

**Landfill Gas and Control System Monitoring
Town of Huntington East Northport Landfill
East Northport, New York
March, 2009**

Prepared for:

**Town of Huntington Department of Environmental Waste Management
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**Landfill Gas and Control System Monitoring
Town of Huntington East Northport Landfill
East Northport, New York
March, 2009**

Introduction

This report presents the results of March, 2009 landfill gas and control system monitoring activities performed at the Town of Huntington East Northport Landfill, as stipulated by the New York State Department of Environmental Conservation.

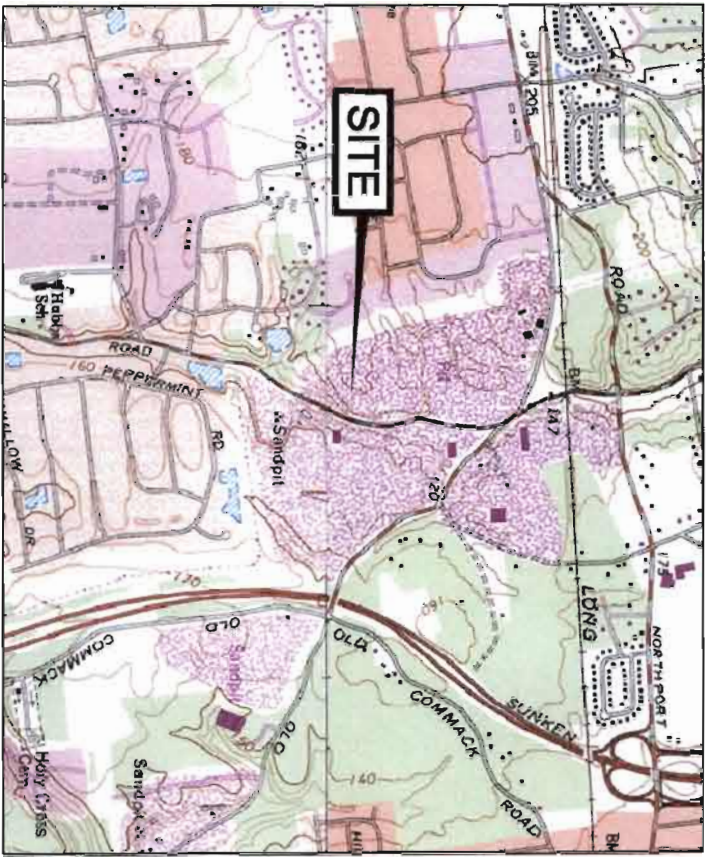
The primary landfill gas migration control system consists of thirty active landfill gas control wells connected - via a single header pipe forming a complete loop around the 44 acre East Northport Landfill - to one blower station. Landfill gas monitoring wells (consisting of 3-4 probes screened from approximately 5-70 feet below grade), situated outside of the aforementioned header pipe, provide a means to verify the control system's efficacy. Separate landfill gas control and monitoring systems are located at adjacent Animal Control and Resource Recovery Facilities.

The landfill area and pertinent components of the landfill gas monitoring and control system is depicted in Figure 1. The scope-of-work completed (per our agreement with the Town of Huntington Department of Environmental Waste Management dated December 4, 2006) precedes a summary of results. A discussion of methane monitoring data - with an emphasis on trends and occurrence - and the system's physical and operating condition follows.

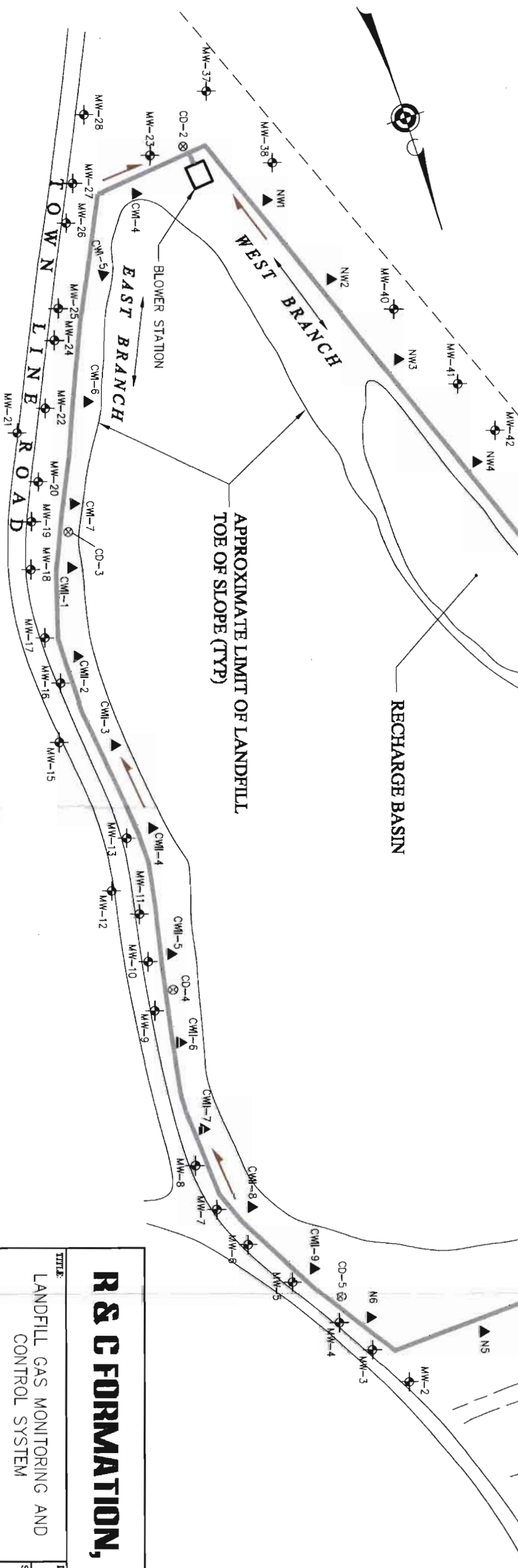
Scope-of-Work

The scope-of-work includes performance of the following on a monthly basis:

- 1) Monitoring of all probes in 41 landfill monitoring wells and up to 5 probes around the Town Animal Control Facility for methane gas and gas pressure.
- 2) Monitoring of 30 methane control wells and blower station for temperature, flow rate, vacuum, methane and oxygen (balance of the control system to be checked and adjustment to wells and to blower intake made, if necessary).



SITE LOCATOR
 APPROXIMATE SCALE: 1" = 2000'



- LEGEND**
- MW-45 MONITORING WELL
 - EXT-2 CONTROL WELL
 - CD-1 CONDENSATE DRAIN
 - HEADER PIPE
 - DIRECTION OF LANDFILL GAS FLOW IN HEADER PIPE

R S C FORMATION, LTD.	
TITLE: LANDFILL GAS MONITORING AND CONTROL SYSTEM	
DATE: 9/22/03	SCALE: AS SHOWN
DRAWING NO: 01006-1A	
APPR. BY: B.C.	
FIGURE: 1	TOWN OF HUNTINGTON EAST NORTHPORT LANDFILL EAST NORTHPORT, NY

3) Examination of 5 condensate traps in the control system for proper operation and water accumulation.

4) Noting of any problems, damage, missing parts etc. at each monitoring well, methane control well, condensate trap, Animal Control Facility probes and blower station.

Summary of Results

General

Reported monthly monitoring activities were performed March 26, 2009. Climatic conditions for the monitoring period are as follows:

Temperature: 40 (°F); Barometric Pressure: 30.07 (in. Hg); Relative Humidity: 89.0%; Precipitation: 0.37 inches; Wind Speed & Direction: 5.0 mph, southerly.

Monitoring Wells

Table 1 presents a summary of measured and recorded landfill gas monitoring well data. As shown, methane was not detected throughout the entire monitoring well network.

LFG Control Wells

A summary of measured and recorded landfill gas control well data - including the system's blower station where 2 "inlet" measuring points (Blower Station 1 & 2) and 1 "outlet" measuring point (Blower Station 3) are located - is presented on Table 2. As shown, control well vacuum values (i.e., negative pressure), a direct indicator of the system's balance, range from 0.0 - -2.8 (in. H₂O). "Extracted" methane values range from 0.0 – 1.5%.

Condensate Traps

Standing water measured within condensate traps CD-1 (4.1 feet), CD-2 (3.9 feet), CD-3 (7.5 feet), CD-4 (7.9 feet) and CD-5 (5.1 feet) was evacuated, as per usual, upon the completion of monitoring activities.

Discussion

Methane Monitoring Data

A summary of measured and recorded methane concentrations detected at landfill gas monitoring wells throughout the period-of-record from January, 2006 through March, 2009 is presented on Table 3. Methane has historically been detected sporadically and at low levels at the 14 monitoring wells shown. The most elevated concentration detected throughout the entire landfill gas monitoring well network continues to be 5.0 %; as measured at Animal Control Facility monitoring well AS-NE during March, 2001 monitoring activities (see October, 2007 report).

As reported previously, methane has not been detected at primary landfill gas migration control system monitoring wells since a nominal concentration of 0.1% was recorded at MW-49 during June, 2002 monitoring activities. The sporadic nature of low-level methane detections indicates that landfill gas control systems in relation to both the Animal Control Facility and East Northport Landfill continue to perform effectively.

Table 4 summarizes methane concentrations detected at landfill gas control wells during the period-of-record from January, 2006 through March, 2009. As shown on Table 4, reported values are consistent throughout the 40 month period, though a general decrease in detected concentrations is indicated.

Physical and Operating Condition

Based upon current and historic landfill gas monitoring data summarized above, the East Northport Landfill's primary landfill gas control system continues to effectively negate the off-site migration of methane. Vacuum values remain comparatively low at the northern-most portion of the system; as they have throughout the monitoring period-of-record (see Appendix 1). More of a site-wide balance, however, has developed in recent monitoring events.

The physical condition of system monitoring wells and control wells is noted on Table 1 and Table 2, respectively. As shown, all monitoring wells and control wells were accessible and in good condition. Blower station pump # 1 was in operation during March monitoring activities and all control wells continue to be set in the full-open-position. This full-open -position will be maintained for an evaluation period and modified if/as necessary.

Recommendations

- * In the event that methane is detected at any monitoring well associated with the primary landfill gas migration control system, recommence the monitoring of off and on-site structures.
- * Assess occurrence of methane versus landfill area (i.e., identify dominant landfill gas production zones).
- * Continue assessment of potential impact of all control valves at full-open-position on system-wide vacuum/methane levels.
- * Maintain the inspection and, when necessary, pumpage periodicity of standing water within condensate traps CD-1 through CD-5 (e.g., semi-weekly).

Table 1
Landfill Gas Monitoring Well Data
Town of Huntington East Northport Landfill, East Northport, New York
Measured March 26, 2009

Well No.	Probe Pressure (in. H ₂ O)				Methane 0-100% (Volume)				Condition
	A	B	C	D	A	B	C	D	
MW-A	-0.2	-0.2			0.0	0.0			
MW-B	-0.3	-0.2			0.0	0.0			
MW-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-3	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	
MW-4	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	
MW-5	0.0	0.0	0.0		0.0	0.0			
MW-6	-0.2	-0.1	0.0		0.0	0.0			
MW-7	-0.1	-0.1	-0.1		0.0	0.0			
MW-8	0.0	0.0	0.0		0.0	0.0			
MW-9	-0.2	0.0	-0.2		0.0	0.0			
MW-10	-0.2	-0.1	-0.2	-0.2	0.0	0.0	0.0	0.0	
MW-11	-0.1	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0	
MW-12	0.0	-0.1	-0.1		0.0	0.0			
MW-13	-0.3	-0.1	0.0		0.0	0.0			
MW-15	0.0	0.0	-0.1		0.0	0.0			
MW-16	-0.1	-0.2	-0.2		0.0	0.0	0.0	0.0	
MW-17	-0.1	0.0	-0.1		0.0	0.0			
MW-18	0.0	0.0	-0.2		0.0	0.0	0.0	0.0	
MW-19	-0.2	-0.2	0.0	-0.2	0.0	0.0	0.0	0.0	
MW-20	-0.2	-0.1	-0.2		0.0	0.0	0.0	0.0	
MW-21	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	
MW-22	-0.1	-0.1	-0.2		0.0	0.0	0.0	0.0	

Table 1 (continued)

Well No.	Probe Pressure (in. H2O)				Methane 0-100% (Volume)				Condition
	A	B	C	D	A	B	C	D	
MW-23	-0.1	-0.2	-0.1	-0.2	0.0	0.0	0.0	0.0	
MW-24	0.0	-0.1	0.0		0.0	0.0	0.0		
MW-25	-0.3	-0.3	0.0		0.0	0.0	0.0		
MW-26	-0.2	-0.2	-0.2	-0.2	0.0	0.0	0.0	0.0	
MW-27	-0.1	-0.1	0.0		0.0	0.0	0.0		
MW-28	0.0	0.0	-0.1		0.0	0.0	0.0		
MW-37	0.0	0.0	0.0		0.0	0.0	0.0		
MW-38	0.0	0.0	0.0		0.0	0.0	0.0		
MW-40	-0.1	-0.1	-0.1	-0.2	0.0	0.0	0.0	0.0	
MW-41	0.0	-0.1	0.0		0.0	0.0	0.0	0.0	
MW-42	-0.1	0.0	-0.1		0.0	0.0	0.0		
MW-43	0.0	-0.1	-0.1		0.0	0.0	0.0		
MW-44	0.0	0.0	-0.1		0.0	0.0	0.0		
MW-45	0.0	0.0	0.0		0.0	0.0	0.0		
MW-46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-47	0.0	0.0	0.0		0.0	0.0	0.0		
MW-48	0.0	0.0	0.0		0.0	0.0	0.0		
MW-49	0.0	0.0	0.0		0.0	0.0	0.0		
MW-51	-0.1	-0.1	-0.1		0.0	0.0	0.0		
AS-NW	0.0				0.0				
AS-NE	0.0				0.0				
AS-SW	0.0				0.0				
AS-SC	0.0				0.0				
AS-SE	0.0				0.0				

D - Deepest Probe

C - Deep Probe

B - Middle Probe

A - Shallow Probe

Shading indicates the well is not equipped with that particular probe.

NA - Not Available

Table 2
Landfill Gas Control Well Data
Town of Huntington East Northport Landfill, East Northport, New York
Measured March 26, 2009

Well No.	Temp (°F)	Flow Rate (ft ³ /min)	Vacuum (in. H ₂ O)	Methane 0-100 % (Volume)	Oxygen % in Air	Condition
CWI-4	63.1	90.50	-2.5	0.0	24.9	
CWI-5	67.3	71.00	-2.7	0.1	21.0	
CWI-6	61.7	17.50	-2.8	0.0	19.9	
CWI-7	73.0	17.50	-2.7	0.3	19.6	
CWI-1	77.6	32.00	0.0	0.5	19.1	
CWI-2	87.1	18.70	-2.5	0.2	18.9	
CWI-3	66.6	10.00	-2.6	0.3	19.4	
CWI-4	68.3	29.60	-2.6	0.5	19.8	
CWI-5	61.2	9.40	-2.6	0.1	18.9	
CWI-6	69.7	15.90	-1.9	0.2	19.7	
CWI-7	54.7	11.40	-1.5	0.0	20.1	
CWI-8	49.8	3.14	0.0	0.0	20.6	
CWI-9	68.7	6.30	-1.0	0.0	20.7	
NW-1	55.6	98.50	-2.3	0.0	20.7	
NW-2	54.2	36.50	-2.7	0.0	20.7	
NW-3	53.8	50.50	-2.3	0.0	20.6	
NW-4	53.7	27.40	-2.1	0.0	20.6	
NW-5	54.4	42.00	-1.8	0.0	20.5	
NW-6	55.1	24.20	-1.8	0.0	20.6	
Ext-1	54.7	5.00	-0.1	0.0	20.5	
Ext-2	55.2	29.30	-0.8	0.0	20.5	
Ext-3	59.7	22.30	-1.9	0.0	20.5	
Ext-4	65.2	44.90	-1.9	0.0	20.4	
Ext-5	56.4	54.50	-1.9	0.0	20.5	
N-1	48.3	1.62	-0.3	0.0	20.9	
N-2	61.7	6.60	-0.6	1.5	17.2	
N-3	48.6	5.80	-0.2	0.0	20.7	
N-4	47.6	1.77	-0.1	0.0	20.7	
N-5	46.4	0.25	-0.1	0.0	20.8	
N-6	59.8	15.20	-1.0	0.0	20.8	
Blower Station - 1	50.0	2,690.00	-4.1	0.0	20.9	
Blower Station - 2	49.1	2,600.00	-9.6	0.0	20.8	
Blower Station - 3	55.1	1,670.00	0.3	0.0	20.8	

NA - Not Available
 Blower Station - 1 - on

Table 3
Summary of Methane Detections
Landfill Gas Monitoring Wells
Town of Huntington East Northport Landfill, East Northport, New York
for period of record between January, 2006 and March, 2009

Well	1/06	2/06	3/06	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07	4/07
MW-7C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-8C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-11A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-12A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-12C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-18A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-19A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-24C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-38B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-39A	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-49A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-49B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-49C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-SC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-NE	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

NA - Not Available
 Measured in % Volume

Table 3 (continued)

Well	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08
MW-7C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-8C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-9C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-11A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-12A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-12C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-18A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-19A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-24C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-38B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-39A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-49A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-49B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW-49C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-SC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AS-NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NA - Not Available
 Measured in % Volume

Table 4
Landfill Gas Control Well Methane Data
Town of Huntington East Northport Landfill, East Northport, New York
for period of record between January, 2006 and March, 2009

Well	1/06	2/06	3/06	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07	4/07
CWI-4	0.0	0.3	0.4	0.2	0.1	0.3	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.1
CWI-5	0.0	1.8	2.0	1.5	0.8	1.5	0.2	0.0	0.0	1.0	0.8	0.7	0.7	2.1	0.0	0.7
CWI-6	0.1	0.3	0.1	0.4	1.0	0.9	0.2	0.0	0.0	0.0	1.0	0.6	0.6	0.0	0.0	0.8
CWI-7	0.2	5.0	6.0	5.0	0.1	0.7	0.6	0.0	0.0	0.2	2.2	1.5	1.1	NA	0.1	2.0
CWII-1	0.4	5.0	6.0	2.7	1.6	2.4	2.6	7.0	0.0	0.3	4.0	4.0	3.8	5.0	5.0	3.8
CWII-2	0.2	4.5	4.2	3.4	2.7	1.9	1.0	2.2	0.0	3.0	1.6	1.6	1.6	1.2	1.7	1.7
CWII-3	0.2	2.3	2.1	0.9	1.8	1.5	1.5	1.7	0.0	0.2	0.0	0.7	1.1	1.1	1.3	NA
CWII-4	0.2	4.0	3.8	1.0	4.0	1.3	0.8	4.7	0.0	0.3	5.0	2.8	2.8	1.7	3.6	2.7
CWII-5	0.0	1.0	4.2	0.5	0.7	0.6	0.4	1.5	0.0	0.0	0.8	0.4	0.6	0.8	0.2	0.4
CWII-6	0.2	3.5	0.7	0.8	2.0	0.6	1.1	0.5	0.0	0.1	0.9	1.4	1.7	1.7	0.3	1.2
CWII-7	0.0	0.1	3.4	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
CWII-8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CWII-9	0.0	1.1	0.0	0.7	0.6	0.2	0.5	0.4	0.0	0.0	0.4	0.4	0.7	0.6	0.4	0.3
NW-1	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-3	0.2	0.0	0.0	0.0	0.2	0.0	0.8	0.2	0.0	3.0	1.2	0.3	1.3	0.2	0.0	0.1
Ext-4	0.2	0.0	0.0	0.0	0.4	0.2	0.4	0.1	0.0	2.0	0.4	0.2	1.0	0.1	0.0	0.1
Ext-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-2	2.6	1.3	0.6	11.0	NA	0.0	4.8	0.0	0.8	4.4	3.0	0.5	0.2	0.0	3.1	4.0
N-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-6	NA	0.0	0.0	0.1	NA	0.7	0.1	0.1	0.0	0.0	NA	NA	NA	NA	NA	0.0
BS-1	0.1	0.0	0.6	0.9	0.7	0.4	0.4	0.0	0.1	0.9	0.7	0.5	0.5	0.6	0.1	0.5

NA - Not Available
 Measured in % Volume

Table 4 (continued)

Well	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08
CWI-4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1
CWI-5	0.8	0.9	0.8	0.7	0.8	0.8	0.0	0.7	0.5	0.5	2.5	0.4	0.2	0.3	0.4	0.0
CWI-6	0.7	1.1	1.3	0.8	1.0	0.8	0.1	0.5	0.6	0.9	0.5	0.4	0.3	0.5	0.7	0.3
CWI-7	2.3	2.4	2.3	2.0	3.0	2.6	0.2	2.0	2.2	2.1	1.3	1.1	0.9	1.2	1.3	0.5
CWII-1	4.6	9.0	8.0	5.0	5.0	1.3	5.0	7.0	7.0	10.0	4.0	3.3	2.2	3.8	3.8	1.0
CWII-2	1.9	2.3	2.0	1.5	1.8	6.0	1.4	1.0	1.1	1.2	0.7	0.9	0.6	0.7	0.9	2.5
CWII-3	NA	3.8	2.7	4.0	3.5	1.8	2.8	0.3	1.5	2.2	1.4	1.0	0.5	1.0	1.4	0.7
CWII-4	2.6	3.5	3.3	3.1	3.5	2.6	3.5	2.5	2.1	2.7	2.0	1.5	1.1	1.5	1.5	1.0
CWII-5	0.9	1.7	1.3	1.7	1.8	0.9	1.0	0.2	0.3	0.4	2.5	0.3	0.3	0.5	0.8	1.2
CWII-6	1.7	2.5	2.0	2.0	2.9	1.7	2.1	0.3	1.0	0.7	0.7	0.7	0.6	0.8	0.0	0.5
CWII-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
CWII-8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CWII-9	0.5	0.5	0.5	0.4	0.6	0.4	0.5	0.3	4.5	0.2	0.2	0.2	0.2	0.2	0.1	0.3
NW-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
NW-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-3	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext-3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.5	1.5	0.2	0.0	0.0	0.0	0.0	0.0
Ext-4	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Ext-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-2	2.8	3.4	3.3	3.0	3.4	4.7	0.3	3.5	2.0	NA	1.5	2.8	2.2	2.4	2.3	2.2
N-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N-6	0.0	0.0	0.0	0.0	0.0	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BS-1	0.5	0.7	0.4	0.7	0.7	0.6	0.0	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.3	0.3

NA - Not Available
Measured in % Volume

APPENDIX 1

Landfill Gas Control Well Vacuum Data
East Northport Landfill, East Northport, New York
 for period of record between January, 2006 and March, 2009

Well	1/06	2/06	3/06	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07	4/07	5/07	6/07	7/07
CWI-4	-2.9	-2.6	-2.6	-3.0	-2.6	-0.1	-3.3	-5.2	-1.2	-2.8	-3.9	-4.2	-3.0	-3.6	-3.0	-3.0	-2.8	-2.8	-2.6
CWI-5	-3.3	-3.1	-3.2	-2.6	-2.8	0.0	-2.8	-1.9	-3.4	-2.3	-4.4	-4.5	-3.4	-3.6	-3.2	-3.2	-2.9	-2.9	-2.7
CWI-6	-3.5	-3.1	-3.0	-3.0	-2.9	-0.3	-4.0	-6.4	-2.9	-2.9	-4.7	-4.3	-3.5	-3.7	-3.2	-3.2	-3.0	-2.9	-2.7
CWI-7	-3.0	-3.0	-2.8	-2.8	-2.8	-0.4	-2.8	-2.4	-3.1	-2.8	-4.5	-4.1	-3.3	NA	-3.0	-2.9	-2.8	-2.7	-2.5
CWI-1	-3.1	-3.0	-3.0	-2.9	-2.7	0.0	-3.2	-6.3	-2.9	-2.6	-4.3	-4.3	-3.4	-3.4	-2.7	-3.0	-2.7	-2.6	-2.5
CWI-2	-3.0	-2.9	-2.7	-2.8	-2.7	-0.5	-3.5	-5.9	-5.4	-2.6	-4.2	-3.9	-3.3	-3.4	-2.6	-2.8	-2.6	-2.5	-2.4
CWI-3	-3.0	-2.9	-2.9	-2.7	-2.5	0.0	-2.6	-6.8	-0.6	-2.7	-4.3	-4.1	-3.1	-3.4	-2.7	NA	NA	-2.6	-2.4
CWI-4	-2.8	-2.8	-2.4	-2.6	-2.7	-0.9	-3.2	-6.8	-2.7	-2.6	-5.0	-4.0	-3.1	-3.7	-2.7	-2.6	-2.5	-2.5	-2.3
CWI-5	-2.8	-2.5	-2.6	-2.7	-2.1	0.0	-2.3	-7.0	-2.6	-2.6	-0.3	-4.2	-3.2	-3.6	-2.6	-2.7	-2.5	-2.4	-2.3
CWI-6	-1.4	-1.4	-1.5	-1.6	-1.9	-0.1	-1.0	-0.2	-1.7	-1.4	-1.7	-2.3	-2.0	-0.2	-1.7	-1.6	-1.7	-1.7	-1.6
CWI-7	-1.2	-1.0	-1.1	-0.7	-1.4	-0.2	-0.8	-0.2	-1.3	-1.1	-1.5	-1.7	-1.7	-1.3	-1.4	-1.4	-1.2	-1.3	-1.1
CWI-8	0.0	0.0	-0.2	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.0
CWI-9	-0.9	-0.6	-0.7	-1.0	-0.8	-0.9	-0.6	-0.2	-0.9	-0.8	-0.9	-1.2	-1.4	-1.0	-1.0	-1.1	-0.9	-0.9	-0.8
NW-1	-2.8	-2.8	-2.8	-2.6	-2.2	-2.4	-3.2	-4.0	-3.7	-2.5	-3.2	-3.9	-2.9	-3.4	-3.0	-2.9	-2.8	-2.6	-2.1
NW-2	-3.3	-2.9	-2.7	-2.6	-2.9	-2.7	-3.4	-4.5	-3.4	-3.2	4.2	-4.5	-3.3	-3.7	-3.2	-3.2	-3.1	-3.9	-2.8
NW-3	-2.8	-2.9	-2.8	-2.7	-2.7	-2.8	-3.2	-4.0	-3.2	-2.8	-4.0	-4.0	-2.3	-3.4	-2.9	-3.0	-2.7	-2.6	-2.6
NW-4	-2.9	-3.0	-3.0	-3.0	-2.7	-2.6	-2.4	-3.6	-2.8	-2.6	-4.0	-3.6	-2.8	-3.3	-2.6	-2.9	-2.6	-2.4	-2.4
NW-5	-2.3	-2.9	-2.6	-2.6	-1.2	-2.5	-2.2	-2.6	-2.3	-2.1	-3.6	-2.9	-2.3	-3.0	-2.2	-2.6	-2.2	-1.9	-2.1
NW-6	-2.2	-3.0	-2.9	-3.0	-1.6	-2.1	-2.8	-2.8	-2.5	-2.8	-3.1	-3.0	-2.3	-2.6	-2.3	-1.6	-2.3	-2.1	-2.0
Ext-1	0.0	0.0	0.0	-0.2	-0.2	-0.3	0.0	-0.7	-0.1	-0.1	-3.6	-3.4	-2.7	-0.1	0.0	0.0	0.0	-1.7	-0.1
Ext-2	-0.6	-0.8	-0.9	-0.8	-0.8	-0.6	-0.1	-3.0	-0.9	-0.7	-3.4	NA	-2.1	-1.1	-0.8	-0.9	-0.9	-2.1	-0.9
Ext-3	-2.1	-2.8	-2.7	-2.6	-2.2	-1.9	-0.5	-3.3	-2.3	-2.1	-3.3	-3.2	-2.3	-2.9	-2.2	-2.5	-2.3	-2.3	-2.1
Ext-4	-2.0	-1.9	-1.8	-1.6	-2.1	-2.0	-0.6	-2.0	-2.0	-2.1	-3.2	-3.5	-2.0	-2.7	-2.2	-2.3	-2.1	-0.9	-2.0
Ext-5	-0.8	-1.6	-1.4	-1.6	-1.7	-1.5	-0.2	-0.1	-1.6	-1.6	-2.4	-2.6	-2.0	-2.3	-2.0	-2.1	-1.9	-0.1	-1.7
N-1	-0.3	-0.2	-0.4	-0.4	-0.6	0.0	-1.0	-2.8	-1.5	-0.2	-0.2	-0.2	0.0	0.1	0.0	-0.2	-0.1	0.0	-0.1
N-2	-0.4	-0.4	-0.8	-0.7	NA	0.0	-0.1	-0.9	-0.3	-0.6	-0.5	-0.4	-0.3	-0.4	-0.4	-0.6	-0.3	-0.3	-0.5
N-3	-0.1	-0.1	0.0	-0.2	-0.1	-0.1	0.0	-0.3	-0.1	-0.1	-0.1	-0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
N-4	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	-0.2	-0.1	-0.2	-0.1	-0.1	0.0	-0.2	-0.8	-0.1	-0.1	0.0	-0.1
N-5	-0.1	-0.1	0.0	-1.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	0.0	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
N-6	NA	-0.8	-0.1	-0.2	NA	0.0	-1.1	-0.2	-0.9	-1.0	NA	NA	NA	NA	NA	-1.1	-0.8	-0.9	-0.9
BS-1	-4.9	-4.2	-5.1	-4.6	-4.6	-3.1	-8.5	-10.1	-6.1	-5.1	-7.3	-7.2	4.0	-5.6	-5.0	-5.1	-4.8	-7.3	-4.3

Measured in inches of H2O

NA - Not Available

Landfill Gas Control Well Vacuum Data
East Northport Landfill, East Northport, New York
for period of record between January, 2006 and March, 2009

Well	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08	1/09	2/09
CWI-4	-2.6	-2.5	-2.5	-3.1	-3.0	-2.9	-3.7	-3.7	-1.8	-3.4	-1.8	-2.1	-1.6	-1.9	-1.2	-1.4	0.0	-3.0	-2.8
CWI-5	-2.7	-2.8	-2.7	-3.0	-3.5	-3.1	-3.7	-3.5	-3.0	-2.9	-1.8	-2.3	-1.9	-2.1	-1.3	-1.4	0.0	-3.4	-2.8
CWI-6	-2.6	-2.2	-2.4	-2.9	-3.4	-3.2	-3.3	-3.4	-3.1	-2.9	-1.9	-2.4	-1.8	-2.1	-1.3	-1.2	-0.1	-3.6	-3.0
CWI-7	-2.5	-2.5	-2.4	-2.5	-3.1	-3.0	-3.7	-3.3	-2.7	-2.3	-1.8	-2.4	-1.8	-2.0	-1.1	-0.6	NA	-3.6	-2.9
CWI-1	-2.3	-1.5	-2.4	-2.4	-3.0	-2.9	-4.1	-3.2	-2.6	-2.6	-1.7	-2.4	-1.7	-2.0	-1.2	-1.1	-0.1	-3.5	-2.9
CWI-2	-2.3	-2.3	-2.4	-2.5	-3.5	-2.9	-3.2	-3.6	-2.6	-2.5	-1.6	-2.4	-1.7	-2.0	-1.2	-1.6	-0.1	-3.0	-2.8
CWI-3	-2.3	-2.4	-2.3	-2.4	-2.9	-2.9	-3.7	-3.1	-3.1	-2.3	-1.7	-2.7	-1.6	-2.0	-1.1	-0.9	-0.1	-3.6	-2.7
CWI-4	-3.2	-2.1	-2.2	-2.3	-3.6	-2.9	-1.8	-3.5	-2.5	-2.1	-1.6	-2.4	-1.6	-1.9	-1.1	-1.1	NA	-3.4	-2.7
CWI-5	-2.2	-2.4	-2.2	-2.6	-3.5	-2.9	-3.0	-3.1	-2.8	-2.4	-1.6	-2.5	-1.6	-1.9	-1.1	-1.0	-0.2	-3.5	-2.7
CWI-6	-1.6	-1.5	-1.5	-1.3	-0.2	-2.0	-1.2	-2.2	-1.6	-1.7	-1.2	0.0	-1.6	-1.6	-0.7	-0.8	NA	0.0	-1.6
CWI-7	-1.2	-1.1	-1.2	-1.1	-0.3	-1.5	-1.2	-1.7	-1.2	-1.3	-0.9	0.0	-1.2	-1.1	-0.7	-0.6	-0.2	0.0	-1.2
CWI-8	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0
CWI-9	-0.2	-0.9	-0.9	-0.9	-0.6	-1.1	-0.2	-0.2	-0.9	-0.9	-0.6	0.0	-0.6	-0.8	-0.6	-0.5	-0.2	0.0	-0.9
NW-1	-2.6	-2.4	-2.5	-2.5	-2.9	-2.8	-3.0	-3.1	-2.7	-2.8	-1.6	-1.9	-1.8	-1.9	-1.1	-1.2	-1.6	-2.9	-2.6
NW-2	-2.8	-1.7	-2.9	-3.1	-3.3	-3.1	-3.4	-3.8	-2.9	-3.2	-2.1	-2.4	-1.7	-2.0	-1.1	-0.8	-1.4	-3.1	-3.4
NW-3	-2.5	-2.0	-2.4	-2.5	-2.8	-2.7	-4.3	-3.1	-2.7	-2.1	-1.8	-2.1	-1.3	-1.8	-1.1	-0.7	-1.0	-2.7	-2.7
NW-4	-2.2	-2.2	-2.3	-2.2	-2.6	-2.4	-3.4	-2.8	-3.1	-2.9	-1.6	-1.9	-1.5	-1.7	-1.0	-1.0	-0.9	-2.3	-2.4
NW-5	-1.8	-1.8	-1.9	-2.0	-2.1	-2.1	-2.5	-2.2	-2.2	-0.9	-1.4	-1.6	-1.2	-1.5	-0.8	-0.6	-1.2	-2.1	-2.0
NW-6	-1.8	-1.8	-1.9	-2.2	-2.2	-2.1	-2.4	-2.4	-2.1	-2.1	-1.3	-1.6	-1.2	-1.4	-0.9	-0.7	-1.3	-2.3	-2.0
Ext-1	-0.1	0.0	0.0	-0.1	-0.1	-2.1	-0.1	-0.1	0.0	-0.1	0.0	-0.1	-1.1	0.0	0.0	-0.1	-0.4	0.0	-0.1
Ext-2	-0.7	-0.8	-0.7	-0.7	-0.9	-0.9	-1.0	-1.0	-0.9	-2.2	-0.9	-0.7	-1.0	-0.5	-0.5	-0.4	-0.7	-0.9	-0.8
Ext-3	-2.1	-2.0	-1.9	-1.9	-2.3	-2.2	-2.6	-2.7	-2.2	-2.2	-1.6	-1.7	-0.6	-1.4	-0.9	-0.7	-0.3	-2.1	-2.0
Ext-4	-1.9	-1.9	-2.2	-1.9	-2.2	-2.1	-2.4	-2.3	-1.9	-2.0	-1.4	-1.1	-1.7	-1.5	-0.9	-0.6	-1.1	-2.0	-1.8
Ext-5	-1.6	-1.5	-1.7	-1.5	-1.9	-1.8	-2.0	-2.1	-1.8	-1.8	-1.1	-0.4	-0.9	-1.2	-0.8	-1.0	-1.4	-1.8	-1.5
N-1	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.3	-0.2	-0.2	-0.1	-0.3	-0.2	-0.2	-0.2	NA	NA	NA	NA	-0.2
N-2	-0.6	-0.5	-0.7	-0.6	-0.6	-0.6	NA	-0.4	-0.6	-0.7	-0.5	-0.5	-0.6	-0.5	-0.3	-0.5	-0.3	-0.7	-0.7
N-3	-0.2	-0.1	-0.2	0.0	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.3	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1
N-4	-0.1	-0.1	-0.1	0.0	-0.2	-0.1	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	NA	-0.2	-0.1
N-5	-0.1	-0.1	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.2	-0.1	NA	-0.2	-0.1
N-6	-0.9	-0.8	-0.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.8	NA	NA	NA	-0.1	-0.8
BS-1	-5.6	0.3	-4.4	-4.7	-5.1	-4.5	-5.0	-5.2	-4.2	-4.8	-2.8	-3.2	0.1	-3.0	-1.7	-21.7	0.1	-4.1	0.5

Measured in inches of H2O

NA - Not Available

