

Report of Progress, September 30, 2008

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.

By the beginning of September, 2008, all of the gas wells and FBMP monitoring probes had been installed. Operation of the enhanced gas extraction system was anticipated to begin in mid- to late-September, after temporary FML capping was complete in the vicinity.

However, on September 14, 2008, a severe wind storm (related to Hurricane Ike) damaged 12.75 acres of newly-laid cap as well as 23 gas extraction wells and 3 FBMP points (see Attachment A-1)—all in the enhanced gas extraction area. All of the damaged gas extraction wells were operational within two days of the storm event. But, as of this writing, the capping and FBMPs are not fully restored in the area. Therefore, start of operation will be delayed until the necessary site features are restored.

Throughout September, readings were obtained from the FBMP temperature probes. Results are presented in Attachment A-2. No significant increasing or decreasing temperature trends are apparent.

Paragraph 15.c and f Capping and Stabilization.

See discussion above regarding wind damage to a 12.75 acre portion of the temporary cap. Areas that were damaged are indicated with Note 1 on Attachment B. As of this writing, about ½ of the damaged portion had been restored.

Nevertheless, significant additional progress was made toward the temporary capping required by the AOC. As of September 30, about 29 acres of 60-mil textured FML had been placed as shown on the drawing in Attachment B. In addition, all of the subcap drainage features are complete.

Composite capping is still on hold until USEPA, OEPA, and Countywide resolve details for a composite cap cross section.

Paragraph 15.e Air Monitoring and Sampling.

On August 27, 2008, U.S. EPA approved a revised Plan for On-Site Continuous Monitoring of Air Contaminants and approved modification of the interim monitoring program. The Center for Toxicology and Environmental Health (CTEH) was tasked with preparing a comprehensive air monitoring work plan (as required by the August 27 conditional approval) that integrates all of the monitoring activities into one plan.

A DRAFT comprehensive work plan was submitted on September 27. The DRAFT plan described the monitoring occurring in three stages as described below:

Stage A – Initial Construction Monitoring. This stage consisted of portable upwind and downwind PID detectors and collection of numerous 8-hour SUMMA canisters and analyses for volatile organic constituents (TO-15). This monitoring was performed between July 8, 2008 and September 2, 2008. An initial report for this stage of monitoring was submitted with the August progress report. Two additional reports covering the remainder of this stage have been provided in Attachment C.

Stage B – Interim Fixed Continuous Monitoring. This stage consist of deployment of four fixed and one portable PID monitors located on-site, around the perimeter of the landfill. Occasional SUMMA canisters were collected for TO-15 analyses based on verified PID readings greater than 250 ppb. Results of this stage of monitoring are posted on the FTP site at <ftp://ftp.earthtech.com/> in the “Stage B Results” subfolder of the “Ambient Air Monitoring” folder.

Stage C – Final Fixed Continuous Monitoring. This stage will consist of final stations as described in the August 22 revised Plan for On-Site Continuous Monitoring of Air Contaminants. Construction of these stations was begun on September 27 and should be completed for a system start-up of October 1, 2008.

Paragraph 15.g Aerial Infrared Imaging.

August 2008 and September 2008 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 August image was 67.5° F and during the September image was 47° F. Comparison of these images generally shows the same subcap warm areas attributed to subcap leachate outbreaks and transmittal of gas through subcap cracking. Any changes appear to reflect correlation to the ambient air temperatures, with no large aerial changes or trends.

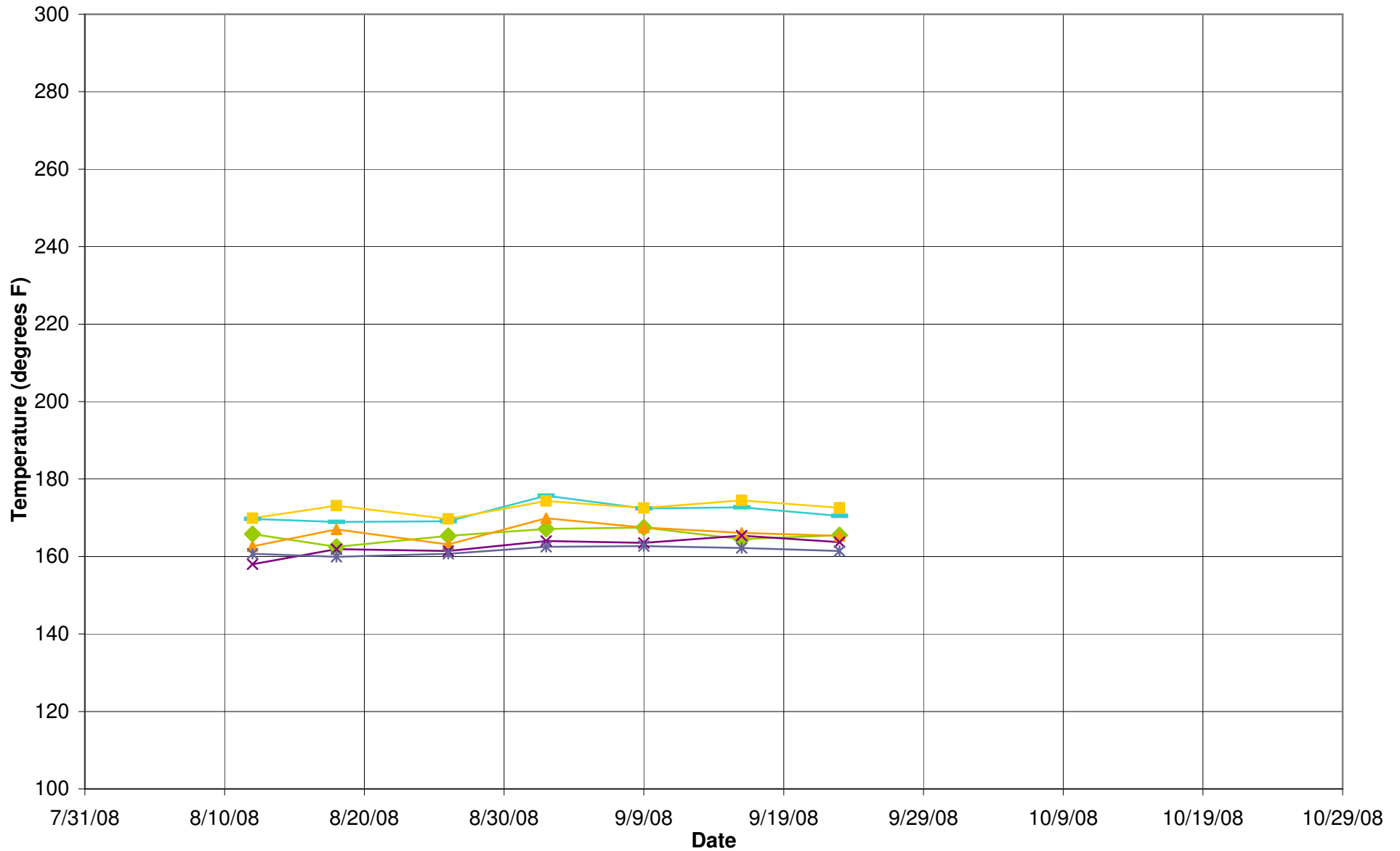
ATTACHMENT A-1

ENHANCED GAS EXTRACTION AND TEMPERATURE MONITORING PROGRESS

ATTACHMENT A-2

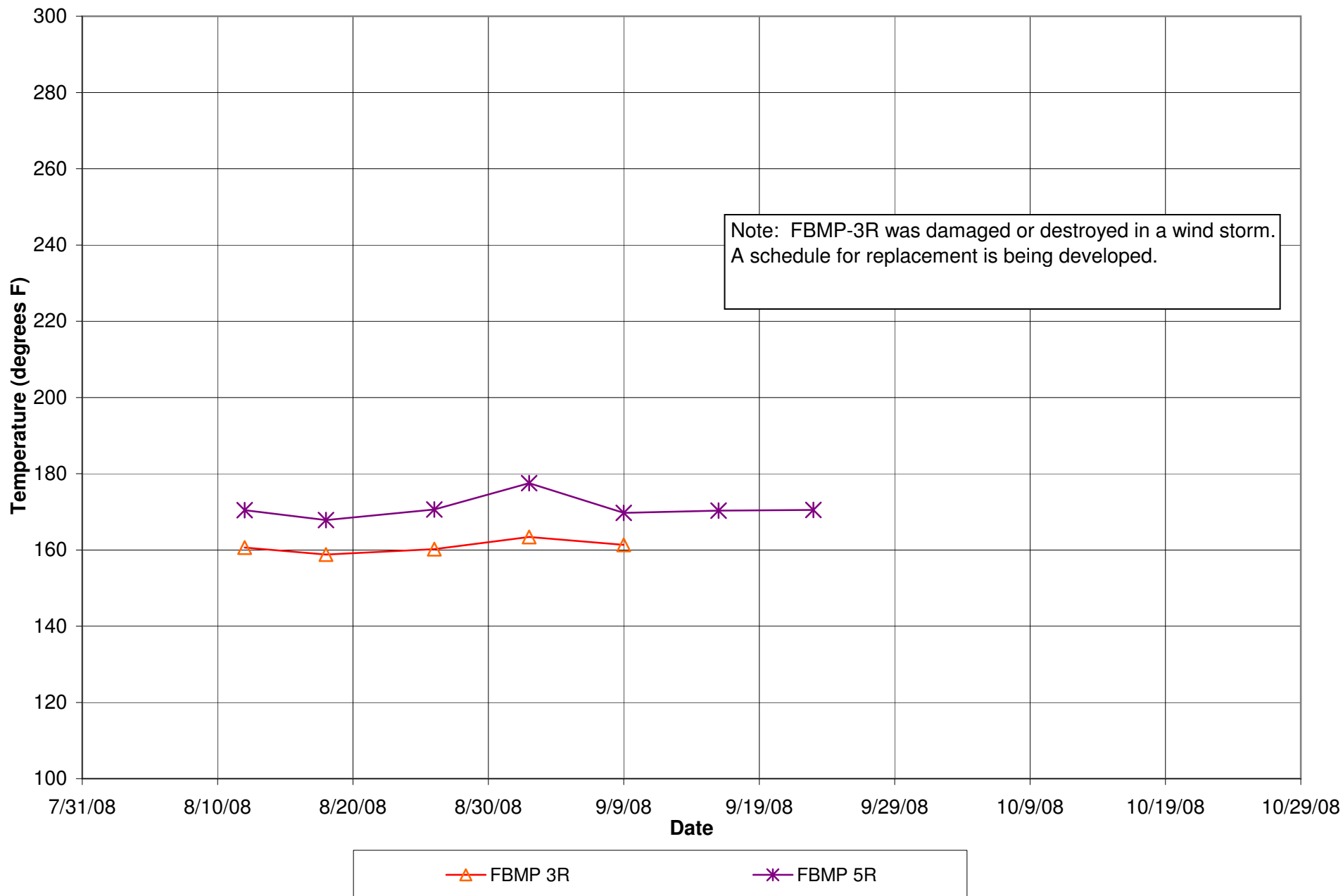
FBMP TEMPERATURE PROBE GRAPHS

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

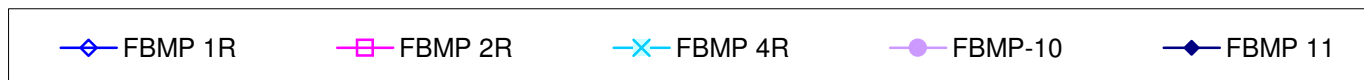
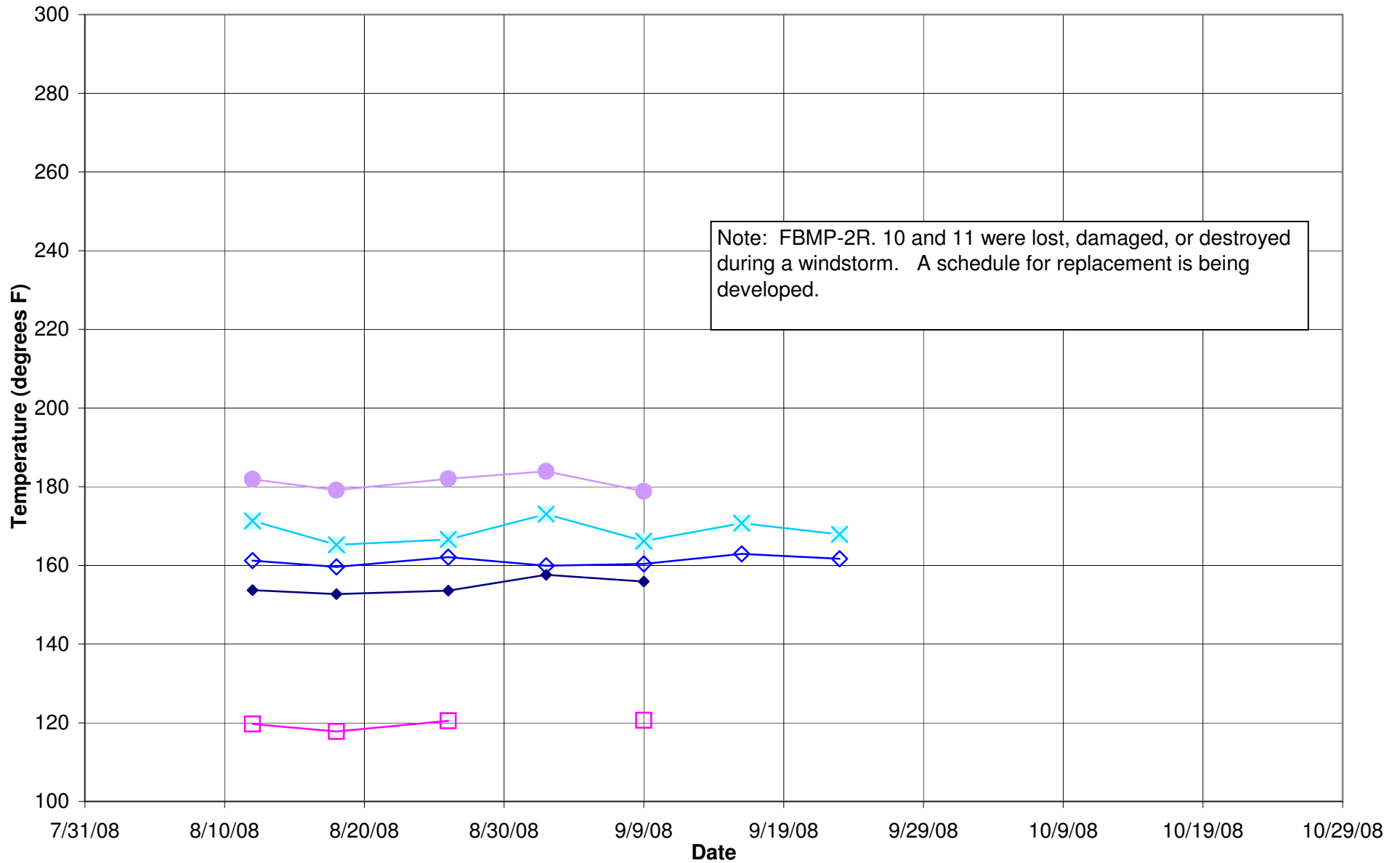


In-situ Temperatures - FBMPs within the Isolation Break Excavation

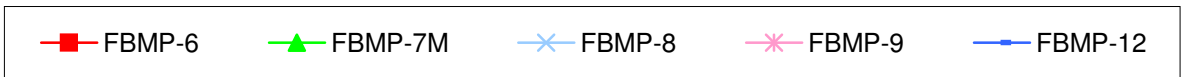
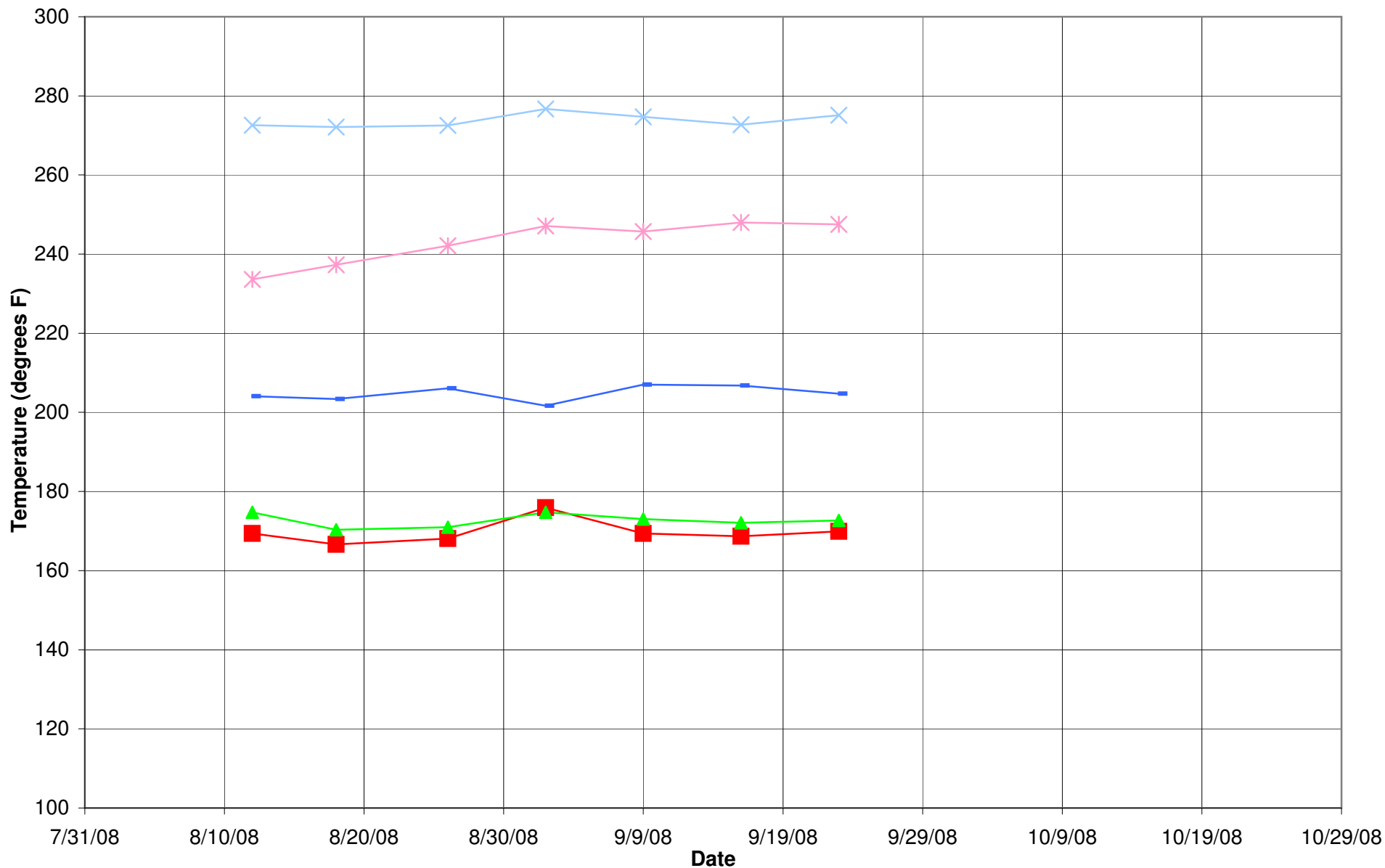
Maximum Readings per Date per FBMP Boring



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



ATTACHMENT B

CAPPING AND STABILIZATION PROGRESS

11 Acres Placed in September 2008 (see Note 1)

5.5 Acres Placed in September 2008

3.5 Acres Placed in September 2008

8.5 Acres FML Placed in August 2008 (see Note 1)

7 Acres FML Placed in August 2008

ANNOTATIONS IN RED FONT PRESENT CAPPING CONSTRUCTION ACTIVITIES FOR PERIOD ENDING September 30, 2008

Note 1: A wind storm on September 14, 2008 significantly damaged 12.75 acres of recently-placed, but not-yet-secured temporary FML in Area N. As of September 30, 2008 about half of the damaged area had been restored.



- LEGEND**
- PROPERTY LINE
 - LIMIT OF SOLID WASTE
 - CELL BOUNDARY
 - EXISTING 2' CONTOURS
 - EXISTING 10' CONTOURS
 - CAP AREA BOUNDARY
 - EXISTING PARKING
 - EXISTING GRAVEL ROAD
 - PROPOSED AREA TO RECEIVE COMPOSITE COVER
 - EXISTING TEMPORARY FML CAP
 - PROPOSED TEMPORARY EXPOSED FML CAP
 - AREA TO BE PREPARED FOR CONSTRUCTION OF TEMPORARY FML CAP
 - EXISTING TEMPORARY FML CAP TO BE AUGMENTED

- NOTES:**
- EXISTING CONTOURS WERE COMPILED FROM DIVERSIFIED ENGINEERING, INC. TOPOGRAPHICAL SURVEY DATED 12/05/07 AND 04/28/08.
 - AREAS SHOWN ARE APPROXIMATE.
 - THE EXISTING TEMPORARY CAP WILL BE MAINTAINED.
 - LOCATION OF NORTHWEST CAP LIMIT WAS OBTAINED FROM FIGURE 3 (GAS WELL AND TEMPERATURE MONITORING LOCATION MAP DATED 04/28/08) PROVIDED IN THE GAS EXTRACTION AND MONITORING WORK PLAN DATED MAY 27, 2008.

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	06/24/08	REVISED PER US EPA 06/06/08 COMMENTS	JAW	JGW	BOS	JGW
2	05/12/08	DATE OF ISSUE	JAW	JGW	JCO	JGW



REPUBLIC SERVICES OF OHIO II, LLC
COUNTYWIDE RECYCLING & DISPOSAL FACILITY
STARK COUNTY, EAST SPARTA, OHIO
LANDFILL COVER & LONG TERM CAPPING
PROPOSED AREAS FOR 2008 CAP CONSTRUCTION

SHEET NO.
3
PROJECT NO.
070187

ATTACHMENT C

AIR MONITORING OF REMEDIAL CONSTRUCTION ACTIVITIES

Report on Ambient Air Monitoring
at the Countywide Recycling & Disposal Facility (Countywide)
August 18, 2008 – August 23, 2008

Pursuant to:
ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION (AOC), April 11, 2008
Docket No. V-W-08-C-897

September 8, 2008

1.0 EXECUTIVE SUMMARY

On behalf of Republic Services of Ohio II, LLC (Republic), its subcontractor, Lawhon & Associates, Inc., (L&A) has prepared this report on the interim on-site ambient air monitoring conducted at the Countywide facility. L&A has been conducting monitoring under this program since July 8, 2008.

This report summarizes the results of the monitoring conducted through the subject period during working hours at locations upwind and downwind of remedial activities. These upwind and downwind stations monitor the ambient air using a ppbRAE photoionization detector (PID) to detect total VOCs, with the intake set at ~18" above grade. These monitors are co-located with 8-hour SUMMA sampling canisters that have been submitted for TO-15 analysis to provide speciation information on the individual VOCs detected in ambient air.

The results of monitoring during this period are summarized below and in the attached tables and figures.

Summary of Ambient Air Monitoring Results for the Week of August 18, 2008 through August 23, 2008

Time Period	# hours of monitoring	Average ppbRAE value (ppb)	Average Total VOCs from SUMMA (ppb)	Avg. Benzene Conc. (ppb)
7/17-8/1	222	28	23	2
8/2-8/9	113	26	14.5	0.3
8/11-8/15	93	39	18	0.44
8/18-8/23	116	15	30*	0.42
Total: 7/17-8/23	543	<i>27 ppb</i>	<i>Time-Weighted Simple Average</i>	

* 8/18/2008 and 8/19/2008 only

2.0 INTRODUCTION

Republic has been performing monitoring of the ambient air on-site at the Countywide facility in accordance with the *Summary of Planned Air Monitoring During Remedial Activities at the Countywide Recycling & Disposal Facility (Countywide)*, dated July 3, 2008. L&A has been routinely monitoring ambient air under this program since July 8, 2008.

The program includes setting up monitoring stations upwind and downwind of site activities. These stations include both a ppbRAE PID and an 8-hour SUMMA. The ppbRAE is deployed to monitor a baseline concentration of total Volatile Organic Compounds over the normal work day and the duration and approximate intensity of any VOC excursions.

The ppbRAE monitor detects an approximate total concentration in air of VOCs. However, the ppbRAE does not speciate individual VOCs; thus, the monitoring is supplemented by SUMMA canister sampling followed by TO-15 analyses.

The co-located SUMMA analytical results are also summarized in the attached tables. The simple sum of the VOC results of detected VOCs are presented. In addition, the benzene concentrations of each sample have also been reported.

The TO-15 analytical results are continuing to be reviewed and evaluated. The results of each analysis will be multiplied by published response factors for the ppbRAE 10.6 eV lamp to generate an expected ppbRAE value. These results will be compared to the integrated PID readings to develop a correlation of PID readings to individual VOC concentrations.

3.0 BACKGROUND

Republic developed and submitted an interim monitoring work plan to monitor airborne constituents associated with the landfill and any changes to the nature and extent of those constituents in the vicinity of the remedial activities. Under this interim work plan, Republic:

- Monitors ambient air using a ppb-RAE, real-time monitors at locations both upwind and downwind of field activities on a given day; and
- Collects companion air samples using SUMMA canisters and submits them for TO-15 analysis.

Monitoring stations are set up each day at locations designed to monitor ambient air upwind and downwind of field activities. These locations are tracked using a GPS system. The data from each ppbRAE for both upwind and downwind locations are provided in weekly reports uploaded to the ftp server. Each day's ppbRAE data are supplemented with regional meteorological data from the Akron Canton airport.

4.0 RESULTS AND DISCUSSION

The ppbRAE data are summarized in the attached table and compared to the previous results. During the subject period, monitors were operated for a total of 116 hours. The simple average concentration throughout that period was 15 ppb. There was one excursion that exceeded 250 ppb for more than 15 minutes. This excursion was noted at an upwind location for 21 minutes on 7/19/2008 in the morning with the wind out of the northwest. The monitors had excursions that exceeded the daily mean + 2 standard deviations value for 4.4% of the minutes for the week.

Republic continues to evaluate the SUMMA data to develop a correlation between the PID results and the SUMMA results.

Republic has re-sorted the data into upwind and downwind subsets to yield the following table. This table demonstrates that the ppbRAE excursions were not accompanied by SUMMA or benzene excursions (and thus were likely due to the spray). These results also show some increase in concentrations downwind of intrusive activities, as expected.

Date Range	Upwind			Downwind			Comments
	Avg. ppb RAE (ppb)	Avg. Total VOCs SUMMA (ppb)	Avg. Benzene SUMMA (ppb)	Avg. ppb RAE (ppb)	Avg. Total VOCs SUMMA (ppb)	Avg. Benzene SUMMA (ppb)	
07/17 to 07/23	835	18	1	316	29	3	Prior to avoid neutralizer spray
07/24 to 08/04	19	18	1	37	23	2	After avoid neutralizer spray
08/05 to 08/15	60	16	0.34	15	22-44**	0.43	No SUMMA data available yet
08/18-08/23	15	37*	0.39*	15	21*	0.46*	

Eight results average 22 ppb. One result of 223 (principally methylene chloride, no benzene detected) skews the overall average of nine results.

Date	Upwind/ Downwind Location	GPS Location	Start Time	End Time	Wind Direction at Start	Average (ppb)	Run Time in minutes	Number of Excursions over 250 (ppb)	Durations of Excursions in minutes	Drilling	Stripping and Trenching	Standard Deviation	Mean + (2x Standard Deviation)	# Results > Mean + (2x Standard Deviation)
8/18/2008	Upwind	40 40.486 - 81 25.903	7:45:00 AM	9:08:00 AM	SW	1	84	0	N/A	N	Y	1.77	4.80	5
8/18/2008	Downwind	40 40.730 - 81 25.828	7:52:00 AM	5:31:00 PM	SW	11	580	0	N/A	N	Y	15.56	42.24	29
8/18/2008	Upwind	*40 40.486 - 81 25.903	9:11:00 AM	5:45:00 PM	WSW	4	515	0	N/A	N	Y	5.18	14.20	20
8/19/2008	Upwind	40 40.622 - 81 25.948	7:34:00 AM	2:07:00 PM	NW	32	394	1	21	N	Y	103.66	239.90	22
8/19/2008	Downwind	40 40.632 - 81 25.763	7:15:00 AM	2:30:00 PM	NW	13	436	0	N/A	N	Y	10.87	34.66	23
8/19/2008	Upwind	40 40.760 - 81 25.793	2:23:00 PM	5:37:00 PM	N	0	195	0	N/A	N	Y	0.00	0.00	0
8/19/2008	Downwind	40 40.566 - 81 25.806	2:36:00 PM	5:22:00 PM	N	4	167	0	N/A	N	Y	5.08	14.32	6
8/20/2008	Upwind	40 40.756 - 81 25.795	7:42:00 AM	5:13:00 PM	ENE	1	590	0	N/A	N	Y	2.34	5.23	19
8/20/2008	Downwind	40 40.562 - 81 25.835	8:01:00 AM	5:17:00 PM	ENE	31	557	0	N/A	N	Y	27.01	84.57	30
8/21/2008	Upwind	40 40.618 - 81 25.766	8:02:00 AM	5:20:00 PM	E	26	559	0	N/A	N	Y	8.20	42.36	30
8/21/2008	Downwind	40 40.550 - 81 25.858	7:43:00 AM	5:27:00 PM	E	15	585	0	N/A	N	Y	11.98	38.48	35
8/21/2008	Upwind	Unknown	6:01:00 PM	8:28:00 PM	S	39	148	0	N/A	N	Y	9.29	57.99	2
8/21/2008	Downwind	Unknown	5:56:00 PM	8:28:00 PM	S	29	153	0	N/A	N	Y	7.86	44.58	3
8/22/2008	Upwind	40 40.540 - 81 25.770	7:37:00 AM	5:14:00 PM	SSE	23	578	1	4	N	Y	40.70	104.72	21
8/22/2008	Downwind	40 40.556 - 81 25.862	8:10:00 AM	5:28:00 PM	SSE	13	559	0	N/A	N	Y	10.95	35.20	10
8/23/2008	Upwind	40 40.538 - 81 25.772	7:31:00 AM	2:51:00 PM	SSE	13	441	0	N/A	N	Y	17.78	48.63	24
8/23/2008	Downwind	40 40.562 - 81 25.863	7:54:00 AM	2:52:00 PM	SSE	6	409	0	N/A	N	Y	7.53	21.05	26
*GPS location is estimated						Simple Avg. ppb	15	6950	minutes=	116	hours			305
														4.4%

Report on Ambient Air Monitoring
at the Countywide Recycling & Disposal Facility (Countywide)
August 25, 2008 – September 2, 2008

Pursuant to:
ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION (AOC), April 11, 2008
Docket No. V-W-08-C-897

September 10, 2008

1.0 EXECUTIVE SUMMARY

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September 2, 2008**

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8/18-8/23	116	15	30*	0.42
8/25-9/2	70	16		
Total: 7/17-8/23	614	<i>26 ppb</i>	<i>Time-Weighted Simple Average</i>	

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2.0 INTRODUCTION

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The TO-15 analytical results are continuing to be reviewed and evaluated. The results of each analysis will be multiplied by published response factors for the ppbRAE 10.6 eV lamp to generate an expected ppbRAE value. These results will be compared to the integrated PID readings to develop a correlation of PID readings to individual VOC concentrations.

3.0 BACKGROUND

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4.0 RESULTS AND DISCUSSION

The ppbRAE data are summarized in the attached table and compared to the previous results. During the subject period, monitors were operated for a total of 70 hours. The simple average concentration throughout that period was 16 ppb. There were two excursions that exceeded 250 ppb but neither lasted for more than 15 minutes. These excursions were noted at an upwind location on 9/2/2008 for a total of 2 minutes with the wind out of the northeast. The monitors

had excursions that exceeded the daily mean + 2 standard deviations value for 3.0% of the minutes for the week.

Republic continues to evaluate the SUMMA data to develop a correlation between the PID results and the SUMMA results.

Republic has re-sorted the data into upwind and downwind subsets to yield the following table. This table demonstrates that the ppbRAE excursions were not accompanied by SUMMA or benzene excursions (and thus were likely due to the spray). These results also show some increase in concentrations downwind of intrusive activities, as expected.

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07/24 to 08/04	19	18	1	37	23	2	
08/05 to 08/15	60	16	0.34	15	22-44**	0.43	
08/18-08/23	15	37*	0.39*	15	21*	0.46*	
08/25 to 09/2	10			22			

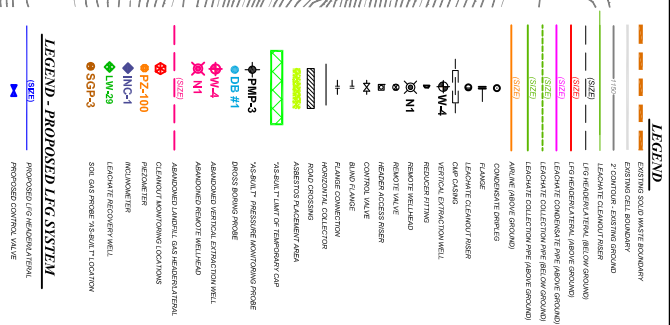
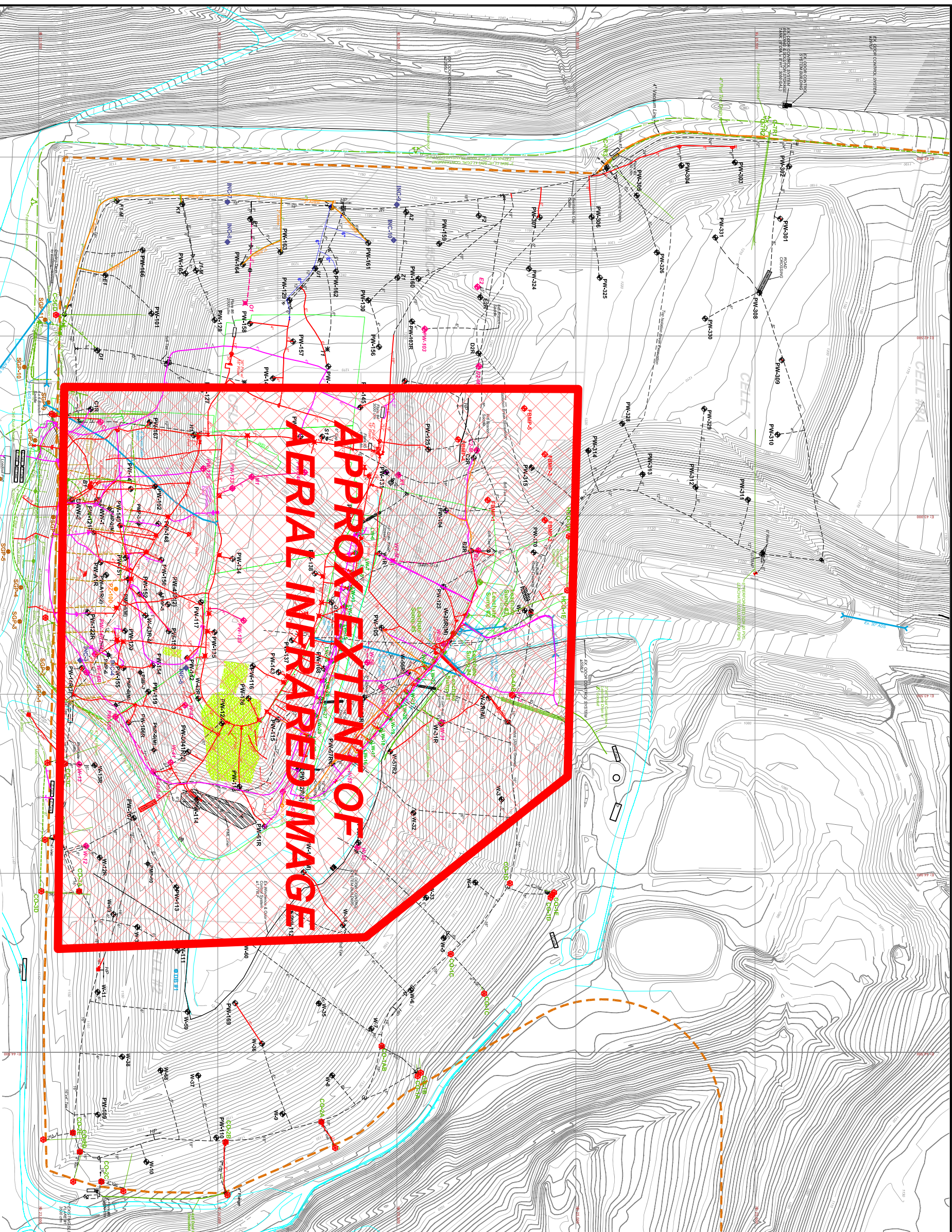
Eight results average 22 ppb. One result of 223 (principally methylene chloride, no benzene detected) skews the overall average of nine results.

Summary Table for ppbRAE Data Collected August 25, 2008 – September 2, 2008

[illegible]

ATTACHMENT D

AERIAL INFRARED IMAGES



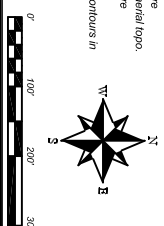
LEGEND NOTES:
1.) Existing below ground gas system is represented with the color BLACK. Existing above ground gas system is shown in RED.

[illegible]

NOTE: Existing contours outside the limit of waste were compiled from the Aircor's March 29, 2007 aerial topography. Existing contours within the 89A footprint were compiled from a Diversified Engineering, Inc. topographic survey dated 3/08/07. Existing contours in Cells 7 & 8A were updated on 1/20/07.

East Side Odor Fogger = 22,336LF
West Side Odor Fogger = 23,452LF

REVISION 12/21/07



REVISION 12/21/07

Composite Image by
Predictive Service LLC. 216.378.3500
Data Collected 8/19/2008



Ambient temperature was
67.5 deg. F at time of image.

Composite Image by
Predictive Service LLC. 216.378.3500
Data Collected 9/19/2008



Ambient temperature was 47 deg. F
at time of image.

