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SEP 16 2005

BUREAU OF AIR REGULATION

September 13, 2005

Mr. Scott M. Sheplack, P.E. Air Permitting South Section Bureau of Air Regulation Mail Station #5505 2600 Blair Stone Road Tallahassee, Florida 32200

Subject:

North County Resource Recovery Facility Solid Waste Authority of Palm Beach County Response to RAI Letter dated June 29, 2005

Dear Mr. Sheplack:

On behalf of the Solid Waste Authority of Palm Beach County (SWA), CDM would like to present this letter as a response to a Request for Additional Information (RAI) letter from the Florida Department of Environmental Protection dated June 29, 2005.

Comment (1):

Compliance Plan and Report. As an attachment you submitted the calendar year 2004 annual statement of compliance. The department requires a report on the compliance status of each emissions unit addressed in the application. This compliance report is required at the time of application and must cover the time period up to the submission of the application in this case the renewal. {For more information on this requirement please see the hard copy of the instructions for the long application form, specifically page 26.}

Response:

A compliance report indicating the compliance status of each emission unit in the Title V Air Permit Renewal Application is included as Attachment 1.

Comment (2):

Applicable Requirements. You provided an Appendix G which includes reporting requirements only. Applicable requirements must be identified for all emissions units in a Title V renewal application. {For more information on this requirement please see the hard copy of the instructions for the long application form, specifically pages 24-26.



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Additionally, you may want to look at the initial Title V permit renewal submission.}

Response:

Appendix G was revised to identify all applicable federal, state and local air pollution regulations applicable to the facility as a whole. The list of applicable rules and/or regulations may be found in Attachment 2.

Comment (3):

Is the woody waste facility diesel engine subject to regulation, e.g., the RICE MACT? In the application, you checked that this emissions unit is a "regulated emissions unit." I found the potential emissions calculation sheet in Appendix E however, no regulations were identified.

Response:

The woody waste facility diesel engine is an "existing" emission unit (was installed before December 19, 2002), has a rating higher than 500 horsepower, and it is a diesel four-stroke compression ignition engine. The woody waste engine meets the definition of an "affected source" in 40 CFR 63.6590(a), because it is an "existing" stationary reciprocating internal combustion engine (RICE) with a rating of more than 500 brake horsepower located at a major source of HAP emissions. However, 40 CFR 63.6590(b)(3) exempts "existing" compression ignition stationary RICE from all of the requirements of the RICE MACT Rule, including the general 40 CFR 63 Subpart A requirements and the initial notification requirements. Therefore, the woody waste engine is not subject to regulation under the RICE MACT.

CDM also evaluated state regulations that could apply. We believe that this emission unit is exempt from the requirements of Reasonably Available Control Technology (RACT) for Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx) Emitting Facilities, Rule 62-296.500, F.A.C. The woody waste engine, although not a major source of NOx itself, is part of a major source facility, the NCRRF site. Since the NCRRF site has been subject to preconstruction and PSD review pursuant to 40 CFR 52.21, 62-212.400 and/or 62-212.500, F.A.C., the woody waste engine is exempt from specific NOx RACT requirements.

CDM

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Rule 62-296.320(b), F.A.C., General Visible Emissions Standard, does apply to the woody waste engine. This rule limits the opacity of the engine exhaust to less than Number 1 on the Ringelmann Chart (20 percent opacity).

Based on our interpretation, it has been determined that this emission unit is regulated, but that the only applicable requirement (other than the requirement for a preconstruction air permit) is the General Visible Emissions Standard in Rule 62-296.320(b), F.A.C.

Comment (4):

Non-productive Wells at the Landfill. The department's SED office sent you a letter on June 9, 2005, on procedures related to non-productive wells. As indicated in that letter, we need a revised Gas Collection and Control System Design Plan to be submitted as part of the Title V permit renewal application.

Response:

A copy of an amendment to the July 1995 Gas Collection and Control System Design Plan is included in Attachment 3. The amendment is a Gas Well Inactivation Plan, which addresses the issues related to non-performing LFG collection wells.

As requested in your RAI letter and as required by Rule 62-4.050(3), F.A.C., a responsible official certification, as well as a professional engineer certification are included in Attachment 4.

If you have any questions or comments, please do not hesitate to contact me at our office.

Very truly yours,

Kevin C. Leo, P.E. Project Manager

Camp Dresser & McKee Inc.

YIM/wlb

Attachments

CDM

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c: Darrel J. Graziani, P.E., FDEP SED

Mary Beth Morrison, SWA Marc Bruner, Ph.D., SWA

File: 2678-44776-129 [1]

ATTACHMENT 1

Title V Permitting - Compliance Report and Plan

General Description

Emi	issions Unit		Pollutan	t/Parameter	Applicable R	equirements	Plan	
ID No.	Description	Item No.	ID Code	Item	Section	Paragraph	Method of Compliance	Frequency
001	Unit 1 Boiler	1	PM	Particulate Matter	40 CFR 60	Appendix A	Stack Test - USEPA Method 5	Annual
					PSD-FL-108A			
		2	NOx	Nitrogen Oxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 7, 7A, 7B,	Annual
			<u> </u>				7C, 7D, or 7E	
					PSD-FL-108A		CEM	Continuously
		-3	СО	Carbon Monoxide	40 CFR 60		Stack Test - USEPA Method 10	Annual
					PSD-FL-108A		CEM	Continuously
		4	H110	Lead	40 CFR 60	Appendix A	Stack Test - USEPA Method 12	Annual
					PSD-FL-108A			
		5	H114	Mercury	40 CFR 60	Appendix A	Stack Test - USEPA Method 29	Annual
					PSD-FL-108A			
		6		Cadmium	PSD-FL-108A		Stack Test - USEPA Method 29	Annual
		7	H021	Beryllium	PSD-FL-108A		Stack Test - USEPA Method 29	Every 5 Years
		8	FL	Fluoridé	PSD-FL-108A		Stack Test - USEPA Method 13A or 13B	Every 5 Years
		9	VOC	Volatile Organic	PSD-FL-108A		Stack Test - USEPA Method 25 or 25A	Annual
				Compound				
		10	SO ₂	Sulfur Dioxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 6, 6C or 6B	Annual
					PSD-FL-108A		CEM	Continuously
	ļ	11	HCI	Hydrogen Cloride	40 CFR 60	Appendix A	Stack Test - USEPA Method 26	Annual
					PSD-FL-108A			
		12	Diox	Dioxin and Furans	PSD-FL-108A		Stack Test - USEPA Method 23	Annual
		13		Opacity - Boilers	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 9	Annual
							CEM	Continuously
		14		Opacity - Fugitive Ash	PSD-FL-108A		Stack Test - USEPA Method 22	Annual
				Emissions				
		15	CO ₂	Carbon Dioxide	PSD-FL-108A		СЕМ	Continuously
				Temp. at Scrubber Exit	PSD-FL-108A		CEM	Continuously
				Steam Production	PSD-FL-108A		CEM .	Continuously
-				"F" Factors	PSD-FL-108A		Method 19	Annual

Title V Permitting - Compliance Report and Plan

General Description

Emi	ssions Unit		Pollutan	<i>V</i> Parameter	Applicable R	equirements	Plan	_
ID No.	Description	Item No.	ID Code	Item	Section	Paragraph	Method of Compliance	Frequency
002	Unit 2 Boiler	1	PM	Particulate Matter	40 CFR 60	Appendix A	Stack Test - USEPA Method 5	Annuai
					PSD-FL-108A		·	
•		2	NOx	Nitrogen Oxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 7, 7A, 7B,	Annual
							7C, 7D, or 7E	
					PSD-FL-108A		CEM	Continuously
		3	co	Carbon Monoxide	40 CFR 60		Stack Test - USEPA Method 10	Annual
					PSD-FL-108A		CEM	Continuously
		4	H110	Lead	40 CFR 60	Appendix A	Stack Test - USEPA Method 12	Annual
					PSD-FL-108A			
		5	H114	Mercury	40 CFR 60	Appendix A	Stack Test - USEPA Method 29	Annual
					PSD-FL-108A			
		6		Cadmium	PSD-FL-108A		Stack Test - USEPA Method 29	Annual
		7	H021	Beryllium	PSD-FL-108A		Stack Test - USEPA Method 29	Every 5 Years
	·	8	FL	Fluoride	PSD-FL-108A		Stack Test - USEPA Method 13A or 13B	Every 5 Years
	·	9	VOC	Volatile Organic	PSD-FL-108A		Stack Test - USEPA Method 25 or 25A	Annual
				Compound				
		10	SO ₂	Sulfur Dioxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 6, 6C or 6B	Annual
					PSD-FL-108A		CEM	Continuously
		11	HCI	Hydrogen Cloride	40 CFR 60	Appendix A	Stack Test - USEPA Method 26	Annual
			·		PSD-FL-108A			
		12	Diox	Dioxin and Furans	PSD-FL-108A	-	Stack Test - USEPA Method 23	Annual
		13		Opacity - Boilers	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 9	Annual
					_		CEM.	Continuously
		14		Opacity - Fugitive Ash	PSD-FL-108A		Stack Test - USEPA Method 22	Annual
	·			Emissions				
		15	CO ₂	Carbon Dioxide	PSD-FL-108A		CEM	Continuously
				Temp. at Scrubber Exit	PSD-FL-108A		CEM	Continuously
				Steam Production	PSD-FL-108A		СЕМ	Continuously
				"F" Factors	PSD-FL-108A		Method 19	Annual

Title V Permitting - Compliance Report and Plan

Standards and Status

Emi	issions Unit	_	Pollutar	nt/Parameter		Compliance S	tandards		Monito	ring/Recording	
ID No.	Description	Item No.	ID Code	ltem	Units	Туре	Value	Conditions	Frequency	Compliance · (Y/N)	Comments
001	Unit 1 Boiler	1	PM	Particulate Matter*	mg/dscm	max	27	@ 7% O ₂	Annually	Y	
		2	NOx	Nitrogen Oxide*	ppmdv	24 hr block avg.	250	@ 7% O ₂	Annual (Stack Test)	Y	-
									Continuous (CEMs)	Y	
		3	со	Carbon Monoxide*	ppmdv	24 hr avg.	200	@ 7% O ₂	Annual (Stack Test)	Y	
					ppmdv	1 hr avg.	400	@ 7% O ₂	Continuous (CEMs)	Y	
		. 4	H110	Lead*	mg/dscm	max	0.440	@ 7% O ₂	Annually	Y	
		5	H114	Mercury*	lbs/MmBTU	max	2.4 x 10(^-4)	@ 7% O₂	Annually	Y	
		6		Cadmium	mg/dscm	max	0.040	@ 7% O ₂	Annually	Y	
		7	H021	Beryllium	lbs/MmBTU	max	7.3 x 10(^-7)	@ 7% O ₂	Every 5 Years	Y	
		8	FL	Fluoride	lbs/MmBTU	max	0.0032	@ 7% O ₂	Every 5 Years	Y	
		9	voc	Volatile Organic	lbs/MmBTU	max	0.016	@ 7% O ₂	Annually	Y	
		10	SO ₂	Compound Sulfur Dioxide*	ppmdv	24 hr	29	@ 7% O ₂	Annual (Stack Test)	Y	
						Geometric Mean	,		Continuous (CEMs)		
		11	HCI	Hydrogen Cloride*	ppmdv	3 run test avg.	25	@ 7% O ₂	Annually	Y	
		12	Diox	Dioxin and Furans*	ng/dscm	max	. 60	@ 7% O ₂	Annually	Y	
		13		Opacity (Visible Emissions -	%	6-min avg.	10		Annual (Stack Test)	Y	
				stack)					Continuous (CEMs)	Y	
		14		Opacity - Fugitive Ash	%	9-min per	5		Annually	Y	
	stringent limit/c			Emissions		3 hr period					

^{*} More stringent limit/guideline applies.

Title V Permitting - Compliance Report and Plan

Standards and Status

Emi	ssions Unit		Pollutan	nt/Parameter		Compliance St	andards		Moni	Monitoring/Recording		
										Compliance		
ID No.	Description	Item No.	ID Code	. Item	Units	Туре	Value	Conditions	Frequency	(Y/N)	Comments	
002	Unit 2 Boiler	1	PM	Particulate Matter*	mg/dscm	max	27	@ 7% O ₂	Annually,	Y		
		2	NOx	Nitrogen Oxide*	ppmdv	24 hr block avg.	250	@ 7% O ₂	Annual (Stack Test)	' Y		
		,				ę.			Continuous (CEMs)	Y		
		3	co	Carbon Monoxide*	ppmdv	24 hr avg.	200	@ 7% O ₂	Annual (Stack Test)	Y		
	·				ppmdv	1 hr avg.	400	@ 7% O ₂	Continuous (CEMs)	Υ		
											Stack test failed,	
		4	H110	Lead*	mg/dscm	max	0.440	@ 7% O ₂	Annually	Υ .	re-test passed	
		5	H114	Mercury*	lbs/MmBTU	max	2.4 x 10(^-4)	@ 7% O ₂	Annually	Y		
		6		Cadmium	mg/dscm	max	0.040	@ 7% O ₂	Annually	Y		
		. 7	H021	Beryllium	lbs/MmBTU	max	7.3 x 10(^-7)	@ 7% O ₂	Every 5 Years	Y		
		8	FL	Fluoride	lbs/MmBTU	max	0.0032	@ 7% O ₂	Every 5 Years	Y		
		9	VOC	Volatile Organic	lbs/MmBTU	max	0.016	@ 7% O ₂	Annually	Y		
				Compound								
		10	SO ₂	Sulfur Dioxide*	ppmdv	24 hr	29	@ 7% O ₂	Annual (Stack Test)	Υ		
						Geometric Mean			Continuous (CEMs)			
		11	HCI	Hydrogen Cloride*	ppmdv	3 run test avg.	25	@ 7% O ₂	Annually	Y		
		12	Diox	Dioxin and Furans*	ng/dscm	max	60	@ 7% O ₂	Annually	Y		
		13		Opacity (Visible Emissions -	% .	6-min avg.	10		Annual (Stack Test)	Y		
				` stack)					Continuous (CEMs)	Y		
		14		Opacity - Fugitive Ash	%	9-min per	5		Annually	Y		
	stringent limit/o			Emissions		3 hr period						

^{*} More stringent limit/guideline applies.

Title V Permitting - Compliance Report and Plan

	Emissions Unit					
ID No.	Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
800	Class I Landfill	Monitor gauge pressure within each gas extraction well.	60.756(a)(1)	Monthly	Υ	
		Monitor nitrogen concentration using Method 3C or oxygen concentration using Method 3A. Nitrogen concentration values <20 percent or oxygen concentration values <5 percent.	60.756(a)(2)	Monthly	N*	All instances of non- compliance have been reported as part of the revised 2004 Statement of Compliance
		Monitor LFG temperature in extraction well; should be <55°C (131°F), unless otherwise demonstrated that a higher temperature is appropriate.	60.756(a)(3)	Monthly	N*	NCRRF Class I Landfill is allowed to operate at less than 75°C (168°F)
		Monitor methane concentration at the landfill surface.	60.755(c) and 60.756(f)	Quarterly	Y	
		Monitor gas flow from collection system to open flare (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).	60.756(c)(2)	At least once every 15 minutes <u>OR</u> Monthly inspections of bypass line seals	Y	
		Monitor the continuous presence of a pilot flame or the flare flame for an open flare. This requirement confirms operational status of control device.	60.756(c)(1)	Continuous	Y	
1		Monitoring of Operations:				
		(1) Gauge pressure in each extraction well	60.756(a)(1)	Monthly	Y	
		(2) Nitrogen or oxygen concentration in extracted LFG	60.756(a)(2)	Monthly	N*	
ľ l		(3) Temperature of extracted LFG	60.756(a)(3)	Monthly	N*	
		(4) A device that records flow to or bypass of the control device	60.756(b)(2)(i)&(ii)	Record flow at least every 15 minutes	Y	
		(5) Continuous presence of a pilot flame for an open flare	60.756(c)	Continuous	Y	
		(6) Operating parameters for alternative collection and control system designs, which are specified by the landfill and approved by the implementing agency include developing a gas well	60.756(e)		Y	
		(7) Methane concentrations along landfill surface	60.756(f)	Quarterly	Y	

^{*}Corrective Action including developing a Gas Well Inactivation Plan and installing replacement wells as part of Cells 1-4 Class I Landfill closure.

Title V Permitting - Compliance Report and Plan

	Emissions Unit	<u> </u>	T			
ID No.	Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
800		Recordkeeping Requirements:				
		Keep for at least 5 years, up-to-date, readily available, on-site records of the design capacity report, current amount of solid waste in place, and year-to-year waste acceptance rate	60.758(a)		. Y	
		Initial Performance Test for open flares: (1) Type of flare (steam-, air-, or non-assisted) (2) All visible emission readings (3) Heat content determination (4) Gas flow rate or bypass measurements (5) Exit velocity determinations (6) Continuous pilot flame or flare flame monitoring (7) All periods when pilot flame or flare flame is absent	60.758(b)(4)	Within 180 days of initial startup and/or at time of permit renewal	Y .	NCRRF Class I and Class III Landfill Gas Control Systems are tested annually for exit velocity, flow rate, net heating value, sulfur content and visible emissions
:		For an open flare: Record all pilot flame or flare flame monitoring data and all periods when pilot flame or flare flame was absent	60.758(c)(4)		Y	
•		Records of continuous flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines	60.758(c)(2)		Y	
		Record all values which exceed the operational standards specified in 60.753. Also include the operating value from the next monitoring period and the location of each exceedance:	60.758(e)	Semi-annual	· Y	
		(1) New well installation(2) Pressure in each extraction well(3) Nitrogen concentration or oxygen concentration in extracted LFG				
		 (4) Temperature of extracted LFG (5) Methane concentrations along landfill surface (6) Collected LFG is routed to control device at all times, note periods when the collection system and/or control device were not operational. 				

^{*}Corrective Action including developing a Gas Well Inactivation Plan and installing replacement wells as part of Cells 1-4 Class I Landfill closure.

Title V Permitting - Compliance Report and Plan

	Emissions Unit			<u> </u>		
ID No.	Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
008	_	Startup, Shutdown and Malfunction: Occurrence and duration of each SSM of operation (i.e. process equipment)	63.10(d)(2)(i)		Υ	
		Occurrence and duration of each SSM required air pollution control and monitoring equipment	63.10(d)(2)(ii)		Υ	
		All required maintenance performed on the air pollution control and monitoring equipment	63.10(d)(2)(iii)		Y	
		Actions taken when procedures are different than specified in 63.6(e)(3)	63.10(d)(2)(iv)		Y	
		All information necessary to demonstrate conformance with the affected source's SSM plan	63.10(d)(2)(v)		Y	
		Initial Control System Performance Test Report: Submit report within 180 days of emission collection and control system start-up per 60.8. Results can be included in the initial Annual Report.	60.757(g)		Y	
		Annual Compliance Report: Submit initial report within 180 days of emission collection and control system start-up. Report once every 6 months. (Required semi-annually by 40 CFR 63 Subpart AAAA)	60.757(f) 63.1980(a)		Υ	
		Landfill Closure Report: When landfill is no longer accepting refuse and the landfill is considered closed. Submit report within 30 days of refuse acceptance cessation.	60.757(d)		N/A	
		Control Equipment Removal Report: Submit report within 30 days prior to removal or cessation of control system operations. Controls can be removed after meeting all of these criteria:	60.757(e)		N/A	
		(1) Landfill Closure Report has been submitted(2) Control system was operated for at least 15 years(3) Three consecutive NMOC Emission Rate Reports with values <50 Mg/yr achieved				
		Startup, Shutdown and Malfunction Plan: Plan shall be developed by the owner or operator and submitted by January 16, 2004.	63.6(e)(3)		Y	
		General Report Requirements	63.10(d)(5)(i) & (ii)	Semi-annual	Υ	

^{*}Corrective Action including developing a Gas Well Inactivation Plan and installing replacement wells as part of Cells 1-4 Class I Landfill closure.

Title V Permitting - Compliance Report and Plan Applicable Subpart WWW and NESHAP Subpart AAAA Requirements

	Emissions Unit	/ Applicable Cappart ****** and **LESTIN	<u> </u>	<u> </u>		
ID No.	Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
009	Class III Landfill	Monitor gauge pressure within each gas extraction well.	60.756(a)(1)	Monthly	Υ	
		Monitor nitrogen concentration using Method 3C or oxygen concentration using Method 3A. Nitrogen concentration values <20 percent or oxygen concentration values <5 percent.	60.756(a)(2)	. Monthly	Y	All instances of non- compliance have been reported as part of the revised 2004 Statement of Compliance
		Monitor LFG temperature in extraction well; should be <55°C (131°F), unless otherwise demonstrated that a higher temperature is appropriate.	60.756(a)(3)	Monthly	Y	
		Monitor methane concentration at the landfill surface.	60.755(c) and 60.756(f)	Quarterly	Y	Class III Landfill is permitted to conduct annual monitoring if readings are less than 250 ppm for three consecutive quarters.
	· .	Monitor gas flow from collection system to open flare (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).	60.756(c)(2)	At least once every 15 minutes <u>OR</u> Monthly inspections of bypass line seals	Y	
		Monitor the continuous presence of a pilot flame or the flare flame for an open flare. This requirement confirms operational status of control device.	60.756(c)(1)	Continuous	Y	

Title V Permitting - Compliance Report and Plan

	Emissions Unit	<u></u>				-
ID No.	Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
009		Monitoring of Operations:				
		(1) Gauge pressure in each extraction well	60.756(a)(1)	Monthly	Y	•
		(2) Nitrogen or oxygen concentration in extracted LFG	60.756(a)(2)	Monthly	Y	
		(3) Temperature of extracted LFG	60.756(a)(3)	Monthly	Y	
	4	(4) A device that records flow to or bypass of the control device	60.756(b)(2)(i)&(ii)	Record flow at least 15 minutes	Y	
	•	(5) Continuous presence of a pilot flame for an open flare	60.756(c)	Continuous	Y	
		(6) Operating parameters for alternative collection and control system designs, which are specified by the landfill and approved by the implementing agency include developing a gas well	60.756(e)		, Y	
		(7) Methane concentrations along landfill surface	60.756(f)	Quarterly	Y	
	•	Recordkeeping Requirements:		·	Y	
		Keep for at least 5 years, up-to-date, readily available, on-site records of the design capacity report, current amount of solid waste in place, and year-to-year waste acceptance rate	60.758(a)		Y	
		Initial Performance Test for open flares: (1) Type of flare (steam-, air-, or non-assisted) (2) All visible emission readings (3) Heat content determination (4) Gas flow rate or bypass measurements (5) Exit velocity determinations (6) Continuous pilot flame or flare flame monitoring (7) All periods when pilot flame or flare flame is absent	60.758(b)(4)	Within 180 days of initial startup and/or at time of permit renewal	Y	NCRRF Class I and Class III Landfill Gas Control Systems are tested annually for exit velocity, flow rate, net heating value, sulfur content and visible emissions
		For an open flare: Record all pilot flame or flare flame monitoring data and all periods when pilot flame or flare flame was absent Records of continuous flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines	60.758(c)(4) 60.758(c)(2)		Y	

Title V Permitting - Compliance Report and Plan

	Emissions Unit	Applicable Subpart WWW and NESTAL				
ID No.	Emissions Unit Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
009		Record all values which exceed the operational standards specified in 60.753. Also include the operating value from the next monitoring period and the location of each exceedance:	60.758(e)	Semi-annual	Y	
		 (1) New well installation (2) Pressure in each extraction well (3) Nitrogen concentration or oxygen concentration in extracted LFG (4) Temperature of extracted LFG (5) Methane concentrations along landfill surface (6) Collected LFG is routed to control device at all times, note 				·
		periods when the collection system and/or control device were not operational. Startup, Shutdown and Malfunction: Occurrence and duration of each SSM of operation (i.e. process equipment)	63.10(d)(2)(i)		Y	
		Occurrence and duration of each SSM required air pollution control and monitoring equipment	63.10(d)(2)(ii)		Y	
		All required maintenance performed on the air pollution control and monitoring equipment	63.10(d)(2)(iii)		Υ	
		Actions taken when procedures are different than specified in 63.6(e)(3)	63.10(d)(2)(iv)		Y	
		All information necessary to demonstrate conformance with the affected source's SSM plan	63.10(d)(2)(v)		Y	
		Initial Control System Performance Test Report: Submit report within 180 days of emission collection and control system start-up per 60.8. Results can be included in the initial Annual Report.	60.757(g)		Y	
	·	Annual Compliance Report: Submit initial report within 180 days of emission collection and control system start-up. Report once every 6 months. (Required semi-annually by 40 CFR 63 Subpart AAAA)	60.757(f) 63.1980(a)		Y	
		Landfill Closure Report: When landfill is no longer accepting refuse and the landfill is considered closed. Submit report within 30 days of refuse acceptance cessation.	60.757(d)		N/A	

Title V Permitting - Compliance Report and Plan

ID No.	Emissions Unit Description	Action	Regulatory Reference	Frequency	Compliance (Y/N)	Comments
009	1	Control Equipment Removal Report: Submit report within 30 days prior to removal or cessation of control system operations. Controls can be removed after meeting all of these criteria: (1) Landfill Closure Report has been submitted (2) Control system was operated for at least 15 years (3) Three consecutive NMOC Emission Rate Reports with values <50 Mg/yr achieved	60.757(e)		N/A	
		Startup, Shutdown and Malfunction Plan: Plan shall be developed by the owner or operator and submitted by January 16, 2004.	63.6(e)(3)		Y	
		General Report Requirements	63.10(d)(5)(i) & (ii)	Semi-annual	· Y	

Title V Permitting - Compliance Report and Plan

Unregulated Emission Units

Emissions Unit ID Number	Description	Compliance Status
005	RDF Storage	Unregulated
006	RDF Process Line	Unregulated
007	OBW Processing Line	Unregulated
New	Cooling Tower	Unregulated
New	Woody Waste Facility Diesel Engine	Unregulated

ATTACHMENT 2

Appendix G Identification of Applicable Requirements

State Regulations	Title		
Chapter 62-4, F.A.C.	Permits		
Chapter 62-204, F.A.C.	Air Pollution control – General Provisions		
Chapter 62-210, F.A.C.	Stationary Sources - General Requirements		
Chapter 62-212, F.A.C.	Stationary Sources – Preconstruction Review		
Chapter 62-213, F.A.C.	Operation Permits for Major Sources of Air Pollution		
Title V Core List	Dated 03/28/05, Appendix TV-5, attached.		
Chapter 62-296, F.A.C.	Stationary Sources – Emission Standards		
Chapter 62-297, F.A.C.	Stationary Sources – Emission Standards		

Federal Regulations	Title
40 CFR 60 Subpart C _b	Emission Guidelines and Compliance Times for Large Municipal Waste Combustors that are Constructed on or Before September 20, 1994. [Conditions in 40 CFR 60 Subpart C_b are also enclosed in 40 CFR 60 Subpart E_b]
40 CFR 60 Subpart WWW	New Source Performance Standards (NSPS) for MSW Landfills
40 CFR 60.18(b)	General Control Device Requirements for Flares
40 CFR 60 Subpart AAAA	National Emissions Standards for Hazardous Air Pollutants

ATTACHMENT 3

Solid Waste Authority of Palm Beach County

North County Resource Recovery Facility Class I and Class III Landfills

Amendment to Landfill Gas Collection and Control System Design Plan

September 2005



Gas Well Inactivation Plan

SOLID WASTE AUTHORITY OF PALM BEACH COUNTY

NORTH COUNTY RESOURCE RECOVERY FACILITY CLASS I AND CLASS III LANDFILLS

AMENDMENT TO LANDFILL GAS COLLECTION AND CONTROL SYSTEM DESIGN PLAN

SEPTEMBER 2005



Prepared for:

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CDM

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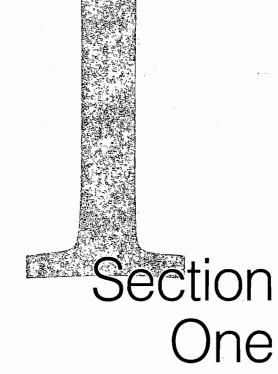
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Section 1 Introduction

1.1 Purpose of Plan

The North County Resource Recovery Facility (NCRRF) Class I and Class III Landfill currently operate under Title V Air Operation Permit No. 0990234-004-AV. As indicated in this permit, the landfill gas (LFG) collection and control system is subject to the requirements of the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills, 40 CFR 60 Subpart WWW. In accordance with these regulations, this document describes a proposed plan under which specific landfill gas extraction wells would be "inactivated" and subject to alternative operating parameters, as allowed by 40 CFR 60.752 (b)(2)(i)(B).

These well inactivations would be monitored and managed so that the landfill gas collection system would continue to meet the NSPS collection and control system requirements. This request to inactivate certain LFG extraction wells would serve two purposes:

- 1) Allow SWA to properly balance the landfill gas collection system in areas, where diminishing amounts of landfill gas are being produced, and/or areas where significant amounts of nondegradable waste are present
- 2) Allow SWA to take corrective actions to dewater and repair flooded and damaged wells and then return the wells to active status.

This inactivation plan is an amendment to the existing Gas Collection and Control System Design Plan submitted to the Florida Department of Environmental Protection (FDEP) as part of the July 1995 Title V Air Permit Application.

1.2 Regulatory Basis for Alternative Parameters

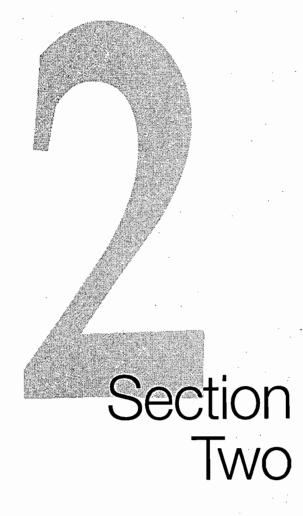
Section 60.756(e) allows an owner/operator to establish alternative parameters to those required by NSPS operational standards for collection and control systems. An operator seeking approval for alternative parameters must provide the following information:

- A description of the design and operation of the collection system;
- A description of the operating parameters that would indicate proper performance;
 and
- Appropriate monitoring procedures.

In addition, Section 60.755(3) and 60.755 (4) allow an owner/operator to request alternative timelines for correcting exceedances. This information and the proposed



procedures for well inactivation are presented and discussed in the following sections.



Section 2 LFG Collection and Control System

The LFG collection and control system at the NCRRF Class I Landfill, Cells 1 through 8, and Class III Landfill, Cells 1-6 and 8, were designed by Waste Energy Technology L.L.C. in accordance with NSPS requirements, 40 CFR 60 Subpart WWW. The systems are operated by a LFG technician at the Solid Waste Authority to meet the operational requirements of NSPS. **Figure 2-1** shows the location of all LFG extraction wells currently installed at the Class I Landfill.

2.1 NSPS Operational Parameters

SWA must operate the LFG collection and control system in accordance with Section 60.753 *Operational Standards for collection and control systems*. This section presents the following operational parameters:

- Pressure/vacuum. Operate the collection system with negative pressure at each wellhead except under fire or increase well temperature, use of geomembrane or synthetic cover, and/or a decommissioned well.
- Temperature. Operate each interior wellhead in the collection system with a LFG temperature less than 75°C (See CDM letter to FDEP, Request for Higher Wellhead Operating Temperature under 40 CFR 60.753 (c), dated October 2, 2000)
- Nitrogen or Oxygen. Operate each interior wellhead in the collection system with a nitrogen level less than 20 percent or an oxygen level less than 5 percent.

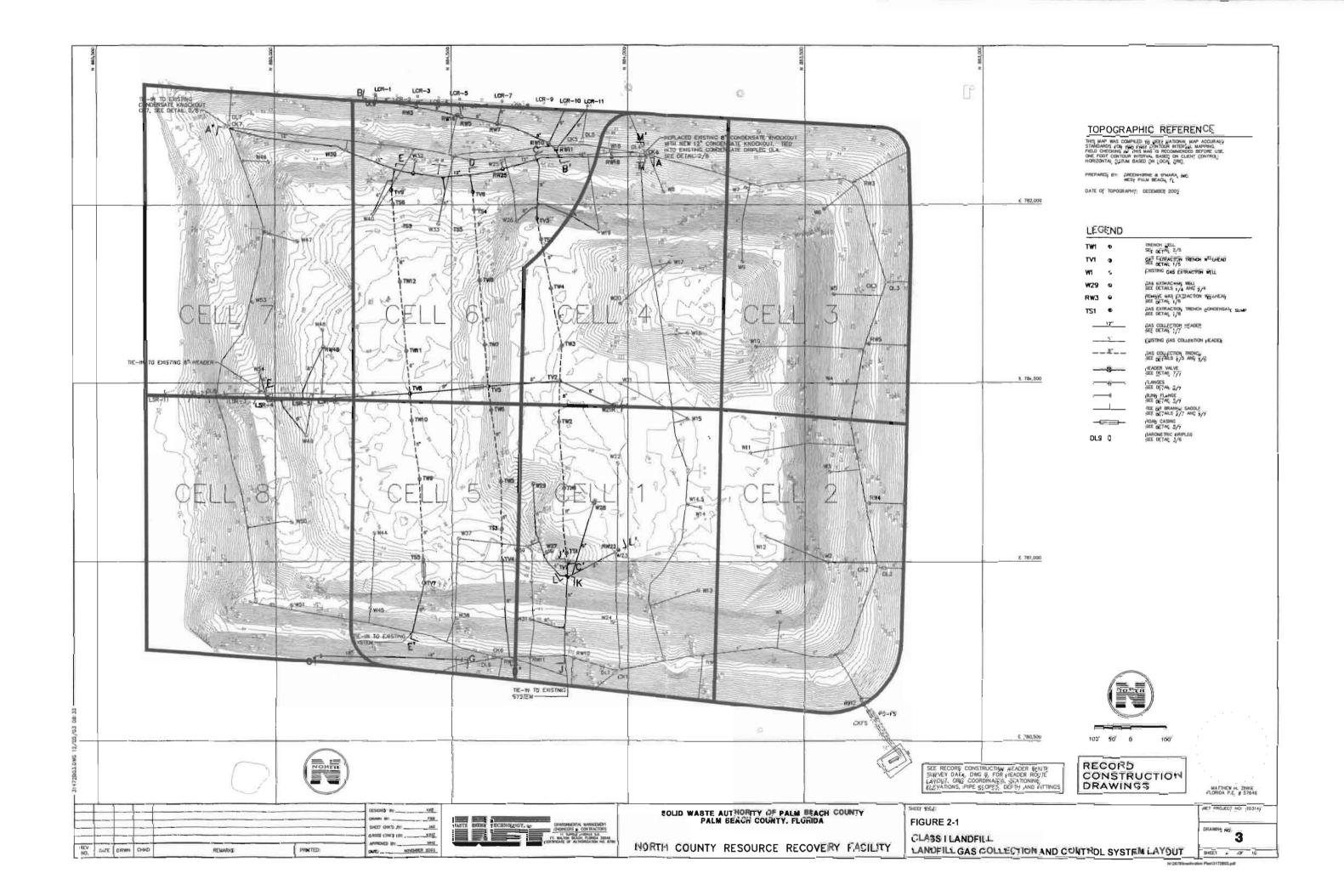
Section 60.755 *Compliance Provisions*, presents the criteria and time requirements to demonstrate compliance with the operational requirements. Monitoring of the landfill gas collection and control system is required to be conducted on a monthly basis. Any time a gas extraction well demonstrates, during monthly monitoring, that the operational requirements of NSPS are not met corrective action for that exceedance must be initiated within five calendar days. If the exceedance cannot be corrected within 15 calendar days, the LFG collection system must be expanded within 120 days of the initial exceedance.

2.2 Alternative Operational Parameters

An alternative set of operational parameters is proposed as part of this inactivation plan. Non-performing LFG collection wells, like those noted in this report, are indicated by the conditions referenced below:

■ Pressure/vacuum. If the gas generation rate has declined, the pressure in the well will exhibit a slight vacuum to neutral pressure when the well control valve is closed





- Methane. Methane generation percentages will decline from historic values.
- Oxygen. A properly operated system will preclude the introduction (drawing) of
 excessive air into the landfill. In this case, oxygen in the waste mass will be
 metabolized by bacteria in the waste into carbon dioxide.
- Nitrogen (Balance gases). With the landfill operating under anaerobic conditions, nitrogen will report as excess nitrogen.
- Temperature. As landfill gas generation declines, the temperature of the waste mass will decline.

Table 2-1 lists normal wellhead operating parameters, NSPS operational parameters, indicated, and the proposed alternative operating parameters for inactive wells.

Table 2-1: Summary of NSPS Operating Parameters vs. Alternative Operating Parameters

Parameter	NSPS Value	Proposed Alternative Parameter for Inactive Wells
Pressure/Vacuum	Less than atmospheric	Less than atmospheric
Methane	~50%	<<50%
Oxygen	<5%	<<5%
Balance (Assumed Nitrogen)	<20%	>20%
Temperature	< 135 deg. F	<<135 deg. F

2.3 Alternative Time Compliance Requirements

Inactivation is not a permanent closure of a well, but rather a temporary time frame where the well will not be subject to NSPS operational requirements. Therefore, a well considered "inactive" will not follow the criteria and time requirements provided in Section 60.755.

An inactive well will be monitored on a monthly basis to record the operational parameters at that time. Inactive wells will not be subject to NSPS requirements but rather subject to a set of alternative parameters, as detailed in Table 2-1. It may be necessary, from time to time in special circumstances, to declare a well inactive if, in the opinion of a Florida Registered Professional Engineer (PE), inactivation can be declared even if one of the inactivation parameters is not met. For example, a well may be declared inactive if high oxygen is recorded, even though a vacuum is present in the well, methane concentration is low, nitrogen concentration is high and temperature is low. Such a case would be clearly indicated on the form and certified by the PE.

Well inactivity actions will be recorded on "Gas Well Inactivation" forms as detailed in Figure 2-2. These forms will be created and certified by a Florida Registered



FIGURE 2-2

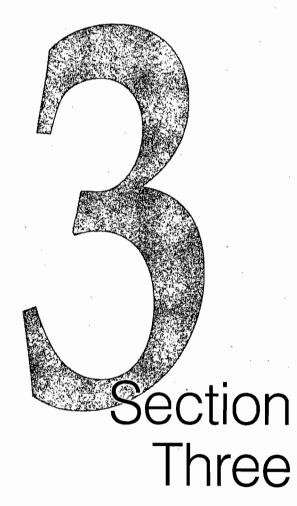
GAS WELL INACTIVATION RECORD					ORD	
	Facility Name: Well ID #:					
To the bare true accorda	, accurate an nce with the llection and	nowledge, that complete LFG Collec Control Sys	e monthly and that ba tion and C tem, I furth	ased on thes ontrol Systemer ner certify th	e records the wel m Design Plan. B	bove landfill gas (LFG) collection well I has been deemed inactive in Based on engineering features of the this well, in addition to any other ystem.
				Signat	ure:	(seal)
		771	.	Na	me:	
		Florida	Kegistered			se No.:
	D	, Na _ 41= = = =			nitoring Recor	ds
Month	Pressure (<1 ATM)	Methane (<<50%)	Oxygen (<<5%)	Nitrogen (>20%)	Temperature (<<135°F)	Comments
JAN						·
FEB					·	
MAR						
APR						
MAY						
JUN						
	· · · · · · · · · · · · · · · · · · ·	<u> </u>				
JUL						
AUG						
SEP						
ОСТ						
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)						
		Florida	Registered			e No ·
	Florida Registered Professional Engineer License No.:					

CDM

Professional Engineer (PE). These forms will be maintained up-to-date and will be readily available at the site at all times. The PE, through the use of this form, will certify that the monthly monitoring records for each landfill gas collection well are true, accurate and complete and that, based on those records, the well inactivity status has been determined. The certification will also state that inactivation of a well, or a series of wells, will not affect the integrity of the landfill gas collection system.

Each form will contain data for a single well, for an annual period of twelve months. At the end of each calendar year, the PE will certify that the monthly monitoring records for each landfill gas collection well are true, accurate and complete and that, based on those records, the well can be either: 1) returned to active service; 2) remain inactive; or 3) be permanently closed in accordance with the LFG Collection and Control System Design Plan. The annual certification will also state that inactivation of a well, or a series of wells, will not affect the integrity of the landfill gas collection system.





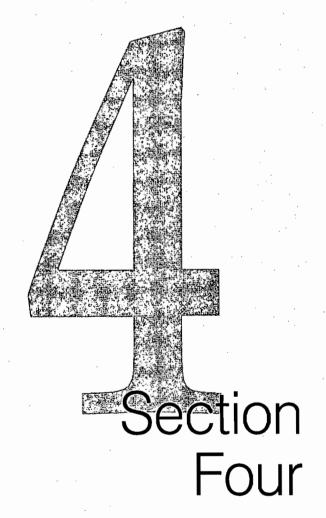
Section 3 Landfill Gas Well Inactivation

Landfill gas extraction wells are designed to extract landfill gas at a flow that is near to the rate of gas generation. Conditions within the well and the quality of the gas extracted are indicators of the condition of a well and its surrounding waste mass. Due to varying conditions within the landfill (i.e., depth of waste, composition, age) landfill gas generation rates can vary across a landfill. From time to time, landfill gas generation will decline to a point where extraction is no longer viable on a constant basis. When this occurs, the well should be taken out of service or "inactivated," with periodic monitoring continuing to determine if the well should be reactivated after a rest period.

Inactivation is not a permanent closure of a well, but a temporary time frame where the well is not subject to the NSPS operational requirements, and corrective actions can be taken (if required) that would lead to the well being placed back in service. Well inactivation includes classification of a well under "inactive" status as well as the physical inactivation of the well.

The physical means to place a well into an inactive condition and to readily return it to active service lies in the wellhead valves. Each and every wellhead is fitted with an isolation valve. Some of the wellheads are fitted with a primary valve that is used for fine adjustment of landfill gas flow through the wellhead. This valve is the one that is adjusted at each system balancing and/or well adjustment. The second valve is used as an isolation valve. This valve is used during maintenance operations or at any time the well needs to be isolated from the collection headers. By using this valve for isolation, the setting of the adjustment valve is unaffected by isolation actions and the well can be more readily and quickly returned to service after an isolation incident. Some wellheads are fitted with a single valve. This valve is also used for isolation and will be readjusted when the well is reactivated.





Section 4 Methodology

This section details the methodology for well inactivation, as well as corrective actions and any requested modifications to the current operating parameters and/or corrective action schedule. A gas well meeting the inactivation criteria, described below, will be identified as "inactive" in the landfill's semi-annual operating report.

4.1 Well Inactivation due to Waste Age/Nondegradable Waste

A gas well that is in waste where gas generation is unreliable due to the age of the waste, and/or the presence of large amounts of nondegradable waste, and does not meet the NSPS operational criteria will be declared "inactive" and its isolation valve will be closed. Waste can potentially be too old (no longer reliably generating gas) or too young (not yet reliably generating gas).

Under this scenario, a change in the operational parameters is requested as described in Table 2-1. This change will be noted in the landfill's semi-annual operating report.

Monthly monitoring of the well parameters will still be performed and recorded, but reactivation will not occur unless the well operating parameters meet NSPS operational values for a consecutive period of 120 days.

4.2 Well Inactivation Due to Flooding

A gas well suspected to be flooded, will be declared "inactive" and its isolation valve will be closed. Under this scenario, a change in the operational parameters is proposed as described in Table 2-1 as well as a modification to the NSPS corrective action schedule. This change will be noted in the landfill's semi-annual operating report.

The corrective action to be taken at a flooded gas well will be pumping or dewatering the well. It is anticipated that pumping of a flooded well will be accomplished by removing the wellhead and lowering a submersible pump as deeply as possible into the well casing. A sealing cap will be installed during pumping operations to prevent uncontrolled venting of gas. All pumped liquids will be conveyed through solid piping or hose to the landfill's leachate collection system. Once the well is dewatered, the isolation valve will be reopened and the well will be adjusted if necessary, commencing at the last control valve setting, until it is once again in active mode.

Monthly monitoring of the well conditions will still be performed and recorded but reactivation will not occur unless the well operating conditions meet NSPS operational parameters for a consecutive period of 120 days. Successful return of a formerly flooded well to active status will be reported to FDEP as part of the landfill's semi-annual operating report. If active mode cannot be achieved after pumping and

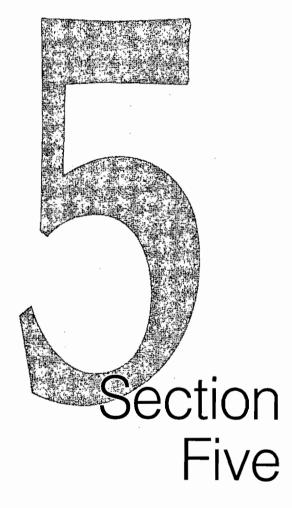


the conditions for inactivity still exist, the isolation valve will remain closed and the well will be reevaluated and possibly decommissioned.

4.3 Well Inactivation due Damaged or Filled Wells

If the well is filled with debris, damaged, or otherwise physically inoperative, or if surface methane levels in surrounding areas are exceeding allowable levels, the procedures mandated by 40 CFR 60.755 for corrective action will be followed. Any wells determined to be in this condition will be reported to FDEP as part of the landfill's semi-annual operating report.





Section 5 Compliance Evaluation

This section describes the information needed to certify compliance of the landfill gas collection and control system.

5.1 Regulatory Requirements

The NCRRF Class I and Class III Landfill are subject to the NSPS operational and compliance provisions which regulate the LFG collection and control systems.

As required by Section 40 CFR 60.756 (f), the demonstration of, "...compliance with 60.755 (c)..." shall be through monitoring, "...surface concentrations of methane according to the instrument specifications and procedures provided in 60.755 (d)." If a landfill gas extraction system is functioning properly, the surface emissions monitoring would indicate that surface methane emissions were less than 500 parts per million (ppm) above background levels at the surface of the landfill.

Surface emissions monitoring must be conducted at the Class I Landfill on a quarterly basis. Readings of 500 ppm or more above background concentrations will be recorded as a monitored exceedance. Exceedances must be corrected as required by NSPS.

Surface emissions monitoring at the Class III Landfill is conducted on an annual basis provided that the methane concentration levels remain below 250 ppm. If the methane concentration equals or exceeds 250 ppm, then the surface monitoring will revert back to a quarterly monitoring frequency. Although quarterly monitoring is required if the readings of 250 ppm or more are recorded, corrective action measures will only be required when the concentration level equals or exceeds 500 ppm.

5.2 Control of Surface Emissions

The surface methane emission levels are the measure of successful operation of a landfill gas system, and, as such, are used to verify proper design and operation. Therefore, compliance with the surface methane emissions limits would be the measure of efficacy of the modified gas extraction well operating parameters as requested herein.

Areas around wells proposed to be inactivated will continue to be monitored quarterly for surface methane concentrations. Landfill gas emissions, measured as methane, must be less than 500 ppm above background levels on the surfaces of a landfill. If methane levels are measured 500 ppm above background, then the procedures mandated by NSPS will be followed.



ATTACHMENT 4

Owner/Responsible Official Certification

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made are true, accurate and complete.

John D. Booth

Executive Director

Solid Waste Authority of Palm

Beach County

Professional Engineer Certification

Kevin C. Leo, P.E.

Florida Registered Engineer Number 57520