

## Report of Progress, August 31, 2009

Pursuant to Administrative Settlement Agreement and Order on Consent for Removal Action

Docket No. V-W-08-C-897

Countywide Recycling and Disposal Facility  
East Sparta, Stark County, Ohio  
Respondent: Republic Services of Ohio II, LLC (Republic)

**Paragraph 15.a and b Enhanced Gas Extraction and Temperature Monitoring [NOTE: THIS WORK ITEM IS SUPERSEDED BY AN ISOLATION BREAK EXCAVATION]. COMPLETED**

The Isolation Break was completed in June 2009.

In situ temperature monitoring of the FBMP thermocouple monitors were continued throughout the month; results are presented in Attachment A-2.

**Paragraph 15.c and f Capping and Stabilization. COMPLETED**

In July 2009, the last remaining temporary cap area (area referred to as the East Plateau) was completed. Regrading of intermediate soil-covered portions of Cell 1-3 was completed in August 2009. Attachment B shows the extent of capping performed in August 2009.

**Paragraph 15.e Air Monitoring and Sampling. COMPLETED**

In August, air monitoring activities continued on the Tier 3 (Stage C Fixed Continuous Monitoring) program until the U.S. EPA released Countywide from further monitoring (via email dated August 10, 2009). A summary of the results is included in Attachment C-1.

**Paragraph 15.g Aerial Infrared Imaging. COMPLETED**

July 2009 and August 2009 aerial infrared images are provided in Attachment D along with a diagram to outline the approximate coverage of the images. Both images were taken in the pre-dawn hours. The ambient air temperature during the July 2009 image was 53° F and during the August 2009 image was 64° F. Comparison of these images generally shows the same subcap warm areas attributed to subcap leachate outbreaks and transmittal of gas through subcap cracking with no large aerial changes or trends. However, temperatures in the August image are generally 10° warmer; which may be attributable to the warmer ambient temperature in August.

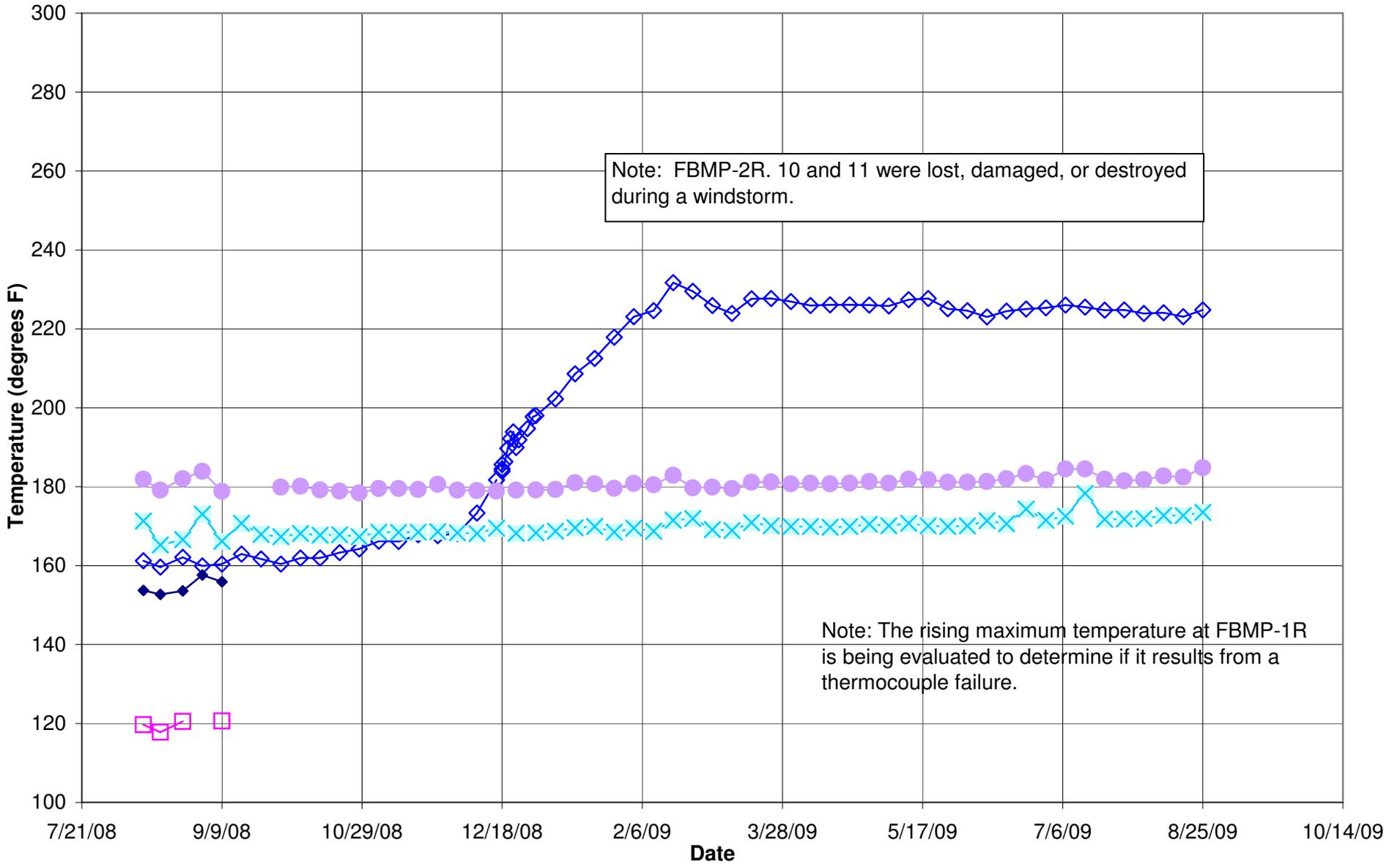
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A final site walkover was conducted by Paul Ruesch of the U.S. EPA on August 19, 2009, and the remedial work was accepted as complete. Therefore, this Progress Report will be the last monthly update, and the Final Report, documenting all of the work, will be submitted on or before October 19, 2009 (first business day following 60 calendar days after completion of work).

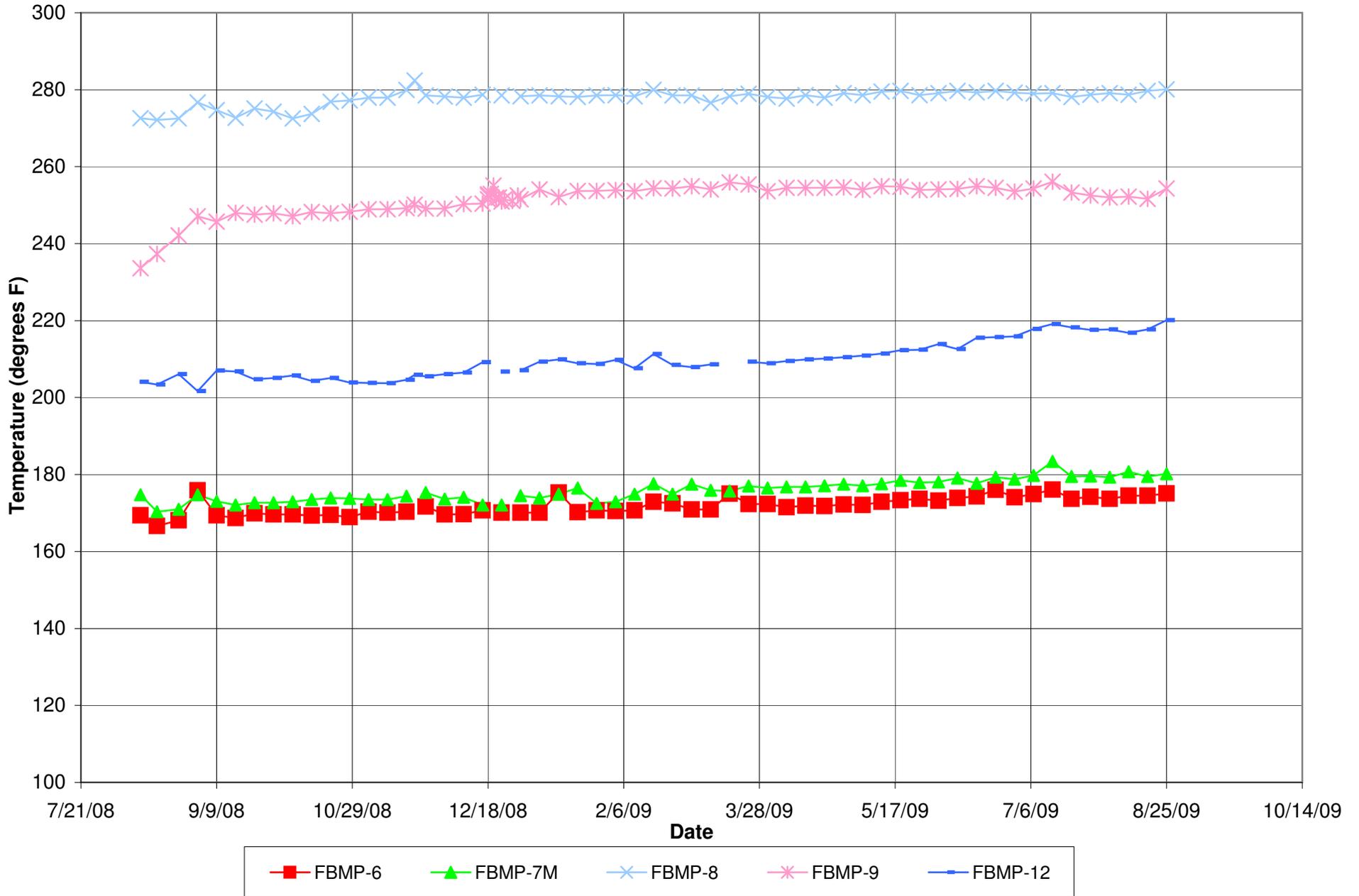
## ATTACHMENT A-2

### FBMP TEMPERATURE PROBE GRAPHS

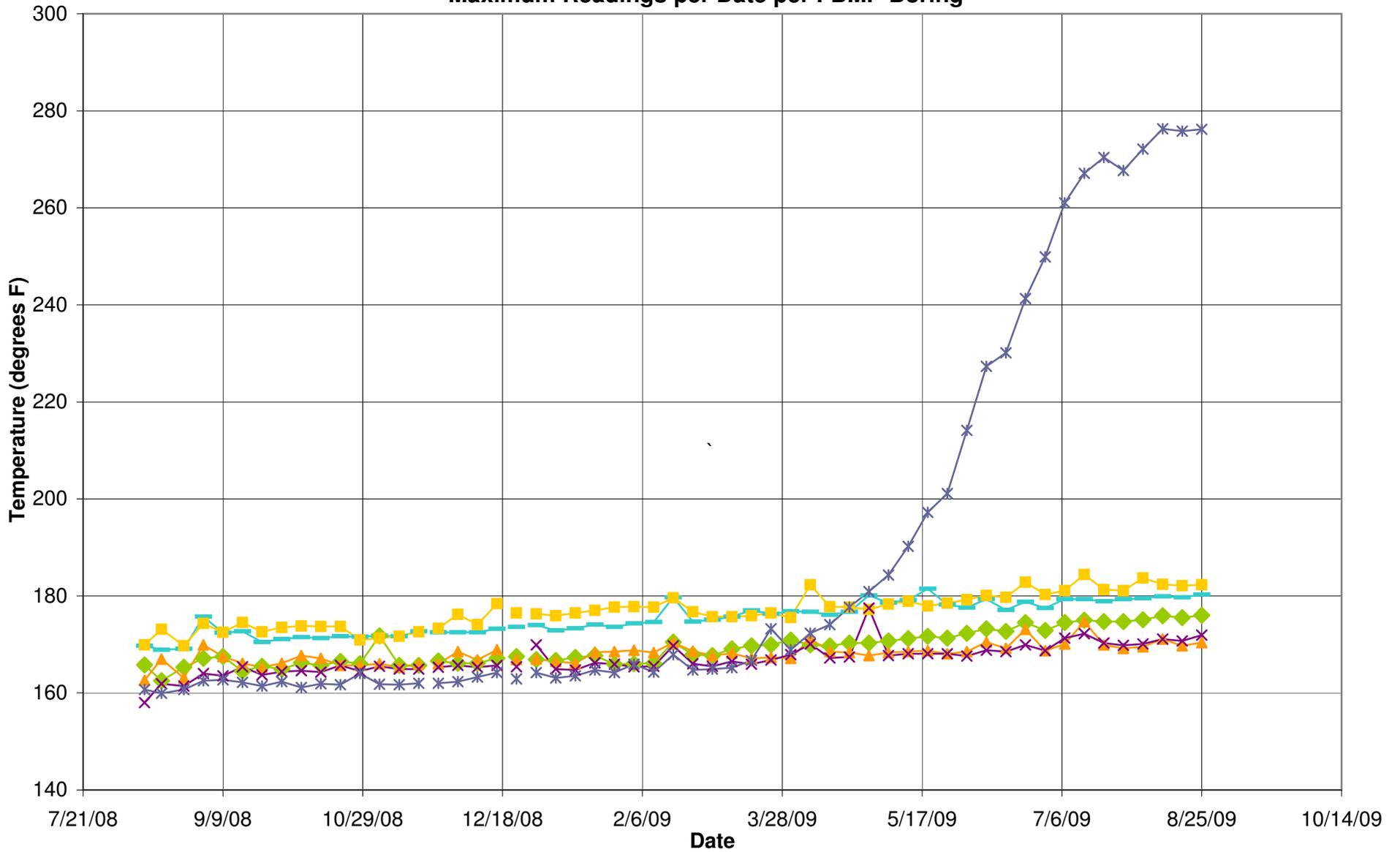
## In-situ Temperatures - FBMPs within 150 ft of the Isolation Break Excavation Maximum Readings per Date per FBMP Boring



### In-situ Temperatures - FBMPs beyond 150 ft from Isolation Break Excavation Maximum Readings per Date per FBMP Boring



### In-situ Temperatures - West Slope FBMPs Maximum Readings per Date per FBMP Boring



**ATTACHMENT B**

**CAPPING AND STABILIZATION PROGRESS**

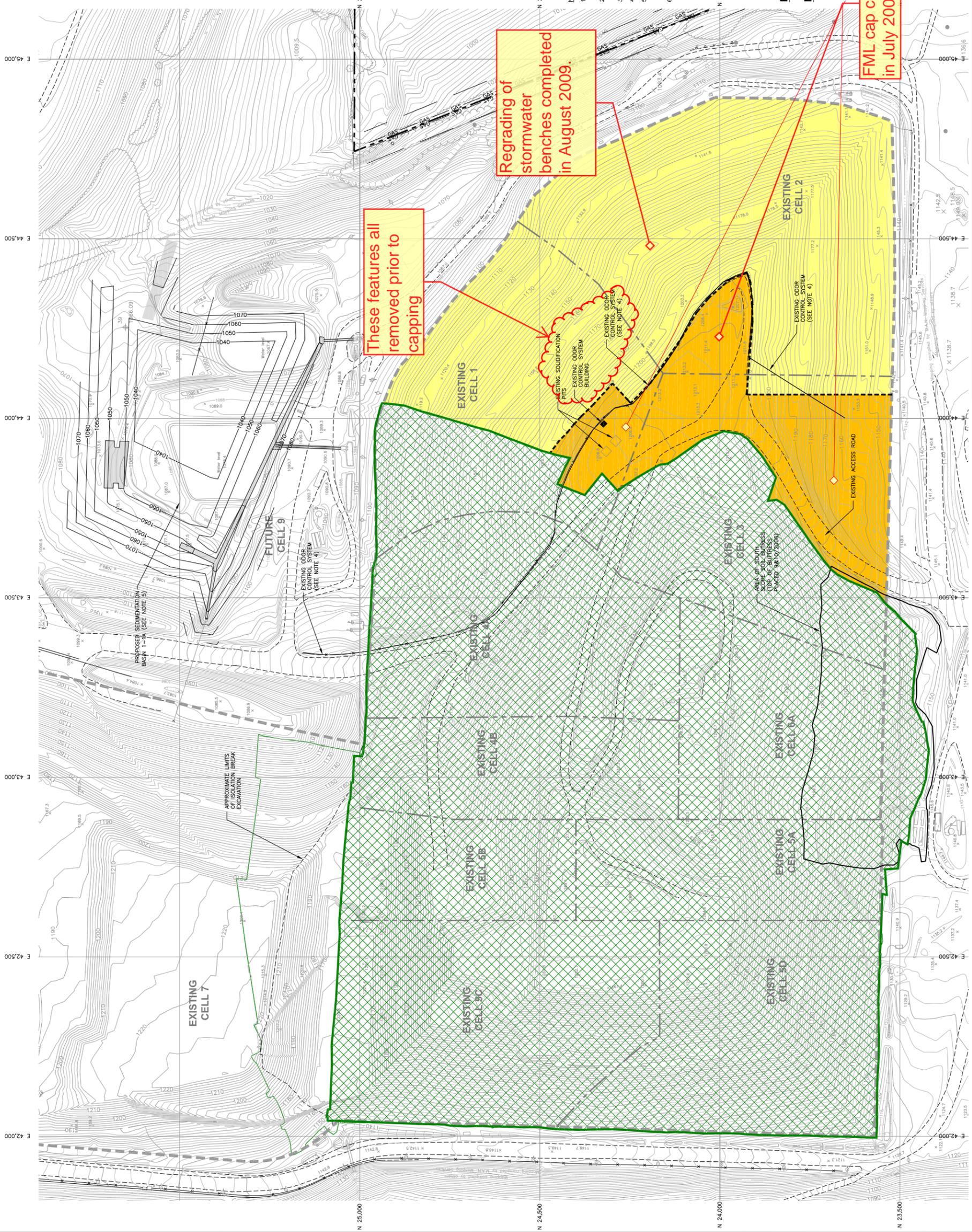


**LEGEND**

- PROPERTY LINE
- EXISTING LIMIT OF SOLID WASTE
- CELL BOUNDARY
- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- PROPOSED TEMPORARY CAP BOUNDARY
- AS-BUILT TEMPORARY FML CAP DATED 12/19/08
- EXISTING GRAVEL ROAD
- EXISTING TEMPORARY FML CAP
- PROPOSED TEMPORARY FML CAP
- AREA WITH EXISTING INTERIM COVER (TO REMAIN UNDISTURBED)

- NOTES:**
- EXISTING CONTOURS WERE COMPILED FROM DIVERSIFIED ENGINEERING, INC. TOPOGRAPHICAL SURVEY DATED 02/11/09 AND 03/05/09.
  - PROPOSED TEMPORARY CAP BOUNDARIES ARE APPROXIMATE AND WILL BE FIELD ADJUSTED AS NECESSARY.
  - THE EXISTING TEMPORARY CAP WILL BE MAINTAINED.
  - EXISTING ODOR CONTROL SYSTEM IS ATTACHED TO FENCE.
  - PROPOSED SEDIMENTATION BASIN 1-1A WAS APPROVED BY DEPA ON 07/27/08. THE SEDIMENTATION BASIN MAY BE CONSTRUCTED IN STAGES.
  - EXISTING CAP LIMITS PROVIDED BY DEI 06/29/09.

**PROPOSED CAPPING AREA: 319,161 sq ft**  
**NOTE: AREA MEASURED IN 3D.**



Regrading of stormwater benches completed in August 2009.

FML cap completed in July 2009.

REV	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
1	04/28/09	REVISED PER US EPA 03/04/09 COMMENTS	JAW	JCW	JCW
2	06/29/09	REVISED REMAINING TEMP CAP	JAW	JCW	JCW



REPUBLIC SERVICES OF OHIO II, LLC  
 COUNTYWIDE RECYCLING AND DISPOSAL FACILITY  
 EAST SPARTA, STARK CO., OHIO  
 REVISED CAPPING PLAN - CELLS 1, 2, & 3  
 PROJECT NO. 090187  
 SHEET NO. 1

PROPOSED / EXISTING CAPPING AREAS

## ATTACHMENT C-1

### TIER 3 (STAGE C) FIXED CONTINUOUS MONITORING RESULTS

# **August 2009 Stage C Monthly Ambient Air Monitoring Report**

## **Prepared for**

Republic Services of Ohio II, LLC  
3619 Gracemont Street, SW  
East Sparta, OH. 44626  
(330) 874-3855

## **Prepared by**

Center for Toxicology and Environmental Health, L.L.C.  
5120 North Shore Drive  
North Little Rock, AR 72118

August 28, 2009



The Stage C ambient air monitoring program has continuously collected real-time Volatile Organic Compounds (VOC) and weather data 24 hours per day since October 2, 2008. Approximately 1,946,909 VOC readings have been collected at the perimeter of the landfill during this monitoring period. The stage C stations dataloggers were calibrated by J@S instruments on July 2, 2009 and placed back into service on July 3, 2009. The dataloggers were all found to be within the manufacturer’s specifications.

**Trigger Levels**

On January 27, 2009, Center for Toxicology and Environmental Health (CTEH®), United States Environmental Protection Agency (USEPA) and Agency for Toxic Substances and Disease Registry (ATSDR) adjusted the trigger levels for the collection of SUMMA canister laboratory samples. A sustained VOC concentration at or above 0.50 ppm VOC was chosen as the trigger level for each station. Table 1.0 illustrates the trigger levels for each station.

**Table 1.0  
July 30, through August 10 Trigger Levels**

Station	Trigger Level (ppm)
1	0.50
2	0.50
3	0.50
4	0.50
5	0.50

If a trigger level is exceeded for a five minute consecutive monitoring period, a 15 minute integrated SUMMA canister is automatically collected. Trigger levels will continue to be evaluated based on the results of the SUMMA canister data or VOC statistics.

On August 10, 2009, U.S. EPA On Scene Coordinator (OSC), Jim Augustyn informed Countywide Landfill management that continued operation of the Stage C monitors will no longer be required pursuant to the US EPA Settlement Agreement. The data acquisition from the Stage C monitoring system was terminated by Countywide on August 10, 2009.

**Real-Time Results**

During the July 30, 2009 through August 10, 2009 monitoring period, approximately 95,794 real-time VOC readings have been collected at the perimeter of the landfill. Of these readings, the sustained VOC concentration exceeded the established trigger levels 4 times. The mean VOC concentrations collected at the perimeter of the landfill ranged from 0.00 ppm to 0.15 ppm. Table 2.0 summarizes the real-time data collected for this monitoring period.

**Table 2.0 July 30, through August 10, Real Time Data Summary**

Station	Analyte	Total VOC Readings Recorded	Trigger Level	Triggering events	Average Concentration
1	VOC	16,143	0.50	0	0.00 ppm
2	VOC	18,495	0.50	0	0.05 ppm

3	VOC	17,093	0.50	1	0.77 ppm
4	VOC	27,260	0.50	1	0.25 ppm
5	VOC	16,803	0.50	2	0.40 ppm

A graphical representation of 24 hour average Real-time concentrations can be viewed in Attachment A.

### **SUMMA Results**

As of May 15, 2009 Tentatively Identified Compounds (TIC) analysis was discontinued. Therefore, only compounds on the TO15 target compound list will be analyzed by the laboratory. Additionally Sample preparation was modified from individually certified clean SUMMA canisters to batch certified clean canisters. Four SUMMA samples were collected during this monitoring period (Attachment B). With these laboratory results and previously available sample results, no VOCs, including benzene, were detected at levels that exceeded the ATSDR's acute or chronic Minimal Risk Levels (MRLs). These data to date indicate that landfill emissions from the site under current conditions do not pose a risk to human health in the short or long term.

# Attachment A

Custom Date Report

Start Date

End Date

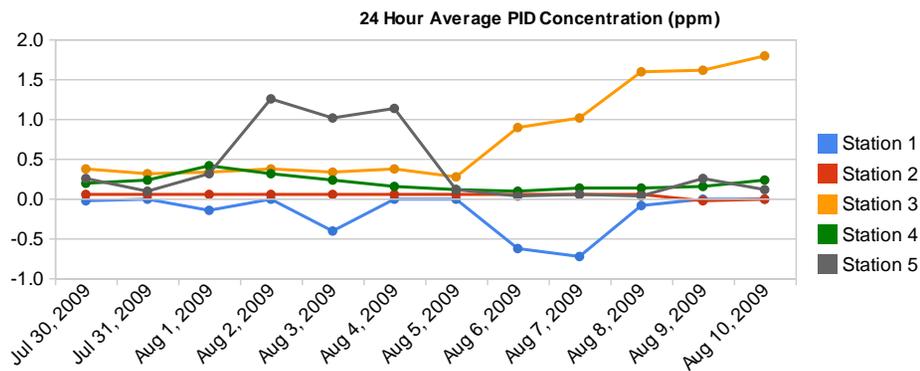
2009/07/30

Calendar

2009/08/10

Calendar

Save



<u>Day</u>	<u>Station 1 (PID)</u>	<u>Station 2 (PID)</u>	<u>Station 3 (PID)</u>	<u>Station 4 (PID)</u>	<u>Station 5 (PID)</u>
2009-07-30	-0.01	0.05	0.37	0.21	0.26
2009-07-31	0.00	0.05	0.32	0.25	0.09
2009-08-01	-0.13	0.05	0.33	0.43	0.31
2009-08-02	0.00	0.05	0.38	0.32	1.27
2009-08-03	-0.41	0.05	0.33	0.23	1.03
2009-08-04	0.00	0.05	0.37	0.15	1.14
2009-08-05	0.00	0.05	0.27	0.12	0.12
2009-08-06	-0.61	0.05	0.91	0.09	0.04
2009-08-07	-0.72	0.05	1.02	0.14	0.05
2009-08-08	-0.07	0.05	1.59	0.15	0.04
2009-08-09	0.00	-0.01	1.62	0.16	0.26
2009-08-10	-0.01	-0.01	1.80	0.23	0.12



Joe Cameron

Center For Toxicology and Environmental Health L.L.C.  
501-801-8500  
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# Attachment B

### Stage C Integrated Air Sampling Summary

Sample ID	Set out Date	Location	Trigger Level	Trigger Date/Time	Wind Direction	Downwind of Reaction Area	Results (Link)	Average 15 min PID Reading During Sample	TICS Identified/ Sampling Methods	Ambient Sampling Temp (Celsius)
ESOH1108-1-SC001	11/8/2008	Station 1	0.50 ppm	11/12/2008 22:52	134	NO	<a href="#">ESOH1108-1-SC001</a>	0.58	None	
ESOH1108-2-SC002	11/8/2008	Station 2	0.18 ppm	11/10/2008 4:38	266	YES	<a href="#">ESOH1101-2-SC002</a>	-0.50	<a href="#">Hexafluoropropylene</a>	7.8
ESOH1108-3-SC003	11/8/2008	Station 3	Sample Fault-Calibration gas triggered the Summa collection system							
ESOH1108-5-SC004	11/8/2008	Station 5	0.17 ppm	12/20/2008 3:53	12	NO	<a href="#">ESOH1108-5-SC004</a>	22.52*	<a href="#">Ethane, 1,1 difluoro; Ethylene Oxide; Isopropyl Alcohol; Propane; 1,1,1,3,3,3,-hexafluoro-2-triflu; Propene, hexafluoro</a>	7.8
ESOH1110-2-SC005	11/10/2008	Station 2	0.18 ppm	11/10/2008 20:15	338	YES	<a href="#">ESOH1110-2-SC005</a>	0.17	unknown	-0.2
ESOH1111-2-SC006	11/11/2008	Station 2	Sample Fault Calibration gas triggered the Summa collection system							
ESOH1111-4-SC007	11/11/2008	Station 4	0.10 ppm	11/23/2008 14:06	227	NO	<a href="#">ESOH1111-4-SC007</a>	0.09	<a href="#">Isopropyl alcohol; Propene, Hexafluoro-; Unknown</a>	2.3
ESOH1113-1-SC008	11/13/2008	Station 1	0.50 ppm	11/13/2008 21:02	181	NO	<a href="#">ESOH1113-1-SC008</a>	0.60	<a href="#">Ethyl alcohol; Propene, hexafluoro; Unknown</a>	10.8
ESOH1114-1-SC009	11/11/2008	Station 1	0.50 ppm	11/24/2008 15:13	179	NO	<a href="#">ESOH1114-1-SC009</a>	0.53	<a href="#">Methyl alcohol,; Propene, hexafluoro</a>	4.6
ESOH1119-3-SC010	11/19/2008	Station 3	Sample Fault- Leaking SUMMA Cannister							
ESOH1123-3-SC011	11/23/2008	Station 3	0.13 ppm	11/29/2008 3:06	290	Downwind of Working phase	<a href="#">ESOH1123-3-SC011</a>	0.04	<a href="#">Butane; Butane, 2 methyl-; Disulfide, dimethyl; Ethane, 1-chloro-1,1-difluoro-; Ethyl alcohol; Isobutane; Pentane; Pentane, 2-methyl-; Propane; Propene, hexafluoro-</a>	-1.6

### Stage C Integrated Air Sampling Summary

Sample ID	Set out Date	Location	Trigger Level	Trigger Date/Time	Wind Direction	Downwind of Reaction Area	Results (Link)	Average 15 min PID Reading During Sample	TICS Identified/ Sampling Methods	Ambient Sampling Temp (Celsius)
ESOH1124-4-SC012	11/24/2008	Station 4	0.10 ppm	11/24/2008 14:23	226	NO	<a href="#">ESOH1124-4-SC012</a>	0.10	None	4.1
ESOH1124-4-SC013	11/24/2008	Station 4	Sample Fault-Calibration gas triggered the Summa collection system							
ESOH1124-1-SC014	11/24/2008	Station 1	Sample Fault							
ESOH1126-4-SC015	11/26/2008	Station 4	0.10 ppm	11/29/2008 11:51	192	NO	<a href="#">ESOH1126-4-SC015</a>	0.10	<a href="#">Ethyl alcohol;Methyl Alcohol; Propene, hexafluoro-</a>	2.7
ESOH1129-3-SC016	11/29/2008	Station 3	Sample Fault							
ESOH1129-4-SC017	11/24/2008	Station 4	Sample Fault							
ESOH1202-4-SC018	12/2/2008	Station 4	0.10 ppm	12/3/2008 8:28	195	NO	<a href="#">ESOH1202-4-SC018</a>	0.10	None	-2.0
ESOH1203-4-SC019	12/3/2008		Sample Fault due to PID malfunction							
ESOH1205-4-SC020	12/5/2008	Station 4	Sample Fault							
ESOH1208-4-SC021	12/8/2008	Station 4	0.10 ppm	12/21/2008 5:52	292	NO	<a href="#">ESOH1208-4-SC021</a>	0.26	<a href="#">Acetaldehyde; Butane, 2-methyl-; Pentane; Propene, hexafluoro-</a>	-1.3
ESOH1218-3-SC022	12/18/2008	Station 3	Sample Fault- Leaking SUMMA Cannister							
ESOH1220-5-SC023	12/20/2008	Station 5	Sample Fault- Leaking SUMMA Cannister							

### Stage C Integrated Air Sampling Summary

Sample ID	Set out Date	Location	Trigger Level	Trigger Date/Time	Wind Direction	Downwind of Reaction Area	Results (Link)	Average 15 min PID Reading During Sample	TICS Identified/ Sampling Methods	Ambient Sampling Temp (Celsius)
ESOH1222-4-SC024	12/22/2008	Station 4	0.10 ppm	1/6/2009 0:02	110	Yes	<a href="#">ESOH1222-4-SC024</a>	0.06	<a href="#">Butane; Butane, 2-methyl-; Dimethyl ether; Ethyl alcohol; Hexane,3-methyl-; Hydroxylamine, O-methyl; Pentane; Pentane, 2-methyl-; Propene, hexafluoro-, 1-propene, 2-methyl-</a>	-3.6
ESOH1230-5-SC025	12/30/2008	Station 5	0.17 ppm	1/8/2009 10:59	243	Yes	<a href="#">ESOH1230-5-SC025</a>	0.16	<a href="#">Butanoic acid, ethyl ester; Ethane, 1,1-difluoro-; Ethyl alcohol; Isopropyl Alcohol; Methyl Alcohol; Propene, hexafluoro-, 1-Propanol; 2-Butanol, (R-)</a>	-7.0
ESOH0106-4-SC026	1/6/2009	Station 4	0.10 ppm	1/7/2008 20:11	258	No	<a href="#">ESOH0106-4-SC026</a>	0.10	<a href="#">Butane; Butane, 2-methyl-; Ethane, 1,1-difluoro-; Pentafluoropropionamide; Pentane</a>	-2.2
ESOH0107-2-SC027	1/7/2009	Station 2	0.18 ppm	2/9/2009 2:23	223	No	<a href="#">ESOH0107-2-SC027</a>	0.92*	<a href="#">Propene, hexafluoro-</a>	1.6
ESOH0108-4-SC028	1/8/2009	Station 4	0.10 ppm	Current Sample						
ESOH0108-5-SC029	1/8/2009	Station 5	0.17 ppm	1/19/2009 0:32	215	Yes	<a href="#">ESOH0108-5-SC029</a>	0.26	<a href="#">Ethyl alcohol; Furan; Propene</a>	-11.70
ESOH0108-3-SC030	1/8/2009	Station 3	0.13 ppm	4/25/2009 12:00			<a href="#">ESOH0108-3-SC030</a>	0.20	<a href="#">Acetaldehyde; Butane, 2-methyl-; Ethanol; Propane; Propene, hexafluoro-2-Cyano-2-O-fluorosulfatofluoropropane</a>	25.4
ESOH0119-5-SC031	1/19/2009	Station 5	0.13 ppm	1/19/2009 13:22	267	Yes	<a href="#">ESOH0119-5-SC031</a>	0.17	<a href="#">Ethyl alcohol; Isopropyl Alcohol; Methyl Alcohol; 1-Butanol; 1-Propanol; 2-Butanol;</a>	-9.30
ESOH0119-5-SC032	1/19/2009	Station 5	0.13 ppm	1/26/2009 9:21	220	Yes	<a href="#">ESOH0119-5-SC032</a>	0.18	<a href="#">Ethyl alcohol; Propene, hexafluoro;</a>	-12.6
ESOH0119-1-SC033	1/19/2009	Station 1	0.50 ppm	Current Sample						
ESOH0119-5-SC034	1/19/2009	Station 5	0.50 ppm	2/16/2009 7:02	10	No	<a href="#">ESOH0127-5-SC034</a>	0.78	<a href="#">Butane, 2-methyl-; Pentane; Propane; Propene, hexafluoro-</a>	-4.6

### Stage C Integrated Air Sampling Summary

Sample ID	Set out Date	Location	Trigger Level	Trigger Date/Time	Wind Direction	Downwind of Reaction Area	Results (Link)	Average 15 min PID Reading During Sample	TICS Identified/ Sampling Methods	Ambient Sampling Temp (Celsius)
ESOH0209-2-SC035	2/9/2009	Station 2	0.50 ppm	2/10/2009 6:25	211	No	<a href="#">ESOH0209-2-SC035</a>	1.41*	<a href="#">Propene, hexafluoro-</a>	8.4
ESOH0210-2-SC036	2/10/2009	Station 2	0.50 ppm	Current Sample						
ESOH0216-5-SC037	2/16/2009	Station 5	0.50 ppm	2/18/2009 6:12	168	Yes	<a href="#">ESOH0216-5-SC037</a>	0.56	<a href="#">Acetaldehyde; Propene</a>	2.1
ESOH0218-5-SC038	2/18/2009	Station 5	0.50 ppm	4/14/2009 16:39	97	No	<a href="#">ESOH0218-5-SC038</a>	14.16	<a href="#">Butane, 2-methyl-; Ethane, 1,1-difluoro-; Ethanol; Methyl Alcohol; N,N'-Methylenebismethacrylamide; Oxirane, ethyl-; Propane; Propene, hexafluoro-</a>	10.1
ESOH0416-5-SC039	4/16/2009	Station 5	0.50 ppm	4/20/2009 18:17	240	Yes	<a href="#">ESOH0416-5-SC039</a>	0.04	<a href="#">Acetaldehyde; Butane, 2-methyl-; Propene, hexafluoro-</a>	9.0
ESOH0422-5-SC040	4/22/2009	Station 5	0.50 ppm	5/5/2009 6:49	199	Yes	<a href="#">ESOH0422-5-SC040</a>	0.59	<a href="#">Ethanol; Propene, hexafluoro-; Unknown; Unknown</a>	14.7
ESOH0429-3-SC041	4/29/2009	Station 3	0.50 ppm	5/15/2009 12:30	229	Yes	<a href="#">ESOH0429-3-SC041</a>	0.46		21.2
ESOH0504-5-SC042	5/4/2009	Station 5	0.50 ppm	5/16/2009 18:44	308	Yes	<a href="#">ESOH0504-5-SC042</a>	22.54		12.9
ESOH0518-3-SC043	5/18/2009	Station 3	0.50 ppm	5/21/2009 12:20	227	Yes	<a href="#">ESOH0518-3-SC043</a>	0.88		24.0
ESOH0520-5-SC044	5/20/2009	Station 5	0.50 ppm	6/2/2009 7:59	224	Yes	<a href="#">No Analysis PID error</a>	17.41		16.8
ESOH0522-3-SC045	5/22/2009	Station 3	0.50 ppm	5/23/2009 11:40	197	No	<a href="#">ESOH0522-3-SC045</a>	0.61		24.6
ESOH0528-3-SC046	5/28/2009	Station 3	0.50 ppm	6/27/2009 6:52	347	No		1.94		15.2
ESOH0609-5-SC047	6/9/2009	Station 5	0.50 ppm	6/19/2009 18:58	313	Yes	<a href="#">No Analysis PID error</a>	11.32		15.2
ESOH0624-5-SC048	6/24/2009	Station 5	0.50 ppm	7/4/2009 4:03	310	Yes	<a href="#">No Analysis PID error</a>	0.64		16.2

### Stage C Integrated Air Sampling Summary

Sample ID	Set out Date	Location	Trigger Level	Trigger Date/Time	Wind Direction	Downwind of Reaction Area	Results (Link)	Average 15 min PID Reading During Sample	TICS Identified/ Sampling Methods	Ambient Sampling Temp (Celsius)
ESOH0707-5-SC049	7/7/2009	Station 5	0.50 ppm	7/10/2009 6:29			<a href="#">ESOH0707-5-SC049</a>	0.54		
ESOH0710-3-SC050	7/10/2009	Station 3	0.50 ppm	8/3/2009 4:12				0.48		
ESOH0710-4-SC051	7/10/2009	Station 4	0.50 ppm	7/16/2009 17:44			<a href="#">ESOH0710-4-SC051</a>	1.03		
ESOH0714-5-SC052	7/14/2009	Station 5	0.50 ppm	7/23/2009 16:59			<a href="#">ESOH0714-5-SC052</a>	0.45		
ESOH0717-4-SC053	7/17/2009	Station 4	0.50 ppm	8/1/2009 7:22			<a href="#">ESOH0717-4-SC053</a>	0.51		
ESOH0724-5-SC054	7/24/2009	Station 5	0.50 ppm	7/30/2009 5:34			<a href="#">ESOH0724-5-SC054</a>	0.50		
ESOH0803-5-SC055	8/3/2009	Station 5	0.50 ppm	8/3/2009 13:56						
ESOH0804-4-SC056	8/4/2009	Station 4	0.50 ppm	Current Sample						
ESOH0806-3-SC057	8/6/2009	Station 3	0.50 ppm	Current Sample						
ESOH0806-5-SC058	8/6/2009	Station 5	0.50 ppm	Current Sample						

*Pending- Sample has been collected awaiting results from the laboratory*

*Average PID Reading During Sample- Average PID concentration during the SUMMA can sample collection*

\* Potential RAEGuard PID error (Drift) noted

Station 4 Trigger Change to 0.15 ppm on January 13, 2009

Stations 1 through 5 trigger levels have been changed to 0.50 ppm on January 27,2009

TIC analysis was dropped from the laboratory Summa Results May 15, 2009

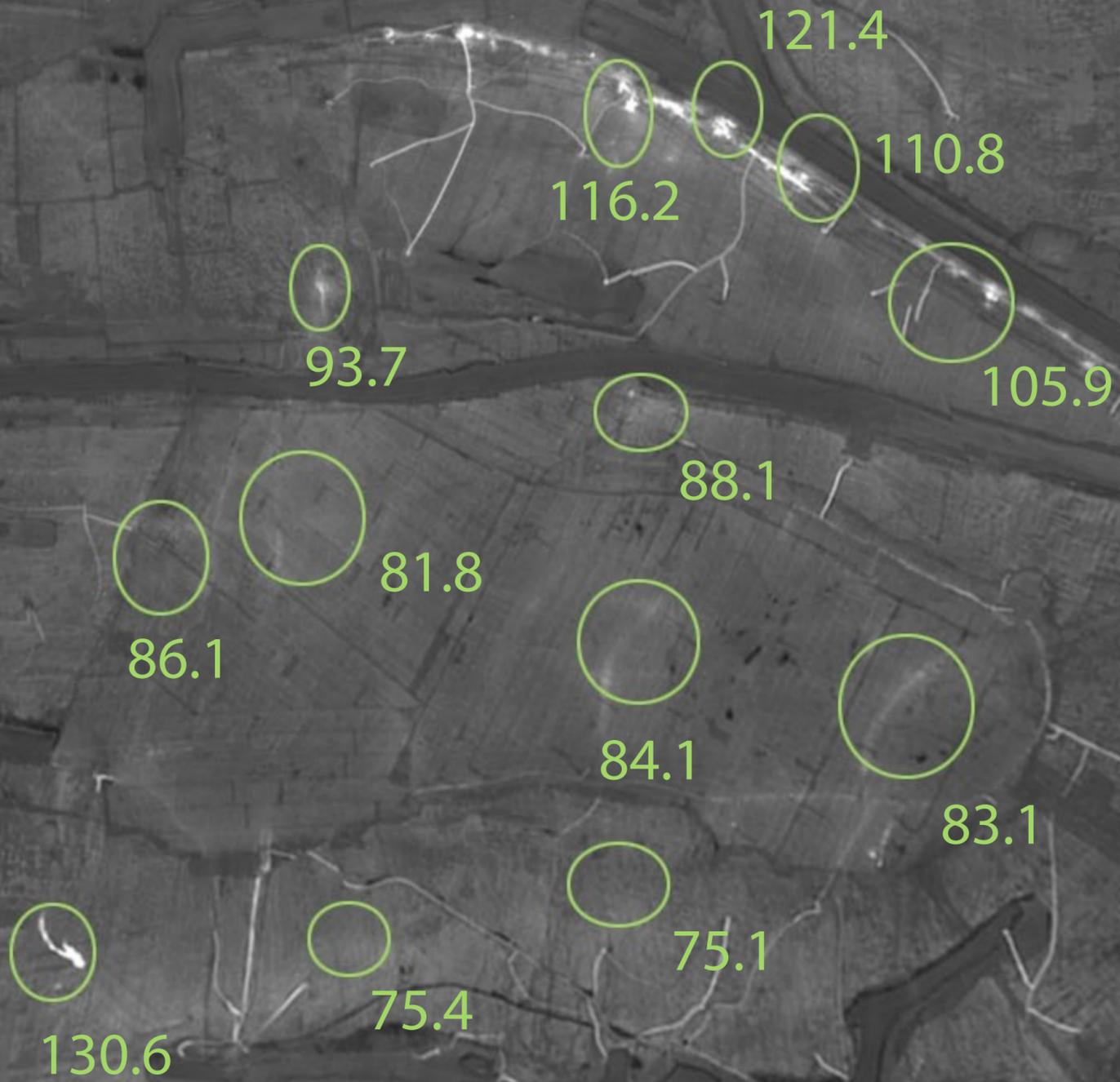
Summa Cannisters are Batch cleaned and not individually certified clean May 15, 2009

Stage C monitoring stations were taken offline August 10, 2009

ATTACHMENT D  
AERIAL INFRARED IMAGES

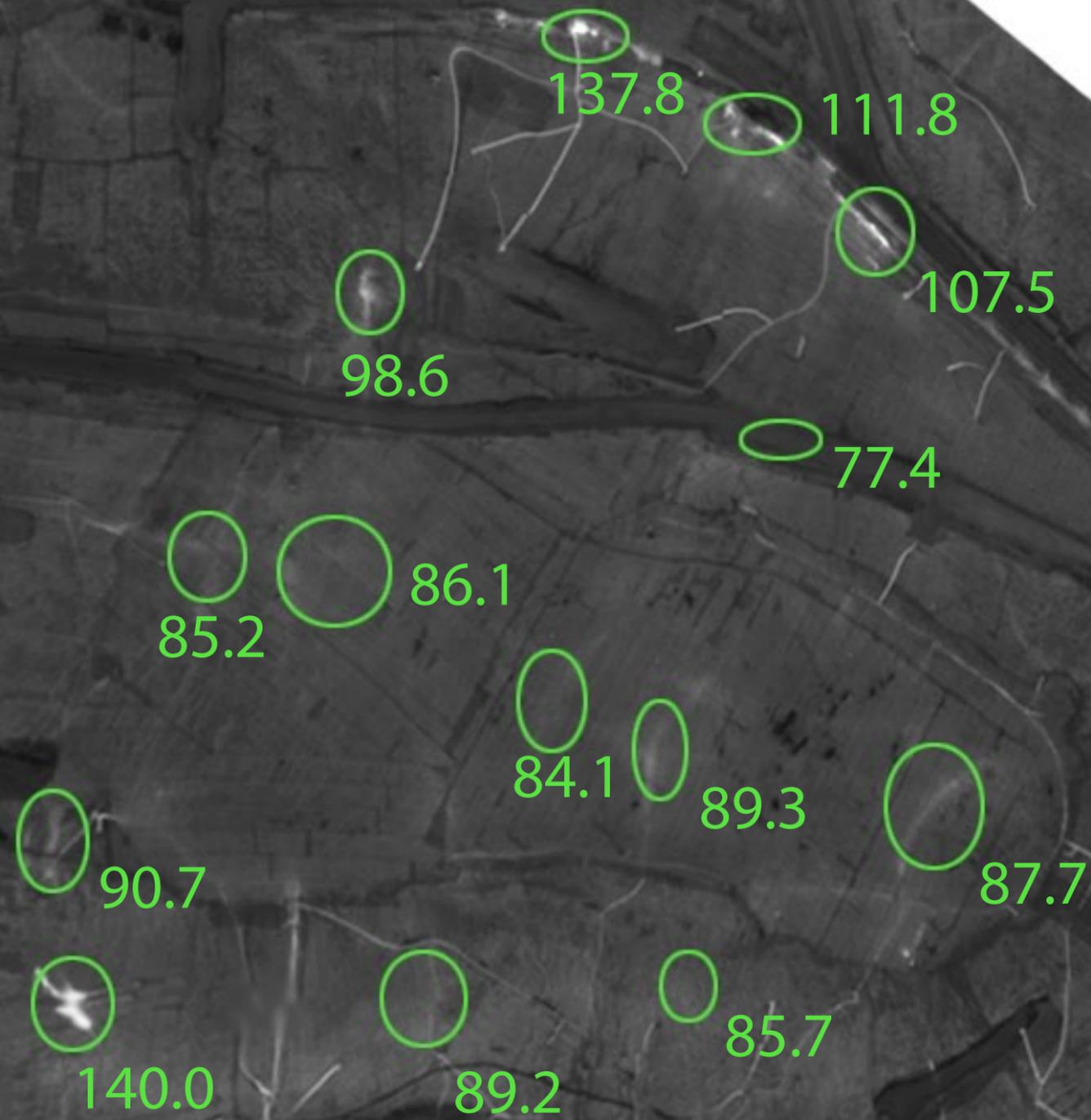


Composite Image by  
Predictive Service LLC. 216.378.3500  
Data Collected 7/20/2009





Composite Image by  
Predictive Service LLC. 216.378.3500  
Data Collected 8/16/2009



AMBIENT  
TEMPERATURE AT  
THE TIME OF IMAGE  
WAS 64 DEG. F

