

# Today's Agenda

## 1) Introductions

- Darla Peelle, Ohio EPA Columbus
- Handouts

## 2) Ohio EPA presentation

- Joleen Cook, Ohio EPA Southwest District Office

## 3) Hamilton County presentation

- Brad Miller, Hamilton County DOES

## 4) Availability Session

- Questions / Answers

# Rumpke Sanitary Landfill

## Update



**April 1, 2010**

# Overview

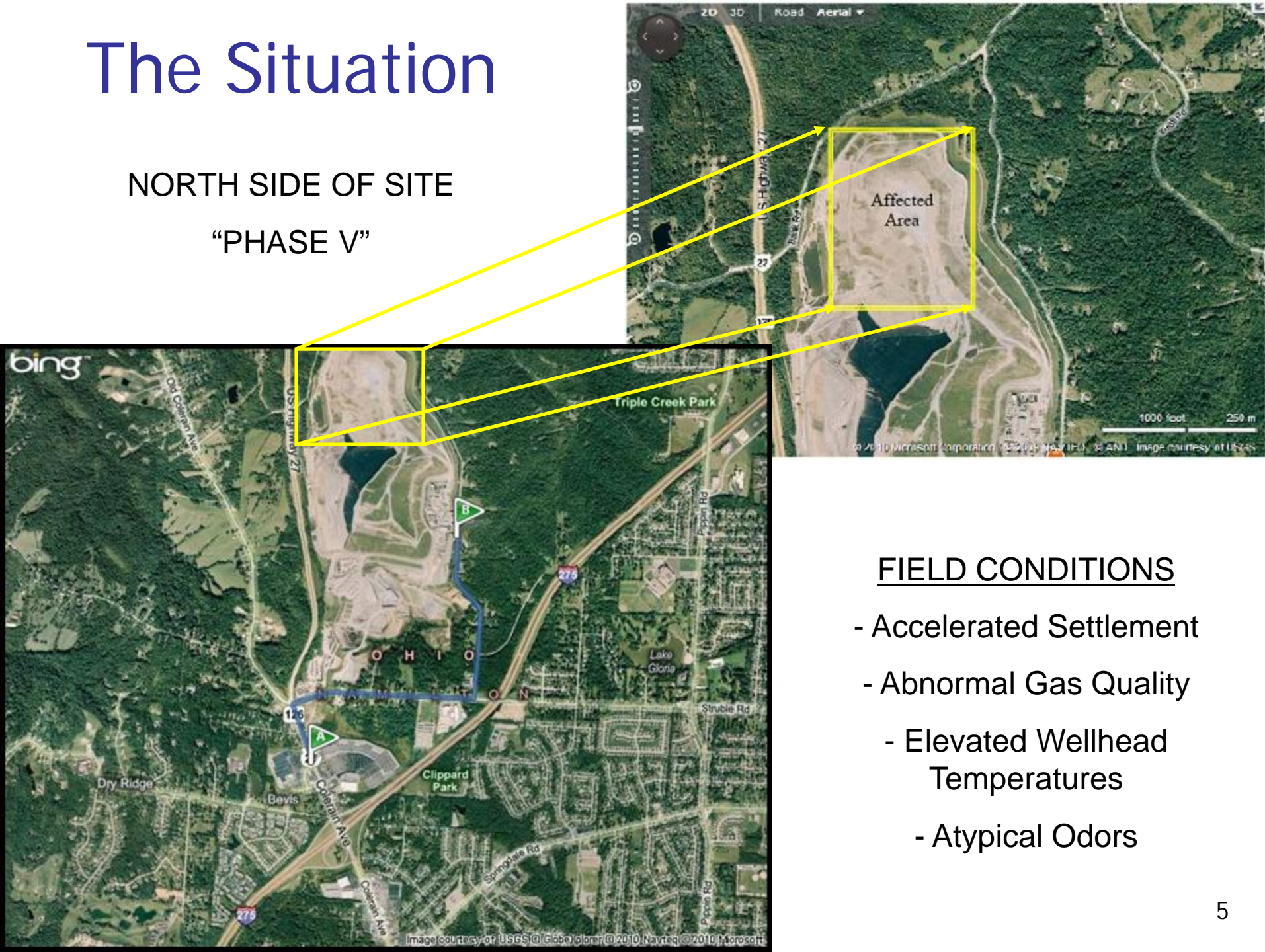
- Background
- Situation
- Response
- Community Air Monitoring
  - Brad Miller, Hamilton County
- Questions
- Availability session

# Chronology

<b>EVENT</b>	<b>DATE</b>
Elevated temps, abnormal gas reported (>149F, methane < 50%)	8/31/09
Initial response plan submitted	9/17/09
Draft action plan	12/1/09
Flare interruption	3/4-5/10
Final action plan / orders	3/18/10

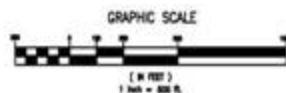
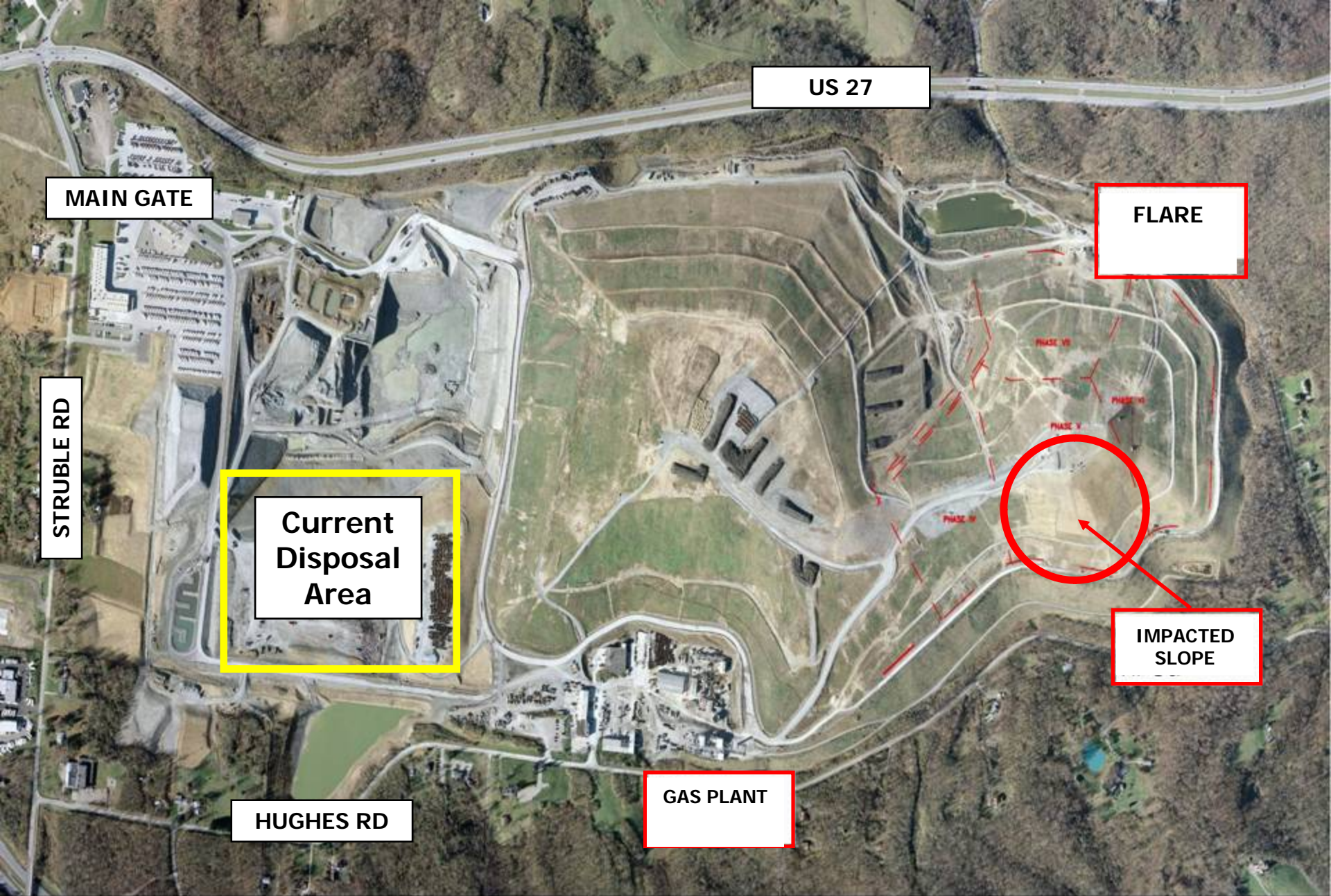
# The Situation

NORTH SIDE OF SITE  
“PHASE V”

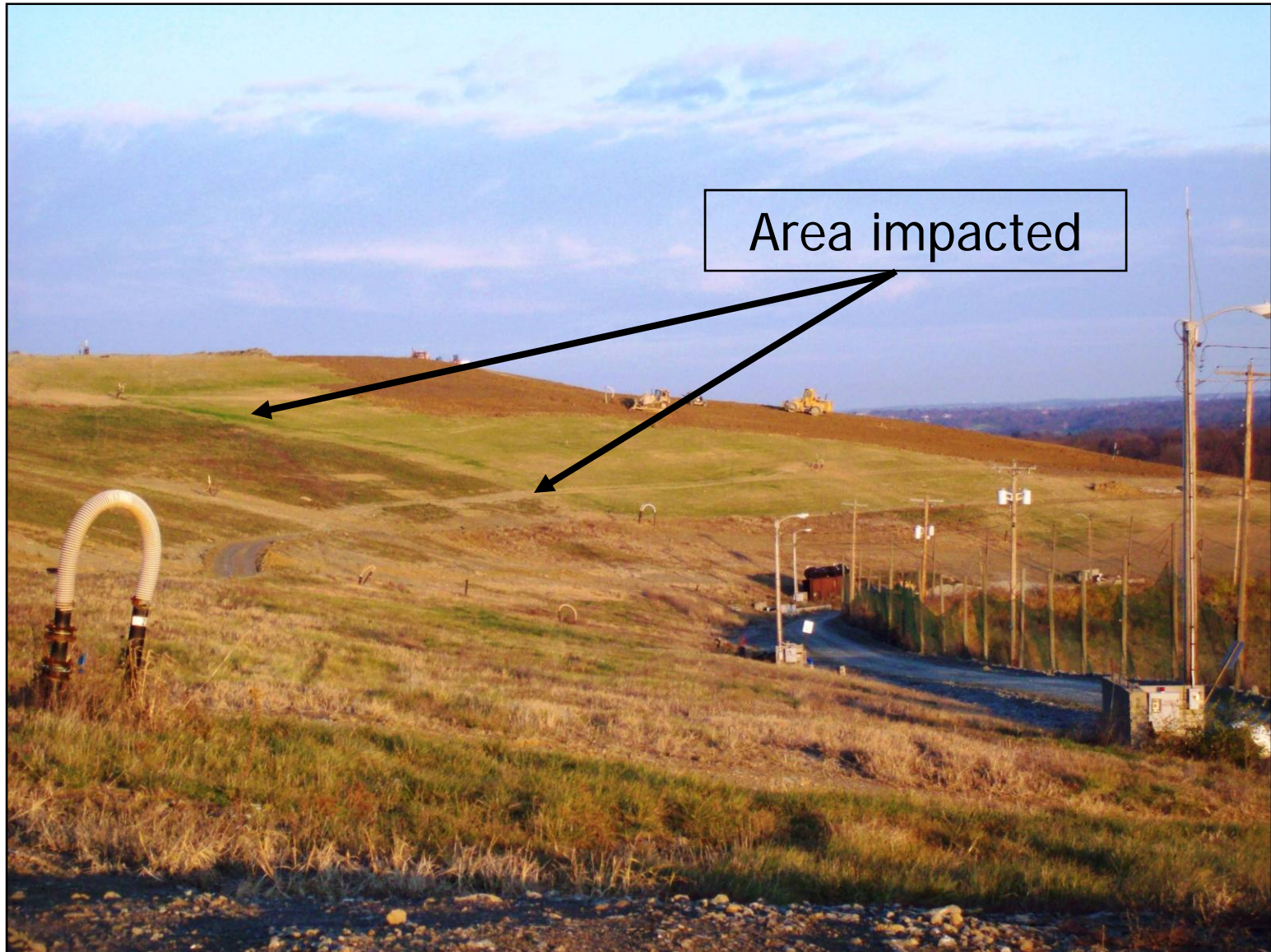


## FIELD CONDITIONS

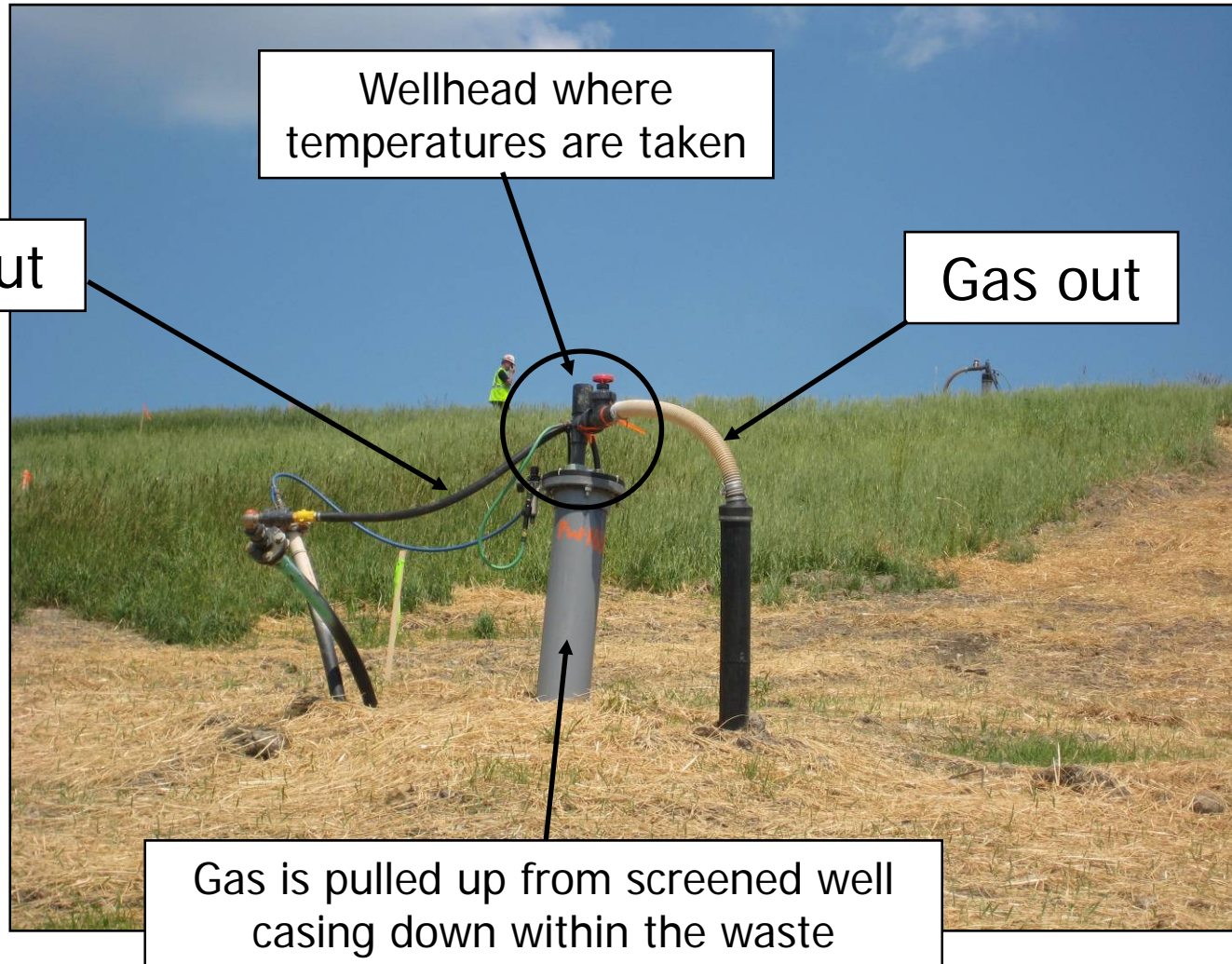
- Accelerated Settlement
- Abnormal Gas Quality
- Elevated Wellhead Temperatures
- Atypical Odors



# 'Phase V' Area



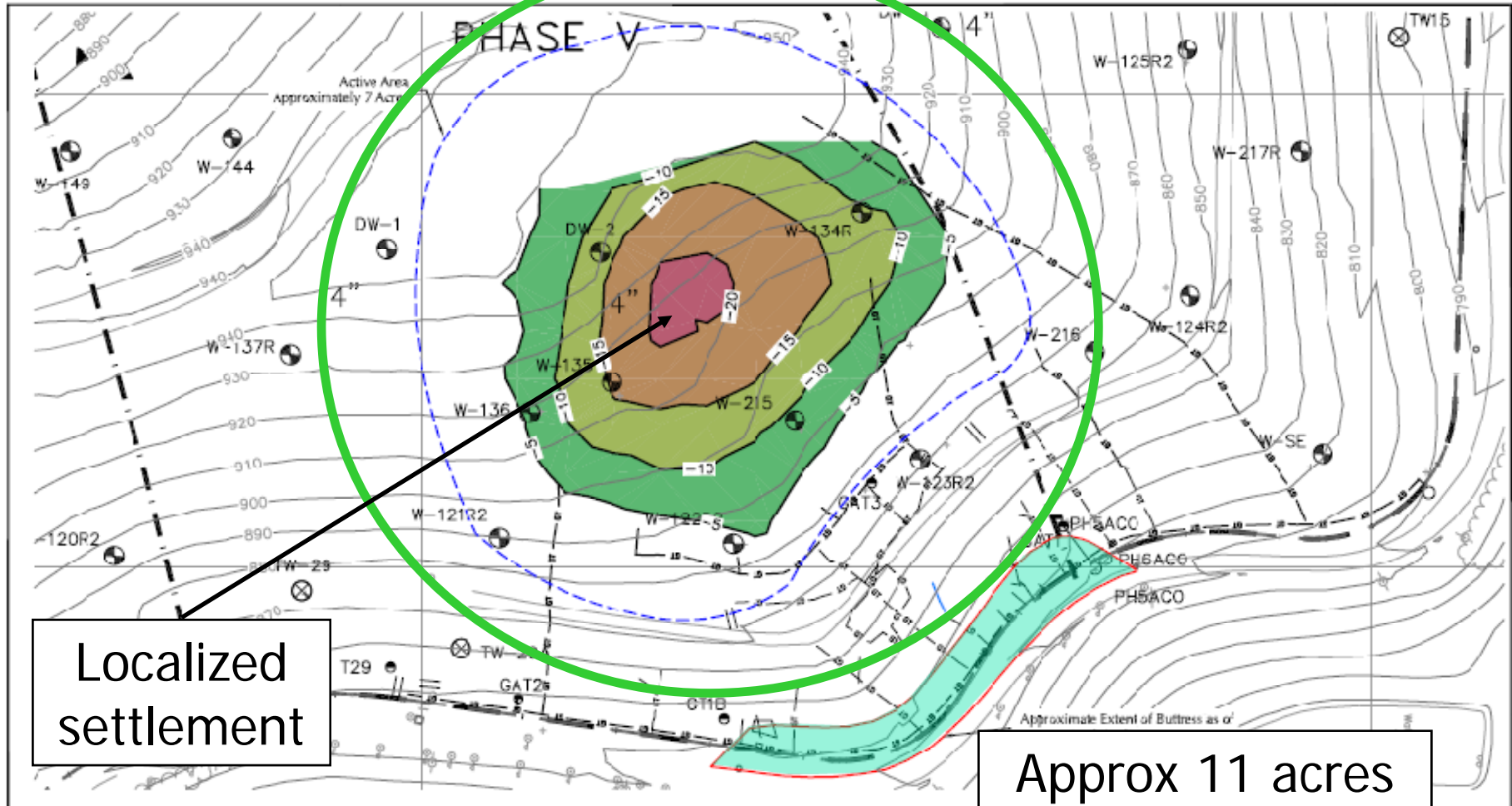
# Gas Extraction Well



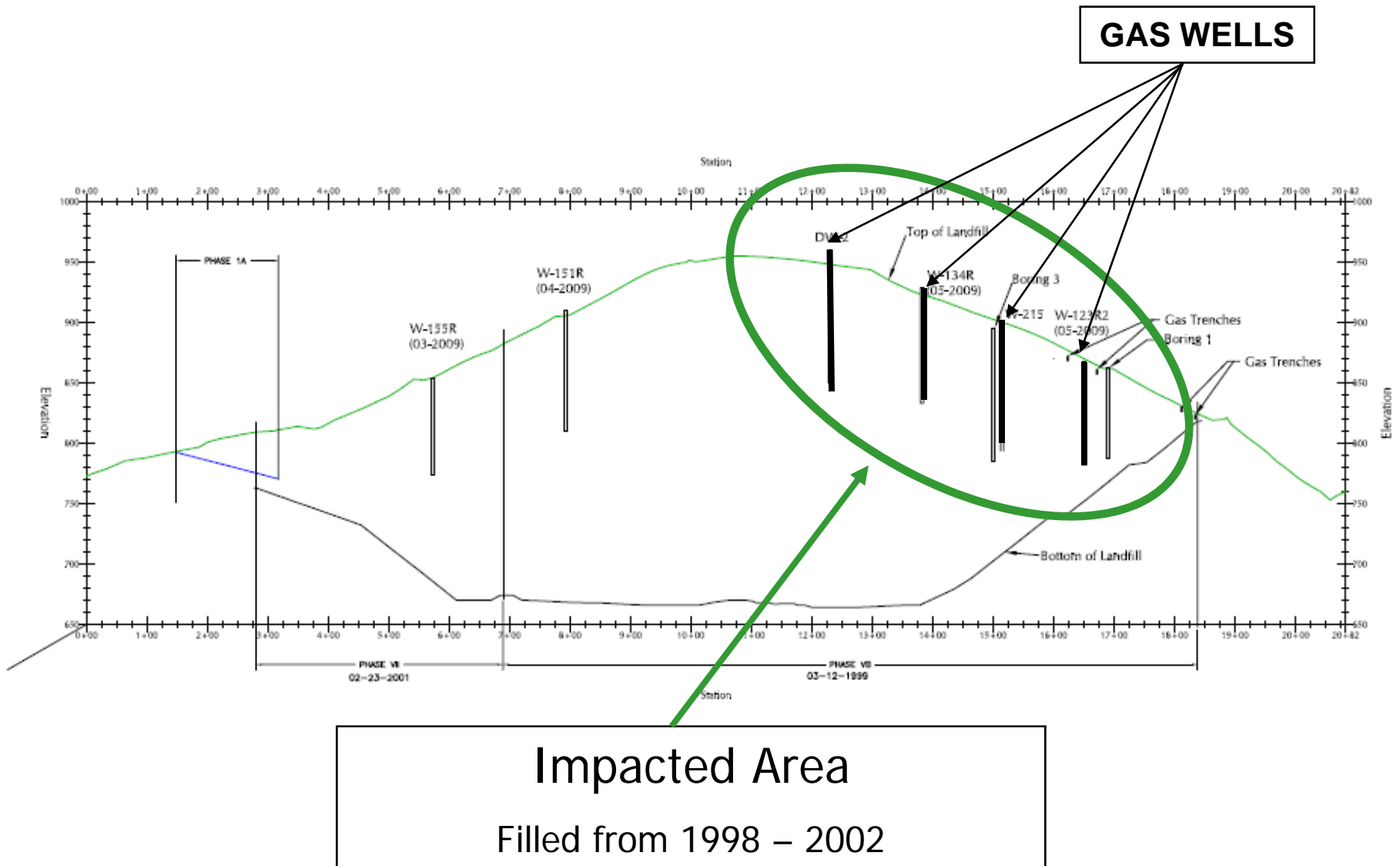
<u>Odor Complaints</u>	<u>Year</u>
106	2008
121	2009
150+	2010 (to date)

- Usually garbage odors
- In 2010, change to gas odors (primarily from Phase V)
- Spike in complaints and intensity during flare interruption (47 in 1 week)
- Air monitoring conducted by HCDOES during odor complaint responses & odor events
- All air sampling results to date are below regulatory & health-based levels for targeted air pollutants

# Abnormal Settlement



# Landfill Cross Section



# The Response

- 'Team Rumpke'
  - Ohio EPA, Hamilton County (DOES & PH), Colerain Township FD, US EPA Region 5, Rumpke, GSF Energy
  - Developed action plan
  - Weekly meetings, daily site monitoring
- Director's Final Findings and Orders (3/18/10)
  - Enforcement of action plan
  - \$98,000 penalty
    - Elevated temps in gas extraction wells
    - Does not preclude future enforcement

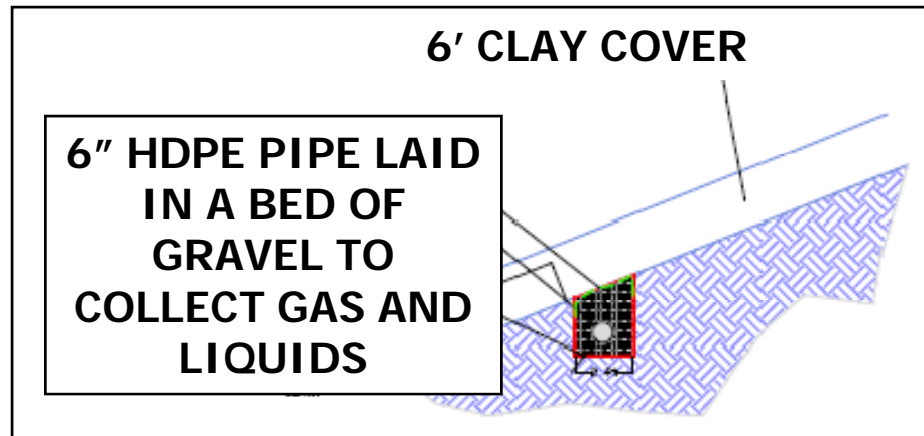
# Action Plan Goals

- Ensure health & safety of workers/public
- Control offensive odors
- Maintain structural integrity
- Closely monitor area
- Prevent spread of fire & return area to normal
- Prepare for emergency situations
- Ensure compliance

# Response Update

- Odor Control
  - Additional clay
  - Gas, leachate, & condensate removal
  - Masking agents
  - Temporary plastic cover
- Stabilize & monitor slope
- Daily inspections, upkeep
- Sampling & analysis
  - Gas, leachate, temps, waste

# Gas Collection Trench



Trenches installed  
on side slope in  
impacted area

# Odor Control

Misting systems



Trailer

Fence line



# Odor Control



Utility flare

FLAME ONLY VISIBLE AT NIGHT



Gas Plant

\*Permit modification request in process to further enhance odor controls

# Slope Stabilization



Additional soil at base to support & stabilize area  
as a preventative measure

# Community Air Monitoring

Brad Miller, HCDOES

- On-going Efforts
  - Portable instruments
  - Canisters
  - Rapid Assessment Tool (RAT)
- Data overview

# Air Monitors

- What are we monitoring for ?
  - Carbon monoxide
  - Hydrogen sulfide
  - Volatile organic compounds (VOC's) (60+)
  - Explosive gases (methane)
  - Instantaneous
- When & where ?
  - 2x / week at 17 locations
  - 15 + canisters in last 6 months

# Existing Air Monitoring Station

Corner of  
Struble Road  
& Colerain  
Avenue

Monitors  
for  
particulate  
matter



# Portable Instruments

**SUMMA Canister**



**ppb RAE**



**Multi-gas**



These instruments  
are used to  
monitor air quality

# SUMMA Canisters



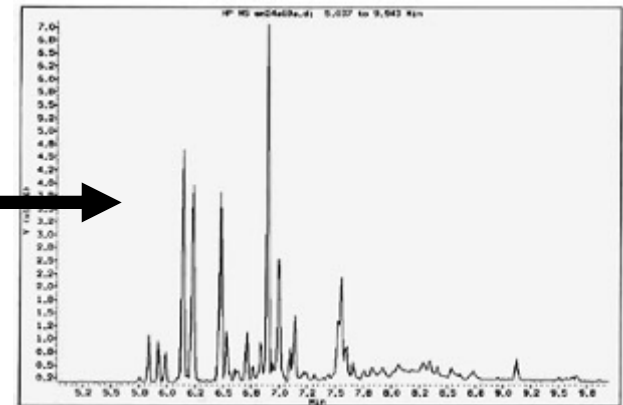
## STEP 1

Collect  
gas in  
canister



## STEP 2

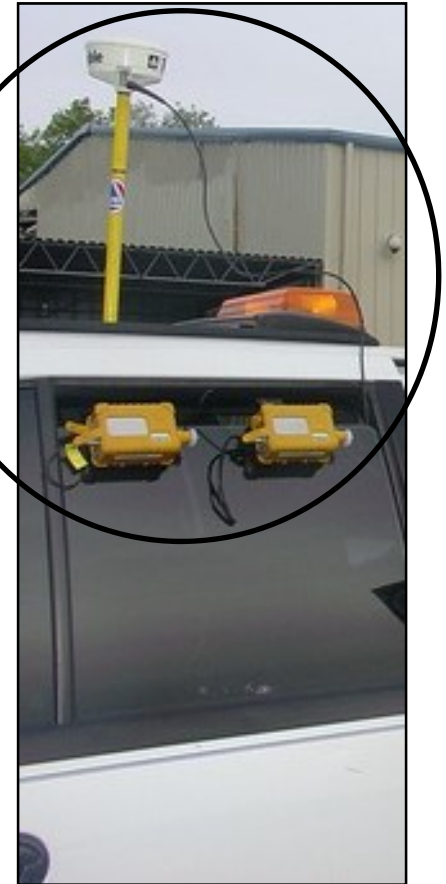
Discharge canister  
into GC/MS



## STEP 3

Interpret output

# U.S. EPA Rapid Assessment Tool (RAT)

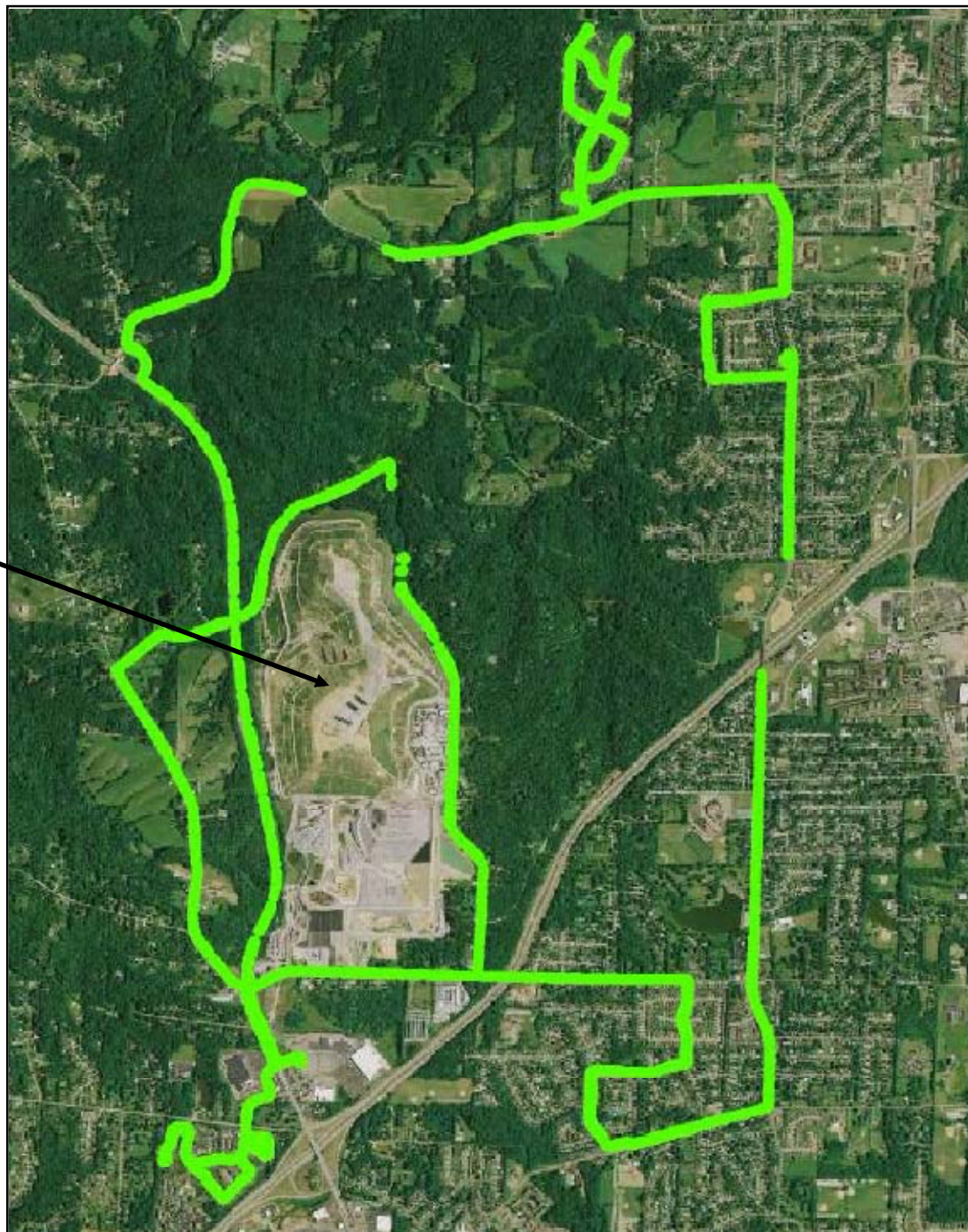


These monitors sample continuously for VOCs and H<sub>2</sub>S and instantly map results

# RAT Results

RSL

Latest route  
3/5/10



All levels  
of  
VOC & H<sub>2</sub>S  
< 1ppm

# Summary

- All air sampling results to date are below regulatory & health-based levels for targeted air pollutants
- A new fixed monitoring station will take 24-hour samples every 6 days

# Odor Complaints

- Please contact Hamilton County DOES
  - Phone (24 hours)
    - **513-946-7777 or 800-889-0474**
  - Web (online form)

**<http://www.hcdoes.org/airquality/webpages/complaints.htm>**



# Next Steps

- Contain & control strategy
  - Action plan
  - Monitoring
- Communication
  - Website, fact sheets, updates
- Coordination
  - Team Rumpke

# Temporary Cover



To be deployed over impacted area

# Information – Fact Sheet

## Contact names

### Contact Information

For additional information, please contact:

Citizen Contact:

**Darla Peelle**

Ohio EPA, Public Interest Center  
50 W. Town St., Suite 700  
Columbus, OH 43215  
Phone: (614) 644-2160  
[darla.peelle@epa.state.oh.us](mailto:darla.peelle@epa.state.oh.us)

Media contact:

**Heather Lauer**

Ohio EPA, Public Interest Center  
50 W. Town St., Suite 700  
Columbus, OH 43215  
Phone: (614) 644-2160  
[heather.lauer@epa.state.oh.us](mailto:heather.lauer@epa.state.oh.us)

Ohio EPA

[www.epa.ohio.gov/portals/27/enforcement/year\\_2010/RumpkeSanitaryLandfill\\_031810.pdf](http://www.epa.ohio.gov/portals/27/enforcement/year_2010/RumpkeSanitaryLandfill_031810.pdf)

U.S. EPA

[www.epaossc.net/rumpkelandfill](http://www.epaossc.net/rumpkelandfill)

Hamilton County Department of Environmental Services  
<http://www.hcdoes.org/>

## Web sites



Environmental  
Protection Agency

April 2010

## Rumpke Landfill – Hamilton County

The Rumpke Sanitary Landfill (Rumpke) is a municipal solid waste facility that accepts construction/demolition debris, industrial and residual wastes. This Rumpke facility is more than 500 acres in size, with more than 330 acres permitted for waste disposal. It is located at 10795 Hughes Road, Colerain Township.

Rumpke is permitted to receive up to 10,000 tons of waste per day and operates 24 hours a day. The landfill was designed and constructed with best available technology, which includes a clay and synthetic liner system, leachate collection system and landfill gas collection and control system. The gas collection system consists of approximately 200 landfill gas wells which are routinely monitored for temperature and gas quality.

GSF Energy, LLC has continuously operated a landfill gas (LFG) processing facility at Rumpke since the mid 1980's. The first plant began operation in 1986, a second plant was added in 1995 and a third plant came on-line in 2007. The three plants have the capacity to process approximately 15 million cubic feet of landfill gas which is put directly into the local utility pipeline for consumer use.

### Situation

In the fall of 2009, Rumpke reported elevated temperatures and poor gas quality in the gas extraction wells. Excessive settlement on the surface of the northeast corner of the landfill (referred to as the "affected area") was reported in late 2009. Rumpke immediately contacted and began working with the Hamilton County Department of Environmental Services (HCDOES), Hamilton County Public Health (HCPH), Colerain Township Fire, Ohio EPA and U.S. EPA on a response plan.

Experts from local, state and federal agencies are working with Rumpke to implement an action plan designed to monitor and control the abnormal conditions in the affected area. This action plan was approved on March 18, 2010. Prior to this date, response actions were taken to minimize the impact of the situation on the local community. Response actions included: installation of a buttress to stabilize and prevent potential slope movement and odor control measures.

### Odors

Odor complaints have been on the rise since the fall of 2009 and early 2010. On March 4 and 5, 2010, a utility flare used to combust landfill gases was not operational due to liquid being drawn into the system. While the utility flare was down, numerous odor complaints were logged with HCDOES.

*If you would like to report an odor complaint, you may contact HCDOES, 24 hours a day, at (513) 946-7777 or toll free at (800) 889-0474.*

To help prevent and control odors, Rumpke has taken the following measures to date:

- placed additional clay soil on the affected area to seal it off and prevent odors;
- Installed additional gas and leachate collection and control structures;
- increased application of odor-masking spray; and,
- enhanced landfill gas, temperature and pressure monitoring throughout the affected area.

It is likely that a temporary plastic cover may be placed atop the affected area to better contain odors soon. To improve its effectiveness, gas collection trenches will be installed beneath this cover. This work may generate temporary odors during construction.

### Air Monitoring

HCDOES, U.S. EPA and Ohio EPA are conducting air monitoring onsite at Rumpke and in surrounding neighborhoods using portable instruments, canisters, fixed monitoring stations and a rapid assessment tool.

Air quality parameters being monitored include hydrogen sulfide, volatile organic compounds, carbon monoxide and methane. To date, there have been no exceedances of regulatory or health-based levels for any of the targeted air pollutants

# Contacts Here Tonight

- **Colerain Township Fire**

- Rick Niehaus

- **Hamilton County**

- Tim Ingram, HCPH
- Chuck DeJonckheere, HCPH
- Brad Miller, HCDOES
- Kerri Castlen, HCDOES

- **Ohio EPA**

- Joleen Cook
- Russ Brown
- Darla Peelle
- Pam Allen

- **US EPA**

- Paul Ruesch
- Steven Renninger

- **Press Inquiries**

- Heather Lauer, Ohio EPA

See handout for contact  
information