



Countywide Recycling & Disposal Facility

Division of Republic Services of Ohio II, LLC
3619 Gracemont Street S.W.
East Sparta, Ohio 44626
Phone: 330-874-3855
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September 26, 2008

Ohio Environmental Protection Agency, Central Office
Division of Solid and Infectious Waste Management
Attn: Mr. Ed Gortner
PO Box 1049
Columbus, Ohio 43216-1049

RE: WRITTEN DEMONSTRATION FOR GAS WELLS WITH OXYGEN EXCEEDANCES
ORDER 4.B.2, DIRECTOR'S FINAL FINDINGS AND ORDERS OF MARCH 28, 2007
COUNTYWIDE RECYCLING AND DISPOSAL FACILITY

Dear Mr. Gortner:

On June 12, 2008 Countywide Recycling and Disposal Facility (Countywide) submitted a 120 day written demonstration requesting an alternative timeline for one (1) landfill gas (LFG) well which exhibited oxygen levels greater than the target level of 1.5% as required by Order 4.B. The purpose of this letter is to inform you that the LFG well has not routinely achieved compliance with the 1.5% oxygen target identified in the findings and orders, and to provide a written demonstration and request for an alternative oxygen concentration.

The LFG well identified in the May 2, 2007 written demonstration is noted in Table 1, below. Also noted in the table is the date in which compliance was achieved if applicable and the oxygen content.

Table 1
LFG Wells with Greater than 1.5% Oxygen Identified in the May 2, 2007 Written Demonstration Letter

Well ID	Date of Initial Exceedance	Initial Oxygen Content	Oxygen Content As Of September 26, 2008
PW-178	5/29/2008	16.2%	2.7%

Corrective actions were taken as described in Table 2, however PW-178 is still exhibiting oxygen concentrations above 1.5% by volume and Countywide is requesting an alternative oxygen concentration for this well.

**Table 2
Corrective Actions Taken to Achieve Compliance With the 1.5% Oxygen Target
and Reason Mandated Oxygen Content Not Achieved**

Well ID	Corrective Actions Taken	Reason 1.5% Level Not Achieved
PW-178	Nominal vacuum adjustments, assessed well integrity and made repairs as appropriate, performed depth to fluid and depth to bottom measurements. Tuned surrounding wells to minimize influence from nearby wells. Installed PVC liner boot to well casing which extends approximately 10 feet around the well. Installed Area D temporary FML cap and associated liquid and LFG collectors.	Well integrity investigation showed no apparent integrity issues with the above ground well casing and wellhead. Depth to fluid shows less than 1 foot of water in the well casing. Camera investigation shows cracked casing at 29 feet (should not influence O2 at this depth). At this time the cause of the O2 exceedance is unknown. Suspect Area D cap construction activities influenced O2 intrusion to the well. Cap construction activities are complete in this area and O2 levels still above 1.5%.

A complete historical record of the corrective actions taken by Countywide for PW-178 is provided in Attachment A. A chronological listing of oxygen content readings taken for this LFG wells is provided in Attachment B.

Countywide proposes an alternative oxygen concentration for the LFG wells as shown in table 3 below.

**Table 3
Proposed Alternative Oxygen Concentration**

Well ID	Proposed Alternative Oxygen Concentration and Reason
PW-178	Countywide requests an alternative oxygen concentration of 5.0% for this well. This is the allowable concentration set fourth in the NSPS and the facilities Title V permit. In addition several corrective measures have been performed on this well to obtain 1.5% oxygen concentration as noted in Table 2 and have been unsuccessful to date. This well is not located in an area where the aluminum dross reaction is occurring at this time, and wellhead temperatures are generally less than 131 degrees F for this well and surrounding wells in the vicinity.

PW-178 is a shallow well located on the north slope of cell 1 within the limits of Temporary Cap Area D. As such Countywide does not believe that the source of oxygen for this LFG well (PW-178) is a result of overpull, nor is the oxygen being introduced into the waste mass. In addition Countywide will continue to monitor this LFG well as required and continue working to achieve 1.5% or less oxygen concentration for this and all other LFG wells where possible.

Countywide respectfully requests your immediate attention and response in this matter. Please feel free to call me should you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tim Vandersall', with a long horizontal line extending to the right.

Tim Vandersall, P.E.
General Manager

Attachments:

Attachment A - Well Assessment and Repair Logs
Attachment B - Chronological Oxygen Content Readings

cc: Bill Skowronski - OEPA-NEDO
Kirk Norris - SCHD
Dan Aleman - CCHD
Todd Hamilton - CWRDF
Kyle Nay, Bruce Schmucker, Mike Contestabile - Cornerstone
Bob Caron, Randy Everett, Janet Todia - AEG
Jason Perdion - B&H
Jim Walsh - SCS Engineers
Mike Beaudoin - Earth Tech

Attachment A
Historical Record of Corrective Actions



PRIORITY RESPONSE TO > 1.5% O2 LFG WELL READING

Well Identification: Pw-178

Initial Discovery
 Date: 5-29-08 **Time:** 2:23pm **of initial discovery of > 1.5% oxygen**
Technician: Thomas Philips 11.2 % O2 non-compliant reading
Possible issue(s):
 Yes No N/A
 Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"

Date: 5-29 **of AEGL O&M Well Integrity Assessment (below)**
Technician: Thomas Philips

Complete within 1-day of initial discovery	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is well labeled?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is well lateral / header in good condition?
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Is well head remote?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is lateral or header line surging?
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Is well hard piped?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Is the well surging?
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are all sample ports in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Is well boot (liner) in good condition?
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are all flanges in good condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is well bore (soil) in good condition?
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are all other connections in good condition?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Compliance achieved?
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is well valve in good condition?	Date compliance achieved?	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the well kanaflex in good condition?	% O2 compliant reading	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Is there a pump in the well?		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Does pump require service?		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is well casing in good condition?		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Miscellaneous - please describe		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"		

Date: 6-11-08 **of AEGL O&M Well Integrity Repairs & Investigation**
Technician: Thomas Philips

Description on noted issue(s): Wellhead ports, fittings, connections repaired/replaced

Repair Summary:

Complete within 2 days of initial discovery	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Wellhead ports / fittings / connections repaired/replaced?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Compliance achieved?
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Wellhead Kanaflex repaired or replaced?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Date compliance achieved?
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Reviewed 3-months monitoring data for O2 trends (attach copy)	% O2 compliant reading	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Well casing integrity checked with dummy?		
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Wellhead valve replaced or repair?		
	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Miscellaneous repaired or replaced? - please describe <u>Checked/tightened all connections</u>		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Review logs for original pipe lengths installed?		

Solid 20.0 ft.
 Perforation 14.0 ft.
 DTB 32.0 ft.
 DTF 31.9 ft.

Additional Comments: Installed sample port below well head in the side of the well casing to ensure that the well head did not have any possible leaks. 6-11-08 See comments on backside for additional information.

Landfill Gas Collection and Control System Repair Documentation Report

this form documents corrective actions taken to achieve less than 1.5% O2 in vertical landfill gas well locations for Republic Services of Ohio II, LLC, dba Countywide Recycling and Disposal Facility Order # 4A and 4B

PRIORITY RESPONSE TO > 1.5% O2 LFG WELL READING

Well Identification: PLW-178

Initial Discovery
 Date: 7/7/08 **Time:** 1238 **of initial discovery of > 1.5% oxygen**
Technician: Tom Phillips 9.6 % O2 non-compliant reading
Possible issue(s): unknown

Yes No N/A
 Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"

Date: 7/7/08 **of AEGL O&M Well Integrity Assessment (below)**
Technician: Tom Phillips

Yes	No	N/A		Yes	No	N/A		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well labeled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well lateral / header in good condition?	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is well head remote?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is lateral or header line surging?	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is well hard piped?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the well surging?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all sample ports in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is well boot (liner) in good condition?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all flanges in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well bore (soil) in good condition?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all other connections in good condition?	Yes	No	N/A		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well valve in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Compliance achieved?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the well Kanaflex in good condition?				_____ Date compliance achieved?	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is there a pump in the well?				_____ % O2 compliant reading	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Does pump require service?					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well casing in good condition?					
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Miscellaneous - please describe _____					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"					

Date: 7/11/08 **of AEGL O&M Well Integrity Repairs & Investigation**
Technician: Tom Phillips
Description on noted issue(s): unknown

Repair Summary:

Yes	No	N/A		Yes	No	N/A		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead ports / fittings / connections repaired/replaced?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Compliance achieved?	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead Kanaflex repaired or replaced?				_____ Date compliance achieved?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reviewed 3-months monitoring data for O2 trends (attach copy)				_____ % O2 compliant reading	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Well casing integrity checked with dummy?					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead valve replaced or repair?					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Miscellaneous repaired or replaced? - please describe _____					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review logs for original pipe lengths installed?					

Solid 20 ft
 Perforation 14 ft
 DTB 32.4 ft
 DTF 31.9 ft

Additional Comments _____

Landfill Gas Collection and Control System Repair Documentation Report
this form documents corrective actions taken to achieve levels less than 1.5% O2 in vertical landfill gas well locations for
Republic Services of Ohio, LLC, aka Countrywide Recycling and Disposal Facility
Order # 4A and 4B

PRIORITY RESPONSE TO > 1.5% O2 LFG WELL READING

Well Identification: PW-178

Initial Discovery
 Date: 9-10-08 Time: 1017 of initial discovery of > 1.5% oxygen
 Technician: Steven Paul 4.3 % O2 non-compliant reading
 Possible Issue(s): unknown

Yes No N/A
 Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"

Complete within 1-day of initial discovery
 Date: 9-10-08 of AEGL O&M Well Integrity Assessment (below)
 Technician: Steven Paul

Yes	No	N/A		Yes	No	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well labeled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well lateral / header in good condition?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is well head remote?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is lateral or header line surging?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is well hand piped?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the well surging?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all sample ports in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is well boot (liner) in good condition?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are all flanges in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well bore (soil) in good condition?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all other connections in good condition?	Yes	No	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well valve in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Compliance achieved?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the well Kanaflex in good condition?				Date compliance achieved?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is there a pump in the well?				% O2 compliant reading
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Does pump require service?				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is well casing in good condition?				
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Miscellaneous - please describe				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"				

Complete within 2 days of initial discovery
 Date: 9-10-08 of AEGL O&M Well Integrity Repairs & Investigation
 Technician: David Messner
 Description on noted issue(s): Alternate Time line expires 9-26-08

Repair Summary:

Yes	No	N/A		Yes	No	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead ports / fittings / connections repaired/replaced?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Compliance achieved?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead Kanaflex repaired or replaced?				Date compliance achieved?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reviewed 3-months monitoring data for O2 trends (attach copy)				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Well casing integrity checked with dummy?				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wellhead valve replaced or repaired?				
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Miscellaneous repaired or replaced? - please describe				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review logs for original pipe lengths installed?				

Solid 20 ft.
 Perforation 14 ft.
 DTB 32.3 ft.
 DTF 32 ft.

% O2 compliant reading

Additional Comments

Apr-08			May-08			Jun-08			Jul-08			Aug-08			Sep-08			
6	(5-6)		7	(6-7)		8	(7-8)		8	(7-8)		9	(8-9)		9	(8-9)		
Date Sampled	DTF (FT)	DTB (FT)	Date Sampled	DTF (FT)	DTB (FT)	Date Sampled	DTF (FT)	DTB (FT)	Date Sampled	DTF (FT)	DTB (FT)	Date Sampled	DTF (FT)	DTB (FT)	Date Sampled	DTF (FT)	DTB (FT)	
4/30/08	34.3	34.3	5/28/08	31.9	32.4	6/5/08	31.9	32.4	7/31/08	31.9	32.4	8/7/08	32.3	32	9/3/08	32	32.3	0.3
				2.4			-			-			32.3	32		(4)		
				DTF	DTB	DTF												
				Δ			Δ			Δ			Δ			Δ		Δ
				Monthly		Monthly												

PW-178

Attachment B
Chronological Oxygen Content Readings

Attachment B
Chronological Oxygen Content Readings

GEM ID	As-built ID	Date Time	O2 %
CTYPW178	PW-178	5/29/2008 14:23	16.2
CTYPW178	PW-178	5/29/2008 14:27	15.6
CTYPW178	PW-178	5/29/2008 14:31	17.9
CTYPW178	PW-178	6/6/2008 8:40	19.5
CTYPW178	PW-178	6/6/2008 8:43	19.1
CTYPW178	PW-178	6/6/2008 8:47	17.5
CTYPW178	PW-178	6/6/2008 8:51	12.9
CTYPW178	PW-178	6/6/2008 8:54	12.5
CTYPW178	PW-178	6/6/2008 8:58	20.4
CTYPW178	PW-178	6/10/2008 10:25	20
CTYPW178	PW-178	6/10/2008 10:29	18.8
CTYPW178	PW-178	6/10/2008 10:35	15.1
CTYPW178	PW-178	6/10/2008 10:39	15.1
CTYPW178	PW-178	6/10/2008 10:43	16.4
CTYPW178	PW-178	6/11/2008 8:23	20.6
CTYPW178	PW-178	6/11/2008 8:26	20.3
CTYPW178	PW-178	6/11/2008 8:30	19.7
CTYPW178	PW-178	6/11/2008 8:33	18
CTYPW178	PW-178	6/11/2008 8:57	18
CTYPW178	PW-178	6/12/2008 8:26	6.2
CTYPW178	PW-178	6/12/2008 8:33	6.5
CTYPW178	PW-178	6/17/2008 11:39	13.1
CTYPW178	PW-178	6/17/2008 11:45	9
CTYPW178	PW-178	6/17/2008 12:15	7.3
CTYPW178	PW-178	6/18/2008 8:43	9
CTYPW178	PW-178	6/18/2008 13:03	13.9
CTYPW178	PW-178	6/26/2008 11:30	1.9
CTYPW178	PW-178	6/26/2008 11:34	4.2
CTYPW178	PW-178	7/2/2008 12:54	0
CTYPW178	PW-178	7/2/2008 12:57	0
CTYPW178	PW-178	7/7/2008 12:38	9.6
CTYPW178	PW-178	7/7/2008 12:44	4.5
CTYPW178	PW-178	7/16/2008 12:52	7.6
CTYPW178	PW-178	7/16/2008 12:57	3.6
CTYPW178	PW-178	7/24/2008 10:14	10.1
CTYPW178	PW-178	7/24/2008 10:18	10.2
CTYPW178	PW-178	8/1/2008 7:45	11.2
CTYPW178	PW-178	8/1/2008 7:48	14.6
CTYPW178	PW-178	8/5/2008 9:45	16.3
CTYPW178	PW-178	8/5/2008 9:48	16.2
CTYPW178	PW-178	8/12/2008 11:05	13.9
CTYPW178	PW-178	8/12/2008 11:09	13.9
CTYPW178	PW-178	8/21/2008 10:12	6.5
CTYPW178	PW-178	8/21/2008 10:16	5.6
CTYPW178	PW-178	8/26/2008 9:05	11.2

Attachment B
Chronological Oxygen Content Readings

CTYPW178	PW-178	8/26/2008 9:08	11.2
CTYPW178	PW-178	9/2/2008 10:41	0.2
CTYPW178	PW-178	9/2/2008 10:42	0.1
CTYPW178	PW-178	9/10/2008 10:17	4.3
CTYPW178	PW-178	9/10/2008 10:19	4
CTYPW178	PW-178	9/17/2008 10:19	5.4
CTYPW178	PW-178	9/17/2008 10:22	5.3
CTYPW178	PW-178	9/22/2008 15:16	6.3
CTYPW178	PW-178	9/22/2008 15:20	6.7
CTYPW178	PW-178	9/24/2008 13:18	2.7
CTYPW178	PW-178	9/24/2008 13:20	2.7

LFG GAS EXTRACTION WELL CAMERA INVESTIGATION REPORT



Well No. PW-178

Site Name: Countywide RDF

Site Location: East Sparta, Oh

Project No.: 607-302

Camera Technician: Randy Everett, Noah Wayt

Date of Investigation: 8/13/2008

Depth to Bottom: 32'

Depth to Fluid: N/A

WELL DEPTH	COMMENTS
0 - 5	8" CPVC Solid Casing
5 - 10	
10 - 15	
15 - 20	
20 - 25	22' Perforated CPVC casing
25 - 30	29' Perforated CPVC casing cracked and sheered
30 - 35	32' Bottom of well casing
35 - 40	
40 - 45	
45 - 50	
50 - 55	
55 - 60	
60 - 65	
65 - 70	
70 - 75	
75 - 80	
80 - 85	
85 - 90	
90 - 95	
95 - 100	
100 - 105	
105 - 110	
110 - 115	