Gude Landfill
Waste Delineation Study
Montgomery County, Maryland

Prepared for:

Northeast Maryland Waste Disposal Authority/
Department of Environmental Protection
Division of Solid Waste Services
Montgomery County, Maryland

Prepared by:

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January 2010 EA Project No. 62196.05

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LIST OF ACRONYMS AND ABBREVIATIONS

CGI	Combustible Gas Indicator
EA	EA Engineering, Science, and Technology, Inc.
EPA	Environmental Protection Agency
GLCC	Gude Landfill Concerned Citizens
HASP	Health and Safety Plan
MCL	Maximum Contaminant Level
MDE	Maryland Department of the Environment
M-NCPPC	Maryland-National Capital Park and Planning Commission
N.E.	Northeast
N.W.	Northwest
PID	Photo-Ionization Detector
RCRA	Resource Conservation and Recovery Act
S.E.	Southeast
S.W.	Southwest
TP	Test Pit
WSSC	Washington Suburban Sanitary Commission

SECTION 1. PURPOSE

EA Engineering, Science, and Technology, Inc. (EA) prepared this report to present the findings of the Waste Delineation Study at the Gude Landfill (the Landfill) for the Montgomery County Department of Environmental Protection (the County). Existing site features and historical records indicated that waste may have been placed along and beyond the Landfill property boundary. An investigation to locate the approximate horizontal extent of waste at the Landfill was completed by EA during August through December 2009. This work effort is part of the initial phase of assessment (Phase 0) as required by the Maryland Department of the Environment (MDE).

The next phase of assessment (Phase 1) by the County is the Nature and Extent Study, which will include characterization of the Landfill site and the extent of potential environmental contamination. The Nature and Extent Study will be discussed in the future under separate cover.

SECTION 2. BACKGROUND

The Landfill was used by the County for municipal solid waste disposal between 1964 and 1982 and predated current Subtitle D design standards per the U.S. Environmental Protection Agency (EPA) – Resource Conservation and Recovery Act (RCRA). The Landfill was constructed as an unlined landfill without a geosynthetic bottom liner, capping system, nor a leachate collection system. The County currently maintains an active landfill gas collection, flare, and gas-to-energy system; a network of on-site and offsite groundwater monitoring wells; and stormwater management infrastructure at the Landfill.

Soil was reportedly used as daily cover during waste filling, and a two-foot final layer of soil was reportedly placed as natural cover to support vegetation, which currently includes grasses, shrubs and trees. The site is approximately 160 acres, with an approximate waste disposal footprint of 100 acres. The Landfill is located at 600 East Gude Drive in Rockville, Maryland, and it is bordered by industrial operations (east by southeast); Washington Suburban Sanitary Commission (WSSC) property and Gude Drive (south); a Transcontinental/Columbia Gas natural gas pipeline and the community of Derwood Station South (west); and Maryland-National Capital Park and Planning Commission (M-NCPPC) land (north by northeast).

Since final closure of the Landfill in 1982, the County has conducted voluntary groundwater and surface water monitoring and laboratory analyses. During calendar year 2008, the Landfill water quality data were requested by a local citizens group (Gude Landfill Concerned Citizens – GLCC) that was opposed to a County plan to construct a bus depot on the Landfill property. GLCC contended that the reported analyte concentrations in the groundwater samples exceeded the Maximum Contaminant Levels (MCLs) established by EPA as limits for drinking water. MDE also reviewed the water quality data, acknowledged GLCC's concerns and the regulatory standards. MDE required the County to initiate a Nature and Extent Study to assess potential adverse environmental or health and safety impacts of the Landfill.

SECTION 3. PROCEDURE

EA prepared a health and safety plan (HASP) for the test pit investigation activities. The HASP, which was approved by the County, detailed the scope of field activities, specified personal protective equipment, and outlined air monitoring requirements. In order to evaluate the approximate horizontal extent of waste at the Landfill, mechanical excavation or hand auguring was performed at the proposed test pit locations.

EA and County personnel staked the proposed locations of the test pits. Wooden stakes were placed in the field at approximate fifty-foot intervals along the assumed edge of waste, and the stakes were typically offset several feet from the Landfill property boundary to ensure that no excavation occurred off County property. Upon completion of the test pit location staking, Miss Utility was contacted. A private utility locator also performed a utility survey to identify subsurface utilities along a 50-foot wide swath inside of the property boundary where test pit locations were staked. Additional utility locating was also performed offsite on M-NCPPC property. Offsite utilities were located within a 25-foot swath to the north of the test pit locations and a 50-foot swath south (towards the Landfill) of the test pit stakes. The utility locator utilized electro-magnetic and other detection methods to sense the presence of subsurface utilities and mark the horizontal location of such utilities on the ground surface. Identified utilities were avoided during test pitting. Pipes were encountered at several of the onsite test pit locations; however, they appeared to be abandoned and remnant of historical Landfill operations.

Test pitting was performed primarily using a CAT 307 Excavator at each staked location. Typical test pits were sized four-feet wide by four-feet long by four-feet deep. A hand auger was utilized in areas where equipment access was problematic or utilities were marked. No digging was performed in streams or apparent wetland areas. On-site excavation was first performed along the property boundary bounded by the Transcontinental/Columbia Gas natural gas pipeline right-of-way and in those areas where waste was most likely to be offsite, to confirm that waste existed in proximity to the property line before offsite test pitting was performed. At the County's request, test pitting was not performed between the area of Pond No. 1 (600 E. Gude Dr. Entrance) and the flare station. This was mainly due to the installation of below-grade infrastructure to support the landfill gas flare station and gas-to-energy facility. Recent construction in this area confirmed the previously understood edge of waste.

A combustible gas indicator (CGI) was utilized by EA at each test pit location to assess the potential presence of hazardous conditions due to the potential presence of landfill gas (methane). The CGI instrument was calibrated prior to use (calibration documentation presented

in Appendix A). A photoionization detector (PID) was also calibrated prior to use and did not indicate hazardous conditions. Calibration reports for the CGI and PID were not prepared. No hazardous conditions were encountered during test pitting.

The following procedure was followed for test pitting:

- Locate property boundary via field survey.
- Flag and stake test pit location.
- Remove flagged stake and write test pit number on each stake with permanent marker.
- Begin test pitting with excavator or hand auger.
- Record measurements using a CGI.
- If strong organic odor is present, oily soils, or other signs of potential impact, record measurement using a PID.
- Continue excavation or hand auguring of test pit.
- Adjust depth and location until waste is found.
- Photograph test pit.
- Document the following in project field notebook:
    - Date and time
    - Equipment used
    - Depth of test pit
    - CGI measurement (and PID if applicable)
    - Location of test pit relative to property boundary
    - Type of waste found, if applicable.
- Place waste/soil back in test pit.
- Place flagged stake at the limit of waste.
- Place hay and seed over disturbed areas (performed by the County's Contractor).
- Develop electronic test pit forms.
- Label digital photographs by test pit number.

SECTION 4. SUMMARY OF FINDINGS ON COUNTY PROPERTY

In total, 161 test pits were completed on County property at the Landfill site (Figure 1). A test pit log was created for each test pit location and is provided as Appendix B, along with a table summarizing the test pit results. Appendix C of this document contains photos of the test pit locations. Test pits were numbered in the order in which they were performed.

The test pit excavations indicated that waste placement primarily follows the property line along the northwest (N.W.) boundary and gas pipeline right-of-way and continues behind Pond No. 2 until re-connecting with the N.W. property boundary. Along the northeast (N.E.) property boundary, waste was primarily identified as likely extending onto M-NCPPC property. The limit of waste follows the property boundary along the eastern side of the Landfill. Along the southeast (S.E.) property boundary, west of Incinerator Lane, the limit of waste follows the access road. Along the southern boundary to the west of Incinerator Lane, waste was surficial in nature, and extends onto WSSC property in several locations. At the County's request, waste was not delineated on the southwestern portion of the site located near the flare station, due to the presence of underground piping and conduits. From previous excavation activities performed by the County, it is known that waste is located at the toe of the slope.

Test pitting results for each location were summarized into the following categories:

- Waste Not Encountered
- Waste Extends Beyond Test Pit
    - Waste Likely Extends Offsite (Not Delineated)
    - Waste Onsite (Not Delineated)
    - Waste Extends Offsite (Delineated)
- Waste Delineated
    - Waste on Landfill Property
    - Waste on M-NCPPC Property (Section 5)

4.1 Waste Not Encountered

No waste was encountered at eleven locations along the property boundary. In these locations, the horizontal limit of waste was unable to be determined. Along the northern side of the entrance from Gude Drive, at test pit locations TP-20 through TP-23, waste was not identified between the guiderail to the access road and the fence located along the edge of the property in depths up to five feet below ground surface (bgs). Similarly, the limit of waste was not able to be identified near the entrance to Incinerator Lane (TP-110 through TP-114). It is likely that

clean fill may have been placed in the area to develop access roads, or the road pre-dates the placement of waste. Along the southeast boundary, west of Incinerator Lane, the limit of waste follows the access road. Subsurface materials encountered in these test pit locations primarily consisted of road bedding material (TP-113 and TP-114). Table 4-1 summarizes the locations where no waste was encountered.

TABLE 4-1. NO WASTE ENCOUNTERED

Test Pit Number	Location
TP-13	Northwest
TP-20 to TP-23	Northwest near Gude Drive Entrance
TP-110 to TP-112	Southeast of Incinerator Lane
TP-113 to TP-114	Southwest of Incinerator Lane
TP-127	Southwest of Incinerator Lane

4.2 Waste Extends Beyond Test Pit

Of the 161 on-site test pit locations, waste was identified as likely extending beyond the Landfill property boundary at fifty-seven of the test pit locations. Test pits were up to twelve feet in depth, and in a few locations waste was not encountered until a depth of ten feet bgs.

Waste Likely Extends Offsite (Not Delineated)

Along the northwest side of the property boundary, there were four locations where the limit of waste was not identified, and it may extend into the gas pipeline right-of-way (TP-7 through TP-10). Waste in this area was fairly shallow, with waste typically encountered one to two feet bgs. The photo of TP-7 illustrates where waste was identified in relation to the property boundary, which is marked by the existing fence.

Along the southern boundary to the west of Incinerator Lane, waste was surficial in nature and extends beyond the Landfill property boundary in several locations (TP-136 through TP-140). Test pitting on WSSC property was not performed because it is unlikely that waste was intentionally buried on this property based on the County's knowledge of the landfilling operations. The photo of TP-136 illustrates typical waste encountered in areas where waste extends onto WSSC property.

TP-7, Located Along N.W. Landfill Property Boundary

TP-136, Located Along Southern Landfill Property Boundary (Adjacent to WSSC Property)

Locations identified as Waste Likely Extends Offsite (Not Delineated) are summarized in Table 4-2.

TABLE 4-2. WASTE LIKELY EXTENDS OFFSITE (NOT DELINEATED)

Test Pit Number	Location
TP-7 to TP-10	Northwest along gas line right of way
TP-28	Northwest along gas line right of way
TP-41 to TP-42	Northwest along gas line right of way
TP-122 to TP-123	Southwest along WSSC property
TP-136 to TP-140	Southwest along WSSC property
TP-159	Northwest along gas line right of way
TP-160	Northwest along gas line right of way

Waste On-site (Not Delineated)

Waste was identified in several areas along the southwestern (S.W.) boundary of the site, but was not delineated. In particular, test pits were performed along the S.W. fence line and along the fence by the pond adjacent to the Gude Drive entrance. Waste was encountered, but not delineated beyond either of the fences. Based on the County's knowledge of the landfilling operations, the County does not believe waste extends beyond the pond. Waste identified along the S.W. fence line was surficial in nature. These locations are summarized in Table 4-3.

TABLE 4-3. WASTE ON-SITE (NOT DELINEATED)	
Test Pit Number	**Location**
TP-6	Northwest along gas line right of way
TP-143 to TP-145	Southwestern property boundary
TP-149 to TP-154	Southwestern property boundary

Waste Extends Offsite (Delineated)

Along the N.E. property boundary, waste was primarily identified as likely extending onto M-NCPPC property (TP-46 through TP-84). Historical aerial photography illustrates that waste was likely placed in this area during the late 1970s (Appendix D). Appendix D is an aerial photo from 1979 with the property boundary overlaid on it. Light areas on the photo represent areas without vegetation where landfilling activities were occurring at the time of the photo. The image illustrates that landfill activities extended beyond the property boundary.

The topography of the N.E. property boundary area also indicates waste was placed beyond the property boundary. The area appears to be graded with a downward slope to facilitate stormwater drainage, which is indicative of waste placement. The majority of the area is vegetated with trees and shrubs, except for the area directly upgradient of an offsite stormwater management pond, which is covered with tall grasses. The pond is fed by two concrete channels set along each side of the open area along the Landfill side slopes, forming a triangular shape. The photo of TP-48 is representative of the test pits performed along the N.E. property boundary.

TP-48, Located Along N.E. Landfill Property Boundary

Table 4-4 summarizes the test pits where further delineation was performed offsite.

TABLE 4-4. WASTE EXTENDS OFFSITE (DELINEATED)

Test Pit Number	Location
TP-45 to TP-55	Northeast along M-NCPPC property
TP-56 to TP-84	Northeast along M-NCPPC property
TP-86	Northeast along M-NCPPC property

4.3 Waste Delineated

Waste was delineated at eighty-three test pit locations on site and fourteen offsite test pit locations.

Waste on Landfill Property

Waste was primarily delineated as being on the Landfill property along the N.W., east, and S.E. property boundaries. Waste that was delineated on site primarily followed the property boundary. Waste on the S.E. of the site followed the Landfill access road. Figure 1 shows an approximate limit of waste in green based on the test pit locations where waste was delineated. The photo of TP-108 was taken along a Landfill access road east of Incinerator Lane, where waste was encountered approximately three feet bgs.

TP-108, Located on S.E. Landfill Property Boundary (East of Incinerator Lane)

Table 4-5 summarizes the test pits where waste was delineated on the Landfill.

TABLE 4-5. WASTE ON LANDFILL PROPERTY	
Test Pit Number	**Location**
TP-1 to TP-5	N.W. adjacent to gas line right-of-way
TP-11 to TP-12	N.W. adjacent to gas line right-of-way
TP-14 to TP-19	N.W. adjacent to gas line right-of-way
TP-24 to TP-27	N.W. adjacent to gas line right-of-way
TP-29 to TP-40	N.W. adjacent to gas line right-of-way
TP-43 to TP-44	N.W. adjacent to gas line right-of-way
TP-85	N.E. adjacent to M-NCPPC property
TP-87 to TP-95	Eastern property boundary
TP-96 to TP-109	S.E. property boundary
TP-115 to TP-121	South along WSSC property
TP-124 to TP-126	South along WSSC property
TP-128 to TP-135	S.W. along WSSC property
TP-141 to TP-142	Western property boundary
TP-146 to TP-148	Western property boundary
TP-155	Western property boundary
TP-156	N.E. adjacent to M-NCPPC property
TP-157 to TP-158	N.W. adjacent to gas line right-of-way
TP-161	N.W. adjacent to gas line right-of-way

SECTION 5. SUMMARY OF FINDINGS ON M-NCPPC PROPERTY

The County contacted M-NCPPC and received a Permit for Construction on Park Property on 23 September 2009, dated 21 September 2009 (Appendix E). EA and the County staked proposed test pit locations on the M-NCPPC property on 28 September 2009. EA and the County visited the M-NCPPC property test pit locations with two representatives from M-NCPPC on 2 October 2009. The M-NCPPC representatives requested that the frequency of test pits be reduced to limit disturbance in the park. Procedures similar to those performed onsite for staking, utility locating, excavation, and stabilization of disturbed areas were performed on M-NCPPC property by EA and County personnel.

In total, fourteen test pits were completed on M-NCPPC property (A series) and provide an approximate limit of waste (Figure 1). An enlarged view of the M-NCPPC test pit locations is provided in Figure 2. A test pit log was created for each test pit location and is provided as Appendix B.

TP-5A, Located on M-NCPPC Property (Along N.E. Landfill Property Boundary)

TP-8A, Located on M-NCPPC Property (Along N.E. Landfill Property Boundary)

Test pits on M-NCPPC property were up to eight feet in depth, and waste was encountered at fairly shallow depths ranging from half a foot to three feet bgs. The limit of waste delineated on M-NCPPC property correlates well with the disturbed area seen on the aerial photo shown in Appendix D, with the limit of waste approximately 200 to 250 feet from the Landfill property boundary. Labeled photos of each of the M-NCPPC test pits are provided in Appendix C. Table 4-6 summarizes the test pit locations performed on M-NCPPC property.

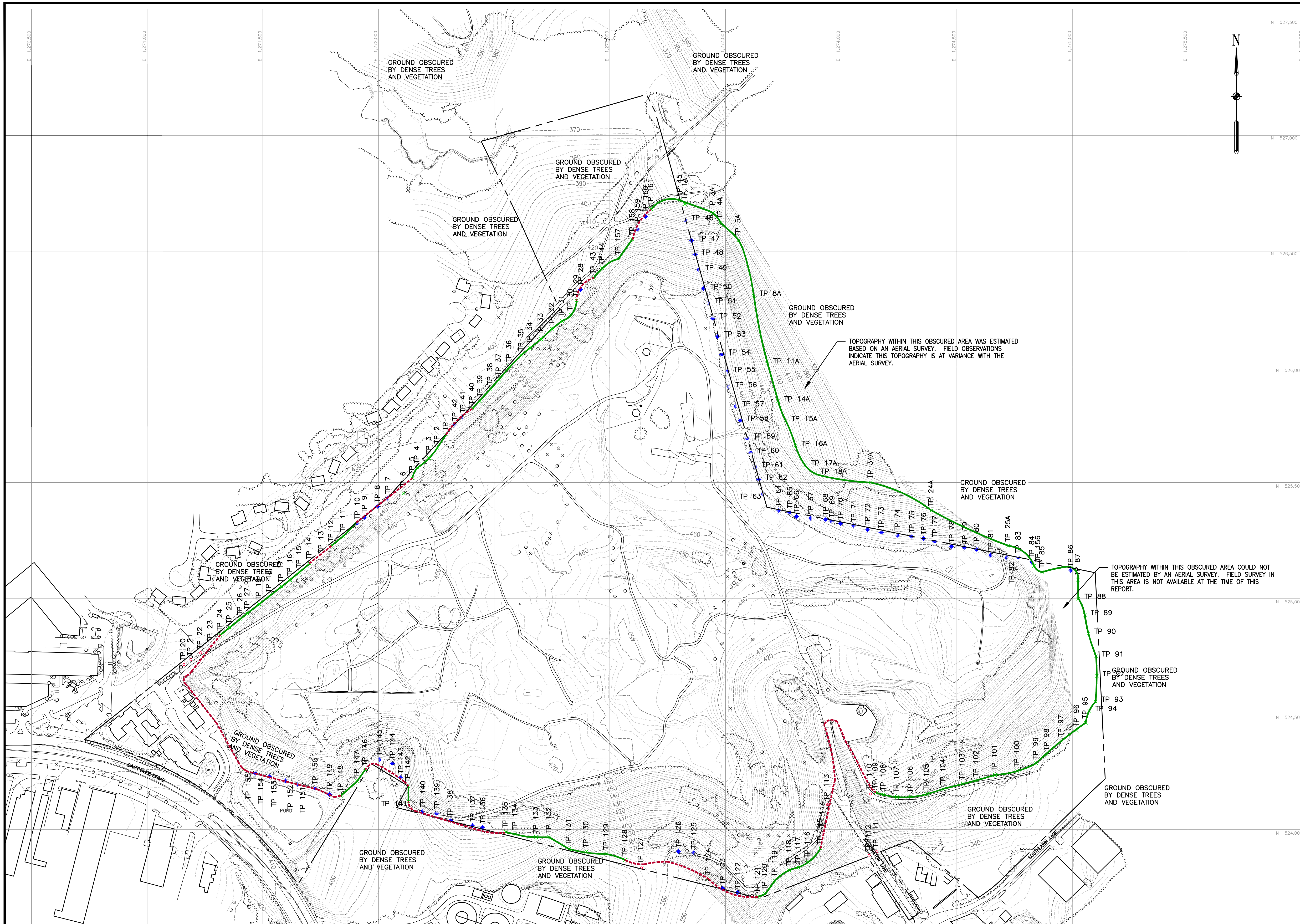
TABLE 5-1. WASTE ON M-NCPPC PROPERTY	
Test Pit Number	**Location**
1A	N.E. of the Landfill property
3A	N.E. of the Landfill property
4A	N.E. of the Landfill property
5A	N.E. of the Landfill property
8A	N.E. of the Landfill property
11A	N.E. of the Landfill property
14A	N.E. of the Landfill property
15A	N.E. of the Landfill property
16A	N.E. of the Landfill property
17A	N.E. of the Landfill property
18A	N.E. of the Landfill property
24A	N.E. of the Landfill property
25A	N.E. of the Landfill property
34A	N.E. of the Landfill property

SECTION 6. SUMMARY

In general, waste was placed within the Landfill property boundary in most locations. Waste was placed beyond the property boundary along the M-NCPPC property boundary to the north and east of the Landfill, with the limit of waste approximately 200 to 250 feet from the Landfill property boundary. Surficial waste was found along the gas pipeline right of way and the WSSC property boundary with the Landfill.

This information will be utilized in the Nature and Extent Study and in future phases of the potential Remediation Project. In most locations, waste was placed in close proximity to the property boundary, which will provide additional information as potential remedial actions are analyzed for the Landfill. Waste placed on M-NCPPC property will also be addressed in the Nature and Extent Study, and the selected remedial action will address this waste, in addition to the waste placed on the Landfill property.

Figures



NOTES:

1. TOPOGRAPHY COMPILED BY APPLIED MAPPING SOLUTIONS, INC. USING PHOTOGRAMMETRIC METHODS WITH PHOTOGRAPHY DATED 06/24/09 AND SUPPLEMENTED WITH FIELD SURVEY PERFORMED BY C.C. JOHNSON & MALHOTRA, P.C., OCTOBER 2009.
2. HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983/91 (NAD-83/91). COORDINATE SYSTEM IS MARYLAND STATE PLANE, U.S. SURVEY FEET. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-88) WITH ELEVATIONS SHOWN IN FEET.
3. THE PROPERTY BOUNDARY WAS LAID OUT AND THE PLAT THEREOF PREPARED BY A REGISTERED PROPERTY LINE SURVEYOR OF THE STATE OF MARYLAND, IN COMPLIANCE WITH SECTION 3-108 OF THE REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND, EDITION 2005.
4. THE PROPERTY BOUNDARY REPRESENTS THE LANDS OWNED BY MONTGOMERY COUNTY, MARYLAND KNOWN AS THE GUDE LANDFILL WHICH IS A COMPILATION OF THREE DEEDS, LISTED BELOW, RECORDED IN THE LAND RECORDS OF MONTGOMERY COUNTY, MARYLAND, WITHOUT BENEFIT OF FULL TITLE COMMITMENT.
   LIBER 2975 FOLIO 213
   LIBER 4501 FOLIO 453
   LIBER 5174 FOLIO 309
5. TEST PITTING WAS PERFORMED AT AN APPROXIMATE SPACING OF 50 FEET ALONG THE ASSUMED LIMIT OF WASTE WHERE THE HORIZONTAL LIMIT OF WASTE WAS TO BE DETERMINED.
6. THE HORIZONTAL LIMIT OF WASTE DEPICTED IS ESTIMATED BASED UPON TEST PIT FINDINGS AND SITE TOPOGRAPHY.
7. AT TEST PIT LOCATIONS ALONG THE ACCESS ROAD AND THE PROPERTY LINE WHERE WASTE WAS NOT ENCOUNTERED, THE HORIZONTAL LIMIT OF WASTE IS NOT DEPICTED AND IS BELIEVED TO BE WITHIN THE PROPERTY BOUNDARY.
8. AT TEST PIT LOCATIONS ALONG THE PROPERTY LINE WHERE WASTE WAS ENCOUNTERED, THE HORIZONTAL LIMIT OF WASTE IS NOT DEPICTED AND IS BELIEVED TO EXTEND BEYOND THE PROPERTY BOUNDARY.
9. TOPOGRAPHY IS APPROXIMATE IN AREAS NOTED "GROUND OBSCURED BY DENSE TREES AND VEGETATION". THE APPROXIMATED TOPOGRAPHY DOES NOT IMPACT THE DELINEATION OF WASTE IN THESE AREAS.
10. IN AREAS WHERE A DEFINITIVE LIMIT OF WASTE WAS NOT ESTABLISHED BY EA ENGINEERING, THE LIMIT OF WASTE WAS ESTIMATED BASED UPON COUNTY STAFF KNOWLEDGE.

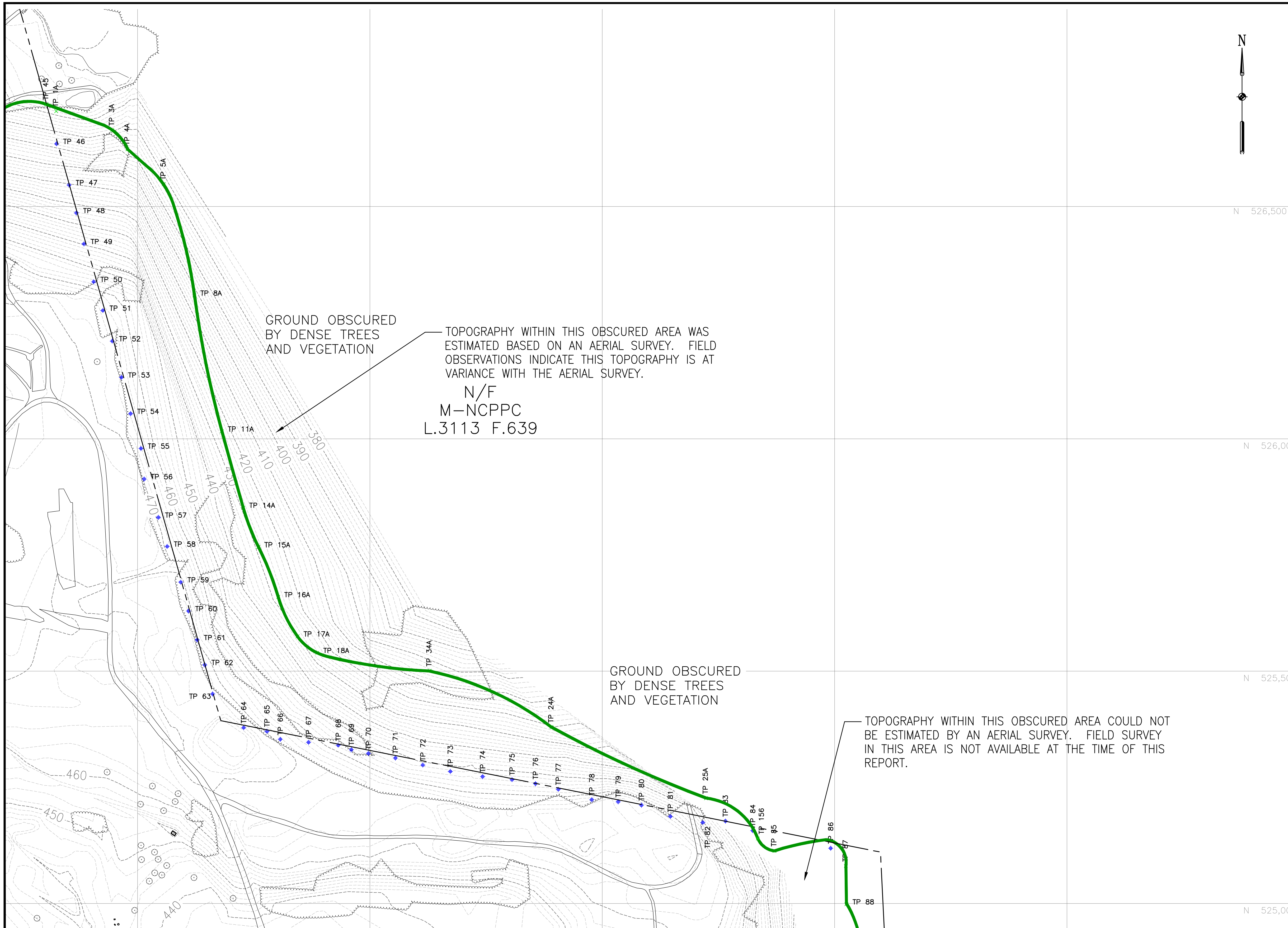
LEGEND

10-FT CONTOUR
2-FT CONTOUR
ESTIMATED LIMIT OF WASTE
COUNTY ESTIMATED LIMIT OF WASTE (SEE NOTE 10)
PROPERTY BOUNDARY
TEST PIT – WASTE DELINEATED × TP 148
TEST PIT – NO WASTE ENCOUNTERED ○ TP 148
TEST PIT – WASTE EXTENDS BEYOND TEST PIT ⊕ TP 148

200 100 0 200 400
GRAPHIC SCALE IN FEET

FILE PATH: (LOVETON) Q:\PROJECTS\6219605 GUDE PHASE 0\WASTE DELINEATION_REV.DWG [FIG 1] 12/4/09

Figure 1. GUDE LANDFILL WASTE DELINEATION



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   LIBER 2975 FOLIO 213
   LIBER 4501 FOLIO 453
   LIBER 5174 FOLIO 309

5. TEST PITTING WAS PERFORMED AT AN APPROXIMATE SPACING OF 50 FEET ALONG THE ASSUMED LIMIT OF WASTE WHERE THE HORIZONTAL LIMIT OF WASTE WAS TO BE DETERMINED.

6. THE HORIZONTAL LIMIT OF WASTE DEPICTED IS ESTIMATED BASED UPON TEST PIT FINDINGS AND SITE TOPOGRAPHY.

7. AT TEST PIT LOCATIONS ALONG THE ACCESS ROAD AND THE PROPERTY LINE WHERE WASTE WAS NOT ENCOUNTERED, THE HORIZONTAL LIMIT OF WASTE IS NOT DEPICTED AND IS BELIEVED TO BE WITHIN THE PROPERTY BOUNDARY.

8. AT TEST PIT LOCATIONS ALONG THE PROPERTY LINE WHERE WASTE WAS ENCOUNTERED, THE HORIZONTAL LIMIT OF WASTE IS NOT DEPICTED AND IS BELIEVED TO EXTEND BEYOND THE PROPERTY BOUNDARY.

9. TOPOGRAPHY IS APPROXIMATE IN AREAS NOTED "GROUND OBSCURED BY DENSE TREES AND VEGETATION". THE APPROXIMATED TOPOGRAPHY DOES NOT IMPACT THE DELINEATION OF WASTE IN THESE AREAS.

LEGEND

10-FT CONTOUR — 400
2-FT CONTOUR
ESTIMATED LIMIT OF WASTE
PROPERTY BOUNDARY
TEST PIT - WASTE DELINEATED — × TP 148
TEST PIT - NO WASTE ENCOUNTERED — ○ TP 148
TEST PIT - WASTE EXTENDS BEYOND TEST PIT — TP 148

100 50 0 100 200
GRAPHIC SCALE IN FEET

Figure 2 GUDE LANDFILL WASTE DELINEATION – M-NCPPC PROPERTY

Appendix A

Equipment Calibration Documentation

EA Engineering, Science, and Technology

Mid-Atlantic Region
15 Loveton Circle
Sparks, MD 21152
Telephone: 410-771-4950
Fax: 410-771-4204

EA Project No. 62196.05

MEMORANDUM OF CGI AND PID CALIBRATION

Date: 21 December 2009

Subject: Gude Landfill, Montgomery County, Maryland
CGI and PID Calibration Procedure

The Combustible Gas Indicator (CGI) and Photoionization Detector (PID) were calibrated according to the manufacturer specifications (Attachment A) on 25 August 2009.

If there are any questions on these procedures, please do not hesitate to contact me at 410-771-4950.

Sincerely,

EA ENGINEERING, SCIENCE,
AND TECHNOLOGY, INC.

Joseph Sawicki, P.G.
Geologist

VRAE

MULTI GAS MONITOR
PGM-7800 & 7840

OPERATION AND MAINTENANCE MANUAL

(Document No.: 017-4001)
Rev. E

CE

RAE SYSTEMS INC.
1339 Moffett Park Drive
Sunnyvale, CA 94089

July 2001

RAE SYSTEMS

ISO 9001 CERTIFIED

4.4 Calibration of VRAE Monitor

CALIBRATION WARNINGS:

The calibration of all newly purchased RAE Systems instruments should be tested by exposing the sensor(s) to known concentration calibration gas before the instrument is put into service the first time.

For maximum safety, the accuracy of the VRAE should be checked by exposing the sensor(s) to known concentration calibration gas before each day's use.

In programming mode, the user may re-calibrate the sensors in the VRAE monitor. This is a two-point calibration process using "fresh air" and the standard reference gas (also known as Span Gas). First, a "fresh air" which contains 20.9% and no detectable, toxic or combustible gases is used to set the zero point for each sensor. Then a standard reference gas, which contains a known concentration of a given gas, is used to set the second point of reference. The two-point calibration procedure is detailed below. Table 4.3 shows the sub-menus for calibration operations.

Table 4.3

Calibration Sub-Menu
Fresh Air Calibration?
VOL% Zero Calibration?
Multiple Sensor Calibration?
Single Sensor Calibration?
Modify Span Gas Value?
Change LEL/VOL Span Gas?

4.4.1 Fresh Air Calibration

This procedure determines the zero point of the sensor calibration curve. To perform fresh air calibration, the calibration adapter and a bottle of "fresh" air (optional) are recommended. The "fresh" air is clean dry air with 20.9% oxygen concentration and without any organic, toxic or combustible gases or impurities. If such an air bottle is not available, any clean ambient air without detectable contaminant can also be used. A charcoal filter should be used if one is not sure of the ambient air's purity.

If the unit is in VOL or Autorange mode, a second zero is performed with the VOL zero gas, typically pure nitrogen. This zeroing step affects only the VOL sensor and does not modify the O_2 calibration performed in the first zero step. In Autorange mode, the first step zeros the LEL sensor. In VOL mode, the first step zeros the VOL sensor and the second step is needed only if the VOL zero gas is different.

The calibration adapter links up the inlet port of the VRAE Monitor to the regulator of the gas bottle (see Figure 4.4.1).

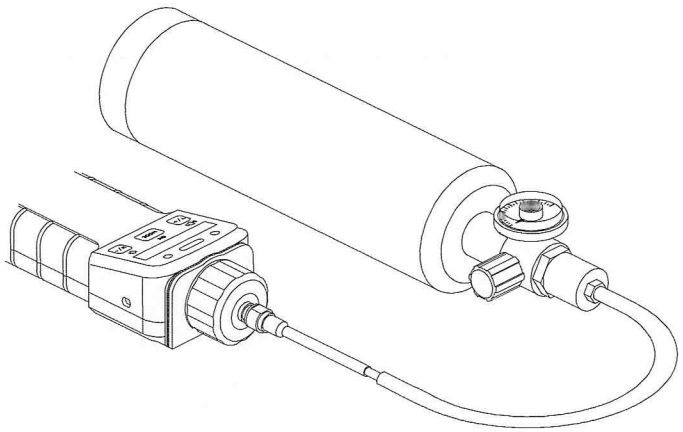


Figure 4.4.1 Set-up of Gas Calibration

1. "Calibrate Monitor?" is the first menu item in Table 4.1. Press **[Y/+]** to perform calibration. The first sub-menu shows: "Fresh Air Calibration?"

2. If the "fresh" air bottle is available, snap in the calibration adapter over the inlet port of the VRAE Monitor and connect the other end of the tube to the fresh gas bottle, as shown in Fig. 4.4.1. If the "fresh" air bottle is not available, simply leave the monitor in an area free of any detectable vapor.

3. Press the **[Y/+]** key to start "fresh air calibration" of the monitor. The display shows "zero... in progress" followed by the name of each sensor and the message "zeroed." The display should show a reading "0.0", or a very small number, for all sensors. For the oxygen sensor in model PGM-7800, it should show a "20.9" as the reading.

1. After about 30 seconds pause, the display will show the message "Zero Cal Done! Reading=" and the instantaneous fresh air readings.

2. Press either **[Y/+]** or **[MODE]** once and move to the next sub-menu "Vol% Zero Calibration?". Apply the Vol% Zero gas and press **[Y/+]** to start. The display shows "zero... in progress…" followed by "Zero cal done…Reading = 0".

3. Press either **[Y/+]** or **[MODE]** once and move to the next sub-menu "Multiple Sensor Calibration?"

4.4.2 Multiple Sensor Calibration

This function simultaneously determines the second point of calibration curves for multiple sensors in the monitor. A bottle of mixed standard reference gases is needed to perform this procedure. The user can choose several gas mixtures* to be used in multiple-sensor calibration.

For use in Autorange mode, the unit should first be calibrated in LEL (or Autorange) mode to span the LEL sensor, then switched to VOL% mode to span the VOL sensor, and finally returned to Autorange. In VOL mode, the calibration and measurement gas must be the same.

Snap in the calibration adapter over the gas inlet port of the VRAE Monitor, and connect the tube to the mixed gas bottle as shown in Figure 4.4.1.

1. Continuing from Step 4 of the previous section, the display should show "Multiple Sensor Calibration?" Press the **[Y/+]** key. The display shows all the pre-selected gases for the mixed gas bottle and "OK?" question (as shown below for PGM-7800). Press **[Y/+]** key to accept the multiple sensor selection and start the calibration, or press the **[N/-]** key to modify the sensor selection and go to Step 6.

CO	**- - - -**	**H_2S**
LEL	**OK?**	**OXY**

2. Turn on the valve of the mixed gas bottle to start the flow of the span gas. Display shows "Apply Mixed Gas" and will wait for the calibration gas to reach the sensor. When the calibration gas has reached the sensor the display will show "calibration in progress... 60"

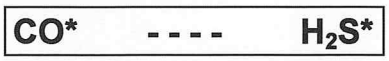
with the countdown timer shows the number of remaining seconds while the monitor performs calibration. When the countdown timer reaches 0, the display shows the name of each sensor, the message "cal'ed!" and the calibrated value for each gas. If no gas has reached the sensor after 60 seconds, the display will show " No gas flow…" and abort the calibration.

Note 1: The readings should be very close to the span gas values. After about 30 seconds pause, the display will show the message "Span Cal Done! Turn Off Gas"

Note 2: Some sensors, such as ammonia and chlorine dioxide, require longer equilibration times than 60 seconds. These sensors should be calibrated separately in a Single Sensor Calibration (Section 4.4.3).

3. This completes the multiple sensor calibration procedure and moves to the next sub-menu item.
4. Turn off the flow of gas. Disconnect the calibration adapter from the VRAE Monitor.
5. Press the **[MODE]** key any time during Step 2 to abort the calibration. If a sensor failed the calibration, the sensor name and an error message "failed, continue?" will appear. Press the **[N/-]** or **[MODE]** key to abort the calibration. Press the **[Y/+]** key to continue the next sensor calibration. In either case, the calibration data for the current sensor is not changed.

From Step 1, if **[N/-]** is pressed, the display shows all the sensor names selected for multiple sensor calibration with the cursor blinking at the first sensor.



LEL*	OK?	O_2

Press the **[Y/+]** key to select the sensor and the **[N/-]** key to de-select the sensor. A previously selected sensor will show an "*" next to the sensor name. A previously de-selected sensor will not show an "*" next to the sensor name.

6. Press the **[MODE]** key momentarily to move from one sensor location to the next one. Repeat Step 7 until all of the sensors that need to be calibrated during multiple sensor calibration are selected. Press and hold the **[MODE]** key for 1 second to save the new sensor selection.
7. The display shows "Save?" To confirm the new selection, press the **[Y/+]** key to accept the change and continue on with Step 2. Press the **[N/-]** key or the **[MODE]** key to discard the change and to continue on with Step 2.

***Cross Sensitivity:** Some sensors may show cross sensitivity to other gases. Therefore, it is important to choose the gas mixture carefully for the multiple sensor calibration to avoid erroneous calibration due to cross sensitivity. For example, some toxic gases are known to cause erroneous readings by the CO sensor. In general, it is recommended to calibrate the CO, H_2S sensors, combustible and oxygen sensor with a bottle of mixed gas using the multiple sensor calibration procedure and to calibrate the other toxic sensor with a bottle of a single toxic gas.

4.4.3 Single Sensor Calibration

This procedure determines the second point of the sensor calibration curve for a single sensor. A bottle of standard reference gas (span gas) is needed to perform this procedure. Table 2.2 shows the standard calibration gases typically used as span gases in the factory. Snap in the calibration adapter over the inlet port of the VRAE monitor, and connect the tube to the regulator of the gas bottle as shown in Figure 4.4.1

1. Continuing from Step 4 or Step 6 of the previous section, the display should show "Single Sensor Calibration?" Press **[Y/+]** key. The display shows all the installed sensors in the monitor with the cursor blinking at the first sensor location. Press **[Y/+]** key to select the high-lighted sensor and start the calibration, or press **[MODE]** key momentarily to move to the next sensor location.

CO	**SO_2**	**H_2S**
LEL	**pick?**	**OXY**

2. Turn on the valve of the CO gas bottle to start the flow of the span gas. Display shows "Apply CO Gas" and the span value set. The VRAE monitor will wait for the calibration gas to reach the sensor. When the calibration gas has reached the sensor the display will show "calibration in progress... 60" with the countdown timer shows the number of remaining seconds while the monitor performs calibration. When the countdown timer reaches 0, the display shows the sensor name and the calibrated value:

CO cal'ed
reading = 50 ppm

If no gas has reached the sensor after 60 seconds, the display will show "No gas flow..." and abort the calibration.

Note: The reading should be very close to the span gas value. After about 30 seconds pause, the display will show the message "Span Cal Done! Turn Off Gas"

3. This completes the single gas calibration procedure for one sensor. The display shows the single gas calibration sub-menu for the user to select another sensor or move to next calibration sub-menu.

4. Turn off the flow of gas. Disconnect the calibration adapter from the VRAE Monitor.

5. Repeat Step 1 to Step 5 to calibrate the next sensor.

6. Press the **[MODE]** key any time during Step 2 abort the calibration. If the sensor failed the calibration, the sensor name and an error message "failed, continue?" will appear. Press **[N/-]** or **[MODE]** key to abort the calibration. Press **[Y/+]** to repeat the single gas calibration. In either case, the current calibration data will not be changed.

Oxygen Sensor Calibration (Not applicable to PGM-7840)

The oxygen sensor calibration is slightly different from all other sensors. The oxygen sensor measures a range from 0 to 30% of oxygen in the air. During "fresh" air calibration, the oxygen sensor is calibrated to fixed 20.9% of oxygen. During single sensor calibration, the user can supply a bottle of pure nitrogen gas so that the oxygen sensor can be calibrated to 0% of oxygen. The user can also supply other span concentrations of the oxygen, e.g. 19.5%, to calibrate the oxygen sensor. A question "0% oxygen?" will be asked. Enter **[Y/+]** if pure nitrogen gas is used to calibrate the oxygen sensor. Otherwise, enter **[N/-]** to calibrate the oxygen sensor to another span oxygen value. During both single or multiple sensor calibration, the oxygen sensor will be calibrated to the span value defined in Section 4.4.4.

Note: After a "0% oxygen" calibration, the user must perform a fresh air calibration to ensure that the oxygen sensor is calibrated correctly.

Calibration Time Stamp

When a single or multiple sensor calibration is performed, a time stamp will be stored in the non-volatile memory. This information will be included in the datalogging report.

MiniRAE 2000

Portable VOC Monitor
PGM-7600

OPERATION AND MAINTENANCE MANUAL

(Document No.: 011-4001-000)
Revision E, May 2005

RAE SYSTEMS

ISO 9001 CERTIFIED

4.4 Calibrate and Select Gas

WARNINGS

The calibration of all newly purchased RAE Systems instruments should be tested by exposing the sensor(s) to known concentration calibration gas before the instrument is put into service for the first time.

For maximum safety, the accuracy of the MiniRAE 2000 should be checked by exposing it to known concentration calibration gas before each day's use.

In the first menu of the programming mode, the user can perform functions such as calibration of the MiniRAE 2000 Monitor, select default cal memories, and modify cal memories (see Table 4.4).

Table 4.4

Calibrate/Select Gas Sub-Menu
Fresh Air Cal?
Span Cal?
Select Cal Memory?
Change Span Value?
Modify Cal Memory?
Change Correction Factor?

Calibrating the MiniRAE 2000 monitor is a two-point process using "fresh air " and the standard reference gas (also known as span gas). First a "Fresh air" calibration, which contains no detectable VOC (0.0 ppm), is used to set the zero point for the sensor. Then a standard reference gas that contains a known concentration of a given gas is used to set the second point of reference.

Note: The span value must be set prior to calibrating for fresh air or span.

The user can store calibrations for up to 8 different measurement gases. The default gas selections are as follows:

Cal Memory #0.....Isobutylene

Cal Memory #1.....Hexane

Cal Memory #2.....Xylene

Cal Memory #3.....Benzene

Cal Memory #4.....Styrene

Cal Memory #5.....Toluene

Cal Memory #6.....Vinyl Chloride

Cal Memory #7.....Custom?

Memory #0 functions differently than the other 7 memories. For Memory #0, isobutylene is always the calibration gas. When the gas is changed in Memory #0 to one of 100 other preprogrammed chemicals or to a user-defined custom gas, a correction factor is applied to all the readings. During calibration, the unit requests isobutylene gas and displays the isobutylene concentration immediately following calibration, but when the unit is returned to the normal reading mode, it displays the selected gas and applies the correction factor.

The other 7 cal memories require the same calibration gas as the measurement gas. These memories may also be modified to a preprogrammed chemical or to a user-defined custom gas. In the gas library, only the gases that can be detected by the installed UV lamp will actually be displayed. Note that although the correction factor for the new gas will be displayed and can be modified, this factor is not applied when Memories #1-7 are

used. Therefore the factor will not affect the readings in these memories.

Once each of the memories has been calibrated, the user can switch between the calibrated gases by changing the cal memory without the need to recalibrate. Or the user can switch the measurement gas in Memory #0 and the appropriate correction factor will automatically be applied without the need to recalibrate. If the gas is changed in Memories #1-7, it is necessary to recalibrate.

To change a default gas from the list above to a library or custom gas, first go to Select Cal Memory (Section 4.4.3) and then proceed to Modify Cal Memory (Section 4.4.5) to enter the desired gas. If the desired compound does not appear in the preprogrammed library, the user can use the Custom_VOC entry in the library, or the name and correction factor of any of the existing compounds can be changed as described in Section 4.4.5. A list of some 300 correction factors is given in Technical Note 106, available at the website www.raesystems.com.

4.4.1 Fresh Air Calibration

This procedure determines the zero point of the sensor calibration curve. To perform a fresh air calibration, use the calibration adapter to connect the MiniRAE 2000 to a "fresh" air source such as from a cylinder or Tedlar bag (option accessory). The "fresh" air is clean dry air without any organic impurities. If such an air cylinder is not available, any clean ambient air without detectable contaminant or a charcoal filter can be used.

1. The first sub-menu shows: "Fresh air Cal?"
2. Make sure that the MiniRAE 2000 is connected to one of the "fresh" air sources described above.
3. Press the **[Y/+]** key, the display shows "zero in progress" followed by "wait.." and a countdown timer.

After about 15 seconds pause, the display will show the message "update data…zeroed… reading = X.X ppm…" Press any key or wait about 20 seconds, the monitor will return back to "Fresh air Calibration?" submenu.

4.4.2 Span Calibration

This procedure determines the second point of the sensor calibration curve for the sensor. A cylinder of standard reference gas (span gas) fitted with a 500 cc/min. flow-limiting regulator or a flow-matching regulator is the simplest way to perform this procedure. Choose the 500 cc/min. regulator only if the flow rate matches or slightly exceeds the flow rate of the instrument pump. Alternatively, the span gas can first be filled into a Tedlar Bag, or delivered through a demand-flow regulator. Connect the calibration adapter to the inlet port of the MiniRAE 2000 Monitor, and connect the tubing to the regulator or Tedlar bag.

Another alternative is to use a regulator with >500 cc/min flow but allow the excess flow to escape through a T or an open tube. In the latter method, the span gas flows out through an open tube slightly wider than the probe, and the probe is inserted into the calibration tube.

Before executing a span calibration, make sure the span value has been set correctly (see next sub-menu).

1. Make sure the monitor is connected to one of the span gas sources described above.
2. Press the **[Y/+]** key at the "Span Cal?" to start the calibration. The display shows the gas name and the span value of the corresponding gas.
3. The display shows "Apply gas now!" Turn on the valve of the span gas supply.

4. Display shows "wait.... 30" with a count down timer showing the number of remaining seconds while the monitor performs the calibration.
5. To abort the calibration, press any key during the count down. The display shows "Aborted!" and return to "Span Cal?" sub-menu.
6. When the count down timer reaches 0, the display shows the calibrated value.

   Note: The reading should be very close to the span gas value.
7. During calibration, the monitor waits for an increased signal before starting the countdown timer. If a minimal response is not obtained after 35 seconds, the monitor displays "No Gas!" Check the span gas valve is on and for lamp or sensor failure before trying again.
8. The calibration can be started manually by pressing any key while the "Apply gas now!" is displayed.
9. After a span calibration is completed, the display will show the message "Update Data Span Cal Done! Turn Off Gas."
10. Turn off the flow of gas. Disconnect the calibration adapter or Tedlar bag from the MiniRAE 2000 Monitor.
11. Press any key and it returns back to "Span Gas Cal?"

Appendix B

Test Pit Logs

APPENDIX B
SUMMARY OF TEST PIT LOGS - ONSITE

Test Pit No.	Limit of Waste Identified Onsite	Extend Offsite	Extended Offsite Location	Test Pit Depth (ft)	Top of Waste (ft)	Bottom of Waste (ft)
1	Yes			5	0.67	0.83
2	Yes			5	2	3
3	Yes			4	3	4
4	Yes			4	2	3
5	Yes			4	2	3
6	**Not delineated due to the presence of phragmites (wetland plant)**			5	4	5
7	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	4	1	2
8	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	3	2	3
9	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	5	3	4
10	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	4	1	1.5
11	Yes			5	2	3
12	Yes			5	2	3
13	**No waste observed from property line to approx. 40 ft from boundary, 6 ft bgs.**			6	NA	NA
14	Yes			4	2	2.5
15	Yes			4	2	3
16	Yes			5	3	4
17	Yes			5	3	4
18	Yes			5	3	4
19	Yes			4	2	3
20	**No waste encountered from property line to guardrail at 4-5 ft bgs.**			5	NA	NA
21	**No waste encountered from property line to guardrail at 4-5 ft bgs.**			5	NA	NA
22	**No waste encountered from property line to guardrail at 4-5 ft bgs.**			5	NA	NA
23	**No waste encountered from property line to guardrail at 4-5 ft bgs.**			5	NA	NA
24	Yes			3	2	3
25	Yes			3	2	3
26	Yes			4	3	4
27	Yes			3	0.5	1
28	**No**	Yes - waste likely extends into gas right-of-way (County property)	Gas ROW	4	3	4
29	Yes			4	2	3
30	Yes			4	2	3
31	Yes			3	1.5	2
32	Yes			4	2	3
33	Yes			2	1	1.5
34	Yes			3	1	2
35	Yes			3	1	2
36	Yes			3	1.5	2
37	Yes			4	2	3
38	Yes			3	2	3
39	Yes			4	2	3
40	Yes			3	2	3
41	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	3	1	2
42	**No**	Yes - surficial waste likely extends beyond Landfill property boundary	Gas ROW	3	1	2
43	Yes			3	2	3
44	Yes			3	1	2
45	Yes			3	1	2
46	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	3	2	3
47	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
48	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	5	4	5
49	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	5	3	4
50	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	1	2

APPENDIX B
SUMMARY OF TEST PIT LOGS - ONSITE

Test Pit No.	Limit of Waste Identified Onsite	Extend Offsite	Extended Offsite Location	Test Pit Depth (ft)	Top of Waste (ft)	Bottom of Waste (ft)
51	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
52	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	8	7	8
53	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	3	2	3
54	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	8	7	8
55	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	11	10	11
56	**No**	No - 20 feet from property boundary		12	10	12
57	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	12	10	12
58	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	10	9	10
59	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	10	8	10
60	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	10	8	10
61	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	8	6	8
62	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	8	6	6
63	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
64	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	6	5	6
65	**No**	No traditional waste found - strong organic decay odor (trash)	M-NCPPC	10	NA	NA
66	**No**	No -approx. 15 feet from property boundary		12	10	12
67	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
68	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	6	4	5
69	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	5	3	4
70	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	3	1	2
71	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	3	1	2
72	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
73	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
74	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
75	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
76	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
77	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	1	2
78	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	4	3	4
79	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	3	1.5	2.5
80	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	0.5	1.5
81	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
82	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	7	6	7
83	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	1	2
84	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	1	2
85	Yes			2	2	2
86	**No**	Yes - waste likely extends beyond Landfill property boundary	M-NCPPC	2	1	2
87	Yes			3	2	3
88	Yes			12	10	12
89	Yes			8	6	8
90	Yes			9	8	9
91	Yes			7	6	7
92	Yes			7	6	7
93	Yes			4	3	4
94	Yes			5	4	5
95	Yes			3	2	3
96	Yes	Waste likely extends beneath access roadway, but not beyond.		5	4	5
97	Yes			4	3	4
98	Yes	Waste likely extends beneath access roadway, but not beyond.		6	4	5
99	Yes	Waste likely extends beneath access roadway, but not beyond.		1.5	1	1.5
100	Yes	Waste likely extends beneath access roadway, but not beyond.		5	3	4

APPENDIX B
SUMMARY OF TEST PIT LOGS - ONSITE

Test Pit No.	Limit of Waste Identified Onsite	Extend Offsite	Extended Offsite Location	Test Pit Depth (ft)	Top of Waste (ft)	Bottom of Waste (ft)
101	Yes	Waste likely extends beneath access roadway, but not beyond.		2	1	2
102	Yes	Waste likely extends beneath access roadway, but not beyond.		4	3	4
103	Yes	Waste likely extends beneath access roadway, but not beyond.		6	5	6
104	Yes	Waste likely extends beneath access roadway, but not beyond.		4	3	4
105	Yes	Waste likely extends beneath access roadway, but not beyond.		7	6	7
106	Yes			3	2	3
107	Yes			3	2	3
108	Yes	Waste likely extends beneath access roadway, but not beyond.		5	3	4
109	Yes	Waste likely extends beneath access roadway, but not beyond.		4	3	4
110	**No**			1.5	NA	NA
111	**No**			5	NA	NA
112	**No**			3	NA	NA
113	**No**			2	NA	NA
114	**No**			2	NA	NA
115	Yes			2	0	0.5
116	Yes			2	0	1
117	Yes			2	0	1
118	Yes			2	0.5	1.5
119	Yes			2	0	2
120	Yes			2	0	0.5
121	Yes			5	4	5
122	**No**	Yes - surficial waste likely extends beyond Landfill property boundary.	WSSC	2	0	0.5
123	**No**	Yes - surficial waste likely extends beyond Landfill property boundary.	WSSC	5	2	2.5
124	Yes			3	2	3
125	Yes	Waste likely extends beneath access roadway, but not beyond.		5	3	4
126	Yes	Waste likely extends beneath access roadway, but not beyond.		2	1	2
127	**No**			3	NA	NA
128	Yes			2	0.5	1
129	Yes			2	0.5	1
130	Yes			1.5	0.3	1
131	Yes			2	1.5	2
132	Yes			2	1.5	2
133	Yes			1	0	0.5
134	Yes			2	0	0.5
135	Yes			2	0	0.5
136	**No**	Yes - waste likely extends beyond Landfill property boundary	WSSC	3	0	0.5
137	**No**	Yes - waste likely extends beyond Landfill property boundary	WSSC	6	1.5	2
138	**No**	Yes - waste likely extends beyond Landfill property boundary	WSSC	5	3	4
139	**No**	Yes - waste likely extends beyond Landfill property boundary	WSSC	2	1	2
140	**No**	Yes - waste likely extends beyond Landfill property boundary	WSSC	2	1	2
141	Yes	Waste likely extends beneath access roadway, but not beyond.		3	1	2
142	Yes			5	1.5	2.5
143	**No**			2	0.5	2
144	**No**			2	1	2
145	**No**			2	1	2
146	Yes			4	1	2
147	Yes			3	1	2
148	Yes			4	1.5	2
149	Yes			3	1.5	2
150	Yes			2	1	2

APPENDIX B
SUMMARY OF TEST PIT LOGS - ONSITE

Test Pit No.	Limit of Waste Identified Onsite	Extend Offsite	Extended Offsite Location	Test Pit Depth (ft)	Top of Waste (ft)	Bottom of Waste (ft)
151	Yes			3	1	2
152	Yes			2	0.5	1
153	Yes			2	0.5	2
154	Yes			2	0.5	2
155	Yes			4	2	3
156	Yes			5	4	5
157	Yes			1.5	0.5	0.5
158	Yes			2	0.5	1
159	**No**	Yes - waste likely extends beyond Landfill property boundary	Gas ROW	1.5	0	0.5
160	**No**	Yes - waste likely extends beyond Landfill property boundary	Gas ROW	1.5	0	0.5
161	Yes			2	1.5	2

APPENDIX B
SUMMARY OF TEST PIT LOGS - M-NCPPC PROPERTY

Test Pit No.	Limit of Waste Identified Onsite	Extend Offsite	Extended Offsite Location	Test Pit Depth (ft)	Top of Waste (ft)	Bottom of Waste (ft)
1A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 20 feet beyond Landfill property boundary.	M-NCPPC	4	3	4
3A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 120 feet beyond Landfill property boundary.	M-NCPPC	4	1.5	3
4A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 140 feet beyond Landfill property boundary.	M-NCPPC	4	2	3
5A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 200 feet beyond Landfill property boundary.	M-NCPPC	4	1.5	3
8A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 200 feet beyond Landfill property boundary.	M-NCPPC	3	0.5	2
11A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 175 feet beyond Landfill property boundary.	M-NCPPC	3	2	3
14A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 175 feet beyond Landfill property boundary.	M-NCPPC	6	2	3
15A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 175 feet beyond Landfill property boundary.	M-NCPPC	4	2.5	3
16A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 200 feet beyond Landfill property boundary.	M-NCPPC	4	3	4
17A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 250 feet beyond Landfill property boundary.	M-NCPPC	3	1.5	2.5
18A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 175 feet beyond Landfill property boundary.	M-NCPPC	3	2	3
24A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 200 feet beyond Landfill property boundary.	M-NCPPC	1	0.5	1
25A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 125 feet beyond Landfill property boundary.	M-NCPPC	3	0.5	1.5
34A	Yes, off Landfill property - on M-NCPPC property.	Yes, approx. 50 feet beyond Landfill property boundary.	M-NCPPC	8	0.5	1

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-1

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Trash				Plastic bags and general trash at 8"-10" bgs at property boundary.
			1		
	Light Brown sandy silt and clay 0-5 ft bgs.		2		Mostly soil with minimal trash up to property boundary.
			3		
					CGI= 0%
			4		
			5		
	BOTTOM OF TP 5 FT BGS				
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-2

Location: Rockville — Project No. : 6219605

Elev: — Date: 8/25/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Light brown sandy silt and clay		1		
	Top of Waste		2		
	Trash		3		Plastic bags, glass, newspaper and other general trash at 2-3 ft. bgs, approximately 12 ft from property boundary.
			4		
	BOTTOM OF TP 5 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-3

Location: Rockville — Project No. : 6219605

Elev: — Date: 8/25/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Brown silty sand and clay		2		
	Top of Waste		3		
	Trash		4		Plastic at 3-4 ft bgs, approximately 18-20 ft from property boundary
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-4

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silty sand and clay		1		
	Top of Waste		2		
	Trash		3		Mimimal plastic bags at 2-3 ft bgs, approximately 12 ft from property boundary. More prevalent trash observed 18-20 ft from property boundary.
	BOTTOM OF TP 4 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-5

Location: Rockville Project No. : 6219605

Elev: Date: 8/25/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silty sand		1		
	Top of Waste		2		
	Trash		3		Mimimal plastic at 2-3 ft bgs, approximately 12 ft from property boundary. No significant waste encountered 3 ft into toe of landfill slope at 5-6 ft bgs. Approaching methane extraction point (EW-108) with test pit.
			4		
	BOTTOM OF TP 4 FT BGS		5		
					CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-6

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt and clay		2		
			3		
	Top of Waste		4		
	Trash		5		Plastic, cloth, and glass at 4-5 ft bgs up to phragmites near property boundary. TP will not disturb wetland area. Waste could not be delineated in this area.
	BOTTOM OF TP 5 FT BGS				
					CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-7

Location: Rockville Project No. : 6219605

Elev: Date: 8/25/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt some clay		0		
	Top of Waste		1		
	Trash		2		Wood, plastic, metal, and brick at 1 ft bgs, at property line. Waste likely extends beyond property boundary.
			3		
	BOTTOM OF TP 4 FT BGS		4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-8

Location: Rockville Project No. : 6219605

Elev: Date: 8/25/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silt some sand and cobbles		1		
	Top of Waste		2		
	Trash		3		Plastic bags at 2-3 ft bgs, at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-9

Location: Rockville Project No. : 6219605

Elev: Date: 8/25/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown silt and clay		2		
	Top of Waste		3		
	Trash		4		Plastic bags at 3-4 ft bgs, at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 5 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-10

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silt and clay		0		
	Top of Waste		1		
	Trash		2		Plastic bags at 1-1.5 ft bgs, at property line. Waste likely extends beyond property boundary.
	Reddish brown clay		3		
	BOTTOM OF TP 4 FT BGS		4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-11

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silt and clay		1		
	Top of Waste		2		
	Trash		3		Plastic bags at 2-3ft bgs, approximately 6-8 ft from property boundary.
			4		
	BOTTOM OF TP 5 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-12

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silt and clay		1		
	Top of Waste		2		
	Trash		3		Plastic and wood at 2-3 ft bgs, approximately 12 ft from property boundary.
			4		
	BOTTOM OF TP 5 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-13

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Light yellow brown silt and clay		1		
			2		
			3		No evidence of waste observed in TP-13 from property line to approximately 40 ft from boundary, 6 ft bgs. Approximately 6 ft into toe of landfill slope.
			4		
			5		
			6		CGI= 0%
	BOTTOM OF TP 6 FT BGS				
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-14

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay		1		
	Top of Waste		2		
	Trash		3		Plastic and cloth at 2-2.5 ft bgs, approximately 10-12 ft from property boundary.
	Reddish brown clay		4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-15

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay		1		
	Top of Waste		2		
	Trash		3		Plastic and rubber at 2 ft bgs, approximately 12 ft from property boundary.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-16

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Light brown sandy silt and clay		1		
			2		
	Top of Waste		3		
	Trash		4		Plastic, cloth and wire at 3-4 ft bgs, approximately 12-15 ft from property boundary.
			5		
	BOTTOM OF TP 5 FT BGS		6		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-17

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay		1		Minimal paper and plastic at 6 inches bgs, approximately 6 ft from property boundary.
			2		
	Top of Waste		3		
			4		Plastic and paper at 3-4 ft bgs, approximately 13 ft from property boundary.
	Trash		5		
	BOTTOM OF TP 5 FT BGS				CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-18

Location: Rockville — Project No. : 6219605

Elev: — Date: 8/25/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay		1		
			2		
	Top of Waste		3		
	Trash		4		Plastic, paper and concrete at 3-4 ft bgs, approximately 10-12 ft from property boundary.
			5		
	BOTTOM OF TP 5 FT BGS				CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-19

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/25/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderately yellow brown sandy silt some clay and cobbles		1		
	Top of Waste		2		
	Trash		3		Plastic, paper and brick at 2-3 ft bgs, approximately 10-12 ft from property boundary.
	BOTTOM OF TP 4 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-20

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt some clay		2		
			3		No waste encountered from property line to guardrail at 4-5 ft bgs.
			4		
	Reddish brown clay		5		CGI= 0%
	BOTTOM OF TP 5 FT BGS				
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-21

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt some clay		2		
			3		No waste encountered from property line to guardrail at 4-5 ft bgs.
			4		
	Reddish brown clay		5		CGI= 0%
	BOTTOM OF TP 5 FT BGS				
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-22

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt some clay		2		
			3		
			4		No waste encountered from property line to guardrail at 4-5 ft bgs.
	Reddish brown clay		5		
	BOTTOM OF TP 5 FT BGS				CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-23

Location: Rockville Project No. : 6219605

Elev: Date: 8/26/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt some clay		2		
			3		
			4		
	Reddish brown clay		5		No waste encountered from property line to guardrail at 4-5 ft bgs.
	BOTTOM OF TP 5 FT BGS				CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-24

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles		1		
	Top of waste		2		
	Trash		3		Plastic and metal at 2-3 ft bgs, approximately 10-12 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-25

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles		1		
	Top of waste		2		
	Trash		3		Plastic, metal and wood at 2-3 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-26

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay some cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic and metal at 3-4 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 4 FT BGS		5		
					CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-27

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/26/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Top of waste				Plastic and metal at 0.5-1 ft bgs, approximately 10-15 ft from property boundary.
	Trash		1		
	Moderate brown sandy silt and clay some cobbles		2		CGI= 0%
			3		
	BOTTOM OF TP 3 FT BGS		4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-28

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/28/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, some clay and cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, cloth, and paper 3-4 ft bgs, at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-29

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/28/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, little cobbles.		1		
	Top of waste		2		
	Trash		3		Plastic, metal, paper and glass at 2-3 ft bgs, approximately 20-22 ft from property boundary.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-30

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/28/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, little cobbles.		1		
	Top of waste		2		
	Trash		3		Plastic and cloth at 2-3 ft bgs, approximately 45-50 ft from property boundary.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-31

Location: Rockville — Project No. : 6219605

Elev: — Date: 8/28/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt little clay and cobbles		0		
			1		
	Top of Waste				
	Trash		2		Plastic and paper at 1.5-2 ft bgs, approximately 30-35 ft from property boundary.
			3		
	BOTTOM OF TP 3 FT BGS				
			4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-32

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/28/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, little cobbles.		1		
	Top of waste		2		
	Trash		3		Plastic at 2-3 ft bgs, approximately 30-35 ft from property boundary.
			4		CGI= 0%
	BOTTOM OF TP 4 FT BGS		5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-33

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of waste		1		
	Trash				Plastic, metal and paper at 1-1.5 ft bgs,approximately 25 ft from boundary.
			2		
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-34

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of Waste		1		
	Trash		2		Plastic and metal at 1-2 ft bgs, approximately 15 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		3		CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-35

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of Waste		1		
	Trash		2		Plastic and metal at 1-2 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		3		CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-36

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay				
			1		
	Top of Waste				
	Trash		2		Plastic at 1.5-2 ft bgs, approximately 3 ft from property boundary.
			3		
	BOTTOM OF TP 3 FT BGS				CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-37

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt some clay, little cobbles		1		
	Top of waste		2		
	Trash		3		Plastic, cloth and metal at 2-3 ft bgs, approximately 12-13 ft from property boundary.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-38

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
	Top of waste		2		
	Trash		3		Plastic at 2-3 ft bgs, approximately 10 ft from property boundary.
			4		CGI= 0%
	BOTTOM OF TP 3 FT BGS		5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-39

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
	Top of waste		2		
	Trash		3		Plastic, cloth and metal at 2-3 ft bgs, approximately 15 ft from property boundary.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-40

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay		1		
	Top of waste		2		
	Trash		3		Plastic, cloth, and metal at 2-3 ft bgs approximately 10 ft from property boundary.
			4		
	BOTTOM OF TP 3 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-41

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt some clay and cobbles		0		
	Top of waste		1		
	Trash		2		Plastic, metal, and tires at 1-2 ft bgs, at property line. Waste likely extends beyond property line.
			3		
	BOTTOM OF TP 3 FT BGS		4		CGI = 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-42

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt some clay and cobbles		0		
	Top of waste		1		
	Trash		2		Plastic, rubber, and metal at 1-2 ft bgs, at property boundary. Waste likely extends beyond property boundary.
			3		
	BOTTOM OF TP 3 FT BGS		4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-43

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt some clay and cobbles		1		
	Top of Waste		2		
	Trash		3		Plastic, rubber (tire), and paper at 2-3 ft bgs, approximately 8 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-44

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay little cobbles		0		
	Top of waste		1		
	Trash		2		Plastic and paper at 1-2 ft bgs, approximately 6ft from property boundary.
			3		
	BOTTOM OF TP 3 FT BGS		4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-45

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay some cobbles		0		
	Top of waste		1		
	Trash		2		Concrete, metal and brick at 1-2 ft bgs at staked location. Excavator can not get any closer to property boundary.
			3		
	BOTTOM OF TP 3 FT BGS		4		Hand Auger at property boundary, concrete, metal and brick at 1-2 ft bgs. Waste likely extends beyond property boundary.
			5		
					CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-46

Location: Rockville

Project No. : 6219605

Elev:

Date: 8/31/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt some clay and cobbles		1		
	Top of Waste		2		
	Trash		3		Concrete rubble at 2-3 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-47

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
			3		
			4		
	Reddish brown sandy silt and clay, little cobbles		5		
	Top of waste		6		Plastic, rubber and concrete at 6-7 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Trash		7		
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-48

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
	Reddish brown sandy silt and clay, little cobbles		3		
	Top of waste		4		
	Trash		5		Metal (pipe), wood, and paper at 4-5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 5 FT BGS		6		
			7		CGI= 0%
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-49

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, metal, and rubber (tire) at 3-4 ft bgs, at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 5 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-50

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt some clay and cobbles.		0		
	Top of waste		1		
	Trash		2		Plastic and glass at 1 ft bgs at property boundary. Wastes likely extend beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-51

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
			3		
			4		
	Reddish brown sandy silt and clay, little cobbles		5		
	Top of waste		6		
	Trash		7		Plastic and wood at 6-7 ft bgs at property boundary. Wastes likely extend beyond property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-52

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
	Reddish brown sandy silt and clay, little cobbles		6		
	Top of waste		7		
	Trash		8		Plastic and wood at 7 ft bgs at property boundary. Wastes likely extend beyond property boundary.
	BOTTOM OF TP 8 FT BGS		9		
			10		CGI= 0%
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-53

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt some clay and cobbles		1		
	Top of Waste		2		
	Trash		3		Plastic at 2-3 ft bgs at property line. Waste likely extend beyond property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-54

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
	Yellow brown sandy silt and clay, little cobbles		6		
	Top of waste		7		
	Trash		8		Plastic, metal, and concrete at 7-8 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 8 FT BGS		9		
			10		CGI= 0%
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-55

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
			6		
			7		
	Yellow brown sandy silt and clay, little cobbles		8		
			9		
	Top of waste		10		
	Trash		11		Plastic and wood at 10-11 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 11 FT BGS		12		CGI= 0%
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-56

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
			6		
			7		
	Yellow brown sandy silt and clay, little cobbles		8		
			9		
	Top of waste		10		
	Trash		11		Wood and plastic at 10-12 ft bgs approximately 20 ft from property boundary.
			12		
	BOTTOM OF TP 12 FT BGS		13		CGI= 0%
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-57

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
			6		
			7		
	Yellow brown sandy silt and clay, little cobbles		8		
			9		
	Top of waste		10		
			11		Plastic, wood, and paper at 10-12 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	Trash		12		
	BOTTOM OF TP 12 FT BGS		13		CGI= 0%
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-58

Location: Rockville

Project No. : 6219605

Elev:

Date: 91/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
			3		
			4		
			5		
			6		
	Yellow brown sandy silt and clay, little cobbles		7		
			8		
	Top of waste		9		
	Trash		10		Plastic, wood, and concrete at 9-10 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 10 FT BGS		11		
			12		CGI= 0%
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-59

Location: Rockville — Project No. : 6219605

Elev: — Date: 9/1/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
			3		
			4		
			5		
	Yellow brown sandy silt and clay, little cobbles		6		
			7		
	Top of waste		8		
			9		Brick, concrete, and wood at 8-10 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	Trash		10		
	BOTTOM OF TP 10 FT BGS		11		CGI= 0%
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-60

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt some clay and cobbles.		1		
			2		
			3		
			4		
	Yellow brown sandy silt and clay, little cobbles		5		
	Top of Concrete Pipe		6		
			7		Concrete pipe at 6-8 ft bgs at property boundary. Likely fill
	Concrete Pipe		8		material and not connected to utilities.
			9		Plastic and metal at 8-10 bgs, below concrete pipe at property boundary.
	Trash		10		Waste likely extends beyond the property boundary.
	BOTTOM OF TP 10 FT BGS		11		CGI= 0%
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-61

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/1/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, wood, concrete, and metal at 6-8 ft bgs at property line. Waste likely extends beyond property boundary
			8		
	BOTTOM OF TP 8 FT BGS		9		CGI = 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-62

Location: Rockville Project No. : 6219605

Elev: Date: 9/1/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, wood, concrete and paper at 6-8 ft bgs at property boundary.
			8		Waste likely extends beyond property boundary.
	BOTTOM OF TP 8 FT BGS		9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-63

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Wood, plastic, and wire at 6 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-64

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
	Top of waste		5		
	Trash		6		Plastic, brick, and asphalt at 5-6 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 6 FT BGS		7		
			8		CGI= 0%
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-65

Location: Rockville Project No. : 6219605

Elev: Date: 9/2/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellowish brown sandy silt some clay and cobbles		1		
			2		
			3		
	Black sandy silt, little clay and cobbles. Possibly decaying waste		4		
			5		
			6		Light gray clay/silt material with strong organic decay odor (trash), at 6-8 ft bgs at property boundary. Could not identify waste type, but odor was indicator of some type of waste. No traditional waste was observed up to 10 ft bgs.
	Light gray clay/silt material with strong organic decay odor (trash)		7		
			8		
	Moderate yellow brown silty clay, little fine sand and cobbles.		9		
			10		
	BOTTOM OF TP 10 FT BGS				
					CGI= 0% PID= 0.0
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-66

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt some clay and cobbles.		2		
			3		
			4		
			5		
			6		
			7		
	Yellow brown sandy silt and clay, little cobbles		8		
			9		
	Top of waste		10		
			11		Metal, brick, and concrete at 10-12 ft bgs, approximately 15 ft from property boundary.
	Trash		12		
	BOTTOM OF TP 12 FT BGS		13		CGI= 0%
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-67

Location: Rockville Project No. : 6219605

Elev: Date: 9/2/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt and clay, some cobbles		2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Concrete, metal wire, wood, and cloth at 6 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-68

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay, little cobbles		1		
			2		
			3		
	Top of waste		4		
	Trash		5		Wood (stumps), plastic and glass at 4 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 6 FT BGS		6		
			7		CGI= 0%
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-69

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay, little cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic garbage bags and other plastic material at 3-4 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 5 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-70

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste		1		
	Trash		2		Concrete, wood, plastic, and metal at 1-2 ft bgs, at property boundary.
	BOTTOM OF TP 3 FT BGS		3		Waste likely extends beyond property boundary.
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-71

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste		1		
	Trash		2		Wood, plastic, cloth, brick at 1-2 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 3 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-72

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste				Metal and plastic at 0.5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Trash		1		
			2		
	BOTTOM OF TP 2 FT BGS				CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-73

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste		1		Wood, plastic, concrete, and asphalt at 0.5 ft bgs at property boundary. Waste likely extend beyond property boundary.
	Trash		2		
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-74

Location: Rockville Project No. : 6219605

Elev: Date: 9/2/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste				Plastic and rubber (tire) at 0.5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Trash		1		
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-75

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste				Plastic, tire, and metal conduit at 0.5 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	Trash		1		
	BOTTOM OF TP 2 FT BGS		2		
			3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-76

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste				Wood, plastic, metal, and asphalt at 0.5 ft bgs, at property line. Waste likely extends beyond property boundary.
	Trash		1		
	BOTTOM OF TP 2 FT BGS		2		
			3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-77

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
	Top of waste		1		
	Trash		2		Plastic, wood, and glass at 1 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-78

Location: Rockville Project No. : 6219605

Elev: Date: 9/2/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, little clay		1		
			2		
	Top of waste		3		
	Trash		4		Plastic and asphalt at 3 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 4 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-79

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt, some clay, little cobbles		0		
			1		
	Top of waste				
	Trash		2		Plastic, concrete, and wood at 1.5 ft bgs, at property line. Waste likely extends beyond property boundary.
			3		
	BOTTOM OF TP 3 FT BGS		4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-80

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some clay		0		
	Top of waste		1		Plastic and nylon netting at 0.5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Trash		2		
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-81

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/2/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, paper, cans at 6 ft bgs at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI = 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-82

Location: Rockville Project No. : 6219605

Elev: Date: 9/2/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, paper, cans at 6 ft bgs at property line. Waste likely extends beyond property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI = 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-83

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt some clay		0		
	Top of waste		1		
	Trash		2		Plastic and fabric at 1-2 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill — Test Pit No.: TP-84

Location: Rockville — Project No. : 6219605

Elev: — Date: 9/3/2009 — Groundwater: No

Equipment: CAT 307 Excavator — Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
	Top of waste		1		
	Trash		2		Plastic and metal at 1 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-85

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Excavator/Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
			1		
	Top of waste		2		
	Trash		3		Plastic and wire mesh 2 ft bgs, approximately 35 ft from property boundary.
	BOTTOM OF TP 2 FT BGS		4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-86

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/3/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
	Top of waste		1		
	Trash		2		Plastic at 1-2 ft bgs, at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-87

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/3/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
	Top of waste		2		
	Trash		3		Plastic bags at 2 ft bgs, approximately 20 ft from toe of landfill slope.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-88

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/3/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay, little cobbles		1		
			2		
			3		
			4		
	Moderate brown silty clay, some fine sand and cobbles.		5		
			6		
			7		
			8		
			9		
	Top of waste		10		
			11		Plastic, carpet and metal at 10-12 ft bgs, approximately 12 ft from toe of landfill slope.
	Trash		12		
	BOTTOM OF TP 12 FT BGS		13		CGI= 0%
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-89

Location: Rockville Project No. : 6219605

Elev: Date: 9/3/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay, little cobbles		1		
			2		
			3		
			4		
			5		
	Top of waste		6		
			7		Plastic, wood, and metal 6-8 ft bgs, at toe of landfill slope.
	Trash		8		
	BOTTOM OF TP 8 FT BGS		9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-90

Location: Rockville Project No. : 6219605

Elev: Date: 9/3/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
			2		
	Moderate brown sandy silt, little clay and cobbles		3		
			4		
			5		
			6		
			7		
	Top of waste		8		
	Trash		9		Plastic and paper at 8 ft bgs, approximately 6 ft up toe of landfill slope.
	BOTTOM OF TP 9 FT BGS		10		CGI= 0%
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-91

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/3/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
			2		
	Moderate brown sandy silt, little clay and cobbles		3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, paper and fabric at 6 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-92

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/3/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
			2		
	Moderate brown sandy silt, little clay and cobbles		3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic and metal at 6 ft bgs, approximately 18-20 ft from property boundary.
	BOTTOM OF TP 7 FT BGS		8		CGI= 0%
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-93

Location: Rockville Project No. : 6219605

Elev: Date: 9/3/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt, some clay and cobbles		2		
	Top of waste		3		
	Trash		4		Plastic, fabric, and metal at 3 ft bgs approximately 30 ft from property boundary.
	BOTTOM OF TP 4 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-94

Location: Rockville Project No. : 6219605

Elev: Date: 9/4/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt, some clay and cobbles		2		
			3		
	Top of waste		4		
	Trash		5		Plastic and metal 4-5 ft bgs, approximately 2 ft up toe of landfill slope.
	BOTTOM OF TP 5 FT BGS		6		
			7		CGI= 0%
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-95

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, little clay		1		
	Top of waste		2		
	Trash		3		Plastic and fabric 2-3 ft bgs, approximately 5 ft down from toe of landfill slope,
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-96

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt, little clay and cobbles		2		
			3		
	Top of waste		4		
	Trash		5		Plastic, fabric and glass 4 ft bgs,at toe of slope. Waste likely extends beneath landfill access roadway but not beyond.
	BOTTOM OF TP 5 FT BGS		6		
			7		CGI= 0%
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-97

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, little clay and cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, glass, and metal 3-4 ft bgs, at toe of landfill slope.
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-98

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, some clay and cobbles		1		
			2		
			3		
	Top of waste		4		
	Trash		5		Plastic 4-5 ft bgs at edge of roadway Waste likely extends beneath
	BOTTOM OF TP 6 FT BGS		6		landfill access roadway but not beyond.
			7		CGI= 0%
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-99

Location: Rockville Project No. : 6219605

Elev: Date: 9/28/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown silt and clay little fine sand		0		
	Top of Waste		1		
	Trash		2		Asphalt at 1 ft bgs at North edge of roadway. Waste likely extends beneath landfill access roadway but not beyond.
	BOTTOM OF TP 1.5 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-100

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, some clay, little cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic and fabric 3-4 ft bgs at roadway. Waste likely extends beneath landfill access roadway but not beyond.
	BOTTOM OF TP 5 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-101

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
	Top of waste		1		
	Trash		2		Plastic, rubber, and metal at 1-2 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI = 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-102

Location: Rockville Project No. : 6219605

Elev: Date: 9/4/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, paper, and metal at 3-4 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 4 FT BGS		5		
			6		CGI = 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-103

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/4/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate yellow brown sandy silt and clay, some cobbles		2		
			3		
			4		
	Top of waste		5		
	Trash		6		Plastic, paper, and metal at 5-6 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 6 FT BGS		7		
			8		CGI = 0%
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-104

Location: Rockville Project No. : 6219605

Elev: Date: 9/4/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, fabric, and metal at 3-4 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 4 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-105

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
			2		
	Moderate yellow brown sandy silt and clay, some cobbles		3		
			4		
			5		
	Top of waste		6		
	Trash		7		Plastic, metal, and concrete at 6-7 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 7 FT BGS		8		
			9		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-106

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
	Top of waste		2		
	Trash		3		Plastic and metal at 2-3 ft bgs, approx. 10 ft northwest of landfill access roadway.
	BOTTOM OF TP 3 FT BGS		4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-107

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt and clay, some cobbles		1		
	Top of waste		2		
	Trash		3		Plastic bags at 2 ft bgs, approximately 20 ft from toe of landfill slope.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-108

Location: Rockville Project No. : 6219605

Elev: Date: 9/9/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay and boulders		1		
			2		
	Top of waste		3		
	Trash		4		Plastic, fabric, and metal at 3 ft bgs at west edge of roadway. Waste likely extend beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 5 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-109

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt, some clay, little cobbles		0		
			1		
	Light gray sandy silt, some clay and cobbles		2		
	Top of waste		3		
	Trash		4		Plastic and asphalt at 3-4 ft bgs at west edge of roadway. Waste
	BOTTOM OF TP 4 FT BGS		5		likely extend beneath landfill access roadway, but not beyond.
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-110

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/28/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt little cobbles		0		
			1		No waste encountered in slope.
	BOTTOM OF TP 1.5 FT BGS		2		Adjacent TP-109 also encountered no waste on south side of landfill access roadway.
			3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-111

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
			2		
	Moderate brown sandy silt, little clay and cobbles		3		
	NO WASTE ENCOUNTERED		4		
			5		
	BOTTOM OF TP 5 FT BGS		6		Large metal pipe at 5 ft bgs, approximately 6 ft from edge of landfill access roadway. No waste encountered.
			7		
			8		CGI= 0%
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-112

Location: Rockville Project No. : 6219605

Elev: Date: 9/9/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt, little clay and cobbles		1		
			2		
	NO WASTE ENCOUNTERED		3		
	BOTTOM OF TP 3 FT BGS		4		Metal pipe at 3 ft bgs, approximately 5 ft from edge of landfill access roadway. No waste encountered.
			5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-113

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some clay and cobbles		0		
	NO WASTE ENCOUNTERED		1		
			2		
	BOTTOM OF TP 2 FT BGS		3		No waste encountered up to 2 ft bgs from toe of slope to landfill access roadway. Large boulders at roadway used as fill for construction.
			4		
			5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-114

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some clay and cobbles		0		
	NO WASTE ENCOUNTERED		1		
			2		
	BOTTOM OF TP 2 FT BGS		3		No waste encountered up to 2 ft bgs from toe of slope to landfill access roadway. Large boulders at roadway used as fill for construction.
			4		
			5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-115

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic, wood, and concrete at 0-0.5 ft bgs, approximately 150 ft from property boundary.
	Moderate brown sandy silt, some cobbles.		1		
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-116

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic, wood, and concrete at 0-1 ft bgs, approximately 125 ft from property boundary.
	Moderate brown sandy silt, little clay and cobbles		1		
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-117

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic, wood, and concrete at 0-1 ft bgs, approximately 125 ft from property boundary.
	Moderate brown sandy silt, little clay and cobbles		1		
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-118

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		
	Trash		1		Plastic and metal at 0.5-1.5 ft bgs, approximately 125 ft from property boundary.
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-119

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some cobbles.		0		Plastic and metal at 0-2 ft bgs, approximately 70 ft from property boundary.
	Trash		1		
	BOTTOM OF TP 2 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-120

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic at 0-0.5 ft bgs, approximately 20 ft from property line.
	Moderate brown sandy silt, some cobbles. BOTTOM OF TP 2 FT BGS		1		CGI= 0%
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-121

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
			1		
	Moderate brown sandy silt, some cobbles.		2		
			3		
	Top of waste		4		
	Trash		5		Plastic and metal at 4 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 5 FT BGS		6		
			7		CGI= 0%
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-122

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic at 0-0.5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Moderate yellow brown sandy silt and cobbles		1		
			2		Large cobbles used to construct roadway
	BOTTOM OF TP 2 FT BGS		3		CGI = 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-123

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
			1		
	Top of waste		2		
	Trash		3		Thin layer (2-3") of plastic, metal, and black soil at 2 ft bgs and property boundary. Waste likely extends beyond property boundary.
	Moderate brown silt and clay.		4		
			5		CGI = 0%
	BOTTOM OF TP 5 FT BGS		6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-124

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some cobbles		0		
	Dark gray sandy silt some cobbles.		1		
	Top of waste		2		
	Trash		3		Plastic, fabric, and concrete at 2 ft bgs, approximately 35-40 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-125

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy siltand clay little cobbles		0		
			1		
			2		
	Top of waste		3		
	Trash		4		Plastic and fabric at 3 ft bgs at edge of roadway. Waste likely beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 5 FT BGS		5		
			6		CGI= 0%
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-126

Location: Rockville Project No. : 6219605

Elev: Date: 9/10/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
	Top of waste		1		
	Trash		2		Plastic, metal, and concrete at 1 ft bgs at roadway. Waste likely extends beneath landfill access roadway, but not beyond.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-127

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt little clay and cobbles.		1		No waste encountered from property boundary to fence line.
	NO WASTE ENCOUNTERED		2		
			3		CGI= 0%
	BOTTOM OF TP 3 FT BGS		4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-128

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Dark brown sandy siltand clay		0		
	Top of waste				Plastic, glass and metal at 0.5-1 ft bgs, approximately 25 ft from property boundary.
	Trash		1		
			2		
	BOTTOM OF TP 2 FT BGS				CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-129

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt		0		
	Top of waste				Plastic and glass 0.5-1 ft bgs, approximately 30 ft from property boundary.
	Trash		1		
			2		
	BOTTOM OF TP 2 FT BGS				CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-130

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		
	Moderate brown silty sand. Trash		1		Plastic and glass 0.3-1 ft bgs approximately 15 ft from property boundary
	BOTTOM OF TP 1.5 FT BGS		2		
			3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-131

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silty sand, little clay and cobbles		1		
	Top of waste				Plastic and glass 1.5-2 ft bgs, approximately 5 ft from property boundary.
	Trash		2		
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-132

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silty sand, little clay and cobbles		1		
	Top of waste				Plastic and glass 1.5-2 ft bgs, approximately 35 ft from property boundary.
	Trash		2		
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-133

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		Plastic, metal and boulders at 0-0.5 ft bgs, approximately 25 ft from property boundary.
	Trash				
	BOTTOM OF TP 1 FT BGS		1		
			2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-134

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/16/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic and metal at 0-0.5 ft bgs, approximately 25 ft from property boundary.
	Moderate brown sandy silt, some clay and cobbles BOTTOM OF TP 2 FT BGS		1		
			2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-135

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plasticand glass at 0-0.5 ft bgs, approximately 15 ft from property boundary.
	Reddish brown clay, some silty sand		1		
			2		CGI= 0%
	BOTTOM OF TP 2 FT BGS		3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-136

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		Thin layer of plastic and black soil (1-2") at 0.5 ft bgs at property boundary. Waste like extends beyond property boundary.
	Trash		1		
	Reddish brown silty clay		2		
	BOTTOM OF TP 3 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-137

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		Thin layer of plastic and black soil (2-3") at 1.5 ft bgs at property boundary. Waste like extends beyond property boundary.
	Top of waste		1		
	Trash		2		
			3		CGI= 0%
			4		
	Reddish brown silty clay		5		
	BOTTOM OF TP 6 FT BGS		6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-138

Location: Rockville Project No. : 6219605

Elev: Date: 9/10/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay		1		
			2		
	Top of waste		3		
	Trash		4		Plastic and metal at 3 ft bgs at property boundary. Waste likely extends beyond property boundary
	Reddish brown clay and silt.		5		
	BOTTOM OF TP 5 FT BGS		6		CGI= 0%
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-139

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay		0		
	Top of waste		1		
	Trash		2		Plastic, fabric, and rubber 1 ft bgs at north side of roadway. Waste likely extends beneath landfill access roadway and possibly beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-140

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay		0		
	Top of waste		1		
	Trash		2		Plastic, glass, and fabric at 1 ft bgs at north side of roadway. Waste likely extends beneath landfill access roadway and possibly beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		
			5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-141

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay Top of waste		0 1		
	Trash		2		Plastic, fabric, and metal at 1-2 ft bgs at edge of roadway. Waste likely extends beneath landfill access roadway but not beyond.
	BOTTOM OF TP 3 FT BGS		3 4		CGI= 0%
			5 6 7 8 9 10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-142

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/10/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt some clay		0		
			1		
	Top of waste				
	Trash		2		Plastic, metal and black soil 1.5-2.5 ft bgs, approximately 4-5 ft from property boundary
	Moderate brown sandy silt some clay		3		
			4		CGI = 0%
	BOTTOM OF TP 5 FT BGS		5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-143

Location: Rockville Project No. : 6219605

Elev: Date: 9/10/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of waste				
	Trash		1		Plastic, fabric and metal at 0.5-2 ft bgs at property boundary. Waste likely extends beyond property boundary.
			2		
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI = 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-144

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of waste		1		
	Trash		2		Plastic at 1 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-145

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and clay		0		
	Top of waste		1		
	Trash		2		Plastic, glass, and brick at 1 ft bgs at property boundary. Waste likely extends beyond property boundary.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-146

Location: Rockville Project No. : 6219605

Elev: Date: 9/14/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, some cobbles		0		
	Top of waste		1		
	Trash		2		Plastic and glass at 1-2 ft bgs at approximately 6 ft from property boundary.
	Yellowish brown clay, some silt		3		
			4		CGI= 0%
	BOTTOM OF TP 4 FT BGS		5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-147

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay and cobbles.		0		
	Top of waste		1		
	Trash		2		Plastic at 1-2 ft bgs approximately 13 ft from property boundary.
	BOTTOM OF TP 3 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-148

Location: Rockville Project No. : 6219605

Elev: Date: 9/14/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay little cobbles		1		
	Top of waste				
	Trash		2		Plastic, metal, wood and glass at 1.5-2 ft bgs, approximately 15 ft from retention pond fence.
			3		
	BOTTOM OF TP 4 FT BGS		4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-149

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt and clay little cobbles		1		
	Top of waste				
	Trash		2		Plasticand metal at 1.5-2 ft bgs at retention pond
	BOTTOM OF TP 3 FT BGS		3		fence.
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-150

Location: Rockville Project No. : 6219605

Elev: Date: 9/14/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Reddish brown sandy silt, little clay and cobbles.		0		
	Top of waste		1		
	Trash		2		Plastic, metal, wood and glass at 1-2 ft bgs at retention pond fence.
	BOTTOM OF TP 2 FT BGS		3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-151

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Reddish brown sandy silt and clay		0		
	Top of waste		1		
	Trash		2		Plastic and metal 1-2 ft bgs at retention pond fence.
	Dark gray silt and clay,some sand		3		CGI= 0%
	BOTTOM OF TP 3 FT BGS		4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-152

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste				
	Trash		1		Plastic, metal and fabric 0.5-1 ft bgs
	Light gray sandy silt, some cobbles little clay.		2		at retention pond fence.
	BOTTOM OF TP 2 FT BGS		3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-153

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste				
	Light gray sandy silt, some cobbles little clay.		1		Plastic and metal at 0.5-2 ft bgs at retention pond fence.
	Trash		2		
	BOTTOM OF TP 2 FT BGS				CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-154

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		Plastic, metal, and wood at 0.5-2 ft bgs at retention pond fence.
	Trash		1		
	BOTTOM OF TP 2 FT BGS Light gray sandy silt, some cobbles little clay.		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-155

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/14/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, little clay		0		
			1		
	Top of waste		2		
	Trash		3		Plastic and metal 2-3 ft bgs, approximately 12 ft from retention pond fence.
	Light gray sandy silt and clay		4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-156

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/15/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, some clay and cobbles.		1		
			2		
			3		
	Top of waste		4		
	Trash		5		Plastic at 4 ft bgs, approximately 25 ft from property boundary.
	BOTTOM OF TP 5 FT BGS		6		CGI= 0%
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-157

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/17/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Trash		0		Plastic and concrete 0-0.5 ft bgs, approximately 30 ft from property boundary.
	Moderate brown sandy silt, little clay		1		
	BOTTOM OF TP 1.5 FT BGS		2		CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Test Pit No.: TP-158

Location: Rockville Project No. : 6219605

Elev: Date: 9/17/2009 Groundwater: No

Equipment: Hand Auger Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt and cobbles Top of waste		0		
	Trash		1		Asphalt and concrete cobbles 0.5-1 ft bgs, approximately 10 ft from property boundary.
	BOTTOM OF TP 2 FT BGS		2		
			3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-159

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/17/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		
	Trash				Asphalt at 0.5 ft bgs at property boundary. Waste likely extends beyond property boundary.
	Moderate yellow brown sandy silt and clay		1		
	BOTTOM OF TP 1.5 FT BGS		2		
			3		CGI= 0%
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-160

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/17/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Top of waste		0		
	Trash				Concrete at 0.5 ft bgs at property boundary. Waste likely extends into pipeline right-of-way.
	Moderate yellow brown sandy silt and clay		1		
	BOTTOM OF TP 1.5 FT BGS		2		
					CGI= 0%
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill

Test Pit No.: TP-161

Location: Rockville

Project No. : 6219605

Elev:

Date: 9/17/2009

Groundwater: No

Equipment: Hand Auger

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate yellow brown sandy silt and clay, little cobbles		0		
			1		
	Top of waste				
	Trash		2		Asphalt and metal at 1.5 ft bgs, approximately 25 ft from gas line right-of-way.
	BOTTOM OF TP 2 FT BGS		3		
			4		CGI= 0%
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-1A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/9/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow borwn silt, some fine sand and clay 0-4 ft bgs.		1		
			2		
	Top of waste		3		
	Trash		4		Plastic and wood at 3 ft bgs approximately 45 ft from retention pond fence.
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-3A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silty sand, large cobbles/boulders.		0		
			1		
	Top of Waste				
	Trash		2		Metal, fabric, and plastic at 1.5-3 ft bgs approximately 35 ft from toe of landfill slope.
			3		
			4		CGI= 0%
	BOTTOM OF TP 4 FT BGS		5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-4A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown silt, some fine sand and clay.		1		
	Top of Waste		2		
	Trash		3		Plastic, metal, glass and fabric at 2-3 bgs, approximately 25 ft from toe of natural slope.
			4		
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-5A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown sandy silt, some larges cobbles.		0		
			1		
	Top of Waste				Metal, plastic, tire and glass at 1.5 to 3 ft bgs, approximately 8 ft into toe fo natural slope. Large cobbles define extent of waste
			2		
	Trash		3		
			4		CGI= 0%
	BOTTOM OF TP 4 FT BGS		5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-8A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silt and clay		0		
	Top of Waste				
	Trash		1		Plastic, metal, wood at 0.5-2 ft bgs, approximately 4 ft from toe of natural slope.
			2		
	BOTTOM OF TP 3 FT BGS		3		CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-11A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown sandy silt, little large boulders.		1		
	Top of Waste		2		
	Trash		3		Metal, wood, and plastic at 2-3 ft bgs, approximately 5 ft from toe of natural slope.
	BOTTOM OF TP 3 FT BGS		4		
			5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-14A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate brown sandy silt.		1		
	Top of Waste		2		
	Trash		3		Plastic, metal, cable, and fabric at 2-3 ft bgs, approximately 2 ft from toe of natural slope.
	BOTTOM OF TP 6 FT BGS		4		
			5		CGI= 0%
			6		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site Test Pit No.: TP-15A

Location: Rockville Project No. : 6219605

Elev: Date: 10/8/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown fine sandy silt.		1		
			2		
	Top of Waste				
	Trash		3		Metal fence, plastic, and concrete at 2.5 ft bgs, approximately 5 ft from toe of natural slope.
	White fine sand, little silt.		4		
	BOTTOM OF TP 4 FT BGS		5		Surficial plastic and metal at toe of natural slope.
					CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-16A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown fine sandy silt, little clay		1		
			2		
	Top of Waste		3		
	Trash		4		Plastic, metal, and insulation at 3 ft bgs, approximately 2 ft from toe of natural slope.
	BOTTOM OF TP 4 FT BGS		5		CGI= 0%
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-17A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silt and fine sand, little cobbles and boulders.		0		
			1		
	Top of Waste				
	Trash		2		Metal, plastic, and wood at 1.5 ft bgs at toe of natural slope.
			3		
	BOTTOM OF TP 3 FT BGS				CGI= 0%
			4		
			5		
			6		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-18A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Moderate yellow brown silt some fine sand		1		
	Top of Waste		2		
	Trash		3		Metal, plastic, wood, and asphalt at 2 ft bgs at toe of natural slope.
	BOTTOM OF TP 3 FT BGS		4		CGI= 0%
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site Test Pit No.: TP-24A

Location: Rockville Project No. : 6219605

Elev: Date: 10/8/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Top of Waste				
	Trash		1		Metal, plastic, and glass at 0.5 ft bgs to roadway. Waste likely extends beneath roadway, but not beyond.
	BOTTOM OF TP 1 FT BGS				
	Moderately yellow brown silty sand to sandy silt		2		
			3		
					CGI= 0%
			4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site

Test Pit No.: TP-25A

Location: Rockville

Project No. : 6219605

Elev:

Date: 10/8/2009

Groundwater: No

Equipment: CAT 307 Excavator

Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
	Moderate brown silty sand.		0		
	Top of waste				
	Trash		1		Metal and plastic at 0.5 ft at toe of landfill slope.
	Moderate brown silty sand.		2		CGI= 0%
	Moderate reddish brown silt and clay		3		
	BOTTOM OF TP 3 FT BGS		4		
			5		
			10		
			15		

Remarks:

EA Engineering, Science, and Technology, Inc.

Test Pit Log

PROJECT: Gude Landfill Off-Site Test Pit No.: TP-34A

Location: Rockville Project No. : 6219605

Elev: Date: 10/8/2009 Groundwater: No

Equipment: CAT 307 Excavator Inspector: Joseph Sawicki

Elev.	Description	Depth	Scale	Sample No.	Notes
			0		
	Top of Waste				
	Trash		1		Plastic 1 ft bgs, approximately 225 ft from retention pond fence.
	Moderate brown sandy silt		2		
			3		CGI= 0%
			4		
			5		
	Dark yellowish brown clay and silt, some fine sand.		6		
			7		
			8		
	BOTTOM OF TP 8 FT BGS		9		
			10		
			15		

Remarks:

Appendix C

Test Pit Photos

Photograph Log
Gude Landfill – M-NCPPC Property Test Pits

TP-1A

TP-3A

TP-4A

TP-5A

TP-8A

TP-11A

Photograph Log
Gude Landfill – M-NCPPC Property Test Pits

TP-14A

TP-15A

TP-16A

TP-17A

TP-18A

TP-24A

Photograph Log
Gude Landfill – M-NCPPC Property Test Pits

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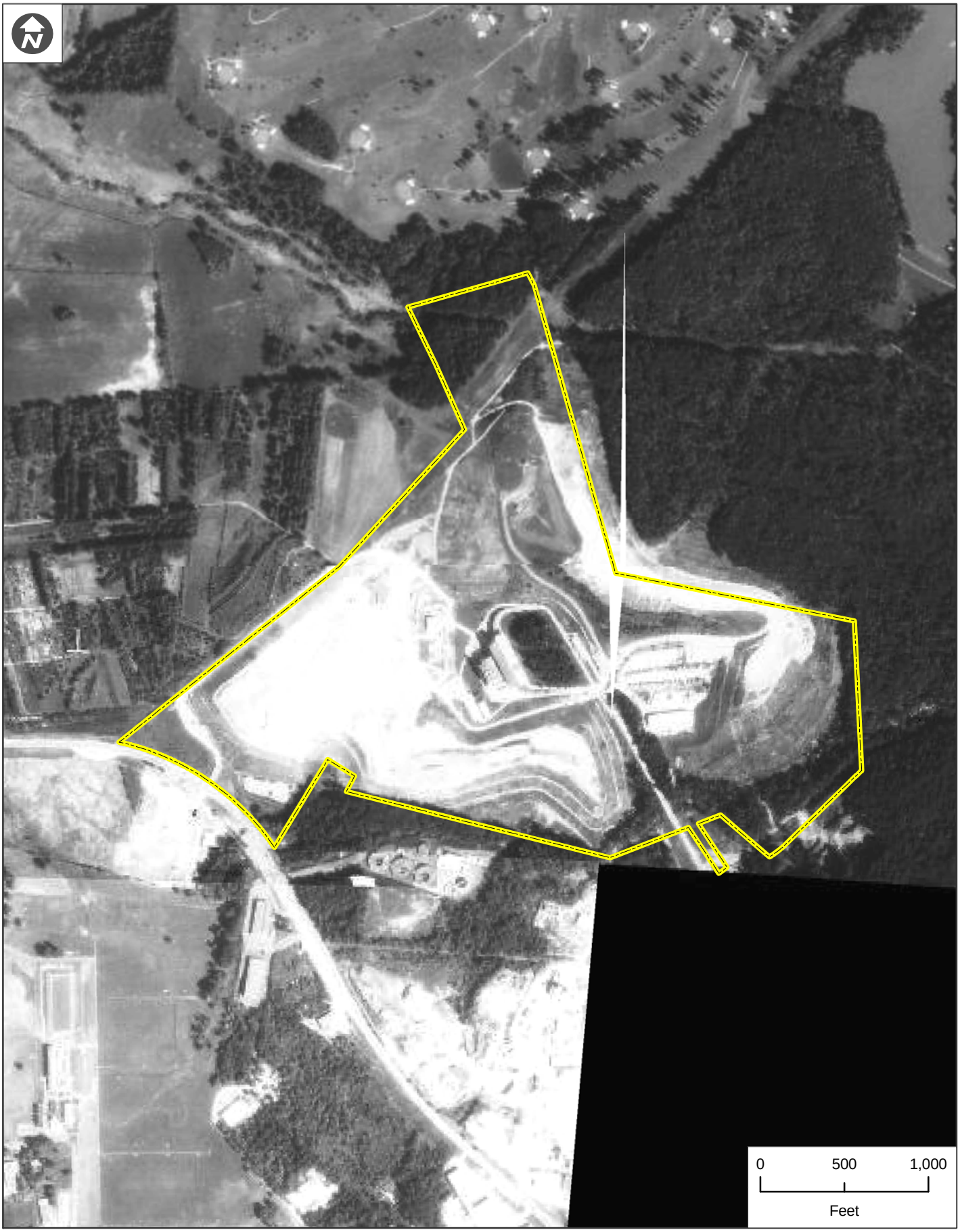
TP-25A

TP-34A

Appendix D

Historical Aerial Photo



Gude Landfill
Montgomery County, Maryland

1979

*Note: The location of the property boundary has been approximated.

Sources:
- ESRI StreetMap, 2006
- Montgomery County, (DTS-GIS), 2009

H:\projects\6219608_out\MXD\HistoricAerials

Appendix E

Permit for Construction on Park Property

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Montgomery County Department of Park and Planning

PERMIT FOR CONSTRUCTION ON PARK PROPERTY

ISSUE DATE: 9/21/2009 EXPIRES ON: January 1, 2010

PERMIT NO.: 2009.40 PERMIT FEE: NONE

PERMITTEE NAME AND ADDRESS: Montgomery Co. Dept. of Environmental Protection
16105 Frederick Rd.
Derwood, Md. 20855
Contact: Steve Lezinski 240-777-6590 Fax 301-840-2385

AUTHORIZED WORK: Excavation of test pits for locating limits of landfill operations and installations of well points for monitoring underground water quality and landfill gas migration in the Rock Creek Regional Park adjacent to the Gude Landfill

The permittee must contact the following M-NCPPC staff 48 hours prior to start of construction:

Herb DeHoff	Construction Supervisor	301-495-2558	herb.dehoff@mncppc-mc.org
Bill Lambdin	Sr. Constr. Inspector	301-370-0103	bill.lambdin@mncppc-mc.org
Doug Ludwig	Park Manager	301-680-3808	Doug.ludwig@mncppc-mc.org

Failure to contact the above staff and conduct a pre-construction meeting will result in revocation of this permit.

Failure of the permittee to read and adhere to the special conditions on the attached pages will result in revocation of this permit and will require further Technical Review before a new permit is issued.

Mitra Pedoeem
Chief, Construction Section
Department of Parks

DEPARTMENT OF PARKS
MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
MONTGOMERY COUNTY, MARYLAND

PERMIT FOR CONSTRUCTION AND WORK ON PARK PROPERTY

This Permit is subject to the following conditions:

1. The Permittee shall perform the construction and the work in accordance with the drawings, plans and specifications approved by the Park Development Division (PDD), Department of Park and Planning.

2. The Permittee shall repair, maintain, replace, and safeguard all of the Permittee's property and equipment on Park Property, subject to the prior approval of the Commission Inspector.

3. The Commission may revoke this Permit for violation of a condition of this Permit.

4. The Permittee shall have a copy of this Permit any time the Permittee is on Park Property and available for inspection upon request by Commission staff.

5. The Permittee shall not remove, clear and/or trim trees outside the area covered by this Permit without the prior approval of the Commission Inspector. The Permittee may remove, clear and/or trim trees within the area covered by this Permit, unless otherwise provided in the drawings, plans, specifications or this Permit.

6. The Permittee shall provide that any stream crossing has sediment protection during construction and Washington Suburban Sanitary Commission Class 2 rip rap on both stream banks pursuant to drawings, plans and specifications approved by the Commission. The Permittee shall obtain approval of all appropriate Federal, State and local government agencies prior to performing any stream crossing.

7. The Permittee shall provide that the final construction grades are the same as the original grades in the construction area unless otherwise approved pursuant to this Permit.

8. The Permittee shall provide all excavation, grading and sediment control measurers required by all appropriate Federal, State and Local government agencies.

9. The Permittee shall fine grade, seed and mulch, using Commission approved seed mix, any disturbed area which originally contained grass. The Permittee shall restore any other area to its original or better condition, including reforestation where required by the Commission. The Permittee shall perform the work in a timely manner to the satisfaction of the commission Inspector.

10. The Permittee shall obtain all required permits from Federal, State and Local government agencies and shall comply with all applicable Commission laws, regulations and rules and all applicable Federal, State and Local laws, regulations and ordinances.

11. The Permittee shall clean and clear the construction area of any debris, materials, tools and equipment upon completion of the work.

12. The Permittee shall repair or replace any property or equipment of the Commission damaged, destroyed or removed by the Permittee, subject to the prior approval of the Commission Inspector.

13. The Permittee shall indemnify and save harmless the Commission, its officers, employees, agents and representatives, from and against all actions, liability, claims, suits, damages, costs or expenses of any kind which are made against or incurred by the Commission arising from the Permittee's negligence, negligent performance of or failure to perform any of the Permittee's obligations under the provisions of this Permit. The Permittee shall provide insurance to insure this indemnification as provided in paragraph 14.

14. The Permittee shall maintain casualty insurance, liability insurance and property insurance, or self-insurance with this coverage, which protects the Commission from claims for damages from bodily injury, including death, or property damage, which may arise from performance of work by the Permittee under this Permit. The Permittee shall furnish a certificate of insurance or appropriate documents showing self-insurance, which is satisfactory to the Commission. The certificate of insurance or self-insurance shall name the Commission as an additional insured and shall provide for 45 days advance written notice to the Commission in the event of termination, modification or cancellation of coverage.

15. The Permittee shall assume all risks in connection with the work on Park Property under this Permit.

16. The Commission reserves the right to make minor adjustments to the Limits of Disturbance in the field to minimize impacts to Park property.

17. The contractor shall be responsible for maintaining safe access to Commission facilities throughout the construction period and to provide signage which may be required at the direction of the Commission inspector. Staging areas and access routes shall be as approved in the permit but may be adjusted in the field by the Commission inspector to minimize impact to Park property.

18. Site restoration and repair or replacement of damaged infrastructure shall be in accordance with the Commission's Standard Details and Technical Specifications and shall be performed at the direction of the Commission inspector.

19. All plant materials, planting locations, and any plant substitutions shall be approved and inspected by the Commission horticulturist. The horticulturist may be contacted through the Commission inspector.

20. Special protection measures such as a 12 " thick mulch layer for access bedding, tree protection fencing, and additional sediment controls shall be provided as directed in the field by the Commission inspector. The Commission shall inspect the condition of trees throughout construction and reserves the right to require repair by a qualified arborist, or replacement of any damaged trees at no cost to the Commission.

21. The Permittee shall be solely responsible for utility clearance prior to the start of work. Miss Utility shall be contacted as prescribed by law. The Permittee shall also be responsible for location of Commission owned on-site utilities. All utility locations shall be at the Permittee's own expense.

22. A concerted effort shall be made by the contractor to protect trees adjacent to the Limits of Disturbance (LOD). If trees outside the LOD are damaged, the following procedures shall be followed to repair the damage:

    a. If the Commission Arborist determines that a tree or shrub is damaged and deemed repairable, the Contractor shall retain an Arborist to make those repairs at no cost to the Commission.

    b. If the Commission Arborist determines that a tree or shrub is damaged and not repairable, the Contractor will be responsible for the following:

        i. Removal and clean up of the tree or shrub at his expense.
        ii. Payment to the Commission for the value of the tree or shrub as established through procedures of the Council of Tree and Landscape Appraisers or another method acceptable to the Commission Arborist.

23. An as-built of the permitted area shall be submitted in plan form and in electronic form if applicable. The electronic version must be in a format acceptable to Commission. All changes or variations from the approved plan must be shown in redline in both paper and electronic form.

24. As-builts of Storm Water Management facilities, approved by Montgomery County Department of Permitting Services, must be submitted in plan form and in electronic form. The as-built submittals must be the version approved by Montgomery County with copies of all pertinent documentation and or approvals. Electronic versions shall be in a format acceptable to Commission.

25. Warranties:

    a. Generally, in addition to any other warranties at law or set out elsewhere in this Permit, or Agreement if executed between the Commission and the Permittee, the Permittee warrants, for one year after final acceptance of the work, that the Work performed under this Permit conforms to the Permit requirements, or Agreement if executed, and is free from any defect of equipment, material or design furnished, or workmanship performed by the Permittee or any of its subcontractors or suppliers at any tier. The Permittee also warrants that all mechanical and electrical equipment, machines, devices, etc. shall be adequate for the use for which they are intended and shall operate with ordinary care and attention in a satisfactory and efficient manner. Under this warranty the Permittee shall remedy at its own expense any such failure to conform, or any such defect. In addition, the Permittee shall remedy at its own expense any damage to Commission owned or controlled real or personal property when that damage is the result of the Permittee's failure to conform to Permit requirements or any defect of equipment, material, workmanship or design. The Permittee shall also restore any work damaged in fulfilling the terms of this section. The Permittee's warranty with respect to Work repaired or replaced hereunder will run for one year from the date of the acceptance by the Commission of the repair or replacement.

    b. Notice of Defect or Damage: The Commission will notify the Permittee in writing within a reasonable time after the discovery of any failure, defect or damage.

    c. Third-Party Warranties: In addition to the other rights and remedies provided by this section, all subcontractors', manufacturers' and suppliers' warranties, express or implied, respecting any Work and materials, at the direction of the Commission shall be enforced

by the Permittee for the benefit of the Commission. In such case, if the Permittee's warranty under subsection a. above has expired, any suit by the Commission to enforce a subcontractor's, manufacturer's or supplier's warranty shall be at the expense of the Commission. The Permittee shall obtain and provide to the Commission copies of all warranties which the subcontractors, manufacturers or suppliers would give in normal commercial practice.

d. Written Warranties: The Permittee shall require all such warranties to be executed in writing to the Commission.

26. In the event this project is subject to a Forest Conservation Plan (FCP), the permittee shall contact the Plan Enforcement Inspector with the Development Review Division at 301-495-4571 to arrange a FCP inspection. This inspection is separate and in addition to inspections required of this permit.

27. Permittee must field locate all excavations and monitoring stations and obtain approval for access to locations and impact to existing trees prior to starting any operations.