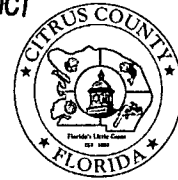


**Application for Title V
Air Operation Permit
Citrus County Central Landfill
Lecanto, Florida**

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

MAR 27 2006

SOUTHWEST DISTRICT
TAMPA



SCS ENGINEERS

Prepared for:

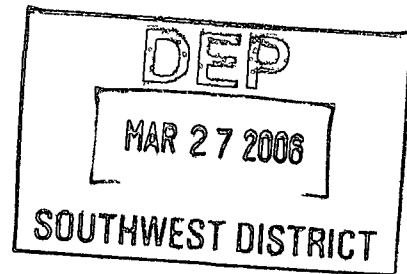
Citrus County Solid Waste Management Division
230 West Gulf to Lake Highway
Lecanto, Florida 34461
(352) 527-7670

Prepared by:

SCS Engineers
3012 U S Highway 301 North, Suite 700
Tampa, Florida 33619-2242
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Fax (813) 623-6757

Florida Board of Professional Engineers
Certificate No 00004892

March 22, 2006
File No 09204067 04



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Lecanto, Florida**

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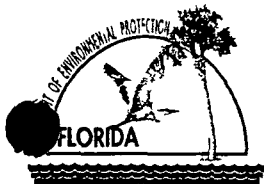
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- 1 Figures
- 2 Precautions to Prevent Emissions of Unconfined Particulate Matter
- 3 List of Insignificant Activities
- 4 Identification of Applicable Requirements
- 5 Compliance Report and Plan
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- 8 Procedures for Startup and Shutdown
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Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for any air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit.

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review, or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT, or
- Where the applicant proposes 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/renewal Title V air operation permit

Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1	Facility Owner/Company Name	Citrus County Board of County Commissioners		
2	Site Name	Citrus County Central Landfill		
3	Facility Identification Number	21375-008-SO/01		
4.	Facility Location			
	Street Address or Other Locator	230 West Gulf to Lake Highway		
	City	County	Zip Code	
	Lecanto	Citrus	34461	
5	Relocatable Facility?	6 Existing Title V Permitted Facility?		
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Application Contact

1	Application Contact Name			Susan J. Metcalfe, P.G.
2	Application Contact Mailing Address			
	Organization/Firm	Citrus County Solid Waste Management Division		
	Street Address	P.O. Box 340		
	City	State	Zip Code	
	Lecanto	Florida	34460-0340	
3	Application Contact Telephone Numbers			
	Telephone	(352) 527 - 7670	ext	Fax (352) 527-7672
4	Application Contact Email Address			
	Susan.Metcalfe@bocc.citrus.fl.us			

Application Processing Information (DEP Use)

1	Date of Receipt of Application	3	PSD Number (if applicable)
2	Project Number(s)	4	Siting Number (if applicable)

APPLICATION INFORMATION

Purpose of Application

This application for air permit is 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

- ☒ 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 the issuance of a Title V operating permit for the Citrus County Central Landfill. See the Permit Application Summary section of the attached engineering report for additional information.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Municipal Solid Waste Landfill		N/A
Insignificant	Storage Tanks		N/A
Insignificant	Yard Waste Handling and Storage Piles		N/A
Insignificant	Miscellaneous Diesel Engines		N/A
Insignificant	Parts Cleaning/Solvent Degreasing		N/A
Insignificant	Leachate Treatment Plant		N/A

Application Processing Fee

Check one: ☐ Attached - Amount \$ _____ ☒ Not Applicable

APPLICATION INFORMATION**NOT APPLICABLE****Owner/Authorized Representative Statement****Complete if applying for an air construction permit or an initial FESOP.**

1	Owner/Authorized Representative Name
2	Owner/Authorized Representative Mailing Address Organization/Firm Street Address City State Zip Code
3	Owner/Authorized Representative Telephone Numbers Telephone () - ext Fax () -
4	Owner/Authorized Representative Email Address:
5	<p>Owner/Authorized Representative Statement</p> <p><i>I, the undersigned, am the owner or authorized representative of the facility 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 requirements identified in this application to which the facility 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.</i></p> <p>_____ Signature</p> <p>_____ Date</p>

APPLICATION INFORMATION

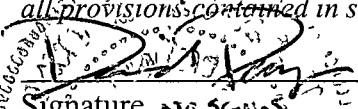
Application Responsible Official Certification

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

1	Application Responsible Official Name Susan J. Metcalfe, P.G.
2	Application Responsible Official Qualification (Check one or more of the following options, as applicable) <input type="checkbox"/> 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 <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively <input checked="" type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official <input type="checkbox"/> The designated representative at an Acid Rain source
3	Application Responsible Official Mailing Address Organization/Firm Citrus County Solid Waste Management Division Street Address P.O. Box 340 City Lecanto State Florida Zip Code 34460-0340
4	Application Responsible Official Telephone Numbers Telephone (352) 527 - 7670 ext Fax (352) 527 - 7672
5	Application Responsible Official Email Address Susan.Metcalfe@bocc.citrus.fl.us
6	Application Responsible Official Certification <p><i>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.</i></p> <p><u>Susan J Metcalfe</u> <u>3/22/06</u> Signature Date</p>

APPLICATION INFORMATION

Professional Engineer Certification

1	Professional Engineer Name David H. Penoyer, P.E. Registration Number 56065
2	Professional Engineer Mailing Address Organization/Firm SCS Engineers Street Address 3012 U.S. Highway 301 North, Suite 700 City Tampa State Florida Zip Code 33619
3	Professional Engineer Telephone Numbers Telephone (813) 621 - 0080 ext Fax (813) 623 - 6757
4.	Professional Engineer Email Address dpenoyer@scsengineers.com
5	<p>Professional Engineer Statement</p> <p><i>I, the undersigned, hereby certify, except as particularly noted herein*, that</i></p> <p><i>(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</i></p> <p><i>(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</i></p> <p><i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/>, 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</i></p> <p><i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, 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 <input type="checkbox"/>, 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</i></p> <p><i>(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 <input type="checkbox"/>, 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 in the corresponding application for air construction permit and with all provisions contained in such permit</i></p> <p> Signature David H. Penoyer (seal)</p> <p>3/22/06 Date</p>

* Attach any exception to certification statement

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1 Facility UTM Coordinates Zone East (km) North (km)		2 Facility Latitude/Longitude . Latitude (DD/MM/SS) 28°51'07" Longitude (DD/MM/SS) 82°26'12"	
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 .			

Facility Contact

1 Facility Contact Name Susan J. Metcalfe, P.G.			
2 Facility Contact Mailing Address Organization/Firm Citrus County Solid Waste Management Division Street Address P.O. Box 340 City Lecanto State Florida Zip Code. 34460-0340			
3 Facility Contact Telephone Numbers Telephone (352) 527 - 7670 ext Fax (352) 527 - 7672			
4 Facility Contact Email Address Susan.Metcalfe@bocc.citrus.fl.us			

Facility Primary Responsible Official

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

1 Facility Primary Responsible Official Name		
2 Facility Primary Responsible Official Mailing Address Organization/Firm. Street Address. City State Zip Code		
3 Facility Primary Responsible Official Telephone Numbers Telephone () - ext Fax () -		
4 Facility Primary Responsible Official Email Address		

FACILITY INFORMATION

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	<input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2	<input type="checkbox"/> Synthetic Non-Title V Source	
3	<input checked="" type="checkbox"/> Title V Source	
4	<input type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5	<input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6	<input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7	<input type="checkbox"/> Synthetic Minor Source of HAPs	
8	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9	<input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10	<input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11	<input checked="" type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70 3(a)(5))	
12	Facility Regulatory Classifications Comment This facility is subject to 40 CFR Part 60, Subpart WWW adopted by reference in Rule 62-204.800(8)(b)72, F.A.C.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1 Pollutant Emitted	2 Pollutant Classification	3. Emissions Cap [Y or N]?
NMOC	B	N
HAPs	B	N
VOC	B	N

The only pollutant emission for which the facility is regulated is non-methane organic compounds (NMOC) of which volatile organic compounds (VOC) is a subset. NMOC is regulated through 40 CFR 60 Subpart WWW.

B. EMISSIONS CAPS

[illegible]

Emission caps are not applicable for this facility.

FACILITY INFORMATION

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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 1, Figure 1 <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 1, Figure 2 <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 2 <input type="checkbox"/> Previously Submitted, Date _____

Additional Requirements for Air Construction Permit Applications

1	Area Map Showing Facility Location <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2	Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL) <input type="checkbox"/> Attached, Document ID _____
3	Rule Applicability Analysis <input type="checkbox"/> Attached, Document ID _____
4	List of Exempt Emissions Units (Rule 62-210 300(3), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5	Fugitive Emissions Identification <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
6	Air Quality Analysis (Rule 62-212 400(7), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
7	Source Impact Analysis (Rule 62-212.400(5), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
8	Air Quality Impact since 1977 (Rule 62-212 400(4)(e), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
9	Additional Impact Analyses (Rules 62-212 400(8) and 62-212 500(4)(e), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
10	Alternative Analysis Requirement (Rule 62-212 500(4)(g), F A C) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for FESOP Applications

- ### **Additional Requirements for Title V Air Operation Permit Applications**

- ☐
- Attached, Document ID _____
- ☒
- Not Applicable

EMISSIONS UNIT INFORMATION

Section [1] of [1]

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 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 for air permit. 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 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/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. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** 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 construction permitting and insignificant emissions units 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.

EMISSIONS UNIT INFORMATION

Section [1] of [1]

A. GENERAL EMISSIONS UNIT INFORMATION**Title V Air Operation Permit Emissions Unit Classification**

1 Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised 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

Emissions Unit Description and Status

1 Type of Emissions Unit Addressed in this Section (Check one)

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent)

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions

☒ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only

2 Description of Emissions Unit Addressed in this Section

Municipal Solid Waste Landfill

3 Emissions Unit Identification Number **001**

4 Emissions Unit Status Code. A	5 Commence Construction Date 1975	6 Initial Startup Date 1975	7 Emissions Unit Major Group SIC Code 49	8 Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	---	---------------------------------------	--	---

9 Package Unit
Manufacturer

Model Number

10 Generator Nameplate Rating **MW**

11 Emissions Unit Comment

**The Citrus County SWMD began construction on a landfill expansion on July 3, 2003.
Date landfill first accepted waste: Site: 1975; Expansion Area: October 4, 2005**

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Emissions Unit Control Equipment

1 Control Equipment/Method(s) Description

The landfill is regulated by the New Source Performance Standards (NSPS) for Municipal Solid Waste (MSW) Landfills promulgated in Title 40 of the Code of Federal Regulations Part 60 (40 CFR 60), Subpart WWW. Based on Tier 1 landfill gas (LFG) modeling submitted to the Florida Department of Environmental Protection (FDEP) on December 30, 2005, the estimated emissions of non-methane organic compounds (NMOC) are above 50 megagrams (Mg) per year. As a result, Citrus County is required to submit a site-specific Tier 2 Non-Methane Organic Compound (NMOC) emission rate report, which determines the actual NMOC emissions for the landfill by July 1, 2006. Therefore, a landfill collection and control system (GCCS) is not currently required for the facility.

2 Control Device or Method Code(s)

EMISSIONS UNIT INFORMATION

Section [1] of [1]

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 24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6	Operating Capacity/Schedule Comment Emissions Unit 001 pertains to fugitive emissions from the landfill. These fugitive emissions occur on a daily basis.

EMISSIONS UNIT INFORMATION

Section [1] of [1]

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)**Emission Point Description and Type**

1 Identification of Point on Plot Plan or Flow Diagram Landfill Surface	2 Emission Point Type Code 4	
3 Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking		
4 ID Numbers or Descriptions of Emission Units with this Emission Point in Common		
5 Discharge Type Code F	6 Stack Height feet	7 Exit Diameter feet
8 Exit Temperature 77 °F	9 Actual Volumetric Flow Rate acfm	10 Water Vapor %
11 Maximum Dry Standard Flow Rate dscfm	12 Nonstack Emission Point Height 0 feet (1 e , ground surface)	
13 Emission Point UTM Coordinates Zone East (km) North (km)	14 Emission Point Latitude/Longitude Latitude (DD/MM/SS) 28°51'07" Longitude (DD/MM/SS) 82°26'12"	
15 Emission Point Comment The facility emissions consist of fugitive emissions from the landfill surface.		

EMISSIONS UNIT INFORMATION

Section [1] of [1]

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate:** Segment 1 of 1

1 Segment Description (Process/Fuel Type) Fugitive emissions from the landfill surface.		
2 Source Classification Code (SCC) 5-01-004-02		3 SCC Units
4 Maximum Hourly Rate N/A	5 Maximum Annual Rate N/A	6 Estimated Annual Activity Factor
7 Maximum % Sulfur N/A	8 Maximum % Ash N/A	9 Million Btu per SCC Unit N/A
10 Segment Comment		

Segment Description and Rate: Segment __ of __

1 Segment Description (Process/Fuel Type)		
2 Source Classification Code (SCC)		3 SCC Units
4 Maximum Hourly Rate	5 Maximum Annual Rate	6. Estimated Annual Activity Factor
7 Maximum % Sulfur	8 Maximum % Ash	9 Million Btu per SCC Unit
10 Segment Comment		

EMISSIONS UNIT INFORMATION

Section [1] of [1]

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
NMOCs*	N/A	N/A	NS
HAPs**			
VOCs**			

* NMOC is not a criteria pollutant. However, it is the pollutant for which landfills are regulated through 40 CFR 60, Subpart WWW.

** VOCs and HAPs are a subset of NMOCs.

Section [1] of [1] Page

POLLUTANT DETAIL INFORMATION

[1] of [2]

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

(Optional for unregulated emissions units.)

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted NMOC		2 Total Percent Efficiency of Control 0%	
3 Potential Emissions lb/hour tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5 Range of Estimated Fugitive Emissions (as applicable) 18 to 24 tons/year			
6 Emission Factor Reference AP-42, Section 4.2		7 Emissions Method Code 3	
8 a Baseline Actual Emissions (if required) tons/year		8 b Baseline 24-month Period From To	
9 a Projected Actual Emissions (if required) tons/year		9 b Projected Monitoring Period <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10 Calculation of Emissions NMOC generation is calculated using the U.S. EPA Landfill Gas Emission Model (LandGEM) and AP-42 model defaults. Model Inputs: Percent Methane: 50% Decay Rate Constant (k): 0.04 year⁻¹ Methane Recovery Rate (L_o): 3,204 ft³/year NMOC Concentration: 595 ppmv Estimated LFG Generation Rate (2006) = 522 ft³/minute Estimated LFG Generation Rate (2011) = 705 ft³/minute			
11 Potential, Fugitive, and Actual Emissions Comment The fugitive emissions calculated are based on the assumption that 100% of LFG generated dissipates to the atmosphere through the permeable soil cover and existing passive vents in the Landfill. See the section on "Emissions Inventory" in the permit application summary.			

EMISSIONS UNIT INFORMATION

Section [1] of [1] Page

POLLUTANT DETAIL INFORMATION

[2] of [2]

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

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) Per 40 CFR 60.752(b)(2), once the Tier 2 calculated NMOC emission rate is equal to or greater than 50 megagrams per year, a gas collection and control system must be installed. However, there is no maximum allowable limit placed on landfill emissions.	

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)	

Section [1] of [1] Page

[1] of [2]

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

(Optional for unregulated emissions units.)

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1 Pollutant Emitted HAPs		2 Total Percent Efficiency of Control 0%	
3 Potential Emissions lb/hour tons/year		4 Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5 Range of Estimated Fugitive Emissions (as applicable) to 2.5 tons/year			
6 Emission Factor Reference AP-42, Section 4.2		7 Emissions Method Code 3	
8 a Baseline Actual Emissions (if required) tons/year		8 b Baseline 24-month Period From To	
9 a Projected Actual Emissions (if required) tons/year		9 b Projected Monitoring Period <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10 Calculation of Emissions See Table 2 in the attached Permit Application Summary. Based on the projected LFG generation rate and AP-42 default values for HAP concentrations in LFG.			
11 Potential, Fugitive, and Actual Emissions Comment			

EMISSIONS UNIT INFORMATION

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POLLUTANT DETAIL INFORMATION

[2] of [2]

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

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)	
NOT APPLICABLE	

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)	

Section [1] of [1] Page

POLLUTANT DETAIL INFORMATION

[1] of [2]

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

(Optional for unregulated emissions units.)

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1 Pollutant Emitted VOCs		2 Total Percent Efficiency of Control 0%	
3 Potential Emissions lb/hour tons/year		4 Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5 Range of Estimated Fugitive Emissions (as applicable) to 9.4 tons/year			
6 Emission Factor 232 ppmv as hexane Reference AP-42, Section 4.2		7 Emissions Method Code 3	
8 a Baseline Actual Emissions (if required) tons/year		8 b Baseline 24-month Period From To	
9 a Projected Actual Emissions (if required) tons/year		9 b Projected Monitoring Period <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10 Calculation of Emissions			
$Q_{VOC} = \left(705 \frac{ft^3}{min} \right) \left(525,600 \frac{min}{yr} \right) \left(0.0283 \frac{m^3}{ft^3} \right) \left(\frac{232 parts VOC}{10^6 parts LFG} \right) = 2,432.9 \frac{m^3 VOC}{yr}$ $UM_{VOC} = \left(2,432.9 \frac{m^3 VOC}{yr} \right) \left(\frac{\left(86.18 \frac{g}{gmol} \right) (1 atm)}{\left(8.205 \times 10^{-5} \frac{m^3 - atm}{gmol - K} \right) (298K) \left(1,000 \frac{g}{kg} \right)} \right) = 8,575.0 \frac{kg VOC}{yr}$ $VOC = \left(8,575.0 \frac{kg VOC}{yr} \right) \left(2.2 \frac{lb}{kg} \right) \left(\frac{ton}{2,000 lb} \right) = 9.4 \frac{tons VOC}{yr}$			
11 Potential, Fugitive, and Actual Emissions Comment			
See attached Permit Application Summary for additional information.			

EMISSIONS UNIT INFORMATION

Section [1] of [1] Page

POLLUTANT DETAIL INFORMATION

[2] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -**ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

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)	
NOT APPLICABLE	

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)	

EMISSIONS UNIT INFORMATION

Section [1] of [1]

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1 Visible Emissions Subtype	2 Basis for Allowable Opacity <input type="checkbox"/> Rule <input type="checkbox"/> Other
3 Allowable Opacity Normal Conditions % Exceptional Conditions % Maximum Period of Excess Opacity Allowed min/hour	
4 Method of Compliance	
5 Visible Emissions Comment NOT APPLICABLE	

Visible Emissions Limitation: Visible Emissions Limitation ___ of ___

1 Visible Emissions Subtype	2 Basis for Allowable Opacity <input type="checkbox"/> Rule <input type="checkbox"/> Other
3 Allowable Opacity Normal Conditions % Exceptional Conditions % Maximum Period of Excess Opacity Allowed min/hour	
4 Method of Compliance	
5 Visible Emissions Comment	

EMISSIONS UNIT INFORMATION

Section [1] of [1]

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor ___ of ___

1 Parameter Code	2 Pollutant(s)
3 CMS Requirement	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4 Monitor Information Manufacturer Model Number Serial Number	
5 Installation Date	6 Performance Specification Test Date
7 Continuous Monitor Comment NOT APPLICABLE	

Continuous Monitoring System: Continuous Monitor ___ of ___

1 Parameter Code	2 Pollutant(s)
3 CMS Requirement	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4 Monitor Information Manufacturer Model Number Serial Number	
5 Installation Date	6 Performance Specification Test Date
7 Continuous Monitor Comment	

EMISSIONS UNIT INFORMATION

Section [1] of [1]

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor ___ of ___

1 Parameter Code	2 Pollutant(s)
3 CMS Requirement.	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4 Monitor Information Manufacturer Model Number	Serial Number
5 Installation Date	6 Performance Specification Test Date
7 Continuous Monitor Comment NOT APPLICABLE	

Continuous Monitoring System: Continuous Monitor ___ of ___

1 Parameter Code	2 Pollutant(s)
3 CMS Requirement	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4 Monitor Information Manufacturer Model Number	Serial Number
5 Installation Date	6 Performance Specification Test Date
7 Continuous Monitor Comment	

EMISSIONS UNIT INFORMATION

Section [1] of [1]

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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 1, Figure 2 <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: Attachment 6 <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 7 <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 8 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID Attachment 9 <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6	Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID _____ Test Date(s)/Pollutant(s) Tested. _____ <input type="checkbox"/> Previously Submitted, Date _____ Test Date(s)/Pollutant(s) Tested. _____ <input type="checkbox"/> To be Submitted, Date (if known) _____ Test Date(s)/Pollutant(s) Tested _____ <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Additional Requirements for Air Construction Permit Applications

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)) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
2	Good Engineering Practice Stack Height Analysis (Rule 62-212 400(4)(d), F A C , and Rule 62-212 500(4)(f), F A C.) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
3	Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1	Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID Attachment 4
2.	Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
3	Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
4	Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID _____ <input checked="" type="checkbox"/> Not Applicable
5	Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No 7610-1) <input type="checkbox"/> Copy Attached, Document ID _____ <input type="checkbox"/> Acid Rain Part (Form No 62-210 900(1)(a)) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Repowering Extension Plan (Form No 62-210 900(1)(a)1) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> New Unit Exemption (Form No 62-210 900(1)(a)2) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210 900(1)(a)3) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No 62-210 900(1)(a)4) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No 62-210 900(1)(a)5) <input type="checkbox"/> Attached, Document ID _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

PERMIT APPLICATION SUMMARY

PERMIT APPLICATION SUMMARY

This application is for issuance of a Title V air operation permit for the Citrus County Central Landfill located in Lecanto, Florida. This application and supporting documentation was prepared for the Citrus County Solid Waste Management Division by SCS Engineers (SCS).

SITE BACKGROUND

Citrus County Central Landfill is owned and operated by Citrus County. The facility consists of four major municipal solid waste (MSW) landfill areas, three of which are closed, and miscellaneous landfill operations, such as a leachate treatment plant and yard waste handling.

Title V Operating Permit

Currently, the facility does not have a Title V operating permit. On December 30, 2005, SCS submitted a Revised Design Capacity Report and Tier 1 Non-Methane Organic Compound (NMOC) Emission Rate Report for the landfill on behalf of the County. The Revised Design Capacity Report was required because the County received a solid waste permit on September 30, 2005 to expand the landfill to a design capacity greater than 2.5 million megagrams (Mg) and began filling in this expansion area on October 4, 2005.

Per Rule 62-204.800(8)(b)72 of the Florida Administrative Code (F.A.C.), "Any municipal solid waste landfill subject to 40 CFR 60, Subpart WWW, and which has a design capacity equal to or greater than 2.5 million Mg and 2.5 million cubic meters is subject to the permitting requirements of Chapter 62-213, F.A.C." Therefore, the County is required to submit an application for a Title V operation permit within 180 days after the issuance of the solid waste permit that modifies the design capacity of the facility to be equal to or greater than 2.5 million Mg and 2.5 million cubic meters. Since the Landfill received the solid waste expansion permit on September 30, 2005, the application for a Title V operating permit is required to be submitted by March 29, 2006.

Landfill Gas Collection

The facility is regulated by the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills promulgated in Title 40 of the Code of Federal Regulations Part 60 (40 CFR 60), Subpart WWW. Based on Tier 1 landfill gas (LFG) modeling submitted to the Florida Department of Environmental Protection (FDEP) on December 30, 2005, the estimated emissions of non-methane organic compounds (NMOC) are above 50 megagrams (Mg) per year. As a result, the County is required to submit a site-specific Tier 2 NMOC report, which determines the actual NMOC emissions for the landfill by July 1, 2006. Therefore, the County currently is not required to install and operate a landfill gas collection and control system (GCCS) per the requirements of the NSPS.

EMISSIONS INVENTORY

This emissions inventory is the basis for the information included in the Title V permit application forms. The regulated emission unit included in this emissions inventory is EU 001 – Municipal Solid Waste Landfill. The potential emission rates provided in this inventory and shown on the permit application forms are based on maximum expected operating conditions, not the anticipated actual operating rates.

FUGITIVE NMOC EMISSIONS FROM EMISSION UNIT 001

Because the landfill does not have an active LFG collection and control system, LFG generated by the decomposition of organic material in the buried waste emits through the landfill surface and through passive vents installed in the closed MSW landfill areas. These emissions to the atmosphere are classified as fugitive emissions. Through this fugitive release, NMOC, volatile organic compounds (VOC), and hazardous air pollutants (HAP) contained in LFG also are emitted. Of these, only NMOC is considered a regulated pollutant for the facility.

The fugitive emission rate of these pollutants was estimated based on emission factors in the U.S. Environmental Protection Agency's (U.S. EPA) *Compilation of Air Pollutant Emission Factors*, commonly known as AP-42, and the U.S. EPA's Landfill Gas Emission Model (LandGEM). Inputs for the model included AP-42 defaults for methane generation potential (L_0), methane generation rate constant (k), and NMOC concentration (C_{NMOC}), and historical waste receipts and projected waste tonnages that were provided to SCS by the County.

Potential NMOC Emissions

As shown in Table 1 at the end of this section, the model projects a maximum LFG generation rate of 705 standard cubic feet per minute (scfm) for 2011, which is the end of the initial five-year permit period. This LFG generation rate is used in the calculations shown below. The projected NMOC emission rate in 2011 is estimated to be 24 tons per year.

Potential VOC Fugitive Emissions

The maximum potential fugitive emissions of VOCs from the landfill surface were calculated using the methods outlined in Section 2.4 of AP-42. As recommended by guidance in Note C of AP-42 Table 2.4-2, the VOC content of the LFG was assumed to be 39 percent of the NMOC concentration. Because the NMOC concentration for the landfill is based on the AP-42 default value of 595 parts per million by volume (ppmv) as hexane, the corresponding VOC concentration was assumed to be 232 ppmv as hexane. This concentration was used in equations (3) and (4) of Section 2.4, as shown below. The potential fugitive emissions from the landfill are based on the estimated maximum LFG generation rate for the five-year permit period, which is projected to be 705 scfm in 2011.

$$Q_{\text{voc}} = \left[\frac{705 \text{ scf}}{\text{min}} \right] \left[\frac{525,600 \text{ min}}{\text{yr}} \right] \left[\frac{0.0283 \text{ m}^3}{\text{ft}^3} \right] \left[\frac{232 \text{ parts VOC as hexane}}{10^6 \text{ parts LFG}} \right] = 2,432.9 \text{ m}^3 \text{ VOC/yr}$$

$$UM_{\text{voc}} = \left[\frac{2,432.9 \text{ m}^3 \text{ VOC}}{\text{yr}} \right] \left[\frac{(86.18 \text{ g VOC as hexane/gmol})(1 \text{ atm})}{\left[8.205 \times 10^{-5} \frac{(\text{m}^3)(\text{atm})}{(\text{gmol})(\text{K})} \right] \frac{(1,000 \text{ g})}{(\text{kg})} (273 + 25 \text{ K})} \right] = 8,575.0 \text{ kg VOC/yr}$$

$$UM_{\text{voc}} = \left[\frac{8,575.0 \text{ kg VOC}}{\text{yr}} \right] \left[\frac{2.2 \text{ lb}}{\text{kg}} \right] \left[\frac{\text{ton}}{2,000 \text{ lb}} \right] = 9.4 \text{ tons fugitive VOC/yr}$$

Potential HAP Fugitive Emissions

The maximum potential fugitive HAP emissions attributed to fugitive LFG emissions from the landfill surface in 2011 were calculated in the same manner as potential VOC emissions, except that the equations utilized the default concentration and molecular weight for each individual HAP listed in Table 2.4-1 of AP-42. As with the calculations for VOC emissions, the LFG generation rate was based on an assumed methane concentration of 50 percent. The results are provided in Table 2 at the end of this section.

As shown at the bottom of the table, the total estimated maximum potential emissions of all 26 HAPs listed in Table 2.4-1 of AP-42 is 2.5 tons per year, all of which will be fugitive. The individual HAP emitted in the greatest quantity is toluene at an annual fugitive emission rate of approximately 0.85 tons per year.

**TABLE 1. PROJECTED LFG AND NMOC GENERATION RATES
CITRUS COUNTY CENTRAL LANDFILL-LECANTO, FLORIDA**

Year	Disposal Rate (tons/yr)	Refuse In-Place (tons)	Disposal Rate (Mg/yr)	Refuse In-Place (Mg)	Methane Generation Rates (m ³ /yr)	LFG Generation Rates (cfm) (Million ft ³ /yr)		NMOC Generation Rates (tons/yr)	NMOC Generation Rates (Mg/yr)
1975	12,676	0	11,499	0	0.000E+00	0	0	0.0	0.0
1976	13,944	12,676	12,649	11,499	4.600E+04	6	3	0.2	0.2
1977	15,338	26,620	13,914	24,149	9.479E+04	13	7	0.4	0.4
1978	16,872	41,958	15,306	38,063	1.467E+05	20	10	0.7	0.6
1979	18,559	58,829	16,836	53,369	2.022E+05	27	14	0.9	0.8
1980	20,415	77,388	18,520	70,205	2.616E+05	35	18	1.2	1.1
1981	22,456	97,803	20,372	88,725	3.254E+05	44	23	1.5	1.4
1982	24,702	120,259	22,409	109,097	3.942E+05	53	28	1.8	1.7
1983	27,172	144,961	24,650	131,507	4.684E+05	63	33	2.2	2.0
1984	29,889	172,133	27,115	156,157	5.486E+05	74	39	2.5	2.3
1985	32,878	202,023	29,827	183,272	6.355E+05	85	45	2.9	2.7
1986	36,166	234,901	32,809	213,099	7.299E+05	98	52	3.4	3.1
1987	39,783	271,067	36,090	245,908	8.325E+05	112	59	3.8	3.5
1988	43,761	310,850	39,699	281,998	9.443E+05	127	67	4.4	4.0
1989	48,338	354,611	43,366	321,698	1.066E+06	143	75	4.9	4.5
1990	53,619	404,949	48,706	370,064	1.258E+06	169	89	5.8	5.3
1991	59,390	466,968	53,363	421,770	1.455E+06	196	103	6.7	6.1
1992	65,791	530,358	59,149	481,133	1.666E+06	229	110	7.2	6.5
1993	72,817	591,149	65,239	536,281	1.891E+06	260	121	7.9	7.2
1994	80,435	655,346	71,011	594,520	2.131E+06	293	133	8.7	7.9
1995	88,646	713,781	77,473	647,531	2.381E+06	329	143	9.3	8.5
1996	97,450	773,827	84,442	702,004	2.636E+06	367	152	10.0	9.1
1997	106,850	828,327	91,444	751,446	2.896E+06	405	160	10.5	9.5
1998	116,848	867,397	98,114	786,889	3.171E+06	443	164	10.7	9.7
1999	127,491	925,945	105,670	840,003	3.456E+06	481	173	11.3	10.3
2000	138,873	999,436	113,367	906,673	3.751E+06	519	185	12.1	11.0
2001	150,358	1,080,309	121,621	980,040	4.056E+06	557	198	13.0	11.8
2002	162,936	1,163,667	129,949	1,055,661	4.371E+06	595	212	13.9	12.6
2003	176,523	1,255,103	138,843	1,138,610	4.696E+06	633	227	14.9	13.5
2004	191,162	1,348,626	148,597	1,223,453	5.031E+06	671	242	15.8	14.4
2005	206,866	1,446,288	158,677	1,312,050	5.376E+06	709	258	16.9	15.3
2006	223,739	1,551,754	169,461	1,407,727	5.731E+06	747	275	18.0	16.3
2007	241,776	1,662,493	180,484	1,508,188	6.096E+06	785	292	19.1	17.3
2008	260,990	1,778,769	191,758	1,613,673	6.471E+06	823	310	20.3	18.4
2009	281,195	1,900,860	203,296	1,724,431	6.856E+06	861	330	21.6	19.6
2010	302,604	2,029,054	215,111	1,840,727	7.251E+06	899	350	22.9	20.8
2011	325,335	2,163,658	227,217	1,962,838	7.656E+06	937	370	24.2	22.0

AP-42 DEFAULT NMOC CONCENTRATION IN LFG	595	ppmv
ASSUMED METHANE CONTENT OF LFG	50%	
AP-42 DEFAULT DECAY RATE CONSTANT	0.04	
AP-42 ULTIMATE METHANE RECOVERY RATE	3,204	ft ³ /ton
METRIC EQUIVALENT	100	m ³ /Mg

**TABLE 2 POTENTIAL FUGITIVE HAP EMISSION RATES
CITRUS COUNTY CENTRAL LANDFILL - LECANTO, FLORIDA**

2011 Total Potential Methane Generation Rate (m³/yr)= 5,245,613 = (705 ft³/min)*(0 500 ft³ CH₄/ft³
LFG)*(m³/35 3198 ft³)*(525,600 min/yr)
Percent of Flow to Flare (%) = 0%
Destruction Efficiency for Flare (%) = 0%
LFG Temperature (deg C) 25 From AP-42
2011 Total LFG Generation (ft³/min) = 705 From EPA Landfill Gas Emission Model,
year 2011 flow rate
*Assume LFG = 50 0% CH₄

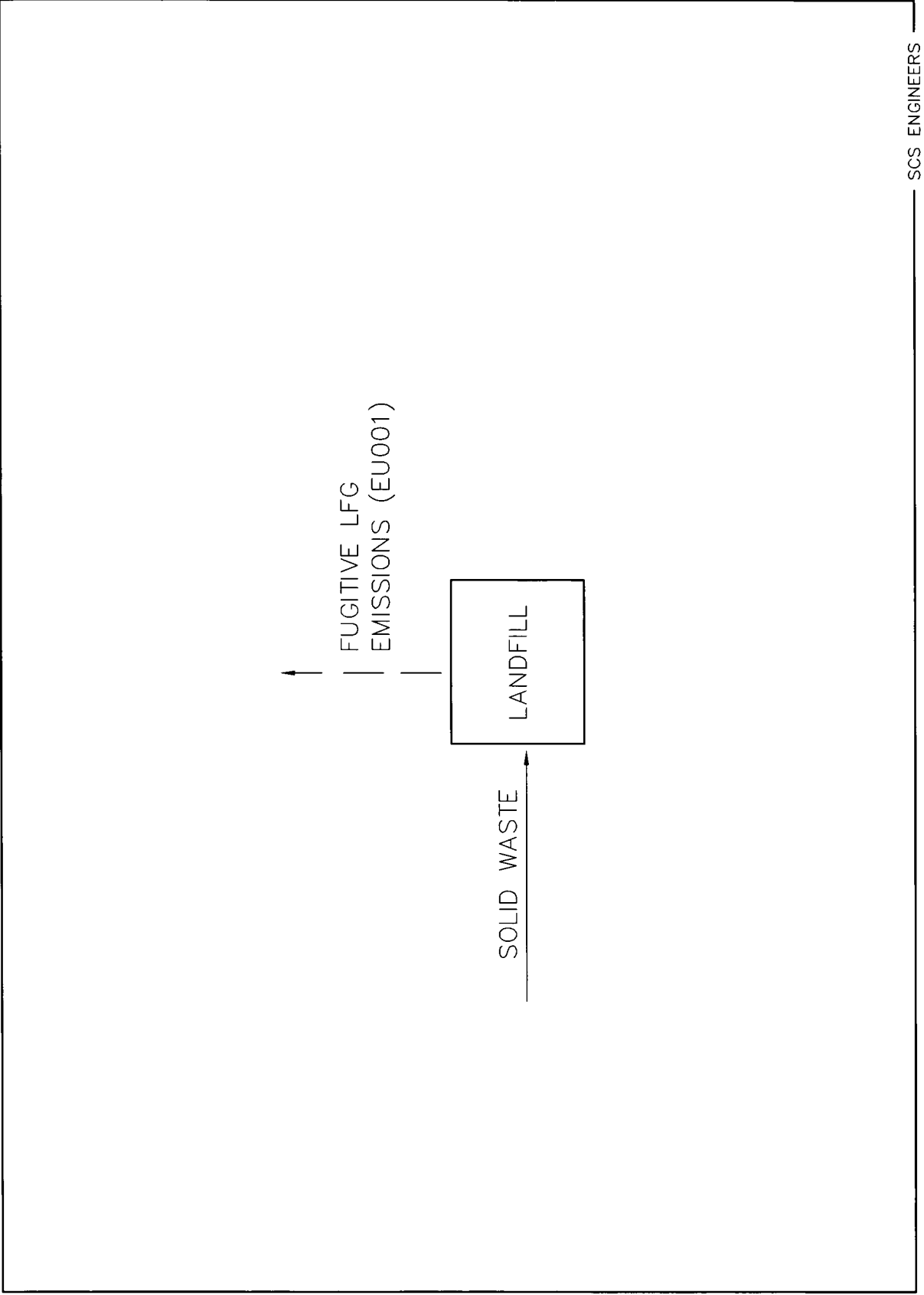
Pollutant	Mol Wt (g/gmol)	Conc (ppmv)	2011 Potential Generation			Fugitive Emissions (tpy)
			Q _p (m ³ /yr)	M _p		
				(kg/yr)	(tpy)	
methyl chloroform	133 41	0 48	2 52	13 74	0 02	0 02
1,1,2,2-tetrachloroethane	167 85	1 11	5 82	39 97	0 04	0 04
ethylidene dichloride	98 97	2 35	12 33	49 90	0 05	0 05
vinylidene chloride	96 94	0 20	1 05	4 16	0 00	0 00
ethylene dichloride	98 96	0 41	2 15	8 70	0 01	0 01
propylene dichloride	112 99	0 18	0 94	4 36	0 00	0 00
acrylonitrile	53 06	6 33	33 20	72 06	0 08	0 08
carbon disulfide	76 13	0 58	3 04	9 47	0 01	0 01
carbon tetrachloride	153 84	0 004	0 02	0 13	0 00	0 00
carbonyl sulfide	60 07	0 49	2 57	6 31	0 01	0 01
chlorobenzene	112 56	0 25	1 31	6 04	0 01	0 01
ethyl chloride	64 52	1 25	6 56	17 30	0 02	0 02
chloroform	119 39	0 03	0 16	0 77	0 00	0 00
1,4-dichlorobenzene	147 00	0 21	1 10	6 62	0 01	0 01
methylene chloride	84 94	14 30	75 01	260 59	0 29	0 29
ethylbenzene	106 16	4 61	24 18	104 99	0 12	0 12
hexane	86 18	6 57	34 46	121 47	0 13	0 13
methyl ethyl ketone	72 11	7 09	37 19	109 68	0 12	0 12
methyl isobutyl ketone	100 16	1 87	9 81	40 18	0 04	0 04
perchloroethylene	165 83	3 73	19 57	132 70	0 15	0 15
trichloroethylene	131 40	2 82	14 79	79 50	0 09	0 09
mercury	200 61	0 000292	0 00	0 01	0 00	0 00
benzene	78 11	1 91	10 02	32 01	0 04	0 04
toluene	92 13	39 30	206 15	776 77	0 85	0 85
vinyl chloride	62 50	7 34	38 50	98 42	0 11	0 11
xylene	106 16	12 10	63 47	275 58	0 30	0 30
Total HAPs	----	----	----	2,271 45	2 50	2.50

Notes

- 1 Q_p = Volumetric emission rate of pollutant AP-42 Section 2 4 equation (3)
- 2 M_p = Mass generation of pollutant
- 3 The equations and all of the pollutant concentrations used to compute the estimated emissions are from AP-42 Section 2 4, as revised Nov 1998
- 4 LFG generation rate based on projected waste tonnages through 2011
- 5 Model parameters used k = 0 04 yr⁻¹, Lo = 100 m³/Mg

ATTACHMENT 1

FIGURES



SCS ENGINEERS

Figure 2 Flow Diagram – EU001, Citrus County Central Landfill – Lecanto, Florida

ATTACHMENT 2

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Unconfined particulate matter emissions are caused by wind erosion and vehicular traffic on unpaved roads usually around the active phases of the landfill. The amount of fugitive particulate matter generated by vehicular traffic is related to the volume of traffic and the speed of travel. The volume of the traffic is based on the average truck capacity, the frequency of collection, the use of transfer stations, etc. The speed is controlled by posting and enforcing the proper speed limits on all the roads inside the landfill to minimize the fugitive dust emissions generated by vehicles. Citrus County also uses a water truck to wet the unpaved roads to suppress dust. The frequency of watering varies with prevailing weather conditions at the landfill.

ATTACHMENT 3

LIST OF INSIGNIFICANT ACTIVITIES

LIST OF INSIGNIFICANT ACTIVITIES

Citrus County is proposing the following insignificant emission units/activities at the site, pursuant to Rule 62-213 430(6), F A C

Brief Description of Emissions Units and/or Activities

- 1 Fugitive VOC emissions from the stationary storage tanks - PTE, <5 TPY, below threshold
- 2 Fugitive PM emissions – yard waste handling and storage piles - PTE, <5 TPY, below threshold
- 3 VOC and criteria pollutants - parts cleaning/solvent degreasing - PTE, <5 TPY, below threshold
- 4 Leachate treatment plant
- 5 Standby pumps (gasoline/diesel)

ATTACHMENT 4

IDENTIFICATION OF APPLICABLE REQUIREMENTS

IDENTIFICATION OF APPLICABLE REQUIREMENTS

The following air-related requirements are applicable to the site

40 CFR 60, Subpart WWW

40 CFR 60, Subpart Cc

62-210 200 – Definitions

62-204 800 – Federal Regulations Adopted

62-210 200 – Definitions

62-210 300 – Permits Required

62-213 – Operation Permits For Major Sources of Air Pollution

ATTACHMENT 5

COMPLIANCE REPORT AND PLAN

COMPLIANCE REPORT AND PLAN

Emission unit EU 001 is in compliance with 40 CFR, Part 60, Subpart WWW. In accordance with 40 CFR 60.752, should the NMOC emission concentrations exceed 50 megagrams per year, a gas collection and control system will be constructed and operated according to the regulatory timeframes.

ATTACHMENT 6

FUEL ANALYSIS OR SPECIFICATION

FUEL ANALYSIS OR SPECIFICATION

Emissions unit EU 001 pertains to fugitive NMOC emissions from the landfill, and therefore the requirement to list a fuel analysis or specification is not applicable

ATTACHMENT 7

DESCRIPTION OF CONTROL EQUIPMENT

DESCRIPTION OF CONTROL EQUIPMENT

There is no control equipment associated with emissions unit (EU) 001

ATTACHMENT 8

PROCEDURES FOR STARTUP AND SHUTDOWN

PROCEDURES FOR STARTUP AND SHUTDOWN

Emissions unit EU 001 pertains to the fugitive emissions that dissipate to the atmosphere through the permeable soil cover and passive vents in the landfill. Equipment is not associated with this emissions unit, and therefore, this item is not applicable.

ATTACHMENT 9

OPERATION AND MAINTENANCE PLAN

OPERATION AND MAINTENANCE PLAN

Emissions unit EU 001 pertains to the fugitive emissions that dissipate to the atmosphere through the permeable soil cover and passive vents in the landfill. Equipment is not associated with this emissions unit, and therefore, this item is not applicable.

