

**Golder Associates Inc.**

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RECEIVED  
MAR 30 2009  
DEP Central Dist.

March 25, 2009

083-82734.2

Florida Department of Environmental Protection  
Division of Air Resource Management  
2600 Blair Stone Road  
MS 5500  
Tallahassee, Florida 32399-2400

Attention: Mr. Errin Prichard  
Program Administrator – Emissions Monitoring

**RE: ALTERNATIVE OPERATING VARIANCE REQUEST  
J.E.D. SOLID WASTE MANAGEMENT FACILITY  
OMNI WASTE OF OSCEOLA COUNTY, LLC  
ST. CLOUD, OSCEOLA COUNTY, FLORIDA  
PERMIT NUMBER: 0970079-005-AV**

Dear Mr. Prichard:

On behalf of Omni Waste of Osceola County, LLC (Omni), Golder Associates Inc. (Golder) has prepared this Alternative Operating Variance request to allow alternative operating procedures for the facility's landfill gas collection and control system (GCCS) to maintain compliance with their Title V Operation Permit. This request addresses elevated temperature at selected gas extraction wells at the facility. This request is in addition to the request made on January 22, 2009, for gas wells installed in the Sequence 1, Phase 1 area. The Request made on January 22, 2009 has subsequently been approved by the Florida Department of Environmental Protection (FDEP) in a letter dated March 19, 2009.

**BACKGROUND**

The facility recently installed the second phase of the GCCS, which includes sixteen gas extraction wells. Since bringing these new wells online in early February 2008, several of the gas extraction wells have been operated at or near elevated temperatures of the New Source Performance Standards (NSPS) regulatory limit of 131°F (40CFR60.753(c)). The wells operating at (or near) elevated temperatures are designated as GW-4, GW-24, GW-26, GW-43, GW-47, GW-49, GW-53, GW-57, GW-59 and GW-60. These wells have demonstrated good gas quality over the past month of operation (high methane content and low oxygen content). Additionally, during operation the wells have been monitored for carbon monoxide (CO) to rule out the possibility of a rapid subsurface oxidation event. Monitoring results for February 6, 2009, corresponding 5-day and 15-day monitoring

results, and CO monitoring results for these wells are included in Attachment A. Note that Attachment A contains all readings from the GCCS and some wells have been previously requested for a temperature variance.

Based on our operational experience of GCCS's, the common method to reduce temperature in a gas extraction well is to reduce vacuum, thereby reducing flow through the wellhead. The above noted wells were brought online in a conservative manner (i.e., minimal vacuum applied), yet still exhibited elevated temperatures from initial operation.

Based on discussions with staff of the FDEP, Central District office, on January 13, 2009, Golder understands that Omni must operate these wells under a vacuum at all times to maintain compliance with NSPS. These wells are currently being operated under minimal vacuum (0.7" W.C. or less) in order to monitor the elevated temperatures until an alternative variance request is approved or denied and reducing possible air intrusion. As shown in Attachment A, the methane and oxygen (O<sub>2</sub>) concentration in these wells are high and low respectively, and the CO measurements indicate no presence of fire, nor any reason to believe that methanogens are being killed by the elevated temperature condition. Golder believes that the subsurface conditions near these wells is highly thermophilic due to the nature of waste, moisture content, age of waste in these areas, and biologic activities. It is important to note that not all of the wells listed above are continually operating in excess of 131°F (55°C).

#### **ALTERNATIVE OPERATING LIMIT**

In accordance with §753(c), a higher operating temperature value may be requested if a demonstration is provided with supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. As discussed above, Golder considers that the information provided in Attachment A meets this demonstration requirement.

As previously requested and approved by the FDEP for the Sequence 1, Phase 1 gas wells, the facility is requesting a operating variance for those wells listed in Attachment A, allowing them to be operated greater than 131°F, provided there is no evidence of fire or significant reduction in methane content (indicating possible reduction of methanogens by inhibiting anaerobic decomposition). The requested maximum temperature limit is 145°F for the listed wells, except for well GW-60, which a limit of 150°F is requested. This temperature limit will allow some flexibility in operations while protecting the GCCS and its components from being affected by the elevated temperatures. Omni will continue to monitor these wells for CO concentrations on a quarterly basis (or increased frequency if needed) over the next twelve months to establish a historical record of levels. Similar procedures will be followed and a separate variance will be requested for any additional wells showing elevated temperatures.

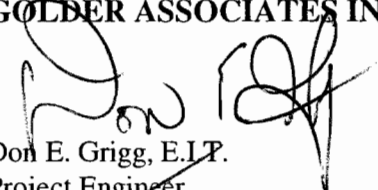
#### **CLOSING**

Omni would appreciate your immediate attention to this request in order to maintain compliance timelines required of the NSPS's. Should you have any questions regarding this

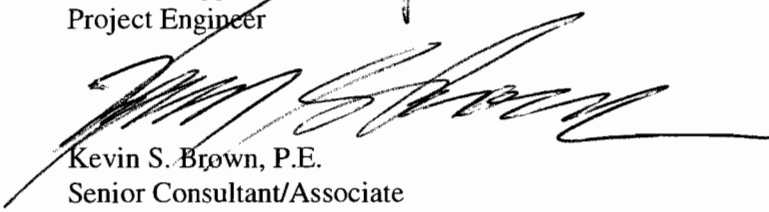
request, please call Mr. Mike Kaiser of Omni at (904) 673-0446, [mkaiser@wsii.us](mailto:mkaiser@wsii.us), or either of the undersigned at (904) 363-3430.

Sincerely,

**GOLDER ASSOCIATES INC.**



Don E. Grigg, E.I.T.  
Project Engineer



Kevin S. Brown, P.E.  
Senior Consultant/Associate

Attachment

cc: Jim Bradner, FDEP Central District  
Tom Lubozynski, FDEP Central District  
Michael Kaiser – Omni Waste of Osceola County, LLC  
Leigh-Ann Pell, FDEP Tallahassee

FN: G:\Projects\083\083-82\083-82734\083-82734.2\High Temp Wells\Sequence 2\JED Alt Op Request March 2009.doc

# GAS WELL FIELD MONITORING LOG

## J.E.D. SOLID WASTE MANAGEMENT FACILITY

Technician: Keith Lunsford

Date: 2/6/2009

Monitoring Location	Date/Time	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Balance (%)	Gas Temp. (°F)	Well Vacuum (In. H <sub>2</sub> O)	Comments
CALIBRAT	2/6/2009 14:35	50.2	35.1	0	14.7	77	-0.1	
FIRINLET	2/6/2009 8:46	49.4	39.1	2.2	9.3	51	-25.4	
FIROUTLE	2/6/2009 8:49	55.7	44.2	0	0.1	90	1.6	
JEDGW026	2/6/2009 9:11	55	44.9	0	0.1	133	-0.5	Adj. 1/4 turn down/ High Temp.
JEDGW024	2/6/2009 9:17	55	44.9	0	0.1	130	-0.6	Adj. 1/4 turn down/ Near High Temp.
JEDGW020	2/6/2009 9:22	55	44.9	0	0.1	129	-0.3	Adj. 1/4 turn down/ Near High Temp.
JEDGW017	2/6/2009 9:27	55.4	44.5	0	0.1	126	-1	
JEDGW012	2/6/2009 9:32	54.8	45	0	0.2	139	-0.4	Adj. 1/4 turn down/ High Temp.
JEDGW010	2/6/2009 9:39	55.6	44.3	0	0.1	119	-1.5	
JEDGW006	2/6/2009 9:44	54.4	45.5	0	0.1	124	-1.5	
JEDGW004	2/6/2009 9:53	55.3	44.5	0.1	0.1	133	-0.1	High Temp
JEDGW040	2/6/2009 10:00	55.8	44.1	0	0.1	127	-1.6	
JEDGW002	2/6/2009 10:08	55.2	44.6	0	0.2	132	-0.5	High Temp
JEDGW039	2/6/2009 10:13	55	44.9	0	0.1	134	-0.6	High Temp
JEDGW043	2/6/2009 10:21	55.7	43.9	0.3	0.1	131	-0.4	Adj. 1/4 turn down/ Near High Temp.
JEDGW047	2/6/2009 10:27	55.5	44.4	0	0.1	129	-0.6	Adj. 1/2 turn down/ Near High Temp
JEDGW049	2/6/2009 10:32	56.1	43.8	0	0.1	130	-0.7	Near High Temp
JEDGW053	2/6/2009 10:38	55.2	44.7	0	0.1	134	-0.3	High Temp
JEDGW057	2/6/2009 10:44	55.6	44.3	0	0.1	141	-0.1	Adj. 1 1/2 turns down/High Temp
JEDGW060	2/6/2009 10:51	54.8	45.1	0	0.1	145	-0.4	Adj. 2 turns down/ High Temp

FIR=Flare Initial Readings  
FAR=Flare After Readings

Monitoring Location	Date	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Balance (%)	Gas Temp. (°F)	Well Vacuum (In. H <sub>2</sub> O)	Comments
JEDGW062	2/6/2009 10:58	56.2	43.7	0	0.1	117	-1.5	
JEDGW059	2/6/2009 11:04	55.9	44	0	0.1	129	-0.4	Adj. 2 turns down/ Near High Temp.
JEDGW056	2/6/2009 11:09	55.4	44.5	0	0.1	124	-0.8	
JEDGW055	2/6/2009 11:13	55.6	44.3	0	0.1	124	-1	
JEDGW052	2/6/2009 11:20	57	42.9	0	0.1	127	-0.9	Adj 1 3/4 turns down
JEDGW048	2/6/2009 11:25	55.9	44	0	0.1	118	-1.1	
JEDGW046	2/6/2009 11:29	53.5	42.6	0	3.9	125	-1	
JEDGW044	2/6/2009 11:43	50.2	39.8	1.2	8.8	123	-0.1	Adj. 2 1/2 Turns Down
JEDGW042	2/6/2009 11:51	45	38.3	0	16.7	114	-1	
JEDGW041	2/6/2009 11:59	55.9	43.5	0	0.6	123	-1.6	
JEDGW038	2/6/2009 12:04	55.4	44.5	0	0.1	121	-0.3	Adj. 1 1/4 Turns Down
JEDGW001	2/6/2009 12:15	55.5	44.3	0	0.2	111	-0.7	
JEDGW003	2/6/2009 12:20	56.9	43	0	0.1	108	-0.3	
JEDGW005	2/6/2009 12:25	56.6	42.9	0	0.5	113	-1	
JEDGW007	2/6/2009 12:30	53.2	42.1	0	4.7	118	-1	
JEDGW008	2/6/2009 12:36	57.6	42.3	0	0.1	107	-1.6	
JEDGW009	2/6/2009 12:43	56.4	42.3	0	1.3	110	-1.8	
JEDGW011	2/6/2009 12:47	54.7	42.6	0	2.7	114	-1.2	
JEDGW013	2/6/2009 12:56	55.3	44.6	0	0.1	131	-0.4	Near High Temp
JEDGW016	2/6/2009 13:00	56.7	43.2	0	0.1	118	-2.2	
JEDGW019	2/6/2009 13:04	52.7	41.5	0	5.8	110	-1.4	
JEDGW023	2/6/2009 13:10	51.2	41.5	0	7.3	107	-1.8	
JEDGW025	2/6/2009 13:16	54.6	42.2	0.3	2.9	119	-2	
JEDGW029	2/6/2009 13:22	56.1	43.6	0	0.3	106	-1.6	
JEDGW032	2/6/2009 13:26	56	42.9	0	1.1	124	-0.2	

FIR=Flare Initial Readings  
FAR=Flare After Readings

Monitoring Location	Date	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Balance (%)	Gas Temp. (°F)	Well Vacuum (In. H <sub>2</sub> O)	Comments
JEDGW034	2/6/2009 13:32	56.8	43.1	0	0.1	113	-1.2	
FARINLET	2/6/2009 13:58	54.6	42.8	0.1	2.5	67	-24.9	
FAROUTLE	2/6/2009 13:54	55.9	44	0	0.1	99	1.7	

FIR=Flare Initial Readings  
FAR=Flare After Readings

# GAS WELL FIELD MONITORING LOG

## J.E.D. SOLID WASTE MANAGEMENT FACILITY

Technician: Keith Lunsford

Date: 2/9/2009    5 Day

Monitoring Location	Date/Time	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Balance (%)	Gas Temp. (°F)	Well Vacuum (In. H <sub>2</sub> O)	Comments
CALIBRAT	2/9/2009 8:52	49.6	34.8	0	15.6	71	8.1	
FIRINLET	2/9/2009 9:27	54.6	43	0.1	2.3	73	-25	
FIROUTLE	2/9/2009 9:31	56.1	43.8	0	0.1	98	1.5	
JEDGW060	2/9/2009 11:20	55.3	44.6	0	0.1	145	-0.1	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW057	2/9/2009 11:31	55.4	44.5	0	0.1	140	-0.2	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW053	2/9/2009 11:36	55.4	44.5	0	0.1	134	-0.2	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW039	2/9/2009 11:54	55	44.9	0	0.1	134	-0.1	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW002	2/9/2009 11:59	54.4	45.5	0	0.1	133	-0.4	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW004	2/9/2009 12:13	54.1	45.8	0	0.1	133	-0.3	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW012	2/9/2009 12:23	53.9	46	0	0.1	139	-0.6	No Adjustment/High Temp./Initial Read 2-06-09/5Day
JEDGW026	2/9/2009 15:47	54.5	45.4	0	0.1	133	-0.1	No Adjustment/High Temp./Initial Read 2-06-09/5Day
FARINLET	2/9/2009 15:59	55	43.8	0	1.2	73	-24.6	
FAROUTLE	2/9/2009 16:02	55.3	44.6	0	0.1	102	1.9	

FIR=Flare Initial Readings  
FAR=Flare After Readings

# GAS WELL FIELD MONITORING LOG

## J.E.D. SOLID WASTE MANAGEMENT FACILITY

Technician: Keith Lunsford

Date: 2/19/2009 15 day

Monitoring Location	Date/Time	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Balance (%)	Gas Temp. (°F)	Well Vacuum (In. H <sub>2</sub> O)	Comments
CALIBRAT	2/19/2009 8:31	50.1	34.9	0.1	14.9	72	13.8	
FIRINLET	2/19/2009 9:32	54.3	43	0.4	2.3	74	-25.2	
FIROUTLE	2/19/2009 9:37	55.7	44.2	0	0.1	103	1.6	
JEDGW060	2/19/2009 9:55	54.9	45	0	0.1	145	-0.3	No Adjustment/High Temp./initial read 2-06-09/15 day
JEDGW057	2/19/2009 9:59	55.3	44.6	0	0.1	141	-0.3	No Adjustment/High Temp./initial read 2-06-09/15 day
JEDGW053	2/19/2009 10:04	55.2	44.7	0	0.1	134	-0.3	Valve Adj. 1/8 turn down/High Temp./initial Read 2-06-09/15 day
JEDGW039	2/19/2009 10:11	54.6	45.3	0	0.1	134	-0.3	Valve Adj. 1/4 turn down/ High Temp./initial Read 2-06-09/15 day
JEDGW002	2/19/2009 10:16	54	45.9	0	0.1	131	-0.2	Valve Adj. 1/8 turn down/Near High Temp./initial read 2-06-09/15 day
JEDGW004	2/19/2009 10:23	54.1	45.8	0	0.1	132	-0.2	No Adjustment/High Temp./initial read 2-06-09/15 day
JEDGW012	2/19/2009 10:28	53.8	46.1	0	0.1	139	-0.2	No Adjustment/High Temp./initial read 2-06-09/15 day
JEDGW026	2/19/2009 10:36	54.6	45.3	0	0.1	133	-0.2	No Adjustment/High Temp./initial read 2-06-09/15 day
FARINLET	2/19/2009 11:28	54.5	43.2	0.2	2.1	76	-24.6	
FAROUTLE	2/19/2009 11:31	55.7	44.2	0	0.1	102	1.8	

FIR=Flare Initial Readings

FAR=Flare After Readings



# **GAS WELL FIELD MONITORING LOG**

## **J.E.D. SOLID WASTE MANAGEMENT FACILITY**

### **Carbon Monoxide Test**

Technician: K.Lunsford

Date: 3/3/2009

<b>Monitoring Location</b>	<b>Date/Time</b>	<b>PPM</b>	<b>Gas Temp. (°F)</b>
JEDGW060	3/3/09-11:05	10PPM	142
JEDGW057	3/3/09-11:10	10PPM	140
JEDGW053	3/3/09-11:15	5PPM	138
JEDGW049	3/3/09-11:25	5PPM	121
JEDGW047	3/3/09-11:30	2PPM	125
JEDGW043	3/3/09-11:43	2PPM	129
JEDGW004	3/3/09-11:43	5PPM	130
JEDGW059	3/3/09-12:02	2PPM	121
JEDGW026	3/3/09-12:23	0PPM	131
JEDGW024	3/3/09-12:30	0PPM	125