



Countywide Recycling & Disposal Facility

Division of Republic Services of Ohio II, LLC
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March 28, 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
INITIAL EXCEEDANCE PERIOD WEEK OF MARCH 10, 2008
ORDER 4.B.2, DIRECTOR'S FINAL FINDINGS AND ORDERS OF MARCH 28, 2007
COUNTYWIDE RECYCLING AND DISPOSAL FACILITY

Dear Mr. Gortner:

On March 14, 2008, one (1) landfill gas (LFG) extraction well had an initial oxygen exceedance over 1.5% which was not able to be brought into the target range within 14 days. Therefore, Countywide hereby submits this written demonstration for landfill gas extraction well exceedances as required by Order 4.B.2, which states:

"If corrective measures undertaken by Respondent fail to lower the oxygen levels within the gas extraction well to 1.5% oxygen by volume, Respondent shall submit a written demonstration to Ohio EPA not later than 14 days after Respondent's initial discovery of the landfill gas extraction well exceedance which explains why a given landfill gas extraction well or wells cannot meet the 1.5% oxygen by volume target goal. The demonstration shall further document in detail all of the corrective measures undertaken by Respondent to achieve the 1.5% by volume level since the exceedance. Respondent's written demonstration may further request an alternative oxygen concentration."

The one LFG well identified during this time period is noted in Table 1, below.

Table 1
LFG Wells with Greater than 1.5% Oxygen On March 14, 2008
For Which Written Demonstration is Required

| Well ID | Date of Initial Exceedance | Initial Oxygen Content | Oxygen Content As Of March 28, 2008 |
|---------|----------------------------|------------------------|-------------------------------------|
| PW-148 | 3/14/2008 | 17.6% | 12.5% |

Required corrective actions were taken as described in Table 2, however this LFG well is still exhibiting oxygen concentrations above 1.5% by volume.

Please note that if Countywide is not able to achieve the required 1.5% oxygen concentration as a result of additional corrective actions within the timelines requested in Table 3, Countywide may request higher operating parameters for this LFG well or expand the system, if necessary. Countywide believes this request is in accordance with the federal NSPS regulations and our Title V operating permit. 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.

Please feel free to call me should you have any questions.



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, Mike Michels, 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

**Table 2
Corrective Actions Taken
And Reason Mandated Oxygen Content Not Achieved**

| Well ID | Corrective Actions Taken | Reason 1.5% Level Not Achieved |
|----------------|---|--|
| PW-148 | Nominal vacuum adjustments, assessed well integrity and made repairs as appropriate, replaced pump, performed depth to fluid and depth to bottom measurements. Tuned surrounding wells to minimize influence from nearby wells. | Well integrity investigation showed no apparent integrity issues with the well casing and pump was replaced. No notable soil cover issues were identified. At this time the cause of the O ₂ exceedance is unknown. |

A complete historical record of the corrective actions taken by Countywide for this LFG well is provided in Attachment A. Chronological listing of oxygen content readings taken on this LFG well is provided in Attachment B.

Countywide proposes a timeline to correct the oxygen exceedance at this LFG well as shown in Table 3.

**Table 3
Proposed Timeline to Achieve 1.5% Oxygen Content**

| Well ID | Requested Timeline for Correction |
|----------------|---|
| PW-148 | July 12, 2008 (120 days from initial exceedance) to perform additional investigation including a camera investigation of the well casing below ground and corrective actions as applicable. |

Countywide does not believe that the source of oxygen for this LFG well is a result of over pull, nor is the oxygen being introduced into the waste mass. Instead we believe the air may be from a silted in filter pack causing vapor lock in well casing or possibly a compromised casing below grade. In addition, review of the recent wellhead temperature and gas data does not suggest that the reaction is occurring in the vicinity of this well. This well has not historically had oxygen issues.



PRIORITY RESPONSE TO > 1.5% O2 LFG WELL READING

Initial Discovery

Well Identification: Pw-148

Date: 3-14-08 Time: 1725 of initial discovery of > 1.5% oxygen

Technician: Mike Bust 18.2 % O2 non-compliant reading

Possible issue(s): _____

Yes No NIA

Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"

Complete within 1-day of initial discovery

Date: 3-14-08 of AEGL O&M Well Integrity Assessment (below)

Technician: Mike Bust

| | | | | | | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|--|-------------------------------------|-------------------------------------|-------------------------------------|---|--|
| Yes | No | NIA | | Yes | No | NIA | | |
| <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 checked="" type="checkbox"/> | <input 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 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 boot (liner) in good condition? | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are all other connections in good condition? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Is well bore (soil) in good condition? | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is well valve in good condition? | Yes | No | NIA | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Is the well kanaflex 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 there a pump in the well? | | | | _____ Date compliance achieved? | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Does pump require service? | | | | _____ % O2 compliant reading | |
| <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: 3-26-08 of AEGL O&M Well Integrity Repairs & Investigation

Technician: Thomas Phillips

Description on noted issue(s): _____

Repair Summary:

Yes No NIA

Wellhead ports / fittings / connections repaired/replaced?

Wellhead Kanaflex repaired or replaced?

Reviewed 3-months monitoring data for O2 trends (attach copy)

Well casing integrity checked with dummy?

Wellhead valve replaced or repair?

Miscellaneous repaired or replaced? - please describe _____

Nominal vacuum adjustments "appropriate and reasonable reductions in vacuum"

Review logs for original pipe lengths installed?

Solid 20.0 ft.

Perforation 33.0 ft.

DTB 47.6 ft.

DTF 141.5 ft.

Yes No NIA

Compliance achieved?

_____ Date compliance achieved?

_____ % O2 compliant reading

Noted integrity issues: _____

Additional Comments: Pump was repaired by Barry although well would still not come compliant



PRIORITY RESPONSE TO > 1.5% O2 LFG WELL READING

initiate within 3 days of discovery

Date: 3-26-08 of AEGL Pump Repairs

Technician: Benny Hatcher

Description on noted issue(s): pump was replaced with a freshly

Repair Summary: rebuilt pump.

Yes No N/A Well pump repairs completed?

Yes No N/A Compliance achieved?
Date compliance achieved?
_____ % O2 compliant reading

Noted integrity issues: _____

initiate within 3 days of discovery

Date: _____ of AEGL Field Repairs

Technician: _____

Description on noted issue(s): _____

Repair Summary: _____

Yes No N/A Lateral or header piping adjustment or repair?

Well boot liner repair? "additional placement of membrane, repair of gas extraction boot"

Well bore seal repairs?(earthwork/bentonite seal) "placement of low permeability soils"

Well casing investigation performed? (camera) Yes No N/A Compliance achieved?

Well casing repairs performed? Date compliance achieved?
_____ % O2 compliant reading

Noted issues: _____

Date: _____ compliance of < 1.5% achieved within _____ days

Date: _____ compliance not achieved - proposed alternate timeline and/or operating value

Additional Comments:

Attachment B
Chronological Oxygen Content Readings

Attachment B
Chronological Oxygen Content Readings

| GEM ID | As-built ID | Date/Time | O2 % |
|---------------|--------------------|------------------|-------------|
| CTYPW148 | PW-148 | 3/14/2008 17:25 | 17.6 |
| CTYPW148 | PW-148 | 3/14/2008 17:28 | 18.2 |
| CTYPW148 | PW-148 | 3/21/2008 12:01 | 20.1 |
| CTYPW148 | PW-148 | 3/21/2008 12:05 | 19.6 |
| CTYPW148 | PW-148 | 3/26/2008 13:55 | 13.1 |
| CTYPW148 | PW-148 | 3/26/2008 13:59 | 12.5 |