



*Ohio's Solid Waste and C&DD
Program
Annual Meeting
May 9, 2013*

Effective Odor Monitoring at MSW Landfills
Aaron Shear



Overview

- Share DMWM's experiences with documenting odors at solid waste landfills including developments over the past year: (training, guidance, and tools)
- Preview updates to DMWM's guidance
- Present Case Studies



Odors may be an inherent reality at solid waste landfills, however there is an expectation that facility owners/operators strictly manage and control odors such that the quality of life of neighboring residents and businesses is not adversely affected.



Odors and related components of odor surveillance and monitoring are subjective and will require the use of judgment.



Elements of an Effective Odor Monitoring Program (based on existing cases and past experience)

Qualified Odor Observer

Trained Inspector

Objective Observation of Odors

Description of Odors and their Intensity

Standard Monitoring Practices

Routine Survey/
Inspection Routes

Standard Data Collection & Reporting Forms

Odor Surveillance Form



The Existing MSW Landfill Regulations Regarding Odor

OAC 3745-27-19(B)(3)

The owner or operator shall operate the facility in such a manner that noise, dust, and odors are strictly controlled so as not to cause a nuisance or health hazard.

OAC 3745-27-19(B)(5)

The owner or operator shall operate the facility in such a manner that operation does not create a nuisance or health hazard...



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OAC 3745-27-19(B)(5)

*The owner or operator shall operate the facility in such a manner that operation **does not create** a nuisance or health hazard...*



Odor Investigation Tools

Complaints

- Statements can document level of impact
- Patterns/trends can help:
 - Verify odors
 - Identify source



Odor Investigation Tools

Complaints

- Document, document, document!
 - Contact information
 - When & where odor was noted
 - Odor description
 - Suspected cause/source
 - Weather conditions
 - Any details offered on how the odor affected them
- Verbatim is best!



Odor Investigation Tools

Site Inspections

- **Operator may identify cause**
 - Landfill gas system malfunction
 - Waste relocation activities
 - Special waste load
 - Leachate system repairs
 - Gas well drilling
 - Leachate removal activities
 - Etc.



Odor Investigation Tools

Odor Surveillance

Timed for worst case odors

- Typically between dusk & dawn
- Air inversion, calm winds

Drive along established route

- Windows down, slow speed
- Stop at set odor check points
 - Complainants' homes
 - Reported odor areas
- Stop anywhere else odors are noted



Odor Investigation Tools

Odor Surveillance

At each stop point:

- Pull over safely
- Turn off vehicle
- Step out and away from vehicle
- Breathe normally
- Record all odor observations on surveillance form

Repeat route at least once

- At office, attach meteorological data



Odor Investigation Tools

Odor Surveillance Form

OHIO EPA-NEDO ODOR SURVEILLANCE FORM - LANDFILL XYZ

Weather Conditions	Precipitation	Direction Wind is From	Wind Speed
Mostly Sunny	None	N	Calm
Partly Cloudy	Fog	NW/NE	1 - 5 mph
Mostly Cloudy	Rain	W/E	5 - 15 mph
Overcast	Sleet	SW/SE	15 - higher
Hazy	Snow	S	

Temperature: ____°F Relative Humidity: ____% Barometric Pressure: ____ inches Hg

Is a printout of weather data attached? ____ If yes, what is the source of the data? ____

Odor Intensity Scale Descriptors

Level	Descriptors
0	A concentration of an odorant which produces no sensation.
1	Concentration which is just barely detectable.
2	A distinct and definite odor whose characteristic is clearly detectable.
3	An odor strong enough to cause a person to avoid it completely.
4	An odor so strong as to be overpowering and intolerable for any length of time.

Note: Note that if an odor's intensity is between 1 and 2, it can be called a 1 ½, etc.

TIME (EST.)	LOCATION	NEDO ODOR INTENSITY	DESCRIPTORS	COMMENTS

Date/Time

Inspector's Name (printed)

Signature



Odor Intensity Scale – Numbered Levels (2/17/12)

Level	Descriptor
0	Odor Not Detectable
1	Odor present in the air, which activates the sense of smell and the characteristics may or may not be distinguished and/or definite, but not objectionable in short durations. This is characterized by occasional “whiffs” of odor, but is not persistent.
2	Odor present in the air, which easily activates the sense of smell, is very distinct and clearly distinguishable, tends to be objectionable and/or irritating, and is persistent in the community.
3	Odor present in the air, which is objectionable and causes a person to attempt to avoid it completely.
4	Odor present in the air, which is so strong that it is overpowering and intolerable for any length of time.



Odor Intensity Scale – Descriptor Levels (6/6/12)

Not Detected	Odor Not Detectable
Faint	Odor present in the air, however faint, which activates the sense of smell and the characteristics may or may not be distinguishable and/or definite, but not objectionable in short durations. This is characterized by occasional “whiffs” of odor, but is not persistent.
Distinct	Odor present in the air, which easily activates the sense of smell, is very distinct and clearly distinguishable, tends to be objectionable and/or irritating, and is persistent in the community.
Objectionable	Odor present in the air, which is objectionable and causes a person to attempt to avoid it completely.
Intolerable	Odor present in the air, which is so strong that it is overpowering and intolerable for any length of time.



Rule – Strictly Control Odors

- Using Odor Surveillance Form
- Citing OAC 3745-27-19(B)(3)

Notice of Violation

Intensity Level 2, persistent
Intensity Level 3 or 4

Warning Letter
Intensity Level 2

Unique Circumstance



November 14, 2012



Odor School

Training Inspector of MSW Landfills

- Odor Chemistry
- Understanding Sense of Smell
- Odor Measurements
 - Odor Descriptors, Odor Wheel, Odor Scale
- Landfill Odors
- How to Conduct an Effective Odor Survey
- Compliance & Enforcement



November 15, 2012



St. Croix Sensory, Inc.

Odor School

Day 2 – Field Exercise & Nasal Ranger Training





St. Croix Sensory, Inc.

A Nasal Chemosensory Performance Test for Odor Inspectors – “Pen Test”



Jerome J605 – Hydrogen Sulfide Analyzer



Updated Guidance

- Incorporation of “Odor Hour” or “Odor Episode” Concept
- Update / Streamline Odor Scale
- Enhanced Surveillance Procedures
- Documentation



Development Sneak Preview Odor Documentation Procedures – Templates & Resources

Odor Surveillance Form &
Intensity Scale

Notice of Violation

Citizen Survey/Questionnaire

Director's Final
Findings & Orders

Odor Complaint Log/Database

License Terms & Conditions

Warning Letter

Odor Control Plan



Compliance Assistance and Inspection Support

Ohio EPA
Division of Materials and Waste Management
P.O. Box 1049
Columbus, OH 43216

Questions?

Call us at:

Main # (614)644-2621

Aaron Shear(614) 728-5350



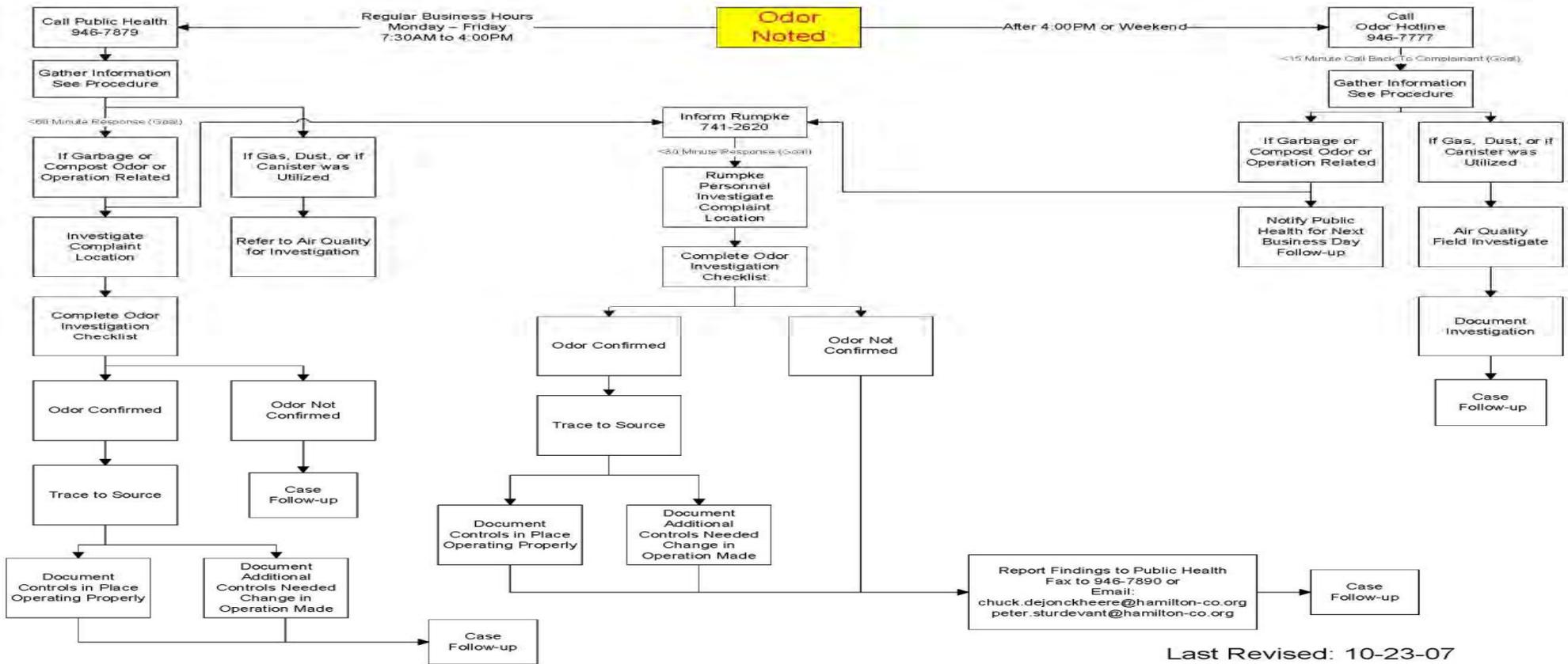
*Ohio's Solid Waste and C&DD
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Rumpke Sanitary Landfill and the use of
Odor APP for Mobile Devices
Chuck DeJonckheere



Rumpke Sanitary Landfill





Last Revised: 10-23-07



RUMPKE COMPLAINT INVESTIGATION

COMPLAINANT	NOTED ODOR AT	DATE	TIME	DESCRIPTION
1)				
2)				
3)				

Time of Investigation _____ AM/PM to _____ AM/PM DATE: _____
 Winds From: _____ still / light / moderate / heavy
 Other Weather Notes: _____

AREAS SURVEYED: (circle all that apply)

Old Colerain RD	I-275	Squirrelsnest LN
Colerain AVE	Gosling RD	Lick RD
Hughes RD	Dunlap RD	Crest RD
Struble RD	Springdale RD	Buell RD
Bank RD	Pottinger RD	Hamilton AVE
Day RD	Pippin RD	Dry Ridge RD
West Kemper RD	Yeatman RD	OTHER: _____

CONFIRMED OFF-SITE ODORS: (area name circle odor intensity) **Description:** (if related to gas plant, see page 2)

_____ 1,2,3,4	<input type="checkbox"/> Gas	<input type="checkbox"/> Garbage	_____
_____ 1,2,3,4	<input type="checkbox"/> Gas	<input type="checkbox"/> Garbage	_____
_____ 1,2,3,4	<input type="checkbox"/> Gas	<input type="checkbox"/> Garbage	_____
_____ 1,2,3,4	<input type="checkbox"/> Gas	<input type="checkbox"/> Garbage	_____

1=Slight, 2= Moderate, 3= Strong, 4= Over Powering

ON-SITE OBSERVATIONS: (check all that apply) **Notes:**

<input type="checkbox"/> Perimeter Misting Operating	Yes/No	_____
<input type="checkbox"/> Portable Misting In Use	Yes/No	_____
<input type="checkbox"/> Asbestos Hole Open	Yes/No	_____
<input type="checkbox"/> Stripping Cover	Yes/No	_____
<input type="checkbox"/> Drilling of Wells	Yes/No	_____
<input type="checkbox"/> Alternate Daily Cover in Use	Yes/No	_____
<input type="checkbox"/> Odorous Loads Received	Yes/No	_____
<input type="checkbox"/> Odor from Gas Plant	Yes/No	_____
<input type="checkbox"/> Odor from Gas Collection System	Yes/No	_____
<input type="checkbox"/> Odor at Phase 5	Yes/No	_____
<input type="checkbox"/> Other (Specify)	Yes/No	_____

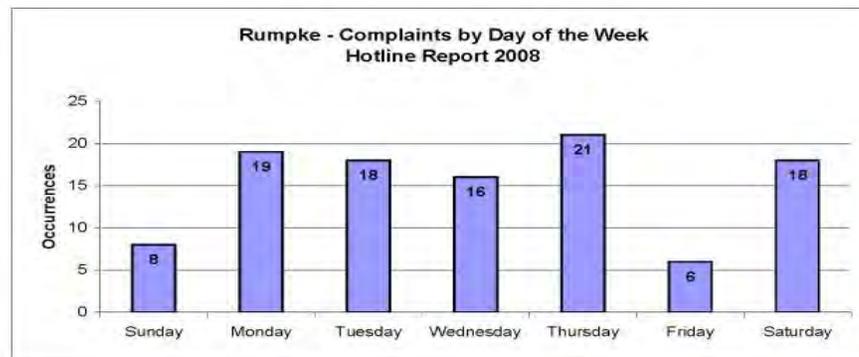
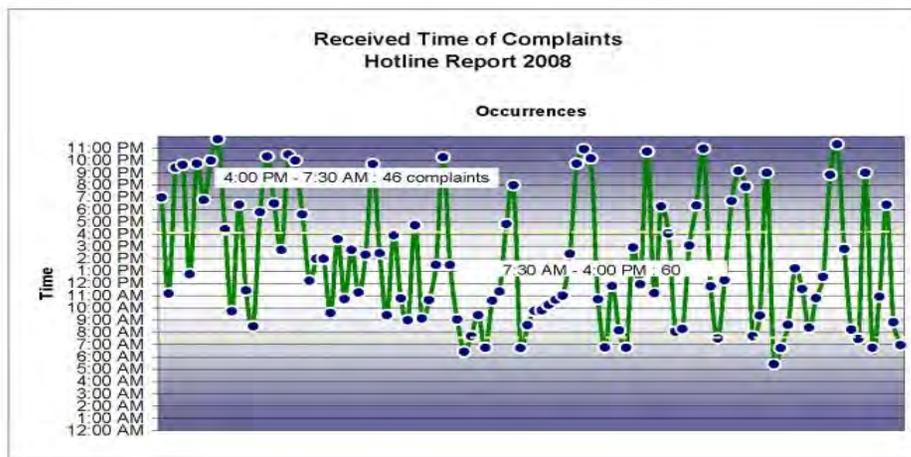
Comments / Corrective Measures Taken:

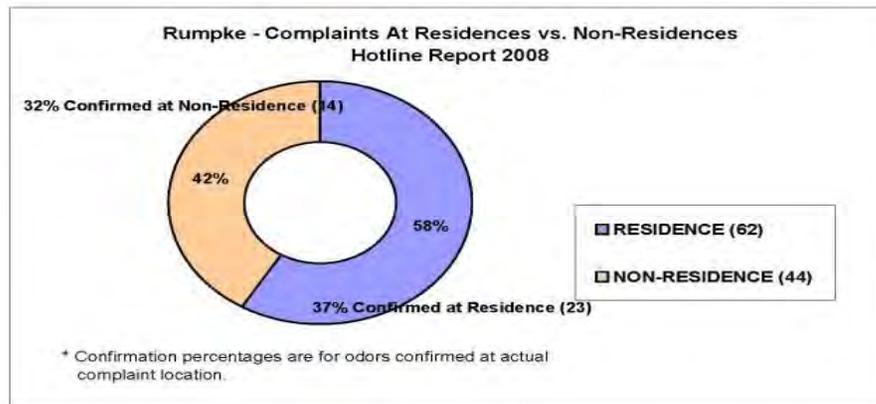
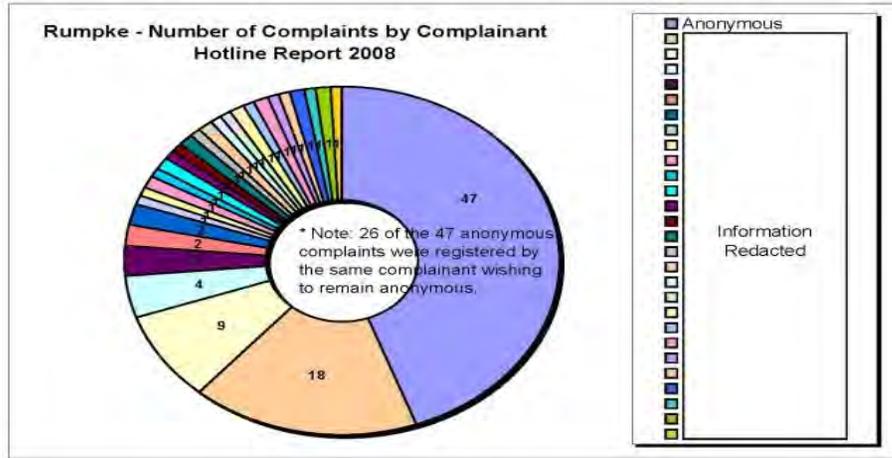
Form Completed By: _____ Signature: _____



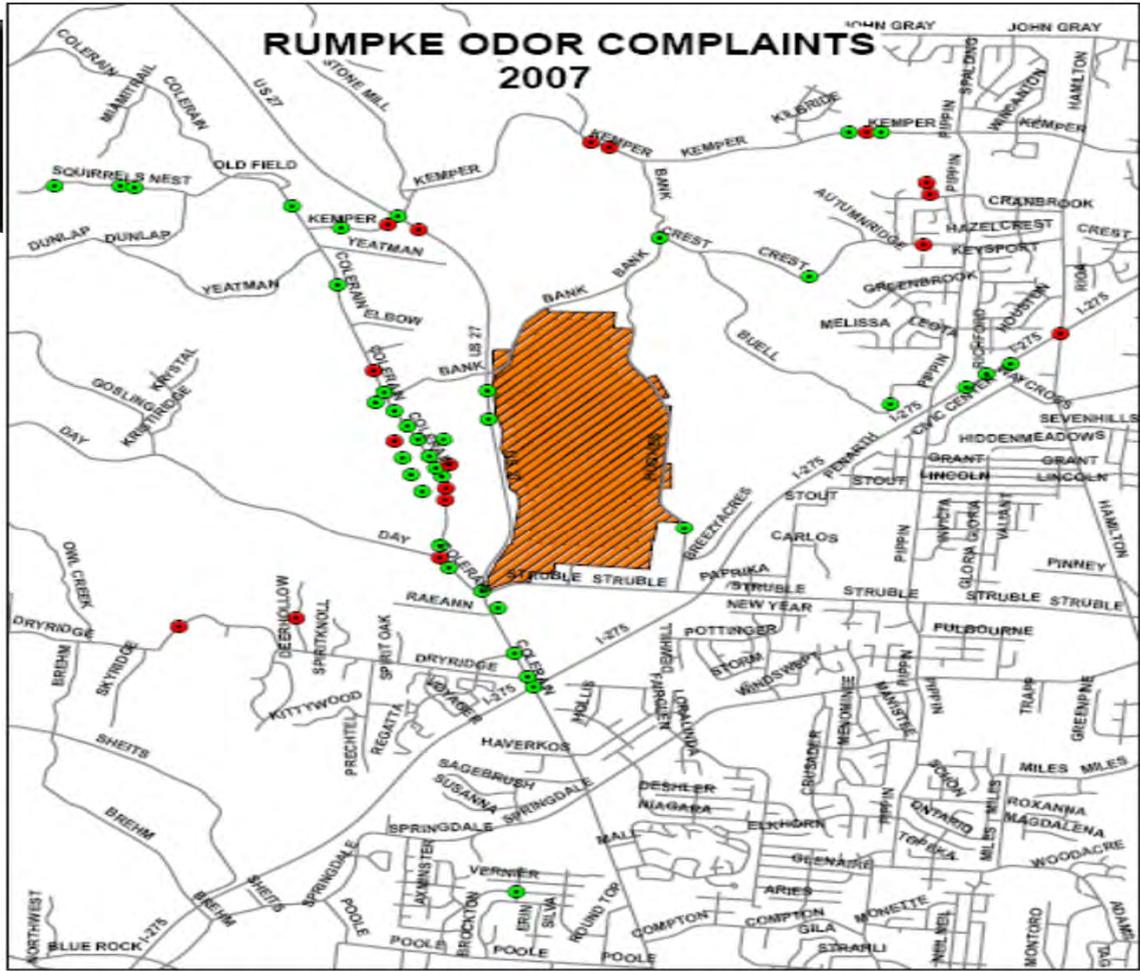
RUMPKE ODOR COMPLAINTS - YEAR 2012

Date of Complaint	Day of Complaint	Initial Responder	Date Received	Response Date	Response Time	Confirmed At Location	Confirmed Elsewhere	Complainant	Location/Comments	At A Residence	Follow-Up Responder	Follow-Up Response Date	Follow-Up Response Time	Follow-Up Confirmed At Location	Follow-Up Confirmed Elsewhere	Follow-Up Status/Comments	Odor Type
1/3/12 7:30 PM	Tuesday	Rumpke	1/3/12 7:30 PM	1/3/12 7:40 PM	0:10:00	Yes	Yes	Paula Lee	2835 Belbranch CT	Yes						Rumpke: Slight garbage on Belbranch Ct, slight PH5 gas on Hughes Rd	Mixed
1/5/12 8:41 PM	Thursday	Rumpke	1/5/12 8:45 PM	1/5/12 8:45 PM	0:00:00	Yes	Yes	Don Straub	3226 Dalmellington CT	Yes	PH	1/5/12 11:20 AM	14:38:00	Yes	Yes	Rumpke: slight PH5 on Hughes, Bank, W Kemper, Dalmellington, Huntergreen, Kibride, and Crest Rd, Slight PH5 on Hughes and Crest Rd, Slight PH5 on Buel, W Kemper, Kibride, Dalmellington, and John Gray	Gas
1/6/12 7:00 AM	Friday	Rumpke	1/6/12 7:00 AM	1/6/12 7:25 AM	0:25:00	No	No	John Lehmkuhl	11990 Kibride DR	Yes	PH	1/6/12 11:20 AM	2:52:00	Yes	Yes	Rumpke: No odors detected. PH: Moderate PH5 on Hughes and Crest Rd, Slight PH5 on Buel, W Kemper, Kibride, Dalmellington, and John Gray	Gas
1/6/12 4:24 PM	Friday	Rumpke	1/6/12 4:24 PM	1/6/12 4:40 PM	0:16:00	Yes	Yes	Casey Sherz	12160 Huntergreen Dr	Yes	PH	1/6/12 12:10 PM	4:14:00	Yes	Yes	Rumpke: moderate to heavy odor on Hughes, slight PH5 on Bank, Kemper, and Huntergreen. PH: Moderate PH5 on Hughes and Crest Rd, Slight PH5 on Buel, W Kemper, Kibride, Dalmellington, and John Gray	Gas
1/6/12 4:30 PM	Friday	Rumpke	1/6/12 4:30 PM	1/6/12 4:40 PM	0:10:00	Yes	Yes	Anonymous	12149 Huntergreen Dr	Yes	PH	1/6/12 12:10 PM	4:20:00	Yes	Yes	Rumpke: moderate to heavy odor on Hughes, slight PH5 on Bank, Kemper, and Huntergreen. PH: Moderate PH5 on Hughes and Crest Rd, Slight PH5 on Buel, W Kemper, Kibride, Dalmellington, and John Gray	Gas
1/6/12 9:27 PM	Friday	Rumpke	1/6/12 10:44 PM	1/6/12 11:00 PM	0:16:00	No	Yes	Carl Hafer	W Kemper at Bank Rd.	No	PH	1/6/12 12:10 PM	9:17:00	No	Yes	Rumpke: slight PH5 odor on Bank Rd and Hughes Rd. PH: Moderate PH5 on Hughes and Crest Rd, Slight PH5 on Buel, W Kemper, Kibride, Dalmellington, and John Gray	Gas
1/7/12 8:18 PM	Saturday	Rumpke	1/7/12 8:35 PM	1/7/12 8:40 PM	0:05:00	No	Yes	Jim Rapien	2567 Wrenning RD.	Yes	PH	1/7/12 3:00 PM	5:18:00	No	Yes	Rumpke: Slight gas on 3700 Struble to Poplar. PH: Strong PH5 gas at Hughes/Bank, slight gas on Hughes (south)	Gas
1/7/12 8:57 PM	Saturday	Rumpke	1/7/12 9:15 PM	1/7/12 9:22 PM	0:07:00	No	Yes	Robert Cuffe	8882 Becky's Ridge DR	Yes	PH	1/7/12 3:00 PM	5:57:00	No	Yes	Rumpke: Slight gas on Struble. PH: Strong PH5 gas at Hughes/Bank, slight gas on Hughes (south)	Gas
1/7/12 11:01 PM	Saturday	Rumpke	1/7/12 11:25 PM	1/7/12 11:25 PM	0:00:00	Yes	Yes	Anonymous	Struble RD (Fay Ln to Pottinger RD)	No	PH	1/7/12 3:00 PM	6:01:00	No	Yes	Rumpke: Slight gas on Struble, and Hughes/Bank. PH: Strong PH5 gas at Hughes/Bank, slight gas on Hughes (south)	Gas
1/8/12 4:35 PM	Sunday	Rumpke	1/8/12 4:35 PM	1/8/12 4:55 PM	0:20:00	No	No	Gina Schneider	Old Colerain RD at Bank RD	No						Rumpke: no offsite odors noted.	
1/9/12 8:59 AM	Monday	Rumpke	1/9/12 9:38 AM	1/9/12 9:45 AM	0:07:00	No	Yes	Sharon Stiller	4850 Poole RD - Colerain Elementary	No	PH	1/9/12 2:25 PM	5:26:00	No	Yes	Rumpke: Moderate PH5 gas on Bank/Hughes, slight PH5 gas on Old Colerain. PH: Slight garbage on Hughes, moderate PH5 gas on Hughes/Bank	Mixed
1/9/12 10:45 AM	Monday	Rumpke	1/9/12 10:57 AM	1/9/12 10:57 AM	0:00:00	No	Yes	Kim Colangelo	Squirrelsnest LN	No	PH	1/9/12 2:25 PM	3:40:00	No	Yes	Rumpke: Moderate PH5 gas on Bank/Hughes, slight PH5 gas on Old Colerain. PH: Slight garbage on Hughes, moderate PH5 gas on Hughes/Bank	Mixed
1/9/12 5:42 PM	Monday	Rumpke	1/9/12 5:42 PM	1/9/12 6:05 PM	0:23:00	No	Yes	Paula Lee	2635 Belbranch CT	Yes	PH	1/9/12 3:05 PM	2:37:00	No	Yes	Rumpke: slight garbage on Hughes, slight PH gas on Hughes/Bank. PH: Slight garbage on Hughes, moderate PH5 gas on Hughes/Bank	Mixed
1/9/12 6:40 PM	Monday	Rumpke	1/9/12 6:40 PM	1/9/12 7:45 PM	1:05:00	No	No	Paul Ellis	2018 Stapleton CT	No	PH	1/9/12 3:05 PM	3:35:00	No	Yes	Rumpke: no offsite odors noted. PH: Slight garbage on Hughes, moderate PH5 gas on Hughes/Bank	Mixed
1/9/12 8:14 PM	Monday	Rumpke	1/9/12 8:14 PM	1/9/12 8:27 PM	0:13:00	No	No	Don Straub	3226 Dalmellington CT	Yes	PH	1/9/12 3:05 PM	5:09:00	No	Yes	Rumpke: no offsite odors noted. PH: Slight garbage on Hughes, moderate PH5 gas on Hughes/Bank	Mixed
1/10/12 7:40 AM	Tuesday	Rumpke	1/10/12 7:40 AM	1/10/12 11:30 AM	3:50:00	No	Yes	Paula Lee	2835 Belbranch CT	Yes						Rumpke: Slight PH5 on Hughes Rd	Gas
1/10/12 9:52 AM	Tuesday	Rumpke	1/10/12 9:52 AM	1/10/12 11:30 AM	1:38:00	No	Yes	Kim Colangelo	Squirrelsnest Ln	Yes						Rumpke: Slight PH5 on Hughes Rd	Gas
1/11/12 7:30 AM	Wednesday	DOES	1/11/12 7:30 AM	1/11/12 7:35 AM	0:00:00	Yes	Yes	Bill Doll	Old Colerain Rd	No	Rumpke	1/11/12 7:35 AM	0:00:00	Yes	Yes	DOES: Moderate Garbage on Old Colerain, Moderate Landfill gas on Old Colerain, Moderate PH5 on Old Colerain and Bank. Rumpke: Slight PH5 on Bank Rd and Old Colerain	Mixed
1/11/12 2:18 PM	Wednesday	Rumpke	1/11/12 2:37 PM	1/11/12 2:50 PM	0:13:00	No	Yes	Kim Colangelo	Squirrelsnest Ln	Yes	DOES	1/11/12 8:55 AM	5:23:00	No	Yes	Rumpke: moderate PH5 on Bank, slight PH5 Old Colerain North of Bank and on US27. DOES: Moderate Garbage on Old Colerain, Moderate Landfill gas on Old Colerain, Moderate PH5 on Old Colerain and Bank.	Mixed
1/11/12 2:28 PM	Wednesday	Rumpke	1/11/12 2:38 PM	1/11/12 2:50 PM	0:12:00	No	Yes	Anonymous	Old Colerain and Dinslip Rd	No	DOES	1/11/12 8:55 AM	5:32:00	No	Yes	Rumpke: moderate PH5 on Bank, slight PH5 Old Colerain North of Bank and on US27. DOES: Moderate Garbage on Old Colerain, Moderate Landfill gas on Old Colerain, Moderate PH5 on Old Colerain and Bank.	Mixed
1/11/12 2:51 PM	Wednesday	Rumpke	1/11/12 2:57 PM	1/11/12 2:57 PM	0:00:00	No	Yes	Mary Coombs	11543 Colerain AVE	Yes	DOES	1/11/12 8:55 AM	5:56:00	No	Yes	Rumpke: moderate PH5 on Bank, slight PH5 Old Colerain North of Bank and on US27. DOES: Moderate Garbage on Old Colerain, Moderate Landfill gas on Old Colerain, Moderate PH5 on Old Colerain and Bank.	Mixed
1/11/12 3:56 PM	Wednesday	Rumpke	1/11/12 4:02 PM	1/11/12 3:56 PM	0:01:00	Yes	Yes	Pat Doll	Old Colerain & Bank Rd up to Kemper and Squirrelsnest Ln	No	DOES	1/11/12 8:55 AM	7:01:00	Yes	Yes	Rumpke: moderate PH5 on Bank, slight PH5 Old Colerain North of Bank and on US27. DOES: Moderate Garbage on Old Colerain, Moderate Landfill gas on Old Colerain, Moderate PH5 on Old Colerain and Bank.	Mixed





56
complaints



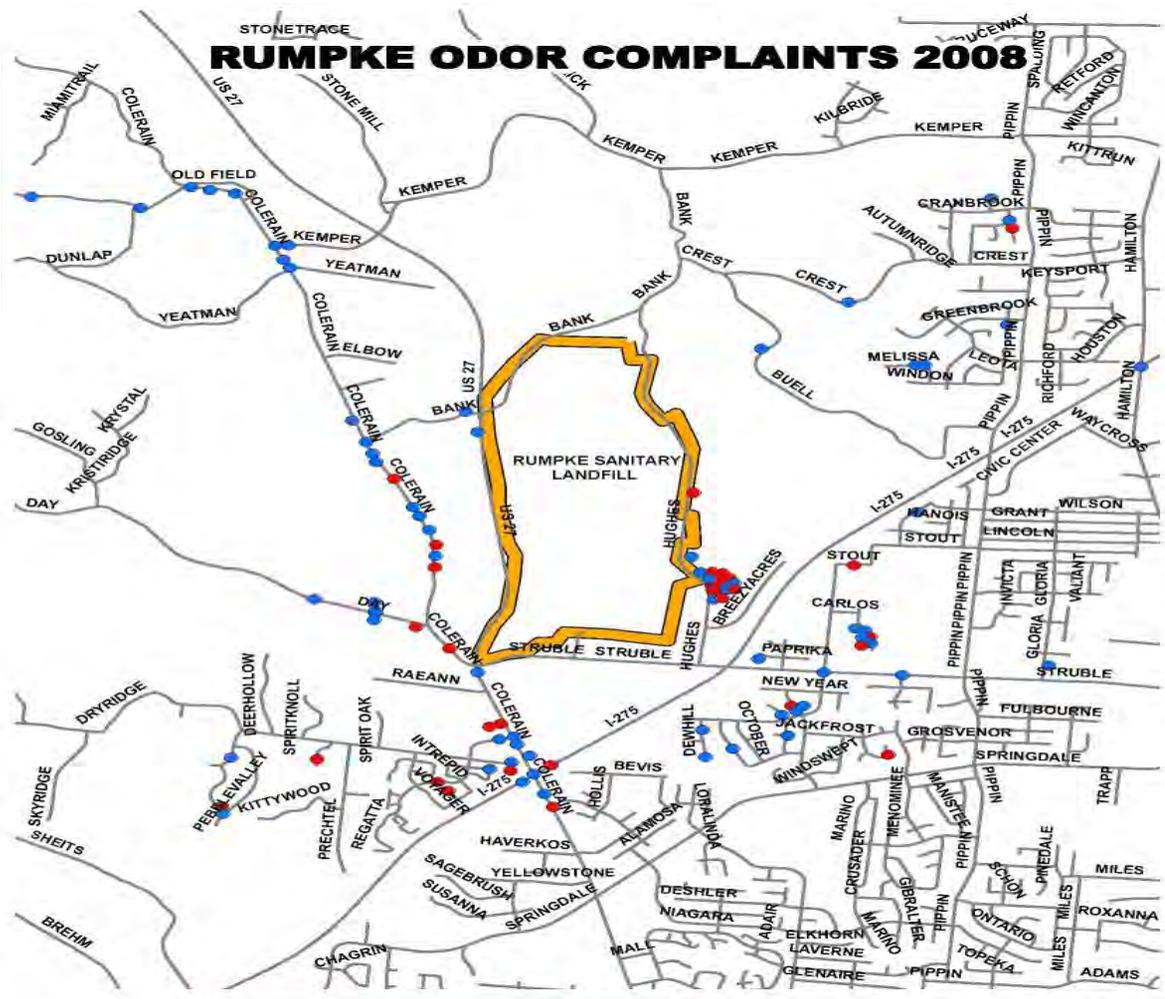
Rumpke Sanitary Landfill

- Unconfirmed Complaint
- Confirmed Complaint



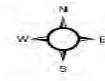
106
complaints

RUMPKE ODOR COMPLAINTS 2008

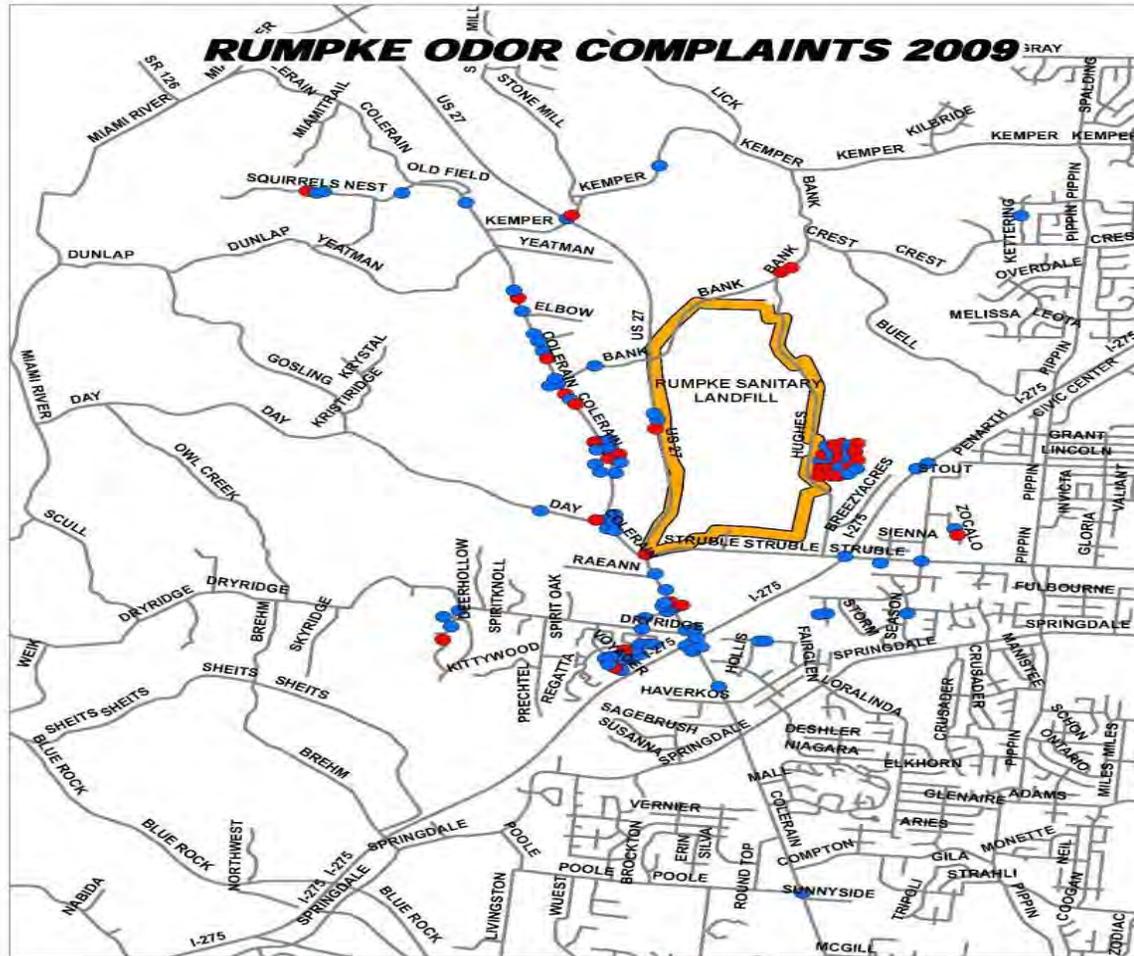


● Complaint Confirmed At Location
● Complaint Unconfirmed At Location
By Initial Responder

HAMILTON COUNTY
PUBLIC HEALTH
PREVENT PROMOTE PROTECT



121
complaints



- Complaint Confirmed At Location
- Complaint Unconfirmed At Location

HAMILTON COUNTY PUBLIC HEALTH
PREVENT. PROMOTE. PROTECT.

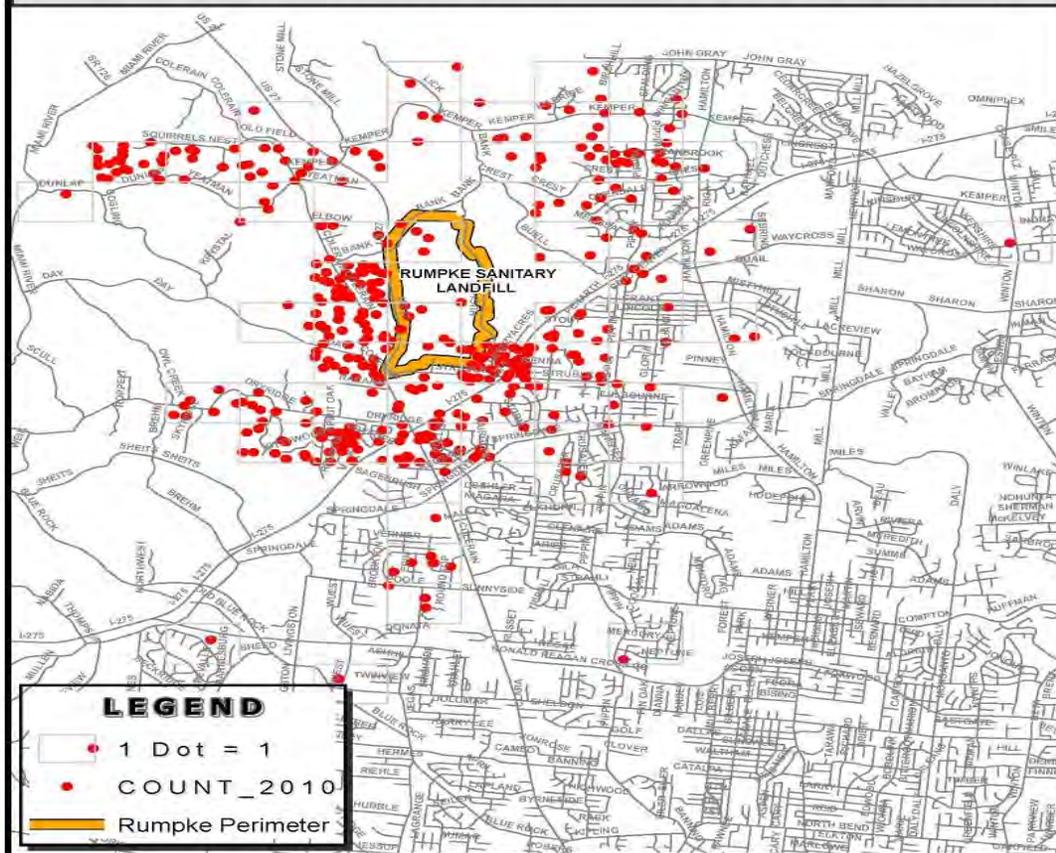


Rumpke Sanitary Landfill

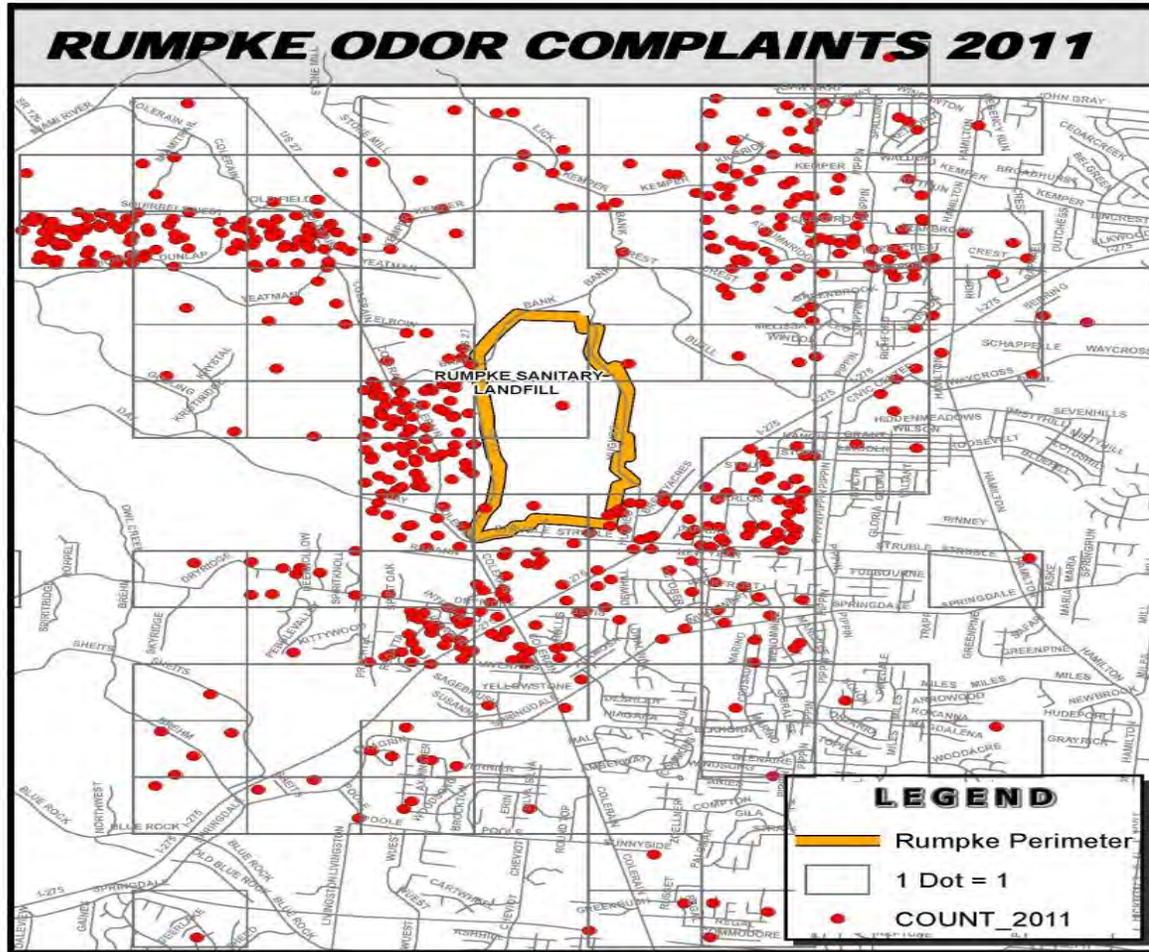


437
complaints

RUMPKE ODOR COMPLAINTS 2010

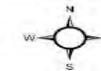


566
complaints

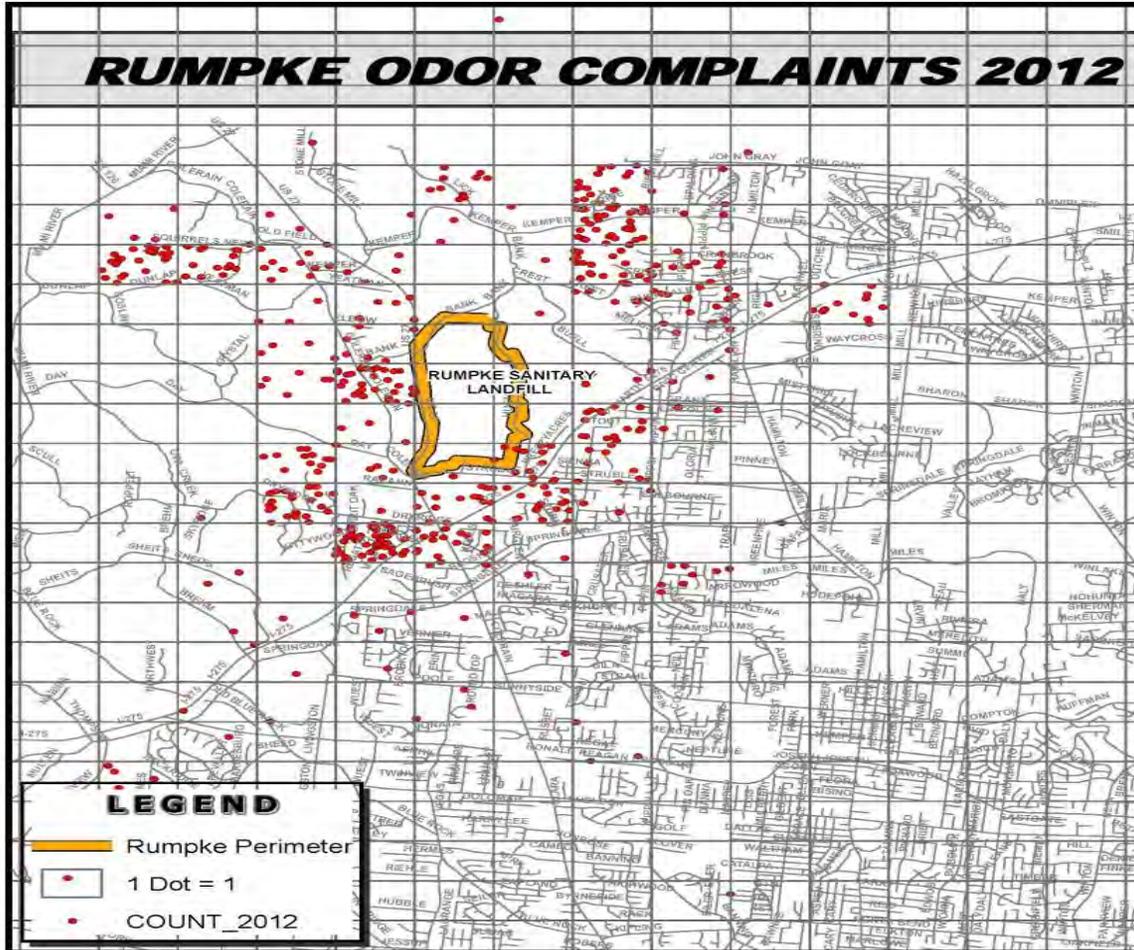


NOTE: Complaints are distributed based upon the Cincinnati Area GIS Grid100 facet that they fall within.

HAMILTON COUNTY PUBLIC HEALTH
PREVENT. PROMOTE. PROTECT.



500
complaints



NOTE: Complaints are distributed based upon the Cincinnati Area GIS Grid 100 facet that they fall within.

HAMILTON COUNTY PUBLIC HEALTH
PREVENT. PROMOTE. PROTECT.

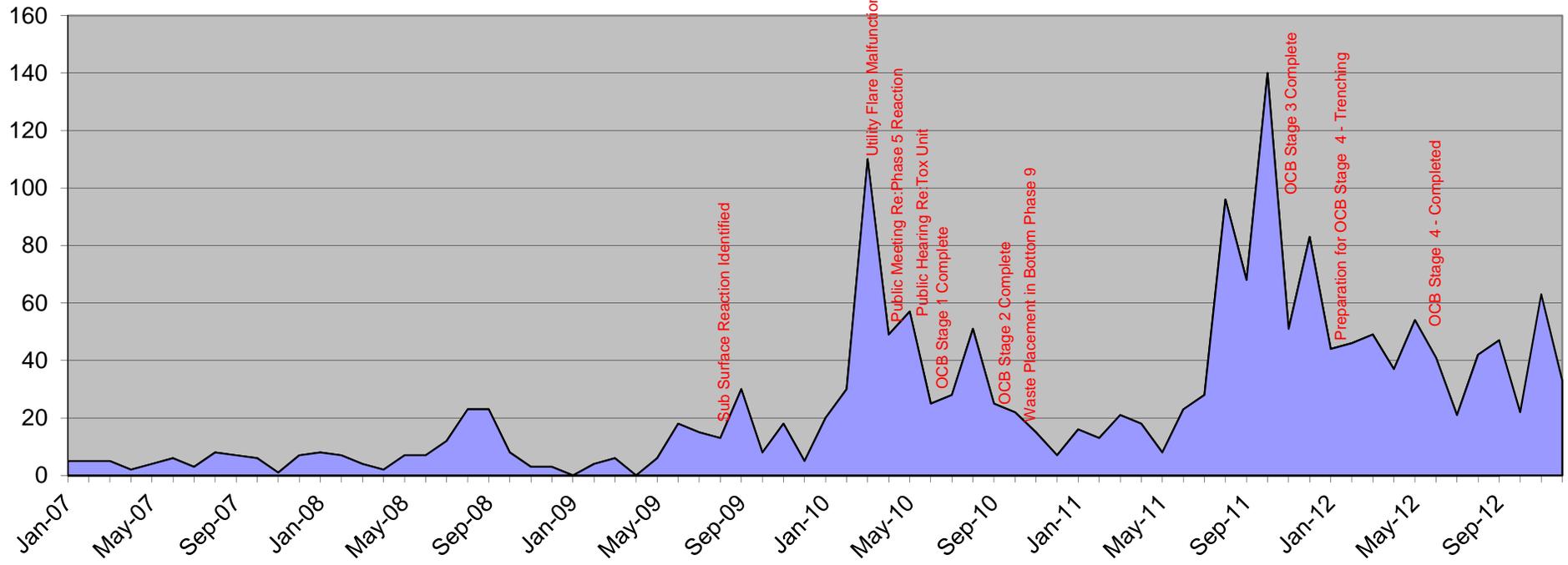


RUMPKE ODOR - DATA COMPARISON 2007 - 2012.

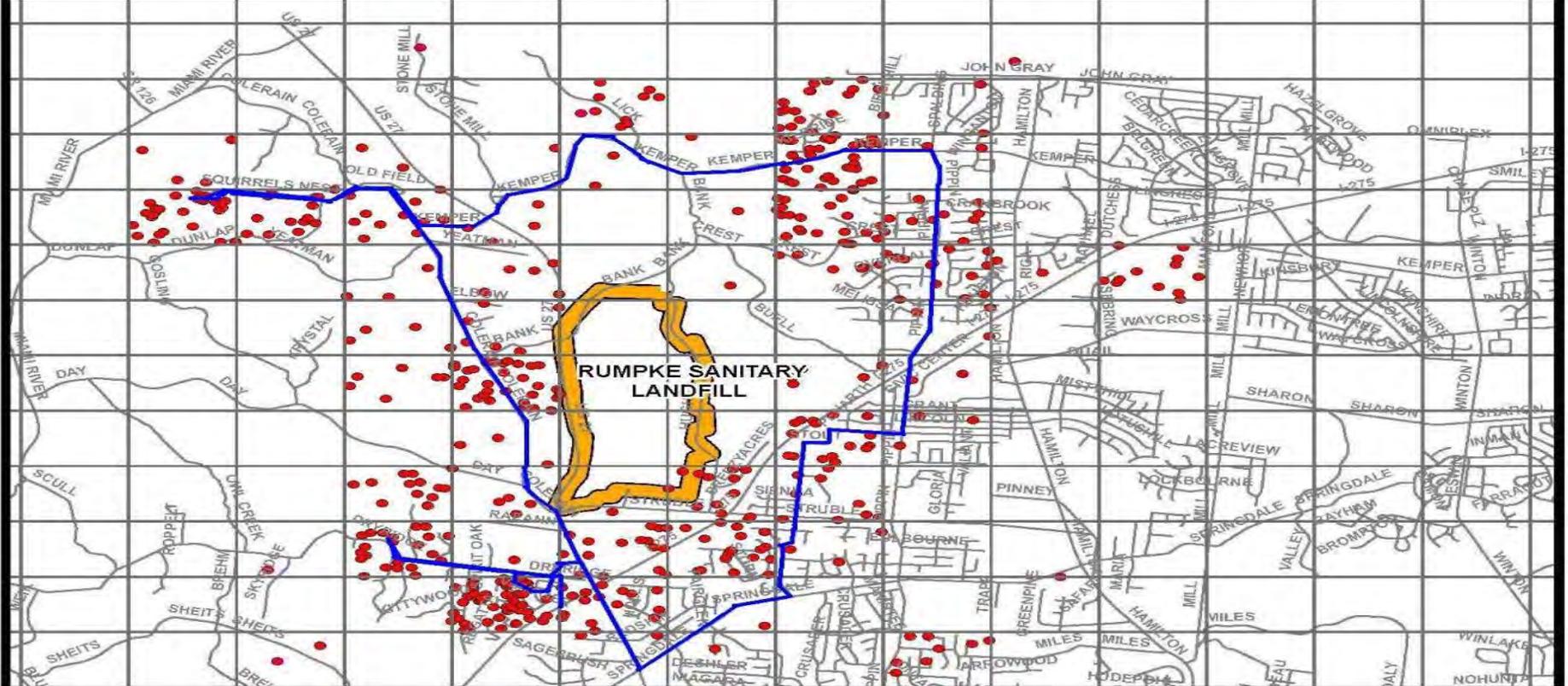
		2012	2011	2010	2009	2008	2007
Complaints	# of Complaints Received	500	566	437	121	106	56
	# of Different Complainants	108	121	266	28	27	17
	% Anonymous Complaints	13	41	37	45	44	0
	% of Complaints at Residences	74	54	57	47	58	30
% Confirmed	By Responder in Vicinity	80	94	94	66	77	30
	By Responder at Complaint Location	27	45	33	28	24	ND
Odor Type %	Gas Odor	54	42	52	32	20	ND
	Garbage odor	5	4	9	36	55	ND
	Mixed odor	41	51	39	32	25	ND
	Leachate odor	0	3	ND	ND	ND	ND
Response Time	% Less than one Hour	94	92	84	76	84	ND
*ND= No Data							



Rumpke - Odor Complaints Timeline - 2007 to 2012



RUMPKE ODOR COMPLAINTS 2012



Advent the Mobile Device



RUMPKE COMPLAINT INVESTIGATION

COMPLAINANT NOTED ODOR AT	DATE	TIME	DESCRIPTION
1) 2060 Haverbrook DR	1-7-12	8:28 AM	
2) 11953 Lick RD	1-7-12	~ 8:30 AM	
3)			

Time of Investigation 9:30 (AM/PM) to 10:30 (AM/PM) DATE: 1-7-12
 winds From: _____ (still) / light / moderate / heavy
 Other weather Notes: 31° F, SUNNY

AREAS SURVEYED: (circle all that apply)

<input checked="" type="checkbox"/> Old Colerain RD	<input checked="" type="checkbox"/> I-275	<input checked="" type="checkbox"/> Squirrelsnest LN	<input checked="" type="checkbox"/> Haverbrook
<input checked="" type="checkbox"/> Colerain AVE	<input checked="" type="checkbox"/> Gosling RD	<input checked="" type="checkbox"/> Lick RD	
<input checked="" type="checkbox"/> Hughes RD	<input checked="" type="checkbox"/> Dunlap RD	<input type="checkbox"/> Crest RD	
<input checked="" type="checkbox"/> Struble RD	<input checked="" type="checkbox"/> Springdale RD	<input type="checkbox"/> Buell RD	
<input type="checkbox"/> Bank RD	<input checked="" type="checkbox"/> Pottinger RD	<input type="checkbox"/> Hamilton AVE	
<input type="checkbox"/> Day RD	<input checked="" type="checkbox"/> Pippin RD	<input type="checkbox"/> Dry Ridge RD	
<input checked="" type="checkbox"/> West Kemper RD	<input type="checkbox"/> Yeatman RD	OTHER: <u>HUNTERGREEN</u>	

CONFIRMED OFF-SITE ODORS: (area name circle odor intensity) Description: (if related to gas plant, see page 2)

W. KEMPER (US 27 TO BANK) (1, 2, 3, 4) Gas Garbage PHASE 5

HUGHES (DENG/LE OFFICE) (1, 2, 3, 4) Gas Garbage PHASE 5

_____ 1, 2, 3, 4 Gas Garbage _____

_____ 1, 2, 3, 4 Gas Garbage _____

1=Slight, 2= Moderate, 3= Strong, 4= Over Powering

ON-SITE OBSERVATIONS: (check all that apply) Notes:

<input type="checkbox"/> Perimeter Misting Operating	Yes/No	_____
<input type="checkbox"/> Portable Misting In Use	Yes/No	_____
<input type="checkbox"/> Asbestos Hole Open	Yes/No	_____
<input type="checkbox"/> Stripping Cover	Yes/No	_____
<input type="checkbox"/> Drilling of wells	Yes/No	_____
<input type="checkbox"/> Alternate Daily Cover in Use	Yes/No	_____
<input type="checkbox"/> Odorous Loads Received	Yes/No	_____
<input type="checkbox"/> Odor from Gas Plant	Yes/No	_____
<input type="checkbox"/> Odor from Gas Collection System	Yes/No	_____
<input type="checkbox"/> Odor at Phase 5	Yes/No	_____
<input type="checkbox"/> other (Specify)	Yes/No	_____

Comments / Corrective Measures Taken:

→ ONSITE INSPECTION CONDUCTED - SEE INSPECTION FOR DETAILS.

OPERATORS DETECTED/REPAIRED A HOLE IN THE OCB AT APPROX. 9:00 A.M.

UTILITY FLARE MOVED & OPERATIONAL.

Form completed By: MATTHEW LEWIS Signature: [Signature]



*Required

Surveillance Loop Map



Facility Name

Rumpke Sanitary Landfill 10795 Hughes Road

Investigator

First and Last Name

Chuck DeJonckheere

Representing

Person filling out form

- HCPH
- SOAQA
- OEPA
- Rumpke

Weather

Current Conditions

- Clear
- Partly Cloudy

Save as Incomplete Save as Complete Exit Without Saving Delete From Device

Odor Report > Swipe the screen vertically to navigate page, then tap on a question. Or swipe page horizontally to navigate between pages.



Verizon LTE 1:13 PM 100%

HAMILTON COUNTY PUBLIC HEALTH
 250 William Howard Taft Road, 2nd Floor
 Cincinnati, OH 45219 • 513-946-7800
 hamiltoncountyhealth.org

Location of Odor
 Will capture coordinates, if a stretch of road was given in a complaint, capture approximate center and provide the description in address.

Address
 Describe location's block of old colerain be a residence. If t near 5120 Dry Ridg

2018 Stapleton

Complaint Locat
 Was there a recent complaint at this location?

Save and Exit Form Remember Answer Clear Answer
 Exit Without Saving Delete Section Form View

Odor Report > Tap previous or next, or swipe the screen horizontally to navigate between question.

Location of Odor
 Will capture coordinates, if a stretch of road was given in a complaint, capture approximate center and provide the description in address.

Replace Location

Latitude: N 39°17'9"
 Longitude: W 84°33'18"
 Altitude: 260.240818 m
 Accuracy: 5.000000 m



Odor Report

Surveillance Loop Map

Facility Name: Rumpke Sanitary Landfill 10795 Hughes Road

Investigator: Nick Siefker

Representing: HCPH

Weather: Clear

Precipitation: None

Direction Wind is From: Northeast 45

Wind Speed: 1-5 mph

Temperature: 35

Relative Humidity: 55

Barometric Pressure: 30.38

Area Inspected: Surveillance Loop

Location of Odor (see attached map):

Latitude (degrees): 39.254988
Longitude (degrees): -84.620797
Altitude (meters): 250.85886 meters
Accuracy (meters): 5.0 meters

Address: 9943 Pebbleknoll Dr

Complaint Location: Yes

Time From Complaint: 1 to 4 hours

Type of Odor: Phase 5 Reaction Odor

Odor Intensity 0-4 Scale: 0.5

Time of Investigation: 04/03/2013 09:34:45 GMT-04:00

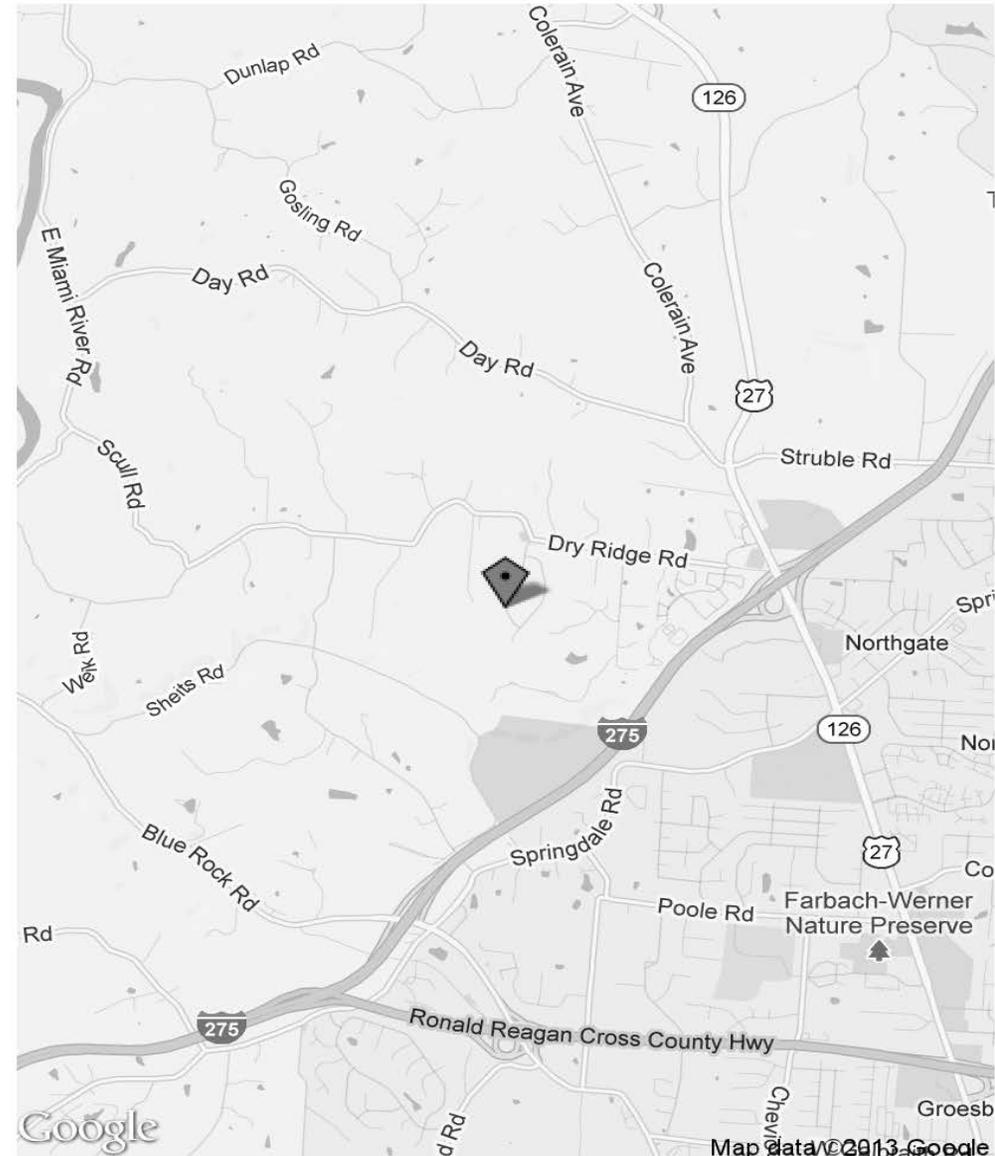
Deodorizer: No

Comments and Corrective Measures: Intermittent phase 5 odor with gusts of wind

Reserved:

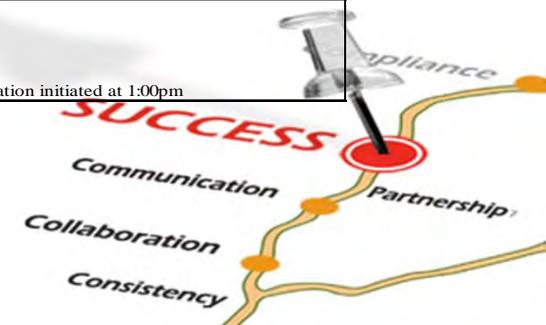
Save and Send Report to:

- chuck.dejonckheere@hamilton-co.org; nick.siefker@hamilton-co.org

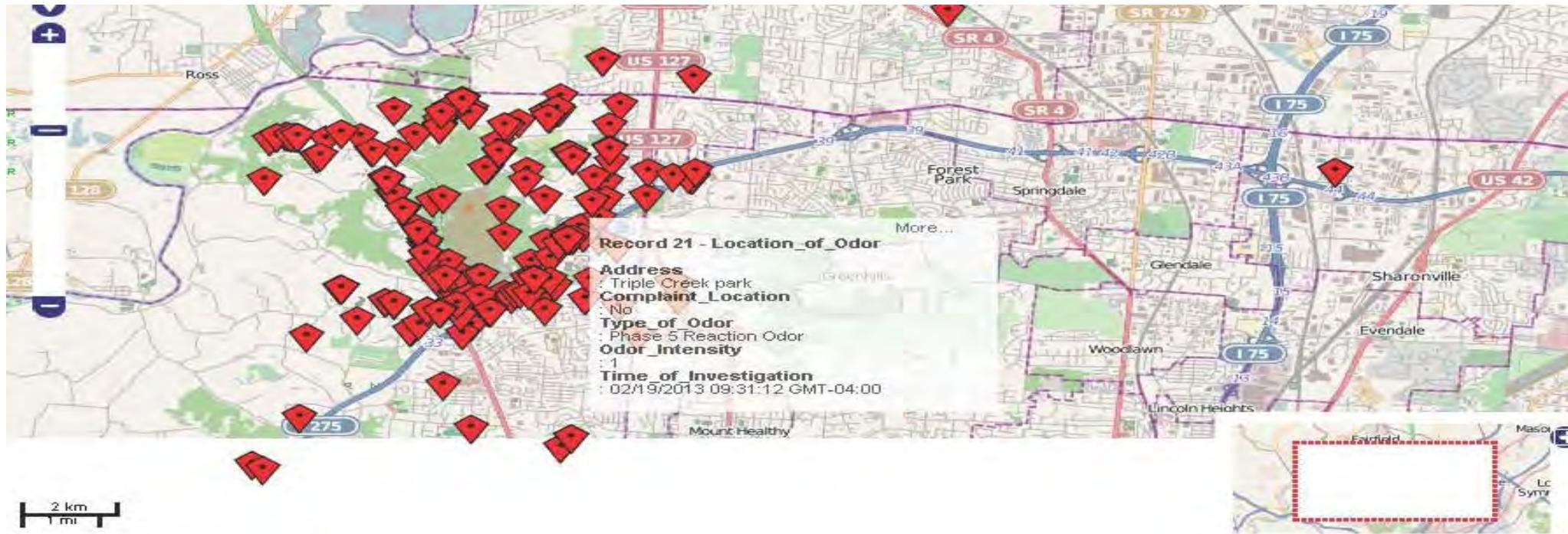


Output (Excel, CSV, HTML, Text, PDF, KML)

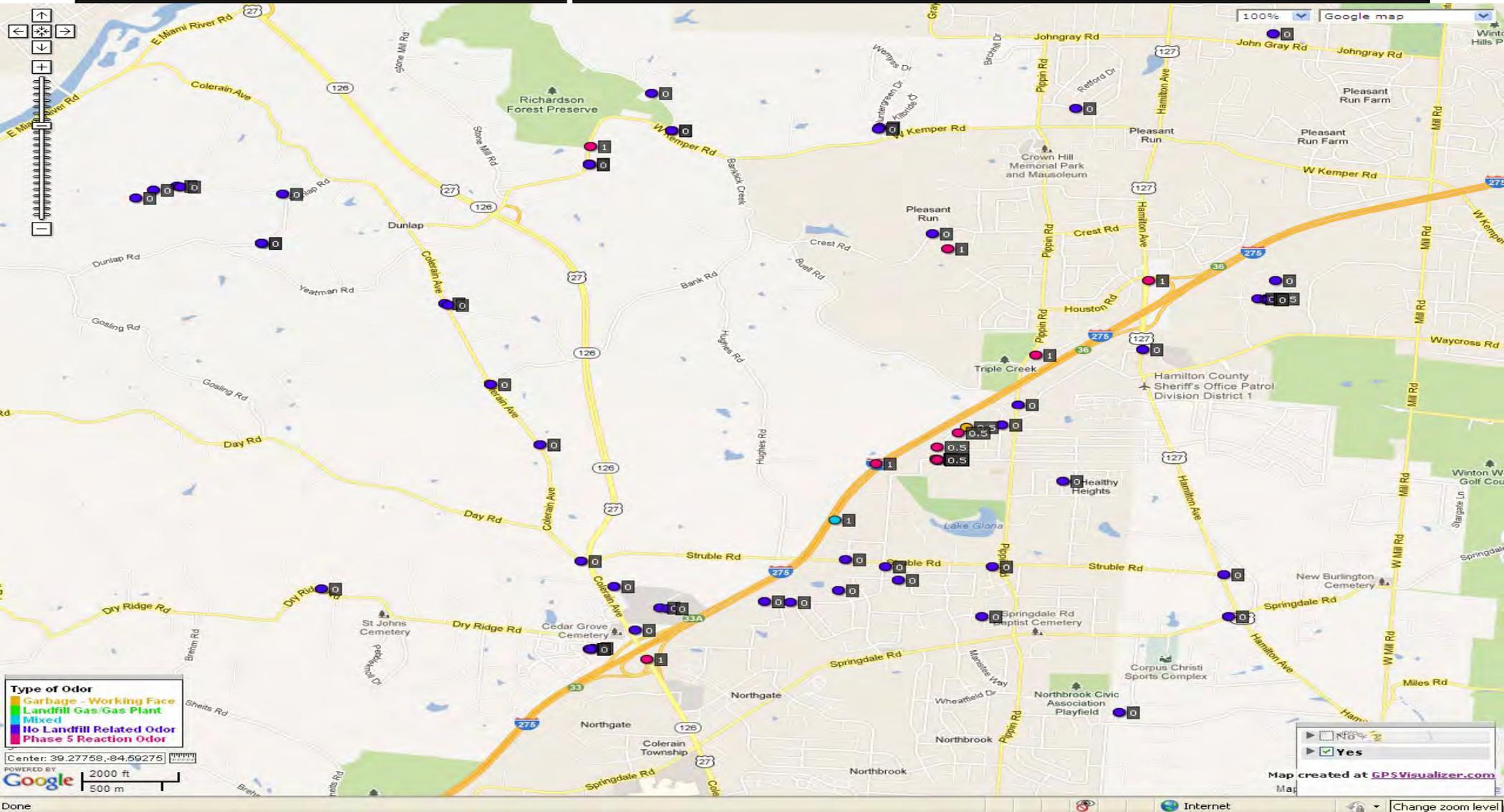
Facility Name	Investigator	Representing	Direction Wind is From	Wind Speed	Address	Complaint Location	Time From Complaint	Type of Odor	Odor Intensity 0-4 Scale	Time of Investigation	Deodorizer	Comments and Corrective Measures
Rumpke Sanitary Landfill 10795 Hughes Road	Tony Schoenlein	HCPH	East 90	Calm	11800 block of Stonemill	Yes	4 to 24 hours	No Landfill Related Odor	0	05/01/2013 09:07:09 GMT-04:00	No	
Rumpke Sanitary Landfill 10795 Hughes Road	Tony Schoenlein	HCPH	North 0/360	5-15 mph	11643 Bank	Yes	4 to 24 hours	No Landfill Related Odor	0	04/30/2013 13:21:58 GMT-04:00	No	
Rumpke Sanitary Landfill 10795 Hughes Road	Nick Siefker	HCPH	Southwest 225	1-5 mph		No		No Landfill Related Odor	0	04/29/2013 13:29:32 GMT-04:00	No	Surveillance started at 12:45 pm.
Rumpke Sanitary Landfill 10795 Hughes Road	Chuck DeJonckheere	HCPH	Southeast 135	1-5 mph	Bank and Hughes	Yes	4 to 24 hours	No Landfill Related Odor	0	04/29/2013 08:34:42 GMT-04:00	No	
Rumpke Sanitary Landfill 10795 Hughes Road	Chuck DeJonckheere	HCPH	Southeast 135	1-5 mph	Pippin at Houston	No		Garbage - Working Face	0.5	04/29/2013 08:15:01 GMT-04:00	Yes	Slight garbage odor with deodorizer. Also skunk odor south on Pippin to Buell.
Rumpke Sanitary Landfill 10795 Hughes Road	Nick Siefker	HCPH	Southeast 135	1-5 mph	10240 Colerain Ave - Walmart	Yes	4 to 24 hours	No Landfill Related Odor	0	04/26/2013 15:40:19 GMT-04:00	No	
Rumpke Sanitary Landfill 10795 Hughes Road	Tony Schoenlein	HCPH	West 270	5-15 mph		No		No Landfill Related Odor	0	04/25/2013 13:48:59 GMT-04:00	No	Investigation initiated at 1:00pm



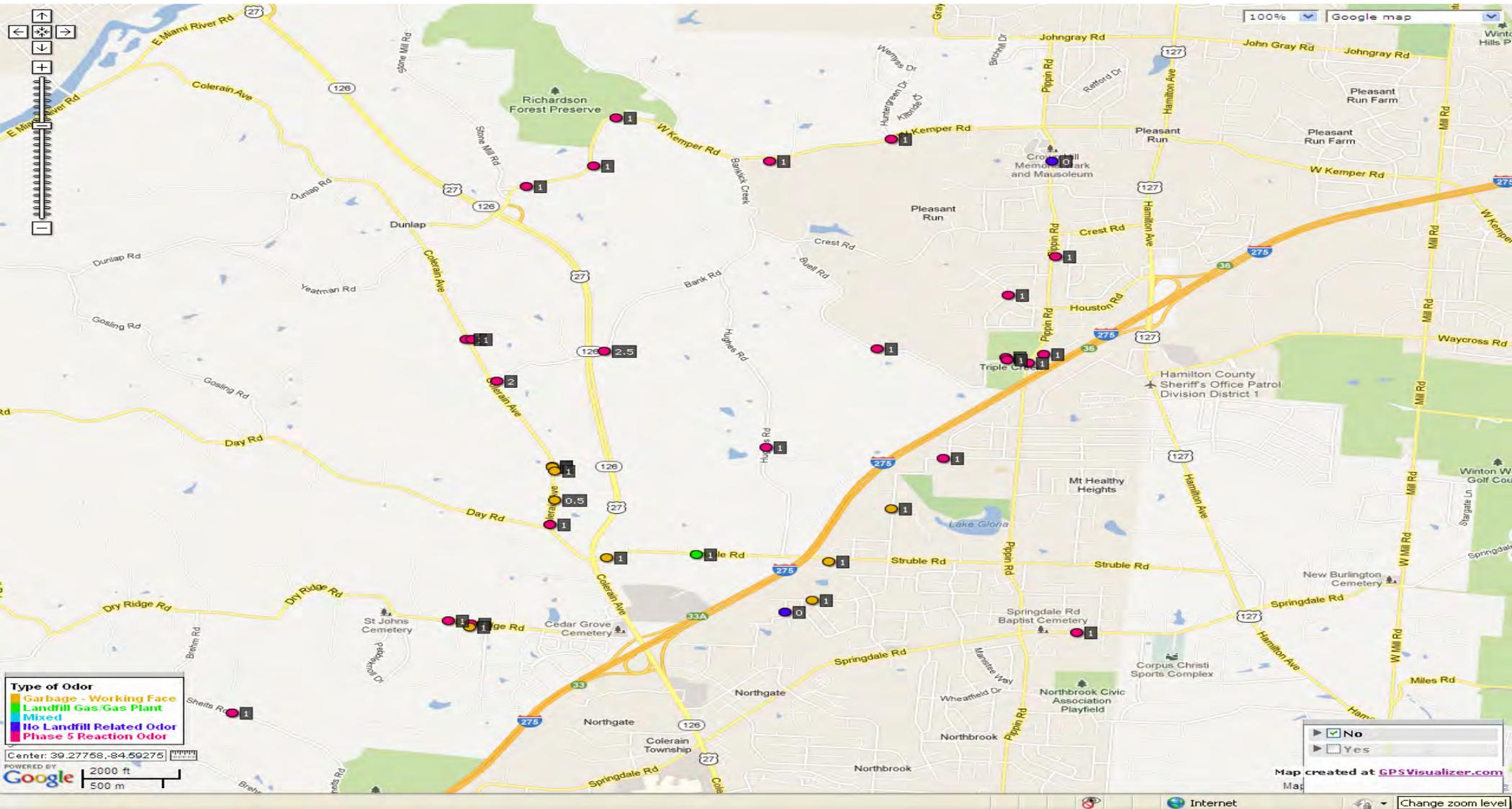
Web Application Mapping



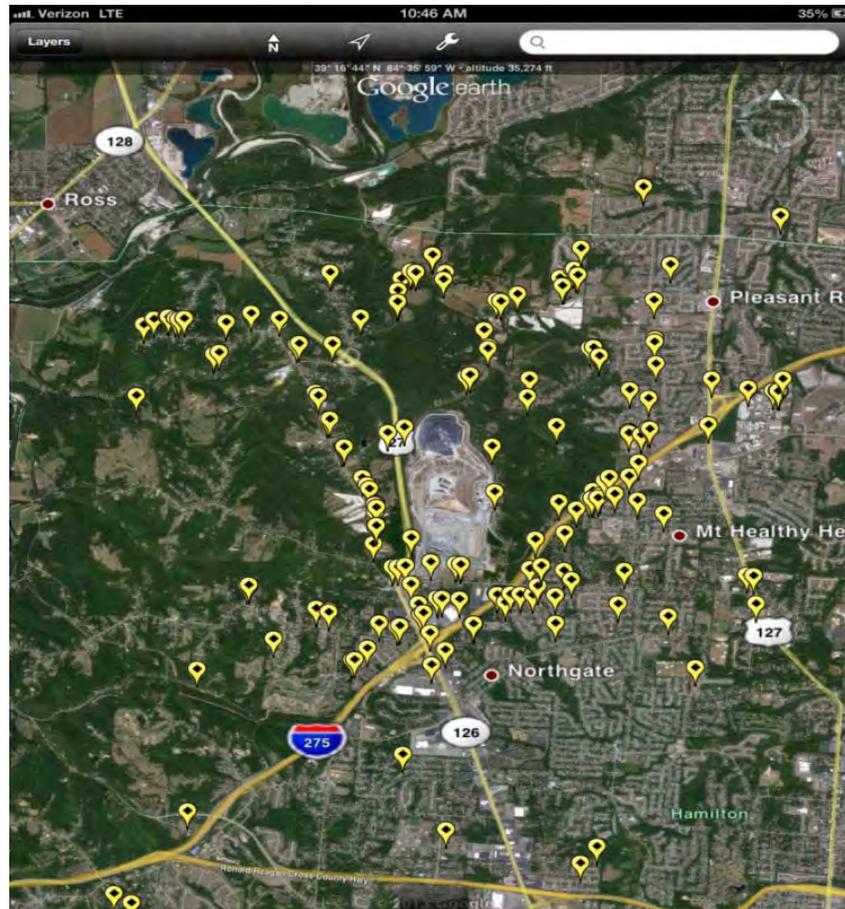
Complaint Locations



Surveillance



Google Earth



Verizon LTE 10:46 AM 35%

Layers

39° 16' 44" N 84° 35' 59" W altitude 35,274 ft

Google Earth

Record 151 - Odor_Report

Record 151 - Odor_Report

[view more...](#)

Record_Name	03/22/2013 10:2 Odor Report
Date_Created	03/22/2013 10:3
Status	
Route	Surveillance Loc
Facility_Name	Rumpke Sanitary Hughes Road

Ross Pleasant Ru
Mt Healthy Hei
Northgate
Hamilton
275 126 127
Ronald Reagan Cross County Hwy

© 2013 Google



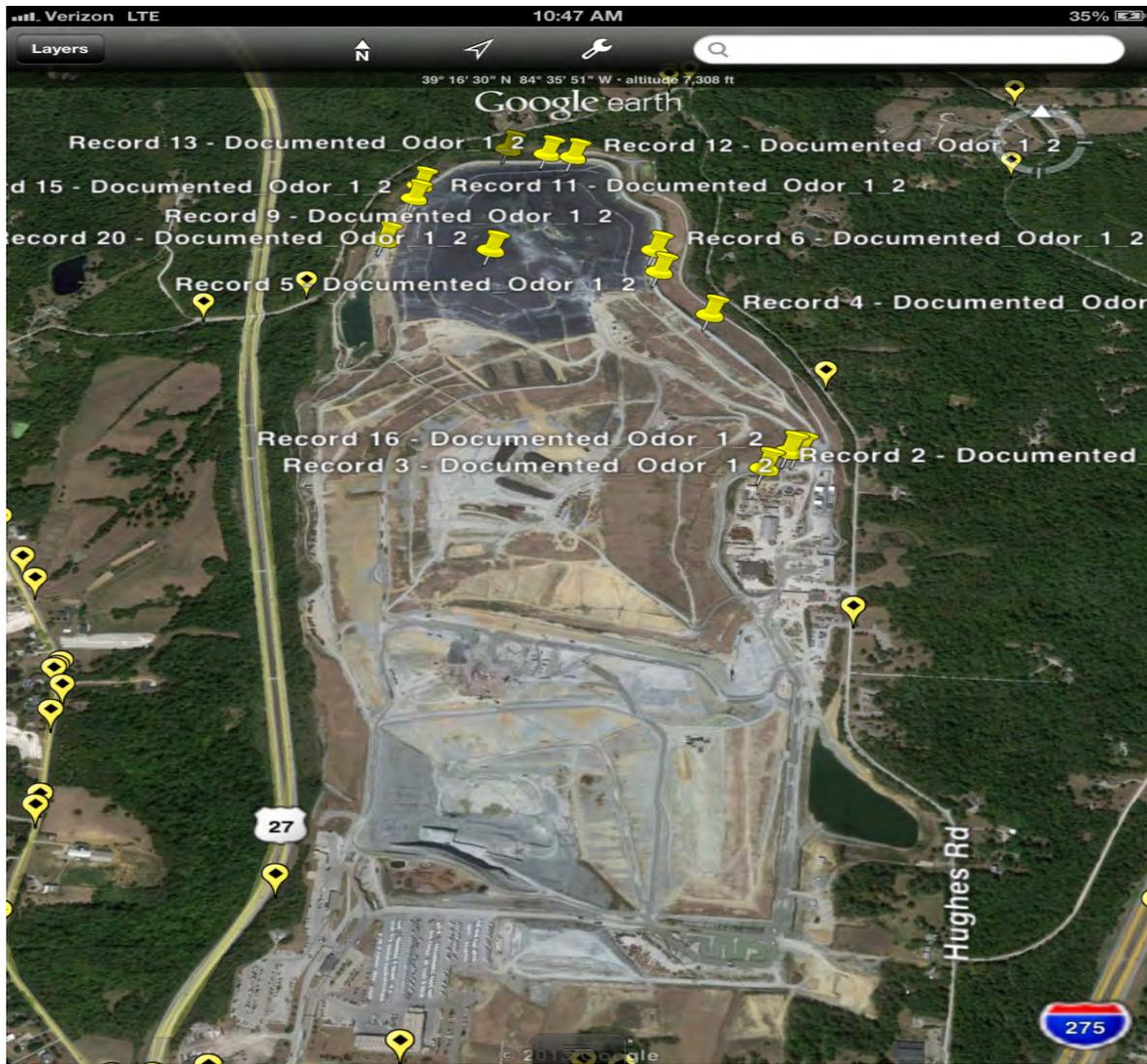
Verizon LTE 10:46 AM 35%

Record 151 - Odor_Report

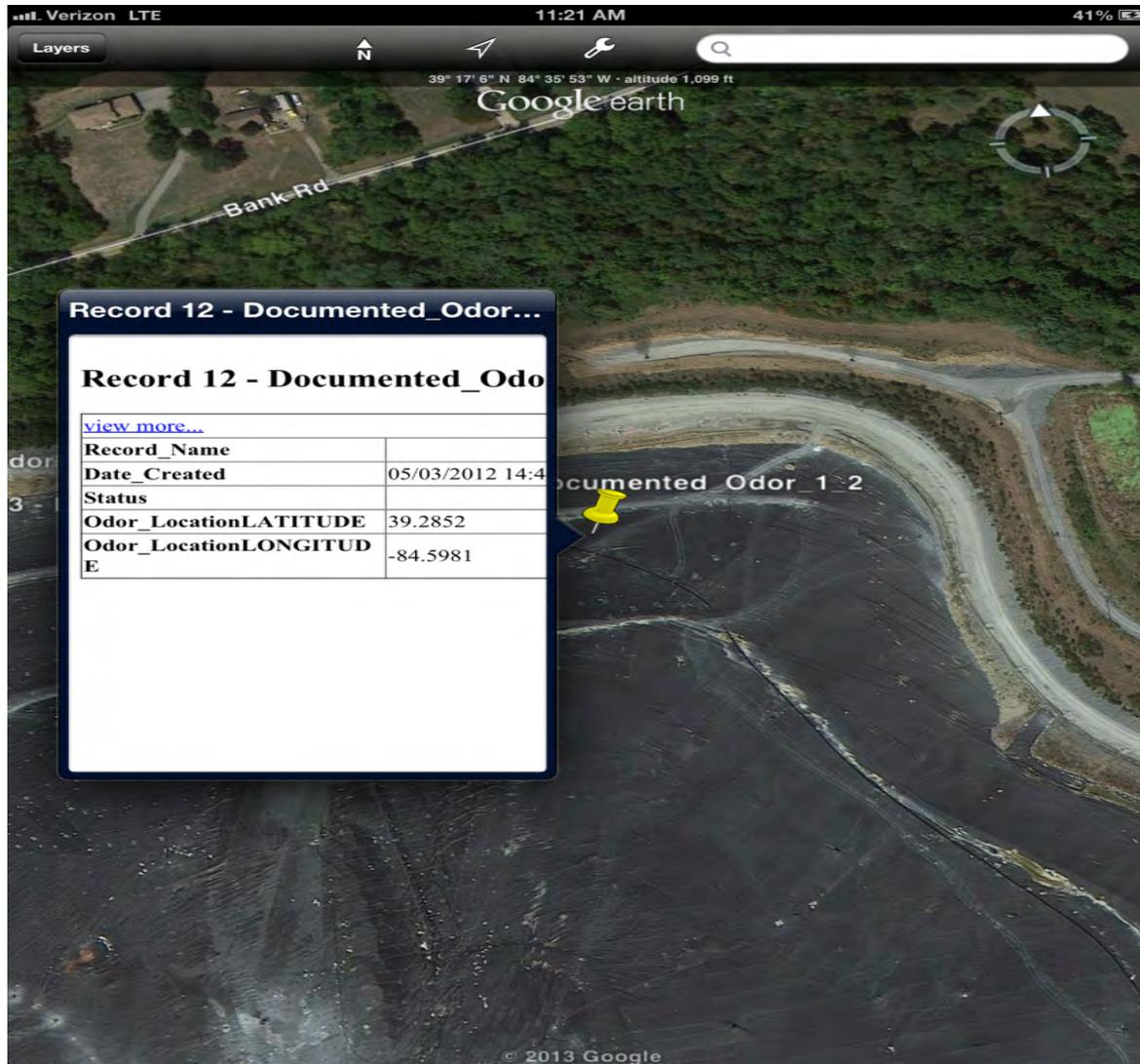
Record_Name	03/22/2013 10:21:44 GMT+04 Odor Report
Date_Created	03/22/2013 10:36:03 GMT-04:00
Status	
Route	Route
Facility_Name	Rumpke Sanitary Landfill 10795 Hughes Road
Investigator	Nick Siefker
Representing	HCPH
Weather	Clear
Precipitation	None
Winds_From	West 270
Wind_Speed	1-5 mph
Temperature	30
Humidity	59
Pressure	30.08
Area_Inspected	Surveillance Loop
Location_of_Odor	39.287678 : -84.563802 : 252.030491 : 5.0
Address	1-275 @ Hamilton ave
Complaint_Location	Yes
Time_From_Complaint	Less than 1 hour
Type_of_Odor	Phase 5 Reaction Odor
Odor_Intensity	1
Time_of_Investigation	03/22/2013 10:21:44 GMT-04:00
Deodorizer	No
Comments_and_Corrective_Measur	
Reserved	
Email	chuck.dejonckheere@hamilton-co.org; nick.siefker@hamilton-co.org; tony.schoenlein@hamilton-co.org
Form_Record	chuck1\$\$02222013162754\$\$Publishes d&&151
Mobile_Device	aglteWRvZm9ybXNyeEwsSCk1vYmlsZVVuaXQY_svVEQw
Edited_By	
Edit_Date	

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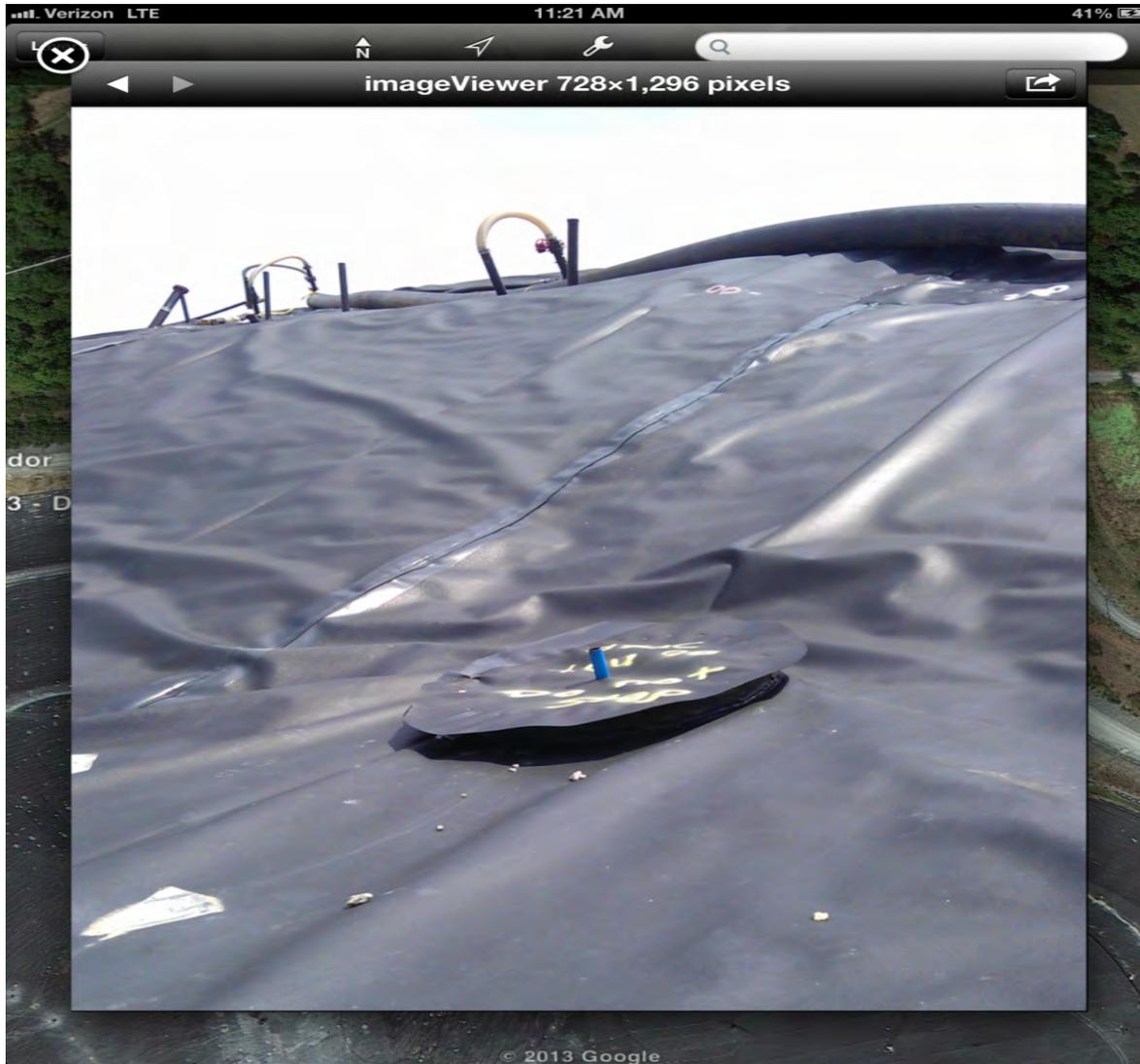
Verizon LTE 11:21 AM 41%

Record 12 - Documented_Odor_1_2

Record Name	
Date Created	05/03/2012 14:44:34 GMT-04:00
Status	
Odor Location	39.2852 ; -84.5981 ; 226.9 ; 4.0
Type of Odor	Phase 5 Odor
Odor Intensity	3
VOC Reading	44000
Other Readings	
Photo 1	View
Photo 2	
Noteworthy Observations	Gas plant valve in phase 5 north end
Form Record	chuck1SS02152012133625SSPublishe d&&12
Mobile Device	agIteWRvZm9ybXNyEwsSCk1vYmis ZVVuaXQY7O2hAgw
Edited By	
Edit Date	

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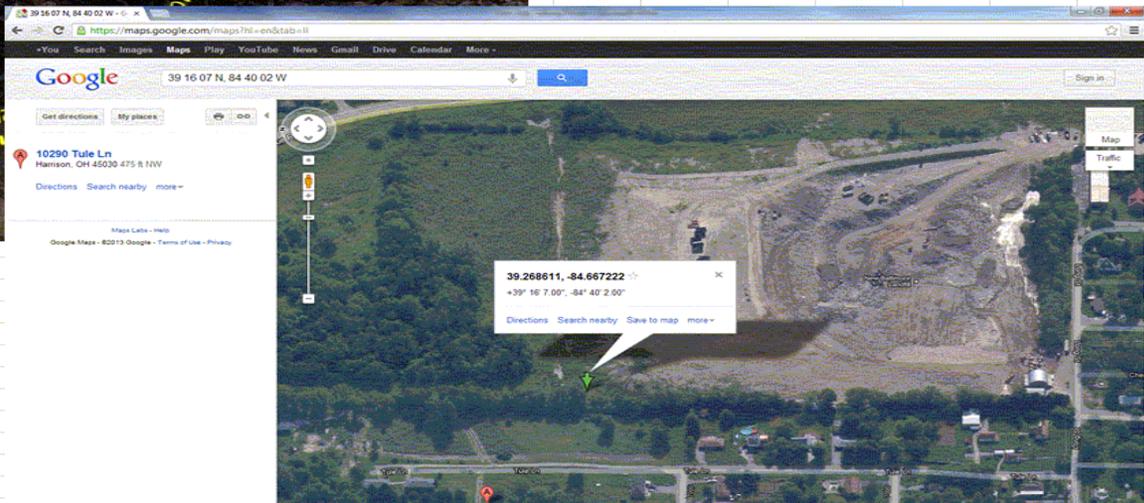
Other Applications

- Spyglass
- Trimble MyTopoPro
- PDF Viewers
- Facetime

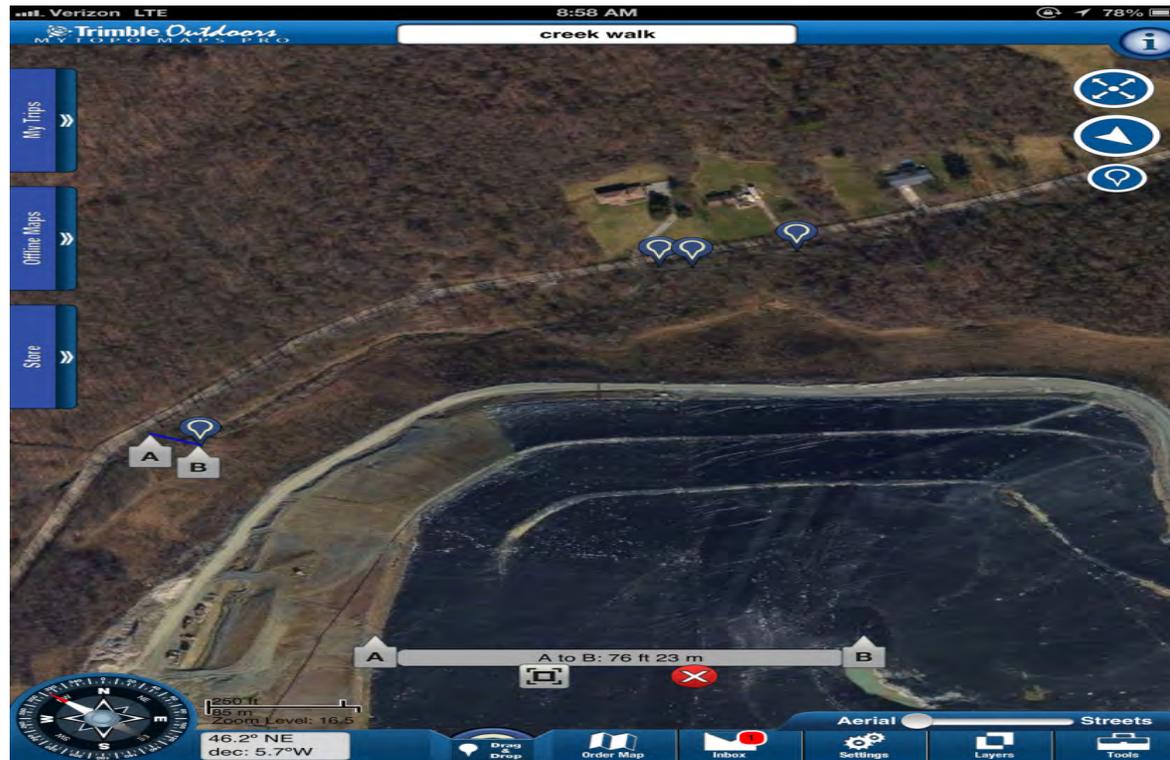


2013.04.16 14:08:40
92° E Δ+6' 1636
<<<< >>>>

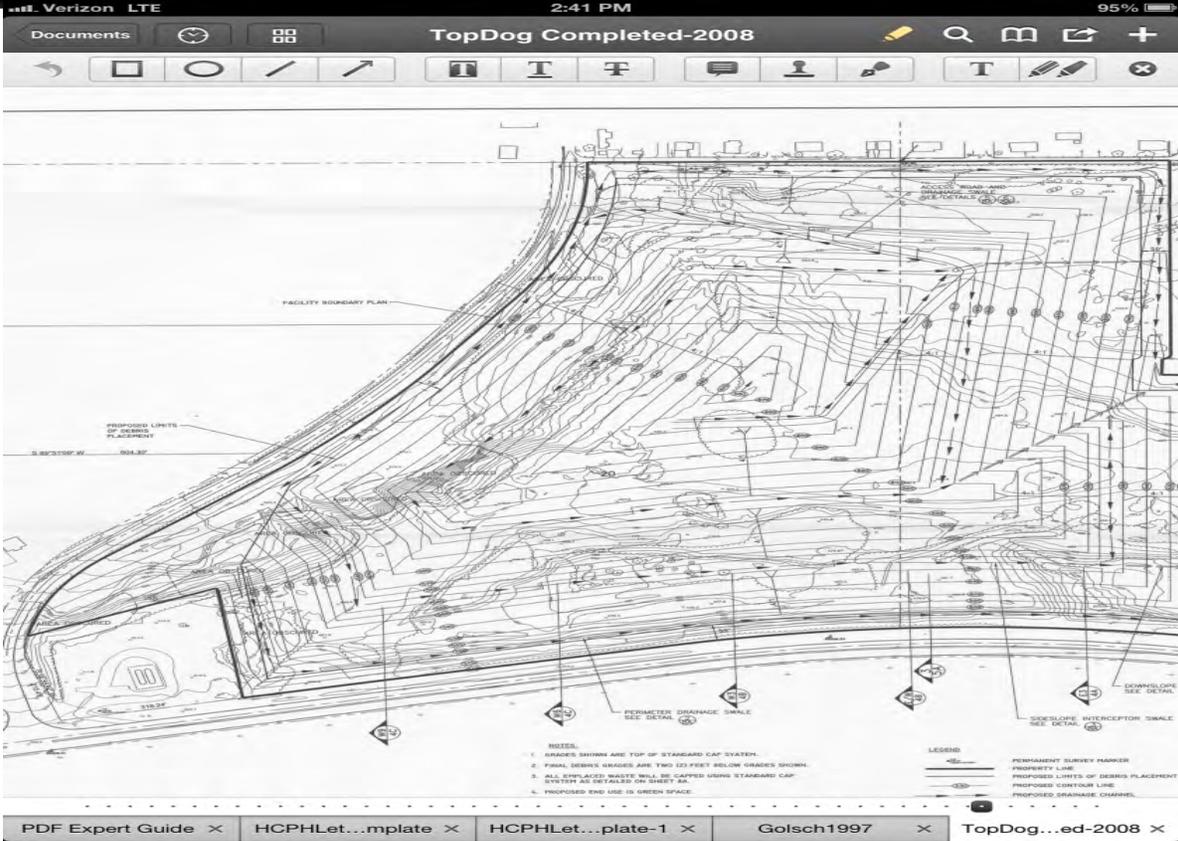
39° 16'07" N 84° 40'02" W
165GJ0122549183
586 ft



Questions ???



Questions ???



Questions ???



HAMILTON COUNTY
PUBLIC HEALTH

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