December 29, 2008

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

Re: 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 methane monitoring plan, wells with previously reported LEL violations were monitored for the month of December on December 17, 2008.

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

Terraquest personnel used a Q-RAE multigas monitor to check the concentrations of carbon monoxide, LEL vapors (as methane), hydrogen sulfide, and oxygen during the December 17, 2008 visit. That information is presented on Table 1 which shows LEL violations in wells M8, M28, M29, M36, M37, and M38. Note that those wells have previously had LEL violations.

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

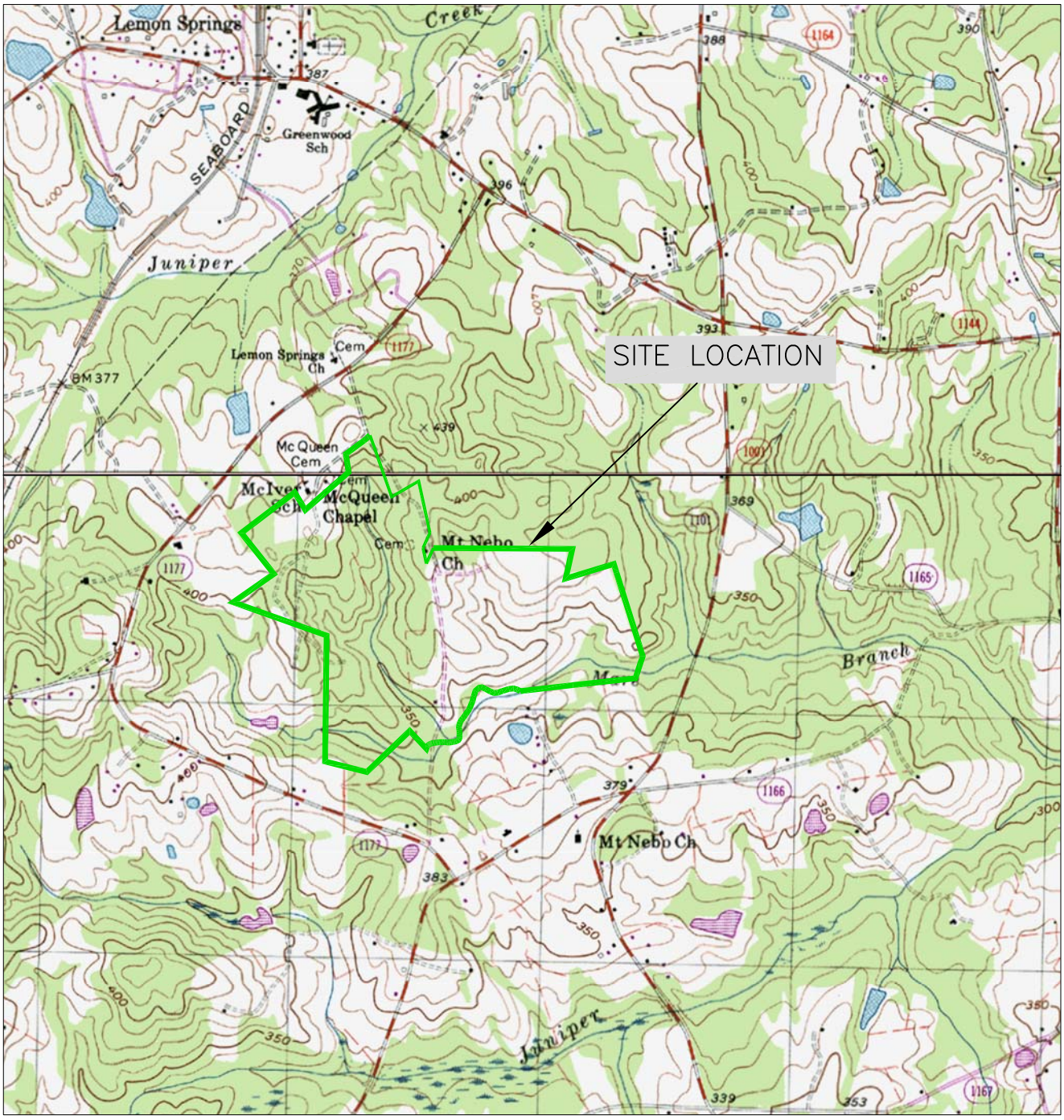
Sincerely,

TERRAQUEST ENVIRONMENTAL CONSULTANTS, P.C.

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



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

GRAPHIC SCALE

0' 2000' 4000'

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SITE LOCATION MAP

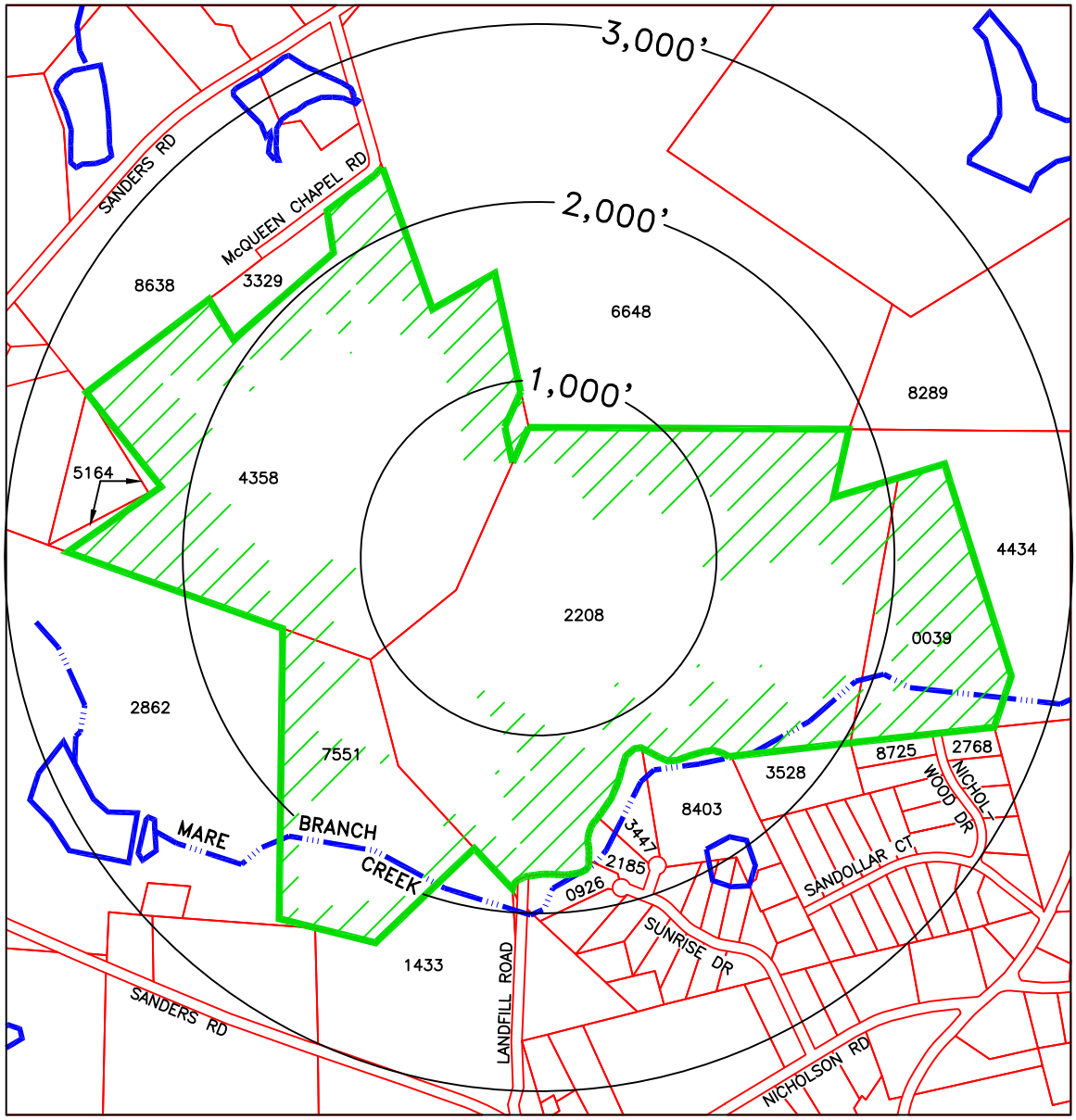
LEE COUNTY LANDFILL

331 LANDFILL ROAD

LEE COUNTY, NORTH CAROLINA

LEE COUNTY PUBLIC WORKS SANFORD, NC

PROJECT NO.	02296	DRAWN BY:	RDK	DATE:	12/29/08
SCALE:	1" = 2000'	CHECKED BY:	JRG/MJB	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)

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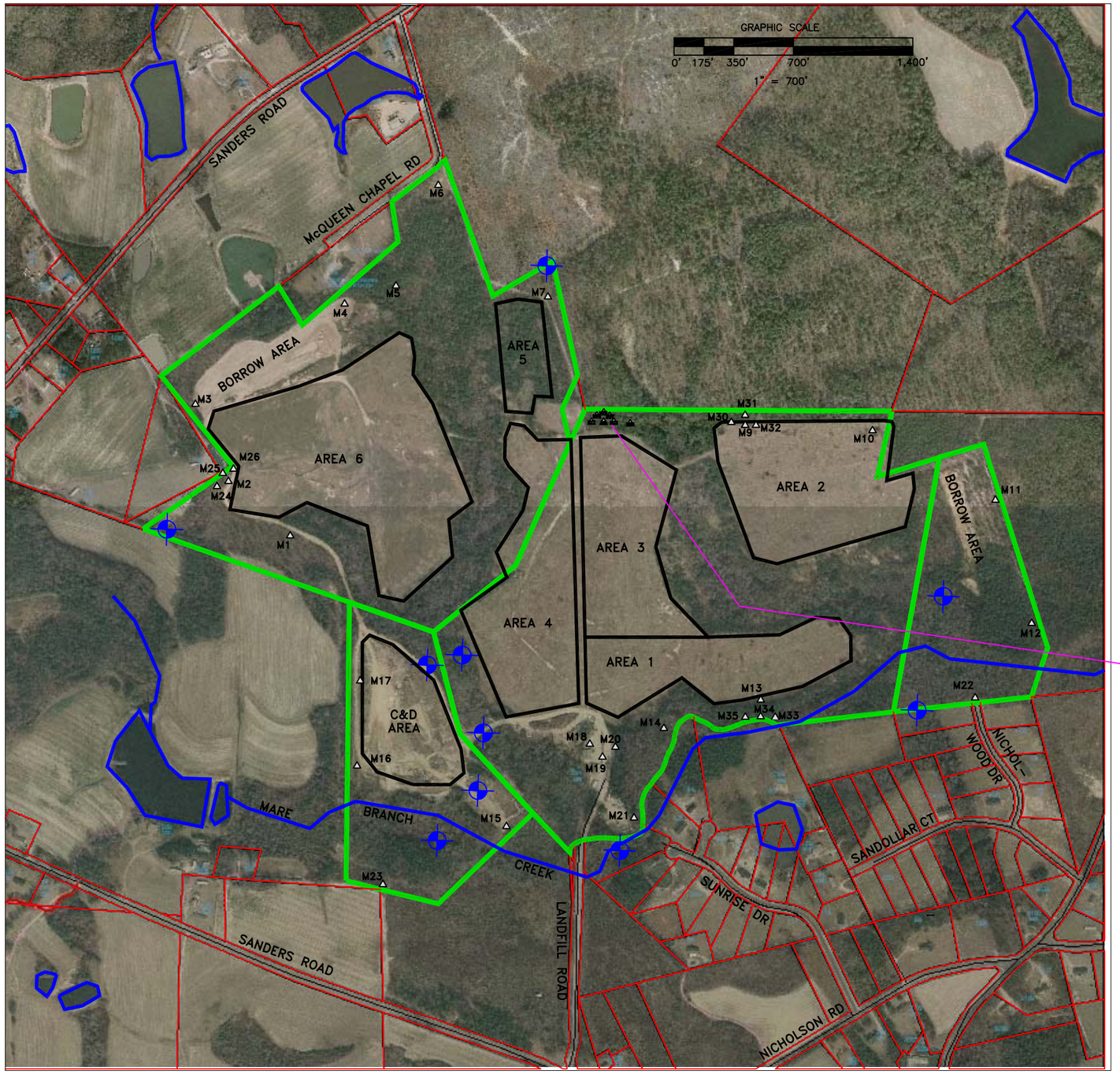
SITE VICINITY MAP
LEE COUNTY LANDFILL
331 LANDFILL ROAD
SANFORD, LEE COUNTY, NC 27332

LKEE COUNTY PUBLIC WORKS — SANFORD, NC

PROJECT NO.	02296	DRAWN BY:	RDK	DATE:	12/29/08
SCALE:	1" = 1,000'	CHECKED BY:	MJB	FIGURE NO.	2



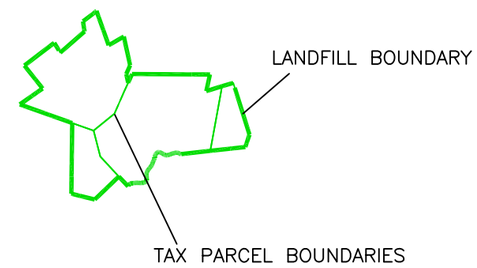
LEGEND

△ APPROVED METHANE MONITORING WELL

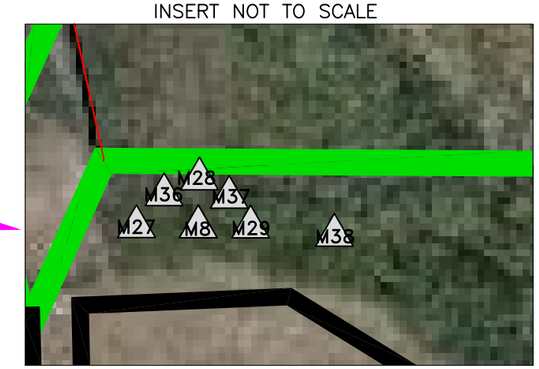
Ⓐ 7/16/08 INVESTIGATIVE BORING

AREAS 1 – 6 CLOSED MSW

C&D AREA STILL ACTIVE



INSERT NOT TO SCALE



(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 — SANFORD, NC

PROJECT NO: 02296	CHECKED BY: MJB	FIGURE NO.	3
SCALE: 1" = 700'	DRAWN BY: RDK	DATE:	12/29/08

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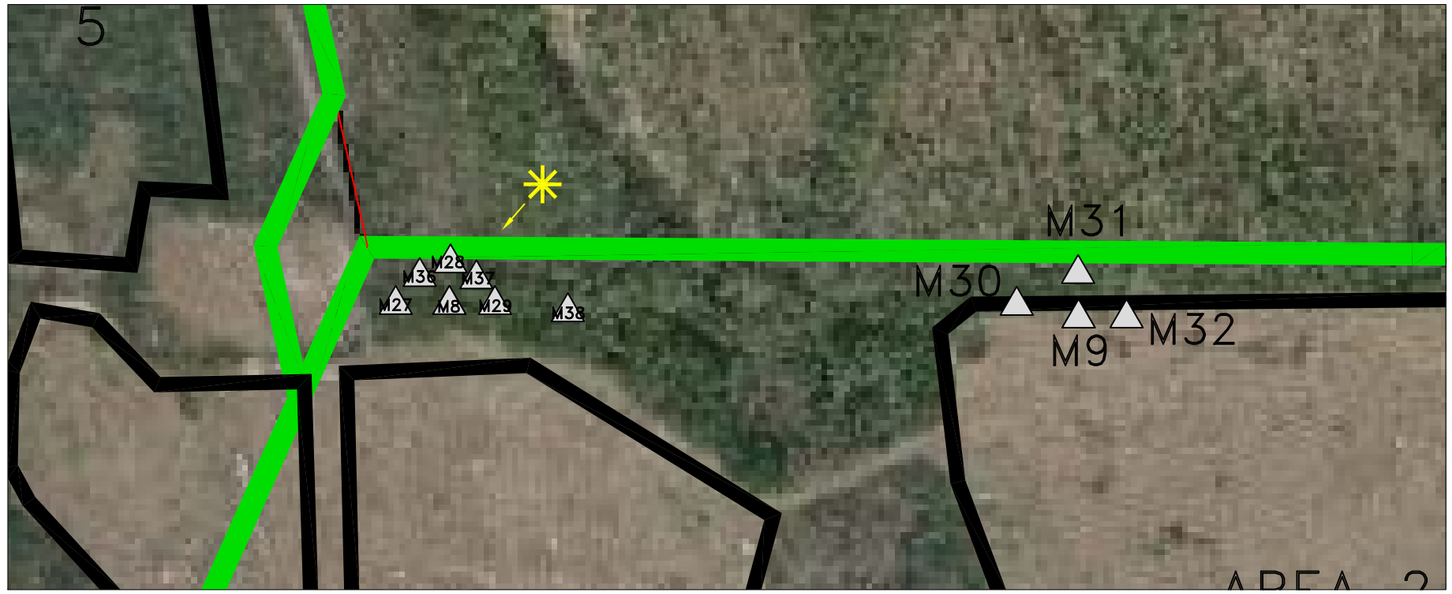
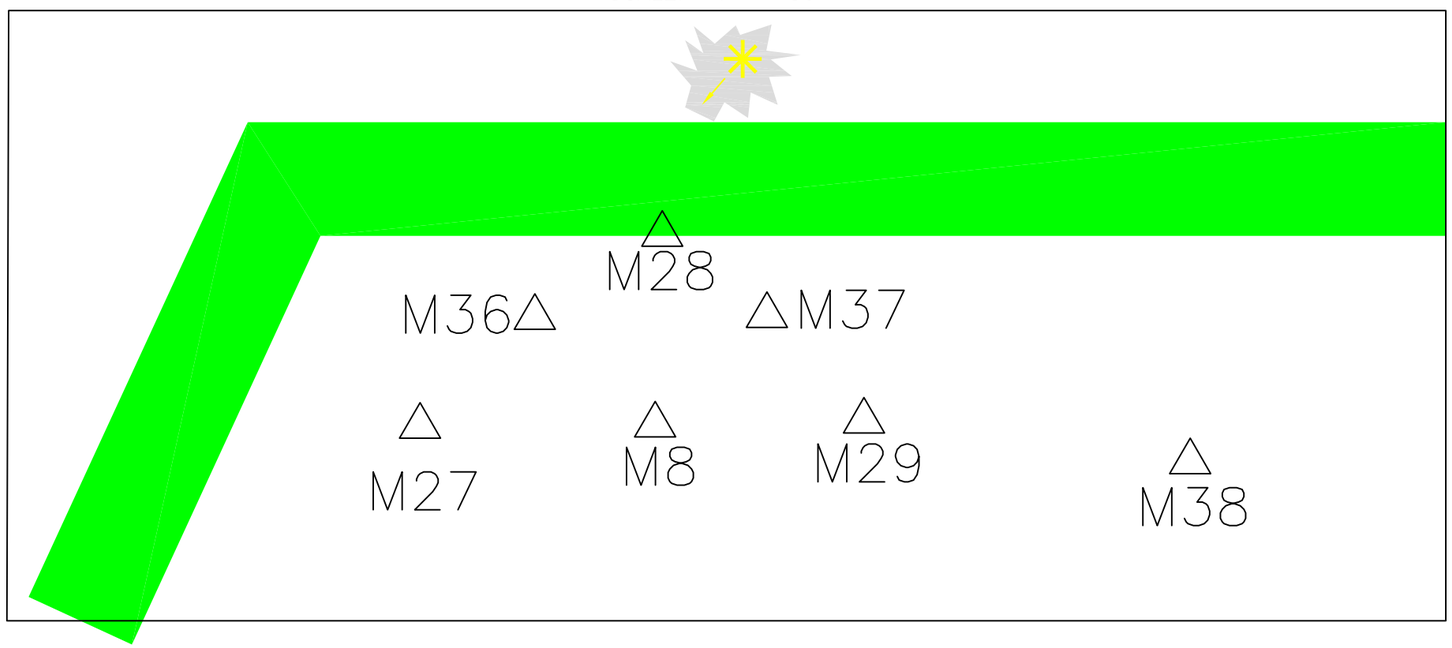
SCALE: 1" = 200'

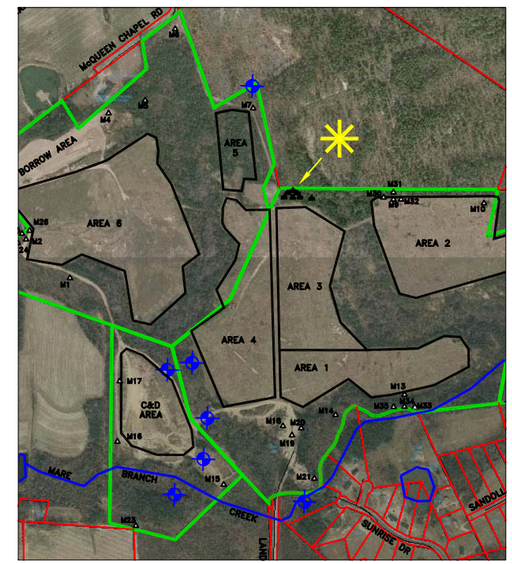


SCALE: 1" = 50'



LEGEND

△ APPROVED METHANE MONITORING WELL



SCALE: 1" = 1,250'

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

LEE COUNTY PUBLIC WORKS

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

SANFORD, NC

PROJECT NO: 02296	CHECKED BY: MJB	FIGURE NO.	4
SCALE: AS SHOWN	DRAWN BY: RDK	DATE:	12/29/08

TERRAquest
ENVIRONMENTAL CONSULTANTS, P.C.

Table 1 METHANE MONITORING
Date: 12/17/08 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	10.0	°C	11:00 12/17/08
53-01	SITE			barometric pressure	30.22	"Hg	11:00 12/17/08
53-01	M8			carbon monoxide	6	ppm	11/25/2008
53-01	M8			methane gas	100	%LEL	11/25/2008
53-01	M8	SW338	338	hydrogen sulfide	70	ppm	11/25/2008
53-01	M8			oxygen	17.1	%	11/25/2008
53-01	M8	SW318	318	Depth To Water	11.48	feet	11/25/2008
53-01	M27			carbon monoxide	4	ppm	11/25/2008
53-01	M27			methane gas	3	%LEL	11/25/2008
53-01	M27	SW338	338	hydrogen sulfide	0	ppm	11/25/2008
53-01	M27			oxygen	20.9	%	11/25/2008
53-01	M27	SW318	318	Depth To Water	10.56	feet	11/25/2008
53-01	M28			carbon monoxide	6	ppm	11/25/2008
53-01	M28			methane gas	52	%LEL	11/25/2008
53-01	M28	SW338	338	hydrogen sulfide	0	ppm	11/25/2008
53-01	M28			oxygen	17.2	%	11/25/2008
53-01	M28	SW318	318	Depth To Water	9.9	feet	11/25/2008
53-01	M29			carbon monoxide	2	ppm	11/25/2008
53-01	M29			methane gas	100	%LEL	11/25/2008
53-01	M29	SW338	338	hydrogen sulfide	37	ppm	11/25/2008
53-01	M29			oxygen	5.6	%	11/25/2008
53-01	M29	SW318	318	Depth To Water	8.45	feet	11/25/2008
53-01	M36			carbon monoxide	7	ppm	11/25/2008
53-01	M36			methane gas	100	%LEL	11/25/2008
53-01	M36	SW338	338	hydrogen sulfide	2	ppm	11/25/2008
53-01	M36			oxygen	17.2	%	11/25/2008
53-01	M36	SW318	318	Depth To Water	10.82	feet	11/25/2008
53-01	M37			carbon monoxide	6	ppm	11/25/2008
53-01	M37			methane gas	100	%LEL	11/25/2008
53-01	M37	SW338	338	hydrogen sulfide	0	ppm	11/25/2008
53-01	M37			oxygen	11.2	%	11/25/2008
53-01	M37	SW318	318	Depth To Water	dry (no water)	feet	11/25/2008
53-01	M38			carbon monoxide	4	ppm	11/25/2008
53-01	M38			methane gas	100	%LEL	11/25/2008
53-01	M38	SW338	338	hydrogen sulfide	77	ppm	11/25/2008
53-01	M38			oxygen	1	%	11/25/2008
53-01	M38	SW318	318	Depth To Water	9.34	feet	11/25/2008

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

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	December 17, 2008

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

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 12/29/08 Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 1185 GEOLOGIST MICHAEL J. BROWN

Revised 01/2007