

## 2011 GAS WELL INACTIVATION RECORD

Facility Name: Martin County Palm City II Landfill  
 Facility ARMS ID No.: 0850120

Well ID #: CW-33  
 Inactivation Date (mm/yyyy): 09/2010

### Initial Well Inactivation Certification

To the best of my knowledge, the monthly monitoring records for identified above landfill gas (LFG) collection well are true, accurate and complete and that based on these records the well has been deemed inactive in accordance with the LFG Collection and Control System Design Plan. Based on engineering features of the LFG Collection and Control System, I further certify that inactivation of this well, in addition to any other inactive wells, will not affect the integrity of the landfill gas collection system.

Signature: Joseph P. Curro (seal)

Name: JOSEPH P. CURRO

Florida Registered Professional Engineer License No.: 58416

Date: 2/25/2011

### Inactive Well Monitoring Records

Month	Pressure (<1 ATM)	Methane (<<50%)	Oxygen (<<5%)	Nitrogen (>20%)	Temp. (<<135°F)	Comments	P.E. Initial
JAN	0.10'wc	66.5%	0.4%	0.1%	82°F	Ball Valve Remains Open ACTIVE	JPC
FEB						ACTIVE	JPC
MAR						ACTIVE	JPC
APR						ACTIVE	JPC
MAY						ACTIVE	JPC
JUN						ACTIVE	JPC
JUL						ACTIVE	JPC
AUG						ACTIVE	JPC
SEP	0.0'wc	38.9%	8.4%	37.4%	87°F	CLOSED BALL VALVE	JPC
OCT	0.0'wc	0.9%	18.5%	79.6%	91°F	BALL VALVE REMAINS CLOSED	JPC
NOV	0.0'wc	37.6%	6.4%	39.9%	91°F	BALL VALVE REMAINS CLOSED	JPC
DEC	0.02'wc	74.0%	0.0%	0.0%	82°F	OPENED BALL VALVE	JPC

### Annual Well Inactivation Certification

To the best of my knowledge, the monthly monitoring records for the above landfill gas (LFG) collection well are true, accurate and complete and that based on these records the above well can be either: 1) Returned to Active Service; 2) Remain Inactive; or 3) Permanently Closed in accordance with the LFG Collection and Control System Design Plan. Based on engineering features of the LFG Collection and Control System, I further certify that reactivation, inactivation or the permanent closure of this well, in addition to any other inactive or closed wells, will not affect the integrity of the landfill gas collection system.

\* INACTIVE / OPEN

Signature: Joseph P. Curro (seal)

Name: JOSEPH P. CURRO

Florida Registered Professional Engineer License No.: 58416

Date: 1/25/2012

**CDM**

## 2012 GAS WELL INACTIVATION RECORD

Facility Name: Martin County Palm City II Landfill  
 Facility ARMS ID No.: 0850120

Well ID #: GW-33  
 Inactivation Date (mm/yyyy): 9/2011

### Initial Well Inactivation Certification

To the best of my knowledge, the monthly monitoring records for identified above landfill gas (LFG) collection well are true, accurate and complete and that based on these records the well has been deemed inactive in accordance with the LFG Collection and Control System Design Plan. Based on engineering features of the LFG Collection and Control System, I further certify that inactivation of this well, in addition to any other inactive wells, will not affect the integrity of the landfill gas collection system.

Signature: \_\_\_\_\_ (seal)

Name: JOSEPH P. CURRO

Florida Registered Professional Engineer License No.: 58416

Date: 2/27/2012

### Inactive Well Monitoring Records

Month	Pressure (<1 ATM)	Methane (<<50%)	Oxygen (<<5%)	Nitrogen (>20%)	Temp. (<<135°F)	Comments	P.E. Initial
JAN	0.10"wc	61.0%	0.0%	11.1%	76°F	Ball Valve Remains Open	JPC
FEB	0.10"wc	48.9%	0.7%	26.4%	80°F	Ball Valve Remains Open	JPC
MAR	0.40"wc	39.6%	1.7%	36.4%	81°F	ACTIVE	JPC
APR						ACTIVE	JPC
MAY						ACTIVE	JPC
JUN						ACTIVE	JPC
JUL	0.0"wc	0.2%	19.7%	79.2%	84°F	CLOSED BALL VALVE	JPC
AUG							
SEP							
OCT							
NOV							
DEC							

### Annual Well Inactivation Certification

To the best of my knowledge, the monthly monitoring records for the above landfill gas (LFG) collection well are true, accurate and complete and that based on these records the above well can be either: 1) Returned to Active Service; 2) Remain Inactive; or 3) Permanently Closed in accordance with the LFG Collection and Control System Design Plan. Based on engineering features of the LFG Collection and Control System, I further certify that reactivation, inactivation or the permanent closure of this well, in addition to any other inactive or closed wells, will not affect the integrity of the landfill gas collection system.

Signature: \_\_\_\_\_ (seal)

Name: \_\_\_\_\_

Florida Registered Professional Engineer License No.: \_\_\_\_\_

Date: \_\_\_\_\_

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Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: JOSH LUCE & JOHN  
 Date: 9-1-11  
 Weather Conditions: MISTY CLOUDY  
 Temperature: 87.0  
 Testing: Monitoring

Barometric Pressure	
"Hg	Time
Start <u>30.03</u>	<u>7:00 AM</u>
Finish <u>29.92</u>	<u>4:00 PM</u>

Well ID	Orifice Type	AP		Flow		Pressure(+)/Vacuum(-)		Temp °F	Gas Readings				Balance %	Comments
		Start "w.c.	Finish "w.c.	Start (CFM)	Finish (CFM)	Start "w.c.	Finish "w.c.		CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %			
GW37	OP	0.0	0.0	0.0	0.0	0.3	0.3	83	37.6	37.1	1.7	24.6	NAR	
GW36	OP	0.0	0.0	0.0	0.0	0.1	0.1	76	28.5	31.2	0.1	40.4	NAR	
GW35	OP	0.0	0.0	0.0	0.0	0.0	0.0	78	0.0	21.9	0.7	77.4	BK CLOSED - LEFT CLOSED	
GW34	OP	0.10	0.20	4.20	5.90	0.30	0.40	76	71.6	23.9	1.4	3.0	INC VAC	
GW33	OP	0.20	0.0	5.90	0.0	3.40	0.0	76	22.6	11.0	12.5	53.8	RED VAC - RETEST - RE-TEST BAD	
GW32	OP	0.30	0.20	7.21	8.50	2.20	2.0	77	44.4	34.6	1.5	19.5	RED VAC	
GW31	OP	0.0	0.0	0.0	0.0	0.2	0.2	79	37.5	32.7	0.5	29.3	NAR	
GW29	OP	0.10	0.4			2.0	1.95	78	53.4	34.9	2.1	9.6	RED VAC	
GW28	OP	0.6	0.0	0.0	0.0	1.43	1.30	81	46.9	32.0	3.2	17.9	RED VAC	
GW27	OP	1.10	0.05	4.20	2.68	9.10	9.0	85	60.2	22.0	3.8	14.0	RED VAC	
GW26	OP	0.30	0.46	7.21	8.50	0.1	0.10	87	65.4	26.2	0.5	8.0	INC VAC	
GW25	OP	0.0	0.0	0.0	0.0	5.20	3.0	84	42.6	30.3	2.7	24.4	RED VAC	
GW24	OP	0.20	0.20	5.90	5.90	0.10	0.10	85	55.2	34.7	0.8	9.3	NAR	
GW23	OP	0.0	0.0	0.0	0.0	0.06	0.06	85	52.8	35.2	1.9	10.1	NAR	

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum

Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: JOHNNY & JOSH LUCE  
 Date: 10-3-11  
 Weather Conditions: CLEAR & SUNNY  
 Temperature: 84°  
 Testing: \_\_\_\_\_  
 Monitoring: \_\_\_\_\_

Barometric Pressure		"Hg	Time
Start	30.06		8:00
Finish	30.10		2:00

10-3-11  
10-5-11

Well ID	Orifice Type	AP		Flow		Pressure(+)/Vacuum(-) "w.c.	Temp °F	Gas Readings				Balance %	Comments
		Start "w.c.	Finish "w.c.	Start (CFM)	Finish (CFM)			CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %			
GW37	OP	.10	.10	4.20	4.20	.01	83	37.7	37.5	1.3	23.7	NAR	
GW36	OP	.10	.10	4.20	4.20	.03	85	30.7	31.9	0.1	37.9	NAR	
GW35	OP	0.0	0.0	0.0	0.0	0.0	93	0.0	20.7	1.3	78.2	BV CLOSED - LEFT CLOSED	
GW34	OP	.10	0.0	4.20	0.0	1.1	85	48.7	10.6	5.6	30.2	RED VAC - RETEST - RETEST GOOD INC VAC	
GW33	OP	0.0	0.0	0.0	0.0	0.0	91	0.9	0.8	18.5	79.6	BV CLOSED - LEFT CLOSED	
GW32	OP	.10	.10	4.20	4.20	2.0	86	49.0	3.34	1.7	10.0	NAR	
GW31	OP	.10	.10	4.20	4.20	.10	86	39.3	33.2	0.1	27.5	NAR	
GW29	OP	.10	.04	4.20	2.68	5.1	87	48.3	30.8	3.1	17.8	RED VAC	
GW28	OP	.10	0.0	4.20	0.0	.70	97	0.9	0.7	18.5	79.8	RED VAC - RETEST - RETEST GOOD	
GW27	OP	.10	.06	4.20	3.77	5.8	92	65.1	22.4	2.6	10.1	RED VAC	
GW26	OP	0.0	.10	0.0	4.20	1.0	90	64.9	25.6	0.1	9.3	INC VAC	
GW25	OP	.10	.10	4.20	4.20	4.0	95	52.0	32.6	0.7	15.2	NAR	
GW24	OP	.10	0.0	4.20	0.0	2.5	86	1.0	0.8	17.7	80.4	RED VAC - RETEST - RETEST GOOD	
GW23	OP	0.0	.10	0.0	4.20	.90	84	59.6	36.8	0.8	2.9	INC VAC	

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum

Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: JOHN T & JOSH LUCE  
 Date: 11-4-11  
 Weather Conditions: CLEAR & SUNNY  
 Temperature: 80°  
 Testing: \_\_\_\_\_ Monitoring: \_\_\_\_\_

Barometric Pressure		"Hg	Time
Start	29.92		9:00
Finish	30.12		1:42

11-4-11  
11-7-11

Well ID	Orifice Type	AP		Flow		Pressure(+)/Vacuum(-)		Gas Readings				Balance %	Comments
		Start "w.c."	Finish "w.c."	Start (CFM)	Finish (CFM)	Start "w.c."	Finish "w.c."	Temp °F	CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %		
GW37	OP	0.0	0.0	0.0	0.0	.10	.10	80	36.3	39.7	1.4	18.9	NAR
GW36	OP	.10	.10	4.20	4.20	.01	.01	84	27.8	32.9	0.0	39.4	NAR
GW35	OP	0.0	0.0	0.0	0.0	0.0	0.0	90	0.4	20.1	0.1	79.4	BV CLOSED - LEFT CLOSED
GW34	OP	0.0	0.0	0.0	0.0	.01	0.0	86	54.4	16.3	6.7	24.2	RED VMC - RETEST - INC VAC
GW33	OP	0.0	0.0	0.0	0.0	0.0	0.0	91	37.6	15.9	6.4	39.9	BV CLOSED - LEFT CLOSED
GW32	OP	0.0	0.0	0.0	0.0	4.4	4.0	87	48.0	27.4	4.5	20.2	RED VMC
GW31	OP	0.0	0.0	0.0	0.0	.10	.10	85	49.1	33.9	0.0	17.0	NAR
GW29	OP	0.0	0.0	0.0	0.0	2.5	0.0	88	0.7	0.3	19.5	79.4	RED VMC - RETEST - INC VAC
GW28	OP	0.0	0.0	0.0	0.0	0.0	0.0	85	0.5	3.6	20.3	75.6	BV CLOSED - LEFT CLOSED
GW27	OP	0.0	0.0	0.0	0.0	5.7	5.3	89	66.6	22.9	3.1	7.7	RED VMC
GW26	OP	0.0	0.0	0.0	0.0	3.1	0.0	93	25.9	9.7	10.3	55.6	RED VMC - RETEST - INC VAC
GW25	OP	0.0	.04	0.0	2.68	1.6	1.8	82	62.1	29.8	1.4	6.8	INC VAC
GW24	OP	0.0	0.0	0.0	0.0	0.0	0.0	93	3.3	7.5	15.9	73.5	BV CLOSED - LEFT CLOSED
GW23	OP	0.0	0.0	0.0	0.0	2.6	0.0	83	0.2	0.1	20.6	79.2	RED VMC - RETEST - <u>RETEST GOOD</u> <u>CLOSED BV</u>

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum

Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: JOHN T & JOSH LUCE  
 Date: 12-1-11  
 Weather Conditions: MOSTLY SUNNY & BREEZY  
 Temperature: 72°  
 Testing: Monitoring

Barometric Pressure		"Hg	Time
Start	30.14		1:00
Finish	30.13		11:30

12-1-11  
12-6-11

Well ID	Orifice Type	ΔP		Flow		Pressure(+)/Vacuum(-)		Gas Readings					Balance %	Comments
		Start "w.c."	Finish "w.c."	Start (CFM)	Finish (CFM)	Start "w.c."	Finish "w.c."	Temp °F	CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %			
GW37	OP	0.0	0.0	0.0	0.0	.10	.04	81	30.3	36.6	0.0	33.1	RED VAC	
GW36	OP	.10	.10	4.20	4.20	.01	.01	79	23.5	30.9	0.0	45.7	NAR	
GW35	OP	0.0	0.0	0.0	0.0	0.0	0.0	83	0.2	18.2	2.9	78.6	BV CLOSED- LEFT CLOSED	
GW34	OP	.10	.20	4.20	5.90	.01	.10	84	75.1	21.0	0.9	3.4	INC VAC	
GW33	OP	0.0	.03	0.0	1.90	0.0	.02	82	74.0	26.0	0.0	0.0	BV CLOSED- * IN C VAC OPEN BV	
GW32	OP	0.0	0.0	0.0	0.0	2.9	2.9	79	48.5	32.6	0.0	18.9	NAR	
GW31	OP	0.0	0.0	0.0	0.0	.10	.05	77	29.1	29.4	0.0	41.3	RED VAC	
GW29	OP	.10	.20	4.20	5.90	.10	.20	85	62.3	37.6	0.0	0.0	INC VAC	
GW28	OP	0.0	0.0	0.0	0.0	0.0	0.0	79	1.3	5.1	17.0	76.7	BV CLOSED- LEFT CLOSED	
GW27	OP	.10	.10	4.20	4.20	8.1	8.1	78	72.5	26.4	0.0	0.0	NAR	
GW26	OP	0.0	0.0	0.0	0.0	.10	0.0	80	8.9	5.6	12.5	77.8	RED VAC- RTEST - INC VAC RTEST GOOD	
GW25	OP	.50	.60	9.20	10.13	1.0	1.2	75	66.7	33.1	0.0	0.1	INC VAC	
GW24	OP	0.0	0.0	0.0	0.0	0.0	0.0	82	3.5	14.4	13.6	68.5	BV CLOSED- LEFT CLOSED	
GW23	OP	0.0	0.0	0.0	0.0	0.0	0.0	87	2.6	15.7	15.3	66.4	BV CLOSED- LEFT CLOSED	

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum

Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: JOHN T + JOSH LUCE  
 Date: 3-2-12  
 Weather Conditions: PARTLY CLOUDY  
 Temperature: 86°  
 Testing: Monitoring

Barometric Pressure

"Hg	Time
<u>30.06</u>	<u>7:30</u>
<u>30.26</u>	<u>11:30</u>

Well ID	Orifice Type	AP		Flow		Pressure(+)/Vacuum(-)		Temp °F	Gas Readings				Balance %	Comments
		Start "w.c.	Finish "w.c.	Start (CFM)	Finish (CFM)	Start "w.c.	Finish "w.c.		CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %	Balance %		
GW37	OP	0.0	0.0	0.0	0.0	.10	.05	71	32.3	38.3	0.0	28.9	RED VAC	
GW36	OP	.10	.10	4.20	4.20	.01	.01	76	24.1	32.1	0.1	43.9	NAR	
GW35	OP	0.0	0.0	0.0	0.0	0.0	0.0	84	0.1	19.8	1.2	78.8	BV CLOSED - LEFT CLOSED	
GW34	OP	0.0	.06	0.0	3.27	.10	.20	86	74.2	24.1	1.4	0.1	INC VAC	
GW33	OP	0.0	0.0	0.0	0.0	.60	.40	81	39.6	22.3	1.7	36.4	RED VAC	
GW32	OP	0.0	.02	0.0	1.90	0.0	.10	87	50.6	32.8	0.1	16.5	BV CLOSED - OPEN BV INC VAC	
GW31	OP	0.0	.10	0.0	4.20	.10	.20	90	49.1	32.9	0.1	17.8	INC VAC	
GW29	OP	0.0	0.0	0.0	0.0	1.0	.70	92	28.1	26.1	0.5	45.4	RED VAC	
GW28	OP	0.0	0.0	0.0	0.0	0.0	0.0	94	1.7	6.8	15.5	76.2	BV CLOSED - LEFT CLOSED	
GW27	OP	0.0	.10	0.0	4.20	.10	.30	88	73.7	25.4	0.5	0.1	INC VAC	
GW26	OP	0.0	.10	0.0	4.25	.30	.50	96	69.7	21.6	0.1	8.6	INC VAC	
GW25	OP	0.0	0.0	0.0	0.0	1.2	1.0	98	48.0	29.8	0.6	21.7	RED VAC	
GW24	OP	0.0	0.0	0.0	0.0	0.0	0.0	94	0.7	27.1	1.0	71.1	BV CLOSED - LEFT CLOSED	
GW23	OP	0.0	.03	0.0	1.90	.02	.10	93	63.3	36.5	0.1	0.1	INC VAC	

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum

Martin County Gas Collection System  
Monthly Landfill Gas Wells Balance Data Log

Staff: DAVID & JOSH LUCE  
 Date: 7-9-12  
 Weather Conditions: MOISTLY CLOUDY & SMOGGY  
 Temperature: 90  
 Testing: \_\_\_\_\_  
 Monitoring: \_\_\_\_\_

Barometric Pressure	
"Hg	Time
Start <u>29.92</u>	<u>8:00</u>
Finish <u>30.06</u>	<u>2:00</u>

Well ID	Orifice Type	ΔP		Flow		Pressure(+)/Vacuum(-)		Temp °F	Gas Readings				Balance %	Comments
		Start "w.c.	Finish "w.c.	Start (CFM)	Finish (CFM)	Start "w.c.	Finish "w.c.		CH <sub>4</sub> %	CO <sub>2</sub> %	O <sub>2</sub> %			
GW37	OP	0.0	0.0	0.0	0.0	.10	.10	84	33.9	37.1	0.0	28.9	NAR	
GW36	OP	0.0	0.0	0.0	0.0	.01	.01	89	26.7	30.7	0.0	42.7	NAR	
GW35	OP	0.0	0.0	0.0	0.0	0.0	0.0	91	0.9	21.1	0.0	78.2	BV CLOSED - LEFT CLOSED	
GW34	OP	0.0	0.0	0.0	0.0	3.2	0.0	88	17.9	10.8	10.9	60.3	RED VAC - RETEST - INC VAC RETEST GOOD	
GW33	OP	0.0	0.0	0.0	0.0	16.2	0.0	92	0.6	0.5	19.4	7.5	RED VAC - RETEST - CLOSED BV RETEST BAD	
GW32	OP	0.0	0.0	0.0	0.0	.60	.50	90	44.1	35.1	0.0	21.6	RED VAC	
GW31	OP	0.0	0.0	0.0	0.0	.10	.10	87	27.7	29.4	0.0	43.1	NAR	
GW29	OP	0.0	.10	0.0	4.20	.30	.50	85	62.7	36.9	0.0	0.5	INC VAC	
GW28	OP	0.0	0.0	0.0	0.0	0.0	.20	87	62.6	37.4	0.0	0.0	BV CLOSED - OPEN BV INC VAC	
GW27	OP	0.0	0.0	0.0	0.0	12.4	19.0	93	23.5	8.5	14.0	52.8	RED VAC - RETEST GOOD INC VAC	
GW26	OP	0.0	.10	0.0	4.26	.10	.30	91	67.4	28.2	0.0	4.0	INC VAC	
GW25	OP	.06	.10	3.27	4.20	1.1	1.6	90	63.2	34.2	0.1	2.6	INC VAC	
GW24	OP	0.0	0.0	0.0	0.0	0.0	0.0	94	1.0	15.1	0.0	83.3	BV CLOSED - LEFT CLOSED	
GW23	OP	0.0	.10	0.0	4.20	.30	.50	96	60.2	39.7	0.0	0.0	INC VAC	

\* NAR - No Adjustment Required  
 Red Vac - Reduced Vacuum  
 Inc Vac - Increased Vacuum