

Department of **Environmental Protection**

Division of Air Resource Management

Win field

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

1. Facility Owner/Company Name: Columbia County Board Of County Commissioners

Identification of Facility

	J · I J		•	•	
2.	Site Name: Solid Waste Facility - L	andfill			
3.	Facility Identification Number: NA				
4.	Facility Location				
	Street Address or Other Locator: 134	17 NW O	ossterhoudt La	ne	
	City: Lake City Co	unty: Col	umbia	Zip Code: 32055	
5.	Relocatable Facility?	6	. Existing Title	V Permitted Facility?	
	X Yes No		Yes	X No	
A	oplication Contact				
1.	Application Contact Name: Kevin I	Kirby, Pul	blic Works Dir	ector	
2.	Application Contact Mailing Address				
	Organization/Firm: Columbia County Commission				
	Street Address: P O Box 969				
	City: Lake City	State:	: FL	Zip Code: 3205	
3.	Application Contact Telephone Num	bers			
	Telephone: (386) 719 - 7565	ext.	Fax: () -		
4.	4. Application Contact E-mail Address: Kevin_Kirby@columbiacountyfla.com				
<u>A</u> r	Application Processing Information (DEP Use)				
1.	Date of Receipt of Application:		3. PSD Number	er (if applicable):	
2.	Project Number(s):		4. Siting Numb	per (if applicable):	

0230047-001-AV

1

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)
Air Construction Permit
☐ Air construction permit.
Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.
Air Operation Permit
X Initial Title V air operation permit.
Title V air operation permit revision.
☐ Title V air operation permit renewal.
☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.
Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)
☐ Air construction permit and Title V permit revision, incorporating the proposed project.
Air construction permit and Title V permit renewal, incorporating the proposed project.
Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:
☐ I hereby request that the department waive the processing time
requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.
Application Comment
This application is for an initial Title V permit for the existing Columbia County Landfill site, which includes both the Closed Central Landfill and the active Winfield landfill.

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
NA	Columbia County Closed Central Landfill	AV	NA
NA	Columbia County active Winfield Landfill	AV	NA
		 -	

Application Processing Fee	
Check one: Attached - Amount: \$	X Not Applicable

3

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1.	Owner/Authorized Representative	e Name :		
2.	Owner/Authorized Representativ Organization/Firm:	e Mailing Address		
	Street Address:			
	City:	State:	Zip Code:	
3.	Owner/Authorized Representative	e Telephone Numbers	3	
	Telephone: () - ext.	Fax: () -		
4.	. Owner/Authorized Representative E-mail Address:			
5.	Owner/Authorized Representative	e Statement:		
	I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.			
	Signature	_	Date	

DEP Form No. 62-210.900(1) – Form

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

Application Responsible Official Name: Kevin Kirby, Public Works Director			
Application Responsible Official Qualification (Check one or more of the following options, as applicable):			
For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.			
For a partnership or sole proprietorship, a general partner or the proprietor, respectively.			
X For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.			
The designated representative at an Acid Rain source or CAIR source.			
Application Responsible Official Mailing Address Organization/Firm: Columbia County Board Of County Commissioners Street Address: P.O. Box 969			
City: Lake City State: FL Zip Code: 32055			
Application Responsible Official Telephone Numbers Telephone: (386) 719 - 7565 ext. Fax: () -			
Application Responsible Official E-mail Address: Kevin_Kirby@columbiacountyfla.com			
olication Responsible Official Certification:			
I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.			
Signature Date			

DEP Form No. 62-210.900(1) – Form

Professional Engineer Certification

	Typessional Engineer Certification			
1.	Professional Engineer Name: Frank Darabi, P.E.			
	Registration Number: 20385			
2.	Professional Engineer Mailing Address			
	Organization/Firm: Darabi and Associates, Inc.			
	Street Address: 4140 NW 37th Place, Suite A			
	City: Gainesville State: FL Zip Code: 32606			
3.	Professional Engineer Telephone Numbers			
	Telephone: (352) 376-6533 ext. Fax: (352) 692-5390			
4.	Professional Engineer E-mail Address: fdarabi@darabiassociates.com			
5.	Professional Engineer Statement:			
	I, the undersigned, hereby certify, except as particularly noted herein*, that:			
	(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and			
	(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.			
	(3) If the purpose of this application is to obtain a Title V air operation permit (check here X, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.			
	(4) If the purpose of this application is to obtain an air construction permit (check here, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.			
	(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given if the corresponding application for air construction permit and with all provisions confident in such permit. Signature $ 9-17-13 $ Date			
	(seal) Sta			

* Attach arry exception to certification statement.

**DEP Form No. 621210.900(1) - Form

Effective: 03/11/2010

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1.	1. Facility UTM Coordinates Zone 17 East (km) 336.1 North (km) 3348.4		2. Facility Latitude/Longitude Latitude (DD/MM/SS) 30°15'23" N Longitude (DD/MM/SS) 82°42'14" W	
3.	Governmental Facility Code: 3	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4953
7. Facility Comment : Existing Municipal Solid Waste Landfill				

Facility Contact

1.	Facility Contact Name: Columbia County Board Of County Commissioners	
2.	Facility Contact Mailing Address Organization/Firm: Columbia County Board Of County Commissioners Street Address: P.O. Box 969	
	City: Lake City State: FL Zip Code: 32055	
3.	Facility Contact Telephone Numbers: Telephone: (386) 719 - 7565 ext. Fax: () -	
4.	Facility Contact E-mail Address: Kevin_Kirby@columbiacountyfla.com	

'Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

	J 1 J 1 1			
1.	Facility Primary Responsible C	Official Name:		-
2.	Facility Primary Responsible C Organization/Firm:	Official Mailing Address		
	Street Address:			
	City:	State:	Zip Code:	
3.	Facility Primary Responsible O	Official Telephone Numbers.		
	Telephone: () - ext.	Fax: () -		
4.	Facility Primary Responsible O	Official E-mail Address:		

DEP Form No. 62-210.900(1) – Form

Facility Regulatory Classifications

Check all that would apply following completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. Small Business Stationary Source Unknown
2. Synthetic Non-Title V Source
3. X Title V Source
4. Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)
5. Synthetic Minor Source of Air Pollutants, Other than HAPs
6. Major Source of Hazardous Air Pollutants (HAPs)
7. Synthetic Minor Source of HAPs
8. One or More Emissions Units Subject to NSPS (40 CFR Part 60)
9. One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)
10. One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)
11. X Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))
12. Facility Regulatory Classifications Comment: Existing facility; Title V source.

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
СО	В	N N
PB	В	N
NOX	В	N
PM	В	N
PM10	В	N
PM2.5	В	N
SO2	В	N
VOC	В	N
HAPS	В	N
H2S	В	N
H114	В	N
NMOC	В	N
H009	· B	N
H017	В	N
H032	В	N
H033	В	N
H034	В	N
H041	В	N
H043	В	N

DEP Form No. 62-210.900(1) – Form Effective: 03/11/2010

H061	В	N
H085	В	N
H087	В	N
H088	В	N
H089	В	N
H094	В	N
H104	В	N
H118	В	N
H119	B	N
H123	В	N
H128	В	N
H156	В	N
H166	В	N
H167	В	N
H169	В	N
H176	В	N
H184	В	N
H185	В	N
H186	В	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant	2. Facility-	3. Emissions		lourly	5.	Annual	6. Basis for
Subject to	Wide Cap	Unit ID's		Cap		Cap	Emissions
Emissions	[Y or N]?	Under Cap		lb/hr)		(ton/yr)	Cap
Cap	(all units)	(if not all units)		_	_		
NA					<u> </u>		
					<u> </u>		
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			-		<u> </u>		
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7 Facility-W	ide or Multi-Unit	<u> </u> Emissions Cap Con	ment:		<u> </u>	-	
7. Tacinty W	ido or ividir Ome	Emissions cup con	mioni.				
					•		
						•	

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: See Appendix Previously Submitted, Date:
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: See Appendix Previously Submitted, Date:
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: See Appendix Previously Submitted, Date:
<u>A</u> c	dditional Requirements for Air Construction Permit Applications NA
1.	Area Map Showing Facility Location: Attached, Document ID: Not Applicable (existing permitted facility)
2.	Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): Attached, Document ID:
3.	Rule Applicability Analysis: Attached, Document ID:
4.	List of Exempt Emissions Units: Attached, Document ID: Not Applicable (no exempt units at facility)
L	Fugitive Emissions Identification: Attached, Document ID: Not Applicable
6.	Air Quality Analysis (Rule 62-212.400(7), F.A.C.): Attached, Document ID: Not Applicable
7.	Source Impact Analysis (Rule 62-212.400(5), F.A.C.): Attached, Document ID: Not Applicable
	Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): Attached, Document ID: Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): Attached, Document ID: Not Applicable
10	. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):

DEP Form No. 62-210.900(1) – Form

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1.	List of Exempt Emissions Units:						
	Attached, Document ID: X Not Applicable (no exempt units at facility)						
<u>Ac</u>	Additional Requirements for Title V Air Operation Permit Applications						
1.	List of Insignificant Activities: (Required for initial/renewal applications only)						
	X Attached, Document ID: See Appendix Not Applicable (revision application)						
2.	Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)						
	X Attached, Document ID: See Appendix						
	☐ Not Applicable (revision application with no change in applicable requirements)						
3.	Compliance Report and Plan: (Required for all initial/revision/renewal applications) Attached, Document ID: NA						
	Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.						
4.	List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only) Attached, Document ID:						
	☐ Equipment/Activities Onsite but Not Required to be Individually Listed						
	X Not Applicable						
5.	Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)						
	Attached, Document ID: X Not Applicable						
6.	Requested Changes to Current Title V Air Operation Permit:						
	Attached, Document ID: X Not Applicable						

DEP Form No. 62-210.900(1) – Form

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:	
Acid Rain Part Application (DEP Form No	. , . , ,
☐ Attached, Document ID: ☐ X Not Applicable (not an Acid Rain sour	Previously Submitted, Date:
Phase II NO _X Averaging Plan (DEP Form Attached, Document ID:	Previously Submitted, Date:
X Not Applicable	
New Unit Exemption (DEP Form No. 62-2	210.900(1)(a)2.):
	Previously Submitted, Date:
X Not Applicable	
2. CAIR Part (DEP Form No. 62-210.900(1))	
Attached, Document ID: X Not Applicable (not a CAIR source)	Previously Submitted, Date:
in the representation (not a crime source)	
Other Information Regarding This Facility	
1. Other Facility Information:	
Other Facility Information:	⊠ Attachment
·	⊠ Attachment
⊠ Included	⊠ Attachment
·	⊠ Attachment
⊠ Included	⊠ Attachment

DEP Form No. 62-210.900(1) – Form Effective: 03/11/2010

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

DEP Form No. 62-210.900(1) – Form

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1.	or renewal Title V	egulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised renewal Title V air operation permit. Skip this item if applying for an air construction ermit or FESOP only.)					
	The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.						
	The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.						
<u>En</u>	nissions Unit Descr	iption and Status					
1.	Type of Emissions	Unit Addressed in this	s Section: (Check one)				
			tion addresses, as a singl	,			
			activity, which produces definable emission point				
			_	e emissions unit, a group			
			tivities which have at lea				
	emission point	(stack or vent) but ma	y also produce fugitive e	emissions.			
			tion addresses, as a singl	•			
		<u> </u>		e fugitive emissions only.			
2.	Description of Em: Columbia County	issions Unit Addressed	l in this Section:				
	Columbia County	Central Landim					
3.	Emissions Unit Ids	entification Number: N	lot V novym				
3. 4.		5. Commence		7. Emissions Unit			
4.	Status Code:	Construction	6. Initial Startup Date:	Major Group			
A		Date:	1974	SIC Code:			
				49			
8.	· ·	applicability: (Check a	all that apply)				
	Acid Rain Unit	:					
	CAIR Unit						
9.	Package Unit: Manufacturer:		Model Number:				
10	Manufacturer: Model Number: 10. Generator Nameplate Rating: MW						
11.	11. Emissions Unit Comment:						

DEP Form No. 62-210.900(1) – Form

Emissions Unit Control Equipment/Method: Control of
1. Control Equipment/Method Description:
2. Control Device or Method Code:
Emissions Unit Control Equipment/Method: Control of
1. Control Equipment/Method Description:
2. Control Device or Method Code:
Encipsions Unit Control Faminment/Mathods Control
Emissions Unit Control Equipment/Method: Control of
1. Control Equipment/Method Description:
1. Control Equipment/Method Description:
Control Equipment/Method Description: Control Device or Method Code:
Control Equipment/Method Description: Control Device or Method Code: Emissions Unit Control Equipment/Method: Control of
Control Equipment/Method Description: Control Device or Method Code: Emissions Unit Control Equipment/Method: Control of
Control Equipment/Method Description: Control Device or Method Code: Emissions Unit Control Equipment/Method: Control of

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:	
2.	Maximum Production Rate:	
3.	Maximum Heat Input Rate: million Btu/hr	
4.	Maximum Incineration Rate: pounds/hr	
	tons/day	
5.	Requested Maximum Operating Schedule:	
	hours/day	days/week
	weeks/year	8760 hours/year
6.	Operating Capacity/Schedule Comment:	

DEP Form No. 62-210.900(1) – Form

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description	and Type	NA	
Identification of Point on Flow Diagram:	Plot Plan or	2. Emission Point	Гуре Code:
3. Descriptions of Emission	Points Comprising	g this Emissions Unit	for VE Tracking:
4. ID Numbers or Descriptio			
5. Discharge Type Code:	6. Stack Height feet	:	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volur acfm	netric Flow Rate:	10. Water Vapor: %
11. Maximum Dry Standard F dscfm	low Rate:	12. Nonstack Emissi feet	on Point Height:
13. Emission Point UTM Coo Zone: East (km):	rdinates	14. Emission Point I Latitude (DD/M	Latitude/Longitude M/SS)
North (km)	:	Longitude (DD/N	MM/SS)
15. Emission Point Comment: Fugitive emissions from			-

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

Segment Description (Pro Landfill Gas	ocess/Fuel Type):					
2. Source Classification Cod 50200602	le (SCC):	3. SCC Units Acre-Yea		ndfill Existing		
4. Maximum Hourly Rate: NA	5. Maximum NA	Annual Rate:		Estimated Annual Activity Factor: NA		
7. Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit:		
10. Segment Comment: Fugi	tive emissions fr	om landfill.	. I.			
Segment Description and R	ate: Segment _	of				
Segment Description (Pro	1. Segment Description (Process/Fuel Type):					
2. Source Classification Cod	le (SCC):	3. SCC Units	:			
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:		Estimated Annual Activity Factor:		
7. Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit:		
10. Segment Comment:			<u> </u>			
						

DEP Form No. 62-210.900(1) – Form

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NMOC			NS
Total HAPS			NS

DEP Form No. 62-210.900(1) – Form

POLLUTANT DETAIL INFORMATION Page [1] of [2]

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:			
NMOC – Municipal Solid Waste Landfill	0			
Emissions (Measured as Non-methane				
Organic Compounds)				
3. Potential Emissions:	4.	Synth	etically Limited?	
	tons/year [Yes X No		
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):			
6. Emission Factor: Variable, see attached ta	ble.		7. Emissions	
·			Method Code: 3	
Reference: AP-42		ļ		
8.a. Baseline Actual Emissions (if required): 8.b. Baseline 24-month Per			Period:	
tons/year	From:	T	o:	
9.a. Projected Actual Emissions (if required):	9.b. Projected Mor	nitorir	ng Period:	
tons/year	5 years [<u> </u>) years	
10. Calculation of Emissions: See attached tab	le.			
11. Potential, Fugitive, and Actual Emissions Co	omment: Individual	WOO	Ca are identified in	
	omment. maividuai	· VUC	s are identified in	
the attached table.				

DEP Form No. 62-210.900(1) – Form

POLLUTANT DETAIL INFORMATION Page [1] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions	of NA
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Descript	
Allowable Emissions Allowable Emissions	
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:6. Allowable Emissions Comment (Description)	ion of Operating Method):
Allowable Emissions Allowable Emissions	of
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Descripti	on of Operating Method):

POLLUTANT DETAIL INFORMATION Page [2] of [2]

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: HAPS - Total Hazardous Air Pollutants	2. Total Percent Efficiency of Control:		
3. Potential Emissions: lb/hour 1.43			
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
6. Emission Factor: Variable, see attached table. Reference: AP-42 7. Emissions Method Code:			: 3
8.a. Baseline Actual Emissions (if required): 8.b. Baseline 24-month Period: From: To:			
9.a. Projected Actual Emissions (if required): 9.b. Projected Monitoring Period: tons/year 5 years 10 years		•	
10. Calculation of Emissions: See attached table.			
11. Potential, Fugitive, and Actual Emissions Comment: Individual HAPs are identified in the attached table.			

DEP Form No. 62-210.900(1) – Form

POLLUTANT DETAIL INFORMATION Page [2] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions	of NA		
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:		
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year		
5. Method of Compliance:			
6. Allowable Emissions Comment (Description	1 of Operating Method):		
Allowable Emissions Allowable Emissions	of		
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:		
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year		
5. Method of Compliance:			
6. Allowable Emissions Comment (Description of Operating Method):			
Allowable Emissions Allowable Emissions	of		
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:		
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year		
5. Method of Compliance:			
6. Allowable Emissions Comment (Description	of Operating Method):		

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

<u> </u>	sidie Emissions Limitation: Visible Emissi	ons Emmanon or	_ NA
1.	Visible Emissions Subtype:	2. Basis for Allowable	Opacity:
		Rule	Other
3.	Allowable Opacity:		
ا ع.	_ ·	ceptional Conditions:	%
ļ		-	
<u> </u>	Maximum Period of Excess Opacity Allowe	zu: 	min/hour
4.	Method of Compliance:		
<u> </u>	W. T. F. C.		
5.	Visible Emissions Comment:		
<u>Vi</u>	sible Emissions Limitation: Visible Emissi	ons Limitation of	_
_	Sible Emissions Limitation: Visible Emissions Subtype:		- Opacity:
_		ons Limitation of 2. Basis for Allowable	Opacity:
1.	Visible Emissions Subtype:	2. Basis for Allowable	
1.	Visible Emissions Subtype: Allowable Opacity:	2. Basis for Allowable Rule	Other
1.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allower	2. Basis for Allowable Rule	Other
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allower	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allowed Method of Compliance:	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allower	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allowed Method of Compliance:	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allowed Method of Compliance:	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allowed Method of Compliance:	2. Basis for Allowable Rule	Other %
3.	Visible Emissions Subtype: Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allowed Method of Compliance:	2. Basis for Allowable Rule	Other %

DEP Form No. 62-210.900(1) – Form

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

ontinuous Monitoring System: Continuous	Monitor of NA
Parameter Code:	2. Pollutant(s):
CMS Requirement:	Rule Other
Monitor Information Manufacturer:	
Model Number:	Serial Number:
Installation Date:	6. Performance Specification Test Date:
Continuous Monitor Comment:	
entinuous Monitoring System: Continuous	Monitor of
<u> </u>	
Parameter Code:	2. Pollutant(s):
Parameter Code: CMS Requirement:	
Parameter Code: CMS Requirement: Monitor Information Manufacturer:	2. Pollutant(s): Rule Other
Parameter Code: CMS Requirement: Monitor Information Manufacturer: Model Number:	2. Pollutant(s): Rule Other Serial Number:
Parameter Code: CMS Requirement: Monitor Information Manufacturer:	2. Pollutant(s): Rule Other
	CMS Requirement: Monitor Information Manufacturer: Model Number: Installation Date:

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

27

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: See Appendix Previously Submitted, Date
2.	Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date
3.	Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date
4.	Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date Not Applicable (construction application)
5.	Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date Not Applicable
6.	Compliance Demonstration Reports/Records: Attached, Document ID: See Appendix Test Date(s)/Pollutant(s) Tested:
	☐ Previously Submitted, Date: ☐ Test Date(s)/Pollutant(s) Tested: ☐ To be Submitted, Date (if known): ☐ Test Date(s)/Pollutant(s) Tested: ☐ X Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7.	Other Information Required by Rule or Statute: Attached, Document ID: See Appendix X Not Applicable

DEP Form No. 62-210.900(1) – Form

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

<u>A</u> (ditional Requirements for Air Construction Permit Applications NA	
1.	Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7),	
	F.A.C.; 40 CFR 63.43(d) and (e)):	
	Attached, Document ID: Not Applicable	
2.	Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-	
	212.500(4)(f), F.A.C.): Attached, Document ID: Not Applicable	
3.	<u> </u>	
٥.	Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities)	.168
	Attached, Document ID: Not Applicable	
Ac	ditional Requirements for Title V Air Operation Permit Applications	
1.	Identification of Applicable Requirements:	
	X Attached, Document ID: See Appendix	
2.	Compliance Assurance Monitoring:	
	Attached, Document ID: X Not Applicable	
3.	Alternative Methods of Operation:	
	Attached, Document ID: X Not Applicable	
4.	Alternative Modes of Operation (Emissions Trading):	
	Attached, Document ID: X Not Applicable	<u>. </u>
<u>A</u> c	ditional Requirements Comment	

DEP Form No. 62-210.900(1) – Form

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

DEP Form No. 62-210.900(1) – Form Effective: 03/11/2010

A. GENERAL EMISSIONS UNIT INFORMATION

<u>Title V Air Operation Permit Emissions Unit Classification</u>

1.	or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)				
	The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.				
	The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.				
<u>En</u>	nissions Unit Descr	iption and Status	_		
1.	Type of Emissions	Unit Addressed in this	Section: (Check one)	· · · · · · · · · · · · · · · · · · ·	
	single process	or production unit, or a	tion addresses, as a single ctivity, which produces definable emission point	one or more air	
	This Emissions of process or pr	s Unit Information Sect roduction units and act	•	e emissions unit, a group st one definable	
	— 3		ion addresses, as a singlactivities which produce	e emissions unit, one or fugitive emissions only.	
2.	2. Description of Emissions Unit Addressed in this Section: Columbia County Winfield Landfill				
3.	Emissions Unit Ide	entification Number: N	ot Known		
3.	Emissions Unit Ide Emissions Unit Status Code:	entification Number: No. 5. Commence Construction	6. Initial Startup Date:	7. Emissions Unit Major Group	
	Emissions Unit	5. Commence	6. Initial Startup		
4. A	Emissions Unit Status Code:	5. Commence Construction	6. Initial Startup Date: 1994	Major Group SIC Code:	
4. A	Emissions Unit Status Code: Federal Program A Acid Rain Unit	5. Commence Construction Date:	6. Initial Startup Date: 1994	Major Group SIC Code:	
4. A 8.	Emissions Unit Status Code: Federal Program A Acid Rain Unit CAIR Unit	5. Commence Construction Date:	6. Initial Startup Date: 1994	Major Group SIC Code:	
4. A 8.	Emissions Unit Status Code: Federal Program A Acid Rain Unit	5. Commence Construction Date:	6. Initial Startup Date: 1994	Major Group SIC Code:	
4. A 8. 9.	Emissions Unit Status Code: Federal Program A Acid Rain Unit CAIR Unit Package Unit:	5. Commence Construction Date:	6. Initial Startup Date: 1994 Il that apply)	Major Group SIC Code:	
4. A 8. 9.	Emissions Unit Status Code: Federal Program A Acid Rain Unit CAIR Unit Package Unit: Manufacturer:	5. Commence Construction Date: pplicability: (Check a	6. Initial Startup Date: 1994 Il that apply)	Major Group SIC Code:	
4. A 8. 9.	Emissions Unit Status Code: Federal Program A Acid Rain Unit CAIR Unit Package Unit: Manufacturer: Generator Namepla	5. Commence Construction Date: pplicability: (Check a	6. Initial Startup Date: 1994 Il that apply)	Major Group SIC Code:	
4. A 8. 9.	Emissions Unit Status Code: Federal Program A Acid Rain Unit CAIR Unit Package Unit: Manufacturer: Generator Namepla	5. Commence Construction Date: pplicability: (Check a	6. Initial Startup Date: 1994 Il that apply)	Major Group SIC Code:	

DEP Form No. 62-210.900(1) – Form

Emissions Unit Control Equipment/Method: Control of	NA
1. Control Equipment/Method Description:	
2. Control Device or Method Code:	
Emissions Unit Control Equipment/Method: Control of	
1. Control Equipment/Method Description:	
2. Control Device or Method Code:	
Emissions Unit Control Equipment/Method: Control of	
1. Control Equipment/Method Description:	
2. Control Device or Method Code:	
Emissions Unit Control Equipment/Method: Control of	_
1. Control Equipment/Method Description:	
· · · · · · · · · · · · · · · · · · ·	
2. Control Device or Method Code:	

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:	·
2.	Maximum Production Rate:	
3.	Maximum Heat Input Rate: million Btu/hr	
4.	Maximum Incineration Rate: pounds/hr	
	tons/day	
5.	Requested Maximum Operating Schedule:	
	hours/day	days/week
	weeks/year	8760 hours/year
6.	Operating Capacity/Schedule Comment:	

DEP Form No. 62-210.900(1) – Form

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

(- F	• 8
Emission Point Description and Type	NA

1.	Identification of Point on I Flow Diagram:	Plot Plan or	2. Emission Point 7	Type Code:
3.	Descriptions of Emission	Points Comprising	this Emissions Unit	for VE Tracking:
4.	ID Numbers or Descriptio	ns of Emission Ui	nits with this Emission	n Point in Common:
5.	Discharge Type Code:	6. Stack Height feet	:	7. Exit Diameter: feet
8.	Exit Temperature: °F	9. Actual Volur acfm	metric Flow Rate:	10. Water Vapor: %
11.	11. Maximum Dry Standard Flow Rate: 12. Nonstack Emission Point Height: feet			
13.	13. Emission Point UTM Coordinates Zone: East (km):			M/SS)
15.	15. Emission Point Comment: Fugitive emissions from the landfill.			

DEP Form No. 62-210.900(1) – Form

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

Segment Description (Process/Fuel Type): Landfill Gas							
2.	Source Classification Code (SCC): 50200602		3. SCC Units: Acre-Years Landfill Existing				
4.	Maximum Hourly Rate: NA	5. Maximum NA	Annual Rate:	6.	Estimated Annual Activity Factor: NA		
7.	Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit:		
10	10. Segment Comment: Fugitive emissions from landfill.						
Segment Description and Rate: Segment _ of _							
1.	. Segment Description (Process/Fuel Type):						
2.	Source Classification Code	e (SCC):	3. SCC Units:				
L_			1.0	1	That was 1 A and 1 A attacked		
4.	Maximum Hourly Rate:	5. Maximum 1	Annual Kate:	6.	Estimated Annual Activity Factor:		
7.	Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit:		
10. Segment Comment:							

DEP Form No. 62-210.900(1) – Form Effective: 03/11/2010

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
NMOC			NS
HAPS			NS

DEP Form No. 62-210.900(1) – Form

POLLUTANT DETAIL INFORMATION Page [1] of [2]

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NMOC – Municipal Solid Waste Landfill Emissions (Measured as Non-methane Organic Compounds) 2. Total Percent Efficiency of Control 349 Mg/9r Nmoc 4. Synthetically Limited 15 No			
5. Range of Estimated Fugitive Emissions (as to tons/year			
6. Emission Factor: Variable, see attached ta Reference: AP-42	ible.	7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month From:	Period:	
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoria 5 years 1	ng Period: 0 years	
10. Calculation of Emissions: See attached table. 11. Potential, Fugitive, and Actual Emissions Comment: Individual VOCs are identified in the attached table.			

POLLUTANT DETAIL INFORMATION Page [1] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

<u>Al</u>	lowable Emissions Allowable Emissions	of_	NA
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	Equivalent Allowable Emissions: lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	of	Operating Method):
Al	lowable Emissions Allowable Emissions		<u> </u>
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	Equivalent Allowable Emissions: lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	of	Operating Method):
Al	lowable Emissions Allowable Emissions	of_	
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	Equivalent Allowable Emissions: lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	n of	Operating Method):

DEP Form No. 62-210.900(1) - Form

POLLUTANT DETAIL INFORMATION Page [2] of [2]

39

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted:	2. Total Perc	ent Efficie	ency of Control:		
HAPS - Total Hazardous Air Pollutants					
3. Potential Emissions:		_	netically Limited?		
lb/hour 11.74	tons/year	Y	es x No		
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6. Emission Factor: Variable, see attached ta	ble.		7. Emissions		
D C AD 40			Method Code: 3		
Reference: AP-42					
8.a. Baseline Actual Emissions (if required):	8.b. Baseline	24-month	Period:		
tons/year	From:	Т	To:		
9.a. Projected Actual Emissions (if required):	9.b. Projected	l Monitori	ng Period:		
tons/year		irs 🔲 1] 10 years		
10. Calculation of Emissions: See attached tabl	le.				
44.5					
11. Potential, Fugitive, and Actual Emissions Comment: Individual HAPs are identified in					
the attached table.					

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

POLLUTANT DETAIL INFORMATION Page [2] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Al	lowable Emissions Allowable Emissions	of_	NA
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	1
		<u> </u>	lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	of	Operating Method):
Al	lowable Emissions Allowable Emissions	of_	
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	Equivalent Allowable Emissions:
			lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	of (Operating Method):
	Louis Emissions Albandala Emissions		
	lowable Emissions Allowable Emissions		— — — — — — — — — — — — — — — — — — —
1.	Basis for Allowable Emissions Code:	2.	Future Effective Date of Allowable Emissions:
3.	Allowable Emissions and Units:	4.	Equivalent Allowable Emissions: lb/hour tons/year
5.	Method of Compliance:		
6.	Allowable Emissions Comment (Description	of	Operating Method):
	•		

DEP Form No. 62-210.900(1) – Form

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

VI	sidie Emissions Limitation: Visible Emissi	ions Limitation of	_ NA
1.	Visible Emissions Subtype:	2. Basis for Allowable	e Opacity:
		☐ Rule	Other
3.	Allowable Opacity:		
	Normal Conditions: % Ex	cceptional Conditions:	%
	Maximum Period of Excess Opacity Allow	ed:	min/hour
4.	Method of Compliance:		
5.	Visible Emissions Comment:		
<i>)</i> .	VISIOLE EMISSIONS COMMENT.		
<u>Vi</u>	sible Emissions Limitation: Visible Emissi	ons Limitation of	_
1.	Visible Emissions Subtype:	2. Basis for Allowable	Opacity:
	-	☐ Rule	Other
3.	Allowable Opacity:		
	Normal Conditions: % Ex	ceptional Conditions:	%
	Maximum Period of Excess Opacity Allowe	ed:	min/hour
4.	Method of Compliance:		
_	Wisikle Conjesions Comment		
5.	Visible Emissions Comment:		

DEP Form No. 62-210.900(1) – Form

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

<u>C</u> c	ntinuous Monitoring System: Continuous	s Monitor of NA	
1.	Parameter Code:	2. Pollutant(s):	
3.	CMS Requirement:	Rule Other	
4.	Monitor Information Manufacturer:		-
	Model Number:	Serial Number:	
5.	Installation Date:	6. Performance Specification Test Date:	
<u>C</u>	ontinuous Monitoring System: Continuous		
1.	Parameter Code:	2. Pollutant(s):	
3.	CMS Requirement:	☐ Rule ☐ Other	
4.	Monitor Information Manufacturer:		
	Model Number:	Serial Number:	
5.	Installation Date:	6. Performance Specification Test Da	ate:
7.	Continuous Monitor Comment:		

DEP Form No. 62-210.900(1) – Form

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: See Appendix Previously Submitted, Date
2.	Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date
3.	Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date
4.	Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date Not Applicable (construction application)
5.	Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date
L_	X Not Applicable
6.	Compliance Demonstration Reports/Records: Attached, Document ID: See Appendix
	Test Date(s)/Pollutant(s) Tested:
	Test Date(s)/Pollutant(s) Tested:
	To be Submitted, Date (if known):
	Test Date(s)/Pollutant(s) Tested:
	X Not Applicable
	Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7.	Other Information Required by Rule or Statute:
	Attached, Document ID: See Appendix X Not Applicable

DEP Form No. 62-210.900(1) - Form

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Add	ditional Requirements for Air Constru	action Permit Applications NA	4
	<u> </u>	sis (Rules 62-212.400(10) and 62-212.500(7),	,
	F.A.C.; 40 CFR 63.43(d) and (e)):		
	Attached, Document ID:	Not Applicable	
2.		t Analysis (Rules 62-212.400(4)(d) and 62-	
	212.500(4)(f), F.A.C.):		
	Attached, Document ID:	Not Applicable	
		s: (Required for proposed new stack sampling fa	cilities
	only)	Net Augliechte	
<u> </u>	Attached, Document ID:	Not Applicable	
Ad	ditional Requirements for Title V Air	Operation Permit Applications	
1.	Identification of Applicable Require	ments:	
	X Attached, Document ID: See Appe	endix.	
2.	Compliance Assurance Monitoring:		
	Attached, Document ID:	X Not Applicable	
3.	Alternative Methods of Operation:		
	Attached, Document ID:	X Not Applicable	
4.	Alternative Modes of Operation (En	nissions Trading)	
"•	Attached, Document ID:		
L		Птеттричение	
Add	ditional Requirements Comment		
		•	
[

DEP Form No. 62-210.900(1) – Form

APPENDICES

- 1. Air Emissions Calculations
- 2. Facility Plot Plan
- 3. Process Flow Diagram
- 4. Precautions to Prevent Emissions of Unconfined PM
- 5. List of Insignificant Activities
- 6. Identification of Applicable Requirements

DEP Form No. 62-210.900(1) – Form

Effective: 03/11/2010

45

ATTACHMENT A EMISSIONS CALCULATIONS

Title V Permit Renewal 2012

Leon County Solid Waste Management Facility, Leon County, Florida

The following table summarizes and details the AP-42 Method (Fifth Edition, Supplement E, Section 2.4.4.2-11/98) that was used in assessing the emissions from the regulated emission unit that is also reported in FDEP Form No. 62-210.900(5). Landfill emissions are based on the LandGEM for year 2012. It should be noted that generated landfill gas decrease from 2012 to 2017, and therefore year 2012 represents conservative calculations.

TABLE A -1 GENERAL PROCESS INFORMATION

Required Information	Provided Information	Source
A. Total landfill gas generated, 2012 (ft ³)	505,213,056	Estimated LFG Generation for 2012, From LandGEM
Total landfill gas generated, 2012 (m ³)	14,303,946	Unit Conversion
B. Methane percentage of LFG	55.00	Based on AP-42 (1998)
C. Collection system efficiency (percent)	39.75	Based on 2011 AOR (Calculated with LandGEM & Flare Data)
D. Methane to flare (m ³)	3,127,200	(2012 LFG Generation * Percent Methane * Collection Efficiency)
Methane to flare (ft ³)	110,452,204	
E. Flare efficiency (percent)	98	Flare Efficiency as Required
F. Estimated total methane generated (ft ³)	277,867,181	2012 LFG Generation * Percent Methane
Estimated total methane generated (m ³)	7,866,420	
G. Estimated uncollected landfill gas (million ft ³)	304.4	Estimated 2012 LFG generation * (1 - Collection Efficiency)



Title V Permit Renewal 2012

Leon County Solid Waste Management Facility, Leon County, Florida

TABLE A-2 SUMMARY OF POTENTIAL EMISSIONS

Page				molecular								
Ehyl mercapia (lethraethiof)-VOC		FDEP ID	AP-42			Total Pollutant Generated			Flare Em	issions	Uncollect	ed Emissions
Elbyl mercaptan (ethanethio) - VOC		column 1	column 2	column 3	column 4	column 5	column 6	column 7	column 8	column 9	column 10	column 11
Acyjontrile - HAP/VOC	Pollutant		ppmv	g/mol_	m3/yr	kg/yr	lb/day	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Benzene - No or Unknown Co-disposal - HAP/VCC	Ethyl mercaptan (ethanethiol) - VOC	F027	2.3	62.13	32.90	83.60	0.5039	0.0920	0.0002	0.0007		0.0554
Carbon disulfide - HAP/VOC	Acrylonitrile - HAP/VOC	HŌ09	6.33	53.06	90.54	196.49	1.1843	0.2161	0.0004	0.0017	0.0297	0.1302
Carbon tetrachloride - HAP/NOC	Benzene - No or Unknown Co-disposal - HAP/VOC	H017	1.91	78.11	27.32	87.28	0.5261	0.0960	0.0002	0.0008	0.0132	0.0578
Carbony sulfide - HAP/VOC	Carbon disulfide - HAP/VOC	H032	0.58	76.13	8.30	25.83	0.1557	0.0284	0.0001	0.0002	0.0039	0.0171
Chlorobenzene - HAP/VOC H043 0.03 119.39 0.43 2.10 0.016 0.0022 0.00000 0.00000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	Carbon tetrachloride - HAP/VOC	H033	0.004	153.84	0.06	0.36	0.0022	0.0004	0.0000	0.0000	0.0001	0.0002
Chloroform - HAP/VOC	Carbonyl sulfide - HAP/VOC	H034	0.49	60.07	7.01	17,22	0.1038	0.0189	0.0000	0.0002	0.0026	0.0114
Dichlorobenzene - (HAP for para isomer/VCC)	Chlorobenzene - HAP/VOC	H041	0.25	112,56	3.58	16,46	0.0992	0.0181	0.0000	0.0001	0.0025	0.0109
Ethylbenzene - HAP/VOC H095	Chloroform - HAP/VOC	H043	0.03	119.39	0.43	2.10	0.0126	0.0023	0.0000	0.0000	0.0003	0.0014
Chloroethane (ethyl chloride) - HAP/VOC	Dichlorobenzene - (HAP for para isomer/VOC)	H061	0.21	147	3.00	18.06	0.1088	0.0199	0.0000	0.0002	0.0027	0.0120
Ethylene dibromide - HAP/VOC	Ethylbenzene - HAP/VOC	H085	4.61	106.16	65.94	286.30	1.7256	0.3149	0.0006	0.0025	0.0433	0.1897
1.2-Dichloroethane (ethylene dichloride) - HAP/VOC H099	Chloroethane (ethyl chloride) - HAP/VOC	H087	1.25	64.52	17.88	47.18	0.2844	0.0519	0.0001	0.0004	0.0071	0.0313
1.1-Dichloroethane (ethylidene dichloride) - HAP/VOC	Ethylene dibromide - HAP/VOC	H088	0.001	187.88	0.01	0.11	0.0007	0.0001	0.0000	0.0000	0.0000	0.0001
1.1-Dichloroethane (ethylidene dichloride) - HAP/VOC	1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	H089	0.41	98.96	5,86	24.50	0.1477	0.0270	0.0000	0.0002	0.0037	0.0162
Hexane - HAP/VOC		H094	2.35	98,97	33.61	140,44	0.8465	0.1545	0.0003	0.0012	0.0213	0.0931
Chloromethane - VOC		H104	6.57	86,18	93.98	341.90	2.0608	0,3761	0.0007	0,0030	0.0517	0.2266
Chloromethane - VOC II.1,1-Trichloroethane (methyl chloroform) - HAP H119 0.48 133.41 6.87 38.67 0.2321 0.0406 0.0001 0.0003 0.0056 0.0244 0.0406 0.0001 0.0003 0.0059 0.0256 0.0254 0.0010 0.0003 0.0059 0.0256 0.0051 0.0001 0.0003 0.0059 0.0256 0.0051 0.0064 0.0010 0.0003 0.0059 0.0256 0.0051 0.0064 0.0010 0.0003 0.0059 0.0256 0.0064 0.0010 0.0003 0.0059 0.0256 0.0064 0.0010 0.00171 0.0756 0.06817 0.1244 0.0002 0.0010 0.0015 0.0064 0.1110 0.4866 1.2-Dichloropropane (propylene dichloride) - HAP/OC H156 0.18 112.99 0.57 12.28 0.0740 0.0135 0.0000 0.0001 0.0015 0.0064 0.1110 0.4866 1.2-Dichloropropane (propylene dichloride) - HAP/OC H166 0.18 112.99 0.57 12.28 0.0740 0.0135 0.0000 0.0001 0.0015 0.0064 0.1110 0.4866 1.2-Dichloropropane (propylene dichloride) - HAP/OC H166 0.18 112.99 0.57 12.28 0.0740 0.0135 0.0000 0.0001 0.0015 0.0064 0.1110 0.4866 1.2-Dichloropropane (propylene dichloride) - HAP/OC H166 0.18 112.99 0.57 12.28 0.0740 0.0135 0.0000 0.0001 0.0015 0.0064 0.1110 0.4866 1.2-Dichloropropane (propylene dichloride) - HAP/OC H167 0.55 15.88 112.51 0.6781 0.1238 0.0002 0.0010 0.0010 0.0017 0.0074 0.007	Mercury (total) - HAP	H114	0.000292	200.61	0.00	0.04	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
Methyl isobutyl ketone - HAP/VOC H123 1.87 100.16 26.75 113.10 0.6817 0.1244 0.0002 0.0010 0.0171 0.0750 Dichloromethane (methylene chloride) - HAP H128 14.3 84.94 204.55 733.46 4.4209 0.8068 0.0015 0.0064 0.1110 0.486* 1,2-Dichloropropane (propylene dichloride) - HAP/VOC H166 0.18 112.99 2.57 12.28 0.0740 0.0135 0.0002 0.0010 0.0017 0.044 Perchloroethylene (etrachloroethylene) - HAP H167 3.73 165.83 53.35 573.51 2.2513 0.4109 0.0007 0.0033 0.0565 0.247* Tolluene - No or Unknown Co-disposal - HAP/VOC H169 39.3 92.13 562.15 2.186.37 13.1781 2.4050 0.0044 0.0191 0.3308 1.247* Tolluene - No or Unknown Co-disposal - HAP/VOC H169 39.3 92.13 562.15 2.186.37 13.1781 2.4050 0.0044 0.0191 0.3308 1.148		H118	1.21	50,49	17.31	36,89	0.2224	0.0406	0.0001	0.0003	0.0056	0.0244
Dichloromethane (methylene chloride) - HAP H128	1,1,1-Trichloroethane (methyl chloroform) - HAP	H119	0.48	133.41	6.87	38.67	0.2331	0,0425	0.0001	0.0003	0.0059	0.0256
Dichloromethane (methylene chloride) - HAP	Methyl isobutyl ketone - HAP/VOC	H123	1.87	100.16	26.75	113.10	0.6817	0.1244	0.0002	0.0010	0.0171	0.0750
1,1,2,2-Tetrachloroethane - HAP/VOC		H128	14.3	84,94	204.55		4.4209		0.0015	0.0064	0.1110	0.4861
1.1.2.2-Tetrachloroethylene (tetrachloroethylene) - HAP/OC Perchloroethylene (tetrachloroethylene) - HAP H167 3.73 165.83 53.35 373.51 2.2513 0.4109 0.0007 0.0033 0.0565 0.2477 Toluene - No or Unknown Co-disposal - HAP/OC H169 39.3 92.13 562.15 2.186.37 13.1781 2.4050 0.0004 0.0019 0.0033 0.0565 0.2477 Trichloroethylene (trichloroethene) - HAP/OC H176 2.82 131.4 40.34 223.76 13.487 0.2461 0.0004 0.0019 0.0039 0.0039 0.4482 Vinyl chloride - HAP/OC H184 7.34 62.5 104.99 277.02 1.6697 0.3047 0.0006 0.0024 0.0419 0.1836 1.1-Dichloroethene (vinylidene chloride) - HAP/OC H185 0.2 96.94 2.86 11.71 0.0706 0.0129 0.0000 0.0001 0.0018 0.0077 Xylenes - HAP/OC Methyl mercaptan - VOC NMOC NMOC NMOC NMOC NMOC NMOC NMOC NM	1,2-Dichloropropane (propylene dichloride) - HAP/VOC	H156	0.18	112.99	2.57	12.28	0.0740	0.0135	0.0000	0.0001	0.0019	0.0081
Perchloroethylene (tetrachloroethylene) - HAP		H166	1.11				0,6781	0.1238	0.0002	0,0010	0.0170	0.0746
Trichloroethylene (trichloroethene) - HAP/VOC	Perchloroethylene (tetrachloroethylene) - HAP	H167	3.73	165.83	53,35		2,2513	0.4109	0.0007	0.0033	0.0565	0.2475
Trichloroethylene (trichloroethene) - HAP/VOC	Toluene - No or Unknown Co-disposal - HAP/VOC	H169	39.3	92.13	562.15	2,186.37	13.1781	2,4050	0.0044	0.0191	0.3308	1.4490
Vinyl chloride - HAP/VOC		H176	2.82	131.4	40.34	223.76	1.3487	0,2461	0.0004	0.0020	0.0339	0.1483
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC H185 0.2 96.94 2.86 11.71 0.0706 0.0129 0.0000 0.0001 0.0018 0.0078		H184	7.34	62.5	104.99	277.02		0.3047	0.0006	0.0024	0.0419	0.1836
Xylenes - HAP/VOC H186 12.1 106.16 173.08 775.67 4.6753 0.8532 0.0015 0.0068 0.1174 0.514* Methyl mercaptan - VOC T049 2.49 48.11 35.62 72.34 0.4360 0.0796 0.0001 0.0006 0.0109 0.0475 NMOC NMOC 159 86.18 2.274.33 8.274.35 49.8728 9.1018 0.0165 0.0724 1.2520 5.4834 Hydrogen sulfide H2S 35.5 34.08 507.79 730.56 4.4034 0.8036 0.0015 0.0064 0.1105 0.4847 PM-10 see note 2 NO _x see note 3 0.5043 2.2090 SO _x see note 4 0.5913 2.5901 0.5913 2.5901 Carbon Monoxide see note 5 1,550.91 6,062.32 36.5400 6.6685 0.0121 0.0530 0.9173 4.0176					2.86		0.0706	0.0129	0,0000	0,0001	0.0018	0.0078
Methyl mercaptan - VOC T049 2.49 48.11 35.62 72.34 0.4360 0.0796 0.0001 0.0006 0.0109 0.0475 NMOC NMOC 159 86.18 2.274.33 8,274.35 49.8728 9.1018 0.0165 0.0724 1.2520 5.4834 Hydrogen sulfide H2S 35.5 34.08 507.79 730.56 4.4034 0.8036 0.0015 0.0064 0.1105 0.4845 PM-10 see note 2 0.2143 0.9388 0.5043 2.2090 0.5043 2.2090 0.5043 2.5901 0.5043 2.5901 0.5043 2.5901 0.5043 0.				,						0.0068	0.1174	0.5141
NMOC 159 86.18 2,274.33 8,274.35 49.8728 9.1018 0.0165 0.0724 1.2520 5.4836								0.0796	0.0001	0.0006	0.0109	0.0479
Hydrogen sulfide H2S 35.5 34.08 507.79 730.56 4.4034 0.8036 0.0015 0.0064 0.1105 0.4847 PM-10 see note 2 0.2143 0.9388 0.5043 2.2090 SO _x see note 4 0.5913 2.5901 0.5913 2.5901 Carbon Monoxide see note 5 9.4565 41.4196 0.9173 4.0176		NMOC					49.8728		0.0165			5.4838
PM-10 see note 2 NO _x see note 3 SO _x see note 4 Carbon Monoxide see note 5 Total HAPS see note 6 0.2143 0.9388 0.5043 2.2090 0.5913 2.5901 9.4565 41.4196 1,550.91 6,062.32 36,5400 6,6685 0.0121 0.0530 0.9173 4.0176	The second secon								0.0015	0.0064	0.1105	0.4842
NO _x see note 3 0.5043 2.2090 SO _x see note 4 0.5913 2.5901 Carbon Monoxide see note 5 9.4565 41.4196 Total HAPS see note 6 1,550.91 6,062.32 36.5400 6.6685 0.0121 0.0530 0.9173 4.0176										0.9388	1	-
SO _x see note 4 0.5913 2.5901 Carbon Monoxide see note 5 9.4565 41.4196 Total HAPS see note 6 1,550.91 6,062.32 36.5400 6.6685 0.0121 0.0530 0.9173 4.0176				**		**********						
Carbon Monoxide see note 5 9.4565 41.4196 9.4565 41												
Total HAPS see note 6 1,550.91 6,062.32 36.5400 6.6685 0.0121 0.0530 0.9173 4.0176	1 °								-			
				-	1.550.01		36.5400	6 6695				4.0178
11.081 V.C. SEC DOIE / 1 1 1 1 1 1 3.71.701 3.107.471 30.77001 3.02041 U.VIVZI U.VIVZI U.VIVZI U.VIVZI U.VIVZI											4	
	Hydrogen Chloride see note 8	Lusic	. 42	26.46	1,3/ 1.96	5,109.47	30.7968	5,6204				5.5865



Title V Permit Renewal 2012

Leon County Solid Waste Management Facility, Leon County, Florida

NOTES FROM TABLE A-2

Pollutant Notes

1. NMOC Calculation

Per the Tier II testing conducted May I through May 4, 2004, NMOC was determined as 159 ppmy as hexane.

2. PM-10 Calculation

Per Title V Permit, the emission factor from the flare is 17 lb/10⁶ dscf methane.

3. NO_x Calculation

Per Title V Permit, the emission factor from the flare is 40 lb/10⁶ dscf methane.

4. SO_x Calculation

PerTitle V permit, the emission factor from the flare is 46.9 lb/10⁶ dscf methane.

5. CO Calculation

Per Title V Permit, the emission factor from the flare is 750 lb/10⁶ dscf methane.

6. Total HAP Derviation

The total HAP emissions were calculated by summing each HAP constituent.

7. VOC Calculation

The total VOC emissions were calculated by summing each VOC constituent.

8. Hydrogen Chloride Calculation

Per method described in 2.4.4.2 using 42.0 ppmv (the default concentration).

UM_p = 2* Methane to Flare * Concentration (42 ppm) * MW * 1 atm * 2.205 lb/kg

106 * 0.00008205 * 1,000 g/kg * 288.7 K * 365 days/year

Column Notes

Columns 2&3 Values from AP-42 Tables 2.4-1 and 2.4-2 unless otherwise noted.

Column 4 Volumetric Emission Calculation AP-42 (1998), equation (3)

 $Q_p = 2 * Q_{CH4} * C_p/10^6$

where Q_{CH4} is the total amount of CH₄ generated by the landfilll, m³/yr (G on Table A-1)

C_p is the concentration of pollutant P in the landfill gas, ppm

Column 5 Mass Emission Calculation AP-42 (1998), equation (4)

 $UM_p = Q_p * (Molecular Weight * 1 atm) / [(8.205*10-5 m^3-atm/gmol-oK)(1,000 g/kg)(273+15.7oK)]$

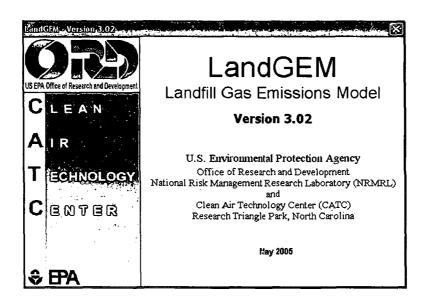
assuming standard temperature of 15.7°C (60°F)

Columns 8 and 9 Collection efficiency is assumed to be 39.75% and flare combustion efficiency assumed to be 98%.

Columns 10 and 11 Landfill gas not collected through the flare is assumed to be emitted as fugitive (i.e., not collected).

HR

ATTACHMENT B LANDGEM 3.02 OUTPUT



Summary Report

Landfill Name or Identifier: Leon County Solid Waste Management Facility

Date: Wednesday, October 31, 2012

Description/Comments:

This LandGEM has been developed for the Title V Permit Renewal. Methane percentage is based on facility records for 2011 (from GHG reporting). Historical tonnage data (1977 through 2011) is also based on 2011 GHG report. NMOC concentration is based on Tier II testing conducted on-site on May 1 through May 4, 2004.

About LandGEM:

First-Order Decomposition Rate Equation:

 $Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} k L_o \left(\frac{M_i}{10}\right) e^{-kt_{ij}}$

Where.

Q_{CH4} = annual methane generation in the year of the calculatic/m³/year)

i = 1-year time increment

n = (year of the calculation) - (initial year of waste acceptance)

j = 0.1-year time increment

 $k = methane generation rate year^{-1}$)

 L_n = potential methane generation capacity m^3/Mg)

 M_i = mass of waste accepted in the th year (Mq) t_{ij} = age of the j^h section of waste mass M accepted in the j^h year (decimal years, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfillg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year1977Landfill Closure Year (with 80-year limit)2017Actual Closure Year (without limit)2017Have Model Calculate Closure Year?No

Waste Design Capacity 4,684,206 megagrams

MODEL PARAMETERS

Methane Generation Rate, k0.040year⁻¹Potential Methane Generation Capacity, ↓100m³/MgNMOC Concentration159ppmv as hexaneMethane Content55% by volume

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:

Total landfill gas

Gas / Pollutant #2:

Methane

Gas / Pollutant #3:

Carbon dioxide

Gas / Pollutant #4:

NMOC

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-I	In-Place
leai	(Mg/year)	(short tons/year)	(Mg)	(short tons)
1977	140,100	154,110	0	O
1978	140,200	154,220	140,100	154,110
1979	140,100	154,110	280,300	308,330
1980	140,100	154,110	420,400	462,440
1981	140,100	154,110	560,500	616,550
1982	140,100	154,110	700,600	770,660
1983	140,200	154,220	840,700	924,770
1984	140,000	154,000	980,900	1,078,990
1985	140,000	154,000	1,120,900	1,232,990
1986	140,000	154,000	1,260,900	1,386,990
1987	140,000	154,000	1,400,900	1,540,990
1988	141,000	155,100	1,540,900	1,694,990
1989	140,000	154,000	1,681,900	1,850,090
1990	140,000	154,000	1,821,900	2,004,090
1991	140,000	154,000	1,961,900	2,158,090
1992	140,000	154,000	2,101,900	2,312,090
1993	140,000	154,000	2,241,900	2,466,090
1994	140,000	154,000	2,381,900	2,620,090
1995	140,000	154,000	2,521,900	2,774,090
1996	140,000	154,000	2,661,900	2,928,090
1997	141,000	155,100	2,801,900	3,082,090
1998	140,000	154,000	2,942,900	3,237,190
1999	136,000	149,600	3,082,900	3,391,190
2000	155,000	170,500	3,218,900	3,540,790
2001	162,000	178,200	3,373,900	3,711,290
2002	58,000	63,800	3,535,900	3,889,490
2003	140,000	154,000	3,593,900	3,953,290
2004	27,000	29,700	3,733,900	4,107,290
2005	74,667	82,133	3,760,900	4,136,990
2006	67,454	74,199	3,835,567	4,219,123
2007	69,413	76,355	3,903,021	4,293,323
2008	57,198	62,918	3,972,434	4,369,678
2009	36,559	40,215	4,029,632	4,432,595
2010	28,424	31,266	4,066,191	4,472,810
2011	14,803	16,283	4,094,615	4,504,076
2012	32,500	35,750	4,109,418	4,520,359
2013	32,500	35,750	4,141,918	4,556,109
2014	32,500	35,750	4,174,418	4,591,859
2015	32,500	35,750	4,206,918	4,627,609
2016	32,500	35,750	4,239,418	4,663,359

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Acc	cepted	Waste-In-Place			
Year	(Mg/year)	(short tons/year)	(Mg)	(short tons)		
2017	32,500	35,750	4,271,918	4,699,109		
2018	0	0	4,304,418	4,734,859		
2019	0	0	4,304,418	4,734,859		
2020	0	0	4,304,418	4,734,859		
2021	0	0	4,304,418	4,734,859		
2022	0	0	4,304,418	4,734,859		
2023	0	0	4,304,418	4,734,859		
2024	0	0	4,304,418			
2025	o	Ō	4,304,418	4,734,859		
2026	0	0	4,304,418	4,734,859		
2027	0	0	4,304,418	4,734,859		
2028	0	0	4,304,418	4,734,859		
2029	0	0	4,304,418	4,734,859		
2030	o	0	4,304,418	4,734,859		
2031	o	0	4,304,418	4,734,859		
2032	0	0	4,304,418	4,734,859		
2033	ō	0	4,304,418	4,734,859		
2034	o	0	4,304,418	4,734,859		
2035	0	0	4,304,418	4,734,859		
2036	0	0	4,304,418	4,734,859		
2037	0	0	4,304,418	4,734,859		
2038	Ö	0	4,304,418	4,734,859		
2039	ō	0	4,304,418	4,734,859		
2040	0	0	4,304,418			
2041	0	0	4,304,418			
2042	0	0	4,304,418			
2043	0		4,304,418	4,734,859		
2044	Ö	0	4,304,418	4,734,859		
2045	0	0	4,304,418	4,734,859		
2046	0	0	4,304,418	4,734,859		
2047	0	0	4,304,418			
2048	0	0	4,304,418	4,734,859		
2049	ō	0	4,304,418			
2050		0	4,304,418	4,734,859		
2051	0	0	4,304,418	4,734,859		
2052	0		4,304,418	4,734,859		
2053	0	0	4,304,418			
2054		0	4,304,418			
2055			4,304,418			
2056	0	0	4,304,418	THE RESIDENCE OF THE PROPERTY		

Pollutant Parameters

	Gas / Po	User-specified Pollutant Parameters:			
	0	Concentration	14-1	Concentration	Malagular Maiah
	Compound Total landfill gas	(ppmv)	Molecular Weight	(ppmv)	Molecular Weight
Gases			0.00		•
	Methane		16.04		
Ö	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
	1,1,1-Trichloroethane				
	(methyl chloroform) -				
	HAP	0.48	133.41		<u> </u>
	1,1,2,2-				
	Tetrachloroethane -				
	HAP/VOC	1.1	167.85		<u> </u>
	1,1-Dichloroethane				
	(ethylidene dichloride) -				
	HAP/VOC	2.4	98.97		
	1,1-Dichloroethene		1		ł
	(vinylidene chloride) -				
	HAP/VOC	0.20	96.94		
	1,2-Dichloroethane				
	(ethylene dichloride) -				
	HAP/VOC	0.41	98.96		
	1,2-Dichloropropane				
	(propylene dichloride) -				
	HAP/VOC	0.18	112.99		
	2-Propanol (isopropyl				
	alcohol) - VOC	50	60.11		
	Acetone	7.0	58.08		
		·			
	Acrylonitrile - HAP/VOC	6.3	53.06		· ·
	Benzene - No or				
	Unknown Co-disposal -				
	HAP/VOC	1.9	78.11		
	Benzene - Co-disposal -				
	HAP/VOC	11	78.11		1
Pollutants	Bromodichloromethane -		†		·
痘	voc	3.1	163.83		
퉁	Butane - VOC	5.0	58.12		
ď	Carbon disulfide -		00.12		·
	HAP/VOC	0.58	76.13		
	Carbon monoxide	140	28.01		
	Carbon tetrachloride -	140	20.01		
	HAP/VOC	4.0E-03	153.84		
	Carbonyl sulfide -	4.0E-03	133.04		·
	HAP/VOC	0.49	60.07		
	Chlorobenzene -	0.49	00.07		
	HAP/VOC	0.25	112 56		
		0.25 1.3	112.56		
	Chlorodifluoromethane	1.3	86.47		- -
	Chloroethane (ethyl	4.0	64.50		
	chloride) - HAP/VOC	1.3	64.52		·
	Chloroform - HAP/VOC	0.03	119.39		
	Chloromethane - VOC	1.2	50.49		
	Dichlorobenzene - (HAP				
	for para isomer/VOC)				ļ
		0.21	147		ļ
	Dichlorodifluoromethane				
	L	16	120.91		<u> </u>
	Dichlorofluoromethane -		1		
	VOC	2.6	102.92		<u> </u>
	Dichloromethane		1		
	(methylene chloride) -				
	HAP	14	84.94		
	Dimethyl sulfide (methyl				
	sulfide) - VOC	7.8	62.13		
	Ethane	890	30.07		<u> </u>
	Ethanol - VOC	27	46.08		

Pollutant Parameters (Continued)

Gas / Pollutant Default Parameters:	User-specified Pollutant Parameters:

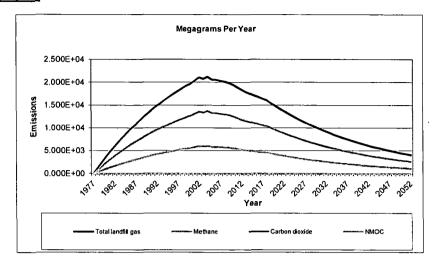
Gas / Poli	lutant Default Paran	User-specified Pollutant Parameters:		
	Concentration		Concentration	
Compound	(ppmv)	Molecular Weight	(ppmv)	Molecular Weight
Ethyl mercaptan			-	
(ethanethiol) - VOC	2.3	62.13		
Ethylbenzene -				
HAPIVOC	4.6	106.16		Į.
Ethylene dibromide -		_ NOTE		
HAP/VOC	1.0E-03	187.88		
Fluorotrichloromethane -	1.0103	107.00		
	0.70	407.00		
voc	0.76	137.38		<u> </u>
Hexane - HAP/VOC	6.6	86.18		
Hydrogen sulfide	36	34.08		
Mercury (total) - HAP	2.9E-04	200.61		
Methyl ethyl ketone -				
HAP/VOC	7.1	72.11		1
Methyl isobutyl ketone -				
	4.0	1 400.40		
HAP/VOC	1.9	100.16		
Methyl mercaptan - VOC		1		1
	2.5	48.11		<u> </u>
Pentane - VOC	3.3	72.15		
Perchloroethylene				
(tetrachloroethylene) -		[l
HAP	3.7	165.83		1
	<u>3.7</u> 11			<u> </u>
Propane - VOC		44.09		<u> </u>
t-1,2-Dichloroethene -	_	1 !		
VOC	2.8	96.94		
Toluene - No or				
Unknown Co-disposal -				
HAP/VOC	39	92.13		1
Toluene - Co-disposal -		02.10		
	470	00.40		1
HAP/VOC	170	92.13		
Trichloroethylene				
(trichloroethene) -				
HAP/VOC	2.8	131.40		
Vinyl chloride -				
HAP/VOC Vinyl chloride - HAP/VOC	7.3	62.50		
Xylenes - HAP/VOC	12	106.16		
Aylelles - HAF/VOC		100.10		
1	12			
	.12			
	.12			
	.12			
	12			
	12			
	12			
	12			
	12			

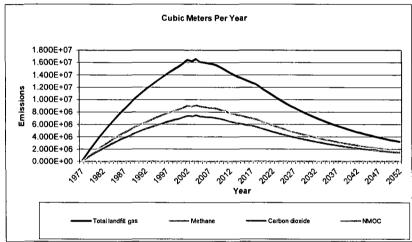
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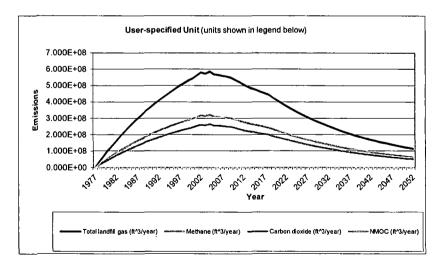
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Graphs







Results

	Total landfill gas			Methane			
Year	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)	
1977	0	0	0	0	0	0	
1978	1.285E+03	1.003E+06	3.542E+07	3.672E+02	5.504E+05	1.944E+07	
1979	2.521E+03	1.967E+06	6.948E+07	7.203E+02	1.080E+06	3.813E+07	
1980	3.707E+03	2.893E+06	1.022E+08	1.059E+03	1.588E+06	5.607E+07	
1981	4.847E+03	3.783E+06	1.336E+08	1.385E+03	2.076E+06	7.331E+07	
1982	5.942E+03	4.637E+06	1.638E+08	1.698E+03	2.545E+06	8.988E+07	
1983	6.994E+03	5.459E+06	1.928E+08	1.999E+03	2.996E+06	1.058E+08	
1984	8.006E+03	6.248E+06	2.207E+08	2.288E+03	3.429E+06	1.211E+08	
1985	8.977E+03	7.006E+06	2.474E+08	2.565E+03	3.845E+06	1.358E+08	
1986	9.909E+03	7.733E+06	2.731E+08	2.831E+03	4.244E+06	1.499E+08	
1987	1.080E+04	8.432E+06	2.978E+08	3.087E+03	4.628E+06	1.634E+08	
1988	1.167E+04	9.104E+06	3.215E+08	3.333E+03	4.996E+06	1.764E+08	
1989	1.250E+04	9.756E+06	3.445E+08	3.572E+03	5.354E+06	1.891E+08	
1990	1.330E+04	1.038E+07	3.664E+08	3.799E+03	5.694E+06	2.011E+08	
1991	1.406E+04	1.097E+07	3.875E+08	4.017E+03	6.021E+06	2.126E+08	
1992	1.479E+04	1.154E+07	4.077E+08	4.226E+03	6.335E+06	2.237E+08	
1993	1.550E+04	1.209E+07	4.271E+08	4.428E+03	6.637E+06	2.344E+08	
1994	1.617E+04	1.262E+07	4.457E+08	4.621E+03	6.927E+06	2.446E+08	
1995	1.682E+04	1.313E+07	4.636E+08	4.807E+03	7.205E+06	2.544E+08	
1996	1.745E+04	1.362E+07	4.809E+08	4.985E+03	7.473E+06	2.639E+08	
1997	1.805E+04	1.408E+07	4.974E+08	5.157E+03	7.730E+06	2.730E+08	
1998	1.863E+04	1.454E+07	5.135E+08	5.324E+03	7.980E+06	2.818E+08	
1999	1.919E+04	1.497E+07	5.288E+08	5.482E+03	8.218E+06	2.902E+08	
2000	1.968E+04	1.536E+07	5.424E+08	5.624E+03	8.430E+06	2.977E+08	
2001	2.033E+04	1.587E+07	5.604E+08	5.810E+03	8.708E+06	3.075E+08	
2002	2.102E+04	1.641E+07	5.793E+08	6.006E+03	9.003E+06	3.179E+08	
2003	2.073E+04	1.618E+07	5.713E+08	5.923E+03	8.878E+06	3.135E+08	
2004	2.120E+04	1.655E+07	5.843E+08	6.058E+03	9.080E+06	3.207E+08	
2005	2.062E+04	1.609E+07	5.682E+08	5.891E+03	8.830E+06	3.118E+08	
2006	2.049E+04	1.599E+07	5.648E+08	5.856E+03	8.777E+06	3.100E+08	
2007	2.031E+04	1.585E+07	5.597E+08	5.803E+03	8.698E+06	3.072E+08	
2008	2.015E+04	1.572E+07	5.553E+08	5.757E+03	8.630E+06	3.048E+08	
2009	1.988E+04	1.552E+07	5.480E+08	5.681E+03	8.516E+06	3.007E+08	
2010	1.944E+04	1.517E+07	5.358E+08	5.555E+03	8.326E+06	2.940E+08	
2011	1.894E+04	1.478E+07	5.219E+08	5.411E+03	8.111E+06	2.864E+08	
2012	1.833E+04	1.431E+07	5.052E+08	5.238E+03	7.851E+06	2.773E+08	
2013	1.791E+04	1.398E+07	4.936E+08	5.118E+03	7.671E+06	2.709E+08	
2014	1.751E+04	1.366E+07	4.825E+08	5.002E+03	7.498E+06	2.648E+08	
2015	1.712E+04	1.336E+07	4.718E+08	4.891E+03	7.332E+06	2.589E+08	
2016	1.675E+04	1.307E+07	4.615E+08	4.785E+03	7.172E+06	2.533E+08	
2017	1.639E+04	1.279E+07	4.516E+08	4.682E+03	7.018E+06	2.478E+08	
2018	1.604E+04	1.252E+07	4.421E+08	4.584E+03	6.871E+06	2.426E+08	
2019	1.541E+04	1.203E+07	4.248E+08	4.404E+03	6.601E+06	2.331E+08	
2020	1.481E+04	1.156E+07	4.081E+08	4.231E+03	6.342E+06	2.240E+08	
2021	1.423E+04	1.110E+07	3.921E+08	4.065E+03	6.094E+06	2.152E+08	
2022	1.367E+04	1.067E+07	3.768E+08	3.906E+03	5.855E+06	2.068E+08	
2023	1.313E+04	1.025E+07	3.620E+08	3.753E+03	5.625E+06	1.987E+08	
2024	1.262E+04	9.848E+06	3.478E+08	3.606E+03	5.405E+06	1.909E+08	
2025	1.212E+04	9.462E+06	3.342E+08	3.464E+03	5.193E+06	1.834E+08	
2026	1.165E+04	9.091E+06	3.211E+08	3.329E+03	4.989E+06	1.762E+08	

V	Total landfill gas			Methane		
Year	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)
2027	1.119E+04	8.735E+06	3.085E+08	3.198E+03	4.794E+06	1.693E+08
2028	1.075E+04	8.392E+06	2.964E+08	3.073E+03	4.606E+06	1.626E+08
2029	1.033E+04	8.063E+06	2.847E+08	2.952E+03	4.425E+06	1.563E+08
2030	9.927E+03	7.747E+06	2.736E+08	2.836E+03	4.251E+06	1.501E+08
2031	9.537E+03	7.443E+06	2.629E+08	2.725E+03	4.085E+06	1.443E+08
2032	9.164E+03	7.151E+06	2.525E+08	2.618E+03	3.925E+06	1.386E+08
2033	8.804E+03	6.871E+06	2.426E+08	2.516E+03	3.771E+06	1.332E+08
2034	8.459E+03	6.601E+06	2.331E+08	2.417E+03	3.623E+06	1.279E+08
2035	8.127E+03	6.343E+06	2.240E+08	2.322E+03	3.481E+06	1.229E+08
2036	7.809E+03	6.094E+06	2.152E+08	2.231E+03	3.344E+06	1.181E+08
037	7.502E+03	5.855E+06	2.068E+08	2.144E+03	3.213E+06	1.135E+08
2038	7.208E+03	5.625E+06	1.987E+08	2.060E+03	3.087E+06	1.090E+08
039	6.926E+03	5.405E+06	1.909E+08	1.979E+03	2.966E+06	1.048E+08
040	6.654E+03	5.193E+06	1.834E+08	1.901E+03	2.850E+06	1.006E+08
041	6.393E+03	4.989E+06	1.762E+08	1.827E+03	2.738E+06	9.670E+07
042	6.142E+03	4.794E+06	1.693E+08	1.755E+03	2.631E+06	9.291E+07
043	5.902E+03	4.606E+06	1.626E+08	1.686E+03	2.528E+06	8.926E+07
044	5.670E+03	4.425E+06	1.563E+08	1.620E+03	2.428E+06	8.576E+07
045	5.448E+03	4.252E+06	1.501E+08	1.557E+03	2.333E+06	8.240E+07
046	5.234E+03	4.085E+06	1.443E+08	1.496E+03	2.242E+06	7.917E+07
2047	5.029E+03	3.925E+06	1.386E+08	1.437E+03	2.154E+06	7.606E+07
2048	4.832E+03	3.771E+06	1.332E+08	1.381E+03	2.069E+06	7.308E+07
049	4.642E+03	3.623E+06	1.279E+08	1.326E+03	1.988E+06	7.022E+07
050	4.460E+03	3.481E+06	1.229E+08	1.274E+03	1.910E+06	6.746E+07
2051	4.285E+03	3.344E+06	1.181E+08	1.224E+03	1.835E+06	6.482E+07
052	4.203E+03 4.117E+03	3.213E+06	1.135E+08	1.176E+03	1.763E+06	6.228E+07
2053	3.956E+03	3.087E+06	1.090E+08	1.130E+03	1.694E+06	5.983E+07
2054	3.801E+03	2.966E+06	1.048E+08	1.086E+03	1.628E+06	5.749E+07
2055	3.652E+03	2.850E+06	1.006E+08	1.043E+03	1.564E+06	5.523E+07
2056	3.509E+03	2.738E+06	9.670E+07	1.003E+03	1.503E+06	5.307E+07
2057	3.371E+03	2.631E+06	9.291E+07	9.632E+02	1.444E+06	5.099E+07
2058	3.239E+03	2.528E+06	8.926E+07	9.255E+02	1.387E+06	4.899E+07
059	3.112E+03	2.429E+06	8.576E+07	8.892E+02	1.333E+06	4.707E+07
2060	2.990E+03	2.333E+06	8.240E+07	8.543E+02	1.281E+06	4.522E+07
2061	2.873E+03	2.242E+06	7.917E+07	8.208E+02	1.230E+06	4.345E+07
2062	2.760E+03	2.154E+06	7.607E+07	7.886E+02	1.182E+06	4.174E+07
2063	2.652E+03	2.069E+06	7.308E+07	7.577E+02	1.136E+06	4.011E+07
2064	2.548E+03	1.988E+06	7.022E+07	7.280E+02	1.091E+06	3.854E+07
2065	2.448E+03	1.910E+06	6.746E+07	6.994E+02	1.048E+06	3.702E+07
2066	2.352E+03	1.835E+06	6.482E+07	6.720E+02	1.007E+06	3.557E+07
2067	2.260E+03	1.763E+06	6.228E+07	6.457E+02	9.678E+05	3.418E+07
890	2.171E+03	1.694E+06	5.984E+07	6.203E+02	9.299E+05	3.284E+07
2069	2.086E+03	1.628E+06	5.749E+07	5.960E+02	8.934E+05	3.155E+07
2070	2.004E+03	1.564E+06	5.524E+07	5.727E+02	8.584E+05	3.031E+07
2071	1.926E+03	1.503E+06	5.307E+07	5.502E+02	8.247E+05	2.912E+07
2072	1.850E+03	1.444E+06	5.099E+07	5.286E+02	7.924E+05	2.798E+07
2073	1.778E+03	1.387E+06	4.899E+07	5.079E+02	7.613E+05	2.689E+07
2074	1.708E+03	1.333E+06	4.707E+07	4.880E+02	7.314E+05	2.583E+07
2075	1.641E+03	1.281E+06	4.522E+07	4.688E+02	7.028E+05	2.482E+07
2076	1.577E+03	1.230E+06	4.345E+07	4.505E+02	6.752E+05	2.385E+07
2077	1.515E+03	1.182E+06	4.175E+07	4.328E+02	6.487E+05	2.291E+07

		Total landfill gas		Methane		
Year	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)
2078	1.455E+03	1.136E+06	4.011E+07	4.158E+02	6.233E+05	2.201E+07
2079	1.398E+03	1.091E+06	3.854E+07	3.995E+02	5.989E+05	2.115E+07
2080	1.343E+03	1.048E+06	3.703E+07	3.839E+02	5.754E+05	2.032E+07
2081	1.291E+03	1.007E+06	3.557E+07	3.688E+02	5.528E+05	1.952E+07
2082	1.240E+03	9.678E+05	3.418E+07	3.543E+02	5.311E+05	1.876E+07
2083	1.192E+03	9.299E+05	3.284E+07	3.405E+02	5.103E+05	1.802E+07
2084	1.145E+03	8.934E+05	3.155E+07	3.271E+02	4.903E+05	1.732E+07
2085	1.100E+03	8.584E+05	3.031E+07	3.143E+02	4.711E+05	1.664E+07
2086	1.057E+03	8.247E+05	2.913E+07	3.020E+02	4.526E+05	1.598E+07
2087	1.015E+03	7.924E+05	2.798E+07	2.901E+02	4.349E+05	1.536E+07
2088	9.755E+02	7.613E+05	2.689E+07	2.787E+02	4.178E+05	1.475E+07
2089	9.373E+02	7.315E+05	2.583E+07	2.678E+02	4.014E+05	1.418E+07
2090	9.005E+02	7.028E+05	2.482E+07	2.573E+02	3.857E+05	1.362E+07
2091	8.652E+02	6.752E+05	2.385E+07	2.472E+02	3.706E+05	1.309E+07
2092	8.313E+02	6.487E+05	2.291E+07	2.375E+02	3.560E+05	1.257E+07
2093	7.987E+02	6.233E+05	2.201E+07	2.282E+02	3.421E+05	1.208E+07
2094	7.674E+02	5.989E+05	2.115E+07	2.193E+02	3.287E+05	1.161E+07
2095	7.373E+02	5.754E+05	2.032E+07	2.107E+02	3.158E+05	1.115E+07
2096	7.084E+02	5.528E+05	1.952E+07	2.024E+02	3.034E+05	1.071E+07
2097	6.806E+02	5.312E+05	1.876E+07	1.945E+02	2.915E+05	1.029E+07
2098	6.539E+02	5.103E+05	1.802E+07	1.868E+02	2.801E+05	9.891E+06
2099	6.283E+02	4.903E+05	1.732E+07	1.795E+02	2.691E+05	9.503E+06
2100	6.036E+02	4.711E+05	1,664E+07	1.725E+02	2.585E+05	9.130E+06
2101	5.800E+02	4.526E+05	1.598E+07	1.657E+02	2.484E+05	8.772E+06
2102	5.572E+02	4.349E+05	1.536E+07	1.592E+02	2.387E+05	8.428E+06
2103	5.354E+02	4.178E+05	1.476E+07	1.530E+02	2.293E+05	8.098E+06
2104	5.144E+02	4.014E+05	1.418E+07	1.470E+02	2.203E+05	7.780E+06
2105	4.942E+02	3.857E+05	1,362E+07	1,412E+02	2.117E+05	7.475E+06
2106	4.748E+02	3.706E+05	1.309E+07	1.357E+02	2.034E+05	7.182E+06
2107	4.562E+02	3.560E+05	1.257E+07	1.304E+02	1.954E+05	6.900E+06
2108	4.383E+02	3,421E+05	1,208E+07	1.252E+02	1.877E+05	6.630E+06
2109	4.211E+02	3.287E+05	1.161E+07	1.203E+02	1.804E+05	6.370E+06
2110	4.046E+02	3.158E+05	1.115E+07	1.156E+02	1.733E+05	6.120E+06
2111	3.888E+02	3.034E+05	1.071E+07	1.111E+02	1.665E+05	5.880E+06
2112	3.735E+02	2.915E+05	1.029E+07	1.067E+02	1.600E+05	5.650E+06
2113	3.589E+02	2.801E+05	9.891E+06	1.025E+02	1.537E+05	5.428E+06
2114	3.448E+02	2.691E+05	9.503E+06	9.852E+01	1.477E+05	5.215E+06
2115	3.313E+02	2.585E+05	9.130E+06	9.466E+01	1.419E+05	5.011E+06
2116	3.183E+02	2.484E+05	8.772E+06	9.095E+01	1.363E+05	4.814E+06
2117	3.058E+02	2.387E+05	8.428E+06	8.738E+01	1.310E+05	4.625E+06

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)
1977	0	0	0	0	0	0
1978	8.284E+02	4.525E+05	1.598E+07	5.716E-01	1.595E+02	5.632E+03
1979	1.625E+03	8.877E+05	3.135E+07	1.121E+00	3.128E+02	1.105E+04
1980	2.390E+03	1.305E+06	4.610E+07	1.649E+00	4.600E+02	1.625E+04
1981	3.124E+03	1.707E+06	6.027E+07	2.156E+00	6.015E+02	2.124E+04
1982	3.830E+03	2.092E+06	7.389E+07	2.643E+00	7.373E+02	2.604E+04
1983	4.508E+03	2.463E+06	8.698E+07	3.111E+00	8.679E+02	3.065E+04
1984	5.161E+03	2.819E+06	9.956E+07	3.561E+00	9.935E+02	3.508E+04
1985	5.786E+03	3.161E+06	1.116E+08	3.993E+00	1.114E+03	3.934E+04
1986	6.387E+03	3.489E+06	1.232E+08	4.407E+00	1.230E+03	4.342E+04
1987	6.964E+03	3.805E+06	1.344E+08	4.806E+00	1.341E+03	4.735E+04
1988	7.519E+03	4.108E+06	1.451E+08	5.189E+00	1.448E+03	5.112E+04
1989	8.058E+03	4.402E+06	1.555E+08	5.560E+00	1.551E+03	5.478E+04
1990	8.570E+03	4.682E+06	1.653E+08	5.914E+00	1.650E+03	5.826E+04
1991	9.062E+03	4.950E+06	1.748E+08	6.253E+00	1.744E+03	6.161E+04
1992	9.534E+03	5.208E+06	1.839E+08	6.579E+00	1.835E+03	6.482E+04
1993	9.988E+03	5.456E+06	1.927E+08	6.892E+00	1.923E+03	6.790E+04
1994	1.042E+04	5.695E+06	2.011E+08	7.193E+00	2.007E+03	7.087E+04
1995	1.084E+04	5.924E+06	2.092E+08	7.482E+00	2.087E+03	7.372E+04
1996	1.125E+04	6.144E+06	2.170E+08	7.760E+00	2.165E+03	7.646E+04
1997	1.163E+04	6.355E+06	2.244E+08	8.027E+00	2.239E+03	7.909E+04
1998	1.201E+04	6.561E+06	2.317E+08	8.288E+00	2.312E+03	8.165E+04
1999	1.237E+04	6.756E+06	2.386E+08	8.534E+00	2.381E+03	8.408E+04
2000	1.269E+04	6.931E+06	2.448E+08	8.754E+00	2.442E+03	8.625E+04
2001	1.311E+04	7.159E+06	2.528E+08	9.043E+00	2.523E+03	8.910E+04
2002	1.355E+04	7.402E+06	2.614E+08	9.350E+00	2.608E+03	9.212E+04
2003	1.336E+04	7.299E+06	2.578E+08	9.220E+00	2.572E+03	9.084E+04
2004	1.366E+04	7.465E+06	2.636E+08	9.430E+00	2.631E+03	9.290E+04
2005	1.329E+04	7.260E+06	2.564E+08	9.170E+00	2.558E+03	9.034E+04
2006	1.321E+04	7.216E+06	2,548E+08	9.115E+00	2.543E+03	8.980E+04
2007	1.309E+04	7.151E+06	2.525E+08	9.033E+00	2.520E+03	8.899E+04
2008	1.299E+04	7.095E+06	2.506E+08	8.962E+00	2.500E+03	8.830E+04
2009	1.282E+04	7.002E+06	2.473E+08	8.844E+00	2.467E+03	8.713E+04
2010	1.253E+04	6.845E+06	2.417E+08	8.646E+00	2.412E+03	8.519E+04
2011	1.221E+04	6.668E+06	2.355E+08	8.423E+00	2.350E+03	8.299E+04
2012	1.182E+04	6.455E+06	2.280E+08	8.153E+00	2.275E+03	8.033E+04
2013	1.154E+04	6.307E+06	2.227E+08	7.966E+00	2.222E+03	7.849E+04
2014	1.128E+04	6.164E+06	2.177E+08	7.787E+00	2.172E+03	7.671E+04
2015	1.103E+04	6.028E+06	2.129E+08	7.614E+00	2.124E+03	7.501E+04
2016	1.079E+04	5.896E+06	2.082E+08	7.448E+00	2.078E+03	7.338E+04
2017	1.056E+04	5.770E+06	2.038E+08	7.288E+00	2.033E+03	7.181E+04
2018	1.034E+04	5.649E+06	1.995E+08	7.135E+00	1.991E+03	7.030E+04
2019	9.935E+03	5.427E+06	1.917E+08	6.855E+00	1.913E+03	6.754E+04
2020	9.545E+03	5.215E+06	1.842E+08	6.587E+00	1.838E+03	6.489E+04
2021	9.171E+03	5.010E+06	1.769E+08	6.328E+00	1.766E+03	6.235E+04
2022	8.811E+03	4.814E+06	1.700E+08	6.080E+00	1.696E+03	5.990E+04
2023	8.466E+03	4.625E+06	1.633E+08	5.842E+00	1.630E+03	5.756E+04
2024	8.134E+03	4.444E+06	1.569E+08	5.613E+00	1.566E+03	5.530E+04
2025	7.815E+03	4.269E+06	1.508E+08	5.393E+00	1.504E+03	5.313E+04
2026	7.508E+03	4.102E+06	1.449E+08	5.181E+00	1.445E+03	5.105E+04

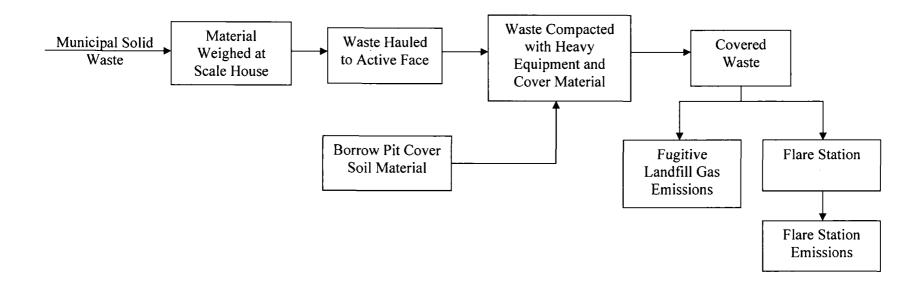
Year	Carbon dioxide			NMOC		
Year	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)
2027	7.214E+03	3.941E+06	1.392E+08	4.978E+00	1.389E+03	4.905E+04
2028	6.931E+03	3.787E+06	1.337E+08	4.783E+00	1.334E+03	4.712E+04
2029	6.659E+03	3.638E+06	1.285E+08	4.595E+00	1.282E+03	4.527E+04
2030	6.398E+03	3.495E+06	1.234E+08	4.415E+00	1.232E+03	4.350E+04
2031	6.147E+03	3.358E+06	1.186E+08	4.242E+00	1.183E+03	4.179E+04
2032	5.906E+03	3.227E+06	1.139E+08	4.076E+00	1.137E+03	4.016E+04
2033	5.675E+03	3.100E+06	1.095E+08	3.916E+00	1.092E+03	3.858E+04
2034	5.452E+03	2.979E+06	1.052E+08	3.762E+00	1.050E+03	3.707E+04
2035	5.238E+03	2.862E+06	1.011E+08	3.615E+00	1.008E+03	3.561E+04
2036	5.033E+03	2.750E+06	9.710E+07	3.473E+00	9.689E+02	3.422E+04
2037	4.836E+03	2.642E+06	9.329E+07	3.337E+00	9.309E+02	3.288E+04
2038	4.646E+03	2.538E+06	8.964E+07	3.206E+00	8.944E+02	3.159E+04
2039	4.464E+03	2.439E+06	8.612E+07	3.080E+00	8.594E+02	3.035E+04
2040	4.289E+03	2.343E+06	8.274E+07	2.960E+00	8.257E+02	2.916E+04
2041	4.121E+03	2.251E+06	7.950E+07	2.844E+00	7.933E+02	2.802E+04
2042	3.959E+03	2.163E+06	7.638E+07	2.732E+00	7.622E+02	2.692E+04
2043	3.804E+03	2.078E+06	7.339E+07	2.625E+00	7.323E+02	2.586E+04
2044	3.655E+03	1.997E+06	7.051E+07	2.522E+00	7.036E+02	2.485E+04
2045	3.511E+03	1.918E+06	6.775E+07	2.423E+00	6.760E+02	2.387E+04
2046	3.374E+03	1.843E+06	6.509E+07	2.328E+00	6.495E+02	2.294E+04
2047	3.241E+03	1.771E+06	6.254E+07	2.237E+00	6.240E+02	2.204E+04
2048	3.114E+03	1.701E+06	6.008E+07	2.149E+00	5.996E+02	2.117E+04
2049	2.992E+03	1.635E+06	5.773E+07	2.065E+00	5.761E+02	2.034E+04
2050	2.875E+03	1.571E+06	5.547E+07	1.984E+00	5.535E+02	1.955E+04
2051	2.762E+03	1.509E+06	5.329E+07	1.906E+00	5.318E+02	1.878E+04
2052	2.654E+03	1.450E+06	5.120E+07	1.831E+00	5.109E+02	1.804E+04
2053	2.550E+03	1.393E+06	4.919E+07	1.760E+00	4.909E+02	1.734E+04
2054	2.450E+03	1.338E+06	4.726E+07	1.691E+00	4.716E+02	1.666E+04
2055	2.354E+03	1.286E+06	4.541E+07	1.624E+00	4.531E+02	1.600E+04
2056	2.262E+03	1.235E+06	4.363E+07	1.561E+00	4.354E+02	1.538E+04
2057	2.173E+03	1.187E+06	4.192E+07	1.499E+00	4.183E+02	1.477E+04
2058	2.088E+03	1.140E+06	4.028E+07	1.441E+00	4.019E+02	1.419E+04
2059	2.006E+03	1.096E+06	3.870E+07	1.384E+00	3.861E+02	1.364E+04
2060	1.927E+03	1.053E+06	3.718E+07	1.330E+00	3.710E+02	1.310E+04
2061	1.852E+03	1.012E+06	3.572E+07	1.278E+00	3.565E+02	1.259E+04
2062	1.779E+03	9.719E+05	3.432E+07	1.228E+00	3.425E+02	1.209E+04
2063	1.709E+03	9.337E+05	3.298E+07	1.179E+00	3.290E+02	1.162E+04
2064	1.642E+03	8.971E+05	3.168E+07	1.133E+00	3.161E+02	1.116E+04
2065	1.578E+03	8.620E+05	3.044E+07	1.089E+00	3.037E+02	1.073E+04
2066	1.516E+03	8.282E+05	2.925E+07	1.046E+00	2.918E+02	1.031E+04
2067	1.456E+03	7.957E+05	2.810E+07	1.005E+00	2.804E+02	9.902E+03
2068	1.399E+03	7.645E+05	2.700E+07	9.657E-01	2.694E+02	9.514E+03
2069	1.345E+03	7.345E+05	2.594E+07	9.278E-01	2.588E+02	9.141E+03
2070	1.292E+03	7.057E+05	2.492E+07	8.914E-01	2.487E+02	8.782E+03
2071	1.241E+03	6.780E+05	2.394E+07	8.565E-01	2.389E+02	8.438E+03
2072	1.192E+03	6.515E+05	2.301E+07	8.229E-01	2.296E+02	8.107E+03
2073	1,146E+03	6.259E+05	2.210E+07	7.906E-01	2.206E+02	7.789E+03
2074	1.101E+03	6.014E+05	2.124E+07	7.596E-01	2.119E+02	7.484E+03
2075	1.058E+03	5.778E+05	2.040E+07	7.298E-01	2.036E+02	7.190E+03
2076	1.016E+03	5.551E+05	1.960E+07	7.012E-01	1.956E+02	6.908E+03
2077	9.763E+02	5.334E+05	1.884E+07	6.737E-01	1.880E+02	6.638E+03

	Carbon dioxide			NMOC		
Year 💳	(Mg/year)	(m³/year)	(ft^3/year)	(Mg/year)	(m³/year)	(ft^3/year)
2078	9.380E+02	5.124E+05	1.810E+07	6.473E-01	1.806E+02	6.377E+03
2079	9.013E+02	4.924E+05	1.739E+07	6.219E-01	1.735E+02	6.127E+03
2080	8.659E+02	4.731E+05	1.671E+07	5.975E-01	1.667E+02	5.887E+03
2081	8.320E+02	4.545E+05	1.605E+07	5.741E-01	1.602E+02	5.656E+03
2082	7.993E+02	4.367E+05	1.542E+07	5.516E-01	1.539E+02	5:434E+03
2083	7.680E+02	4.196E+05	1.482E+07	5.300E-01	1.478E+02	5.221E+03
2084	7.379E+02	4.031E+05	1.424E+07	5.092E-01	1.421E+02	5.017E+03
2085	7.090E+02	3.873E+05	1.368E+07	4.892E-01	1.365E+02	4.820E+03
2086	6.812E+02	3.721E+05	1.314E+07	4.700E-01	1.311E+02	4.631E+03
2087	6.544E+02	3.575E+05	1.263E+07	4.516E-01	1.260E+02	4.449E+03
2088	6.288E+02	3.435E+05	1.213E+07	4.339E-01	1.210E+02	4.275E+03
2089	6.041E+02	3.300E+05	1.166E+07	4.169E-01	1.163E+02	4.107E+03
2090	5.804E+02	3.171E+05	1.120E+07	4.005E-01	1.117E+02	3.946E+03
2091	5.577E+02	3.047E+05	1.076E+07	3.848E-01	1.074E+02	3.791E+03
2092	5.358E+02	2.927E+05	1.034E+07	3.697E-01	1.032E+02	3.643E+03
2093	5.148E+02	2.812E+05	9.932E+06	3.552E-01	9.911E+01	3.500E+03
2094	4.946E+02	2.702E+05	9.542E+06	3.413E-01	9.522E+01	3.363E+03
2095	4.752E+02	2.596E+05	9.168E+06	3.279E-01	9.149E+01	3.231E+03
2096	4.566E+02	2.494E+05	8.809E+06	3.151E-01	8.790E+01	3.104E+03
2097	4.387E+02	2.397E+05	8.463E+06	3.027E-01	8.445E+01	2.982E+03
2098	4.215E+02	2.303E+05	8.132E+06	2.908E-01	8.114E+01	2.866E+03
2099	4.050E+02	2.212E+05	7.813E+06	2.794E-01	7.796E+01	2.753E+03
2100	3.891E+02	2.126E+05	7.506E+06	2.685E-01	7.490E+01	2.645E+03
2101	3.738E+02	2.042E+05	7.212E+06	2.580E-01	7.197E+01	2.541E+03
2102	3.592E+02	1.962E+05	6.929E+06	2.478E-01	6.914E+01	2.442E+03
2103	3.451E+02	1.885E+05	6.658E+06	2.381E-01	6.643E+01	2.346E+03
2104	3.316E+02	1.811E+05	6.397E+06	2.288E-01	6.383E+01	2.254E+03
2105	3.186E+02	1.740E+05	6.146E+06	2.198E-01	6.133E+01	2.166E+03
2106	3.061E+02	1.672E+05	5.905E+06	2.112E-01	5.892E+01	2.081E+03
2107	2.941E+02	1.606E+05	5.673E+06	2.029E-01	5.661E+01	1.999E+03
2108	2.825E+02	1.543E+05	5.451E+06	1.950E-01	5.439E+01	1.921E+03
2109	2.715E+02	1.483E+05	5.237E+06	1.873E-01	5.226E+01	1.845E+03
2110	2.608E+02	1.425E+05	5.032E+06	1.800E-01	5.021E+01	1.773E+03
2111	2.506E+02	1.369E+05	4.834E+06	1.729E-01	4.824E+01	1.704E+03
2112	2.408E+02	1.315E+05	4.645E+06	1.661E-01	4.635E+01	1.637E+03
2113	2.313E+02	1.264E+05	4.463E+06	1.596E-01	4.453E+01	1.573E+03
2114	2.222E+02	1.214E+05	4.288E+06	1.534E-01	4.279E+01	1.511E+03
2115	2.135E+02	1.167E+05	4.120E+06	1.473E-01	4.111E+01	1.452E+03
2116	2.052E+02	1.121E+05	3.958E+06	1.416E-01	3.950E+01	1.395E+03
2117	1.971E+02	1.077E+05	3.803E+06	1.360E-01	3.795E+01	1.340E+03

ATTACHMENT C FACILITY PLOT PLAN

ATTACHMENT D PROCESS FLOW DIAGRAM

The following process flow diagram shows the permitted solid waste facility.



ATTACHMENT E
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE
MATTER

Precautions to Prevent Unconfined PM Emissions:

Pursuant to Rule 62-296-320, F.A.C., the County will undertake all reasonable actions to prevent the emission of particulate matter above the amounts stipulated in Table 296.320-1 of the referenced rule. Particulate matter emissions from the Central Landfill are expected to be minimal. The landfill will continue to monitor established vegetation growth on the cap. If a high volume of traffic is expected, the County will spray roads with water to prevent dust from escaping. Any on-site construction projects will utilize best management practices in preventing fugitive emissions.

ATTACHMENT F LIST OF INSIGNIFICANT ACTIVITIES The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

- 1. Wood waste processing and temporary storage.
- 2. White goods temporary storage.
- 3. Household hazardous waste collection and temporary storage.
- 4. Used oil collection and temporary storage.
- 5. Diesel fuel storage tank.
- 6. Scrap tire temporary storage.
- 7. Asbestos disposal pit.
- 8. Equipment maintenance building with hydraulic and motor oil storage.
- 9. Electronic waste collection and temporary storage.
- 10. Oil, gas and battery removal from lawn mowers and similar equipment.
- 11. Lead-acid battery temporary storage.

ATTACHMENT G IDENTIFICATION OF APPLICABLE REQUIREMENTS

Applicable Requirements:

- Florida Department of Environmental Protection's Title V Core List 1.
- 40 CFR 60, Subpart A 2.
- 40 CFR 60.33c, 60.34c & 60.35c 3.
- 40 CFR Part 82, Subpart F 4.
- 62-296.320 (2), FAC 5.
- 62-296.320 (4)(b) 1 and 4, FAC 62-296.320(4)(c), FAC 6.
- 7.
- 62-213.430, FAC 8.
- 9. 62-213.440, FAC