



December 6, 2010

Mr. Randy Nattis
On-Scene Coordinator
U.S. Environmental Protection Agency (EPA), Region 4
61 Forsyth Street SW, 11th Floor
Atlanta, GA 30303

**Subject: Final Emergency Response Letter Report
Maynard Terrace Methane Response
Atlanta, DeKalb County, Georgia
EPA Contract No. EP-W-05-054
TDD No. TTEMI-05-001-0136**

Dear Mr. Nattis:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting this letter report to summarize emergency response activities performed at the Maynard Terrace Methane Response located in Atlanta, DeKalb County, Georgia. This report includes figures (Appendix A), tables and soil boring logs (Appendix B), a photographic log (Appendix C), field logbook notes (Appendix D), a table of witnesses (Appendix E), analytical data packages for air samples collected from the site (Appendix F), and the Scribe database generated for the project (Appendix G). This letter report summarizes activities conducted at the site from September 22 through October 8, 2010.

BACKGROUND

On September 17, 2010, Atlanta Gas Light (AGL) representatives discovered elevated methane concentrations while performing a routine leak check of their natural gas supply system in the vicinity of the Urban Lofts Townhomes located at 241 Maynard Terrace SE in Atlanta, Georgia (see Figure 1 of Appendix A). As a result, AGL representatives turned off the gas supply to the townhomes and began to investigate their pipelines for potential leaks. In addition, AGL representatives notified the Atlanta Fire Department (AFD), who also responded to the scene to conduct air monitoring and coordinate with AGL and local residents regarding the situation.

As part of their investigation, AGL representatives collected four air samples, including three samples collected from separate subsurface water meter boxes located in front of townhomes at the site; and one sample collected from an AGL service pipe that supplies natural gas to a townhome at the site. The samples were submitted to Applied Technical Resources, Inc. in Marietta, Georgia for analysis using gas chromatography with flame ionization detection. Laboratory analysis indicated that the sample collected from the AGL service pipe contained methane, ethane, propane, butane, isobutene, pentane, and isopentane, which are considered indicative of natural gas (thermogenic gas) from their supply system. Analysis also indicated that the samples collected from the water meter boxes contained only methane, which is considered indicative of decomposition gas (biogenic gas). Based on these results and their investigation at the site, AGL representatives concluded that the methane detected in the vicinity of the townhomes was not emanating from their natural gas supply system.

On September 21, 2010, AFD representatives requested assistance from the U.S. Environmental Protection Agency (EPA) in identifying the source of the methane and determining actions to be taken to mitigate the explosive threat present at the site. EPA On-Scene Coordinator (OSC) Randy Nattis subsequently responded to the site and met with representatives from AGL, AFD, and the Georgia Environmental Protection Division (GA EPD). In addition, OSC Nattis directed Tetra Tech START to mobilize to the site the following morning to conduct air monitoring and assist with response activities.

RESPONSE ACTIVITIES

On September 22, 2010, Tetra Tech START met onsite with OSC Nattis, as well as representatives of AFD, AGL, and GA EPD. EPA, GA EPD, and Tetra Tech START conducted response activities at the site from September 22 through October 8, 2010. Figure 2 of Appendix A illustrates the site layout. The following subsections provide a chronology of response activities.

September 22, 2010

EPA and Tetra Tech START initiated air monitoring at various locations throughout the site, including miscellaneous subsurface utility vaults and sewers, as well as the subsurface water meter boxes located in front of the garage at each townhome unit. In addition, shallow boreholes (approximately 4 to 5 feet below ground surface [bgs]) were advanced by AGL representatives inside water meter boxes to provide further monitoring of the subsurface. Air monitoring activities included the use of the following equipment:

- MultiRAE Plus to measure percent lower explosive limit (LEL).
- TVA1000 (flame ionization detector [FID]) to measure volatile organic compounds (VOC).
- AreaRAE units to provide additional percent LEL readings from stationary locations at the site.
- LandTec GA-90 to measure percent methane by volume.

Consistently high readings for percent LEL (greater than 100 percent), VOCs (greater than 1 percent by volume), and percent methane (up to 41 percent by volume) were obtained at numerous subsurface locations throughout the site. The flammable range for methane in air is 5 to 15 percent. No significantly elevated readings were obtained from sewers at the site. Although no elevated readings were obtained above the ground surface, a high level of concern existed for the potential explosive threat present at the site.

EPA and Tetra Tech START also conducted air monitoring of the interior of 11 of the 25 townhomes constructed at the site. Additional air monitoring of the residences was conducted throughout the response based on access and availability provided by owners and/or tenants of the townhomes. Generally, no significantly elevated readings were obtained inside the residences. However, VOC concentrations up to 178 parts per million (ppm) were detected along cracks in the ground-level cement floors of two townhomes (Units 29 and 30).

AFD, EPA, and GA EPD held a meeting with residents of the townhomes to discuss the situation and provide updates to them regarding actions being taken. In addition, OSC Nattis and GA EPD representatives also initiated conversations with the potentially responsible party (PRP) regarding the situation and the need for actions to be taken to protect public health. The PRP subsequently hired Environmental Resources Management (ERM) to begin an independent assessment of the situation.

September 23, 2010

Tetra Tech START continued air monitoring at subsurface locations throughout the site. Again, consistently high readings for percent LEL, VOCs, and percent methane were obtained at numerous subsurface locations throughout the site.

In addition, Tetra Tech START collected seven air samples (tedlar bags) from various subsurface locations at the site, including a sewer manhole, a gas utility vault, and several water meter boxes. These air samples were delivered to Analytical Environmental Services in Atlanta, Georgia for analysis of VOCs. Due to laboratory limitations and the desire for quick turnaround of the results, methane could not be included in the analyses. Analytical results did not identify any analytes above the laboratory reporting limit.

ERM representatives arrived onsite to initiate their assessment activities as a contractor for the PRP. OSC Nattis and GA EPD representatives coordinated with ERM to relay their expectations.

September 24, 2010

Tetra Tech START continued air monitoring at subsurface locations throughout the site. Consistently high readings for percent LEL, VOCs, and percent methane were once again obtained at numerous subsurface locations.

ERM representatives used hand augers to install 13 piezometers to a depth of approximately 5 feet bgs to provide additional subsurface air monitoring locations and further assess conditions at the site. Subsequent air monitoring conducted by Tetra Tech START at the piezometer locations identified methane concentrations up to 44.7 percent by volume.

OSC Nattis directed the Emergency and Rapid Response Services (ERRS) contractor to procure a GeoProbe subcontractor that could also advance soil borings at the site. ERRS personnel advanced a total of five soil borings (B-1 through B-5) in the southern (undeveloped) portion of the site to depths of approximately 20 feet bgs. Subsequent air monitoring of the Geoprobe borings conducted by Tetra Tech START indicated methane concentrations up to 60 percent by volume; vapors and a decomposition odor were also observed emanating from some of the borings. Materials observed from corings removed from the GeoProbe borings included compressed leaves, chunks of trees, a piece of carpet, and a piece of metal at depths up to 20 feet bgs. Appendix B provides logs of the GeoProbe borings. Two of the GeoProbe boreholes (B-2 and B-4) were subsequently backfilled with bentonite while slotted PVC piping was installed in the other three boreholes to serve as future air monitoring locations.

September 25 through September 26, 2010

OSC Nattis maintained a presence at the site over the weekend and coordinated with townhome residents. Over the weekend, ERM also began installing methane sensors in the townhomes to provide a measure of safety for the residents. After sensors were installed, Tetra Tech START conducted air monitoring of the residences prior to the gas supply being turned back on.

September 27, 2010

Tetra Tech START conducted air monitoring for methane in the water meter boxes, GeoProbe borings, and piezometer locations (installed by ERM). Air monitoring was performed once in the morning and once in the afternoon. Again, consistently high readings for percent methane (up to 63 percent by volume) were obtained at numerous subsurface locations throughout the site.

Tetra Tech START also collected air samples (summa canisters) from the three remaining GeoProbe boreholes that were shipped to Air Toxics Ltd in Folsom, California for laboratory analysis of VOCs, including methane. Analytical results verified the presence of methane at concentrations up to 60 percent by volume. In addition, low level concentrations of other analytes were also detected, including benzene and vinyl chloride. Table 1 of Appendix B provides a summary of the analytes detected in these air samples. Appendix F provides copies of the analytical data packages.

September 28 through October 8, 2010

Tetra Tech START continued air monitoring (twice daily) of the water meter boxes, GeoProbe boreholes, and piezometers (installed by ERM). Consistently high readings for percent methane (up to 78 percent by volume) were obtained at numerous subsurface locations throughout the site.

PRP ACTIVITIES

Following discussions, the PRP and GA EPD entered into a consent order that required the PRP to assume responsibility for and conduct actions necessary to protect human health and reduce methane concentrations emanating from beneath the site. On October 8, 2010, the PRP and its contractors assumed responsibility for cleanup efforts in accordance with the order.

Activities conducted by the PRP on October 8 included pumping air from the subsurface using the existing GeoProbe borings and piezometers through a filtration system to vent methane from the ground. Air monitoring conducted by Tetra Tech START prior to this pumping indicated a maximum methane concentration of 63.8 percent by volume; while air monitoring conducted after the pumping indicated a maximum methane concentration of 30.3 percent by volume.

Following completion of activities on October 8, 2010, Tetra Tech START demobilized from the site. The PRP and its contractors were scheduled to continue activities at the site in accordance with the consent order and under the oversight of GA EPD.

GOOGLE EARTH APPLICATION AND SCRIBE DATABASE

During response activities, Tetra Tech START coordinated with OSC Nattis to make air monitoring results, analytical data, and site photographs available to the public using a *.kmz file that could be viewed in Google Earth®. The file, which was updated daily, can be accessed at the following weblink: http://www.epaosc.org/site/doc_list.aspx?site_id=6362.

In addition, Tetra Tech START prepared and maintained a Scribe database containing the air monitoring results and analytical results for air samples. Appendix G contains an electronic copy of the Scribe database for this site.

Mr. R. Nattis
December 6, 2010
Page 5

Please contact me at (678) 775-3113, if you have any questions or comments regarding this submittal.

Sincerely,



Brian Croft
START III Task Order Manager



Andrew F. Johnson
START III Program Manager

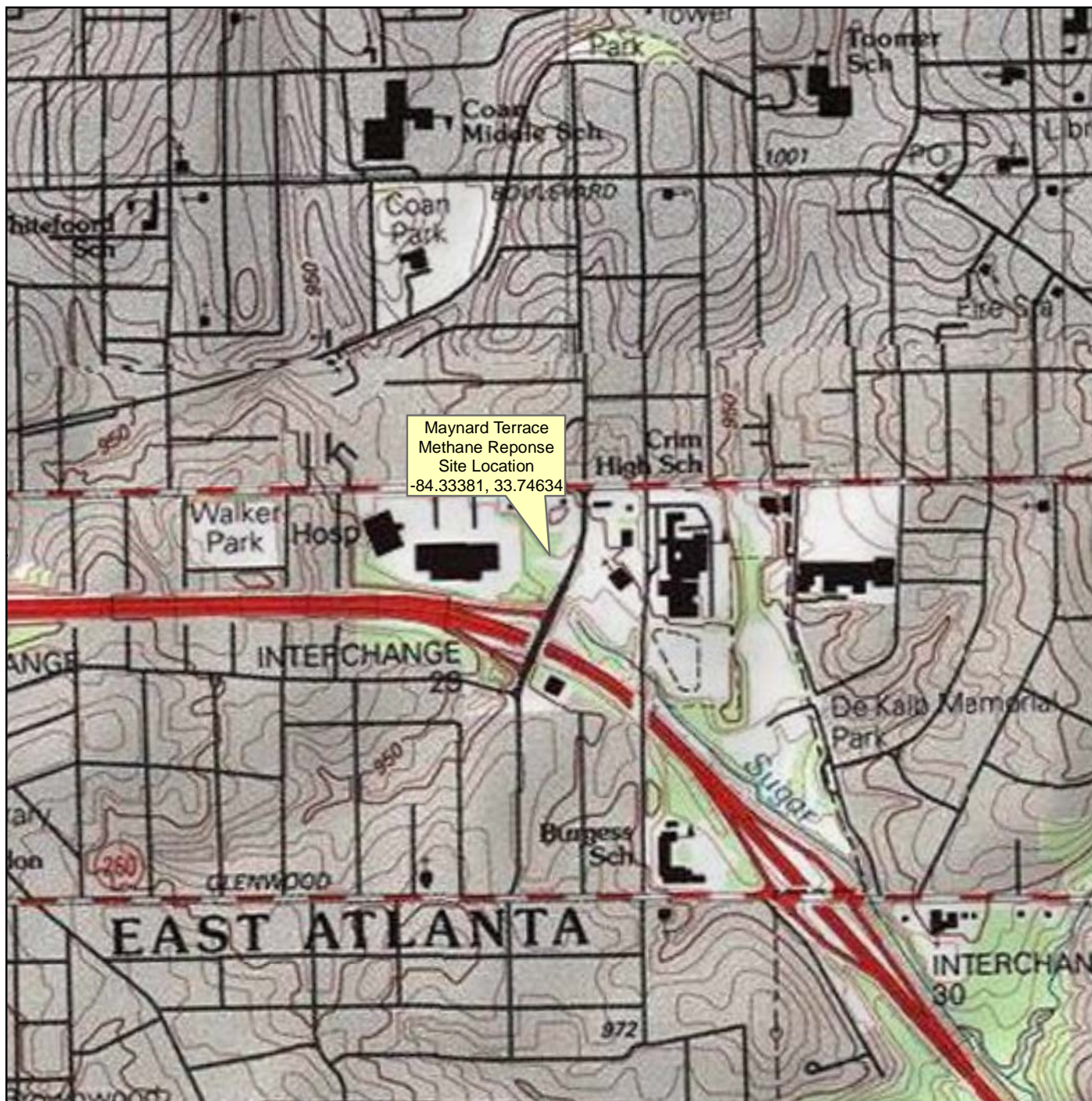
Enclosure

cc: Katrina Jones, EPA Project Officer
Angel Reed, START III Document Control Coordinator

APPENDIX A

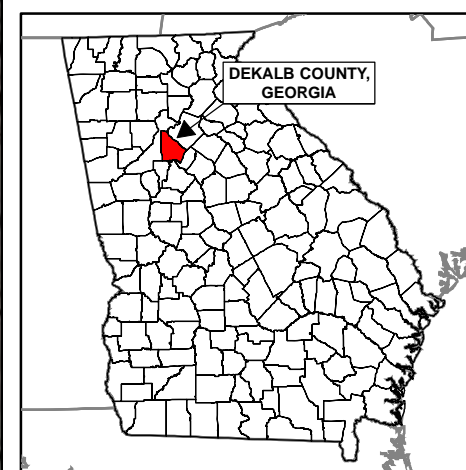
FIGURES

(Two Pages)



0 500 1,000
Feet
1:12,000

MAP SOURCE:
NORTHEAST ATLANTA, GA 1983
& SOUTHEAST ATLANTA, GA 1983
USGS TOPOGRAPHIC QUADRANGLES.



United States
Environmental Protection Agency

MAYNARD TERRACE
METHANE RESPONSE
ATLANTA,
DEKALB COUNTY,
GEORGIA

TDD No. TTEMI-05-001-0136

**FIGURE 1
SITE LOCATION**





Legend

- ▲ Water Meter Box Location (outside garage door)
- ERM Monitoring Location
- GeoProbe Location



0 30 60
Feet
1:720

MAP SOURCE:
GPS Coordinates obtained in field.
Aerial Imagery, Google Earth 4/2010.



United States
Environmental Protection Agency

MAYNARD TERRACE
METHANE RESPONSE
ATLANTA,
DEKALB COUNTY,
GEORGIA
TDD No. TTEMI-05-001-0136

FIGURE 2
SITE LAYOUT WITH
SAMPLING LOCATIONS



APPENDIX B

TABLES AND BORING LOGS

(Six Pages)

TABLE 1
AIR SAMPLE RESULTS
(SUMARY OF ANALYTES DETECTED)

ANALYTE	Sample Identification			RAL
	MTM-A-12 ($\mu\text{g}/\text{m}^3$)	MTM-A-13 ($\mu\text{g}/\text{m}^3$)	MTM-A-14 ($\mu\text{g}/\text{m}^3$)	
Freon 12	360	820	180	NA
Freon 114	500	28	260	NA
Vinyl Chloride	210	1000	ND	16.1
Ethanol	74	ND	66	NA
Acetone	200	50	ND	96600
Carbon Disulfide	55	58	40	2190
Methylene Chloride	ND	15	ND	518
Methyl tert-butyl ether	58	ND	ND	936
trans-1,2-Dichloroethene	ND	27	ND	188
Hexane	2000	500	110	2190
2-Butanone (Methyl Ethyl Ketone)	54	9.6	ND	15600
cis-1,2-Dichloroethene	54	190	ND	NA
Cyclohexane	1300	360	280	18800
2,2,4-Trimethylpentane	860	130	3500	NA
Benzene	150	220	160	31.2
Heptane	590	98	260	NA
Toluene	210	57	120	15600
Chlorobenzene	ND	ND	81	156
Ethyl Benzene	240	23	ND	97.3
m,p-Xylene	91	18	56	2190
o-Xylene	58	ND	ND	2190
Styrene	36	ND	ND	3130
Cumene	540	ND	470	1250
Propylbenzene	270	50	520	NA
4-Ethyltoluene	80	ND	54	NA
1,3,5-Trimethylbenzene	92	ND	100	18.8
1,2,4-Trimethylbenzene	250	ND	140	21.9

Notes:

bold Reported result exceeds the EPA Region 4 RAL for residential air

NA None available

ND Not detected above the laboratory reporting limit

RAL Removal action level for residential air

$\mu\text{g}/\text{m}^3$ Micrograms per cubic meter



BORING ID: B-1
TOTAL FOOTAGE: 20 feet

Project: Maynard Terrace Methane Response
Address: 241 Maynard Terrace SE, Atlanta, Georgia

Core Interval (feet below ground surface)	Percent Methane by Volume (%)	Description
0 to 5	0.0	Soil: gray-tan-red-brown
5 to 10	5.0	Soil: gray-brown Wood and vegetation observed at approximately 10 feet
10 to 15	16.0	Black organic debris mixed with soil
15 to 20	48.0	Leaves and wood mixed with soil

Note: Slotted PVC piping was installed in this boring to provide an air monitoring location




BORING ID: B-2
TOTAL FOOTAGE: 16 feet

Project: Maynard Terrace Methane Response
Address: 241 Maynard Terrace SE, Atlanta, Georgia

Core Interval (feet below ground surface)	Percent Methane by Volume (%)	Description
0 to 5	0.0	Soil: gray-brown
5 to 10	34.0	Soil: gray-brown Rock and wood debris
10 to 15	54.0	Soil: gray-brown Mostly leaves and wood debris
15 to 20	60.0	Refusal at 16 feet

Note: This boring was backfilled with bentonite

 TETRA TECH		BORING ID: B-3 TOTAL FOOTAGE: 20 feet
Project: Maynard Terrace Methane Response Address: 241 Maynard Terrace SE, Atlanta, Georgia		
Core Interval (feet below ground surface)	Percent Methane by Volume (%)	Description
0 to 5	0.0	Soil: gray-brown
5 to 10	10.0	Soil: gray-brown Wood debris
10 to 15	27.0	Soil: gray-brown Leaves and wood debris
15 to 20	No reading taken	Soil: gray-brown Leaves and wood debris Piece of carpet at approximately 20 feet

Note: Slotted PVC piping was installed in this boring to provide an air monitoring location



BORING ID: B-4
TOTAL FOOTAGE: 12 feet

Project: Maynard Terrace Methane Response
Address: 241 Maynard Terrace SE, Atlanta, Georgia

Core Interval (feet below ground surface)	Percent Methane by Volume (%)	Description
0 to 5	No reading taken	Soil: gray-red-brown
5 to 10	No reading taken	Soil: gray-red-brown
10 to 15	17.0	Soil: gray-brown Leaves and wood debris

Note: This boring was backfilled with bentonite



TETRA TECH

BORING ID: B-5
TOTAL FOOTAGE: 25 feet

Project: Maynard Terrace Methane Response
Address: 241 Maynard Terrace SE, Atlanta, Georgia

Core Interval (feet below ground surface)	Percent Methane by Volume (%)	Description
0 to 5	6.0	Soil: gray-red-brown
5 to 10	16.0	Soil: gray-red-brown Rock encountered at approximately 10 feet
10 to 15	53.0	Rock mixed with soil from approximately 10 to 12 feet Wood debris with organic material from approximately 12 to 15 feet
15 to 20	55.0	Soil: brown Black organic material Piece of metal
20 to 25	No reading taken	Soil: brown Black organic material Groundwater encountered at approximately 22 feet

Note: Slotted PVC piping was installed in this boring to provide an air monitoring location

APPENDIX C

PHOTOGRAPHIC LOG

(11 Pages)



OFFICIAL PHOTOGRAPH NO. 1
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	Northwest	Date:	September 22, 2010
Photographer:	Brian Croft, Tetra Tech	Witness:	Randy Mayer, Tetra Tech
Subject:	Northern portion of the site, where townhome units have already been constructed and occupied.		



OFFICIAL PHOTOGRAPH NO. 2
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number: TTEMI-05-001-0136

Location: Maynard Terrace Methane Response

Orientation: West

Date: September 22, 2010

Photographer: Brian Croft, Tetra Tech

Witness: Randy Mayer, Tetra Tech

Subject: Central portion of the site.



OFFICIAL PHOTOGRAPH NO. 3
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number: TTEMI-05-001-0136

Location: Maynard Terrace Methane Response

Orientation: Southwest

Date: September 22, 2010

Photographer: Brian Croft, Tetra Tech

Witness: Randy Mayer, Tetra Tech

Subject: Southern portion of the site.



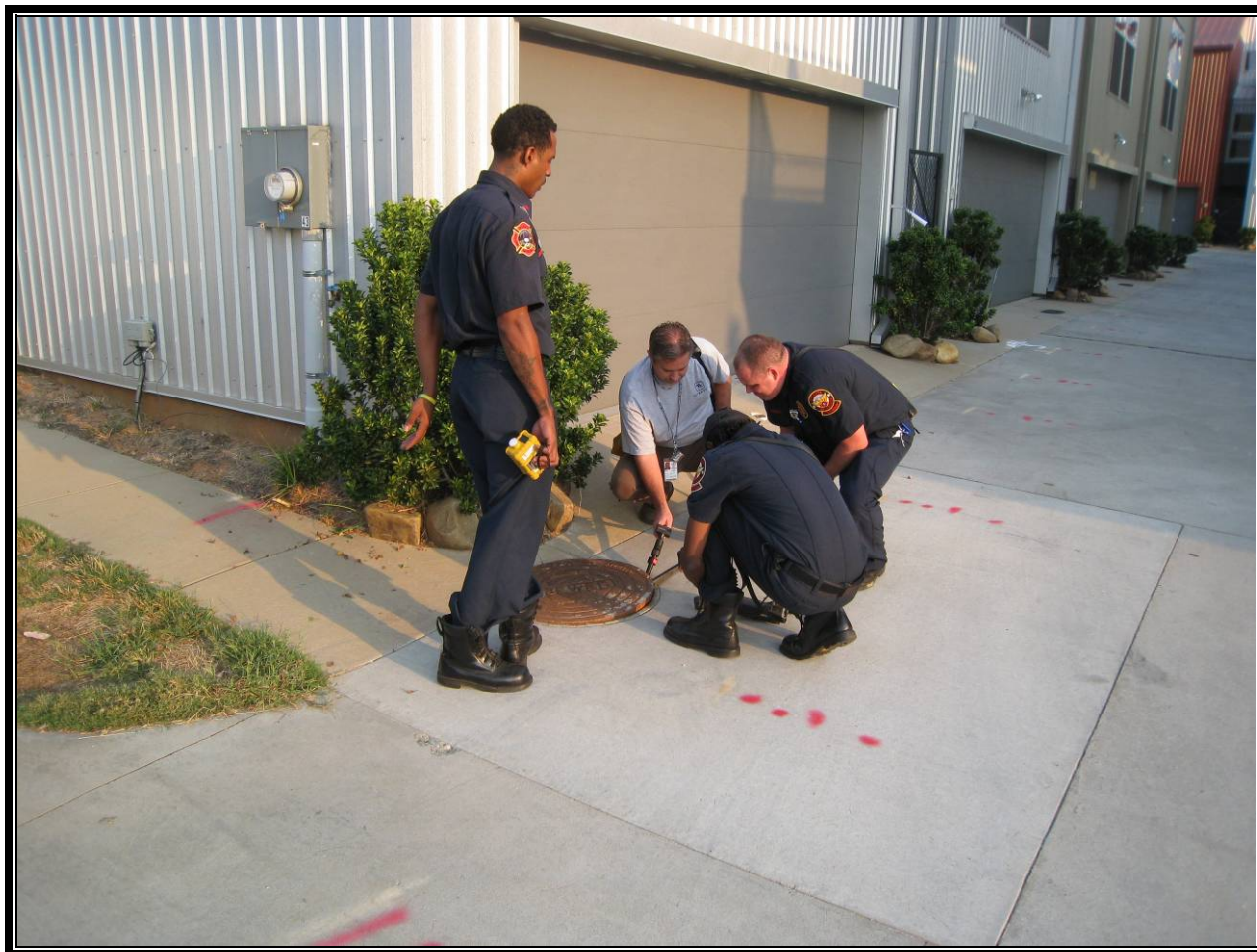
OFFICIAL PHOTOGRAPH NO. 4
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number: TTEMI-05-001-0136 **Location:** Maynard Terrace Methane Response

Orientation: West **Date:** September 22, 2010

Photographer: Brian Croft, Tetra Tech **Witness:** Randy Mayer, Tetra Tech

Subject: Northern portion of the site, where townhome units have already been constructed and occupied.



OFFICIAL PHOTOGRAPH NO. 5
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number: TTEMI-05-001-0136 **Location:** Maynard Terrace Methane Response

Orientation: Northwest **Date:** September 22, 2010

Photographer: Brian Croft, Tetra Tech **Witness:** Randy Mayer, Tetra Tech

Subject: Tetra Tech and Atlanta Fire Department representatives conducting air monitoring of a sewer manhole located at the site.



OFFICIAL PHOTOGRAPH NO. 6
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number: TTEMI-05-001-0136

Location: Maynard Terrace Methane Response

Orientation: West

Date: October 8, 2010

Photographer: Eric Turner, Tetra Tech

Witness: Randy Nattis, EPA

Subject: Typical water meter box located in front of the garage of a townhome.



OFFICIAL PHOTOGRAPH NO. 7
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	East	Date:	September 23, 2010
Photographer:	Brian Croft, Tetra Tech	Witness:	Didi Fung, Tetra Tech
Subject:	OSC Nattis conducting an interview with local news media.		



OFFICIAL PHOTOGRAPH NO. 8
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	Southwest	Date:	September 23, 2010
Photographer:	Brian Croft, Tetra Tech	Witness:	Didi Fung, Tetra Tech
Subject:	Piezometer installed by ERM representatives as an air monitoring location.		



OFFICIAL PHOTOGRAPH NO. 9
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	Southwest	Date:	September 23, 2010
Photographer:	Brian Croft, Tetra Tech	Witness:	Didi Fung, Tetra Tech
Subject:	GeoProbe boring advanced in the central portion of the site.		



OFFICIAL PHOTOGRAPH NO. 10
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	Down	Date:	September 23, 2010
Photographer:	Brian Croft, Tetra Tech	Witness:	Didi Fung, Tetra Tech
Subject:	Wood and a piece of carpet observed in a coring from a GeoProbe boring at approximately 20 feet below ground surface.		



OFFICIAL PHOTOGRAPH NO. 11
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0136	Location:	Maynard Terrace Methane Response
Orientation:	Northwest	Date:	October 8, 2010
Photographer:	Eric Turner, Tetra Tech	Witness:	Randy Nattis, EPA
Subject:	Pumping operations being performed by a contractor on behalf of the potentially responsible party.		

APPENDIX D

LOGBOOK NOTES

(40 Sheets)

"Outdoor writing products for outdoor writing people."



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Maynard Terrace Methane Response

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PAGE

REFERENCE

DATE _____

Maynard Terrace Methane Response
241 Maynard Terrace SE
Atlanta, GA

9-22-10

0730 START Croft & Nayer @ site

- meet w/ OSC Nattis & EPD Scott

- Atlanta G&L visit since Friday 9-17

- they were spot checking & found methane

w/ LEL up to 70%

- NO mercaptan was smelled, so AG&L does not think it is theirs

- Atlanta Fire Dept / Haz Mat visit - called M&C & GAEPD → called EPA

0800 screened water result @ front of lawn house

LEL = 3 to 4

VOCs ~ 250 ppm

O₂ = 16%

- last night, A G&L has gotten checked readings

- NO AG&L present currently

AFD Sanitation Chief Hale

note: Atlanta G&L has reportedly turned off

gas to subdivision - reportedly turned off on evening of 9-17

- AG&L reported gas in sewers @ low-medium conc

- 2 to 4% at 4' in sewer by south entrance

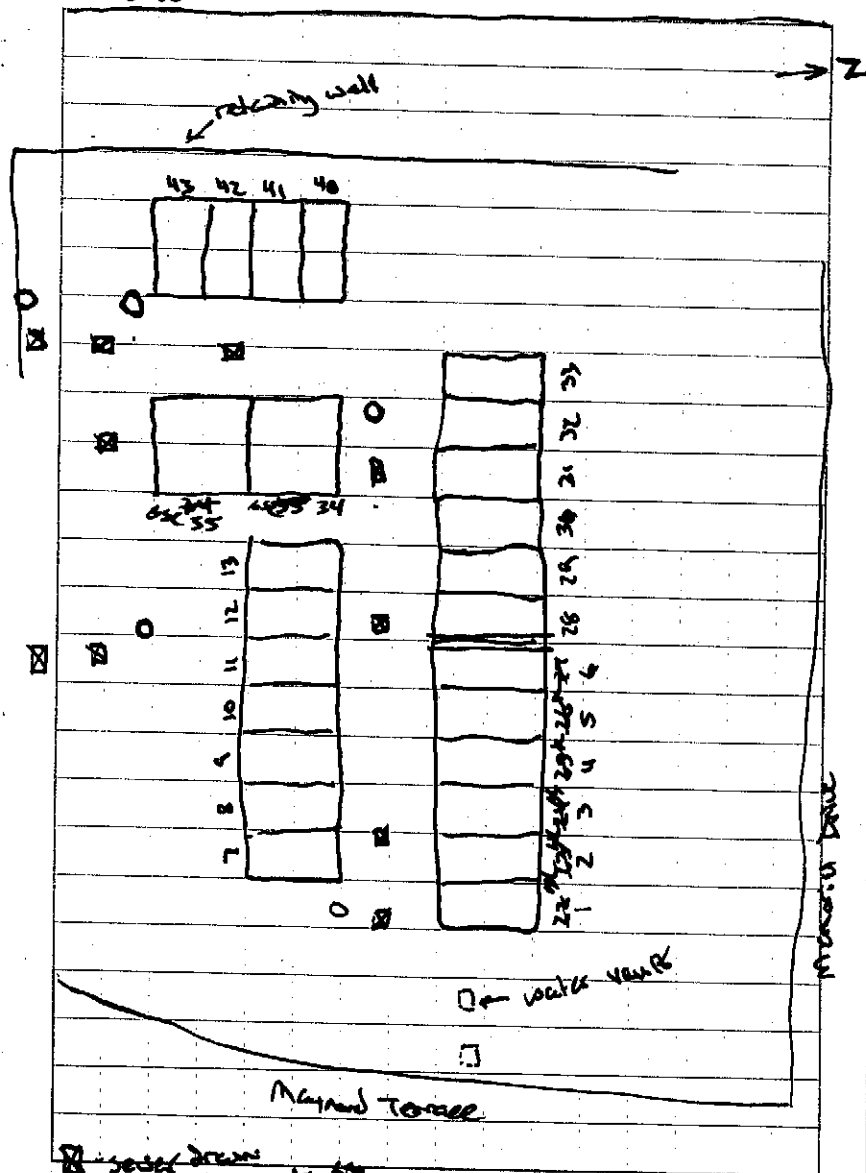
3 to 5% at 4' in sewer by main entrance

- AG&L reported miscellaneous debris (metal, plastic, wood, etc) in area @ SE corner of property when they were digging around to inspect the gas line

Scale: 1 square = _____

BSL 9-22-10

9-22-10



17 - sewer drain
17 - water vault (gas test) ~~etc~~
○ - sewer manhole cover

Scale: 1 square = _____

BSL 9-22-10

9-22-10

DB10

FID background = 2-3 ppm

 $O_2 = 20.6$

LEL = 0

VOCs = 0

multiflare

1 BR15 m x 6 by Industrial Scientific
(methane meter)- sewer manhole = spiked @ 48 ppm but dropped
to near background immediately- no spikes on LEL or O_2

- in expansion joint b/t units 3 & 4 = 5 ppm ppm

- gas composition test (kolar bag)

1 cc analyzed @
Marietta

- underground (basings) - probe hole

Applied
Technologies

↳ "biogenic gas" - decomposition

ASC NIOSH
requested to
see results

10000

Vent H in front = 0 LEL / 1.9 ppm VOCs

water meter box @ unit 8 = LEL = 10

AGAL readings @ unit

LEL = ~~4.5~~ 6.5% LEL inside box

= 41% gas by volume @

approx 4.5 ft below meter
box

Scale: 1 square =

BSL 9-22-10

9-22-10

1145 decision made to vent all sewer covers and
water meter boxes to see if levels will
drop1235 station across from residents to 7 townhouse
to conduct air monitoring (FID/LEL) - exterior

UNIT #1

FID - max = 8.5 ppm

LEL - max = 0 ppm

Water meter box = 16.5 ppm (FID) / LEL = 1

UNIT #2

FID - max = 12.5 ppm

LEL - max = 0

Water meter box = ^{FID} pegged > 1.5% / ^{LEL} > 57

① front door = pegged meter (FID)

isolate valve slabs meter

UNIT #5

① front door = 14.7 ppm

where house slabs meet

FID max = 19.0 ppm

LEL max = 0

water meter box = ^{if} already covered by AGD① front door
ASC

BSL 9-22-10

Scale: 1 square =

9-22-10

UNIT #29

① front door where
slide meet = max = 22.2 ppm

FID max = 16.1 ppm / LEL max = 0

UNIT #33

FID max = 8.6 ppm / LEL max = 0

UNIT #35

FID max = 23 ppm (kitchen sink drain) / LEL max = 0
9.9 ppm in rest of house

UNIT #42

① front door = FID = 6.5 ppm / LEL max = 0
where stairs meet

FID max = 12.9 ppm (kitchen sink drain) / LEL max = 0

Area RAE #5 @ 1410

RAE #2 (unit 29) LEL: 54

VOL: 0.0

O₂: 18.9

RAE #1 (unit 12) LEL: 20

VOL: 0.0

O₂: 18.3

RAE #4 (unit 5) LEL: 21

VOL: 3.6

O₂: 19.1

Scale: 1 square = _____

BSC 9-22-10

9-22-10

@ 1410

RAE #3 (unit 7) LEL: 22

VOL: 0.9 ppm

O₂: 2.2

note: Area RAEs are monitoring @ depths of
approx 3 ft hrs in ^{open} holes bored by AFD
using steel pipes

1410 property owner has reportedly hired a
consultant to assess - Jordan Jones &
Goulden (have office in Atlanta)
- according to GA EPP Scott Cohen
- not onsite yet

late note:

- Sewer (sanitary) appears to be plugged near
SE corner of property where it crosses
Maynard Terrace SE - based on visual
inspection of manholes on the property
w/ stagnant water in them
- city water/sewer division working on
how to clean / clear sewers

- property is considered part of DeKalb
County & City of Atlanta

- DeKalb City EMA was onsite briefly today,
but no longer here

Leo Gentilly - Jordan Jones, Goulden (Norcross, GA)
678 333 0148

Scale: 1 square = 9-22-10

BSC

9.22.10

1600 checked water vent in NE portion of property LEL = 100

1610 meeting w/ residents

1700 additional screening

UNIT 29 (re-screen at crack in basement floor @ owner's request)

FID max = 4.5 ^{ppm} to 178 ^{ppm} (on surface) _{at crack}

note: resident @ unit 29 said she will not be staying in townhome tonight based on results of screening in the crack

UNIT 34

FID max 10-13 ppm throughout house
= 114 ppm in sink - treated 18-19 ppm after running water into trap

LEL = 0

VOL = 9.0

→ lowered to 1.4 ppm after running water into trap

= 10.7 in upstairs

between stair

UNIT 31 (background = 9-10 ppm)

FID max = 9-10 ppm / LEL = 0 ppm

UNIT 13 (background = 6-7 ppm)

FID max = 6-7.2 ppm

LEL = 0

BSC 9.22.10

Scale: 1 square = _____

9.22.10

note: tubing for Area RAEs has been @ shallow depth (0-3 inches bgs) to monitor off gassing from bore holes - all holes were initially documented w/ LEL levels exceeding Area RAE sensor limits & was deemed more useful by OSC NATHS to measure LEL at depths more indicative of what may be coming out of ground inside the water meter boxes (typically ranging from 20 to 40")

note: periodic LEL rdgs taken inside the water system vault located near NE corner of property have consistently exceeded LEL sensor limits throughout day since initial readings taken this morning

2020 mtg w/ JIG Leo Gendle, DNR Scott Coburn, & AFD rps regarding future activities:
- DNR Coburn reportedly spoke w/ property owner Trinity Shokbeam (sp?)

2050 additional screening

UNIT 30 (background = 10.5 ppm)

scaler - FID = 13.6 / LEL = 0

- dampers b/room cracks in floor LEL = 0 60-137 ppm

note: SW has asthma & began wheezing out weekend according to mother

BK 9.22.10

Scale: 1 square = _____

9.22.10

UNIT 22 (continued)

Kitchen drain FID = 10.2 ppm / LEL = 0

upstairs bathroom FID = 9.09 ppm / LEL = 0

2235 office

2315 return to office - unboxed
Pulse equipmentput on charge, recharge hydrogen for
FID

2340 end of day

BXC 9.22.10

Scale: 1 square=

9.23.10

0745 on site (START CROCK & FINE)

performed site walk & orientation.

0812 Calibration of air monitoring equipment.

MultiRAE SN # 095-508250 EXP 8/2011

CAL GAS	Lot# 771517	Bump Results	CAL GAS	±10%
LEL		57.9%	50%	⊗
O ₂		20.9%	20.9%	✓
H ₂ S		10 ppm	10 ppm	✓
CO		45 ppm	50 ppm	✓
PID (VOL)		20.9 ppm	100 ppm	✓

Need to recal LEL sensor on MultiRAE.

Liquor Technology Lot# LTF130-MD-CM EXP. 6/2013

	Post Cal	CAL GAS	±10%
LEL	49%	50%	✓

Background Readings taken by the street by sign.

LEL	0%	
O ₂	20.9%	
H ₂ S	0 ppm	
CO	0 ppm	
PID (VOL)	0 ppm	

The same cal bottles used above were used
for the AreaRAEs (4 cont.).

Died: Troy

Scale: 1 square=

9-23-10

AREARAE SN: 295-001349 (#3)			
	Bump Results	CAL GAS	±10%
LEL	50%	50%	✓
O ₂	20.4%	20.9%	✓
H ₂ S	9 ppm	10 ppm	✓
CO	52 ppm	50 ppm	✓
PID (VOCs)	82.2 ppm	100 ppm	⊗
Need to calibrate PID sensor.			
PID	Post Cal	CAL GAS	±10%
PID (VOCs)	100 ppm	100 ppm	✓
AREARAE SN: 295-001348 (#2)			
	Bump Results	CAL GAS	±10%
LEL	59%	50%	⊗
O ₂	20.9%	20.9%	✓
H ₂ S	10 ppm	10 ppm	✓
CO	64 ppm	50 ppm	⊗
PID (VOCs)	85.7 ppm	100 ppm	⊗
Need to calibrate for LEL, CO & PID sensors.			
LEL	Post Cal	CAL GAS	±10%
CO	50 ppm	50 ppm	✓
PID (VOCs)	100 ppm	100 ppm	✓
LEL	49%	50%	✓

Scale: 1 square=

BSC 9-23-10

9-23-10

AREARAE SN: 295-001347 (#1)			
	Bump test	CAL GAS	±10%
LEL	50%	50%	✓
O ₂	20.5%	20.9%	✓
H ₂ S	10 ppm	10 ppm	✓
CO	64 ppm	50 ppm	⊗
PID (VOCs)	44.7 ppm	100 ppm	⊗
Need to calibrate CO & PID sensor.			
CO	Post Cal	CAL GAS	±10%
CO	50 ppm	50 ppm	✓
PID	99 ppm	100 ppm	✓
AREARAE SN: 295-001350 (#4)			
	Bump Test	CAL GAS	±10%
LEL	85%	50%	⊗
O ₂	20.9%	20.9%	✓
H ₂ S	9 ppm	10 ppm	✓
CO	60 ppm	50 ppm	⊗
PID (VOCs)	96.8 ppm	100 ppm	✓
Need to calibrate LEL & CO sensor.			
LEL	Post Cal	CAL GAS	±10%
LEL	49%	50%	✓
CO	50 ppm	50 ppm	✓

BSC 9-23-10

Scale: 1 square=

9-23-10

1000 Completed setting up the AreaRAE system

Unit #	Location
1	Water valve box @ garage # 3
2	" " " " " 10
3	" " " " " 13
4	" " " " " 30

Initial reading indicate

Unit #	Location	LEL%	CO	VOC	H ₂ S	O ₂
1	2" in ground	7.9%	0.0	0.1	0.0	17.3
2	"	14.4%	1.9	0.0	0.0	19.6
3	2" above hole made in ground	3.9%	0.0	0.0	0.0	20.9
4	2" in hole made in ground	15.3%	0.0	4.5	0.0	19.6

1045 re-screen unit #29 (crack on floor in downstairs bedroom)

background (as measured outside)

FID = 5.6 ppm

LEL = 0

VOCs = 0.3 ppm O₂ = 20.9

LandTec GA90 (S/J 687) - DNR Ted Jackson

CH₄ (%) = 0%O₂ (%) = 20.5

interior breathing zone downstairs: (unit 29)

LandTec	CH ₄ 0.0%	VOCs = 17.8 ppm	TEN FID
	O ₂ 20.8%	LEL = 0	
		VOCs = 0.2 ppm	Multirae Plus

Scale: 1 square = _____

BSC 9-23-10

9-23-10

along crack in floor (downstairs bedroom):

VOCs = 177 ppm (on FID) - ramp on FID background for other readings on Multirae and LandTel

along crack in floor (garage)

VOCs = 13.4 ppm BSC

= 175 ppm

↳ Breathing zone = 15.0

background for other readings on Multirae and LandTel

under meter box (in box hole)

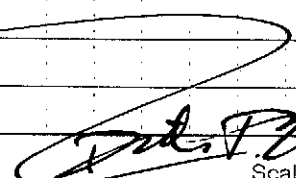
LEL = > 100

VOCs = pegged out

% CH₄ = 5.2%

1330 Unit #4 AreaRAE unit had exceeded 100% LEL. The unit was reset and the tubing was reset just above the ground level in the water meter box.

1415 Unit #4 again exceeded 100% LEL. The unit was reset and again raised higher in the water meter box.



Scale: 1 square = _____

9-23-10

1417 AreaRAE units are correctly reading

Unit #	LEL	O ₂	H ₂ S	CO	PID (vocs)
1 in H ₂ O ²⁴	15.8%	19.3%	0.0 ppm	0.0 ppm	0.0 ppm
2 in H ₂ O ²⁴	9.6%	17.5%	0.0 ppm	0.0 ppm	0.0 ppm
3 above ground	14.8%	20.3%	0.0 ppm	0.0 ppm	0.0 ppm
4 in box	22.7%	20.0%	0.0 ppm	0.0 ppm	0.7 ppm

1430 Moved Unit #1 from resident garage garage #3 to garage #42.

Unit #	LEL	O ₂	H ₂ S	CO	PID (vocs)
1 2" in H ₂ O	9.3%	19.3%	0.0 ppm	0.0 ppm	0.0 ppm

1533 Call with ERT to discuss sampling & EL activities.

- core slab in garage and sample sub slab
- methane collection system
- test trench in open undeveloped area

1625 START Flay collects air sample (tealor bag)

MTM-A-01 - sewer manhole @

SE corner of property

1635 START collects air sample MTM-A-02 @

~~control box (in garage control unit) for~~~~near SE corner of property & C~~

a water meter box along sidewalk adjacent

to Raymond Terrace - note: ERM rep

Hender stated that he observed elevated

O₂ rags @ this location

BSC 9-23-10

Scale: 1 square =

9-23-10

1642 START collects air sample MTM-A-03
from water meter box in front of UNIT 43

1646 START collects air sample MTM-A-04

1650 from water meter box in front of UNIT 30

1646 START collects air sample MTM-A-05
from water meter box in front of UNIT 101653 START collects air sample MTM-A-06
from water vault box in NE corner of property1657 START collects air sample MTM-A-07
from gas check cover on sidewalk
along Raymond Terrace in NE corner of property1702 START collects blank sample MTM-A-FB
collected from atop GA power box #3062551720 Depart site to deliver samples
to AES for analysis

1800 @ AES to deliver air samples

1825 Return to office

- Unload / charge equipment

BSC 9-23-10

Scale: 1 square =

9-24-10

0735 START Craft & Fung onsite

OSC Nattis is working hard to push
PRP & their contractor to begin assessing
site for source materials, including a
Geoprobe or similar equipment to inspect
subsurface areas. requested start to
begin looking into potential vendors in
case PRP does not move quickly
enough and FRA takes over response
under 103 e authority

0830 ERM (contractor for PRP) is currently
using hand augers to look at subsurface
areas in southern (no construction) portion
of site

0900 Calibrating AREARAE's

AREARAE UNIT # SN 295-001347 (UNIT #1)

Isobutylene Cal gas Lot # LTF-180-MD-CM

June 20, 2013 exp date for Liquid Technologies

	Bump Result	Cal Gas	±10%
PID (VOCs) ppm	91.2 ppm	100 ppm	✓
LEL %	16	50	✓
O ₂ %	20.9	20.9	✓
H ₂ S ppm	10	10	✓
CO ppm	15	50	⊗

Scale: 1 square=

BSC 9-24-10

9-24-10

Need to calibrate CO sensor.

	Post Result Cal	Cal Gas	±10%
CO	50	50	✓

AREARAE SN 295-001350 Unit #4

4 gas Lot # 771517 exp date 8/2011 by
Cal Gas

	Bump Result	Cal Gas	±10%
PID (VOCs) ppm	93.5	100	✓
LEL	49	50	✓
O ₂	20.9	20.9	✓
H ₂ S	10	10	✓
CO	59	50	⊗

Need to calibrate for CO.

	Post Cal Result	Cal Gas	±10%
CO	53	50	✓

AREARAE SN 295-001349 Unit #3

	Bump Result	Cal Gas	±10%
PID (VOCs) ppm	97.5	100	✓
LEL %	49	50	✓
O ₂ %	21.1	20.9	✓
H ₂ S ppm	10	10	✓
CO ppm	57	50	✓

Scale: 1 square=

BSC 9-24-10

9-24-10

Need to calibrate CO sensor.

	Post Cal Result	Cal Gas	±10%
CO ppm	49	50	✓

AneRAE SV # 295-001348 (Unit #2)

	Bump Test Result	Cal Gas	±10%
PID (VOC) ppm	91.8	100	✓
LEL %	63	100	⊗
O ₂ %	21.2	20.9	✓
H ₂ S ppm	11	10	✓
CO ppm	54	50	✓

Need to calibrate LEL sensor.

	Post Cal Result	Cal Gas	±10%
LEL %	49	50	✓

0954 AneRAE units were set out at the following locations @ the water meter boxes 2" into the ground

AneRAE Unit #	Gauge #
1	1
2	34
3	11
4	32

Current readings are as follows:

Scale: 1 square =

BSC 9-24-10

9-24-10

Unit #	LEL %	O ₂ %	H ₂ S ppm	CO ppm	PID (VOC) ppm
1 (1)	0.0	20.1	0.0	0.0	0.2
2 (34)	26.3	19.8	0.0	2.5	0.0
3 (11)	13.3	19.7	0.0	0.0	0.0
4 (32)	0.0	20.4	0.0	0.0	1.0

1009 Calibrating M-K RAE SV #

	Bump Test	Cal Gas	±10%
LEL %	49	50	✓
O ₂ %	20.9	20.9	✓
H ₂ S ppm	10	10	✓
CO ppm	44	50	⊗
PID (VOC) ppm	111	100	⊗

Need to calibrate CO

	Post Cal Result	Cal Gas	±10%
CO	50	50	✓
PID	100	100	✓

1157 From crews are augering 2-5 feet deep holes with 1" PVC pipe with slotted partition at bottom.

Two monitoring pipes were screened.

Location	Reading
By Manual Terrain rd near Post entrance (south of dining)	770% LEL

(north of dining)

Scale: 1 square = 0% LEL
BSC 9-24-10

UNIT 1 = 10% - peak readings

WIT 2 = 7 record on left

UNIT 3 = ④

UNIT 4 = 8

UNITS E 11

UNIT 6 = 0 (Vols = $\frac{1}{2} \times \frac{6}{16} / O_2 = 16$)

UNIT 7 282

UNIT 8 = > 100 (CH₄ = 3.1% - LongTech GAS90)

LOWIT 9 = > 1000 (CH₄ = 3.0% LandTech CAT-10)

UNIT 10 = > 100 (CH₄ = 4.0% wet test GA-90)

UNIT II = 2 (already open & Aearag)

4012 12 = 13

unit 13 = > 100 (CH₄ = 3.46 - LandTech 6A.90)

UNIT 28 = 33

Unit 29 = 7166 ($\text{CH}_4 = 11.7\%$ Landfill Gas 90)

$$\text{Wast } 30 = 20$$
$$\text{Unit 31} = > 100$$

Wisk 32 = 3 (only a shallow borehole (2-3 inches))

Unit 33 = ①

UNIT 34 = ① ~~CH₄~~ _{isc}

UNIT 35 = 3

Scale: 1 square=_____

65C 9-24-10

UNIT 402 ⑦

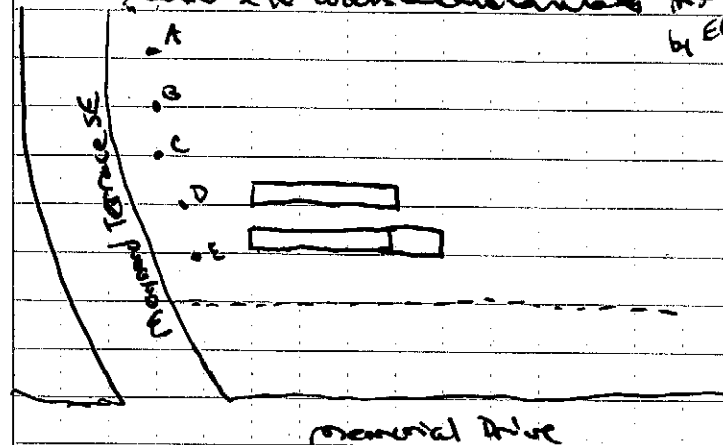
Unit 41 = ⑩

$$\text{LHS IS } 42 = 0$$

Unit 43 = ⑦

ERM hand auger / PVC pipe sensors locations -

Like the woods underneath installed by ERM



A - LEL = 0 $CH_4 = 0.1\%$	D LEL = 4 $CH_4 = 0.1\%$
B - LEL = > 100 $CH_4 = 11.4\%$	E LEL = 0 $CH_4 = 0\%$
C - LEL = 75 100 $CH_4 = 44.7\%$ $CO_2 = 29\%$	

BSC 9-24-10

Scale: 1 square=_____

9.24-10

1330 ERRS (ER G-side)

- preparing for GeoProbe / excavation activities

1410 check Summa canister # 34211

Initial pressure = -30 inches Hg

Summa canister # 03406

Initial pressure = -29 inches Hg

Summa canister # 05362

Initial pressure = -30 inches Hg

1500 begin GeoProbe ops in south portion of subdivision (in undeveloped portion)

0-5' (photo 100-3801)

CH₄ = 0% - soil - gray / tan / red~~test = 0% VOC~~

5-10' (photo 100-3803) & (100-3804) & 3805

CH₄ = 4.8% - soil / gray / brown

test = 66C - some wood / vegetation

10-15' (photo 100-3806) @ approx 10 feet

CH₄ = > 16% ^{soil} ~~soil~~ soil - brown / red w/ black "burned" material @ 13-15'

15-20' (photo 100-3807 → 3810)

CH₄ = > 48% - soil - red / brown

- leaves / wood @

16-20 feet

Scale: 1 square = _____ BSC 9.24-10

9.24-10

1535 START collect air sample MTM-A-08

- Summa canister # 34211

- VOC analysis to be performed

- collected @ approx 15 ft hgs from bony B-1

1545 GeoProbe at location B-2 photos 3811-3814

0-5'

CH₄ = 0% - soil / air brown - gray

5-10'

CH₄ = 34% soil / wood debris (burnt)

10-15'

CH₄ = 54% soil - mostly wood debris (burnt) - leaves15-20' ^{66C}CH₄ = - refusal @ ~ 16 feet hgs

- installed 10' slotted PVC & ~ 10 ft

unslopped for monitoring purposes

- note: observed fumes / vapors & decomposition

odor emanating from top of RC pipe

- Land Tech GACED rdy's in vapors:

CH₄ = 60%CO₂ = 40%

1600 START collect air sample MTM-A-09

for B-2

- Summa canister # 05406

BSC 9.24-10

Scale: 1 square = _____

9.24.10

1610 begin Geoprobe @ location B-3

0-5' gray to brown soil

CH₄ = 0%

5-10' soil mixed w/ small wood

CH₄ = 10.2% pieces ~ 6-10'

10-15'

CH₄ = 27% soil / wood & leaves @

~ 16-20' ~ 12-15'

15-20'

CH₄ = NAsumma
canister # 05362

soil wood / leaves

1640 - start collect
MTM-A-10 from
0-3'

- piece of carpet @ 20'

- photo 100-3815-3818

1645 begin Geoprobe @ location B-4

0-5' gray - red / brown soil

BSC 9.24.10

5-10' gray - red - gray soil

10-15' - refusal @ 12'

CH₄ = 16.9%photos 100-
3819-3820

1700 begin Geoprobe @ location B-5

0-5'

CH₄ = 6%

red - gray - red / brown soil

5-10'

CH₄ = 16.3%

gray - red / brown soil

rock @ approx 10'

Scale: 1 square =

BSC 9.24.10

9.24.10

10-15'

CH₄ = 53%

red-brown soil 10-11'

gray - tan rock / soil 11-12'

wood debris 12-15'

+ organic
- piece of metal debris

15-20'

CH₄ = 55% brown soil

black organic

20-25'

brown soil / mud

black organic

GWS encountered @ approx 22'

summa canister # 12687

initial pressure = -30 inches Hg

1730 START collect MTM-A-11 from B-5

- summa canister # 12687

1805 preparing COC for air samples

- packing up equipment

- picking up Area RAEs / downloading data

1915 depart site for Fed Ex

1935 drop samples @ Fed Ex

2005 return to Duluth office / unload / change equip

2015 end of day

BSC 9.24.10

Scale: 1 square =

9-27-10

1020 START Craft onsite

- ERM reqs not present
- meet w/ OSC notes
- calibrate MultiRAE & TVA 1000 (FID)

1115 ERM reqs onsite

1125 begin round of air monitoring using
DNR's LenoTech GA-90 - calibrated to
2.5% methane

LOCATION	% CH ₄	LEL
ERM1 (along map)	0.0	0
ERM2	-	0
ERM3	-	>100
ERM4		>100
ERM5		0
ERM6		>100
ERM7		0
B-5		>100
ERM8		3
ERM9		2
ERM10		5
ERM11		5
B-1		>100
ERM12		3
ERM13		8
B-3		>100

Scale: 1 square=_____

BSC
9-24-10

9-27-10

1400 begin setting up summa canisters for

air samples:	initial pressure	end pressure
# 3409	-26.5 m.Hg	-4.5 m.Hg
* 35254	-30 m.Hg	-3.5 m.Hg
* 24221	-30 m.Hg	-4.5 m.Hg

1430 START collect air sample MTM-A-12

- collected from Geoprobe boring B-5 (canister #)
- depth of approx 5 ft bgs (35254)

1440 START collect air sample MTM-A-13

- collected from Geoprobe boring B-3 (canister #)
- depth of approximately 5 ft bgs (3409)

1450 START collect air sample MTM-A-14

- collected from Geoprobe boring B-1 (canister #)
- depth of approximately 5 ft bgs (24221)

1505 labeling air samples & preparing COC

1530 recaller Donna Kingman onsite to

provide access to Unit # 6 (tenant is out of
the country) - background 15 ppm

FID = max = 30-40 ppm

= 1 reading approx 60 ppm inside wall
on first floor foyer (drywall was cut
out near plumbing pipes)

- no significantly elevated readings in cracks
of floor on 1st level

BSC
9-24-10
BSC

Scale: 1 square=_____

9-27-10

1600 air monitoring loop $\% \text{CH}_4$

Water result =	7%
ERM 3 =	55%
ERM 12 =	0
B-5 =	54%
ERM 1	0.1%
ERM 2	0.1%
ERM 4	23.2%
ERM 5	0.0%
ERM 6	14.6%
ERM 7	0.0%
ERM 8	0.0%
ERM 9	0.0%
ERM 10	0.0%
ERM 11	0.1%
ERM 13	0.1%
B-1	57.3%
B-3	63.2%

Scale: 1 square=

BSC 9-27-10

27
9-27-10

water meter boxes:

UNIT*	$\% \text{CH}_4$	UNIT*	$\% \text{CH}_4$
1	0.2		
2	2.8		
3	4.1		
4	1.0		
5	3.5		
6	1.3	7	17.2
28	6.6	8	8.7
29	15.5	9	7.1
30	8.9	10	15.8
31	5.8	11	16.4
32	0.0 (no borehole)	12	15.8
33	0.0 (no borehole)	13	5.6
34	7.1		
35	0.0		
40	0.1		
41	2.8		
42	5.0		
43	4.8		

Scale: 1 square=

BSC 9-27-10

9-27-10

1830 depart site for FedEx

1920 Return to office / unload equipment

1930 end of day

9-27-10

b5c

Scale: 1 square=

9-28-10

1030 START Craft onsite

calibrate LandTec GA-90 (S/N 1287)

1045 begin cor monitoring loop:

LOCATION	% CH ₄	LOCATION	% CH ₄
B-1	54.3	UNIT 1	0.5
B-3	68.8	2	3.5
B-5	56.0	3	0.6
ERM 1	0.0	4	0.0 (no borehole)
ERM 2	0.1	5	1.4 (small shallow borehole)
ERM 3	53.6	6	0.3 (small shallow borehole)
ERM 4	21.2	7	5.7
ERM 5	0.0	8	0.3
ERM 6	4.3	9	6.9
ERM 7	0.0	10	2.8
ERM 8	0.0	11	3.4
ERM 9	0.0	12	1.1
ERM 10	0.0	13	2.8
ERM 11	0.0	28	6.9
ERM 12	0.0	29	9.7
ERM 13	0.2	30	1.4
		31	17.3
UNIT 40	0.0	32	0.0 (borehole)
41	1.4	33	0.0 (no borehole)
42	0.2	34	3.4
43	1.2	35	0.0

note:
readings
for tool
collected from
~ 2" inside
bore hole
with
water meter
boxes
except
where
noted
(then -
from
water
meter
box)

b5c 9-28-10

Scale: 1 square=

9-28-10

1200 air monitoring loop complete

begin data entry; summarizing air monitoring results; assembling list of contacts

1450 EPA RCRA reps on site to meet w/
OSC Nottis & tour site1515 begin air monitoring loop - results a
new page (p 35)

1620 air monitoring loop completed

1655 depart site

1740 return to office

- unload/charge equipment
- update air monitoring spreadsheet
- summarize Geolink borings
- organize photos

2000 end of day

OSC 9-28-10

Scale: 1 square=

9-28-10

LOCATION	%CH ₄	LOCATION	%CH ₄
B-1	56.2	UNIT 1	2.5
B-3	57.3	2	2.4
B-5	55.5	3	1.4
ERM 1	0.0	4	0.6 (no borings)
ERM 2	0.0	5	2.3
ERM 3	55.1	6	3.2
ERM 4	22.6	7	9.8
ERM 5	0.0	8	2.5
ERM 6	6.8	9	12.9
ERM 7	0.0	10	8.1
ERM 8	0.0	11	8.4
ERM 9	0.0	12	8.8
ERM 10	0.0	13	8.7
ERM 11	0.1	28	15.0
ERM 12	0.1	29	23.9
ERM 13	0.2	30	10.7
		31	20.5
UNIT 40	0.0	32	0.0 (no borings)
UNIT 41	3.7	33	0.0 (no borings)
UNIT 42	2.0	34	8.2
UNIT 43	6.8	35	0.0

OSC 9-28-10

Scale: 1 square=

9-29-10

0935 START Croft on site

calibrate LandTec GA-90 (slw 1287)

0950 begin air monitoring loop (p. 37 for results)

1110 air monitoring loop completed

- coordinated w/ START GIS MULTIRAE

- bump check TVA 1000 (FID only) (VOCs: 99.6 ppm)

FID VOCs

BCKGRND = 0

LEL = 0

1140 conduct air monitoring of UNIT 5 residence

BCKGRND inside front door = 3 to 4 ppm (VOCs)

macro FID = 10 ppm (laundry room)

macro LEL = 0

- also tested her methane sensor w/ calibration gas - correctly alarmed using 15% CH₄

1205 coordinated GIS information w/ office

1220 offsite for lunch

1245 return to site

- updating site info, including air monitoring data, and contacts for property ownership status

1500 begin air monitoring loop (p. 37 for PM results)

1525 referenced UNIT 9 @ request of tenant-

- macro FID = 15 ppm (background = 1-2 ppm (outside))

- macro LEL = 0

- tested methane sensor (alarmed w/ 15% CH₄)

- notified Ecm Hunter System of screening

Scale: 1 square =

BSC 9-29-10

and tenant's request to turn on gas

9-29-10

LOCATION	% CH ₄	PM	LOCATION	% CH ₄	PM
UNIT 1	1.1	2.8	ERM1	0.0	0.0
2	3.6	7.5	ERM2	0.0	0.0
3	0.5	0.9	ERM3	56.6	57.7
4	0.0	0.7	ERM4	18.5	19.3
5	0.1	2.7	ERM5	0.0	0.0
6	0.0	1.3	ERM6	6.6	10.9
7	9.6	7.5	ERM7	0.0	0.0
8	0.3	2.6	ERM8	0.0	0.0
9	2.4	9.6	ERM9	0.0	0.0
10	1.0	11.5	ERM10	0.0	0.0
11	2.1	11.1	ERM11	0.0	0.0
12	1.1	6.6	ERM12	0.0	0.0
13	1.3	18.2	ERM13	0.1	0.0
28	1.7	10.9	B-1	55.3	57.0
29	5.4	20.1	B-3	63.0	63.5
30	2.0	9.7	B-5	55.5	55.5
31	7.9	23.7			
32	0.0	0.0	UNIT 42	1.2	3.7
33	0.0	0.0	UNIT 43	0.2	5.5
34	3.9	11.2			
35	0.0	0.3			
40	0.0	0.0			
41	3.4	6.1			

BSC 9-29-10

Scale: 1 square =

9-29-10

1540 continue air monitoring loop (p. 37 for results)

1615 air monitoring loop complete

1620 screen UNIT 4 residence

bckgrnd outside = FID = 3 to 4 ppm / LEL = 0

inside front door = FID = 10 to 12 ppm / LEL = 0

FID max = 15 ppm / LEL max = 0

1645 coordinated w/ EA EPD Ted Jackson

1710 re-screen UNIT 34 (bckgrnd outside FID = 3 to 4 ppm / LEL = 0)

- inside front door FID = 8 to 9 ppm / LEL = 0

FID max = 9.6 ppm / LEL max = 0

- tested methane sensor w/ 15% CH₄ = okay

1730 coordinate w/ OSC Nattis & EPD Ted Jackson

1750 offsite - return to Duluth office

1825 @ Duluth office

- unload / charge equipment

- update documentation

- review data for air sampler (summer considers)

1920 end of day

BSC 9-29-10

Scale: 1 square = _____

9-30-10

0945 START Craft onsite

- calibrate LandTech GA-90 (s/n 1287)

1000 begin air monitoring loop (results on p. 40)

1105 air monitoring loop complete

- updating spreadsheet w air monitoring results

- coordinate w/ OSC Nattis and T6 staff regarding potential analytical needs

1205 offsite for lunch

1220 return from lunch

- calibrate FID & MultiRAE

1240 per email correspondence between OSC Nattis & Urban Lofts rep Trinity Schlottman, I left voice mail messages for the following units, who have reportedly had their methane sensors installed but are awaiting for gas to be turned back on:

Unit 10 - Louis Delouwer @ 404.343.0557

↳ I am awaiting a return call

Unit 43 - Matthew Evans @ 336.253.0940

- Mr. Evans referred me to Kathy Ware (Coldwell Banker) @ 404.705-1772 - I left message for her and am awaiting a return call.

BSC 9-30-10

Scale: 1 square = _____

40
9-30-10

LOCATION	6 CH		LOCATION	6 CH	
	Am	Pm		Am	Pm
UNIT 1	2.2	2.8	ERM 1	0.0	0.0
2	0.7	0.3	ERM 2	0.0	0.0
3	1.3	1.1	ERM 3	54.1	54.6
no (boade) 4	0.0	0.0	ERM 4	16.2	14.4
5	0.8	0.6	ERM 5	0.0	0.0
6	0.4	0.0	ERM 6	8.2	7.8
7	2.7 max 0.8	4.8	ERM 7	0.0	0.0
8	0.4	1.0	ERM 8	0.0	0.0
9	7.5	5.6	ERM 9	0.0	0.0
10	0.5	4.0	ERM 10	0.0	0.0
11	13.2	13.0	ERM 11	0.0	0.0
12	4.7	2.1	ERM 12	0.0	0.0
13	0.8	3.7	ERM 13	0.0	0.0
28 40 24 15	0.8	1.2	B-1	54.1	56.4
15	10.6	8.8	B-3	59.5	62.7
30	5.4	5.5	B-5	54.9	54.7
31	5.9	20.8			
no boade 32	0.0	0.0	UNIT 42	0.0	0.0
no boade 33	0.0	0.0	UNIT 43	0.0	0.7
34	2.9 0.8 max	4.7			
35	0.0	0.0			
40	0.0	0.0			
41	0.6	2.2			

Scale: 1 square=

BSC 9-30-10

41

9-30-10

1315 spoke w/ Michael Woodard @ Unit 1 - gas still not on, but has sensor installed - he will return to unit later and I will try to get it re-screened

1330 spoke w/ Jackie Lafontaine (renter) of Unit 13 - their gas has already been turned on

1350 re-screen UNIT 1

background outside = FID = 2-3 ppm / LEL = 0

inside front door = FID = 7-8 ppm / LEL = 0

max FID = 8.8 ppm / max LEL = 0

1410 spoke w/ owner of Unit 42 - their gas has already been turned on

note: Knocked on doors / rang buzzer @ following units to re-screen residences but no answer: 6, 8, 10, 11, 12, 29, 30, 31, 33, 34, 40, 41

1500 began air monitoring loop (results on p. 40)

1605 air monitoring loop complete

1615 screen UNIT 40

background outside = FID = 2-3 ppm / LEL = 0

inside front door = 8-9 ppm

FID max = 9.2 ppm / LEL max = 0

note: spoke w/ residents @ Unit 3 + 41 - gas supply has already been turned on (methane sensors were already installed by ERM)

BSC 9-30-10

Scale: 1 square=

9.30-10

1635 updating spreadsheets for air monitoring results and status of townhome units
 - emailed results for Units 1 & 40 to

Tam Burruss @ AGL Resources for gas turn on (emailed results for Units 5, 9, & 34 earlier this morning)

1710 Offsite - return to Duluth office

1800 @ Duluth office

- unloaded / charge equipment

- email updated spreadsheet to GLS

1820 end of day

BSC 9.30-10

Scale: 1 square =

10-1-10

0925 START Craft on site

- calibrate LaidTec GA-90

0940 begin air monitoring loop (results on p. 44)

1035 air monitoring loop completed

1045 meet w/ OSC Natchis discuss site status and upcoming activities

note: morning weather: sunny, mid 60's °F

- update spreadsheet w/ air monitoring results

1245 offsite for lunch

1345 return to site

speak w/ Christian Hemmington (Unit 11) - he will be home in approx 1 hr to have unit rescreened

1415 rescreen UNIT 29 (methane sensor installed)

background outside: FID = $2\frac{5}{100}$ ppm / LEL = 0
 inside front door: FID = 12-14 ppm / LEL = 0
 FID max = 14.0 / LEL max = 0

1430 screen UNIT 31 (methane sensor installed)

background outside = FID = 4.5 ppm / LEL = 0

inside front door: FID = 6.7 ppm / LEL = 0

FID max = 7.0 ppm / LEL = 0 ppm

note: resident (wife [Kc]) did not want me to go upstairs to 3rd level - personal reasons at hers

- thus, no readings taken on 3rd level

- 2 children + parents live here

- gas not on yet

Scale: 1 square =

10-1-10

LOCATION	CH ₄		LOCATION	CH ₄	
	AM	PM		AM	PM
UNIT 1	1.2	5.4	ERM 1	0.0	0.0
2	0.6	5.3	ERM 2	1.8	2.9
3	0.4	3.8	ERM 3	52.1	53.2
no batch 4	0.0	0.4	ERM 4	13.4	11.3
5	0.1	2.2	ERM 5	0.0	0.0
6	0.0	1.8	ERM 6	4.6	7.7
7	0.5	7.8	ERM 7	0.0	0.0
8	0.0	2.8	ERM 8	0.0	0.0
9	1.0	12.1	ERM 9	0.0	0.0
10	1.3	10.4	ERM 10	0.1	0.4
11	0.4	9.9	ERM 11	0.0	0.0
12	0.6	6.2	ERM 12	0.0	0.0
13	2.4	6.2	ERM 13	0.0	0.0
28	0.5	10.3			
29	2.5	20.5	B-1	38.7	54.5
30	0.9	9.5	B-3	59.8	62.1
31	2.6	17.3	B-5	47.3	53.8
no batch 32	0.0	0.0			
no batch 33	0.0	0.0	UNIT 42	0.0	0.9
34	0.7	13.2	UNIT 43	0.1	0.4
35	0.0	0.0			
40	0.0	0.0			
41	0.9	4.1			

Scale: 1 square=_____

10-1-10

1510 begin air monitoring loop (results on p 44)

1605 air monitoring loop complete
called Finis White (Unit 8) per email

1610 left office (Unit 8) per email
from Trinity Schlottman - no answer &
voicemail was already full

note: AGL rep onsite to begin turning on gas
supply for units (9, 5, & 34) sc
- coordinated w/ AGL rep & resident of
Unit 9 (Terrance Williams) who was
not home @ the moment, but wants his
gas turned on

1650 AGL rep completed gas turn-ons for
Units 5, 9, & 34

1705 tried to contact Finis White (Unit 8)
still no answer

1730 screen Unit 8 (methane sensor installed)
background outside: FID = 3-4 ppm / LEL = 0
inside front door: FID = 12-13 ppm / LEL = 0
FID max = 13.6 ppm / LEL max = 0

1800 offsite - return to Duluth office

1840 @ Duluth office
unload/charge equipment

1850 end of day 7
BCL 10-1-10

Scale: 1 square=_____

• ~~tenex tubes (proprietary - charcoal plus?)~~

~~↳ absorbs organic molecules → GC~~

~~↳ methane applicability??~~

~~↳ runtime??~~

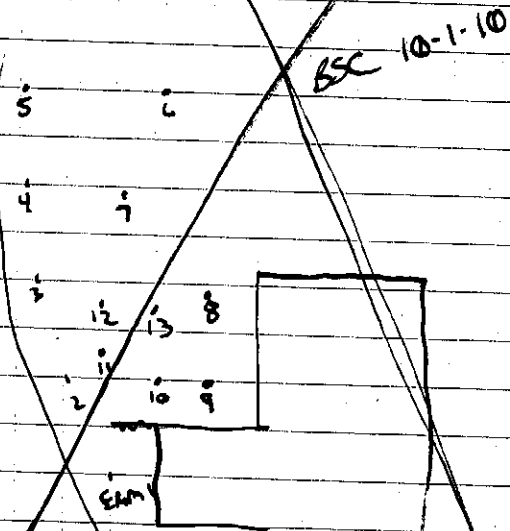
- ~~Summa canisters~~

- ~~not available locally~~

- ~~within 24-hr.~~

- ~~soil gas sampling~~

- ~~geoprobe w/ GC/no??~~



Scale: 1 square=_____

filter mass

calculated + 2408 - 26.5 in Hg

+ 35294 - 30 in Hg

+ 21221 - 30 in Hg

BSC 10-1-10

Scale: 1 square=_____

CONTACTS

Atlanta Gas Light

Jimmy McElvey (man contact)

678 414-5516

Bobby Avery

404 569 2494

ERM - Hunter Jordan 678 520-4980

Atlanta Fire Dept.

Batt Chief → Ken Hale (Battalla Hale)

404 787-4424

Chief → Dave Rhodes (Chief) - IC

678 873-9721

Fulton City Fire Dept.

Darnell Fullum (Deputy Fire Chief)

404 790 5883

DNR

PIO → Ted Jackson 404 656-3204

GA DNR-EPD call 404 473-2725

Scott Coburn 770 387-4900 (office)

Al Frazier 706 214 0183

Leo Gentile

(Jordan, Jones, & Smith) 678 642-9322 cell

678 333-0148

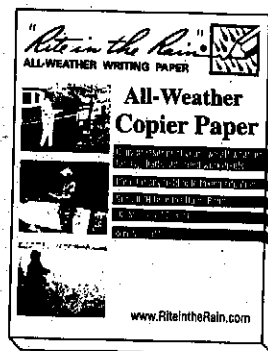
Scale: 1 square = 1 consultant for property owner
Trinity

2009 - left hand bar

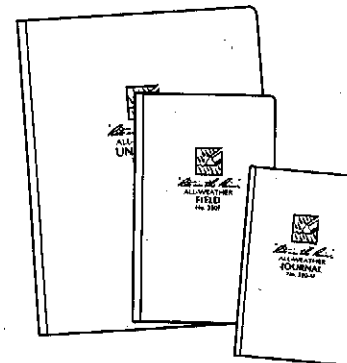
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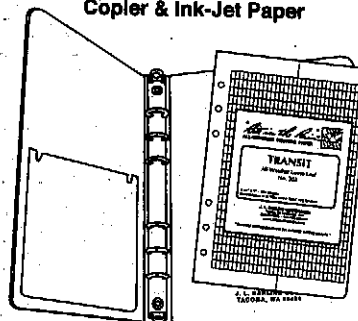
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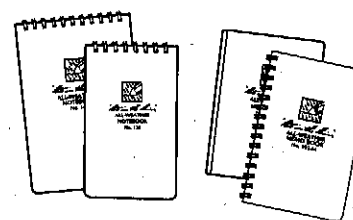
Loose Leaf / Ring Binder

Trinity Schlottman - trinity5015@aol.net

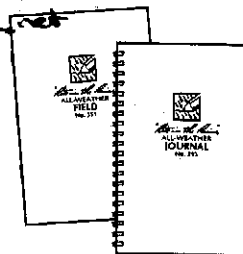
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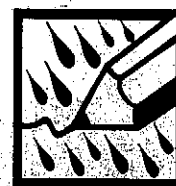
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TTEMI-05-001-0136

Maynard Terrace Methane Response

LOGBOOK #2

Figure 1 consists of six horizontal bar charts, labeled 1 through 6, each representing a different fish species. The x-axis for all charts is the percentage of total catch, ranging from 0 to 100. The y-axis lists the species. The bars are color-coded: 1 (black), 2 (white), 3 (black), 4 (white), 5 (black), and 6 (white).

Species	Percentage of Total Catch
1. Kizilirmak chub	~10%
2. Common carp	~10%
3. European perch	~10%
4. Common bream	~10%
5. Common roach	~10%
6. Common carp	~10%



Project _____

[illegible]

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10-2-10

0850 START Craft onsite for transition w/
START Tobar to conduct weekend air
monitoring

morning weather: sunny; ~ 63°F

0930 START Tobar onsite
calibrate LandTec GA-90 (S/N 1287)

0940 begin air monitoring loop (results on p. 3)

1045 air monitoring loop complete

- reviewed TVA 10000 * Multi-RAE operation

1145 Off site for lunch

1220 Return to site

1400 Prepared equipment for residential
monitoring at unit # 43 ppm

Background outside: FID: 1.2-1.3 / LEL: 0

Inside front door: FID: 1.3-1.4 / LEL: 0 ppm

FID Max: 4.8 ppm / LEL Max: 0

Kitchen sink: FID: 4.8 / LEL: 0

Monitored 1st and 3rd level bathrooms and

sinks. No foundation cracks found. Gas is
not on yet, resident does not know if they
will turn on immediately after monitoring. He

Will check with Property contact.

1500 Begin air monitoring loop (Results on p. 3)

1645 Air Monitoring loop complete. Charge Equipment.

1700 End of day

Scale: 1 square =

IMT 10/02/10

10-2-10

LOCATION	Am	pm	LOCATION	Am	pm
UNIT 1	0.5	3.4	ERM1	0.0	0.0
2	0.8	8.0	ERM2	2.7	2.9
3	0.5	14.3	ERM3	47.6	55.5
* 4	0.0	0.2	ERM4	9.5	14.1
5	0.4	3.9	ERM5	0.0	0.0
6	0.2	2.5	ERM6	4.3	8.4
7	4.3 0.0 asc	10.3	ERM7	0.0	0.0
8	0.0	3.3	ERM8	0.0	0.0
9	0.8	10.2	ERM9	0.0	0.0
10	0.7	9.5	ERM10	0.4	0.6
11	0.2	9.7	ERM11	0.0	0.0
12	1.2	8.9	ERM12	0.0	0.0
13	1.4	12.4	ERM13	0.0	0.2
28	3.4	16.5			
29	0.6	21.6	0-1	36.9	56.1
30	0.5 5.0 asc	20.0	0-3	64.3	63.5
31	5.0	27.7	0-5	49.3	53.4
* 32	0.0	0.0			
* 33	0.0	0.0			
34	3.1	19.4	UNIT 42	0.0	3.2
35	0.0	0.5	UNIT 43	0.0	3.6
40	0.0	0.0			
41	0.9	7.0			

* No borehole

Scale: 1 square =

IMT 10/02/10

10/03/10

0900 START Tobar onsite to conduct air monitoring.

Morning weather: Sunny ~65°F

0910 Calibrate Landtec GA-90 (S/N 1287)

Calgas lot # LTK139-JYB-CM Exp 10/2012

Bump Results CalGas ± 10%

CH₄ 12.3% 15% XCO₂ 12.5% 15% XNeed to recal CH₄ and CO₂ sensorCH₄ 14.8% 15% ✓CO₂ 15.7% 15% ✓

→ Post cal bump results.

0940 Begin air monitoring loop (Results p. 5)

1120 Air monitoring loop complete.

1300 Offsite for lunch

1330 Return to site

1400 Entered monitoring results into
spreadsheet template for upload to
database.

1500 Begin air monitoring loop (Results on p. 5)

1630 Air monitoring loop complete.

1635 Entered last monitoring results into
spreadsheet and forwarded to START Craft.

1700 End of day

IMT 10/03/10

Scale: 1 square=

10/03/10

Location	% CH ₄		Location	% CH ₄	
	AM	PM		AM	PM
Unit 1	2.5	5.1	ERM 1	0.0	0.0
2	3.6	10.1	ERM 2	2.4	2.5
3	0.9	2.3	ERM 3	57.9	67.5
* 4	0.0	0.0	ERM 4	10.4	11.1
5	0.5	2.3	ERM 5	0.0	0.0
6	1.8	3.9	ERM 6	11.6	5.5
7	5.3	6.1	ERM 7	0.0	0.0
8	0.1	1.0	ERM 8	0.0	0.0
9	1.4	16.6	ERM 9	0.0	0.0
10	1.2	22.8	ERM 10	0.8	0.7
11	1.2	16.6	ERM 11	0.0	0.0
12	0.8	16.3	ERM 12	0.0	0.0
13	11.1	11.4	ERM 13	0.1	0.1
IMT 14 28	8.0	21.7			
IMT 15 29	2.9	26.3			
IMT 16 30	1.2	24.3	B-1	57.8	68.6
IMT 17 31	3.8	24.6	B-3	75.7	78.3
* IMT 18 32	0.0	0.0	B-5	59.7	65.7
* IMT 19 33	0.0	0.0			
IMT 20 34	0.8	17.9	Unit 42	0.2	1.3
35	0.0	0.2	Unit 43	0.1	3.2
40	0.0	0.0	IMT		
41	1.7	6.4	10/03/10		

* No borehole

Scale: 1 square=

10-4-10

0930 START Craft on site

calibrate Low Tec GA-90 (S/N 1287)

0940 begin air monitoring loop (results on p. 7)

1035 air monitoring loop complete

1055 ERM rep Hunter Sertain on site along with

Robert Morse (Houston, TX) to look @ site prior

to their meeting w/ GA EPD this evening

- Hunter stated that Unit 32 rep is in town so

he is taking a methanol sensor there to

install - START informed him that we are

available to screen the residence for gas turn

on, if requested - Joyce Carr

1115 screen UNIT 32 (Joyce Carr)

background outside FID = 0.1 ppm / LEL = 0

inside front door FID = 1.2 ppm / LEL = 0

FID max = 2.58 ppm / LEL max = 0

note: screened crack in floor of garage:

FID max = 21.5 ppm / LEL max = 0

no cracks observed inside residence

1200 updating spread sheet / daily chronology

- summarizing air sample data

1330 offsite for LUNCH

1355 return to site

1405 spoke w/ Marcus Cobb (UNIT 10) - he will be
back w/ the hour to have residence screened

Scale: 1 square = _____

BSC 10-4-10

10-4-10

LOCATION	AM	PM	LOCATION	AM	PM
UNIT 1	0.5	9.1	ERM 1	0.0	0.0
2	0.3	8.6	ERM 2	0.9	0.7
3	1.3	8.6	ERM 3	44.6	54.1
no batch 4	0.0	0.6	ERM 4	6.5	12.3
5	0.1	1.4	ERM 5	0.0	0.0
6	0.0	0.2	ERM 6	0.9	5.0
7	0.3	8.8	ERM 7	0.0	0.0
8	0.1	1.0	ERM 8	0.0	0.0
9	1.2	8.4	ERM 9	0.0	0.0
10	0.9	12.1	ERM 10	0.1	0.3
11	0.8	10.1	ERM 11	0.0	0.0
12	0.8	7.6	ERM 12	0.0	0.0
13	1.2	7.9	ERM 13	0.0	0.0
28	0.2	13.1			
29	1.5	21.0	B-1	44.1	56.0
30	0.1	5.5	B-3	65.2	64.7
31	2.9	17.4	B-5	40.3	52.2
no batch 32	0.0	0.0			
no batch 33	0.0	0.0	UNIT 42	0.0	0.4
34	0.7	13.0	UNIT 43	0.0	0.4
35	0.0	0.2			
40	0.0	0.0			
41	0.7	2.2			

BSC 10-4-10

Scale: 1 square = _____

10-4-10

1445 spoke w/ Christian Harrington (Unit 11) -
he has already had his gas turned on - he will
be home between 1600-1700 to have
screening conducted

1500 begin air monitoring loop (results on p. 7)

1600 air monitoring loop completed

- update spreadsheet - email to GLS

- continue working on daily chronology

1650 left voice mail messages for both

Marcus Cobb (Unit 10) & Christian Harrington (Unit 11)

to conduct screening of residences - no answer

1705 screen UNIT 10 (Marcus Cobb)

background outside: FID = 0.1 ppm / LEL = 0

inside front door: FID = 30.32 ppm / LEL = 0

FID max = 33.6 ppm / LEL max = 0

- no floor cracks observed

1800 no word from Christian Harrington (Unit 11)

- offsite - return to Duluth office

1840 @ Duluth office

end of day

Scale: 1 square =

BSC 10-4-10

10-5-10

0935 START Craft onsite

- calibrate LowTech GA-90 (S/N 1287)

0950 begin air monitoring loop (results on p. 10)

1045 air monitoring loop completed

1050 called a spoke w/ Randy Matthews (Unit 12)

regarding screening of his residence - he said
he won't be home until 7-7³⁰ pm and leaves

① approximately the same time in morning -

I told him to call me when he is on his
way home and I would try to meet him

② Unit 12 tonight for screening

1055 Barry Menaker stopped @ Unit 4 &

informed me that he is scheduled to

move into Unit 4 on Thursday 10-7-10 - he
is renting from the developer through an agent
(Ryan Graham - Sanctuary)

- Barry's phone is 404.819.8014

1130 calibrate MultiRAE & TVA 10000

1215 screen UNIT 3

background outside: FID = 3-4 ppm / LEL = 0

inside front door: FID = 21-22 ppm / LEL = 0

FID max = 42.8 ppm (downstairs sink) / LEL = 0

note: garage @ this unit is used for t-shirt
printing (i.e. paints used - odors observed

in downstairs bathroom)

BSC 10-5-10

Scale: 1 square =

10-5-10

LOCATION	Am	Pm	LOCATION	Am	Pm
UNIT 1	0.5	4.3	ERM 1	0.0	0.0
2	0.4	12.0	ERM 2	0.0	0.0
3	0.7	1.2	ERM 3	45.4	54.0
no bottle 4	0.0	0.3	ERM 4	7.3	13.8
5	0.2	2.7	ERM 5	0.0	0.0
6	0.0	0.9	ERM 6	1.2	9.6
7	4.1 0.2 ASD	10.6	ERM 7	0.0	0.0
8	0.1	1.8	ERM 8	0.0	0.0
9	0.9	8.2	ERM 9	0.0	0.0
10	1.1	10.1	ERM 10	0.0	0.2
11	0.5	12.7	ERM 11	0.0	0.0
12	1.2	10.5	ERM 12	0.0	0.0
13	0.9	13.6	ERM 13	0.0	0.0
28	0.2	14.5			
29	1.7	20.2	B-1	40.8	56.1
30	0.1	10.7	B-3	65.2	64.4
31	0.7	24.0	B-5	32.6	51.1
no bottle 32	0.0	0.0			
no bottle 33	0.0	0.0	UNIT 42	0.0	0.4
34	0.5	14.3	UNIT 43	0.0	2.5
35	0.0	0.8			
40	0.0	0.0	water vault near Market Ter.	0.0	4.3
41	2.3	3.5			

BSC 10-5-10

Scale: 1 square=

10-5-10

1245 off site for lunch

1325 return to site from lunch

- coordinated w/ office staff regarding
GIS needs- updated spreadsheets w/ air monitoring results
and tenant contact information

1430 screen UNIT 11 (Christian Harrison)

background outside: FID = 2-3 ppm / LEL = 0

inside front door: FID = 8-9 ppm / LEL = 0

max FID = 11.8 ppm / max LEL = 0

note: max FID rdg from downstairs bathroom
sink- crack on floor on 1st level observed but
max FID reading = 9.5 ppm

1505 begin air monitoring loop (results on p. 10)

1640 air monitoring loop complete

note: EPA Tech Services Reps Glenn Adams and
colleagues on site for site tour @ approximately
1525 - I toured site w/ them and
updated them on site activities1700 update spreadsheet w/ air monitoring
results - email to GIS1730 drafted email to Trinity Schottman regarding
screening of residences (Units 3 & 11) for gas turn on

BSC 10-5-10

Scale: 1 square=

10-5-10

1740 awaiting phone call from or arrival of Randy Mathias (Unit 12) for screening at residence for gas turn on

- also packing up Area RAEs, cal gas, tent, and other miscellaneous equipment belonging to EPA/START in preparation for new tenant moving into Unit 4 on Thursday - equipment will be moved to T6 office in Duluth, GA

1930 left voicemail message for Randy Mathias

- ④ 404.219.4718 regarding screening of his residence (Unit 12) - asked him to call me back if he was going to be home soon

1935 send email to Trinity Schlottman summarizing results for units 3 & 11

1945 offsite - return to Duluth office

2015 @ Duluth office

- unloaded equipment

2025 end of day

- LATE NOTE: @ 2030 received call from Randy Mathias (Unit 12)
- scheduled to conduct screening at residence tomorrow morning @ 0710

b5c 10-5-10

Scale: 1 square = _____

10-6-10

0655 START Craft onsite

- bump check MultiRAE & TVA 1000 - okay - no calibration necessary

0705 ~~10:05~~ rang buzzer @ Unit 12 - no answer

- called Randy Mathias - no answer - left voicemail telling him I was waiting to screen residence - told him to call me back

0830 begin air monitoring loop (results on p.14)

0935 air monitoring loop completed

0945 2-person cleaning crew @ Unit 4 to clean unit prior to new tenant moving in

1010 moving remaining equipment from Unit 4 garage to vehicle

1150 ~~10:50~~ offsite for lunch

1220 back onsite

- update spreadsheet of air monitoring results

1310 spoke w/ OSC Mattis regarding site activities

- he said that GENEED & PRP are reportedly signing an order for PRP to conduct site activities - order to be signed today or tomorrow
- he still wants to plan on doing air monitoring over the weekend unless PRP signs order & mobilizes resources to site

- also requested to look into having summer containers available for indoor sampling, if necessary

b5c 10-6-10

Scale: 1 square = _____

10-6-10

LOCATION	Am	PM	LOCATION	Am	PM
UNIT 1	0.5	4.6	ERM 1	0.0	0.0
2	0.9	5.9	ERM 2	0.0	0.0
3	0.5	5.2	ERM 3	58.8	61.7
no borehole 4	0.0	0.5	ERM 4	9.8	18.3
5	0.5	3.5	ERM 5	0.0	0.0
6	0.5	2.4	ERM 6	3.2	6.1
7	1.0	7.9	ERM 7	0.0	0.0
8	0.4	3.8	ERM 8	0.0	0.0
9	3.6	10.8	ERM 9	0.0	0.0
10	2.5	5.3 10.8 0.5	ERM 10	1.2	1.1
11	2.7	5.8	ERM 11	0.0	0.0
12	1.9	8.3	ERM 12	0.0	0.0
13	2.2	13.5	ERM 13	0.0	0.0
28	1.1	12.3			
29	14.2	20.3	B-1	59.4	61.3
30	1.5	8.4	B-3	66.7	68.6
31	9.6	26.0	B-5	53.7 66.7 0.5	57.3
no borehole 32	0.0	0.0			
no borehole 33	0.0	0.0	UNIT 42	0.0	0.2
34	3.3	12.0	UNIT 43	0.2	0.7
35	0.0	0.2 0.2 0.0			
40	0.0	0.0	water vault on Mainway	0.5	9.2
41	1.6	3.5			

Scale: 1 square=

10-6-10

Wednesday

1440 begin air monitoring loop (results on p. 14)

- note: START Turner onsite for transition

1545 air monitoring loop complete

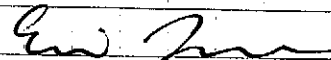
- update spreadsheet w/ air monitoring results

- email to GIS

- transfer equipment to START Turner vehicle

1630 START Cross offsite

1700 START Turner offsite


 10/6/10

Scale: 1 square=

10/7/10

Thursday

0900 START Turner on site

Landtec GA-90 calibration (S/N 1287)

Gas 15% Methane, 15% Carbon Dioxide

Post calibration readings: 15.3% CH₄, 14.9% CO₂ ✓

Lot # LTH290-JB-CM exp. 08/2015

0940 Begin air monitoring loop (results p.17)

1110 Air monitoring loop complete

1130 Offsite for lunch

1200 Return to site

1215 Enter readings into spreadsheet

1445 Bump test for Landtec GA-90 ok

1450 Begin air monitoring loop (results p.17)

1500 Meet John Hollar, P.E. for ERM. Gives directive to screen Unit 4

Calibrate TVA-1000 (S/N 69890-365)

with 95 ppm Methane, Lot LTA077-

MM-CM, exp 01/2010. Post cal. 94.8 ppm

Bump test MultiRAE (S/N 095-508250)

OK, LEL 50% with 50% LEL

(cocktail) gas, Lot # 930842, exp 6/2011

1525 Begin screen Unit 4

background outside: FID = 0.8 ppm / LEL = 0

Garage breathing zone: FID = 56.22 ppm / LEL = 0

Crack in garage floor: FID = 44.56 ppm / LEL = 0

Scale: 1 square = _____

ET

10/7/10

Thursday

Location	AM	PM	Location	AM	PM
Unit 1	0.3	8.1	ERM 1	0.0	0.0
2	3.1	12.9	ERM 2	0.0	0.0
3	1.6	3.6	ERM 3	60.1	62.2
No Borehole 4	0.0	1.0	ERM 4	11.6	13.9
5	0.7	5.1	ERM 5	0.0	0.0
6	0.5	1.4	ERM 6	0.5	5.6
7	5.4	11.7	ERM 7	0.0	0.0
8	0.7	4.2	ERM 8	0.0	0.0
9	5.9	6.4	ERM 9	0.0	0.0
10	4.4	11.4	ERM 10	1.2	1.5
11	3.1	10.9	ERM 11	0.0	0.0
12	3.7	9.5	ERM 12	0.0	0.0
13	12.6	14.6	ERM 13	0.0	0.0
28	6.2	21.1			
29	13.8	32.4	B-1	59.4	61.2
30	3.9	8.6	B-3	56.4	48.3
31	9.8	22.8	B-5	55.9	57.4
No Borehole 32	0.0	0.0			
No Borehole 33	0.0	0.0	Unit 42	0.6	0.8
34	3.6	16.7	Unit 43	0.5	1.2
35	0.5	0.4			
40	0.0	0.0	water unit on Maynard Terrace	0.8	6.6
41	2.7	3.9			

Scale: 1 square = _____

ET

10/7/10

Thursday

Inside front door: FID=17.1^{ppm} LEL=0

FID Max = 56.22 ppm / LEL=0

Note: Max in garage breathing zone.

Cracks present in floor slab.

1540 Continue air monitoring loop OSC
Nattis arrives.1720 Finish air monitoring loop and
photo documentation of unit water
meters and monitoring locations.1740 START Turner creates photo log, updates
spreadsheet and daily log.

1800 START Turner offsite

Pic ID	Date	Time	Direction	Photog	Description
IMG_2698	10/7/10	1626	N	ET	ERM Parameter 3
2699		1629	^{ET} NE NW		ERM 4
2700		1631	^{ET} NE NW		ERM 5
2701		1633	N		ERM 6
2707		1635	N		B-3
2708		1637	N		B-5
2713		1649	N		B-1
2714		1652	NW		ERM 7
2715		1654	NW		ERM 8
2716		1654	E		ERM 9

Scale: 1 square=

ET

10/7/10

Thursday

Pic ID	Date	Time	Dir	Photog	Description
2717	10/7/10	1655	E	ET	ERM 10
2718		1656	E		ERM 11
2720		1657	W		ERM 12
2721		1658	SE		ERM 13
2722		1702	NE		ERM 1
2723		1703	S		ERM 2
2724		1703	SE		ERM 3
2725		1704	W		water meter Unit 1
2726		1706	W		Unit 2
2727		1707	W		Unit 3
2728		1708	W		Unit 4
2729		1708	W		Unit 5
2730		1708	NW		Unit 6
2731		1708	SE		Unit 7
2732		1709	W		Unit 8
2733		1709	W		Unit 9
2734		1709	W		Unit 10
2735		1709	W		Unit 11
2736		1709	W		Unit 12
2737		1709	W		Unit 13
2738		1710	N		Unit 28
2739		1710	N		Unit 29
2740		1710	NW		Unit 30

Scale: 1 square=

ET

10/7/10

Thursday

Pic ID	Date	Time	Dir	Photog	Description
2741	10/7/10	1710	NW	ET	Unit 31
2742		1710	NW		Unit 32
2743		1711	NW		Unit 33
2744		1711	E		Unit 34
2745		1711	SE		Unit 35
2746		1711	NW		Unit 40
2747		1711	SW		Unit 41
2748		1711	SW		Unit 42
2749		1711	W		Unit 43
2750	10/8/10	1117	NW	ET	Premier Env.
Services attaches pump/vent system to B-3, B-5					
2751	10/8/10	1117	NW	ET	Closer of 2750
2752	10/8/10	1627	NW	ET	pumping B-1

Eri

10/8/10

Scale: 1 square=

ET

10/8/10

Friday

0900 START Turner arrives on site.
 Landtec GA-90 Calibration (s/n 1287)
 Gas 15% Methane, 15% Carbon Dioxide
 Lot # LTH290-JB-CM exp 08/2015
 Post-Cal readings: $CH_4 = 14.9\%$, $CO_2 = 15.1\%$
 0920 Begin air monitoring loop (results p. 22)
 1000 ERM arrives on site
 1044 Complete air monitoring loop
 1050 Calibrate MultiRAE and TVA-1000
 MultiRAE (s/n 095-508260)
 Cocktail gas Lot # 930842, exp 06/2011
 Bump result Cal Gas
 LEL 49% 50% ✓
 TVA-1000 (s/n 69890-365)
 95 ppm Methane, Lot LTA077-MM-CM
 exp 01/2010.
 Bump result Cal Gas
 FID (ppm) 94.8 95
 1104 Begin rescreen Unit 4 per request
 ERM. Door opened yesterday prior to
 screening.
 - background outside: FID = 0.8 ppm / LEL = 0
 - inside front door: FID = 25 ppm / LEL = 0
 - inside garage: FID = 26 ppm / LEL = 0

Scale: 1 square=

ET

10/8/10

Friday

LOCATION	AM	% CH ₄	PM	LOCATION	AM	% CH ₄	PM
Unit 1	1.0		0.7	ERM 1	0.0		0.0
2	2.3		0.0	ERM 2	0.0		0.0
3	10.3		0.5	ERM 3	46.1		30.3
^{no} borehole 4	0.0		0.0	ERM 4	10.2		5.7
5	0.5		0.0	ERM 5	0.0		0.0
6	0.0		0.0	ERM 6	0.4		0.0
7	3.4		0.0	ERM 7	0.0		0.0
8	0.5		0.0	ERM 8	0.0		0.0
9	5.4		0.0	ERM 9	0.0		0.0
10	1.3		0.0	ERM 10	1.3		1.2
11	1.7		0.0	ERM 11	0.0		0.0
12	1.0		0.0	ERM 12	0.0		0.0
13	1.7		0.0	ERM 13	0.0		0.0
28	1.0		0.0				
29	8.2		0.0	B-1	19.8		pumping
30	3.2		0.0	B-3	63.8		2.9
^{no} borehole 31	7.7		0.0	B-5	0.0*		0.0*
^{no} borehole 32	0.0		0.0				
^{no} borehole 33	0.0		0.0	Unit 42	1.6		0.7
34	1.4		0.0	Unit 43	0.4		0.0
35	0.3		0.0				
40	0.0		0.0	water vault on Maynard Terrace	0.1		0.0
41	3.0		1.1				

Scale: 1 square=_____

*No visible vapors, no odor. ET

10/8/10

Friday

1110 Patrick Kelley of Premier Environmental Services begins pumping B-3 + B-5
 B-3 23% CH₄ @ 30 SCFM
 B-5 25% CH₄ @ 30 SCFM
 combined 28% CH₄ @ 35 SCFM
 Documented via photographs. (see p. 20)

1115 Additional ERM personnel arrive to distribute Methane alarming sensors to units.

1210 START Turner, ERM, Premier offsite for lunch

1240 Return from lunch. START Turner updates spreadsheet and photolog. Discuss where to drill wells.

1350 ERM John Hallar offsite

1400 Premier removes pumps from B-3 and B-5.
 Prior to removal combined concentration 29% CH₄

1420 Premier Environmental Services begins pumping B-1
 B-1 30 % CH₄ @ 30 SCFM

1500 Begin air monitoring loop.
 Landtec GA-90 bump test good.
 Measured 14.9%
 Premier continues pumping during

Scale: 1 square=_____ ET

10/8/10

Friday

monitoring on B-1.

1645 START finishes air monitoring loop,
values drastically reduced from
historical values. Post monitoring
bump check OK (15.1% CH₄).

EPA OSC arrived for update and
to inform START that air monitoring
no longer necessary after today.

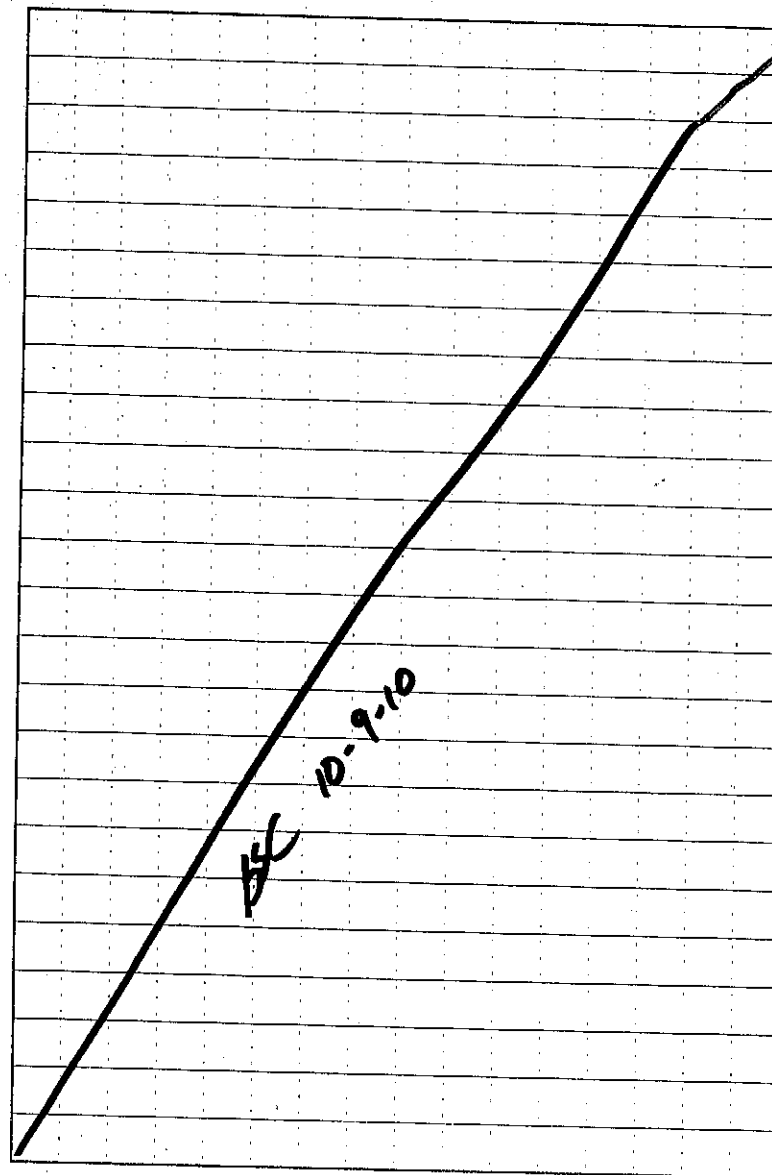
1650 Update excel spreadsheet and daily log.

1735 Premier stops pumping gas on B-1.
Breaks down pumping setup.

1755 START Turner, Premier, and ERM
offsite.

Chris Turner
10/8/10

Scale: 1 square=



Scale: 1 square=

APPENDIX E

TABLE OF WITNESSES

(One Page)

TABLE OF WITNESSES
MAYNARD TERRACE METHANE RESPONSE
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APPENDIX F

ANALYTICAL DATA PACKAGES

(Electronic copy on compact disc)

APPENDIX G

SCRIBE DATABASE

(Electronic copy on compact disc)