



January 29, 2009

Ms. Jaclyne Drummond
Division of Waste Management - Solid Waste Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Re: Quarterly Methane Monitoring Status Report
Lee County Landfill - Sanford, NC
NCDWM-Solid Waste Section Permit # 53-01

Dear Ms. Drummond:

Terraquest Environmental Consultants, P.C. is hereby reporting the status of methane monitoring at the Lee County Landfill. In accordance with the approved plan, the entire methane well network was monitored on January 19, 2009. The monitoring included collection of LEL as methane, O₂, H₂S, and CO readings from each well and then measuring the presence of groundwater in the well to determine the screen interval open to the investigated area. Air measurements were collected with a Q-RAE multigas monitor and the depth to water was measured with a Durham Geo Slope Indicator.

The site location, vicinity, and layout are displayed on the attached Figures 1, 2, and 3, respectively. Figure 4 provides a closer view of an area previously identified to have LEL violations at the property boundary. Methane monitoring results are provided on the attached Table 1, and an NCDWM-SW Environmental Monitoring Reporting Form is also attached.

The information presented on Table 1 reveals results similar to historical conditions with LEL violations in wells M2, M8, M13, M26, M27, M28, M29, M36, M37, and M38. Note that 100% LEL readings were absent from the wells located closest to the property boundary. This is an improvement from previous conditions where M28 indicated that vapors were at the lower explosive level. Future confirmation monitoring is needed, however, it appears that the venting wells in that area are helping to release the LEL vapors.

Please feel free to call or email me with any questions or comments you may have.

Sincerely,

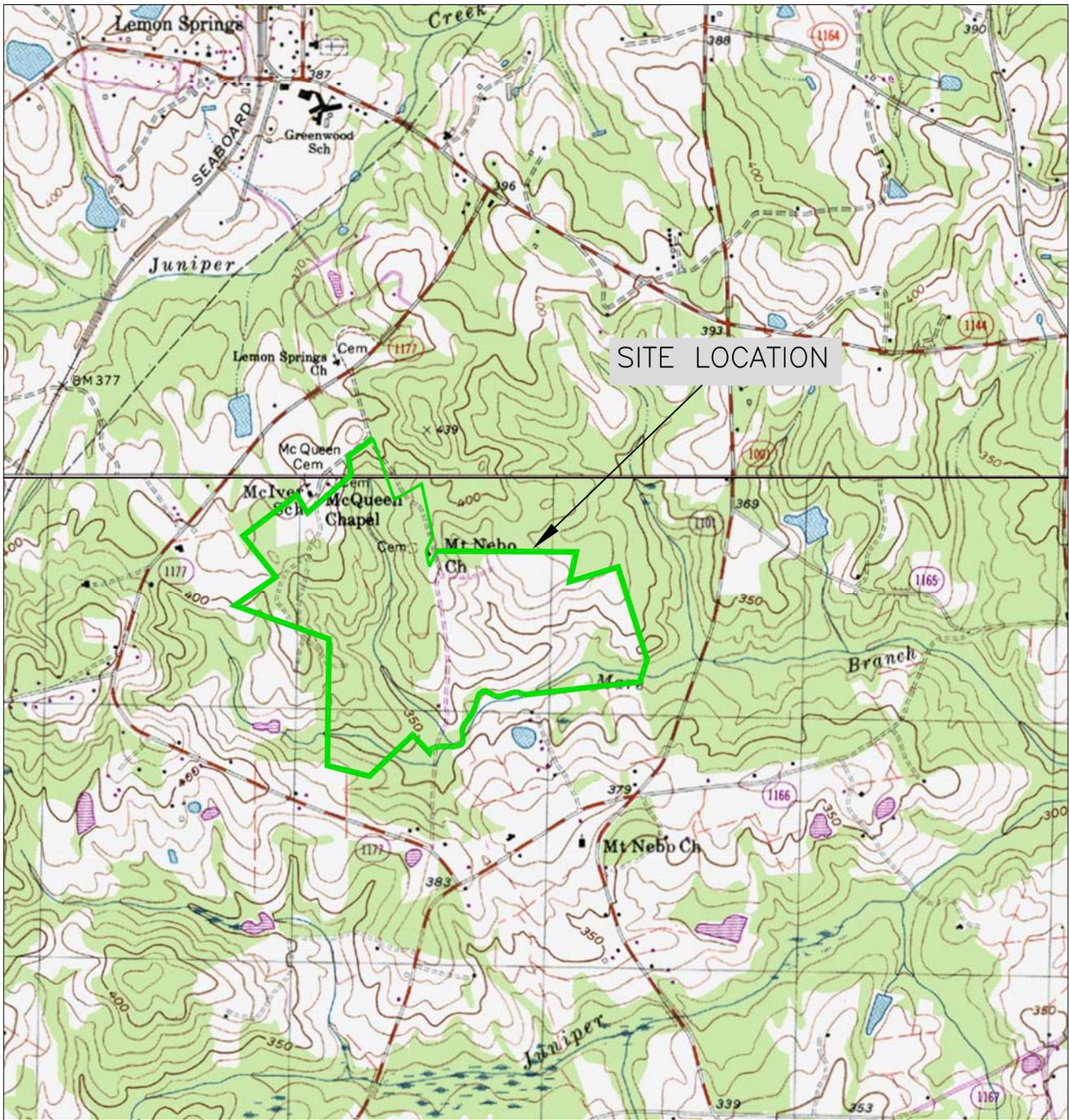
TERRAQUEST ENVIRONMENTAL CONSULTANTS, P.C.

A handwritten signature in black ink, appearing to read "R. Kerins", written over a light blue grid background.

Ryan D. Kerins
Project Manager

Attachments: Figure 1 – Site Location Map, Figure 2 – Site Vicinity Map, Figure 3 – Site Layout Map, Figure 4 – LEL Violation Area
Table 1 – Methane Monitoring
NCDWM-SW Environmental Monitoring Reporting Form

cc: Joe Cherry – Lee County Public Works Department



MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHICS – SANFORD AND MURCHISONTOWN, NC

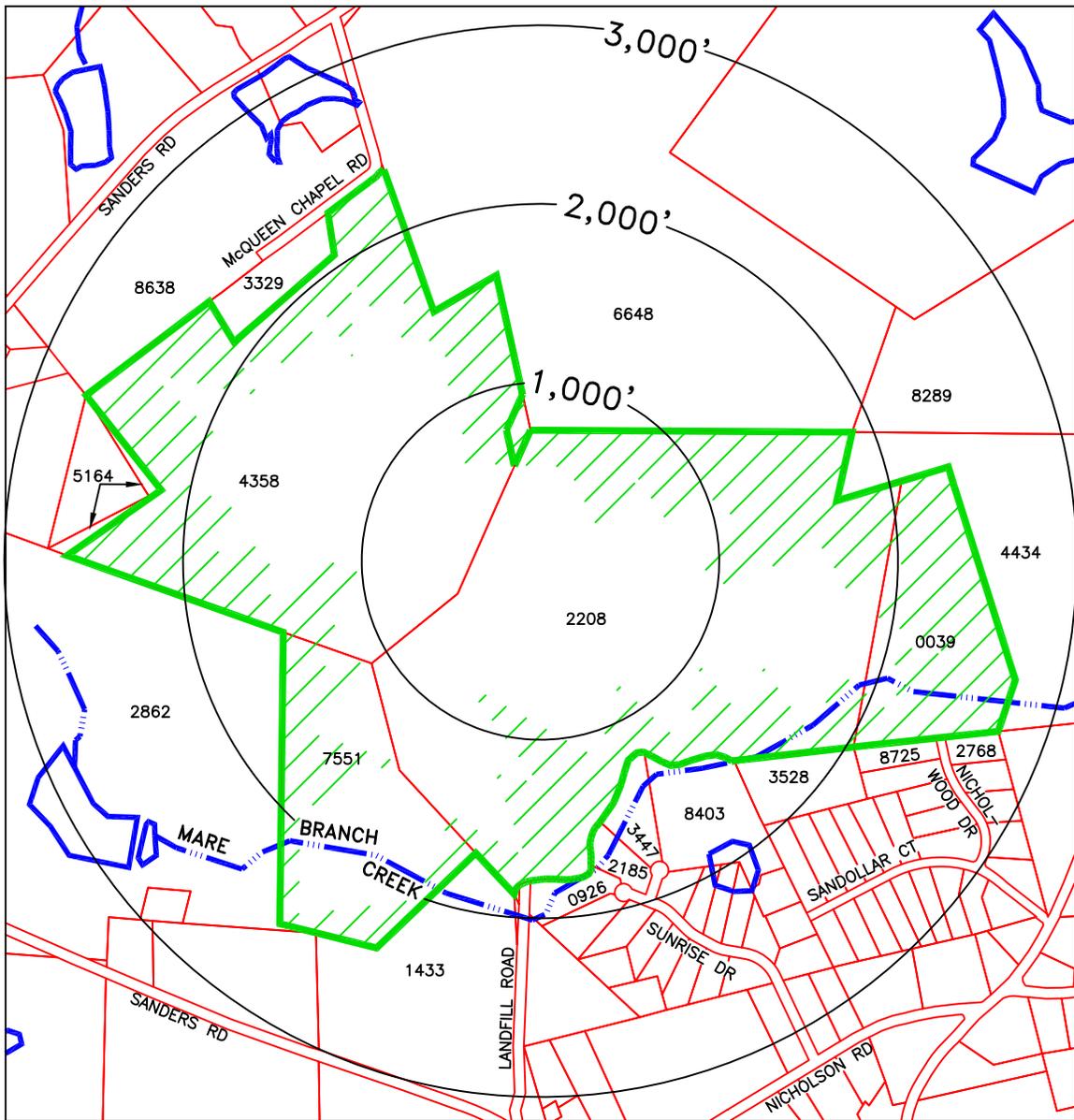
GRAPHIC SCALE



SITE LOCATION MAP

LEE COUNTY LANDFILL
331 LANDFILL ROAD
LEE COUNTY, NORTH CAROLINA

LEE COUNTY PUBLIC WORKS		SANFORD, NC	
PROJECT NO.	02296	DRAWN BY:	RDK
SCALE:	1" = 2000'	CHECKED BY:	JRG/MJB
		DATE:	1/30/09
		FIGURE NO.	1



LEGEND

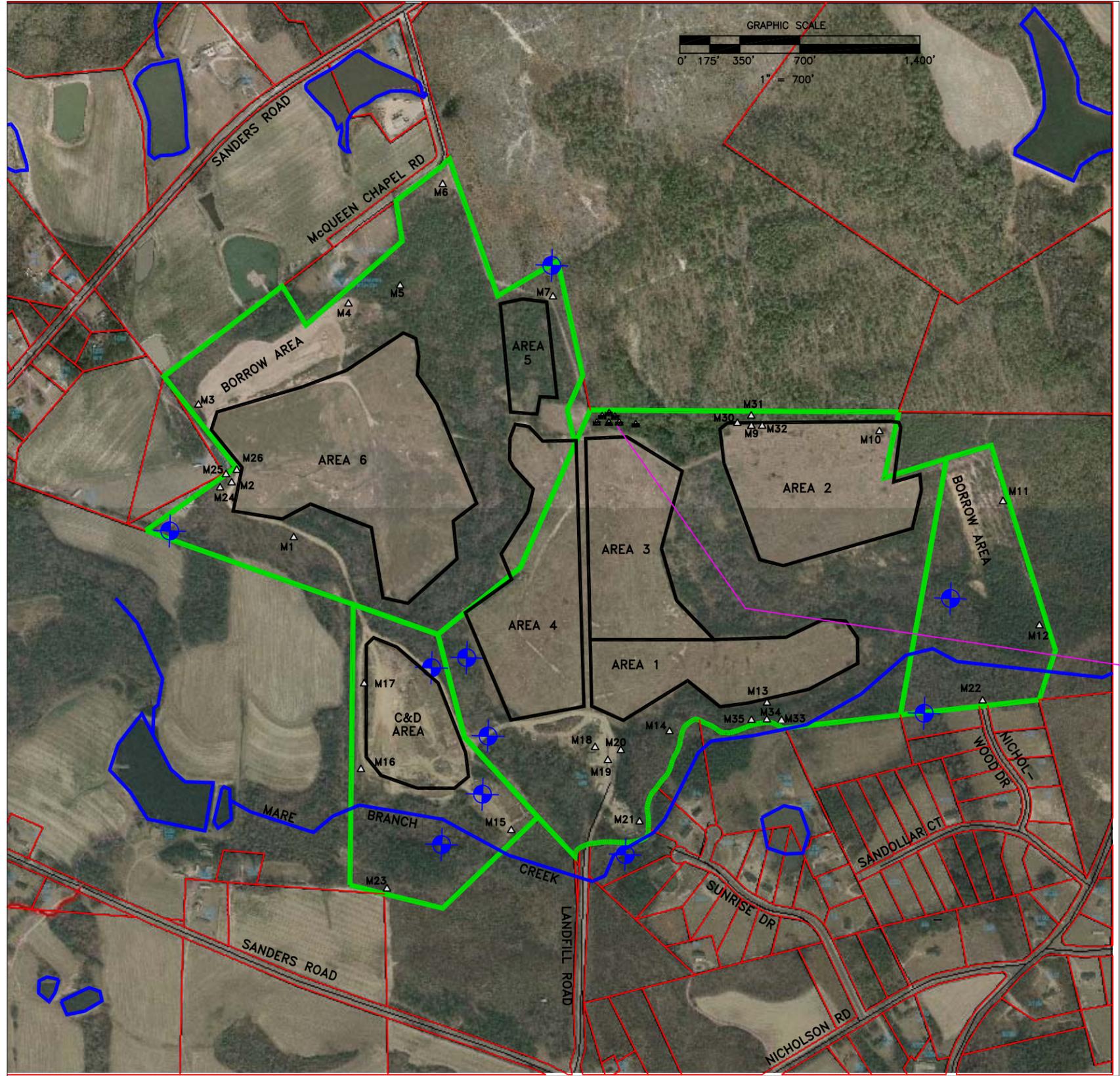
-  LANDFILL PROPERTY BOUNDARY
-  PARCEL BOUNDARIES
-  DISTANCE FROM LANDFILL CENTER
-  SURFACE WATER BODY
- 2106 TAX PARCEL ID (SEE TABLE 1)
- GRAPHIC SCALE (1" = 1,000')
- 
- 0' 500' 1,000' 2,000'

(NOTE: MAP ADAPTED FROM INFORMATION PROVIDED BY THE LEE COUNTY DEPARTMENT OF STRATEGIC SERVICES)



SITE VICINITY MAP
 LEE COUNTY LANDFILL
 331 LANDFILL ROAD
 SANFORD, LEE COUNTY, NC 27332

LKEE COUNTY PUBLIC WORKS		SANFORD, NC	
PROJECT NO.	02296	DRAWN BY:	RDK
SCALE:	1" = 1,000'	CHECKED BY:	MJB
DATE:	1/30/09	FIGURE NO.	2



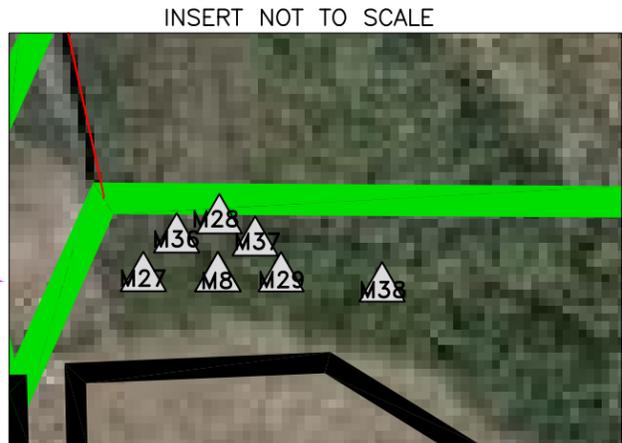
LEGEND

- △ APPROVED METHANE MONITORING WELL
- ⓐ 7/16/08 INVESTIGATIVE BORING

AREAS 1 – 6 CLOSED MSW
C&D AREA STILL ACTIVE

LANDFILL BOUNDARY

TAX PARCEL BOUNDARIES



(NOTE: MAP ADAPTED FROM INFORMATION PROVIDED BY THE LEE COUNTY DEPARTMENT OF STRATEGIC SERVICES)

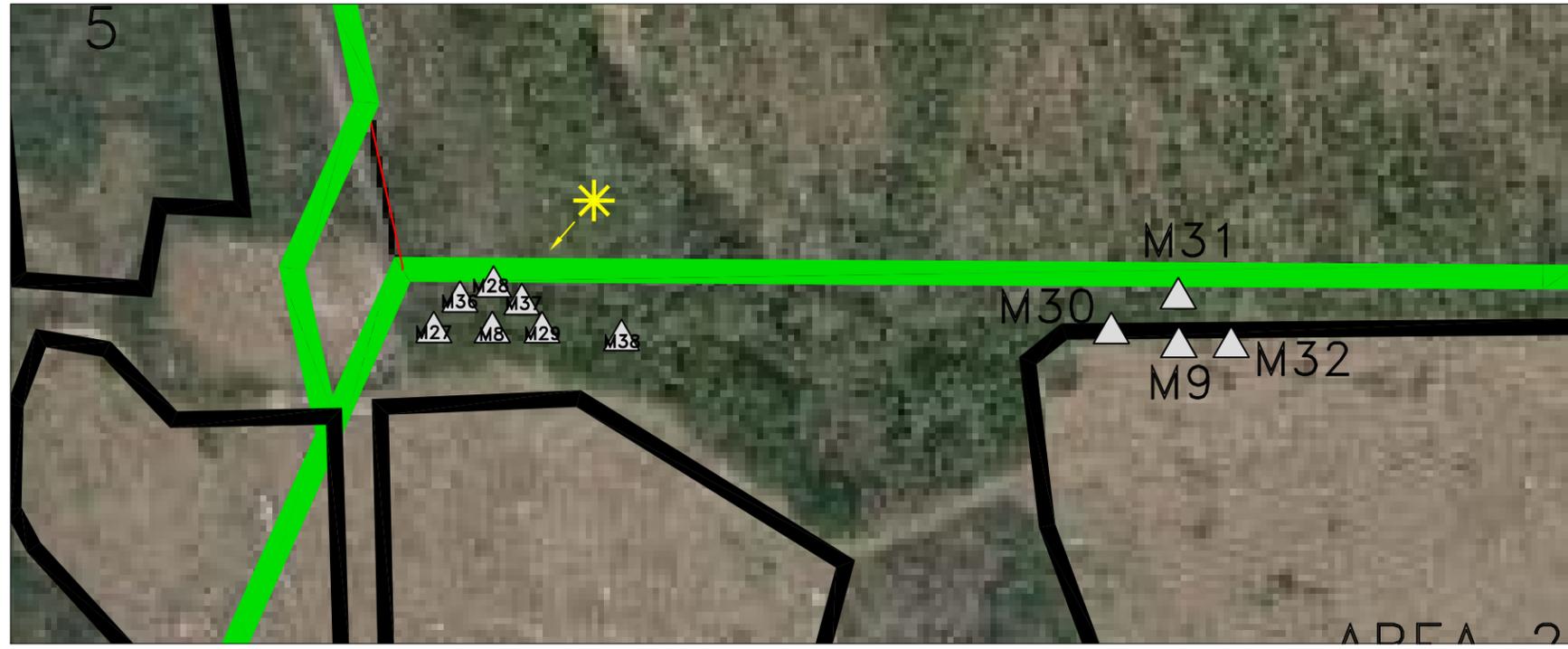


SITE LAYOUT MAP – AERIAL VIEW
LEE COUNTY LANDFILL
SANFORD, LEE COUNTY, NC

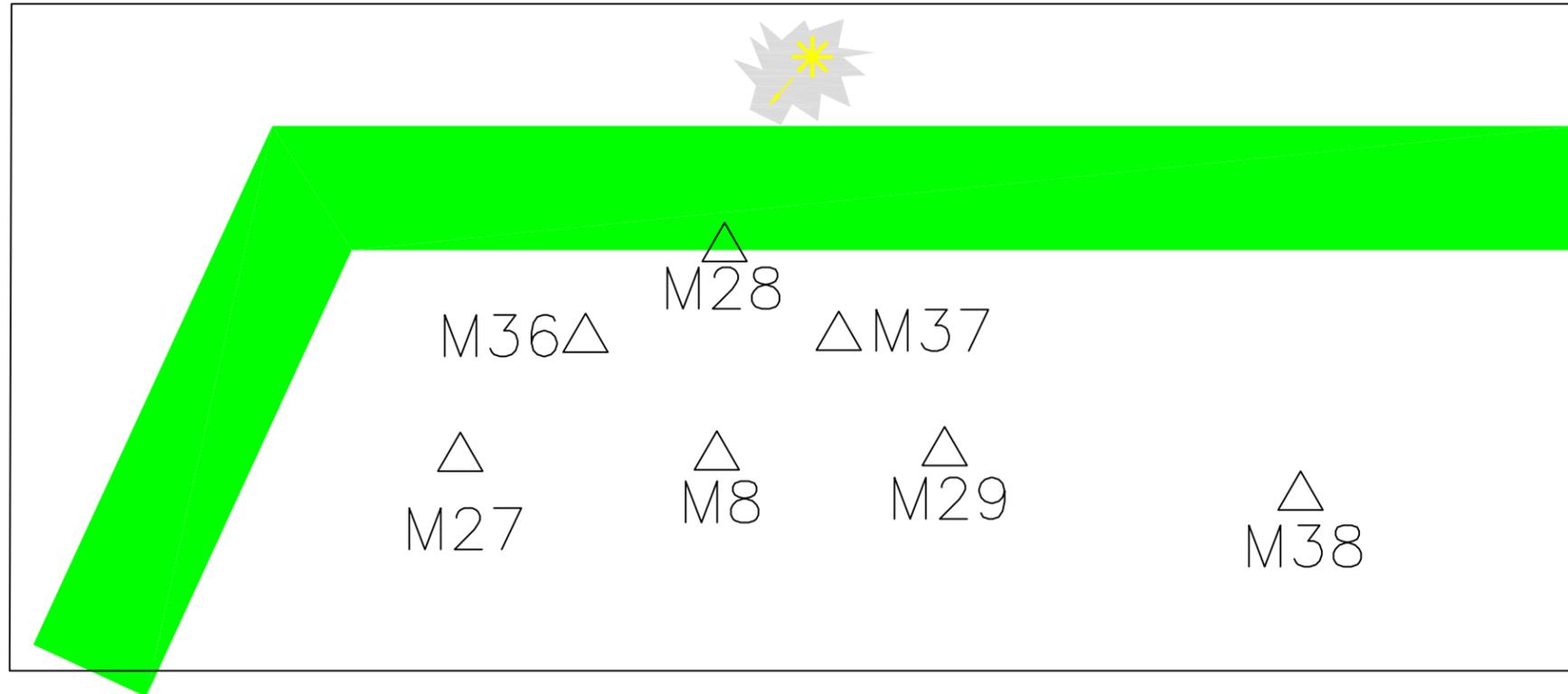
LEE COUNTY PUBLIC WORKS	PROJECT NO: 02296	CHECKED BY: MJB	FIGURE NO. 3	SANFORD, NC
SCALE: 1" = 700'		DRAWN BY: RDK	DATE: 1/30/09	



SCALE: 1" = 200'

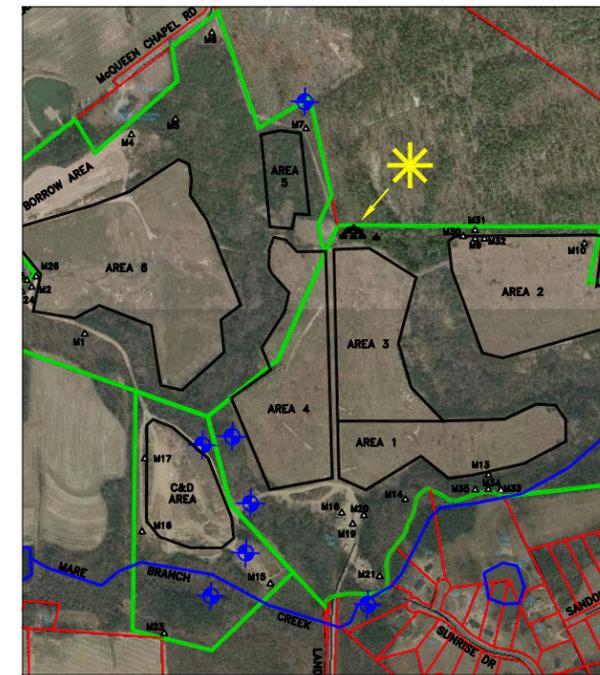


SCALE: 1" = 50'



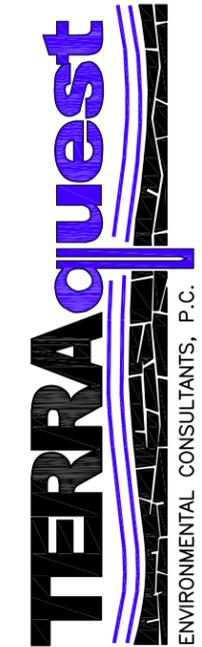
LEGEND

△ APPROVED METHANE MONITORING WELL



SCALE: 1" = 1,250'

(NOTE: MAP ADAPTED FROM INFORMATION PROVIDED BY THE LEE COUNTY DEPARTMENT OF STRATEGIC SERVICES)



LEL VIOLATION AREA
LEE COUNTY LANDFILL
SANFORD, LEE COUNTY, NC

LEE COUNTY PUBLIC WORKS	PROJECT NO: 02296	CHECKED BY: MJB	FIGURE NO. 4	SANFORD, NC
SCALE: AS SHOWN		DRAWN BY: RDK	DATE: 1/30/09	

Table 1 METHANE MONITORING							
Date: 1/30/09 Facility Name: Lee County Landfill							
FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	COLLECT DATE
53-01	SITE	SW325	325	ambient temperature	35.6	°F	10:00 1/19/09
53-01	SITE			barometric pressure	29.71	"Hg	10:00 1/19/09
53-01	M1			carbon monoxide	0	ppm	1/19/2009
53-01	M1			methane gas	0	%LEL	1/19/2009
53-01	M1	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M1			oxygen	20.9	%	1/19/2009
53-01	M1	SW318	318	Depth To Water	7.71	feet	1/19/2009
53-01	M2			carbon monoxide	18	ppm	1/19/2009
53-01	M2			methane gas	55	%LEL	1/19/2009
53-01	M2	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M2			oxygen	21.4	%	1/19/2009
53-01	M2	SW318	318	Depth To Water	7.70	feet	1/19/2009
53-01	M3			carbon monoxide	0	ppm	1/19/2009
53-01	M3			methane gas	0	%LEL	1/19/2009
53-01	M3	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M3			oxygen	20.9	%	1/19/2009
53-01	M3	SW318	318	Depth To Water	12.30	feet	1/19/2009
53-01	M4			carbon monoxide	0	ppm	1/19/2009
53-01	M4			methane gas	0	%LEL	1/19/2009
53-01	M4	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M4			oxygen	20.9	%	1/19/2009
53-01	M4	SW318	318	Depth To Water	4.47	feet	1/19/2009
M4 = Well screen saturated. Measurements are of stagnant air trapped in the well.							
53-01	M5			carbon monoxide	0	ppm	1/19/2009
53-01	M5			methane gas	0	%LEL	1/19/2009
53-01	M5	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M5			oxygen	20.9	%	1/19/2009
53-01	M5	SW318	318	Depth To Water	9.36	feet	1/19/2009
53-01	M6			carbon monoxide	0	ppm	1/19/2009
53-01	M6			methane gas	0	%LEL	1/19/2009
53-01	M6	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M6			oxygen	20.9	%	1/19/2009
53-01	M6	SW318	318	Depth To Water	7.43	feet	1/19/2009
53-01	M7			carbon monoxide	0	ppm	1/19/2009
53-01	M7			methane gas	0	%LEL	1/19/2009
53-01	M7	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M7			oxygen	20.9	%	1/19/2009
53-01	M7	SW318	318	Depth To Water	11.58	feet	1/19/2009
53-01	M8			carbon monoxide	3	ppm	1/19/2009
53-01	M8			methane gas	100	%LEL	1/19/2009
53-01	M8	SW338	338	hydrogen sulfide	31	ppm	1/19/2009
53-01	M8			oxygen	20.9	%	1/19/2009
53-01	M8	SW318	318	Depth To Water	11.30	feet	1/19/2009
53-01	M9			carbon monoxide	0	ppm	1/19/2009
53-01	M9			methane gas	3	%LEL	1/19/2009
53-01	M9	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M9			oxygen	20.9	%	1/19/2009
53-01	M9	SW318	318	Depth To Water	3.90	feet	1/19/2009
M9 = Well screen saturated. Measurements are of stagnant air trapped in the well.							
53-01	M10			carbon monoxide	0	ppm	1/19/2009
53-01	M10			methane gas	0	%LEL	1/19/2009
53-01	M10	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M10			oxygen	20.9	%	1/19/2009
53-01	M10	SW318	318	Depth To Water	7.18	feet	1/19/2009
53-01	M11			carbon monoxide	0	ppm	1/19/2009
53-01	M11			methane gas	0	%LEL	1/19/2009
53-01	M11	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M11			oxygen	20.9	%	1/19/2009
53-01	M11	SW318	318	Depth To Water	dry	feet	1/19/2009
53-01	M12			carbon monoxide	0	ppm	1/19/2009
53-01	M12			methane gas	0	%LEL	1/19/2009
53-01	M12	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M12			oxygen	20.9	%	1/19/2009
53-01	M12	SW318	318	Depth To Water	dry	feet	1/19/2009
53-01	M13			carbon monoxide	29	ppm	1/19/2009
53-01	M13			methane gas	100	%LEL	1/19/2009
53-01	M13	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M13			oxygen	19.6	%	1/19/2009
53-01	M13	SW318	318	Depth To Water	8.10	feet	1/19/2009
53-01	M14			carbon monoxide	0	ppm	1/19/2009
53-01	M14			methane gas	0	%LEL	1/19/2009
53-01	M14	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M14			oxygen	20.9	%	1/19/2009
53-01	M14	SW318	318	Depth To Water	8.64	feet	1/19/2009
53-01	M15			carbon monoxide	0	ppm	1/19/2009
53-01	M15			methane gas	0	%LEL	1/19/2009
53-01	M15	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M15			oxygen	20.9	%	1/19/2009
53-01	M15	SW318	318	Depth To Water	7.10	feet	1/19/2009

Table 1-cont.		METHANE MONITORING					
Date: 1/30/09		Facility Name: Lee County Landfill					
53-01	M16			carbon monoxide	0	ppm	1/19/2009
53-01	M16			methane gas	0	%LEL	1/19/2009
53-01	M16	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M16			oxygen	20.9	%	1/19/2009
53-01	M16	SW318	318	Depth To Water	4.22	feet	1/19/2009
M16 = Well screen saturated. Measurements are of stagnant air trapped in the well.							
53-01	M17			carbon monoxide	0	ppm	1/19/2009
53-01	M17			methane gas	0	%LEL	1/19/2009
53-01	M17	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M17			oxygen	20.9	%	1/19/2009
53-01	M17	SW318	318	Depth To Water	3.20	feet	1/19/2009
M17 = Well screen saturated. Measurements are of stagnant air trapped in the well.							
53-01	M18			carbon monoxide	0	ppm	1/19/2009
53-01	M18			methane gas	0	%LEL	1/19/2009
53-01	M18	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M18			oxygen	20.9	%	1/19/2009
53-01	M18	SW318	318	Depth To Water	7.85	feet	1/19/2009
53-01	M19			carbon monoxide	0	ppm	1/19/2009
53-01	M19			methane gas	0	%LEL	1/19/2009
53-01	M19	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M19			oxygen	21.2	%	1/19/2009
53-01	M19	SW318	318	Depth To Water	6.95	feet	1/19/2009
M19 = Well screen saturated. Measurements are of stagnant air trapped in the well.							
53-01	M20			carbon monoxide	0	ppm	1/19/2009
53-01	M20			methane gas	0	%LEL	1/19/2009
53-01	M20	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M20			oxygen	20.9	%	1/19/2009
53-01	M20	SW318	318	Depth To Water	9.48	feet	1/19/2009
53-01	M21			carbon monoxide	0	ppm	1/19/2009
53-01	M21			methane gas	0	%LEL	1/19/2009
53-01	M21	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M21			oxygen	20.9	%	1/19/2009
53-01	M21	SW318	318	Depth To Water	-	feet	1/19/2009
53-01	M22			carbon monoxide	0	ppm	1/19/2009
53-01	M22			methane gas	0	%LEL	1/19/2009
53-01	M22	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M22			oxygen	20.9	%	1/19/2009
53-01	M22	SW318	318	Depth To Water	-	feet	1/19/2009
53-01	M23			carbon monoxide	0	ppm	1/19/2009
53-01	M23			methane gas	0	%LEL	1/19/2009
53-01	M23	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M23			oxygen	20.9	%	1/19/2009
53-01	M23	SW318	318	Depth To Water	-	feet	1/19/2009
53-01	M24			carbon monoxide	0	ppm	1/19/2009
53-01	M24			methane gas	0	%LEL	1/19/2009
53-01	M24	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M24			oxygen	20.9	%	1/19/2009
53-01	M24	SW318	318	Depth To Water	7.60	feet	1/19/2009
53-01	M25			carbon monoxide	0	ppm	1/19/2009
53-01	M25			methane gas	0	%LEL	1/19/2009
53-01	M25	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M25			oxygen	20.9	%	1/19/2009
53-01	M25	SW318	318	Depth To Water	7.68	feet	1/19/2009
53-01	M26			carbon monoxide	26	ppm	1/19/2009
53-01	M26			methane gas	64	%LEL	1/19/2009
53-01	M26	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M26			oxygen	21.4	%	1/19/2009
53-01	M26	SW318	318	Depth To Water	7.20	feet	1/19/2009
53-01	M27			carbon monoxide	4	ppm	1/19/2009
53-01	M27			methane gas	100	%LEL	1/19/2009
53-01	M27	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M27			oxygen	17.4	%	1/19/2009
53-01	M27	SW318	318	Depth To Water	10.52	feet	1/19/2009
53-01	M28			carbon monoxide	3	ppm	1/19/2009
53-01	M28			methane gas	11	%LEL	1/19/2009
53-01	M28	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M28			oxygen	20.9	%	1/19/2009
53-01	M28	SW318	318	Depth To Water	7.92	feet	1/19/2009
53-01	M29			carbon monoxide	0	ppm	1/19/2009
53-01	M29			methane gas	100	%LEL	1/19/2009
53-01	M29	SW338	338	hydrogen sulfide	18	ppm	1/19/2009
53-01	M29			oxygen	20.9	%	1/19/2009
53-01	M29	SW318	318	Depth To Water	8.50	feet	1/19/2009
53-01	M30			carbon monoxide	0	ppm	1/19/2009
53-01	M30			methane gas	4	%LEL	1/19/2009
53-01	M30	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M30			oxygen	20.9	%	1/19/2009
53-01	M30	SW318	318	Depth To Water	7.80	feet	1/19/2009
53-01	M31			carbon monoxide	0	ppm	1/19/2009
53-01	M31			methane gas	4	%LEL	1/19/2009
53-01	M31	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M31			oxygen	20.9	%	1/19/2009
53-01	M31	SW318	318	Depth To Water	7.65	feet	1/19/2009

Table 1-cont.		METHANE MONITORING					
Date: 1/30/09		Facility Name: Lee County Landfill					
53-01	M32			carbon monoxide	0	ppm	1/19/2009
53-01	M32			methane gas	0	%LEL	1/19/2009
53-01	M32	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M32			oxygen	20.9	%	1/19/2009
53-01	M32	SW318	318	Depth To Water	7.25	feet	1/19/2009
53-01	M33			carbon monoxide	0	ppm	1/19/2009
53-01	M33			methane gas	0	%LEL	1/19/2009
53-01	M33	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M33			oxygen	20.9	%	1/19/2009
53-01	M33	SW318	318	Depth To Water	7.20	feet	1/19/2009
53-01	M34			carbon monoxide	0	ppm	1/19/2009
53-01	M34			methane gas	0	%LEL	1/19/2009
53-01	M34	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M34			oxygen	20.9	%	1/19/2009
53-01	M34	SW318	318	Depth To Water	5.45	feet	1/19/2009
(With a 3 foot above ground stickup and well screen from 0 - 5' below ground level, these results are representative of the vadose zone.							
53-01	M35			carbon monoxide	0	ppm	1/19/2009
53-01	M35			methane gas	0	%LEL	1/19/2009
53-01	M35	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M35			oxygen	20.9	%	1/19/2009
53-01	M35	SW318	318	Depth To Water	6.55	feet	1/19/2009
53-01	M36			carbon monoxide	7	ppm	1/19/2009
53-01	M36			methane gas	100	%LEL	1/19/2009
53-01	M36	SW338	338	hydrogen sulfide	41	ppm	1/19/2009
53-01	M36			oxygen	20.9	%	1/19/2009
53-01	M36	SW318	318	Depth To Water	10.90	feet	1/19/2009
53-01	M37			carbon monoxide	1	ppm	1/19/2009
53-01	M37			methane gas	100	%LEL	1/19/2009
53-01	M37	SW338	338	hydrogen sulfide	0	ppm	1/19/2009
53-01	M37			oxygen	20.7	%	1/19/2009
53-01	M37	SW318	318	Depth To Water	10.55	feet	1/19/2009
53-01	M38			carbon monoxide	6	ppm	1/19/2009
53-01	M38			methane gas	100	%LEL	1/19/2009
53-01	M38	SW338	338	hydrogen sulfide	26	ppm	1/19/2009
53-01	M38			oxygen	20.9	%	1/19/2009
53-01	M38	SW318	318	Depth To Water	9.40	feet	1/19/2009

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

TerraQuest Environmental Consultants, P.C.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Ryan Kerins Phone: (919) 563-9091
 E-mail: rdkerins@terraquestpc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Lee County Landfill	331 Landfill Rd, Sanford, NC 27332	53-01	.1600	January 19, 2009

Environmental Status: (Check all that apply)

- Initial/Background Monitoring Detection Monitoring Assessment Monitoring Corrective Action

Type of data submitted: (Check all that apply)

- Groundwater monitoring data from monitoring wells Methane gas monitoring data
 Groundwater monitoring data from private water supply wells Corrective action data (specify) _____
 Leachate monitoring data Other(specify) _____
 Surface water monitoring data

Notification attached?

- No. No groundwater or surface water standards were exceeded.
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
 Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Ryan Kerins Project Manager (919) 563-9091
 Facility Representative Name (Print) Title (Area Code) Telephone Number
 Signature [Signature] Date 1/30/09
 Affix NC Licensed/ Professional Geologist/Engineer Seal here:

