00 AM	DEPARTURE TIME: 06:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/27/2013	CAL. GAS USED (% CH4)	2.5 % CH4

Perimeter Monitoring Point ID	Depth of Monitoring Point (in inches)	CH4 in %LEL	CO2	O2	Balance
PT-01	36	0	0.3	17.4	82.3
PT-02	36	0	0.1	20.6	79.3
PT-03	36	0	0.1	20.6	79.3
PT-04	36	0	0.1	20.3	79.6
PT-05	36	0	0.5	20	79.5
PT-06	36	0	0.3	20.4	79.3
PT-07	36	0	0.1	20.5	79.4
PT-08	36	0	0.1	20.6	79.3
PT-09	36	0	0.1	20.5	79.4
PT-10	36	0	0.1	20.4	79.5
PT-11	36	0	0.1	20.4	79.5
PT-12	36	0	0.4	20.2	79.4
PT-13	36	0	0.3	20.1	79.6
PT-14	36	0	0.1	20.2	79.7
PT-15	36	0	0.2	20.1	79.7
PT-16	36	0	0.1	20.5	79.4

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 10

Offsite Structure Methane Monitoring Forms

February 2013

ATTACHMENT 10
SHELTON OFF-SITE STRUCTURES METHANE MONITORING
07204023.00

DATE: 02/04/2013	OPERATOR: B.Todoriko
TEMPERATURE: 21	BAR. PRESSURE: 29.74
WEATHER: Clear	SITE ID: 1270_11
ARRIVAL TIME: 06:30:00 AM	DEPARTURE TIME: 02:00:00 PM

MONITORING EQUIPMENT

GAS METER	GEM 2000	SERIAL NUMBER	7453
DATE LAST CALIBRATED	02/04/2013	CAL. GAS USED (% CH4)	2.5

Structure No.	Name of Structure	CH4% Vol	CH4% LEL	Continuous Monitoring Reading	Tested/Calibrated Continuous Monitors
1	**Centrix**	0.0	0.0	0.0	Yes
2	**Driving Range**	0.0	0.0	0.0	Yes
3	**Pro Lube**				
	In Car Bay				
4	**Subway**	0.0	0.0	0.0	Yes
5	**Wine Shop**				
	Basement	0.0	0.0	0.0	Yes
6	**Cumberland Farms**	0.0	0.0	0.0	Yes

COMMENT 1:

COMMENT 2:

COMMENT 3:

Attachment 11

Condensate Disposal Waste Manifests

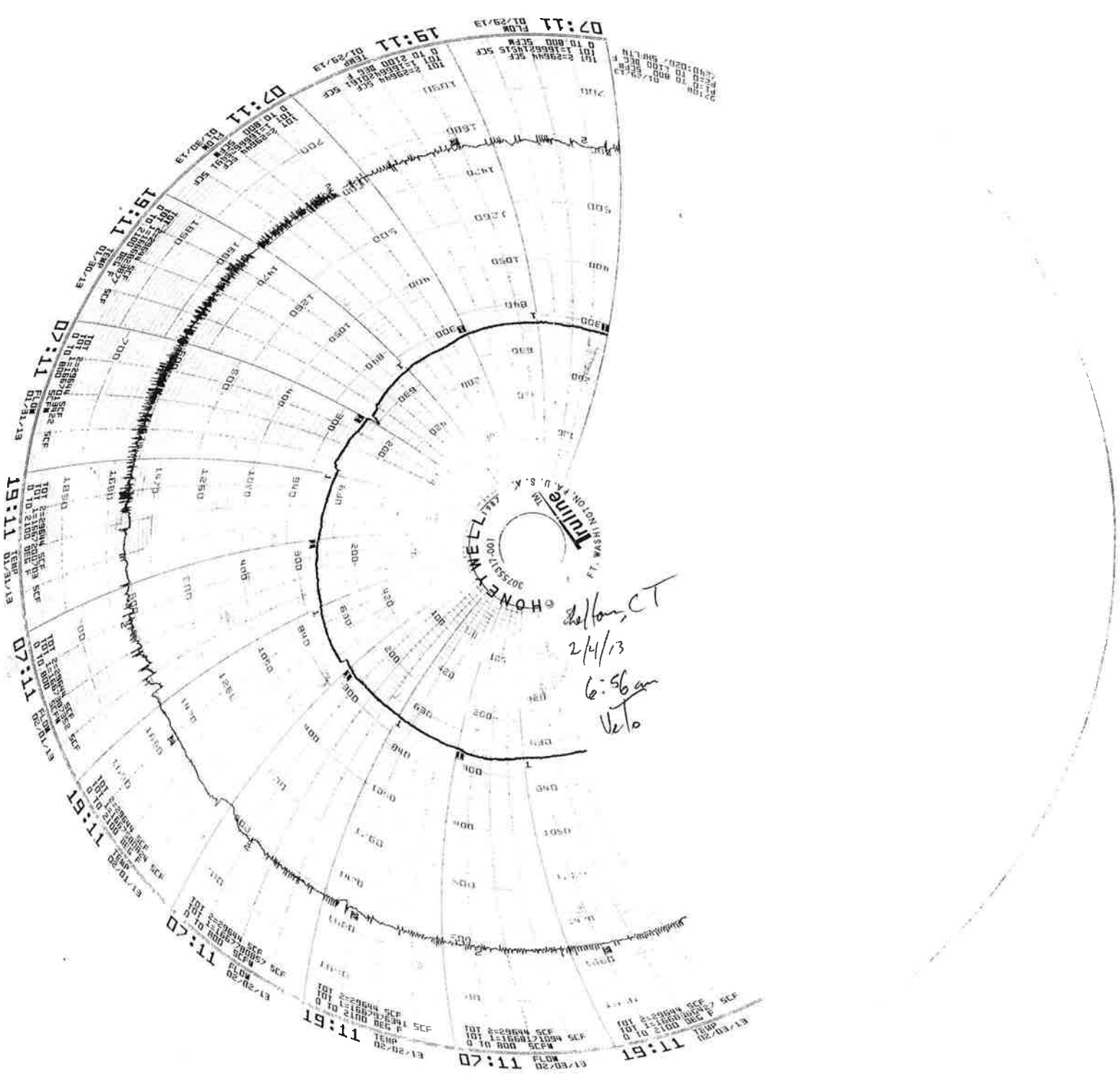
SCS-FS did not observe condensate removal during the month

February 2013

Attachment 12

Flare Operational Chart Records

February 2013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PHONETYME
Shelton, CT
2/4/13
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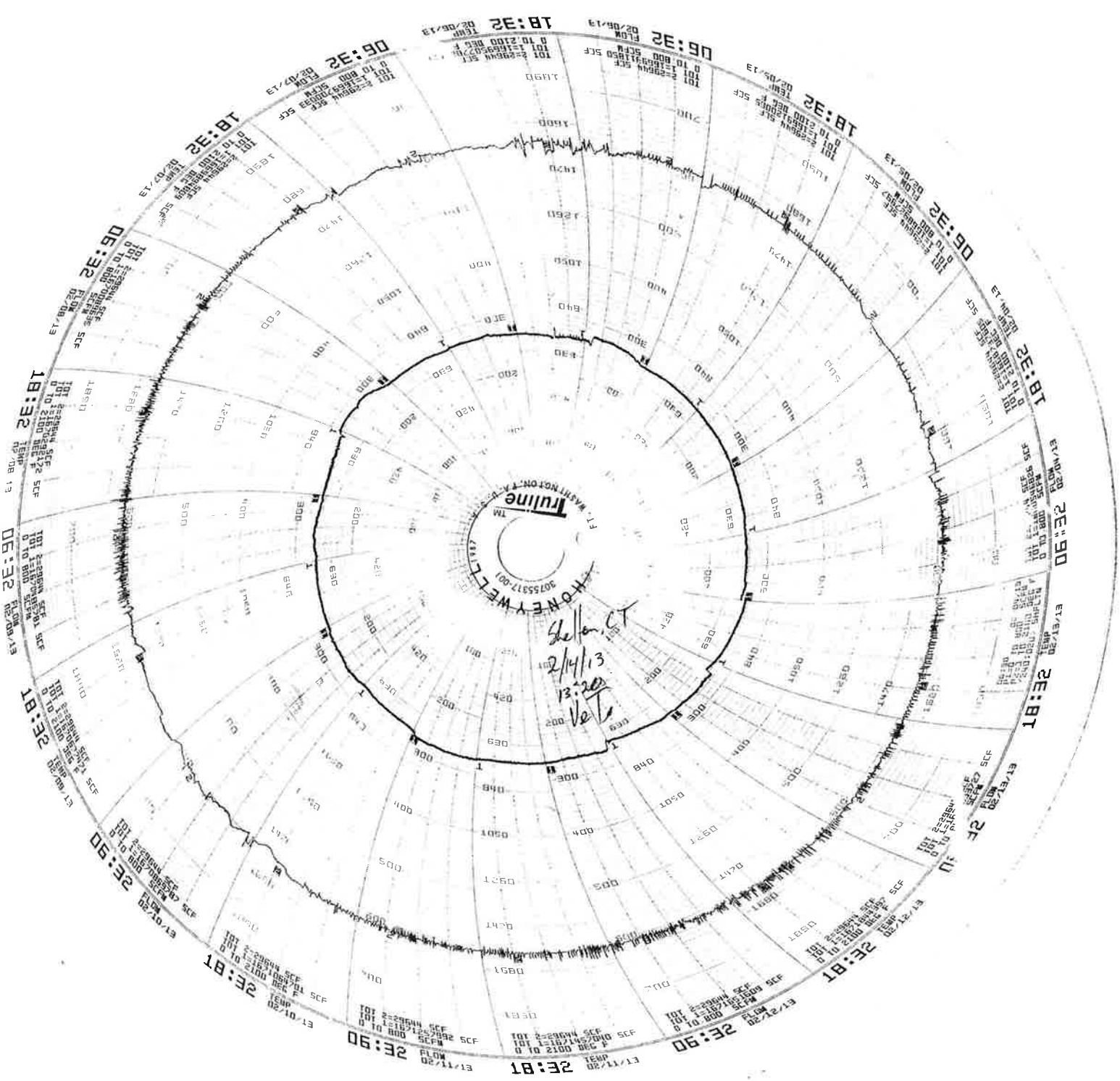
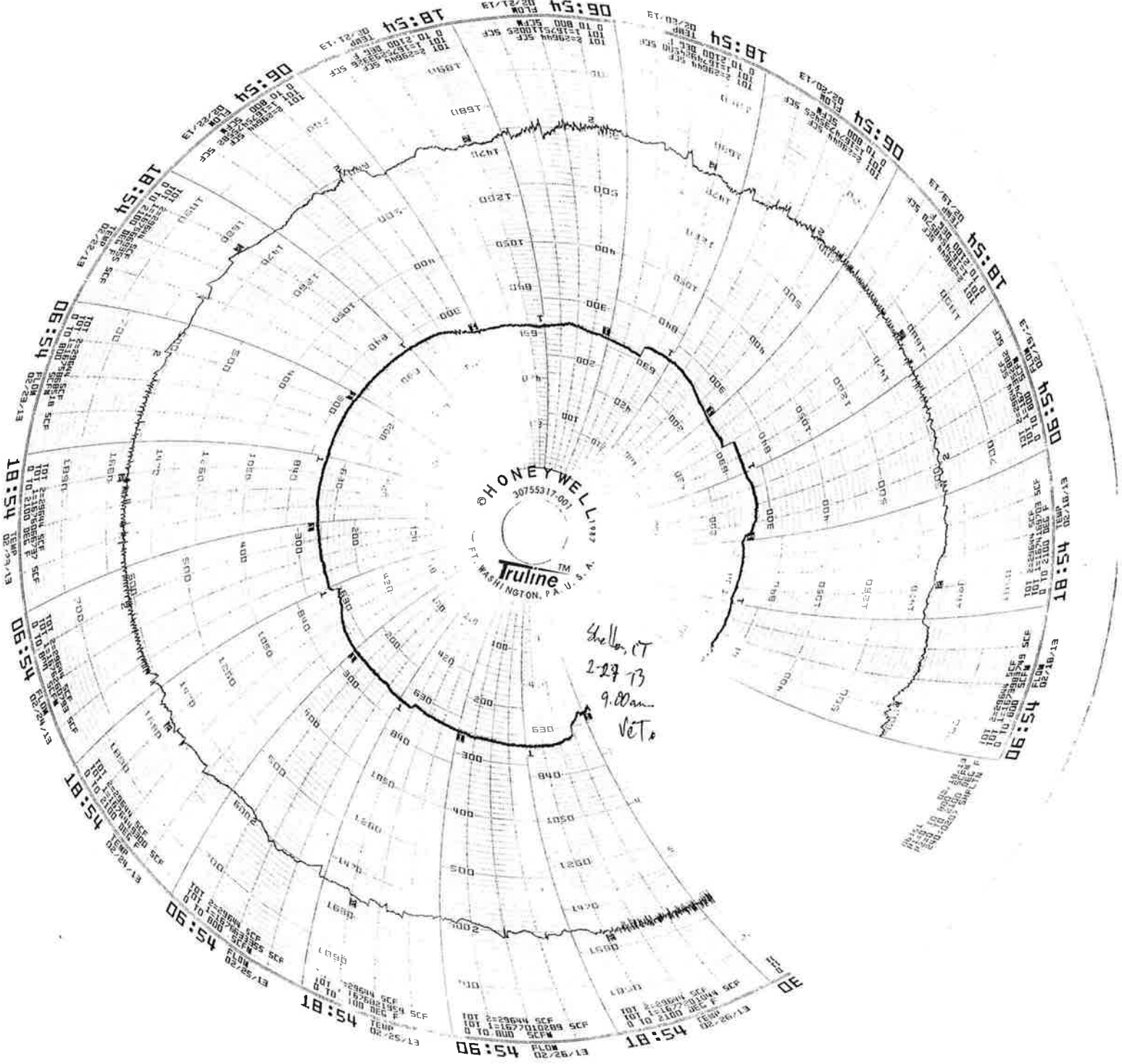
Vc/o


Trulline
HONEYWELL
Shelton, CT
2/14/13
13:20
Ve T

HONEYWELL
Truline
Shelton, CT
2/18/13
7:30 am
VLD


©HONEYWELL 1987
30755317-007
Truline TM
FT. WASHINGTON, PA. U.S.A.
Shelby, CT
2-27-13
9.00am
VCT

Attachment 13

Flare Permit Compliance Emissions Logs

February 2013

Monthly Emission Calculations - input values
Shelton Landfill

Input Sheet - Monthly LFG Flow

Month:	**February**	Year:	**2013**	
Downtime Hours:	0.5			
Operating Hours:	671.5	Total hours	672	
Heating Value:	153			
LFG Flow Total SCF:	10,781,573			
	Flare Chart totalizer reading			Total Period
	Flow Totalizer x1000	1666213	Month Begin	Hours
	Date taken:	1/29/13	2/1/2013	48
	Time taken:	7:30	0:00	16.5
	Flare Chart totalizer reading			
	Flow Totalizer x 1000	1677404	Month End	
	Date taken:	2/27/13	2/28/2013	-24
	Time taken:	9:00	0:00	-15.0
	Total SCF x 1000	11191	Total hours	698
Monthly Average:	267.6	scfm		
Average Percent Methane	15.10%	Totalizer average flow:		268
Supplemental Fuel Total Cubic Feet	0	Site visits Observations average flow:		264

Notes:
-- State references for the data that is input --
LFG Flare - Chart totalizer
Methane - Weekly Methane Test Method 3A
Blue Fonts are inputs

Monthly HAPS Calculations
Shelton Landfill

February 2013

HAP	HAP Emissions [1,3] Total Emissions (tons/month)	(lb/month)
1,1,1-Trichloroethane (methyl chloroform)	0.000	0.012
1,1,2,2-Tetrachloroethane	0.000	0.001
1,1,2-Trichloroethane (1,1,2 TCA)	0.000	0.007
1,1-Dichloroethane (ethylidene dichloride)	0.000	0.001
1,1-Dichloroethene (vinylidene chloride)	0.000	0.000
1,2-Dichloroethane (ethylene dichloride)	0.000	0.000
1,2-Dichloropropane (propylene dichloride)	0.000	0.000
Acrylonitrile	0.000	0.000
Benzene	0.000	0.012
Carbon disulfide	0.000	0.009
Carbon tetrachloride	0.000	0.001
Carbonyl sulfide	0.000	0.006
Chlorobenzene	0.000	0.017
Chloroethane (ethyl chloride)	0.000	0.001
Chloroform	0.000	0.001
Chloromethane (methyl chloride)	0.000	0.000
0	0.000	0.025
Dichloromethane (methylene chloride)	0.000	0.000
Ethylbenzene	0.000	0.076
Ethylene dibromide (1,2-dibromomethane)	0.000	0.001
Hexane	0.000	0.012
Mercury	0.000	0.000
Methyl ethyl ketone	0.000	0.010
Methyl isobutyl ketone	0.000	0.042
	0.000	0.001
Toluene	0.001	1.923
Trichloroethylene (trichloroethene)	0.000	0.004
Vinyl chloride	0.000	0.003
Xylenes	0.000	0.146
Total HAP's	**0.001**	**2.313**

Monthly LFG Thruput	10,781,573	scf/month
Hours of Operation	672	hours

(1) List and molecular weights from AP-42 Table 2.4-1, Default Concentrations for LFG Constituents, Revised November 1998.
(2) HAPs are non-volatile and non-particulate only.
(3) Flare destruction efficiency = 98%

Summary Table of Criteria Pollutants

Shelton Landfill

February 2013

Air Contaminant [1]	Emission Rates Value	Unit	Emissions (lbs/hr)	(lbs/mo)
CO [2]	0.000	lb/MMBtu	0.00	0.00
NOx [2]	0.0390	lb/MMBtu	0.10	64.25
PM10 [2]	0.00010	lb/MMBtu	0.00	0.16
SOx [2]	0.0010	lb/MMBtu	0.00	1.65
VOC [3]	1.33	ppm	0.00	0.28

Average LFG Flow Rate	268	scfm
Hours of Operation	672	hours
Monthly LFG Thruput	10.78	MMscf/month
Heating Value	153	Btu/scf
Methane Content	15.10%	
NMOC Destruction Efficiency [2]:	91.3%	

(1) Criteria pollutant list from Permit 0091, PART II, dated 4/26/02.

(2) Compliance Test Report, prepared by Rojac Air Testing Services Inc., dated 10/09/02

(3) Calculated as 39% of NMOC concentration; Compliance Test Report, prepared by Rojac Air Testing Services Inc., dated 10/09/02 lists the flare outlet NMOC concentration as <3.4 ppm @ 3%

Shelton Landfill
Summary HAPs - 12 Month Rolling Period
March 2012 through February 2013

	Emissions	
	lbs	tons
1,1,1-Trichloroethane (methyl chloroform)	0.150	0.000
1,1,2,2-Tetrachloroethane	0.009	0.000
1,1,2-Trichloroethane (1,1,2 TCA)	0.089	0.000
1,1-Dichloroethane (ethylidene dichloride)	0.006	0.000
1,1-Dichloroethene (vinylidene chloride)	0.005	0.000
1,2-Dichloroethane (ethylene dichloride)	0.005	0.000
1,2-Dichloropropane (propylene dichloride)	0.006	0.000
Acrylonitrile	0.003	0.000
Benzene	0.141	0.000
Carbon disulfide	0.112	0.000
Carbon tetrachloride	0.008	0.000
Carbonyl sulfide	0.073	0.000
Chlorobenzene	0.198	0.000
Chloroethane (ethyl chloride)	0.011	0.000
Chloroform	0.006	0.000
Chloromethane (methyl chloride)	0.003	0.000
1,4-Dichlorobenzene (p-dichlorobenzene)	0.298	0.000
Dichloromethane (methylene chloride)	0.004	0.000
Ethylbenzene	0.912	0.000
Ethylene dibromide (1,2-dibromomethane)	0.010	0.000
Hexane	0.148	0.000
Mercury	0.000	0.000
Methyl ethyl ketone	0.124	0.000
Methyl isobutyl ketone	0.502	0.000
Perchloroethylene (tetrachloroethylene)	0.009	0.000
Toluene	23.050	0.012
Trichloroethylene (trichloroethene)	0.054	0.000
Vinyl chloride	0.041	0.000
Xylenes	1.754	0.001
Total HAPs =	27.731	0.014

Emission limits for HAPS are as follows:

Any Single HAP - 10 tons/12 months

Total HAPS - 25 tons/12 months

Shelton Landfill
Flare Emissions Summary - 12 Month Rolling Period
March 2012 through February 2013

	12-Month		Permit Limit
	lbs	tons	tons/yr
CO	0.00	0.00	16.2
NO_X	809.00	0.40	4.9
PM_{10}	2.07	0.00	1.4
SO_X	20.74	0.01	4.9
VOC	3.28	0.00	0.6

Shelton Landfill												
HAP Monthly Calculation Data												
Month/Year	Mar-12		Apr-12		May-12		Jun-12		Jul-12		Aug-12	
Hours of Usage	741		719.5		743.5		719		729		742	
Down Hours	3.5		0.5		0.5		1		15		2	
Average scfm	232		225		216		217		234		258	
HAPs	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)
1,1,1-Trichloroethane (methyl chloroform)	0.012	0.000	0.011	0.000	0.011	0.000	0.011	0.000	0.012	0.000	0.013	0.000
1,1,2,2-Tetrachloroethane	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
1,1,2-Trichloroethane (1,1,2 TCA)	0.007	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.007	0.000	0.008	0.000
1,1-Dichloroethane (ethylidene dichloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
1,1-Dichloroethene (vinylidene chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1,2-Dichloroethane (ethylene dichloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1,2-Dichloropropane (propylene dichloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Acrylonitrile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzene	0.011	0.000	0.011	0.000	0.010	0.000	0.010	0.000	0.011	0.000	0.013	0.000
Carbon disulfide	0.009	0.000	0.008	0.000	0.008	0.000	0.008	0.000	0.009	0.000	0.010	0.000
Carbon tetrachloride	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Carbonyl sulfide	0.006	0.000	0.006	0.000	0.005	0.000	0.005	0.000	0.006	0.000	0.007	0.000
Chlorobenzene	0.016	0.000	0.015	0.000	0.015	0.000	0.014	0.000	0.016	0.000	0.018	0.000
Chloroethane (ethyl chloride)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Chloroform	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Chloromethane (methyl chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1,4-Dichlorobenzene (p-dichlorobenzene)	0.024	0.000	0.022	0.000	0.022	0.000	0.022	0.000	0.024	0.000	0.026	0.000
Dichloromethane (methylene chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	0.073	0.000	0.068	0.000	0.068	0.000	0.066	0.000	0.072	0.000	0.081	0.000
Ethylene dibromide (1,2-dibromomethane)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Hexane	0.012	0.000	0.011	0.000	0.011	0.000	0.011	0.000	0.012	0.000	0.013	0.000
Mercury	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Methyl ethyl ketone	0.010	0.000	0.009	0.000	0.009	0.000	0.009	0.000	0.010	0.000	0.011	0.000
Methyl isobutyl ketone	0.040	0.000	0.038	0.000	0.037	0.000	0.036	0.000	0.040	0.000	0.045	0.000
Perchloroethylene (tetrachloroethylene)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Toluene	1.837	0.001	1.729	0.001	1.717	0.001	1.668	0.001	1.828	0.001	2.049	0.001
Trichloroethylene (trichloroethene)	0.004	0.000	0.004	0.000	0.004	0.000	0.004	0.000	0.004	0.000	0.005	0.000
Vinyl chloride	0.003	0.000	0.003	0.000	0.003	0.000	0.003	0.000	0.003	0.000	0.004	0.000
Xylenes	0.140	0.000	0.132	0.000	0.131	0.000	0.127	0.000	0.139	0.000	0.156	0.000
Total HAPs	**2.210**	**0.001**	**2.080**	**0.001**	**2.066**	**0.001**	**2.007**	**0.001**	**2.199**	**0.001**	**2.465**	**0.001**

Shelton Landfill

HAP Monthly Calculation Data

Month/Year	Sep-12		Oct-12		Nov-12		Dec-12		Jan-13		Feb-13	
Hours of Usage	719		734		719		744		737		672	
Down Hours	1.5		10		0.5		0.5		7		0.5	
Average scfm	239		243		278		275		283		268	
HAPs	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)	(lbs/mo)	(tons/mo)
1,1,1-Trichloroethane (methyl chloroform)	0.012	0.000	0.012	0.000	0.014	0.000	0.014	0.000	0.014	0.000	0.012	0.000
1,1,2,2-Tetrachloroethane	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
1,1,2-Trichloroethane (1,1,2 TCA)	0.007	0.000	0.007	0.000	0.008	0.000	0.008	0.000	0.009	0.000	0.007	0.000
1,1-Dichloroethane (ethylidene dichloride)	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
1,1-Dichloroethene (vinylidene chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1,2-Dichloroethane (ethylene dichloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
1,2-Dichloropropane (propylene dichloride)	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000
Acrylonitrile	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzene	0.011	0.000	0.012	0.000	0.013	0.000	0.013	0.000	0.014	0.000	0.012	0.000
Carbon disulfide	0.009	0.000	0.009	0.000	0.010	0.000	0.011	0.000	0.011	0.000	0.009	0.000
Carbon tetrachloride	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Carbonyl sulfide	0.006	0.000	0.006	0.000	0.007	0.000	0.007	0.000	0.007	0.000	0.006	0.000
Chlorobenzene	0.016	0.000	0.016	0.000	0.018	0.000	0.019	0.000	0.019	0.000	0.017	0.000
Chloroethane (ethyl chloride)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Chloroform	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Chloromethane (methyl chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1,4-Dichlorobenzene (p-dichlorobenzene)	0.024	0.000	0.025	0.000	0.028	0.000	0.028	0.000	0.029	0.000	0.025	0.000
Dichloromethane (methylene chloride)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	0.073	0.000	0.076	0.000	0.085	0.000	0.086	0.000	0.088	0.000	0.076	0.000
Ethylene dibromide (1,2-dibromomethane)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Hexane	0.012	0.000	0.012	0.000	0.014	0.000	0.014	0.000	0.014	0.000	0.012	0.000
Mercury	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Methyl ethyl ketone	0.010	0.000	0.010	0.000	0.011	0.000	0.012	0.000	0.012	0.000	0.010	0.000
Methyl isobutyl ketone	0.040	0.000	0.042	0.000	0.047	0.000	0.048	0.000	0.049	0.000	0.042	0.000
Perchloroethylene (tetrachloroethylene)	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000
Toluene	1.838	0.001	1.909	0.001	2.137	0.001	2.184	0.001	2.231	0.001	1.923	0.001
Trichloroethylene (trichloroethene)	0.004	0.000	0.004	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.004	0.000
Vinyl chloride	0.003	0.000	0.003	0.000	0.004	0.000	0.004	0.000	0.004	0.000	0.003	0.000
Xylenes	0.140	0.000	0.145	0.000	0.163	0.000	0.166	0.000	0.170	0.000	0.146	0.000
Total HAPs	**2.211**	**0.001**	**2.297**	**0.001**	**2.570**	**0.001**	**2.628**	**0.001**	**2.685**	**0.001**	**2.313**	**0.001**

Shelton Landfill

Enclosed Flare Monthly Calculation Data

	CO		NOX		PM10		SOX		VOC	
	lb/mo	tons/mo	lb/mo	tons/mo	lb/mo	tons/mo	lb/mo	tons/mo	lb/mo	tons/mo
Mar-12	0.000	0.000	67.981	0.034	0.174	0.000	1.743	0.001	0.264	0.000
Apr-12	0.000	0.000	62.366	0.031	0.160	0.000	1.599	0.001	0.249	0.000
May-12	0.000	0.000	72.515	0.036	0.186	0.000	1.859	0.001	0.247	0.000
Jun-12	0.000	0.000	65.245	0.033	0.167	0.000	1.673	0.001	0.240	0.000
Jul-12	0.000	0.000	65.124	0.033	0.167	0.000	1.670	0.001	0.263	0.000
Aug-12	0.000	0.000	67.449	0.034	0.173	0.000	1.729	0.001	0.295	0.000
Sep-12	0.000	0.000	67.205	0.034	0.172	0.000	1.723	0.001	0.264	0.000
Oct-12	0.000	0.000	74.207	0.037	0.190	0.000	1.903	0.001	0.275	0.000
Nov-12	0.000	0.000	64.898	0.032	0.166	0.000	1.664	0.001	0.275	0.000
Dec-12	0.000	0.000	71.452	0.036	0.183	0.000	1.832	0.001	0.314	0.000
Jan-13	0.000	0.000	66.301	0.033	0.170	0.000	1.700	0.001	0.321	0.000
Feb-13	0.000	0.000	64.255	0.032	0.165	0.000	1.648	0.001	0.277	0.000
12 month Total	**0.0**	**0.0**	**809.0**	**0.4**	**2.1**	**0.0**	**20.7**	**0.0**	**3.3**	**0.0**

Attachment 14

Spare Parts Inventory

February 2013

Shelton Landfill
Onsite Spare Parts Inventory

Flare Manufacturer's Recommended Spare Parts List	Current Number in Onsite Spare Parts Inventory	Manufacturer's Recommended Number
Flame Scanner	1	1
Thermocouple Assembly	3	4
Pilot Electrode	1	1
Pilot Ignition Rod Insulator	3	3
Pilot Assembly	1	1
Sight Glass Assembly	1	1
Panel Replacement Light Bulbs	2 box	3
Pilot Gas Regulator	1	1
Pilot Gas Pressure Gauge	1	1
Pilot Gas Solnoid Valve	1	1
Purge Air Pressure Switch	1	1
Louver Damper Actuator	1	1
Enrichment Gas Pressure Regulator	1	1
Enrichment Gas Solenoid Valve	1	1
Temperature Switch	1	1
Chart Paper	1.0	1
Other Flare Spare Parts in Office		
Blower/Motor Flexible connector	2	Not on List
Blower/Motor Hub	4	Not on List
Blower Bearing	4	Not on List
Blower Bearing change kit	2	Not on List
Blower Seals	0	Not on List
Flame Arrester Element	0	Not on List
Flame Arrester Gaskets	0	Not on List
Demister Element	0	Not on List
Methane Monitoring Spare Components		
Perimeter monitoring explosive gas sensor head	2	NA
Nighthawk combustible gas monitors	0	NA

Attachment 15

Flare Station Backup Generator Maintenance

February 2013

ATTACHMENT 15

SHELTON LANDFILL BALDOR GENERATOR LUBRICATION AND MAINTENANCE

DATE: 02/15/2013	OPERATOR: B.Todoriko

Item	Every 2 Weeks	250 Hours or 12 Months	500 Hours or 12 Months	As Required
Operate Engine at Rated Speed and 50%-70% load a Minimum of 30 Minutes	Yes			
Check Engine oil and Coolant Level	No			
Check Fuel Filter/Water Separator Bowl				
Check Air Cleaner Dust Unloader Valve & Indicator (a)				
Perform Visual Walkaround Inspection	Yes			
Service Fire Extinguisher				
Change Engine Oil and Replace Oil Filter (b)				
Check Engine Mounts				
Service Battery				
Clean Crankcase Vent Tube				
Check Air Intake Hoses, Connections, & System				
Replace Fuel Filter Element - Bleed Fuel System				
Check Belt Tensioner and Belt Wear		Yes		
Check Engine Electrical Ground Connection		Yes		
Check Cooling System		Yes		
Coolant Solution Analysis Add SCAs as Required				
Pressure Test Cooling System				

ATTACHMENT 15

SHELTON LANDFILL BALDOR GENERATOR LUBRICATION AND MAINTENANCE

DATE: 02/15/2013	OPERATOR: B.Todoriko

Item	Every 2 Weeks	250 Hours or 12 Months	500 Hours or 12 Months	As Required
Check Crankshaft Vibration Damper (6.8 L Engines) (c)				
Flush Cooling System (d)				
Test Thermostats				
Check and Adjust Engine Valve Clearance				
Add Coolant				
Replace Air Filter Elements				
Replace Poly-Vee Belt				
Check Fuses				
Bleed Fuel System				

(a) Replace primary air cleaner element when restriction indicator shows vacuum of 625 mm (25 in.) H2O.

(b) Change the oil the first time before 100 hours maximum of (break-in) operation, then every 250 hours there after. If PLUS-50 oil is used along with John Deere oil filter, the oil change interval may be extended by 50 percent to 375 hours

(c) Replace crankshaft damper every 4500 hours or 60 months, whichever occurs first.

(d) If John Deere COOL-GARD is used, the flushinh interval may be extended to 3000 hours or 36 months. If John Deere COOL-GARD is used and the coolant is tested annually AND additives are replenished as needed by adding a supplemental coolant additive, the flushing interval may be extended to 5000 hours or 60 months, whichever comes first.

COMMENT 1:

COMMENT 2:

COMMENT 3: