

STATEMENT OF BASIS

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: **0950113**
Orange County

Title V Air Operation Permit Renewal
FINAL Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

The initial Title V Air Operation Permit, No. 0950113-001-AV, was issued/effective on April 16, 1998. This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The subject of this permit is for the renewal of Title V Air Operation Permit, No. 0950113-001-AV.

Orange County operates the Orange County Solid Waste Management Facility (landfill) identified as emissions unit 001 (EU -001). The landfill has a candlestick flare to control the emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and sulfur compounds. The flare is not subject to compliance assurance monitoring (CAM) under 40 CFR Part 64.

E.U. 001 The facility is subject to: 40 CFR Part 60, Subparts A (General Provisions) and WWW (Standards of Performance for Municipal Solid Waste Landfills); with the exception of the candlestick flare control system, which shall have no visible emissions per 40 CFR Part 60.18(c)(1), the facility is subject to the General Visible Emissions (VE) limit of less than 20 percent per Rule 62-296.320(4)(b)1., F.A.C.; the General Volatile Organic Compound (VOC) standard per Rule 62-296.320(1)(a), F.A.C.; and the Objectionable Odor Rule per Rule 62-296.320(2), F.A.C.; and, Reasonable precautions to prevent emissions of unconfined particulate matter (PM) per Rule 62-296.320(4)(c)2., F.A.C.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received August 28, 2001, this facility is not a major source of hazardous air pollutants (HAPs).

Edwards, Mary Lou

From: Edwards, Mary Lou
Sent: Thursday, October 10, 2002 1:57 PM
To: James W. Becker (E-mail)
Cc: Marie Driscoll (E-mail); Dan Morrival (E-mail); Dave Pelham (E-mail)
Subject: Orange County Solid Waste - Final Title V Permit

Importance: High

E-CORRESPONDENCE

jim.becker@ocfl.net

In the Matter of an
Application for Permit Renewal:

James W. Becker, Division Manager
Orange County Solid Waste Division
Orange County Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

FINAL Permit Project No.: 0950113-002-AV (Part 2)
Orange County Solid Waste Management Facility
Orange County

Attached is an Adobe Acrobat version a document from the Central District of the Florida Department of Environmental Protection. Also attached is a permit survey. A free viewer is available at <http://www.adobe.com/>. This e-mail is an alternative to a hard copy being sent by mail. Please reply to this e-mail to confirm receipt.

Or, if you would still like to receive a hard copy or had trouble receiving the attachments, please reply to this e-mail or call me at (407) 893-3334.

Attachment:



Orange Co SW - Part
2.pdf

This is an automatically generated Delivery Status Notification.

Delivery Status Notification (Relay)

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

jim.becker@ocfl.net
Marie.Driscoll@ocfl.net
dan.morrival@ocfl.net

Orange County Solid Waste - Final Title V Permit
Your message

To: Becker, Jim
Cc: Driscoll, Marie; Morrival, Dan; Dave Pelham (E-mail)
Subject: Orange County Solid Waste - Final Title V Permit
Sent: Thu, 10 Oct 2002 13:56:37 -0400

was delivered to the following recipient(s):
Becker, Jim on Thu, 10 Oct 2002 13:57:00 -0400

MSEXCH:MSEExchangeMTA:BCC:EMS1
Driscoll, Marie on Thu, 10 Oct 2002 13:57:00 -0400
MSEXCH:MSEExchangeMTA:BCC:EMS1
Morrical, Dan on Thu, 10 Oct 2002 13:58:28 -0400
MSEXCH:MSEExchangeMTA:BCC:EMS2
The original message was received at Thu, 10 Oct 2002 13:56:53 -0400
from mail2.dep.state.fl.us [199.73.152.9]

----- The following addresses had successful delivery notifications -----
<DPelham@wcg1.com> (relayed to non-DSN-aware mailer)
----- Transcript of session follows -----
procmail: Couldn't read ".rc.local.init"
<DPelham@wcg1.com>... relayed; expect no further notifications

Edwards, Mary Lou

From: Edwards, Mary Lou
Sent: Thursday, October 10, 2002 1:50 PM
To: James W. Becker (E-mail)
Cc: Marie Driscoll (E-mail); Dan Morriscal (E-mail); Dave Pelham (E-mail)
Subject: Orange County Solid Waste - Final Title V Permit

Importance: High

E-CORRESPONDENCE

jim.becker@ocfl.net

In the Matter of an
Application for Permit Renewal:

James W. Becker, Division Manager
Orange County Solid Waste Division
Orange County Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

FINAL Permit Project No.: 0950113-002-AV (Part 1)
Orange County Solid Waste Management Facility
Orange County

Attached is an Adobe Acrobat version a document from the Central District of the Florida Department of Environmental Protection. Also attached is a permit survey. A free viewer is available at <http://www.adobe.com/>. This e-mail is an alternative to a hard copy being sent by mail. Please reply to this e-mail to confirm receipt.

Or, if you would still like to receive a hard copy or had trouble receiving the attachments, please reply to this e-mail or call me at (407) 893-3334.

Attachment



Orange Co SW - Part
1.pdf

The correct e-mail address for returning the survey is:
DEP.OIG@dep.state.fl.us

If the form is returned by mail:
OIG Program
Review & Improvement MS 40
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, FL 32399-9958

For any questions, call Ms. Andrea Vaughn in OIG. Andrea can only answer questions concerning the Permitting Survey, not the permit. Her telephone number is (850) 488-2287.

Exchange Administrator
This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may

not be generated by the destination.

jim.becker@ocfl.net
Marie.Driscoll@ocfl.net
dan.morrical@ocfl.net

Orange County Solid Waste - Final Title V Permit
Your message

To: Becker, Jim
Cc: Driscoll, Marie; Morrival, Dan; Dave Pelham (E-mail)
Subject: Orange County Solid Waste - Final Title V Permit
Sent: Thu, 10 Oct 2002 13:49:35 -0400

was delivered to the following recipient(s):

Becker, Jim on Thu, 10 Oct 2002 13:49:43 -0400
MSEXCH:MSEExchangeMTA:BCC:EMS1
Driscoll, Marie on Thu, 10 Oct 2002 13:49:43 -0400
MSEXCH:MSEExchangeMTA:BCC:EMS1

Mail Delivery Subsystem [MAILER-DAEMON@host4.globalsecureserver.com]

The original message was received at Thu, 10 Oct 2002 13:49:49 -0400
from mail2.dep.state.fl.us [199.73.152.9]

----- The following addresses had successful delivery notifications -----
<DPelham@wcg1.com> (relayed to non-DSN-aware mailer)
----- Transcript of session follows -----
procmail: Couldn't read ".rc.local.init"
<DPelham@wcg1.com>... relayed; expect no further notifications



Jeb Bush
Governor

Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

NOTICE OF FINAL TITLE V AIR OPERATION PERMIT

E-CORRESPONDENCE

jim.becker@ocfl.net

In the Matter of an
Application for Permit Renewal:

James W. Becker, Division Manager
Orange County Solid Waste Division
Orange County Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

FINAL Permit Project No.: **0950113-002-AV**
Orange County Solid Waste Management Facility
Orange County

Enclosed is the FINAL Permit, No. 0950113-002-AV. The purpose is for the renewal of the Title V Air Operation Permit, No. 0950113-001-AV. The facility is located in Orange County. This permit renewal is issued pursuant to Chapter 403, Florida Statutes (F.S.). There were no comments received from Region 4, U.S. EPA, regarding the PROPOSED Permit.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Orlando, Florida.

Sincerely,

L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

10-9-02

Date

AB
LTK/dl
DCL

"More Protection, Less Process"

Printed on recycled paper.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT (including the FINAL Determination and the FINAL Permit) was sent before the close of business on October 10, 2002 to the person(s) listed or as otherwise noted:

James W. Becker, Division Manager
Orange County Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829

The undersigned duly designated deputy agency clerk hereby certifies that a copy of this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT was sent by U.S. Mail before the close of business on October 10, 2002 to the person(s) listed or as otherwise noted:

David M. Pelham, P.E., (*dpelham@wcg1.com*)
Marie Driscoll, Orange County Environmental Protection Division
Bruce Mitchell, DARM, Title V Section, Bureau of Air Regulation
Mr. Gregg Worley - USEPA Region 4

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(7), Florida
Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

Dina Jones *Oct 10, 2002*
(Clerk) (Date)

FINAL Determination

Title V Air Operation Permit Renewal

FINAL Permit No.: **0950113-002-AV**

Renewal to Title V Air Operation Permit No.: 0950113-001-AV

Orange County Solid Waste Division

Orange County Solid Waste Management Facility

Page 1 of 1

I. Comment(s).

No comments were received from the USEPA during their 45 day review period of the PROPOSED Permit.

II. Conclusion.

In conclusion, the permitting authority hereby issues the **FINAL** Permit.

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: 0950113
Orange County

Title V Air Operation Permit Renewal

FINAL Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

Permitting Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

Compliance Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

Title V Air Operation Permit Renewal

FINAL Permit No.: 0950113-002-AV
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

Table of Contents

Section	Page Number
Placard Page	1
I. Facility Information	2
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s)	
C. Relevant Documents.	
II. Facility-wide Conditions	3 - 5
III. Emissions Unit(s) and Conditions	
A. Emission Unit 001: Municipal solid waste landfill with candlestick flare	6



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

Permittee:
Orange County
Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

FINAL Permit No.: 0950113-002-AV
Facility ID No.: 0950113
SIC No(s): 24, 2421
Project: Title V Air Operation Permit Renewal

The purpose of this permit is to renew Title V Air Operation Permit, No. 0950113-001-AV. This existing facility is located at 5901 Young Pine Road; UTM Coordinates: Zone 17, 481.20 km East and 3150.30 km North; and, Latitude: 28° 28' 52" North and Longitude: 81° 11' 30" West.

This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

- Appendix B, 40 CFR 60, Subparts A and WWW
- Appendix D-1, Definitions for Subpart WWW – Municipal Solid Waste Landfills
- Appendix I-1, List of Insignificant Emissions Units and/or Activities
- APPENDIX TV-4, TITLE V CONDITIONS version dated 02/12/02
- Table 2-1, Summary of Monitoring Requirements for Municipal Solid Waste Landfills
- Table 2-2, Summary of Recordkeeping Requirements for Municipal Solid Waste Landfills
- Table 2-3, Summary of Compliance Requirements for Municipal Solid Waste Landfills

Effective Date:	October 6, 2002
Renewal Application Due Date:	August 28, 2006
Expiration Date:	February 28, 2007

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

L. T. Kozlov, P.E.
Program Administrator
Air Resources Management

A3
LTK/dl
DL

"More Protection, Less Process"

Printed on recycled paper.

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of a municipal solid waste disposal facility (landfill) with a candlestick flare.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received August 28, 2001, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-001	Municipal solid waste landfill with candlestick flare

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History
Statement of Basis

These documents are on file with the permitting authority:
Application for Initial Title V Air Operation Permit received June 14, 1996
Additional information request dated September 17, 1997
Additional information received September 29, 1997
Initial Title V Air Operation Permit issued April 15, 1998
Application for a Title V Air Operation Permit Renewal received August 28, 2001
Additional information request dated October 26, 2001
Letter requesting PSD evaluation dated December 3, 2001
Additional information and evaluation received January 23, 2002

Subsection D. Miscellaneous.

The use of 'Permitting Notes' throughout this permit are for informational purposes only and are not permit conditions.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.

{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.

Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.

[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.

[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

[Rule 62-296.320(1)(a), F.A.C.]

7. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities;
- b. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne;
- c. Landscaping or planting of vegetation; and,
- d. Other techniques, as necessary.

[Rule 62-296.320(4)(c)2., F.A.C.]

{Permitting note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition No. 57. of APPENDIX TV-4, TITLE V CONDITIONS)}

8. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS.)}

10. The permittee shall submit all compliance related notifications and reports required of this permit to the [Department's [name of District] District or [name of Local Program] office.

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555; Fax: 407/897-5963

11. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on

information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

[Rule 62-213.420(4), F.A.C.]

13. Annual Operating Report. A DEP Form No. 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" including the Emissions Report, shall be completed for each calendar year on or before March 1 of the following year and submitted to the Department of Environmental Protection's Central District office:

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555

{Permitting Note: This condition implements the requirements of Rules 62-210.370(3) F.A.C. (see Condition 24. of APPENDIX TV-4, TITLE V CONDITIONS.)}

14. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in accordance with Rule 62-213.205, F.A.C., and the appropriate form and associated instructions.

{Permitting Note: This condition implements the requirements of Rules 62-213.205 and 62-213.900(1), F.A.C. (see Condition 27. of APPENDIX TV-4, TITLE V CONDITIONS.)}

15. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(j), F.A.C. (see Condition 29. of APPENDIX TV-4, TITLE V CONDITIONS.)}

16. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.

{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(k), F.A.C. (see Condition 30. of APPENDIX TV-4, TITLE V CONDITIONS.)}

17. At least 180 days prior to the expiration date of this operation permit, the permittee shall submit to this office four copies of the air permit application, DEP Form No. 62-210.900(1).

[Rule 62-4.090(1), F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.420(1)(a)3., 62-213.420(1)(b)1., 2., 3. & 4., 62-213.430(3), F.A.C. and 40 CFR 70.7(f) (see Conditions 35. and 38. of APPENDIX TV-4, TITLE V CONDITIONS.)}

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-001	Municipal solid waste landfill with candlestick flare

{Permitting note: This emissions unit is regulated under: NSPS - 40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, adopted and incorporated by reference in Rule 62-204.800, F.A.C. }

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A1. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.

[Rule 62-210.200(PTE), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-3, Summary of Compliance Requirements for Municipal Solid Waste Landfills, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A2. This emission unit is subject to the following requirements from title 40 of the CFR Part 60 (see attached Appendix B):

40 CFR 60.7	<u>Notification and record keeping</u> .(Appendix B page 1)
40 CFR 60.8	<u>Performance tests</u> (Appendix B page 1)
40 CFR 60.11	<u>Compliance with standards and maintenance requirements</u> (Appendix B page 2)
40 CFR 60.13	<u>Monitoring requirements</u> (Appendix B page 4)
40 CFR 60.14	<u>Modification</u> (Appendix B page 4)
40 CFR 60.15	<u>Reconstruction</u> (Appendix B page 6)
40 CFR 60.18	<u>General control device requirements</u> (Appendix B page 7)
40 CFR 60.752(b)	<u>Standards for air emissions from municipal solid waste landfills</u> (Appendix B page 9)
40 CFR 60.753	<u>Operational standards for collection and control systems</u> (Appendix B page 10)
40 CFR 60.754	<u>Test methods and procedures</u> (Appendix B page 12)
40 CFR 60.755	<u>Compliance provisions</u> (Appendix B page 15)
40 CFR 60.756	<u>Monitoring of operations</u> (Appendix B page 18)
40 CFR 60.757	<u>Reporting requirements</u> (Appendix B page 19)
40 CFR 60.758	<u>Record keeping requirements</u> (Appendix B page 22)
40 CFR 60.759	<u>Specifications for active collection systems</u> (Appendix B page 23)

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Abbreviations and Acronyms:

°F:	Degrees Fahrenheit
BACT:	Best Available Control Technology
CFR:	Code of Federal Regulations
DEP:	State of Florida, Department of Environmental Protection
DARM:	Division of Air Resource Management
EPA:	United States Environmental Protection Agency
F.A.C.:	Florida Administrative Code
F.S.:	Florida Statute
ISO:	International Standards Organization
LAT:	Latitude
LONG:	Longitude
MMBtu:	million British thermal units
MW:	Megawatt
ORIS:	Office of Regulatory Information Systems
SOA:	Specific Operating Agreement
UTM:	Universal Transverse Mercator

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers, and ID numbers.

Code of Federal Regulations:

Example: [40 CFR 60.334]

Where:	40	reference to	Title 40
	CFR	reference to	Code of Federal Regulations
	60	reference to	Part 60
	60.334	reference to	Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: [Rule 62-213, F.A.C.]

Where:	62	reference to	Title 62
	62-213	reference to	Chapter 62-213
	62-213.205	reference to	Rule 62-213.205, F.A.C.

ISO: International Standards Organization refers to those conditions at 288 degrees K, 60 percent relative humidity, and 101.3 kilopascals pressure.

Identification Numbers:

Facility Identification (ID) Number:

Example: Facility ID No.: 1050221

Where:

105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by state database.

Permit Numbers:

Example: 1050221-002-AV, or
1050221-001-AC

Where:

AC = Air Construction Permit
AV = Air Operation Permit (Title V Source)
105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by permit tracking database
001 or 002 = 3-digit sequential project number assigned by permit tracking database

Example: PSD-FL-185
PA95-01
AC53-208321

Where:

PSD = Prevention of Significant Deterioration Permit
PA = Power Plant Siting Act Permit
AC = old Air Construction Permit numbering

APPENDIX B

60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:

- (1) A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- (2) A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days nor less than 30 days prior to such date.
- (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
- (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
- (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with § 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- (6) A notification of the anticipated date for conducting the opacity observations required by § 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
- (7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by § 60.8 in lieu of Method 9 observation data as allowed by § 60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

Section 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator

- (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,
- (2) approves the use of an equivalent method,
- (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,
- (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or

(5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes

(I) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and

(ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

60.11 Compliance with standards and maintenance requirements.

(e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in § 60.8 unless one of the following conditions apply. If no performance test under § 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under § 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in § 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make

available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under § 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in § 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

(4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by § 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and § 60.8 performance test results.

(5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under § 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under § 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under § 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under § 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under § 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in § 60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by § 60.8, the opacity observation results and observer certification required by § 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by § 60.8. If the Administrator finds that an affected facility is in compliance

with all applicable standards for which performance tests are conducted in accordance with § 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the FEDERAL REGISTER.

60.13 Monitoring requirements.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under § 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under § 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under § 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under § 60.8 and as described in § 60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under § 60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the

Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
 - (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and § 60.15.
 - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
 - (3) An increase in the hours of operation.
 - (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by § 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.
 - (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
 - (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.
- (i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.
- (j) (1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.
 - (2) This exemption shall not apply to any new unit that:
 - (i) Is designated as a replacement for an existing unit;

- (ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and
 - (iii) Is located at a different site than the existing unit.
- (k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A temporary clean coal control technology demonstration project, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

60.15 Reconstruction.

- (a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
- (b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:
 - (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
 - (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
- (c) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be post-marked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
 - (1) Name and address of the owner or operator.
 - (2) The location of the existing facility.
 - (3) A brief description of the existing facility and the components which are to be replaced.
 - (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
 - (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
 - (6) The estimated life of the existing facility after the replacements.
 - (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
- (e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
- (f) The Administrator's determination under paragraph (e) shall be based on:
 - (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
 - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;
 - (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
 - (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

60.18 General control device requirements.

- (a) **Introduction.** This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.
- (b) **Flares.** Paragraphs (c) through (f) apply to flares.
- (c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- (2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).
- (3) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f).
- (4) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(4) (ii) and (iii).
- (ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
- (iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.
- (5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6).
- (6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.
- (d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
- (e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
- (f) (1) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
- (2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- (3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

k = Constant

$$1.740 \times 10^{-7} \left(\frac{1}{ppm} \right) \left(\frac{gmole}{scm} \right) \left(\frac{MJ}{kcal} \right)$$

where the standard temperature for (gmole/scm) is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 (Incorporated by reference as specified in § 60.17); and

H_i = Net heat of combustion of sample component i, kcal/ g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8) / 31.7$$

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084 (H_T)$$

V_{max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

Section 60.752(b) Standards for air emissions from municipal solid waste landfills.

Each owner or operator shall either comply with condition (2) below or calculate an NMOC emission rate for the landfill using the procedures specified in section 60.754 of this permit. The NMOC emission rate shall be recalculated annually, except as provided in condition 60.757(b)(1)(ii). When a landfill is closed, and either never needed control or meets the conditions for control system removal specified in condition 60.752(b)(2)(v), a Title V operating permit is no longer required.

- (1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:
 - (i) Submit an annual emission report to the Administrator, except as provided for in condition 60.757(b)(1)(ii); and
 - (ii) Recalculate the NMOC emission rate annually using the procedures specified in condition 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
 - (A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with condition (2) below.
 - (B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in condition 60.757(d).
- (2) If a NMOC emission rate for the landfill, using the procedures specified in section 60.754 of this permit, has not been calculated or the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:
 - (i) Submit a collection and control system design plan prepared by a professional engineer to the **Department of Environmental Protection, Central District Office, Air Program, on or before December 31, 1997.**
 - (A) The collection and control system as described in the plan shall meet the design requirements of condition 60.752(b)(2)(ii) of this permit.
 - (B) The collection and control system design plan shall include any alternatives to the operational standards, test methods or procedures, compliance measures, monitoring or recordkeeping requirements, or reporting provisions, of sections 60.753 through 60.758 of this permit, proposed by the owner or operator.
 - (C) The collection and control system design plan shall either conform with specifications for active collection systems in section 60.759 of this permit or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to section 60.759.
 - (D) The Administrator shall review the information submitted under conditions (2)(i) (A), (B) and (C) above and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.
 - (ii) Install a collection and control system **within 18 months** of the submittal of the design plan under condition (2)(i) above that effectively captures the gas generated within the landfill.
 - (A) An active collection system shall:
 - (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
 - (2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
 - (i) 5 years or more if active; or
 - (ii) 2 years or more if closed or at final grade;
 - (3) Collect gas at a sufficient extraction rate;

- (4) Be designed to minimize off-site migration of subsurface gas.
 - (B) A passive collection system shall:
 - (1) Comply with the provisions specified in conditions (2)(ii)(A) (1), (2), and (4) above.
 - (2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258.40.
 - (iii) Route all the collected gas to a control system that complies with the requirements in either of the following conditions (2)(iii) (A), (B) or (C).
 - (A) An open flare designed and operated in accordance with 40 CFR 60.18;
 - (B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, required under 40 CFR Sec. 60.8 using the test methods specified in condition 60.754(d) of this permit.
 - (1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
 - (2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section 60.756;
 - (C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of condition (2)(iii) (A) or (B) above.
 - (iv) Operate the collection and control device installed to comply with this permit in accordance with the provisions of sections 60.753, 60.755 and 60.756.
 - (v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (2)(v) (A), (B), and (C) below are met:
 - (A) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 40 CFR 258.60. A closure report shall be submitted to the Administrator as provided in condition 60.757(d) of this permit;
 - (B) The collection and control system shall have been in operation a minimum of 15 years; and
 - (C) Following the procedures specified in condition 60.754(b) of this permit, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.752(b)]

Section 60.753 Operational standards for collection and control systems.

- (a) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
 - (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(a)]
- (b) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in condition 60.757(f)(1);

- (2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;
- (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator.
[Rule 62-204.800, F.A.C.; 40 CFR 60.753(b)]

(c) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55° C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

- (1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above.
- (2) Unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above, the oxygen shall be determined by an oxygen meter using Method 3A except that:
 - (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
 - (ii) A data recorder is not required;
 - (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - (iv) A calibration error check is not required;
 - (v) The allowable sample bias, zero drift, and calibration drift are ± 10 percent.[Rule 62-204.800, F.A.C.; 40 CFR 60.753(c)]

(d) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(d)]

(e) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with condition 60.755(b)(2)(iii) above. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(e)]

(f) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the control or treatment system at all times when the collected gas is routed to the system.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(f)]

- (g) If monitoring demonstrates that the operational requirement in conditions (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in condition 60.755(a)(3) through (a)(5) or Sec. 60.755(c) of this permit. If corrective actions are taken as specified in section 60.755, the monitored exceedance is not a violation of the operational requirements in this section.
[Rule 62-204.800, F.A.C.; 40 CFR 60.753(g)]

Section 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in condition (a)(1)(i) below or the equation provided in condition (a)(1)(ii) below. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} .

- (i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC}	= Total NMOC emission rate from the landfill, megagrams per year
k	= methane generation rate constant, year ⁻¹
L_o	= methane generation potential, cubic meters per megagram solid waste
M_i	= mass of solid waste in the i th section, megagrams
t_i	= age of the i th section, years
C_{NMOC}	= concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}	= conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of condition 60.758(d)(2) are followed.

- (ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC}	= mass emission rate of NMOC, megagrams per year
L_o	= methane generation potential, cubic meters per megagram solid waste
R	= average annual acceptance rate, megagrams per year
k	= methane generation rate constant, year ⁻¹
t	= age of landfill, years
C_{NMOC}	= concentration of NMOC, parts per million by volume as hexane
c	= time since closure, years. For active landfill c = 0 and $e^{-kc} = 1$
3.6×10^{-9}	= conversion factor

The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R, if the documentation provisions of condition 60.758(d)(2) are followed.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(1)]

(2) Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

(I) If the NMOC emission rate calculated in condition (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in condition 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under condition 60.752(b)(1).

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with condition 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in specific condition (a)(3) below.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(2)]

(3) Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in condition (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in specific condition (a)(1) of this section.

(ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with condition 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in specific condition (a)(4) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in condition 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(3)]

(4) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of 40 CFR 60 Appendix A. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in condition (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in condition (a)(3) of this section instead of the default values provided in condition (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with condition 60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in condition 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in condition 60.757(b)(1) using the equations in condition (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in condition (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained is used in all subsequent annual NMOC emission rate calculations.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(4)]

(5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in conditions (a)(3) and (a)(4) of this section if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(5)]

(b) After the installation of a collection and control system in compliance with section 60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in condition 60.752(b)(2)(v), using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of Section 4 of Method 2E of 40 CFR 60 Appendix A.

(2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(b)]

(c) The owner or operator shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions in Sec. 60.752(b)(2) is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in condition (b) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(c)]

(d) For the performance test required in condition 60.752(b)(2)(iii)(B), Method 25 or Method 18 of 40 CFR 60 Appendix A shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by condition 60.752(b)(2)(i)(B). If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(d)]

Section 60.755 Compliance provisions.

Except as provided in condition 60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with Sec. 60.752(b)(2)(ii).

(a)(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with condition 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in condition 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_oR(e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill c = 0 and e^{-kc} = 1)

(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n 2kL_oM_i(e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

- k = methane generation rate constant, year⁻¹
- L_o = methane generation potential, cubic meters per megagram solid waste
- M_i = mass of solid waste in the ith section, megagrams
- t_i = age of the ith section, years

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in conditions (a)(1) (i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in conditions (a)(1) (i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(1)]

(2) For the purposes of determining sufficient density of gas collectors for compliance with condition 60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or

other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(2)]

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with condition 60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under condition 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(3)]

(4) Owners or operators are not required to install additional wells as required in specific condition (a)(3) of this section during the first 180 days after gas collection system start-up.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(4)]

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in condition 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(5)]

(6) An owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in section 60.759 of this permit shall provide information satisfactory to the Administrator as specified in condition 60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(6)]

(b) For purposes of compliance with condition 60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in condition 60.752(b)(2)(i). Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:

- (1) 5 years or more if active; or
- (2) 2 years or more if closed or at final grade.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(b)]

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in condition 60.753(d).

(1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in condition (d) of this section.

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with Section 4.3.1 of Method 21 of 40 CFR 60 Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in conditions (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of condition 60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.

(iii) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, the action specified in condition (v) below shall be taken, and no further monitoring of that location is required until the action specified in condition (v) has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in condition (ii) or (iii) above shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in condition (iii) or (v) shall be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(c)]

(d) Each owner or operator seeking to comply with the provisions in condition 60.755(c) above shall comply with the following instrumentation specifications and procedures for surface emission

monitoring devices:

- (1) The portable analyzer shall meet the instrument specifications provided in Section 3 of 40 CFR 60 Appendix A Method 21, except that "methane" shall replace all references to VOC.
- (2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
- (3) To meet the performance evaluation requirements in Section 3.1.3 of Method 21, the instrument evaluation procedures of Section 4.4 of Method 21 shall be used.
- (4) The calibration procedures provided in Section 4.2 of Method 21 shall be followed immediately before commencing a surface monitoring survey.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(d)]

(e) The provisions of this permit apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(e)]

Section 60.756 Monitoring of operations.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and:

- (1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in condition 60.755(a)(3); and
- (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in condition 60.755(a)(5); and
- (3) Monitor temperature of the landfill gas on a monthly basis as provided in condition 60.755(a)(5).
[Rule 62-204.800, F.A.C.; 40 CFR 60.756(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

- (1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 °C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
- (2) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The owner or operator shall either:
 - (I) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
 - (ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
[Rule 62-204.800, F.A.C.; 40 CFR 60.756(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

- (1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.
- (2) A device that records flow to or bypass of the flare. The owner or operator shall either:

- (i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
- (ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in condition 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to install a collection system that does not meet the specifications in Section 60.759 or seeking to monitor alternative parameters to those required by Section 60.753 through Section 60.756 shall provide information satisfactory to the Administrator as provided in conditions 60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in condition 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(f)]

Section 60.757 Reporting requirements.

(a) An amended design capacity report shall be submitted to the Administrator providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above 2.5 million megagrams or 2.5 million cubic meters. The amended design capacity report shall be submitted within 90 days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the requirements of this subpart shall submit an annual NMOC emission rate report to the Administrator, except as provided for in condition (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in condition 60.754(a) or (b), as applicable.

(i) NMOC emission rate reports shall be submitted annually, except as provided for in conditions (b)(1)(ii) and (b)(3) of this section.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of conditions (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with condition 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with Section 60.753 and Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of condition 60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report, in which the emission rate exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in condition 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in condition 60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of condition 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

- (i) A copy of the closure report submitted in accordance with condition (d) of this section;
- (ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
- (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in condition 60.752(b)(2)(v) have been met.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a landfill seeking to comply with condition 60.752(b)(2) using an active collection system designed in accordance with condition 60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) below. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under condition 60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under conditions 60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under Section 60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in condition 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to conditions (a)(3), (b), and (c)(4) of Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(f)]

(g) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall include the following information with the initial performance test report required under 40 CFR 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

Section 60.758 Recordkeeping requirements.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of condition 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in conditions (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in condition 60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in condition 60.759(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(I) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in condition 60.752(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator seeks to demonstrate compliance with condition 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Section 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that shall be recorded and reported under condition 60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour

periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with condition 60.752(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under condition (b)(3)(i) of this section.

(2) Each owner or operator shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under Section 60.756.

(3) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with condition 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, or Federal regulatory requirements.)

(4) Each owner or operator seeking to comply with the provisions of this permit by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under condition 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under condition 60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in condition 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in condition 60.759(a)(3)(ii).

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in condition 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(e)]

Section 60.759 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in conditions 60.752(b)(2)(i)(C) and (D):

(1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

(2) The sufficient density of gas collection devices determined in condition (a)(1) above shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in condition (a)(1) above shall control all gas producing areas, except as provided by conditions (a)(3)(i) and (a)(3)(ii) below.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under condition 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section

proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_oM_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

k = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the i^{th} section, megagram

t_i = age of the solid waste in the i^{th} section, years

C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume

3.6×10^{-9} = conversion factor

(iii) The values for k , L_o , and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence. If field testing has not been performed, the default values for k , L_o and C_{NMOC} provided in condition 60.754(a)(1) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in condition (a)(3)(i) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(a)]

(b) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal

collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

- (3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(b)]

- (c) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with condition 60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

- (1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in condition (c)(2) below shall be used.

- (2) For new collection systems, the maximum flow rate shall be in accordance with condition 60.755(a)(1).

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(c)]

Definitions for Subpart WWW - Municipal Solid Waste Landfills

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under Sec. 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed. A landfill is considered closed after meeting the criteria of Sec. 258.60 of this title.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time either (1) A notification of intent to install a collection and control system or (2) A collection and control system design plan is submitted in compliance with Sec. 60.752(b)(2)(i).

Design capacity means the maximum amount of solid waste a landfill can accept, as specified in the construction or operating permit issued by the State, local, or Tribal agency responsible for regulating the landfill.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under Sec. 257.2 of this title.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (Sec. 257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of Sec. 60.754.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Appendix H-1: Permit History

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility

FINAL Permit No.: 0950113-002-AV
Facility ID No.: 0950113

E.U. ID No.	Description	Permit No.	Effective Date	Expiration Date	Project Type ¹
-001	Orange County Solid Waste Management Facility	0950113-001-AV	04/16/98	02/28/02	Initial

¹ Project Type (select one): Title V: Initial, Revision, Renewal, or Admin. Correction; Construction (new or mod.); or, Extension (AC only).

Appendix I-1: List of Insignificant Emissions Units and/or Activities.

Orange County
Board of County Commissioners
Orange County Solid Waste Management Facility

FINAL Permit No.: 0950113-002-AV
Facility ID No.: 0950113

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

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

Brief Description of Emissions Units and/or Activities

1. Stationary Petroleum Storage Tanks
2. Leachate Emissions
3. Various Pumps and Generators

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02)

APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.

Chapter 62-4, F.A.C.

1. **Not federally enforceable. General Prohibition.** Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained, constructed, expanded, or modified without the appropriate and valid permits issued by the Department, unless the source is exempted by Department rule. The Department may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the provisions of Chapter 403, F.S., or the rules promulgated thereunder. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.

[Rule 62-4.030, Florida Administrative Code (F.A.C.); Section 403.087, Florida Statute (F.S.)]

2. **Not federally enforceable. Procedures to Obtain Permits and Other Authorizations: Applications.**

(1) Any person desiring to obtain a permit from the Department shall apply on forms prescribed by the Department and shall submit such additional information as the Department by law may require.

(2) All applications and supporting documents shall be filed in quadruplicate with the Department.

(3) To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. All applications for a Department permit shall be certified by a professional engineer registered in the State of Florida except, when the application is for renewal of an air pollution operation permit at a non-Title V source as defined in Rule 62-210.200, F.A.C., or where professional engineering is not required by Chapter 471, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

(4) Processing fees for air construction permits shall be in accordance with Rule 62-4.050(4), F.A.C.

(5)(a) To be considered by the Department, each application must be accompanied by the proper processing fee. The fee shall be paid by check, payable to the Department of Environmental Protection. The fee is non-refundable except as provided in Section 120.60, F.S., and in this section.

(c) Upon receipt of the proper application fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin.

(d) If the applicant does not submit the required fee within ten days of receipt of written notification, the Department shall either return the unprocessed application or arrange with the applicant for the pick up of the application.

(e) If an applicant submits an application fee in excess of the required fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin upon receipt, and the Department shall refund to the applicant the amount received in excess of the required fee.

(6) Any substantial modification to a complete application shall require an additional processing fee determined pursuant to the schedule set forth in Rule 62-4.050, F.A.C., and shall restart the time requirements of Sections 120.60 and 403.0876, F.S. For purposes of this Subsection, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review.

(7) Modifications to existing permits proposed by the permittee which require substantial changes in the existing permit or require substantial evaluation by the Department of potential impacts of the proposed modifications shall require the same fee as a new application for the same time duration except for modification under Chapter 62-45, F.A.C.

[Rule 62-4.050, F.A.C.]

3. **Standards for Issuing or Denying Permits.** Except as provided at Rule 62-213.460, F.A.C., the issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules.

[Rule 62-4.070(7), F.A.C.]

4. **Modification of Permit Conditions.**

(1) For good cause and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee the Department may grant additional time. For the purpose of this section, good cause shall include, but not be limited to, any of the following: (also, see **Condition No. 38**).

(a) A showing that an improvement in effluent or emission quality or quantity can be accomplished because of technological advances without unreasonable hardship.

(b) A showing that a higher degree of treatment is necessary to effect the intent and purpose of Chapter 403, F.S.

(c) A showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air or water quality standards.

(e) Adoption or revision of Florida Statutes, rules, or standards which require the modification of a permit condition for compliance.

(2) A permittee may request a modification of a permit by applying to the Department.

(3) A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit. Upon timely submittal of a request for extension, unless the permit automatically expires by statute or rule, the permit will remain in effect until final agency action is taken on the request. For construction permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that, upon completion, the extended permit will comply with the standards and conditions required by applicable regulation. For all other permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that the extended permit will comply with the standards and

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

conditions applicable to the original permit. A permit for which the permit application fee was prorated in accordance with Rule 62-4.050(4)(1), F.A.C., shall not be extended. In no event shall a permit be extended or remain in effect longer than the time limits established by statute or rule.

[Rule 62-4.080, F.A.C.]

5. Renewals. Prior to 180 days before the expiration of a permit issued pursuant to Chapter 62-213, F.A.C., the permittee shall apply for a renewal of a permit using forms incorporated by reference in the specific rule chapter for that kind of permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 180 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department or, if there is court review of the Department's final agency action, until a later date is required by Section 120.60, F.S., provided that, for renewal of a permit issued pursuant to Chapter 62-213, F.A.C., the applicant complies with the requirements of Rules 62-213.420(1)(b)3. and 4., F.A.C.

[Rule 62-4.090, F.A.C.]

6. Suspension and Revocation.

(1) Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.

(2) Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.

(3) A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or the his agent:

(a) Submitted false or inaccurate information in his application or operational reports.

(b) Has violated law, Department orders, rules or permit conditions.

(c) Has failed to submit operational reports or other information required by Department rules.

(d) Has refused lawful inspection under Section 403.091, F.S.

(4) No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60(7), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

[Rule 62-4.100, F.A.C.]

7. **Not federally enforceable.** Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules.

[Rule 62-4.110, F.A.C.]

8. Transfer of Permits.

(1) Within 30 days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Permit" (DEP Form 62-1.201(1)) must be submitted to the Department. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. For air permits, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted.

(2) The Department shall approve the transfer of a permit unless it determines that the proposed new permittee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of these permit conditions. If the Department proposes to deny the transfer, it shall provide both the permittee and the proposed new permittee a written objection to such transfer together with notice of a right to request a Chapter 120, F.S., proceeding on such determination.

(3) Within 30 days of receiving a properly completed Application for Transfer of Permit form, the Department shall issue a final determination. The Department may toll the time for making a determination on the transfer by notifying both the permittee and the proposed new permittee that additional information is required to adequately review the transfer request. Such notification shall be served within 30 days of receipt of an Application for Transfer of Permit form, completed pursuant to Rule 62-4.120(1), F.A.C. If the Department fails to take action to approve or deny the transfer within 30 days of receipt of the completed Application for Transfer of Permit form, or within 30 days of receipt of the last item of timely requested additional information, the transfer shall be deemed approved.

(4) The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer.

(5) Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility.

[Rule 62-4.120, F.A.C.]

9. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. (also, see Condition No. 10.).

[Rule 62-4.130, F.A.C.]

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

10. For purposes of notification to the Department pursuant to Condition No. 9., Condition No. 12.(8), and Rule 62-4.130, F.A.C., Plant Operation-Problems, "immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of 40 CFR 70.6(a)(3)(iii)(B), "prompt" shall have the same meaning as "immediately". [also, see Conditions Nos. 9. and 12.(8).]
[40 CFR 70.6(a)(3)(iii)(B)]

11. **Not federally enforceable.** Review. Failure to request a hearing within 14 days of receipt of notice of proposed or final agency action on a permit application or as otherwise required in Chapter 62-103, F.A.C., shall be deemed a waiver of the right to an administrative hearing.
[Rule 62-4.150, F.A.C.]

12. Permit Conditions. All permits issued by the Department shall include the following general conditions:

(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

(3) As provided in Subsections 403.087(7) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

(4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

(5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.

(6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

(7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.

(8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information: (also, see Condition No. 10.)

(a) A description of and cause of noncompliance; and,

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

(9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

(10) The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

(11) This permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

(12) This permit or a copy thereof shall be kept at the work site of the permitted activity.

(14) The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;

2. the person responsible for performing the sampling or measurements;

3. the dates analyses were performed;

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

(15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
[Rules 62-4.160 and 62-213.440(1)(b), F.A.C.]

13. Construction Permits.

(1) No person shall construct any installation or facility which will reasonably be expected to be a source of air or water pollution without first applying for and receiving a construction permit from the Department unless exempted by statute or Department rule. In addition to the requirements of Chapter 62-4, F.A.C., applicants for a Department Construction Permit shall submit the following as applicable:

- (a) A completed application on forms furnished by the Department.
- (b) An engineering report covering:
 1. plant description and operations,
 2. types and quantities of all waste material to be generated whether liquid, gaseous or solid,
 3. proposed waste control facilities,
 4. the treatment objectives,
 5. the design criteria on which the control facilities are based, and,
 6. other information deemed relevant.

Design criteria submitted pursuant to Rule 62-4.210(1)(b)5., F.A.C., shall be based on the results of laboratory and pilot-plant scale studies whenever such studies are warranted. The design efficiencies of the proposed waste treatment facilities and the quantities and types of pollutants in the treated effluents or emissions shall be indicated. Work of this nature shall be subject to the requirements of Chapter 471, F.S. Where confidential records are involved, certain information may be kept confidential pursuant to Section 403.111, F.S.

- (c) The owners' written guarantee to meet the design criteria as accepted by the Department and to abide by Chapter 403, F.S. and the rules of the Department as to the quantities and types of materials to be discharged from the installation. The owner may be required to post an appropriate bond or other equivalent evidence of financial responsibility to guarantee compliance with such conditions in instances where the owner's financial resources are inadequate or proposed control facilities are experimental in nature.
- (2) The construction permit may contain conditions and an expiration date as determined by the Secretary or the Secretary's designee.
- (3) When the Department issues a permit to construct, the permittee shall be allowed a period of time, specified in the permit, to construct, and to operate and test to determine compliance with Chapter 403, F.S., and the rules of the Department and, where applicable, to apply for and receive an operation permit. The Department may require tests and evaluations of the treatment facilities by the permittee at his/her expense.
[Rule 62-4.210, F.A.C.]

14. Not federally enforceable. Operation Permit for New Sources. To properly apply for an operation permit for new sources, the applicant shall submit the appropriate fee and certification that construction was completed noting any deviations from the conditions in the construction permit and test results where appropriate.
[Rule 62-4.220, F.A.C.]

Chapters 28-106 and 62-110, F.A.C.

15. Public Notice, Public Participation, and Proposed Agency Action. The permittee shall comply with all of the requirements for public notice, public participation, and proposed agency action pursuant to Rules 62-110.106 and 62-210.350, F.A.C.
[Rules 62-110.106, 62-210.350 and 62-213.430(1)(b), F.A.C.]

16. Administrative Hearing. The permittee shall comply with all of the requirements for a petition for administrative hearing or waiver of right to administrative proceeding pursuant to Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.
[Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.]

Chapter 62-204, F.A.C.

17. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source.
[40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

Chapter 62-210, F.A.C.

18. Permits Required. The owner or operator of any emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain an appropriate permit from the Department prior to beginning construction, modification, or initial or continued operation of the emissions unit unless exempted pursuant to Department rule or statute. All emissions limitations, controls, and other requirements imposed by such permits shall be at least as stringent as any applicable limitations and requirements contained in or enforceable under the State Implementation Plan (SIP) or that are otherwise federally enforceable. Except as provided at Rule 62-

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

213.460, F.A.C., issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law.

(1) Air Construction Permits.

(a) Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new or modified facility or emissions unit prior to the beginning of construction or modification, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. Except as provided under Rule 62-213.415, F.A.C., the owner or operator of any facility seeking to create or change an air emissions bubble shall obtain an air construction permit in accordance with all the applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. The construction permit shall be issued for a period of time sufficient to allow construction or modification of the facility or emissions unit and operation while the new or modified facility or emissions unit is conducting tests or otherwise demonstrating initial compliance with the conditions of the construction permit.

(b) Notwithstanding the expiration of an air construction permit, all limitations and requirements of such permit that are applicable to the design and operation of the permitted facility or emissions unit shall remain in effect until the facility or emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing) or any such limitation or requirement that is changed in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C. Either the applicant or the Department can propose that certain conditions be considered obsolete. Any conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules.

1. Except for those limitations or requirements that are obsolete, all limitations and requirements of an air construction permit shall be included and identified in any air operation permit for the facility or emissions unit. The limitations and requirements included in the air operation permit can be changed, and thereby superseded, through the issuance of an air construction permit, federally enforceable state air operation permit, federally enforceable air general permit, or Title V air operation permit; provided, however, that:

- a. Any change that would constitute an administrative correction may be made pursuant to Rule 62-210.360, F.A.C.;
- b. Any change that would constitute a modification, as defined at Rule 62-210.200, F.A.C., shall be accomplished only through the issuance of an air construction permit; and
- c. Any change in a permit limitation or requirement that originates from a permit issued pursuant to 40 CFR 52.21, Rule 62-204.800(10)(d)2., F.A.C., Rule 62-212.400, F.A.C., Rule 62-212.500, F.A.C., or any former codification of Rule 62-212.400 or Rule 62-212.500, F.A.C., shall be accomplished only through the issuance of a new or revised air construction permit under Rule 62-204.800(10)(d)2., Rule 62-212.400, or Rule 62-212.500, F.A.C., as appropriate.

2. The force and effect of any change in a permit limitation or requirement made in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C., shall be the same as if such change were made to the original air construction permit.

3. Nothing in Rule 62-210.300(1)(b), F.A.C., shall be construed as to allow operation of a facility or emissions unit without a valid air operation permit.

(2) Air Operation Permits. Upon expiration of the air operation permit for any existing facility or emissions unit, subsequent to construction or modification, or subsequent to the creation of or change to a bubble, and demonstration of compliance with the conditions of the construction permit for any new or modified facility or emissions unit, any air emissions bubble, or as otherwise provided in Chapter 62-210, F.A.C., or Chapter 62-213, F.A.C., the owner or operator of such facility or emissions unit shall obtain a renewal air operation permit, an initial air operation permit or general permit, or an administrative correction or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-213, F.A.C., and Chapter 62-4, F.A.C.

(a) **Minimum Requirements for All Air Operation Permits.** At a minimum, a permit issued pursuant to this subsection shall:

1. Specify the manner, nature, volume and frequency of the emissions permitted, and the applicable emission limiting standards or performance standards, if any;
2. Require proper operation and maintenance of any pollution control equipment by qualified personnel, where applicable in accordance with the provisions of any operation and maintenance plan required by the air pollution rules of the Department.
3. Contain an effective date stated in the permit which shall not be earlier than the date final action is taken on the application and be issued for a period, beginning on the effective date, as provided below.

a. The operation permit for an emissions unit which is in compliance with all applicable rules and in operational condition, and which the owner or operator intends to continue operating, shall be issued or renewed for a five-year period, except that, for Title V sources subject to Rule 62-213.420(1)(a)1., F.A.C., operation permits shall be extended until 60 days after the due date for submittal of the facility's Title V permit application as specified in Rule 62-213.420(1)(a)1., F.A.C.

b. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for six months or more prior to the expiration date of the current operation permit, shall be renewed for a period not to exceed five years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided:

- (i) the owner or operator of the emissions unit demonstrates to the Department that the emissions unit may need to be reactivated and used, or that it is the owner's or operator's intent to apply to the Department for a permit to construct a new emissions unit at the facility before the end of the extension period; and,

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

(ii) the owner or operator of the emissions unit agrees to and is legally prohibited from providing the allowable emission permitted by the renewed permit as an emissions offset to any other person under Rule 62-212.500, F.A.C.; and,

(iii) the emissions unit was operating in compliance with all applicable rules as of the time the source was shut down.

c. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C.; the operation permit for an emissions unit which has been shut down for five years or more prior to the expiration date of the current operation permit shall be renewed for a maximum period not to exceed ten years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided the conditions given in Rule 62-210.300(2)(a)3.b., F.A.C., are met and the owner or operator demonstrates to the Department that failure to renew the permit would constitute a hardship, which may include economic hardship.

d. The operation permit for an electric utility generating unit on cold standby or long-term reserve shutdown shall be renewed for a five-year period, and additional five-year periods, even if the unit is not maintained in operational condition, provided the conditions given in Rules 62-210.300(2)(a)3.b.(i) through (iii), F.A.C., are met.

4. In the case of an emissions unit permitted pursuant to Rules 62-210.300(2)(a)3.b., c., and d., F.A.C., include reasonable notification and compliance testing requirements for reactivation of such emissions unit and provide that the owner or operator demonstrate to the Department prior to reactivation that such reactivation would not constitute reconstruction pursuant to Rule 62-204.800(7), F.A.C.

[Rules 62-210.300(1) & (2), F.A.C.]

19. **Not federally enforceable. Notification of Startup.** The owner or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

(a) The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.

(b) If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.

[Rule 62-210.300(5), F.A.C.]

20. **Emissions Unit Reclassification.**

(a) Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.

(b) If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.

[Rule 62-210.300(6), F.A.C.]

21. **Transfer of Air Permits.**

(a) An air permit is transferable only after submission of an Application for Transfer of Air Permit (DEP Form 62-210.900(7)) and Department approval in accordance with Rule 62-4.120, F.A.C. For Title V permit transfers only, a complete application for transfer of air permit shall include the requirements of 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Within 30 days after approval of the transfer of permit, the Department shall update the permit by an administrative permit correction pursuant to Rule 62-210.360, F.A.C.

(b) For an air general permit, the provision of Rules 62-210.300(7)(a) and 62-4.120, F.A.C., do not apply. Thirty (30) days before using an air general permit, the new owner must submit an air general permit notification to the Department in accordance with Rule 62-210.300(4), F.A.C., or Rule 62-213.300(2)(b), F.A.C.

[Rule 62-210.300(7), F.A.C.]

22. **Public Notice and Comment.**

(1) **Public Notice of Proposed Agency Action.**

(a) A notice of proposed agency action on permit application, where the proposed agency action is to issue the permit, shall be published by any applicant for:

1. An air construction permit;
2. An air operation permit, permit renewal or permit revision subject to Rule 62-210.300(2)(b), F.A.C., (i.e., a FESOP), except as provided in Rule 62-210.300(2)(b)1.b., F.A.C.; or
3. An air operation permit, permit renewal, or permit revision subject to Chapter 62-213, F.A.C., except Title V air general permits or those permit revisions meeting the requirements of Rule 62-213.412(1), F.A.C.

(b) The notice required by Rule 62-210.350(1)(a), F.A.C., shall be published in accordance with all otherwise applicable provisions of Rule 62-110.106, F.A.C. A public notice under Rule 62-210.350(1)(a)1., F.A.C., for an air construction permit may be combined with any required public notice under Rule 62-210.350(1)(a)2. or 3., F.A.C., for air operation permits. If such notices are combined, the public notice must comply with the requirements for both notices.

(c) Except as otherwise provided at Rules 62-210.350(2) and (5), F.A.C., each notice of intent to issue an air construction permit shall provide a 14-day period for submittal of public comments.

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

(2) Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment - Area Preconstruction Review.

(a) Before taking final agency action on a construction permit application for any proposed new or modified facility or emissions unit subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., and the Department's analysis of the effect of the proposed construction or modification on ambient air quality, including the Department's preliminary determination of whether the permit should be approved or disapproved;
2. A 30-day period for submittal of public comments; and,
3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed facility or emissions unit, whether BACT or LAER has been determined, the degree of PSD increment consumption expected, if applicable, and the location of the information specified in paragraph 1. above; and, notifying the public of the opportunity for submitting comments and requesting a public hearing.

(b) The notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall also be sent by the Department to the Regional Office of the U. S. Environmental Protection Agency and to all other state and local officials or agencies having cognizance over the location of such new or modified facility or emissions unit, including local air pollution control agencies, chief executives of city or county government, regional land use planning agencies, and any other state, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the new or modified facility or emissions unit.

(d) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be displayed in the appropriate district, branch and local program offices.

(e) An opportunity for public hearing shall be provided in accordance with Chapter 120, F.S., and Rule 62-110.106, F.A.C.

(f) Any public comments received shall be made available for public inspection in the location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.

(g) The final determination shall be made available for public inspection at the same location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., was made available.

(h) For a proposed new or modified emissions unit which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area, and which would be subject to the preconstruction review requirements of Rule 62-212.400, F.A.C., or Rule 62-212.500, F.A.C.:

1. The Department shall mail or transmit to the Administrator a copy of the initial application for an air construction permit and notice of every action related to the consideration of the permit application.
2. The Department shall mail or transmit to the Federal Land Manager of each affected Class I area a copy of any written notice of intent to apply for an air construction permit; the initial application for an air construction permit, including all required analyses and demonstrations; any subsequently submitted information related to the application; the preliminary determination and notice of proposed agency action on the permit application; and any petition for an administrative hearing regarding the application or the Department's proposed action. Each such document shall be mailed or transmitted to the Federal Land Manager within fourteen (14) days after its receipt by the Department.

(3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.

(a) Before taking final agency action to issue a new, renewed, or revised air operation permit subject to Chapter 62-213, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.; and,
2. A 30-day period for submittal of public comments.

(b) The notice provided for in Rule 62-210.350(3)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action. If written comments received during the 30-day comment period on a draft permit result in the Department's issuance of a revised draft permit in accordance with Rule 62-213.430(1), F.A.C., the Department shall require the applicant to publish another public notice in accordance with Rule 62-210.350(1)(a), F.A.C.

(c) The notice shall identify:

1. The facility;
2. The name and address of the office at which processing of the permit occurs;
3. The activity or activities involved in the permit action;
4. The emissions change involved in any permit revision;
5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application, compliance plan, permit, monitoring report, and compliance statement required pursuant to Chapter 62-213, F.A.C. (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), and all other materials available to the Department that are relevant to the permit decision;
6. A brief description of the comment procedures required by Rule 62-210.350(3), F.A.C.;
7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled); and,

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

8. The procedures by which persons may petition the Administrator to object to the issuance of the proposed permit after expiration of the Administrator's 45-day review period.

[Rule 62-210.350, F.A.C.]

23. Administrative Permit Corrections.

(1) A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:

- (a) Typographical errors noted in the permit;
- (b) Name, address or phone number change from that in the permit;
- (c) A change requiring more frequent monitoring or reporting by the permittee;
- (d) A change in ownership or operational control of a facility, subject to the following provisions:
 - 1. The Department determines that no other change in the permit is necessary;
 - 2. The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and
 - 3. The new permittee has notified the Department of the effective date of sale or legal transfer.
- (e) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;
- (f) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and,
- (g) Any other similar minor administrative change at the source.

(2) Upon receipt of any such notification the Department shall within 60 days correct the permit and provide a corrected copy to the owner.

(3) After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.

(4) For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.

(5) The Department shall incorporate requirements resulting from issuance of a new or revised construction permit into an existing Title V source permit, if the construction permit or permit revision incorporates requirements of federally enforceable preconstruction review, and if the applicant requests at the time of application that all of the requirements of Rule 62-213.430(1), F.A.C., be complied with in conjunction with the processing of the construction permit application.

[Rule 62-210.360, F.A.C.]

24. Reports.

(3) Annual Operating Report for Air Pollutant Emitting Facility.

- (a) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year.
- (c) The annual operating report shall be submitted to the appropriate Department District or Department approved local air pollution control program office by March 1 of the following year unless otherwise indicated by permit condition or Department request.

[Rule 62-210.370(3), F.A.C.]

25. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

[Rule 62-210.650, F.A.C.]

26. Forms and Instructions. The forms used by the Department in the stationary source control program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, with the subject, title and effective date. Forms 62-210.900(1),(3),(4) and (5), F.A.C., including instructions, are available from the Department as hard-copy documents or executable files on computer diskettes. Copies of forms (hard-copy or diskette) may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Notwithstanding the requirement of Rule 62-4.050(2), F.A.C., to file application forms in quadruplicate, if an air permit application is submitted using the Department's electronic application form, only one copy of the diskette and signature pages is required to be submitted.

(1) Application for Air Permit - Title V Source, Form and Instructions (Effective 02/11/1999).

- (a) Acid Rain Part (Phase II), Form and Instructions (Effective 04/16/2001).
 - 1. Repowering Extension Plan, Form and Instructions (Effective 07/01/1995).
 - 2. New Unit Exemption, Form and Instructions (Effective 04/16/2001).
 - 3. Retired Unit Exemption, Form and Instructions (Effective 04/16/2001).
 - 4. Phase II NOx Compliance Plan, Form and Instructions (Effective 01/06/1998).
 - 5. Phase II NOx Averaging Plan, Form (Effective 01/06/1998).
- (b) Reserved.

(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions (Effective 02/11/1999).

(7) Application for Transfer of Air Permit - Title V and Non-Title V Source, (Effective 04/16/2001).

[Rule 62-210.900, F.A.C.]

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

Chapter 62-213, F.A.C.

27. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.

[Rules 62-213.205 and 62-213.900(1), F.A.C.]

28. Annual Emissions Fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.

[Rule 62-213.205(1)(g), F.A.C.]

29. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

[Rule 62-213.205(1)(i), F.A.C.]

30. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.

[Rule 62-213.205(1)(j), F.A.C.]

31. Air Operation Permit Fees. No permit application processing fee, renewal fee, modification fee or amendment fee is required for an operation permit for a Title V source.

[Rule 62-213.205(4), F.A.C.]

32. Permits and Permit Revisions Required. All Title V sources are subject to the permit requirements of Chapter 62-213, F.A.C.

(1) No Title V source may operate except in compliance with Chapter 62-213, F.A.C.

(2) Except as provided in Rule 62-213.410, F.A.C., no source with a permit issued under the provisions of this chapter shall make any changes in its operation without first applying for and receiving a permit revision if the change meets any of the following:

- (a) Constitutes a modification;
- (b) Violates any applicable requirement;
- (c) Exceeds the allowable emissions of any air pollutant from any unit within the source;
- (d) Contravenes any permit term or condition for monitoring, testing, recordkeeping, reporting or of a compliance certification requirement;
- (e) Requires a case-by-case determination of an emission limitation or other standard or a source specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapters 62-212 or 62-296, F.A.C.;
- (f) Violates a permit term or condition which the source has assumed for which there is no corresponding underlying applicable requirement to which the source would otherwise be subject;
- (g) Results in the trading of emissions among units within a source except as specifically authorized pursuant to Rule 62-213.415, F.A.C.;
- (h) Results in the change of location of any relocatable facility identified as a Title V source pursuant to paragraph (a)-(e), (g) or (h) of the definition of "major source of air pollution" at Rule 62-210.200, F.A.C.;
- (i) Constitutes a change at an Acid Rain Source under the provisions of 40 CFR 72.81(a)(1),(2), or (3), (b)(1) or (b)(3), hereby incorporated by reference;
- (j) Constitutes a change in a repowering plan, nitrogen oxides averaging plan, or nitrogen oxides compliance deadline extension at an Acid Rain Source;
- (k) Is a request for industrial-utility unit exemption pursuant to Rule 62-214.340, F.A.C.

[Rules 62-213.400(1) & (2), F.A.C.]

33. Changes Without Permit Revision. Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation in each alternative method of operation:

- (1) Permitted sources may change among those alternative methods of operation allowed by the source's permit as provided by the terms of the permit;
- (2) Permitted sources may implement the terms or conditions of a new or revised construction permit if:
 - (a) The application for construction permit complied with the requirements of Rule 62-213.420(3) and (4), F.A.C.;
 - (b) The terms or conditions were subject to federally enforceable preconstruction review pursuant to Chapter 62-212, F.A.C.; and,
 - (c) The new or revised construction permit was issued after the Department and the applicant complied with all the requirements of Rule 62-213.430(1), F.A.C.;
- (3) A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;
 - (a) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
 - (b) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
- (4) Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.

[Rule 62-213.410, F.A.C.]

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

34. Immediate Implementation Pending Revision Process.

(1) Those permitted Title V sources making any change that constitutes a modification pursuant to the definition of modification at Rule 62-210.200, F.A.C., but which would not constitute a modification pursuant to 42 USC 7412(a) or to 40 CFR 52.01, 60.2, or 61.15, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may implement such change prior to final issuance of a permit revision in accordance with this section, provided the change:

- (a) Does not violate any applicable requirement;
- (b) Does not contravene any permit term or condition for monitoring, testing, recordkeeping or reporting, or any compliance certification requirement;
- (c) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;
- (d) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and which the source has assumed to avoid an applicable requirement to which the source would otherwise be subject including any federally enforceable emissions cap or federally enforceable alternative emissions limit.

(2) A Title V source may immediately implement such changes after they have been incorporated into the terms and conditions of a new or revised construction permit issued pursuant to Chapter 62-212, F.A.C., and after the source provides to EPA, the Department, each affected state and any approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revision. The Title V source may conform its application for construction permit to include all information required by Rule 62-213.420, F.A.C., in lieu of submitting separate application forms.

(3) The Department shall process the application for operation permit revision in accordance with the provisions of Chapter 62-213, F.A.C., except that the Department shall issue a draft permit revision or a determination to deny the revision within 60 days of receipt of a complete application for operation permit revision or, if the Title V source has submitted a construction permit application conforming to the requirements of Rule 62-213.420, F.A.C., the Department shall issue a draft permit or a determination to deny the revision at the same time the Department issues its determination on issuance or denial of the construction permit application. The Department shall not take final action until all the requirements of Rules 62-213.430(1)(a), (c), (d), and (e), F.A.C., have been complied with.

(4) Pending final action on the operation permit revision application, the source shall implement the changes in accordance with the terms and conditions of the source's new or revised construction permit.

(5) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes until after the Department takes final action to issue the operation permit revision.

(6) If the Department denies the source's application for operation permit revision, the source shall cease implementation of the proposed changes.

[Rule 62-213.412, F.A.C.]

35. Permit Applications.

(1) **Duty to Apply.** For each Title V source, the owner or operator shall submit a timely and complete permit application in compliance with the requirements of Rules 62-213.420, F.A.C., and Rules 62-4.050(1) through (3), F.A.C.

(a) **Timely Application.**

3. For purposes of permit renewal, a timely application is one that is submitted in accordance with Rule 62-4.090, F.A.C.

(b) **Complete Application.**

1. Any applicant for a Title V permit, permit revision or permit renewal must submit an application on DEP Form No. 62-210.900(1), which must include all the information specified by Rule 62-213.420(3), F.A.C., except that an application for permit revision must contain only that information related to the proposed change. The applicant shall include information concerning fugitive emissions and stack emissions in the application. Each application for permit, permit revision or permit renewal shall be certified by a responsible official in accordance with Rule 62-213.420(4), F.A.C.

2. For those applicants submitting initial permit applications pursuant to Rule 62-213.420(1)(a)1., F.A.C., a complete application shall be an application that substantially addresses all the information required by the application form number 62-210.900(1), and such applications shall be deemed complete within sixty days of receipt of a signed and certified application unless the Department notifies the applicant of incompleteness within that time. For all other applicants, the applications shall be deemed complete sixty days after receipt, unless the Department, within sixty days after receipt of a signed application for permit, permit revision or permit renewal, requests additional documentation or information needed to process the application. An applicant making timely and complete application for permit, or timely application for permit renewal as described by Rule 62-4.090(1), F.A.C., shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of Rules 62-213.420(1)(b)3. and 4. F.A.C. Failure of the Department to request additional information within sixty days of receipt of a properly signed application shall not impair the Department's ability to request additional information pursuant to Rules 62-213.420(1)(b)3. and 4., F.A.C.

3. For those permit applications submitted pursuant to the provisions of Rule 62-213.420(1)(a)1., F.A.C., the Department shall notify the applicant if the Department becomes aware at any time during processing of the application that the application contains incorrect or incomplete information. The applicant shall submit the corrected or supplementary information to the Department within ninety days unless the applicant has requested and been granted additional time to submit the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days or such additional time as requested and granted shall render the application incomplete.

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

4. For all applications other than those addressed at Rule 62-213.420(1)(b)3., F.A.C., should the Department become aware, during processing of any application that the application contains incorrect information, or should the Department become aware, as a result of comment from an affected State, an approved local air program, EPA, or the public that additional information is needed to evaluate the application, the Department shall notify the applicant within 30 days. When an applicant becomes aware that an application contains incorrect or incomplete information, the applicant shall submit the corrected or supplementary information to the Department. If the Department notifies an applicant that corrected or supplementary information is necessary to process the permit, and requests a response, the applicant shall provide the information to the Department within ninety days of the Department request unless the applicant has requested and been granted additional time to submit the information or, the applicant shall, within ninety days, submit a written request that the Department process the application without the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days, or such additional time as requested and granted, or to demand in writing within ninety days that the application be processed without the information shall render the application incomplete. Nothing in this section shall limit any other remedies available to the Department.

[Rules 62-213.420(1)(a)3. and 62-213.420(1)(b)1., 2., 3. & 4., F.A.C.]

36. Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. (also, see Condition No. 50.) [Rule 62-213.420(2), F.A.C.]

37. Standard Application Form and Required Information. Applications shall be submitted under Chapter 62-213, F.A.C., on forms provided by the Department and adopted by reference in Rule 62-210.900(1), F.A.C. The information as described in Rule 62-210.900(1), F.A.C., shall be included for the Title V source and each emissions unit. An application must include information sufficient to determine all applicable requirements for the Title V source and each emissions unit and to evaluate a fee amount pursuant to Rule 62-213.205, F.A.C. [Rule 62-213.420(3), F.A.C.]

38. a. Permit Renewal and Expiration. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) and 62-213.420(3), F.A.C. Unless a Title V source submits a timely application for permit renewal in accordance with the requirements of Rule 62-4.090(1), F.A.C., the existing permit shall expire and the source's right to operate shall terminate. No Title V permit will be issued for a new term except through the renewal process.

b. Permit Revision Procedures. Permit revisions shall meet all requirements of Chapter 62-213, F.A.C., including those for content of applications, public participation, review by approved local programs and affected states, and review by EPA, as they apply to permit issuance and permit renewal, except that permit revisions for those activities implemented pursuant to Rule 62-213.412, F.A.C., need not meet the requirements of Rule 62-213.430(1)(b), F.A.C. The Department shall require permit revision in accordance with the provisions of Rule 62-4.080, F.A.C., and 40 CFR 70.7(f), whenever any source becomes subject to any condition listed at 40 CFR 70.7(f)(1), hereby adopted and incorporated by reference. The below requirements from 40 CFR 70.7(f) are adopted and incorporated by reference in Rule 62-213.430(4), F.A.C.:

o 40 CFR 70.7(f): Reopening for Cause. (also, see Condition No. 4.)

(1) This section contains provisions from 40 CFR 70.7(f) that specify the conditions under which a Title V permit shall be reopened prior to the expiration of the permit. A Title V permit shall be reopened and revised under any of the following circumstances:

(i) Additional applicable requirements under the Act become applicable to a major Part 70 source with a remaining permit term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii).

(ii) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approved by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

(iii) The permitting authority or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

(iv) The Administrator or the permitting authority determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(2) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

(3) Reopenings under 40 CFR 70.7(f)(1) shall not be initiated before a notice of such intent is provided to the Part 70 source by the permitting authority at least 30 days in advance of the date that the permit is to be reopened, except that the permitting authority may provide a shorter time period in the case of an emergency.

[Rules 62-213.430(3) & (4), F.A.C.; and, 40 CFR 70.7(f)]

39. Insignificant Emissions Units or Pollutant-Emitting Activities.

(a) All requests for determination of insignificant emissions units or activities made pursuant to Rule 62-213.420(3)(m), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to Chapter 62-213, F.A.C. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of Rule 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under Chapter 62-213, F.A.C., shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to Rule 62-213.430(6), F.A.C.

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

- (b) An emissions unit or activity shall be considered insignificant if all of the following criteria are met:
1. Such unit or activity would be subject to no unit-specific applicable requirement;
 2. Such unit or activity, in combination with other units or activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in Rule 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s);
 3. Such unit or activity would not emit or have the potential to emit:
 - a. 500 pounds per year or more of lead and lead compounds expressed as lead;
 - b. 1,000 pounds per year or more of any hazardous air pollutant;
 - c. 2,500 pounds per year or more of total hazardous air pollutants; or
 - d. 5.0 tons per year or more of any other regulated pollutant.

[Rule 62-213.430(6), F.A.C.]

40. Permit Duration. Permits for sources subject to the Federal Acid Rain Program shall be issued for terms of five years, provided that the initial Acid Rain Part may be issued for a term less than five years where necessary to coordinate the term of such part with the term of a Title V permit to be issued to the source. Operation permits for Title V sources may not be extended as provided in Rule 62-4.080(3), F.A.C., if such extension will result in a permit term greater than five years.

[Rule 62-213.440(1)(a), F.A.C.]

41. Monitoring Information. All records of monitoring information shall specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses.

[Rule 62-213.440(1)(b)2.a., F.A.C.]

42. Retention of Records. Retention of records of all monitoring data and support information shall be for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[Rule 62-213.440(1)(b)2.b., F.A.C.]

43. Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports.

[Rule 62-213.440(1)(b)3.a., F.A.C.]

44. Deviation from Permit Requirements Reports. The permittee shall report in accordance with the requirements of Rules 62-210.700(6) and 62-4.130, F.A.C., deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

[Rule 62-213.440(1)(b)3.b., F.A.C.]

45. Reports. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C.

[Rule 62-213.440(1)(b)3.c., F.A.C.]

46. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect.

[Rule 62-213.440(1)(d)1., F.A.C.]

47. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity.

[Rule 62-213.440(1)(d)3., F.A.C.]

48. Any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C.

[Rule 62-213.440(1)(d)4., F.A.C.]

49. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference.

[Rule 62-213.440(1)(d)5., F.A.C.]

50. Confidentiality Claims. Any permittee may claim confidentiality of any data or other information by complying with Rule 62-213.420(2), F.A.C. (also, see **Condition No. 36.**)

[Rule 62-213.440(1)(d)6., F.A.C.]

51. Statement of Compliance. (a)2. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit using DEP Form No. 62-213.900(7). Such statements shall be accompanied by a certification in accordance with Rule 62-213.420(4), F.A.C. Such statement shall be submitted (postmarked) to the Department and EPA:

- a. Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

b. Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.

3. The statement of compliance status shall include all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C.

(b) The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.

[Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

52. Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in Rule 62-213.460, F.A.C., or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program.

[Rule 62-213.460, F.A.C.]

53. Forms and Instructions. The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by contacting the appropriate permitting authority.

(1) Major Air Pollution Source Annual Emissions Fee Form. (Effective 01/03/2001)

(7) Statement of Compliance Form. (Effective 01/03/2001)

[Rule 62-213.900, F.A.C.: Forms (1) and (7)]

Chapter 62-256, F.A.C.

54. **Not federally enforceable.** Open Burning. This permit does not authorize any open burning nor does it constitute any waiver of the requirements of Chapter 62-256, F.A.C. Source shall comply with Chapter 62-256, F.A.C., for any open burning at the source.

[Chapter 62-256, F.A.C.]

Chapter 62-281, F.A.C.

55. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts B and F, and with Rule 62-281.100, F.A.C. Those requirements include the following restrictions:

(1) Any facility having any refrigeration equipment normally containing 50 (fifty) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added pursuant to 40 CFR 82.166;

(2) No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided at 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved pursuant to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;

(3) No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or Class II substance at 40 CFR 82, Subpart A, Appendices A and B, except in compliance with Rule 62-281.100, F.A.C., and 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;

(4) No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or Class II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined at 40 CFR 82.152) for service, maintenance or repair unless the person has been properly trained and certified pursuant to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance pursuant to 40 CFR 82.158 and unless the person observes the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;

(5) No person may dispose of appliances (except small appliances, as defined at 40 CFR 82.152) without using equipment certified for that type of appliance pursuant to 40 CFR 82.158 and without observing the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;

(6) No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined at 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82, Subpart F.

[40 CFR 82; and, Chapter 62-281, F.A.C. (**Chapter 62-281, F.A.C., is not federally enforceable**)]

Chapter 62-296, F.A.C.

56. Industrial, Commercial, and Municipal Open Burning Prohibited. Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when:

(a) Open burning is determined by the Department to be the only feasible method of operation and is authorized by an air permit issued pursuant to Chapter 62-210 or 62-213, F.A.C.; or,

(b) An emergency exists which requires immediate action to protect human health and safety; or,

(c) A county or municipality would use a portable air curtain incinerator to burn yard trash generated by a hurricane, tornado, fire or other disaster and the air curtain incinerator would otherwise be operated in accordance with the permitting exemption criteria of Rule 62-210.300(3), F.A.C.

[Rule 62-296.320(3), F.A.C.]

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

57. Unconfined Emissions of Particulate Matter.

(4)(c)1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

3. Reasonable precautions include the following:

- a. Paving and maintenance of roads, parking areas and yards.
- b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- e. Landscaping or planting of vegetation.
- f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- g. Confining abrasive blasting where possible.
- h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rules 62-296.320(4)(c)1., 3., & 4. F.A.C.]

[electronic file name: tv-4,14pages.doc]

TABLE 2-1. SUMMARY OF MONITORING REQUIREMENTS FOR MSW LANDFILLS

Equipment	Monitoring Action	Schedule	Reference
Gas Collection System	Monitor gauge pressure within each gas extraction well. A negative value indicates a well is operating with a sufficient gas extraction rate.	Monthly	§60.756(a) (1)
	Monitor nitrogen concentration using Method 3C or oxygen concentration using Method 3A. Nitrogen concentration values <20 percent or oxygen concentration values < 5 percent indicate well extraction rates are not causing excessive air infiltration into the landfill.	Monthly	§60.756(a) (2)
	Monitor LFG temperature in extraction well; should be <55°C (131°F), unless otherwise demonstrated that a higher temperature is appropriate. An elevated LFG temperature is an indicator of subsurface fires and aerobic conditions within the landfill.	Monthly	§60.756(a) (3)
	Monitor methane concentration at the landfill surface. Values <500 ppm above background indicate well extraction rates are sufficient to minimize the amount of LFG seeping out of the landfill.	Quarterly <u>OR</u> Skip Method ^a	§60.775 (c) and §60.756 (f)
	For an alternative gas collection system design, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.	To Be Determined	§60.756 (e)
Gas Control System	Monitor gas flow from collection system to the enclosed combustion device (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration). This requirement identifies periods when gas flow has been diverted from the control device.	At least once every 15 minutes <u>OR</u> Monthly inspections of bypass line seals	§60.756 (b) (2)

TABLE 2-1. SUMMARY OF MONITORING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Equipment	Monitoring Action	Schedule	Reference
Gas Control System (continued)	Monitor gas flow from collection system to open flare (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration). This requirement identifies periods when gas flow has been diverted from the control device.	At least once every 15 minutes OR Monthly inspections of bypass line seals	§60.756(c)(2)
	Monitor combustion temperature of the enclosed combustion device with a temperature monitoring device equipped with a continuous recorder. (Temperature monitoring is not required for a boiler or process heater >44 megawatts) This requirement identifies operational and performance status of control device.	Continuous	§60.756(b)(1)
	Monitor the continuous presence of a pilot flame or the flare flame for an open flare. This requirement confirms operational status of control device.	Continuous	§60.756(c)(1)
	For an alternative control device, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.	To Be Determined	§60.756(d)

a When monitoring of methane concentration for a closed landfill shows no exceedances for three consecutive quarterly monitoring periods, then monitoring can be "skipped" to annual monitoring. Any exceedance of the 500 ppm methane standard returns the landfill to quarterly monitoring.

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS

Operation	Recordkeeping Item	Reference
<p>Landfill and Control System Design</p>	<p>Current maximum design capacity, current amount of refuse-in-place, and year-by-year refuse accumulation rates</p>	<p>§60.758 (a)</p>
	<p>Plot map showing each existing and planned well in the gas collection system. Provide unique identifying labels for each well.</p>	<p>§60.758 (d)</p>
	<p>Installation date and location of all newly installed wells per §60.755(b).</p>	<p>§60.758 (d) (1)</p>
	<p>Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill areas which are excluded from LFG collection and control.</p>	<p>§60.758 (d) (2)</p>
<p>Monitored Operating Parameters for Gas Collection and Control Systems</p>	<p>(1) Gauge pressure in each extraction well, (2) Nitrogen or oxygen concentration in extracted LFG. (3) Temperature of extracted LFG. (4) Methane concentrations along landfill surface. (5) Gas flow from collection system to the BDT control device (or seal bypass lines and inspect seals). (6) Combustion temperature of an enclosed combustion device or the continuous presence of a pilot flame for an open flare. (7) Operating parameters for alternative collection and control system designs, which are specified by the landfill and approved by the implementing agency.</p>	<p>§60.758 (c)</p>
<p>Measurements From Initial Performance Test</p>	<p>Maximum expected gas generation flow rate</p>	<p>60.758 (b) (1) (i)</p>
	<p>Density of wells, horizontal collectors, surface collectors, or other gas extraction devices.</p>	<p>60.758 (b) (1) (ii)</p>
	<p>For enclosed combustion devices (except for boilers or process heaters with a heat input ≥ 44 MW [150 MMBTU/hr]):</p>	

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Operation	Recordkeeping Item	Reference
<p>Measurements From Initial Performance Test (continued)</p>	<p>(1) Average combustion temperature measured at least every 15 minutes and averaged over the performance test duration.</p> <p>(2) Percent reduction of NMOC's by the control device.</p> <p>For boilers/process heaters (of any size):</p> <p>Describe location where LFG is introduced into the boiler flame zone.</p> <p>For open flares:</p> <p>(1) Type of flare (steam-, air-, or non-assisted),</p> <p>(2) All visible emission readings,</p> <p>(3) Heat content determination,</p> <p>(4) Gas flow rate or bypass measurements,</p> <p>(5) Exit velocity determinations,</p> <p>(6) Continuous pilot flame or flare flame monitoring, and</p> <p>(7) All periods when pilot flame or flare flame is absent.</p>	<p>§60.758(b)(2)(i)</p> <p>§60.758(b)(2)(ii)</p> <p>§60.758(b)(3)</p> <p>§60.758(b)(4)</p>
<p>Gas Control System: Periods When Operating Parameters Exceeded Limits Set by Most Recent Performance Test</p>	<p>For enclosed combustion devices (except for boilers/process heaters with a heat input ≥ 44 MW [150 MMBtu/hr]):</p> <p>Records of all 3-hour periods in which the average combustion temperature was more than 28°C (50°F) below the average combustion temperature measured during the most recent performance test.</p> <p>For boilers/process heaters with a heat input ≥ 44 MW (150 MMBtu/hr):</p> <p>Document all periods of operation by recording parameters, such as steam use, fuel use, or other specified parameters required by other regulatory agencies.</p>	<p>§60.758(c)(1)(i)</p> <p>§60.758(c)(3)</p>

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Operation	Recordkeeping Item	Reference
<p>Gas Control System: Periods When Operating Parameters Exceeded Limits Set by Most Recent Performance Test (continued)</p>	<p>For boilers/process heaters: Document any changes to the location where collected LFG is introduced in the boiler flame zone.</p> <p>For an open flare: Record all pilot flame or flare flame monitoring data and all periods when pilot flame or flare flame was absent.</p> <p>Records of continuous flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines.</p>	<p>\$60.758(c)(1)(ii)</p> <p>\$60.758(c)(4)</p> <p>\$60.758(c)(2)</p>
<p>Gas Collection and Control System: Exceedances of operational standards</p>	<p>Record all values which exceed the operational standards specified in §60.753. Also include the operating value from the next monitoring period and the location of each exceedance:</p> <ol style="list-style-type: none"> (1) New well installation, (2) Pressure in each extraction well, (3) Nitrogen concentration or oxygen concentration in extracted LFG, (4) Temperature of extracted LFG, (5) Methane concentrations along landfill surface, (6) Collected LFG is routed to control device at all times, note periods when the collection system and/or control device were not operational. 	<p>\$60.758(e)</p>

TABLE 2-3. SUMMARY OF COMPLIANCE REPORTING REQUIREMENTS FOR MSW LANDFILLS

Report or Action	Schedule	Reference
Initial Design Capacity Report	Submit report according to whichever of the following deadlines occurs first: (1) 90 days after receiving construction or operating permit, <u>OR</u> (2) 30 days after construction or reconstruction starts, <u>OR</u> (3) 30 days after initial acceptance of refuse.	§60.757(a)
Amended Design Capacity Report	If design capacity is increased to a value that equals or exceeds 2.5 million Mg, the landfill must submit an Amended Design Capacity Report. Submit report 90 days after receiving modified permit, using additional land, or increasing maximum design capacity of landfill, whichever occurs first.	§60.757(a)(3)
Annual <u>OR</u> Five-Year ^a NMOC Emission Rate Report (Tier 1)	Submit initial report 90 days after initial acceptance of refuse. May submit with Initial Design Capacity Report. Repeat either once a year <u>OR</u> once every 5 years.	§60.757(b)
Revised NMOC Emission Rate Report (Tier 2)	If Tier 1 analysis results in NMOC emissions ≥ 50 Mg/yr, a revised NMOC emission rate report using data gathered from Tier 2 analysis can be submitted within 180 days of the initial calculated exceedance.	§60.757(c)(1)
Revised NMOC Emission Rate Report (Tier 3)	If Tier 2 analysis results in NMOC emissions ≥ 50 Mg/yr, a revised NMOC Emission Rate Report using data gathered from Tier 3 analysis can be submitted within 1 year of the initial calculated exceedance.	§60.757(c)(2)
Collection and Control System Design Plan	Within 1 year after submitting NMOC Emission Rate Report with a value ≥ 50 Mg/yr. Plans must gain Agency approval prior to installation.	§60.757(c)
Emission Control System Start-up	Control system based on approved design will startup within 18 months after submitting design plan.	§60.752(b)(2)(ii)
Initial Control System Performance Test Report	Submit report within 180 days of emission collection and control system start-up per §60.8. Results can be included in the initial Annual Report.	§60.757(f) §60.757(g)

TABLE 2-3. SUMMARY OF COMPLIANCE REPORTING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Report or Action	Schedule	Reference
Annual Compliance Report	Submit initial report within 180 days of emission collection and control system start-up. Report once every 12 months.	§60.757(f) §60.757(g)
Landfill Closure Report	When landfill is no longer accepting refuse and the landfill is considered closed. Submit report within 30 days of refuse acceptance cessation.	§60.757(d)
Control Equipment Removal Report	Submit report within 30 days prior to removal or cessation of control system operations. Controls can be removed after meeting all of these criteria: (1) Landfill Closure Report has been submitted, (2) Control system was operated for at least 15 years, and (3) Three consecutive NMOC Emission Rate Reports with values <50 Mg/yr achieved.	§60.757(e)

^a The owner/operator may elect to submit an estimate of the NMOC emission rate for the next 5 years in lieu of the annual report if the estimated NMOC emission rate is <50 Mg/yr in each of the 5 years.

STATEMENT OF BASIS

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: **0950113**
Orange County

Title V Air Operation Permit Renewal
PROPOSED Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

The initial Title V Air Operation Permit, No. 0950113-001-AV, was issued/effective on April 16, 1998. This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The subject of this permit is for the renewal of Title V Air Operation Permit, No. 0950113-001-AV.

Orange County operates the Orange County Solid Waste Management Facility (landfill) identified as emissions unit 001 (EU -001). The landfill has a candlestick flare to control the emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and sulfur compounds. The flare is not subject to compliance assurance monitoring (CAM) under 40 CFR Part 64.

E.U. 001 The facility is subject to: 40 CFR Part 60, Subparts A (General Provisions) and WWW (Standards of Performance for Municipal Solid Waste Landfills); with the exception of the candlestick flare control system, which shall have no visible emissions per 40 CFR Part 60.18(c)(1), the facility is subject to the General Visible Emissions (VE) limit of less than 20 percent per Rule 62-296.320(4)(b)1., F.A.C.; the General Volatile Organic Compound (VOC) standard per Rule 62-296.320(1)(a), F.A.C.; and the Objectionable Odor Rule per Rule 62-296.320(2), F.A.C.; and, Reasonable precautions to prevent emissions of unconfined particulate matter (PM) per Rule 62-296.320(4)(c)2., F.A.C.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received August 28, 2001, this facility is not a major source of hazardous air pollutants (HAPs).



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

E-CORRESPONDENCE

jim.becker@ocfl.net

James W. Becker, Division Manager
Orange County Solid Waste Division
Orange County Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

Re: Title V Air Operation Permit Renewal
PROPOSED Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV
Orange County Solid Waste Management Facility

Dear Mr. Becker:

One copy of the "PROPOSED Determination" for the renewal of a Title V Air Operation Permit for the the Orange County Solid Waste Facility located at 5901 Young Pine Road, Orlando, Orange County, is enclosed. This letter is only a courtesy to inform you that the **DRAFT** Permit has become a **PROPOSED** Permit.

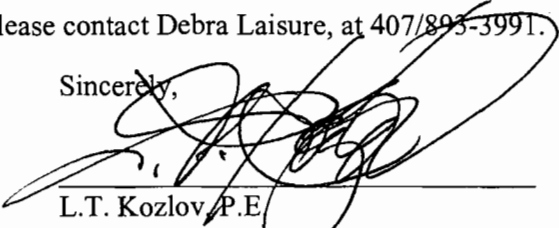
An electronic version of this determination has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is:

"http://www.dep.state.fl.us/air/permitting/airpermits/AirSearch_ltd.asp"

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the **PROPOSED** Permit is made by the USEPA within 45 days, the **PROPOSED** Permit will become a **FINAL** Permit no later than 55 days after the date on which the **PROPOSED** Permit was mailed (posted) to USEPA. If USEPA has an objection to the **PROPOSED** Permit, the **FINAL** Permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.


If you should have any questions, please contact Debra Laisure, at 407/893-3991.

Sincerely,


L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

8-12-02

Date


LTK/dl
Enclosures

copy furnished to: David M. Pelham, P.E., (dpelham@wogl.com)
Dan Morrical (dan.morrical@ocfl.net)
Bruce Mitchell, DARM, Title V Section, Bureau of Air Regulation
Mr. Gregg Worley - USEPA Region 4

"More Protection, Less Process"

PROPOSED Determination

Title V Air Operation Permit Renewal

PROPOSED Permit Project No.: **0950113-002-AV**

Renewal of Title V Air Operation Permit No.: 0950113-001-AV

I. Public Notice.

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" to Orange County Board of County Commissioners/Orange County Solid Waste Division for the Orange County Solid Waste Facility located at 5901 Young Pine Road, Orlando, Orange County, was clerked on July 3, 2002. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" was published in the Orlando Sentinel on July 13, 2002. The **DRAFT** Permit was available for public inspection at the permitting authority's office in Orlando. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" was received on July 23, 2002.

II. Public Comment(s).

(1) No comments were received during the 30 (thirty) day public comment period. Since no comments were received, the **DRAFT** Permit becomes the **PROPOSED** Permit.

III. Conclusion.

(1) Since there were no comments received during the Public Notice period, no changes were made to the **DRAFT** Permit and the permitting authority hereby issues the **PROPOSED** Permit.

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: 0950113
Orange County

Title V Air Operation Permit Renewal

PROPOSED Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

Permitting Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

Compliance Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

Title V Air Operation Permit Renewal

PROPOSED Permit No.: 0950113-002-AV
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

Table of Contents

Section	Page Number
Placard Page	1
I. Facility Information	2
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s)	
C. Relevant Documents.	
II. Facility-wide Conditions	3 - 5
III. Emissions Unit(s) and Conditions	
A. Emission Unit 001: Municipal solid waste landfill with candlestick flare	6



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

Permittee:

Orange County
Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

PROPOSED Permit No.: 0950113-002-AV

Facility ID No.: 0950113

SIC No(s): 24, 2421

Project: Title V Air Operation Permit Renewal

The purpose of this permit is to renew Title V Air Operation Permit, No. 0950113-001-AV. This existing facility is located at 5901 Young Pine Road; UTM Coordinates: Zone 17, 481.20 km East and 3150.30 km North; and, Latitude: 28° 28' 52" North and Longitude: 81° 11' 30" West.

This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix B, 40 CFR 60, Subparts A and WWW

Appendix D-1, Definitions for Subpart WWW – Municipal Solid Waste Landfills

Appendix I-1, List of Insignificant Emissions Units and/or Activities

APPENDIX TV-4, TITLE V CONDITIONS version dated 02/12/02

Table 2-1, Summary of Monitoring Requirements for Municipal Solid Waste Landfills

Table 2-2, Summary of Recordkeeping Requirements for Municipal Solid Waste Landfills

Table 2-3, Summary of Compliance Requirements for Municipal Solid Waste Landfills

Renewal Application Due Date: August 28, 2006

Expiration Date: February 28, 2007

**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

L. T. Kozlov, P.E.
Program Administrator
Air Resources Management

LTK/dl

"More Protection, Less Process"

Printed on recycled paper.

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of a municipal solid waste disposal facility (landfill) with a candlestick flare.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received August 28, 2001, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-001	Municipal solid waste landfill with candlestick flare

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History
Statement of Basis

These documents are on file with the permitting authority:
Application for Initial Title V Air Operation Permit received June 14, 1996
Additional information request dated September 17, 1997
Additional information received September 29, 1997
Initial Title V Air Operation Permit issued April 15, 1998
Application for a Title V Air Operation Permit Renewal received August 28, 2001
Additional information request dated October 26, 2001
Letter requesting PSD evaluation dated December 3, 2001
Additional information and evaluation received January 23, 2002

Subsection D. Miscellaneous.

The use of 'Permitting Notes' throughout this permit are for informational purposes only and are not permit conditions.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.

{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.

Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.

[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.

[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

[Rule 62-296.320(1)(a), F.A.C.]

7. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities;
- b. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne;
- c. Landscaping or planting of vegetation; and,
- d. Other techniques, as necessary.

[Rule 62-296.320(4)(c)2., F.A.C.]

{Permitting note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition No. 57. of APPENDIX TV-4, TITLE V CONDITIONS)}

8. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS.)}

10. The permittee shall submit all compliance related notifications and reports required of this permit to the [Department's [name of District] District or [name of Local Program] office.

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555; Fax: 407/897-5963

11. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on

information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

[Rule 62-213.420(4), F.A.C.]

13. Annual Operating Report. A DEP Form No. 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" including the Emissions Report, shall be completed for each calendar year on or before March 1 of the following year and submitted to the Department of Environmental Protection's Central District office:

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555

{Permitting Note: This condition implements the requirements of Rules 62-210.370(3) F.A.C. (see Condition 24. of APPENDIX TV-4, TITLE V CONDITIONS.)}

14. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in accordance with Rule 62-213.205, F.A.C., and the appropriate form and associated instructions.

{Permitting Note: This condition implements the requirements of Rules 62-213.205 and 62-213.900(1), F.A.C. (see Condition 27. of APPENDIX TV-4, TITLE V CONDITIONS.)}

15. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(j), F.A.C. (see Condition 29. of APPENDIX TV-4, TITLE V CONDITIONS.)}

16. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.

{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(k), F.A.C. (see Condition 30. of APPENDIX TV-4, TITLE V CONDITIONS.)}

17. At least 180 days prior to the expiration date of this operation permit, the permittee shall submit to this office four copies of the air permit application, DEP Form No. 62-210.900(1).

[Rule 62-4.090(1), F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.420(1)(a)3., 62-213.420(1)(b)1., 2., 3. & 4., 62-213.430(3), F.A.C. and 40 CFR 70.7(f) (see Conditions 35. and 38. of APPENDIX TV-4, TITLE V CONDITIONS.)}

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-001	Municipal solid waste landfill with candlestick flare

{Permitting note: This emissions unit is regulated under: NSPS - 40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, adopted and incorporated by reference in Rule 62-204.800, F.A.C. }

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A1. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.
[Rule 62-210.200(PTE), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-3, Summary of Compliance Requirements for Municipal Solid Waste Landfills, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A2. This emission unit is subject to the following requirements from title 40 of the CFR Part 60 (see attached Appendix B):

40 CFR 60.7	<u>Notification and record keeping</u> (Appendix B page 1)
40 CFR 60.8	<u>Performance tests</u> (Appendix B page 1)
40 CFR 60.11	<u>Compliance with standards and maintenance requirements</u> (Appendix B page 2)
40 CFR 60.13	<u>Monitoring requirements</u> (Appendix B page 4)
40 CFR 60.14	<u>Modification</u> (Appendix B page 4)
40 CFR 60.15	<u>Reconstruction</u> (Appendix B page 6)
40 CFR 60.18	<u>General control device requirements</u> (Appendix B page 7)
40 CFR 60.752(b)	<u>Standards for air emissions from municipal solid waste landfills</u> (Appendix B page 9)
40 CFR 60.753	<u>Operational standards for collection and control systems</u> (Appendix B page 10)
40 CFR 60.754	<u>Test methods and procedures</u> (Appendix B page 12)
40 CFR 60.755	<u>Compliance provisions</u> (Appendix B page 15)
40 CFR 60.756	<u>Monitoring of operations</u> (Appendix B page 18)
40 CFR 60.757	<u>Reporting requirements</u> (Appendix B page 19)
40 CFR 60.758	<u>Record keeping requirements</u> (Appendix B page 22)
40 CFR 60.759	<u>Specifications for active collection systems</u> (Appendix B page 23)

APPENDIX B

60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:

(1) A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) [Reserved]

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

(6) A notification of the anticipated date for conducting the opacity observations required by § 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by §60.8 in lieu of Method 9 observation data as allowed by §60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance tests(s) and furnish the Administrator a written report of the results of such performance tests(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator

(1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,

(2) approves the use of an equivalent method,

(3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,

(4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or

- (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
- (c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- (d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.
- (e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
- (1) Sampling ports adequate for test methods applicable to such facility. This includes
 - (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and
 - (ii) providing a stack or duct free of cyclonic flow during performance tests; as demonstrated by applicable test methods and procedures;
 - (2) Safe sampling platform(s);
 - (3) Safe access to sampling platform(s); and
 - (4) Utilities for sampling and testing equipment.
- (f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

60.11 Compliance with standards and maintenance requirements.

- (e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in §60.8 unless one of the following conditions apply. If no performance test under §60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under §60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in §60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix A of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or

operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in §60.11(e)(5), the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in §60.11(e)(3), the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with §60.11(b), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under §60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in §60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of §60.7(e)(1) shall apply.

(4) The owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by §60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and §60.8 performance test results.

(5) The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under §60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under §60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under §60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under §60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under §60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in §60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by §60.8, the opacity observation results and observer certification required by §60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by §60.8. If the Administrator finds that an affected facility is in compliance with

all applicable standards for which performance tests are conducted in accordance with §60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, the shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the FEDERAL REGISTER.

60.13 Monitoring requirements.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system data for compliance with the opacity standard as provided under 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B of this part before the performance test required under §60.8 is conducted. Otherwise the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under §60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under §60.8 and as described in §60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under §60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

60.14 Modification.

(a) Except as provided under §60.14(e) and §60.14(f), any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr (lbs./hour) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that

the emission level resulting from the physical or operational change will either clearly increase or clearly not increase;

- (2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in §60.14(b)(1) does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in §60.14(b)(1). When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in §60 appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
 - (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of §60.14(c) and §60.15;
 - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility;
 - (3) An increase in the hours of operation;
 - (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by §60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.
 - (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
 - (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in §60.14(a), compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.
- (i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.
- (j)(1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual

hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(2) This exemption shall not apply to any new unit that:

- (i) Is designated as a replacement for an existing unit;
- (ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and
- (iii) Is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A temporary clean coal control technology demonstration project, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
- (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

(c) "Fixed capital cost" means the capital needed to provide all the depreciable components.

(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be post-marked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

- (1) Name and address of the owner or operator.
- (2) The location of the existing facility.
- (3) A brief description of the existing facility and the components which are to be replaced.
- (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
- (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
- (6) The estimated life of the existing facility after the replacements.
- (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

(e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.

(f) The Administrator's determination under paragraph (e) shall be based on:

- (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
- (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

- (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
- (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

60.18 General control device requirements.

- (a) Introduction. This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.
- (b) Flares. Paragraphs (c) through (f) apply to flares.
- (c)(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - (2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).
 - (3) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f).
 - (4)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(4) (ii) and (iii).
 - (ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
 - (iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.
 - (5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6).
 - (6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.
- (d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
- (e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
- (f)(1) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
 - (2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
 - (3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

K = Constant

$$1.740 \times 10^{-7} \left(\frac{1}{ppm} \right) \left(\frac{gmole}{scm} \right) \left(\frac{MJ}{kcal} \right)$$

where the standard temperature for (gmole/scm) is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 (Incorporated by reference as specified in § 60.17); and

H_i = Net heat of combustion of sample component i , kcal/ g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8) / 31.7$$

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084 (HT)$$

V_{max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in paragraph (f)(3).

Section 60.752(b) Standards for air emissions from municipal solid waste landfills.

Each owner or operator shall either comply with condition (2) below or calculate an NMOC emission rate for the landfill using the procedures specified in section 60.754 of this permit. The NMOC emission rate shall be recalculated annually, except as provided in condition 60.757(b)(1)(ii). When a landfill is closed, and either never needed control or meets the conditions for control system removal specified in condition 60.752(b)(2)(v), a Title V operating permit is no longer required.

(1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in condition 60.757(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in condition 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

(A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with condition (2) below.

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in condition 60.757(d).

(2) If a NMOC emission rate for the landfill, using the procedures specified in section 60.754 of this permit, has not been calculated or the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Department of Environmental Protection, Central District Office, Air Program, on or before December 31, 1997.

(A) The collection and control system as described in the plan shall meet the design requirements of condition 60.752(b)(2)(ii) of this permit.

(B) The collection and control system design plan shall include any alternatives to the operational standards, test methods or procedures, compliance measures, monitoring or recordkeeping requirements, or reporting provisions, of sections 60.753 through 60.758 of this permit, proposed by the owner or operator.

(C) The collection and control system design plan shall either conform with specifications for active collection systems in section 60.759 of this permit or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to section 60.759.

(D) The Administrator shall review the information submitted under conditions (2)(i)(A),(B) and (C) above and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

(ii) Install a collection and control system within 18 months of the submittal of the design plan under condition (2)(i) above that effectively captures the gas generated within the landfill.

(A) An active collection system shall:

(1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i) 5 years or more if active; or

(ii) 2 years or more if closed or at final grade;

- (3) Collect gas at a sufficient extraction rate;
- (4) Be designed to minimize off-site migration of subsurface gas.
- (B) A passive collection system shall:
 - (1) Comply with the provisions specified in conditions (2)(ii)(A) (1), (2), and (4) above.
 - (2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258.40.
- (iii) Route all the collected gas to a control system that complies with the requirements in either of the following conditions (2)(iii) (A), (B) or (C).
 - (A) An open flare designed and operated in accordance with 40 CFR 60.18;
 - (B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, required under §60.8 using the test methods specified in condition 60.754(d) of this permit.
 - (1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
 - (2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section 60.756;
 - (C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of condition (2)(iii) (A) or (B) above.
- (iv) Operate the collection and control device installed to comply with this permit in accordance with the provisions of sections 60.753, 60.755 and 60.756.
- (v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (2)(v) (A), (B), and (C) below are met:
 - (A) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 40 CFR 258.60. A closure report shall be submitted to the Administrator as provided in condition 60.757(d) of this permit;
 - (B) The collection and control system shall have been in operation a minimum of 15 years; and
 - (C) Following the procedures specified in condition 60.754(b) of this permit, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

[Rule 62-204.800, F.A.C.; 40 CFR 60.752(b)]

Section 60.753 Operational standards for collection and control systems.

- (a) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
 - (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(a)]

(b) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system with negative pressure at each wellhead except under the following conditions:

- (1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in condition 60.757(f)(1);
- (2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;
- (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(b)]

(c) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 co and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

- (1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above.
- (2) Unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above, the oxygen shall be determined by an oxygen meter using Method 3A except that:
 - (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
 - (ii) A data recorder is not required;
 - (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - (iv) A calibration error check is not required;
 - (v) The allowable sample bias, zero drift, and calibration drift are +10 percent.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(c)]

(d) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(d)]

(e) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with condition 60.755(b)(2)(iii) above. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(e)]

(f) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the control or treatment system at all times when the collected gas is routed to the system.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(f)]

(g) If monitoring demonstrates that the operational requirement in conditions (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in condition 60.755(a)(3) through (a)(5) or Sec. 60.755(c) of this permit. If corrective actions are taken as specified in section 60.755, the monitored exceedance is not a violation of the operational requirements in this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(g)]

Section 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in condition (a)(1)(i) below or the equation provided in condition (a)(1)(ii) below. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} .

(i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

- M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year
- k = methane generation rate constant, year-1
- L_o = methane generation potential, cubic meters per megagram solid waste
- M_i = mass of solid waste in the ith section, megagrams
- t_i = age of the ith section, years
- C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
- 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of condition 60.758(d)(2) are followed.

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

- M_{NMOC} = mass emission rate of NMOC, megagrams per year
- L_o = methane generation potential, cubic meters per megagram solid waste
- R = average annual acceptance rate, megagrams per year
- k = methane generation rate constant, year-1
- t = age of landfill, years
- C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
- c = time since closure, years. For active landfill c = 0 and e-kc = 1
- 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R, if the documentation provisions of condition 60.758(d)(2) are followed.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(1)]

(2) Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC emission rate calculated in condition (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in condition 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under condition 60.752(b)(1).

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with condition 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in specific condition (a)(3) below.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(2)]

(3) Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in condition (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in specific condition (a)(1) of this section.

(ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with condition 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in specific condition (a)(4) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in condition 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(3)]

(4) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of 40 CFR 60 Appendix A. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in condition (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in condition (a)(3) of this section instead of the default values provided in condition (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with condition 60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in condition 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in condition 60.757(b)(1) using the equations in condition (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in condition (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained is used in all subsequent annual NMOC emission rate calculations.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(4)]

(5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in conditions (a)(3) and (a)(4) of this section if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(5)]

(b) After the installation of a collection and control system in compliance with section 60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in condition 60.752(b)(2)(v), using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
 Q_{LFG} = flow rate of landfill gas, cubic meters per minute
 C_{NMOC} = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of Section 4 of Method 2E of 40 CFR 60 Appendix A.

(2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(b)]

(c) The owner or operator shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions in Sec. 60.752(b)(2) is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in condition (b) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(c)]

(d) For the performance test required in condition 60.752(b)(2)(iii)(B), Method 25 or Method 18 of 40 CFR 60 Appendix A shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by condition 60.752(b)(2)(i)(B). If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(d)]

Section 60.755 Compliance provisions.

Except as provided in condition 60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with Sec. 60.752(b)(2)(ii).

(a)(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with condition 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in condition 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_oR(e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year-1

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year-1

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the ith section, megagrams

t_i = age of the ith section, years

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in conditions (a)(1) (i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in conditions (a)(1) (i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(1)]

(2) For the purposes of determining sufficient density of gas collectors for compliance with condition 60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(2)]

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with condition 60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under condition 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(3)]

(4) Owners or operators are not required to install additional wells as required in specific condition (a)(3) of this section during the first 180 days after gas collection system start-up.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(4)]

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in condition 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(5)]

(6) An owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in section 60.759 of this permit shall provide information satisfactory to the Administrator as specified in condition 60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(6)]

(b) For purposes of compliance with condition 60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in condition 60.752(b)(2)(i). Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:

- (1) 5 years or more if active; or
- (2) 2 years or more if closed or at final grade.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(b)]

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in condition 60.753(d).

(1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine

pattern spaced 30 meters apart (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in condition (d) of this section.

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with Section 4.3.1 of Method 21 of 40 CFR 60 Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in conditions (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of condition 60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.

(iii) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, the action specified in condition (v) below shall be taken, and no further monitoring of that location is required until the action specified in condition (v) has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in condition (ii) or (iii) above shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in condition (iii) or (v) shall be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(c)]

(d) Each owner or operator seeking to comply with the provisions in condition 60.755(c) above shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer shall meet the instrument specifications provided in Section 3 of 40 CFR 60 Appendix A Method 21, except that "methane" shall replace all references to VOC.

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in Section 3.1.3 of Method 21, the instrument evaluation procedures of Section 4.4 of Method 21 shall be used.

(4) The calibration procedures provided in Section 4.2 of Method 21 shall be followed immediately before commencing a surface monitoring survey.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(d)]

(e) The provisions of this permit apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(e)]

Section 60.756 Monitoring of operations.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and:

- (1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in condition 60.755(a)(3); and
- (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in condition 60.755(a)(5); and
- (3) Monitor temperature of the landfill gas on a monthly basis as provided in condition 60.755(a)(5).

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

- (1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of +1 percent of the temperature being measured expressed in degrees Celsius or +0.5 co, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
- (2) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The owner or operator shall either:
 - (i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
 - (ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

- (1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.
- (2) A device that records flow to or bypass of the flare. The owner or operator shall either:
 - (i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
 - (ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in condition 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to install a collection system that does not meet the specifications in Section 60.759 or seeking to monitor alternative parameters to those required by Section 60.753 through Section 60.756 shall provide information satisfactory to the Administrator as provided in conditions 60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in condition 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(f)]

Section 60.757 Reporting requirements.

(a) An amended design capacity report shall be submitted to the Administrator providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above 2.5 million megagrams or 2.5 million cubic meters. The amended design capacity report shall be submitted within 90 days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the requirements of this subpart shall submit an annual NMOC emission rate report to the Administrator, except as provided for in condition (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in condition 60.754(a) or (b), as applicable.

(i) NMOC emission rate reports shall be submitted annually, except as provided for in conditions (b)(1)(ii) and (b)(3) of this section.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of conditions (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with condition 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with Section 60.753 and Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of condition 60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report, in which the emission rate exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in condition 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in condition 60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of condition 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

- (i) A copy of the closure report submitted in accordance with condition (d) of this section;
- (ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
- (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in condition 60.752(b)(2)(v) have been met.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a landfill seeking to comply with condition 60.752(b)(2) using an active collection system designed in accordance with condition 60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) below. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under condition 60.758(c).

- (1) Value and length of time for exceedance of applicable parameters monitored under conditions 60.756(a), (b), (c), and (d).
- (2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under Section 60.756.
- (3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.
- (4) All periods when the collection system was not operating in excess of 5 days.
- (5) The location of each exceedance of the 500 parts per million methane concentration as provided in condition 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
- (6) The date of installation and the location of each well or collection system expansion added pursuant to conditions (a)(3), (b), and (c)(4) of Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(f)]

(g) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall include the following information with the initial performance test report required under 40 CFR 60.8:

- (1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
- (2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
- (3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
- (4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and
- (5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
- (6) The provisions for the control of off-site migration.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(g)]

Section 60.758 Recordkeeping requirements.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of condition 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in conditions (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(ii):

- (i) The maximum expected gas generation flow rate as calculated in condition 60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

- (ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in condition 60.759(a)(1).
- (2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:
 - (i) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.
 - (ii) The percent reduction of NMOC determined as specified in condition 60.752(b)(2)(iii)(B) achieved by the control device.
- (3) Where an owner or operator seeks to demonstrate compliance with condition 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.
- (4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Section 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

- (1) The following constitute exceedances that shall be recorded and reported under condition 60.757(f):
 - (i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28° C below the average combustion temperature during the most recent performance test at which compliance with condition 60.752(b)(2)(iii) was determined.
 - (ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under condition (b)(3)(i) of this section.
- (2) Each owner or operator shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under Section 60.756.
- (3) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with condition 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, or Federal regulatory requirements.)
- (4) Each owner or operator seeking to comply with the provisions of this permit by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under condition 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under condition 60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in condition 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in condition 60.759(a)(3)(ii).

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in condition 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(e)]

Section 60.759 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in conditions 60.752(b)(2)(i)(C) and (D):

(1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

(2) The sufficient density of gas collection devices determined in condition (a)(1) above shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in condition (a)(1) above shall control all gas producing areas, except as provided by conditions (a)(3)(i) and (a)(3)(ii) below.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under condition 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_oM_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

- Q_i = NMOC emission rate from the i th section, megagrams per year
- k = methane generation rate constant, year⁻¹
- L_o = methane generation potential, cubic meters per megagram solid waste
- M_i = mass of the degradable solid waste in the i th section, megagram
- t_i = age of the solid waste in the i th section, years
- C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume
- 3.6×10^{-9} = conversion factor

(iii) The values for k , L_o , and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence. If field testing has not been performed, the default values for k , L_o and C_{NMOC} provided in condition 60.754(a)(1) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in condition (a)(3)(i) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(a)]

(b) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(b)]

(c) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with condition 60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in condition (c)(2) below shall be used.

(2) For new collection systems, the maximum flow rate shall be in accordance with condition 60.755(a)(1).

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(c)]

Appendix D-1

Definitions for Subpart WWW - Municipal Solid Waste Landfills

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under Sec. 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed. A landfill is considered closed after meeting the criteria of Sec. 258.60 of this title.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time either (1) A notification of intent to install a collection and control system or (2) A collection and control system design plan is submitted in compliance with Sec. 60.752(b)(2)(i).

Design capacity means the maximum amount of solid waste a landfill can accept, as specified in the construction or operating permit issued by the State, local, or Tribal agency responsible for regulating the landfill.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under Sec. 257.2 of this title.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (Sec. 257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of Sec. 60.754.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Appendix H-1: Permit History

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility

PROPOSED Permit No.: 0950113-002-AV
Facility ID No.: 0950113

E.U. ID No.	Description	Permit No.	Effective Date	Expiration Date	Project Type ¹
-001	Orange County Solid Waste Management Facility	0950113-001-AV	04/16/98	02/28/02	Initial

¹ Project Type (select one): Title V: Initial, Revision, Renewal, or Admin. Correction; Construction (new or mod.); or, Extension (AC only).

Appendix I-1: List of Insignificant Emissions Units and/or Activities.

Orange County
Board of County Commissioners
Orange County Solid Waste Management Facility

PROPOSED Permit No.: 0950113-002-AV
Facility ID No.: 0950113

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

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

Brief Description of Emissions Units and/or Activities

1. Stationary Petroleum Storage Tanks
2. Leachate Emissions
3. Various Pumps and Generators

TABLE 2-1. SUMMARY OF MONITORING REQUIREMENTS FOR MSW LANDFILLS

Equipment	Monitoring Action	Schedule	Reference
Gas Collection System	Monitor gauge pressure within each gas extraction well. A negative value indicates a well is operating with a sufficient gas extraction rate.	Monthly	§60.756(a)(1)
	Monitor nitrogen concentration using Method 3C or oxygen concentration using Method 3A. Nitrogen concentration values <20 percent or oxygen concentration values < 5 percent indicate well extraction rates are not causing excessive air infiltration into the landfill.	Monthly	§60.756(a)(2)
	Monitor LFG temperature in extraction well; should be <55°C (131°F), unless otherwise demonstrated that a higher temperature is appropriate. An elevated LFG temperature is an indicator of subsurface fires and aerobic conditions within the landfill.	Monthly	§60.756(a)(3)
	Monitor methane concentration at the landfill surface. Values <500 ppm above background indicate well extraction rates are sufficient to minimize the amount of LFG seeping out of the landfill.	Quarterly <u>OR</u> Skip Method ^a	§60.775(c) and §60.756(f)
	For an alternative gas collection system design, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.	To Be Determined	§60.756(e)

TABLE 2-1. SUMMARY OF MONITORING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Equipment	Monitoring Action	Schedule	Reference
Gas Control System	<p>Monitor gas flow from collection system to the enclosed combustion device (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).</p> <p>This requirement identifies periods when gas flow has been diverted from the control device.</p>	<p>At least once every 15 minutes</p> <p>OR</p> <p>Monthly inspections of bypass line seals</p>	<p>§60.756 (b) (2)</p>
	<p>Monitor gas flow from collection system to open flare (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).</p> <p>This requirement identifies periods when gas flow has been diverted from the control device.</p>	<p>At least once every 15 minutes</p> <p>OR</p> <p>Monthly inspections of bypass line seals</p>	<p>§60.756 (c) (2)</p>
	<p>Monitor combustion temperature of the enclosed combustion device with a temperature monitoring device equipped with a continuous recorder. (Temperature monitoring is not required for a boiler or process heater >44 megawatts)</p> <p>This requirement identifies operational and performance status of control device.</p>	<p>Continuous</p>	<p>§60.756 (b) (1)</p>

TABLE 2-1. SUMMARY OF MONITORING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Equipment	Monitoring Action	Schedule	Reference
	<p>Monitor the continuous presence of a pilot flame or the flare flame for an open flare.</p> <p>This requirement confirms operational status of control device.</p>	Continuous	§60.756(c)(1)
Gas Control System (continued)	For an alternative control device, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.	To Be Determined	§60.756(d)

^a When monitoring of methane concentration for a closed landfill shows no exceedances for three consecutive quarterly monitoring periods, then monitoring can be "skipped" to annual monitoring. Any exceedance of the 500 ppm methane standard returns the landfill to quarterly monitoring.

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS

Operation	Recordkeeping Item	Reference
<p>Landfill and Control System Design</p>	<p>Current maximum design capacity, current amount of refuse-in-place, and year-by-year refuse accumulation rates</p>	<p>§60.758(a)</p>
	<p>Plot map showing each existing and planned well in the gas collection system. Provide unique identifying labels for each well.</p>	<p>§60.758(d)</p>
	<p>Installation date and location of all newly installed wells per §60.755(b).</p>	<p>§60.758(d)(1)</p>
	<p>Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill areas which are excluded from LFG collection and control.</p>	<p>§60.758(d)(2)</p>
<p>Monitored Operating Parameters for Gas Collection and Control Systems</p>	<p>(1) Gauge pressure in each extraction well, (2) Nitrogen or oxygen concentration in (3) Temperature of extracted LFG. (4) Methane concentrations along landfill surface. (5) Gas flow from collection system to the BDT control device (or seal bypass lines and inspect seals). (6) Combustion temperature of an enclosed combustion device or the continuous for an open flare. (7) Operating parameters for alternative collection and control system designs, which are specified by the landfill and</p>	<p>§60.758(c)</p>

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Operation	Recordkeeping Item	Reference
	approved by the implementing agency.	
Measurements From Initial Performance Test	<p>Maximum expected gas generation flow rate</p> <p>Density of wells, horizontal collectors, surface collectors, or other gas extraction devices.</p> <p>For enclosed combustion devices (except for boilers or process heaters with a heat input ≥ 44 MW [150 MMBtu/hr]):</p> <p>(1) Average combustion temperature measured at least every 15 minutes and averaged over the performance test duration.</p> <p>(2) Percent reduction of NMOC's by the control device.</p> <p>For boilers/process heaters (of any size):</p> <p>Describe location where LFG is introduced into the boiler flame zone.</p> <p>For open flares:</p> <p>(1) Type of flare (steam-, air-, or non-assisted),</p> <p>(2) All visible emission readings,</p> <p>(3) Heat content determination,</p> <p>(4) Gas flow rate or bypass measurements,</p>	<p>§60.758(b)(1)(i)</p> <p>§60.758(b)(1)(ii)</p> <p>§60.758(b)(2)(i)</p> <p>§60.758(b)(2)(ii)</p> <p>§60.758(b)(3)</p> <p>§60.758(b)(4)</p>

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Operation	Recordkeeping Item	Reference
	<p>(5) Exit velocity determinations, (6) Continuous pilot flame or flare flame monitoring, and (7) All periods when pilot flame or flare flame is absent.</p>	
<p>Gas Control System: Periods When Operating Parameters Exceeded Limits Set by Most Recent Performance Test</p>	<p>For enclosed combustion devices (except for boilers/process heaters with a heat input ≥ 44 MW [150 MMBtu/hr]):</p> <p>Records of all 3-hour periods in which the average combustion temperature was more than 28°C (50°F) below the average combustion temperature measured during the most recent performance test.</p> <p>For boilers/process heaters with a heat input ≥ 44 MW (150 MMBtu/hr): Document all periods of operation by recording parameters, such as steam use, fuel use, or other specified parameters required by other regulatory agencies.</p> <p>For boilers/process heaters: Document any changes to the location where collected LFG is introduced in the boiler flame zone.</p> <p>For an open flare: Record all pilot flame or flare flame monitoring data and all periods when pilot</p>	<p>§60.758(c)(1)(i)</p> <p>§60.758(c)(3)</p> <p>§60.758(c)(1)(ii)</p> <p>§60.758(c)(4)</p>

TABLE 2-2. SUMMARY OF RECORDKEEPING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Operation	Recordkeeping Item	Reference
	<p>flame or flare flame was absent.</p> <p>Records of continuous flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines.</p>	<p>§60.758 (c) (2)</p>
<p>Gas Collection and Control System:</p> <p>Exceedances of operational standards</p>	<p>Record all values which exceed the operational standards specified in §60.753. Also include the operating value from the next monitoring period and the location of each exceedance:</p> <ol style="list-style-type: none"> (1) New well installation, (2) Pressure in each extraction well, (3) Nitrogen concentration or oxygen concentration in extracted LFG, (4) Temperature of extracted LFG, (5) Methane concentrations along landfill surface, (6) Collected LFG is routed to control <p>at all times, note periods when the collection system and/or control device were not operational.</p>	<p>§60.758 (e)</p>

TABLE 2-3. SUMMARY OF COMPLIANCE REPORTING REQUIREMENTS FOR MSW LANDFILLS

Report or Action	Schedule	Reference
Initial Design Capacity Report	<p>Submit report according to whichever of the following deadlines occurs first:</p> <p>(1) 90 days after receiving construction or operating permit, <u>OR</u></p> <p>(2) 30 days after construction or reconstruction starts, <u>OR</u></p> <p>(3) 30 days after initial acceptance of refuse.</p>	§60.757(a)
Amended Design Capacity Report	<p>If design capacity is increased to a value that equals or exceeds 2.5 million Mg, the landfill must submit an Amended Design Capacity Report. Submit report 90 days after receiving modified permit, using additional land, or increasing maximum design capacity of landfill, whichever occurs first.</p>	§60.757(a)(3)
Annual <u>OR</u> Five-Year ^a NMOC Emission Rate Report (Tier 1)	<p>Submit initial report 90 days after initial acceptance of refuse. May submit with Initial Design Capacity Report.</p> <p>Repeat either once a year <u>OR</u> once every 5 years.</p>	§60.757(b)
Revised NMOC Emission Rate Report (Tier 2)	<p>If Tier 1 analysis results in NMOC emissions ≥ 50 Mg/yr, a revised NMOC emission rate report using data gathered from Tier 2 analysis can be submitted within 180 days of the initial calculated exceedance.</p>	§60.757(c)(1)
Revised NMOC Emission Rate Report (Tier 3)	<p>If Tier 2 analysis results in NMOC emissions ≥ 50 Mg/yr, a revised NMOC Emission Rate Report using data gathered from Tier 3 analysis can be submitted within 1 year of the initial calculated exceedance.</p>	§60.757(c)(2)

TABLE 2-3. SUMMARY OF COMPLIANCE REPORTING REQUIREMENTS FOR MSW LANDFILLS (CONTINUED)

Report or Action	Schedule	Reference
Collection and Control System Design Plan	<p>Within 1 year after submitting NMOC Emission Rate Report with a value ≥ 50 Mg/yr.</p> <p>Plans must gain Agency approval prior to installation.</p>	§60.757(c)
Emission Control System Start-up	Control system based on approved design will startup within 18 months after submitting design plan.	§60.752(b)(2)(ii)
Initial Control System Performance Test Report	Submit report within 180 days of emission collection and control system start-up per §60.8. Results can be included in the initial Annual Report.	§60.757(f) §60.757(g)
Annual Compliance Report	<p>Submit initial report within 180 days of emission collection and control system start-up.</p> <p>Report once every 12 months.</p>	§60.757(f) §60.757(g)
Landfill Closure Report	When landfill is no longer accepting refuse and the landfill is considered closed. Submit report within 30 days of refuse acceptance cessation.	§60.757(d)
Control Equipment Removal Report	<p>Submit report within 30 days prior to removal or cessation of control system operations. Controls can be removed after meeting all of these criteria:</p> <ul style="list-style-type: none"> (1) Landfill Closure Report has been submitted, (2) Control system was operated for at least 15 years, and (3) Three consecutive NMOC Emission Rate Reports with values < 50 Mg/yr achieved. 	§60.757(e)

a The owner/operator may elect to submit an estimate of the NMOC emission rate for the next 5 years in lieu of the annual report if the estimated NMOC emission rate is < 50 Mg/yr in each of the 5 years.

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02)

[Note: This attachment includes "canned conditions" developed from the "Title V Core List."]

{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

Chapter 62-4, F.A.C.

1. **Not federally enforceable. General Prohibition.** Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained, constructed, expanded, or modified without the appropriate and valid permits issued by the Department, unless the source is exempted by Department rule. The Department may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the provisions of Chapter 403, F.S., or the rules promulgated thereunder. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.

[Rule 62-4.030, Florida Administrative Code (F.A.C.); Section 403.087, Florida Statute (F.S.)]

2. **Not federally enforceable. Procedures to Obtain Permits and Other Authorizations; Applications.**

(1) Any person desiring to obtain a permit from the Department shall apply on forms prescribed by the Department and shall submit such additional information as the Department by law may require.

(2) All applications and supporting documents shall be filed in quadruplicate with the Department.

(3) To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. All applications for a Department permit shall be certified by a professional engineer registered in the State of Florida except, when the application is for renewal of an air pollution operation permit at a non-Title V source as defined in Rule 62-210.200, F.A.C., or where professional engineering is not required by Chapter 471, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

(4) Processing fees for air construction permits shall be in accordance with Rule 62-4.050(4), F.A.C.

(5)(a) To be considered by the Department, each application must be accompanied by the proper processing fee. The fee shall be paid by check, payable to the Department of Environmental Protection. The fee is non-refundable except as provided in Section 120.60, F.S., and in this section.

(c) Upon receipt of the proper application fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin.

(d) If the applicant does not submit the required fee within ten days of receipt of written notification, the Department shall either return the unprocessed application or arrange with the applicant for the pick up of the application.

(e) If an applicant submits an application fee in excess of the required fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin upon receipt, and the Department shall refund to the applicant the amount received in excess of the required fee.

(6) Any substantial modification to a complete application shall require an additional processing fee determined pursuant to the schedule set forth in Rule 62-4.050, F.A.C., and shall restart the time requirements of Sections 120.60 and 403.0876, F.S. For purposes of this Subsection, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review.

(7) Modifications to existing permits proposed by the permittee which require substantial changes in the existing permit or require substantial evaluation by the Department of potential impacts of the proposed modifications shall require the same fee as a new application for the same time duration except for modification under Chapter 62-45, F.A.C.

[Rule 62-4.050, F.A.C.]

3. **Standards for Issuing or Denying Permits.** Except as provided at Rule 62-213.460, F.A.C., the issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules.

[Rule 62-4.070(7), F.A.C.]

APPENDIX TV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

4. Modification of Permit Conditions.

(1) For good cause and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee the Department may grant additional time. For the purpose of this section, good cause shall include, but not be limited to, any of the following: (also, see Condition No. 38.).

- (a) A showing that an improvement in effluent or emission quality or quantity can be accomplished because of technological advances without unreasonable hardship.
- (b) A showing that a higher degree of treatment is necessary to effect the intent and purpose of Chapter 403, F.S.
- (c) A showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air or water quality standards.
- (e) Adoption or revision of Florida Statutes, rules, or standards which require the modification of a permit condition for compliance.

(2) A permittee may request a modification of a permit by applying to the Department.

(3) A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit. Upon timely submittal of a request for extension, unless the permit automatically expires by statute or rule, the permit will remain in effect until final agency action is taken on the request. For construction permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that, upon completion, the extended permit will comply with the standards and conditions required by applicable regulation. For all other permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that the extended permit will comply with the standards and conditions applicable to the original permit. A permit for which the permit application fee was prorated in accordance with Rule 62-4.050(4)(1), F.A.C., shall not be extended. In no event shall a permit be extended or remain in effect longer than the time limits established by statute or rule.

[Rule 62-4.080, F.A.C.]

5. Renewals. Prior to 180 days before the expiration of a permit issued pursuant to Chapter 62-213, F.A.C., the permittee shall apply for a renewal of a permit using forms incorporated by reference in the specific rule chapter for that kind of permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 180 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department or, if there is court review of the Department's final agency action, until a later date is required by Section 120.60, F.S., provided that, for renewal of a permit issued pursuant to Chapter 62-213, F.A.C., the applicant complies with the requirements of Rules 62-213.420(1)(b)3. and 4., F.A.C.

[Rule 62-4.090, F.A.C.]

6. Suspension and Revocation.

(1) Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.

(2) Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.

(3) A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or the his agent:

- (a) Submitted false or inaccurate information in his application or operational reports.
- (b) Has violated law, Department orders, rules or permit conditions.
- (c) Has failed to submit operational reports or other information required by Department rules.
- (d) Has refused lawful inspection under Section 403.091, F.S.

(4) No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60(7), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

[Rule 62-4.100, F.A.C.]

7. **Not federally enforceable.** Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules.

[Rule 62-4.110, F.A.C.]

APPENDIX IV-4, TITLE V CONDITIONS (version dated 02/12/02) (Continued)

8. Transfer of Permits.

(1) Within 30 days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Permit" (DEP Form 62-1.201(1)) must be submitted to the Department. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. For air permits, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted.

(2) The Department shall approve the transfer of a permit unless it determines that the proposed new permittee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of these permit conditions. If the Department proposes to deny the transfer, it shall provide both the permittee and the proposed new permittee a written objection to such transfer together with notice of a right to request a Chapter 120, F.S., proceeding on such determination.

(3) Within 30 days of receiving a properly completed Application for Transfer of Permit form, the Department shall issue a final determination. The Department may toll the time for making a determination on the transfer by notifying both the permittee and the proposed new permittee that additional information is required to adequately review the transfer request. Such notification shall be served within 30 days of receipt of an Application for Transfer of Permit form, completed pursuant to Rule 62-4.120(1), F.A.C. If the Department fails to take action to approve or deny the transfer within 30 days of receipt of the completed Application for Transfer of Permit form, or within 30 days of receipt of the last item of timely requested additional information, the transfer shall be deemed approved.

(4) The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer.

(5) Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility.

[Rule 62-4.120, F.A.C.]

9. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. (also, see Condition No. 10.).

[Rule 62-4.130, F.A.C.]

10. For purposes of notification to the Department pursuant to Condition No. 9., Condition No. 12.(8), and Rule 62-4.130, F.A.C., Plant Operation-Problems, "immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of 40 CFR 70.6(a)(3)(iii)(B), "prompt" shall have the same meaning as "immediately". [also, see Conditions Nos. 9. and 12.(8).]

[40 CFR 70.6(a)(3)(iii)(B)]

11. Not federally enforceable. Review. Failure to request a hearing within 14 days of receipt of notice of proposed or final agency action on a permit application or as otherwise required in Chapter 62-103, F.A.C., shall be deemed a waiver of the right to an administrative hearing.

[Rule 62-4.150, F.A.C.]

12. Permit Conditions. All permits issued by the Department shall include the following general conditions:

(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

(3) As provided in Subsections 403.087(7) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

- (4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- (5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
- (6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- (7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
- (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
- (8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information: **(also, see Condition No. 10.)**
- (a) A description of and cause of noncompliance; and,
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
- (9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- (10) The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
- (11) This permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- (12) This permit or a copy thereof shall be kept at the work site of the permitted activity.
- (14) The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
- (15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

[Rules 62-4.160 and 62-213.440(1)(b), F.A.C.]

APPENDIX IV-4, TITLE V CONDITIONS (version dated 02/12/02) (continued)

13. Construction Permits.

(1) No person shall construct any installation or facility which will reasonably be expected to be a source of air or water pollution without first applying for and receiving a construction permit from the Department unless exempted by statute or Department rule. In addition to the requirements of Chapter 62-4, F.A.C., applicants for a Department Construction Permit shall submit the following as applicable:

- (a) A completed application on forms furnished by the Department.
- (b) An engineering report covering:
 - 1. plant description and operations,
 - 2. types and quantities of all waste material to be generated whether liquid, gaseous or solid,
 - 3. proposed waste control facilities,
 - 4. the treatment objectives,
 - 5. the design criteria on which the control facilities are based, and,
 - 6. other information deemed relevant.

Design criteria submitted pursuant to Rule 62-4.210(1)(b)5., F.A.C., shall be based on the results of laboratory and pilot-plant scale studies whenever such studies are warranted. The design efficiencies of the proposed waste treatment facilities and the quantities and types of pollutants in the treated effluents or emissions shall be indicated. Work of this nature shall be subject to the requirements of Chapter 471, F.S. Where confidential records are involved, certain information may be kept confidential pursuant to Section 403.111, F.S.

- (c) The owners' written guarantee to meet the design criteria as accepted by the Department and to abide by Chapter 403, F.S. and the rules of the Department as to the quantities and types of materials to be discharged from the installation. The owner may be required to post an appropriate bond or other equivalent evidence of financial responsibility to guarantee compliance with such conditions in instances where the owner's financial resources are inadequate or proposed control facilities are experimental in nature.

(2) The construction permit may contain conditions and an expiration date as determined by the Secretary or the Secretary's designee.

(3) When the Department issues a permit to construct, the permittee shall be allowed a period of time, specified in the permit, to construct, and to operate and test to determine compliance with Chapter 403, F.S., and the rules of the Department and, where applicable, to apply for and receive an operation permit. The Department may require tests and evaluations of the treatment facilities by the permittee at his/her expense.

[Rule 62-4.210, F.A.C.]

14. **Not federally enforceable.** Operation Permit for New Sources. To properly apply for an operation permit for new sources, the applicant shall submit the appropriate fee and certification that construction was completed noting any deviations from the conditions in the construction permit and test results where appropriate.

[Rule 62-4.220, F.A.C.]

Chapters 28-106 and 62-110, F.A.C.

15. Public Notice, Public Participation, and Proposed Agency Action. The permittee shall comply with all of the requirements for public notice, public participation, and proposed agency action pursuant to Rules 62-110.106 and 62-210.350, F.A.C.

[Rules 62-110.106, 62-210.350 and 62-213.430(1)(b), F.A.C.]

16. Administrative Hearing. The permittee shall comply with all of the requirements for a petition for administrative hearing or waiver of right to administrative proceeding pursuant to Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.

[Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.]

Chapter 62-204, F.A.C.

17. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source.

[40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

Chapter 62-210, F.A.C.

18. Permits Required. The owner or operator of any emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain an appropriate permit from the Department prior to beginning construction, modification, or initial or continued operation of the emissions unit unless exempted pursuant to Department rule or statute. All emissions limitations, controls, and other requirements imposed by such permits shall be at least as stringent as any applicable limitations and requirements contained in or enforceable under the State Implementation Plan (SIP) or that are otherwise federally enforceable. Except as provided at Rule 62-213.460, F.A.C., issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law.

(1) Air Construction Permits.

(a) Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new or modified facility or emissions unit prior to the beginning of construction or modification, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. Except as provided under Rule 62-213.415, F.A.C., the owner or operator of any facility seeking to create or change an air emissions bubble shall obtain an air construction permit in accordance with all the applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. The construction permit shall be issued for a period of time sufficient to allow construction or modification of the facility or emissions unit and operation while the new or modified facility or emissions unit is conducting tests or otherwise demonstrating initial compliance with the conditions of the construction permit.

(b) Notwithstanding the expiration of an air construction permit, all limitations and requirements of such permit that are applicable to the design and operation of the permitted facility or emissions unit shall remain in effect until the facility or emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing) or any such limitation or requirement that is changed in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C. Either the applicant or the Department can propose that certain conditions be considered obsolete. Any conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules.

1. Except for those limitations or requirements that are obsolete, all limitations and requirements of an air construction permit shall be included and identified in any air operation permit for the facility or emissions unit. The limitations and requirements included in the air operation permit can be changed, and thereby superseded, through the issuance of an air construction permit, federally enforceable state air operation permit, federally enforceable air general permit, or Title V air operation permit; provided, however, that:

- a. Any change that would constitute an administrative correction may be made pursuant to Rule 62-210.360, F.A.C.;
- b. Any change that would constitute a modification, as defined at Rule 62-210.200, F.A.C., shall be accomplished only through the issuance of an air construction permit; and
- c. Any change in a permit limitation or requirement that originates from a permit issued pursuant to 40 CFR 52.21, Rule 62-204.800(10)(d)2., F.A.C., Rule 62-212.400, F.A.C., Rule 62-212.500, F.A.C., or any former codification of Rule 62-212.400 or Rule 62-212.500, F.A.C., shall be accomplished only through the issuance of a new or revised air construction permit under Rule 62-204.800(10)(d)2., Rule 62-212.400, or Rule 62-212.500, F.A.C., as appropriate.

2. The force and effect of any change in a permit limitation or requirement made in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C., shall be the same as if such change were made to the original air construction permit.

3. Nothing in Rule 62-210.300(1)(b), F.A.C., shall be construed as to allow operation of a facility or emissions unit without a valid air operation permit.

(2) Air Operation Permits. Upon expiration of the air operation permit for any existing facility or emissions unit, subsequent to construction or modification, or subsequent to the creation of or change to a bubble, and demonstration of compliance with the conditions of the construction permit for any new or modified facility or emissions unit, any air emissions bubble, or as otherwise provided in Chapter 62-210, F.A.C., or Chapter 62-213, F.A.C., the owner or operator of such facility or emissions unit shall obtain a renewal air operation permit, an initial air operation permit or general permit, or an administrative correction or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-213, F.A.C., and Chapter 62-4, F.A.C.

(a) Minimum Requirements for All Air Operation Permits. At a minimum, a permit issued pursuant to this subsection shall:

1. Specify the manner, nature, volume and frequency of the emissions permitted, and the applicable emission limiting standards or performance standards, if any;
2. Require proper operation and maintenance of any pollution control equipment by qualified personnel, where applicable in accordance with the provisions of any operation and maintenance plan required by the air pollution rules of the Department.
3. Contain an effective date stated in the permit which shall not be earlier than the date final action is taken on the application and be issued for a period, beginning on the effective date, as provided below.

a. The operation permit for an emissions unit which is in compliance with all applicable rules and in operational condition, and which the owner or operator intends to continue operating, shall be issued or renewed for a five-year period, except that, for Title V sources subject to Rule 62-213.420(1)(a)1., F.A.C., operation permits shall be extended until 60 days after the due date for submittal of the facility's Title V permit application as specified in Rule 62-213.420(1)(a)1., F.A.C.

b. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for six months or more prior to the expiration date of the current operation permit, shall be renewed for a period not to exceed five years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided:

- (i) the owner or operator of the emissions unit demonstrates to the Department that the emissions unit may need to be reactivated and used, or that it is the owner's or operator's intent to apply to the Department for a permit to construct a new emissions unit at the facility before the end of the extension period; and,
- (ii) the owner or operator of the emissions unit agrees to and is legally prohibited from providing the allowable emission permitted by the renewed permit as an emissions offset to any other person under Rule 62-212.500, F.A.C.; and,
- (iii) the emissions unit was operating in compliance with all applicable rules as of the time the source was shut down.

c. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for five years or more prior to the expiration date of the current operation permit shall be renewed for a maximum period not to exceed ten years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided the conditions given in Rule 62-210.300(2)(a)3.b., F.A.C., are met and the owner or operator demonstrates to the Department that failure to renew the permit would constitute a hardship, which may include economic hardship.

d. The operation permit for an electric utility generating unit on cold standby or long-term reserve shutdown shall be renewed for a five-year period, and additional five-year periods, even if the unit is not maintained in operational condition, provided the conditions given in Rules 62-210.300(2)(a)3.b.(i) through (iii), F.A.C., are met.

4. In the case of an emissions unit permitted pursuant to Rules 62-210.300(2)(a)3.b., c., and d., F.A.C.; include reasonable notification and compliance testing requirements for reactivation of such emissions unit and provide that the owner or operator demonstrate to the Department prior to reactivation that such reactivation would not constitute reconstruction pursuant to Rule 62-204.800(7), F.A.C.

[Rules 62-210.300(1) & (2), F.A.C.]

19. **Not federally enforceable.** Notification of Startup. The owner or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

(a) The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.

(b) If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.

[Rule 62-210.300(5), F.A.C.]

20. Emissions Unit Reclassification.

(a) Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.

(b) If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.

[Rule 62-210.300(6), F.A.C.]

21. Transfer of Air Permits.

(a) An air permit is transferable only after submission of an Application for Transfer of Air Permit (DEP Form 62-210.900(7)) and Department approval in accordance with Rule 62-4.120, F.A.C. For Title V permit transfers only, a complete application for transfer of air permit shall include the requirements of 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Within 30 days after approval of the transfer of permit, the Department shall update the permit by an administrative permit correction pursuant to Rule 62-210.360, F.A.C.

(b) For an air general permit, the provision of Rules 62-210.300(7)(a) and 62-4.120, F.A.C., do not apply. Thirty (30) days before using an air general permit, the new owner must submit an air general permit notification to the Department in accordance with Rule 62-210.300(4), F.A.C., or Rule 62-213.300(2)(b), F.A.C.

[Rule 62-210.300(7), F.A.C.]

22. Public Notice and Comment.

(1) Public Notice of Proposed Agency Action.

(a) A notice of proposed agency action on permit application, where the proposed agency action is to issue the permit, shall be published by any applicant for:

1. An air construction permit;
2. An air operation permit, permit renewal or permit revision subject to Rule 62-210.300(2)(b), F.A.C., (i.e., a FESOP), except as provided in Rule 62-210.300(2)(b)1.b., F.A.C.; or
3. An air operation permit, permit renewal, or permit revision subject to Chapter 62-213, F.A.C., except Title V air general permits or those permit revisions meeting the requirements of Rule 62-213.412(1), F.A.C.

(b) The notice required by Rule 62-210.350(1)(a), F.A.C., shall be published in accordance with all otherwise applicable provisions of Rule 62-110.106, F.A.C. A public notice under Rule 62-210.350(1)(a)1., F.A.C., for an air construction permit may be combined with any required public notice under Rule 62-210.350(1)(a)2. or 3., F.A.C., for air operation permits. If such notices are combined, the public notice must comply with the requirements for both notices.

(c) Except as otherwise provided at Rules 62-210.350(2) and (5), F.A.C., each notice of intent to issue an air construction permit shall provide a 14-day period for submittal of public comments.

(2) Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment - Area Preconstruction Review.

(a) Before taking final agency action on a construction permit application for any proposed new or modified facility or emissions unit subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., and the Department's analysis of the effect of the proposed construction or modification on ambient air quality, including the Department's preliminary determination of whether the permit should be approved or disapproved;
2. A 30-day period for submittal of public comments; and,
3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed facility or emissions unit, whether BACT or LAER has been determined, the degree of PSD increment consumption expected, if applicable, and the location of the information specified in paragraph 1. above; and, notifying the public of the opportunity for submitting comments and requesting a public hearing.

(b) The notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall also be sent by the Department to the Regional Office of the U. S. Environmental Protection Agency and to all other state and local officials or agencies having cognizance over the location of such new or modified facility or emissions unit, including local air pollution control agencies, chief executives of city or county government, regional land use planning agencies, and any other state, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the new or modified facility or emissions unit.

(d) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be displayed in the appropriate district, branch and local program offices.

(e) An opportunity for public hearing shall be provided in accordance with Chapter 120, F.S., and Rule 62-110.106, F.A.C.

- (f) Any public comments received shall be made available for public inspection in the location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.
- (g) The final determination shall be made available for public inspection at the same location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., was made available.
- (h) For a proposed new or modified emissions unit which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area, and which would be subject to the preconstruction review requirements of Rule 62-212.400, F.A.C., or Rule 62-212.500, F.A.C.:

- 1. The Department shall mail or transmit to the Administrator a copy of the initial application for an air construction permit and notice of every action related to the consideration of the permit application.
- 2. The Department shall mail or transmit to the Federal Land Manager of each affected Class I area a copy of any written notice of intent to apply for an air construction permit; the initial application for an air construction permit, including all required analyses and demonstrations; any subsequently submitted information related to the application; the preliminary determination and notice of proposed agency action on the permit application; and any petition for an administrative hearing regarding the application or the Department's proposed action. Each such document shall be mailed or transmitted to the Federal Land Manager within fourteen (14) days after its receipt by the Department.

(3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.

- (a) Before taking final agency action to issue a new, renewed, or revised air operation permit subject to Chapter 62-213, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:
 - 1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.; and,
 - 2. A 30-day period for submittal of public comments.
- (b) The notice provided for in Rule 62-210.350(3)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action. If written comments received during the 30-day comment period on a draft permit result in the Department's issuance of a revised draft permit in accordance with Rule 62-213.430(1), F.A.C., the Department shall require the applicant to publish another public notice in accordance with Rule 62-210.350(1)(a), F.A.C.
- (c) The notice shall identify:
 - 1. The facility;
 - 2. The name and address of the office at which processing of the permit occurs;
 - 3. The activity or activities involved in the permit action;
 - 4. The emissions change involved in any permit revision;
 - 5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application, compliance plan, permit, monitoring report, and compliance statement required pursuant to Chapter 62-213, F.A.C. (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), and all other materials available to the Department that are relevant to the permit decision;
 - 6. A brief description of the comment procedures required by Rule 62-210.350(3), F.A.C.;
 - 7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled); and,
 - 8. The procedures by which persons may petition the Administrator to object to the issuance of the proposed permit after expiration of the Administrator's 45-day review period.

[Rule 62-210.350, F.A.C.]

23. Administrative Permit Corrections.

- (1) A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:
 - (a) Typographical errors noted in the permit;
 - (b) Name, address or phone number change from that in the permit;
 - (c) A change requiring more frequent monitoring or reporting by the permittee;
 - (d) A change in ownership or operational control of a facility, subject to the following provisions:
 - 1. The Department determines that no other change in the permit is necessary;

2. The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and
3. The new permittee has notified the Department of the effective date of sale or legal transfer.
- (e) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;
- (f) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and,
- (g) Any other similar minor administrative change at the source.
- (2) Upon receipt of any such notification the Department shall within 60 days correct the permit and provide a corrected copy to the owner.
- (3) After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.
- (4) For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.
- (5) The Department shall incorporate requirements resulting from issuance of a new or revised construction permit into an existing Title V source permit, if the construction permit or permit revision incorporates requirements of federally enforceable preconstruction review, and if the applicant requests at the time of application that all of the requirements of Rule 62-213.430(1), F.A.C., be complied with in conjunction with the processing of the construction permit application.
- [Rule 62-210.360, F.A.C.]

24. Reports.

- (3) Annual Operating Report for Air Pollutant Emitting Facility.
- (a) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year.
- (c) The annual operating report shall be submitted to the appropriate Department District or Department approved local air pollution control program office by March 1 of the following year unless otherwise indicated by permit condition or Department request.
- [Rule 62-210.370(3), F.A.C.]

25. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.
- [Rule 62-210.650, F.A.C.]

26. Forms and Instructions. The forms used by the Department in the stationary source control program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, with the subject, title and effective date. Forms 62-210.900(1),(3),(4) and (5), F.A.C., including instructions, are available from the Department as hard-copy documents or executable files on computer diskettes. Copies of forms (hard-copy or diskette) may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Notwithstanding the requirement of Rule 62-4.050(2), F.A.C., to file application forms in quadruplicate, if an air permit application is submitted using the Department's electronic application form, only one copy of the diskette and signature pages is required to be submitted.

- (1) Application for Air Permit - Title V Source, Form and Instructions (Effective 02/11/1999).
- (a) Acid Rain Part (Phase II), Form and Instructions (Effective 04/16/2001).
1. Repowering Extension Plan, Form and Instructions (Effective 07/01/1995).
 2. New Unit Exemption, Form and Instructions (Effective 04/16/2001).
 3. Retired Unit Exemption, Form and Instructions (Effective 04/16/2001).
 4. Phase II NOx Compliance Plan, Form and Instructions (Effective 01/06/1998).
 5. Phase II NOx Averaging Plan, Form (Effective 01/06/1998).
- (b) Reserved.
- (5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions (Effective 02/11/1999).
- (7) Application for Transfer of Air Permit - Title V and Non-Title V Source, (Effective 04/16/2001).
- [Rule 62-210.900, F.A.C.]

Chapter 62-213, F.A.C.

27. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.
- [Rules 62-213.205 and 62-213.900(1), F.A.C.]

28. Annual Emissions Fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.

[Rule 62-213.205(1)(g), F.A.C.]

29. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.

[Rule 62-213.205(1)(i), F.A.C.]

30. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.

[Rule 62-213.205(1)(j), F.A.C.]

31. Air Operation Permit Fees. No permit application processing fee, renewal fee, modification fee or amendment fee is required for an operation permit for a Title V source.

[Rule 62-213.205(4), F.A.C.]

32. Permits and Permit Revisions Required. All Title V sources are subject to the permit requirements of Chapter 62-213, F.A.C.

(1) No Title V source may operate except in compliance with Chapter 62-213, F.A.C.

(2) Except as provided in Rule 62-213.410, F.A.C., no source with a permit issued under the provisions of this chapter shall make any changes in its operation without first applying for and receiving a permit revision if the change meets any of the following:

- (a) Constitutes a modification;
- (b) Violates any applicable requirement;
- (c) Exceeds the allowable emissions of any air pollutant from any unit within the source;
- (d) Contravenes any permit term or condition for monitoring, testing, recordkeeping, reporting or of a compliance certification requirement;
- (e) Requires a case-by-case determination of an emission limitation or other standard or a source specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapters 62-212 or 62-296, F.A.C.;
- (f) Violates a permit term or condition which the source has assumed for which there is no corresponding underlying applicable requirement to which the source would otherwise be subject;
- (g) Results in the trading of emissions among units within a source except as specifically authorized pursuant to Rule 62-213.415, F.A.C.;
- (h) Results in the change of location of any relocatable facility identified as a Title V source pursuant to paragraph (a)-(e), (g) or (h) of the definition of "major source of air pollution" at Rule 62-210.200, F.A.C.;
- (i) Constitutes a change at an Acid Rain Source under the provisions of 40 CFR 72.81(a)(1),(2),or(3),(b)(1) or (b)(3), hereby incorporated by reference;
- (j) Constitutes a change in a repowering plan, nitrogen oxides averaging plan, or nitrogen oxides compliance deadline extension at an Acid Rain Source;
- (k) Is a request for industrial-utility unit exemption pursuant to Rule 62-214.340, F.A.C.

[Rules 62-213.400(1) & (2), F.A.C.]

33. Changes Without Permit Revision. Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation in each alternative method of operation:

(1) Permitted sources may change among those alternative methods of operation allowed by the source's permit as provided by the terms of the permit;

(2) Permitted sources may implement the terms or conditions of a new or revised construction permit if;

- (a) The application for construction permit complied with the requirements of Rule 62-213.420(3) and (4), F.A.C.;
 - (b) The terms or conditions were subject to federally enforceable preconstruction review pursuant to Chapter 62-212, F.A.C.;
- and,
- (c) The new or revised construction permit was issued after the Department and the applicant complied with all the requirements of Rule 62-213.430(1), F.A.C.;

(3) A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;

- (a) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
 - (b) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
- (4) Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C. [Rule 62-213.410, F.A.C.]

34. Immediate Implementation Pending Revision Process.

(1) Those permitted Title V sources making any change that constitutes a modification pursuant to the definition of modification at Rule 62-210.200, F.A.C., but which would not constitute a modification pursuant to 42 USC 7412(a) or to 40 CFR 52.01, 60.2, or 61.15, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may implement such change prior to final issuance of a permit revision in accordance with this section, provided the change:

- (a) Does not violate any applicable requirement;
 - (b) Does not contravene any permit term or condition for monitoring, testing, recordkeeping or reporting, or any compliance certification requirement;
 - (c) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;
 - (d) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and which the source has assumed to avoid an applicable requirement to which the source would otherwise be subject including any federally enforceable emissions cap or federally enforceable alternative emissions limit.
- (2) A Title V source may immediately implement such changes after they have been incorporated into the terms and conditions of a new or revised construction permit issued pursuant to Chapter 62-212, F.A.C., and after the source provides to EPA, the Department, each affected state and any approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revision. The Title V source may conform its application for construction permit to include all information required by Rule 62-213.420, F.A.C., in lieu of submitting separate application forms.
- (3) The Department shall process the application for operation permit revision in accordance with the provisions of Chapter 62-213, F.A.C., except that the Department shall issue a draft permit revision or a determination to deny the revision within 60 days of receipt of a complete application for operation permit revision or, if the Title V source has submitted a construction permit application conforming to the requirements of Rule 62-213.420, F.A.C., the Department shall issue a draft permit or a determination to deny the revision at the same time the Department issues its determination on issuance or denial of the construction permit application. The Department shall not take final action until all the requirements of Rules 62-213.430(1)(a), (c), (d), and (e), F.A.C., have been complied with.
- (4) Pending final action on the operation permit revision application, the source shall implement the changes in accordance with the terms and conditions of the source's new or revised construction permit.
- (5) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes until after the Department takes final action to issue the operation permit revision.
- (6) If the Department denies the source's application for operation permit revision, the source shall cease implementation of the proposed changes.
[Rule 62-213.412, F.A.C.]

35. Permit Applications.

- (1) Duty to Apply. For each Title V source, the owner or operator shall submit a timely and complete permit application in compliance with the requirements of Rules 62-213.420, F.A.C., and Rules 62-4.050(1) through (3), F.A.C.
- (a) Timely Application.
 - 3. For purposes of permit renewal, a timely application is one that is submitted in accordance with Rule 62-4.090, F.A.C.
 - (b) Complete Application.
 - 1. Any applicant for a Title V permit, permit revision or permit renewal must submit an application on DEP Form No. 62-210.900(1), which must include all the information specified by Rule 62-213.420(3), F.A.C., except that an application for permit revision must contain only that information related to the proposed change. The applicant shall include information concerning fugitive emissions and stack emissions in the application. Each application for permit, permit revision or permit renewal shall be certified by a responsible official in accordance with Rule 62-213.420(4), F.A.C.

2. For those applicants submitting initial permit applications pursuant to Rule 62-213.420(1)(a)1., F.A.C., a complete application shall be an application that substantially addresses all the information required by the application form number 62-210.900(1), and such applications shall be deemed complete within sixty days of receipt of a signed and certified application unless the Department notifies the applicant of incompleteness within that time. For all other applicants, the applications shall be deemed complete sixty days after receipt, unless the Department, within sixty days after receipt of a signed application for permit, permit revision or permit renewal, requests additional documentation or information needed to process the application. An applicant making timely and complete application for permit, or timely application for permit renewal as described by Rule 62-4.090(1), F.A.C., shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of Rules 62-213.420(1)(b)3. and 4. F.A.C. Failure of the Department to request additional information within sixty days of receipt of a properly signed application shall not impair the Department's ability to request additional information pursuant to Rules 62-213.420(1)(b)3. and 4., F.A.C.

3. For those permit applications submitted pursuant to the provisions of Rule 62-213.420(1)(a)1., F.A.C., the Department shall notify the applicant if the Department becomes aware at any time during processing of the application that the application contains incorrect or incomplete information. The applicant shall submit the corrected or supplementary information to the Department within ninety days unless the applicant has requested and been granted additional time to submit the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days or such additional time as requested and granted shall render the application incomplete.

4. For all applications other than those addressed at Rule 62-213.420(1)(b)3., F.A.C., should the Department become aware, during processing of any application that the application contains incorrect information, or should the Department become aware, as a result of comment from an affected State, an approved local air program, EPA, or the public that additional information is needed to evaluate the application, the Department shall notify the applicant within 30 days. When an applicant becomes aware that an application contains incorrect or incomplete information, the applicant shall submit the corrected or supplementary information to the Department. If the Department notifies an applicant that corrected or supplementary information is necessary to process the permit, and requests a response, the applicant shall provide the information to the Department within ninety days of the Department request unless the applicant has requested and been granted additional time to submit the information or, the applicant shall, within ninety days, submit a written request that the Department process the application without the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days, or such additional time as requested and granted, or to demand in writing within ninety days that the application be processed without the information shall render the application incomplete. Nothing in this section shall limit any other remedies available to the Department.

[Rules 62-213.420(1)(a)3. and 62-213.420(1)(b)1., 2., 3. & 4., F.A.C.]

36. Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. (also, see Condition No. 50.) [Rule 62-213.420(2), F.A.C.]

37. Standard Application Form and Required Information. Applications shall be submitted under Chapter 62-213, F.A.C., on forms provided by the Department and adopted by reference in Rule 62-210.900(1), F.A.C. The information as described in Rule 62-210.900(1), F.A.C., shall be included for the Title V source and each emissions unit. An application must include information sufficient to determine all applicable requirements for the Title V source and each emissions unit and to evaluate a fee amount pursuant to Rule 62-213.205, F.A.C. [Rule 62-213.420(3), F.A.C.]

38. a. Permit Renewal and Expiration. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) and 62-213.420(3), F.A.C. Unless a Title V source submits a timely application for permit renewal in accordance with the requirements of Rule 62-4.090(1), F.A.C., the existing permit shall expire and the source's right to operate shall terminate. No Title V permit will be issued for a new term except through the renewal process.

b. Permit Revision Procedures. Permit revisions shall meet all requirements of Chapter 62-213, F.A.C., including those for content of applications, public participation, review by approved local programs and affected states, and review by EPA, as they apply to permit issuance and permit renewal, except that permit revisions for those activities implemented pursuant to Rule 62-213.412, F.A.C., need not meet the requirements of Rule 62-213.430(1)(b), F.A.C. The Department shall require permit revision in accordance

with the provisions of Rule 62-4.080, F.A.C., and 40 CFR 70.7(f), whenever any source becomes subject to any condition listed at 40 CFR 70.7(f)(1), hereby adopted and incorporated by reference. The below requirements from 40 CFR 70.7(f) are adopted and incorporated by reference in Rule 62-213.430(4), F.A.C.:

o 40 CFR 70.7(f): Reopening for Cause. (also, see Condition No. 4.)

(1) This section contains provisions from 40 CFR 70.7(f) that specify the conditions under which a Title V permit shall be reopened prior to the expiration of the permit. A Title V permit shall be reopened and revised under any of the following circumstances:

(i) Additional applicable requirements under the Act become applicable to a major Part 70 source with a remaining permit term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii).

(ii) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approved by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

(iii) The permitting authority or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

(iv) The Administrator or the permitting authority determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(2) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

(3) Reopenings under 40 CFR 70.7(f)(1) shall not be initiated before a notice of such intent is provided to the Part 70 source by the permitting authority at least 30 days in advance of the date that the permit is to be reopened, except that the permitting authority may provide a shorter time period in the case of an emergency.

[Rules 62-213.430(3) & (4), F.A.C.; and, 40 CFR 70.7(f)]

39. Insignificant Emissions Units or Pollutant-Emitting Activities.

(a) All requests for determination of insignificant emissions units or activities made pursuant to Rule 62-213.420(3)(m), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to Chapter 62-213, F.A.C. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of Rule 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under Chapter 62-213, F.A.C., shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to Rule 62-213.430(6), F.A.C.

(b) An emissions unit or activity shall be considered insignificant if all of the following criteria are met:

1. Such unit or activity would be subject to no unit-specific applicable requirement;
2. Such unit or activity, in combination with other units or activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in Rule 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s);
3. Such unit or activity would not emit or have the potential to emit:
 - a. 500 pounds per year or more of lead and lead compounds expressed as lead;
 - b. 1,000 pounds per year or more of any hazardous air pollutant;
 - c. 2,500 pounds per year or more of total hazardous air pollutants; or
 - d. 5.0 tons per year or more of any other regulated pollutant.

[Rule 62-213.430(6), F.A.C.]

40. Permit Duration. Permits for sources subject to the Federal Acid Rain Program shall be issued for terms of five years, provided that the initial Acid Rain Part may be issued for a term less than five years where necessary to coordinate the term of such part with the term of a Title V permit to be issued to the source. Operation permits for Title V sources may not be extended as provided in Rule 62-4.080(3), F.A.C., if such extension will result in a permit term greater than five years.

[Rule 62-213.440(1)(a), F.A.C.]

41. Monitoring Information. All records of monitoring information shall specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses.

[Rule 62-213.440(1)(b)2.a., F.A.C.]

42. Retention of Records. Retention of records of all monitoring data and support information shall be for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[Rule 62-213.440(1)(b)2.b., F.A.C.]

43. Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports.

[Rule 62-213.440(1)(b)3.a., F.A.C.]

44. Deviation from Permit Requirements Reports. The permittee shall report in accordance with the requirements of Rules 62-210.700(6) and 62-4.130, F.A.C., deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

[Rule 62-213.440(1)(b)3.b., F.A.C.]

45. Reports. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C.

[Rule 62-213.440(1)(b)3.c., F.A.C.]

46. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect.

[Rule 62-213.440(1)(d)1., F.A.C.]

47. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity.

[Rule 62-213.440(1)(d)3., F.A.C.]

48. Any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C.

[Rule 62-213.440(1)(d)4., F.A.C.]

49. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference.

[Rule 62-213.440(1)(d)5., F.A.C.]

50. Confidentiality Claims. Any permittee may claim confidentiality of any data or other information by complying with Rule 62-213.420(2), F.A.C. (also, see Condition No. 36.).

[Rule 62-213.440(1)(d)6., F.A.C.]

51. Statement of Compliance. (a)2. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit using DEP Form No. 62-213.900(7). Such statements shall be accompanied by a certification in accordance with Rule 62-213.420(4), F.A.C. Such statement shall be submitted (postmarked) to the Department and EPA:

- a. Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and
- b. Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.

3. The statement of compliance status shall include all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C.

(b) The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.

[Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

52. Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in Rule 62-213.460, F.A.C., or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program.
[Rule 62-213.460, F.A.C.]

53. Forms and Instructions. The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by contacting the appropriate permitting authority.

(1) Major Air Pollution Source Annual Emissions Fee Form. (Effective 01/03/2001)

(7) Statement of Compliance Form. (Effective 01/03/2001)

[Rule 62-213.900, F.A.C.: Forms (1) and (7)]

Chapter 62-256, F.A.C.

54. **Not federally enforceable.** Open Burning. This permit does not authorize any open burning nor does it constitute any waiver of the requirements of Chapter 62-256, F.A.C. Source shall comply with Chapter 62-256, F.A.C., for any open burning at the source.
[Chapter 62-256, F.A.C.]

Chapter 62-281, F.A.C.

55. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts B and F, and with Rule 62-281.100, F.A.C. Those requirements include the following restrictions:

(1) Any facility having any refrigeration equipment normally containing 50 (fifty) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added pursuant to 40 CFR 82.166;

(2) No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided at 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved pursuant to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;

(3) No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or Class II substance at 40 CFR 82, Subpart A, Appendices A and B, except in compliance with Rule 62-281.100, F.A.C., and 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;

(4) No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or Class II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined at 40 CFR 82.152) for service, maintenance or repair unless the person has been properly trained and certified pursuant to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance pursuant to 40 CFR 82.158 and unless the person observes the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;

(5) No person may dispose of appliances (except small appliances, as defined at 40 CFR 82.152) without using equipment certified for that type of appliance pursuant to 40 CFR 82.158 and without observing the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;

(6) No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined at 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82, Subpart F.

[40 CFR 82; and, Chapter 62-281, F.A.C. (**Chapter 62-281, F.A.C., is not federally enforceable**)]

Chapter 62-296, F.A.C.

56. Industrial, Commercial, and Municipal Open Burning Prohibited. Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when:

- (a) Open burning is determined by the Department to be the only feasible method of operation and is authorized by an air permit issued pursuant to Chapter 62-210 or 62-213, F.A.C.; or,
- (b) An emergency exists which requires immediate action to protect human health and safety; or,
- (c) A county or municipality would use a portable air curtain incinerator to burn yard trash generated by a hurricane, tornado, fire or other disaster and the air curtain incinerator would otherwise be operated in accordance with the permitting exemption criteria of Rule 62-210.300(3), F.A.C.

[Rule 62-296.320(3), F.A.C.]

57. Unconfined Emissions of Particulate Matter.

(4)(c)1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

3. Reasonable precautions include the following:

- a. Paving and maintenance of roads, parking areas and yards.
- b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- e. Landscaping or planting of vegetation.
- f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- g. Confining abrasive blasting where possible.
- h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rules 62-296.320(4)(c)1., 3., & 4. F.A.C.]

STATEMENT OF BASIS

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: **0950113**
Orange County

Title V Air Operation Permit Renewal
DRAFT Permit Project No.: **0950113-002-AV**
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

The initial Title V Air Operation Permit, No. 0950113-001-AV, was issued/effective on April 16, 1998. This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

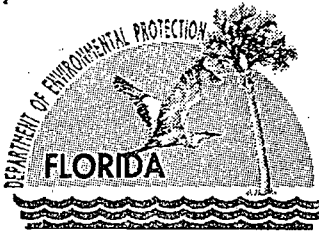
The subject of this permit is for the renewal of Title V Air Operation Permit, No. 0950113-001-AV.

Orange County operates the Orange County Solid Waste Management Facility (landfill) identified as emissions unit 001 (EU -001). The landfill has a candlestick flare to control the emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and sulfur compounds. The flare is not subject to compliance assurance monitoring (CAM) under 40 CFR Part 64.

E.U. 001 The facility is subject to: 40 CFR Part 60, Subparts A (General Provisions) and WWW (Standards of Performance for Municipal Solid Waste Landfills); with the exception of the candlestick flare control system, which shall have no visible emissions per 40 CFR Part 60.18(c)(1), the facility is subject to the General Visible Emissions (VE) limit of less than 20 percent per Rule 62-296.320(4)(b)1., F.A.C.; the General Volatile Organic Compound (VOC) standard per Rule 62-296.320(1)(a), F.A.C.; and the Objectionable Odor Rule per Rule 62-296.320(2), F.A.C.; and, Reasonable precautions to prevent emissions of unconfined particulate matter (PM) per Rule 62-296.320(4)(c)2., F.A.C.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received August 28, 2001, this facility is not a major source of hazardous air pollutants (HAPs).



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

E-CORRESPONDENCE

jim.becker@ocfl.net

James W. Becker, Division Manager
Orange County Solid Waste Division
Orange County Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

Re: Title V Air Operation Permit Renewal
DRAFT Permit Project No.: 0950113-002-AV
Renewal of Title V Air Operation Permit No.: 0950113-001-AV
Orange County Solid Waste Management Facility

Dear Mr. Becker:

One copy of the **DRAFT** Permit for the renewal of a Title V Air Operation Permit for the Orange County Solid Waste Facility located at 5901 Young Pine Road, Orlando, Orange County, is enclosed. The permitting authority's "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" and the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" are also included.

An electronic version of the **DRAFT** Permit has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is:

"<http://www.dep.state.fl.us/air/permitting/tv/TitleVSearch.asp>"

The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" must be published as soon as possible. Proof of publication, i.e., newspaper affidavit, must be provided to the permitting authority's office within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to Alan Zahm, P.E., at the above letterhead address. If you have any other questions, please contact Debra Laisure, at 407/893-3991.

Sincerely,

L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

7-2-02

Date

03
LTK/dl
Enclosures

"More Protection, Less Process"

In the Matter of an
Application for Permit Renewal by:

Orange County Solid Waste Division
Orange County
Board of County Commissioners
5901 Young Pine Road
Orlando, Florida 32829

DRAFT Permit Project No.: 0950113-002-AV
Renewal of Title V Air Operation Permit No.: 0950113-001-AV
Orange County Solid Waste Management Facility
Orange County

INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL

The Florida Department of Environmental Protection (permitting authority) gives notice of its intent to issue a Title V Air Operation Permit Renewal (copy of **DRAFT** Permit attached) for the Title V source detailed in the application specified above, for the reasons stated below. This is a renewal to Title V Air Operation Permit No. 0950113-001-AV.

The applicant, the Orange County Board of County Commissioners, applied on August 28, 2001, to the permitting authority for a Title V Air Operation Permit Renewal for the Orange County Solid Waste Management Facility located at 5901 Young Pine Road, Orlando, Orange County.

The permitting authority has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. This source is not exempt from Title V permitting procedures. The permitting authority has determined that a Title V Air Operation Permit Renewal is required to commence or continue operations at the described facility.

The permitting authority intends to issue this Title V Air Operation Permit Renewal based on the belief that reasonable assurances have been provided to indicate that operation of the source will not adversely impact air quality, and the source will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.087, F.S., and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL." The notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the permitting authority at the address or telephone number listed below. The applicant shall provide proof of publication to Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida, 32803 (Telephone: 407/894/7555; Fax: 407/897-5963), within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

The permitting authority will issue the PROPOSED Permit, and subsequent FINAL Permit, in accordance with the conditions of the attached DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will accept written comments concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL." Written comments should be provided to the permitting authority office. Any written comments filed shall be made available for public

inspection. If written comments received result in a significant change in this DRAFT Permit, the permitting authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, FL 32399-3000 (Telephone: 850/488-9730; Fax: 850/487-4938). Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the permitting authority's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of how and when each petitioner received notice of the agency action or proposed action;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and,

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the permitting authority's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation will not be available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply to the Department of Environmental Protection for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state

rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

- (a) The name, address, and telephone number of the petitioner;
- (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
- (c) Each rule or portion of a rule from which a variance or waiver is requested;
- (d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
- (e) The type of action requested;
- (f) The specific facts that would justify a variance or waiver for the petitioner;
- (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and,
- (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

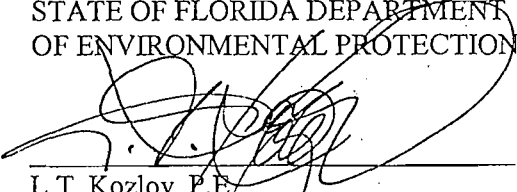
The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the United States Environmental Protection Agency and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Executed in Orlando, Florida, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL (including the PUBLIC NOTICE and the DRAFT Permit) and all copies were sent before the close of business on July 3, 2002 to the person(s) listed:

James W. Becker (*jim.becker@ocfl.net*)
Orange County Solid Waste Division
5901 Young Pine Road
Orlando FL 32724

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL (including the PUBLIC NOTICE and Statement of Basis) were sent on the same date to the person(s) listed or as otherwise noted:

Dan Morrical (*dan.morrical@ocfl.net*)
David M. Pelham, P.E., (*dipelham@wogl.com*)
Bruce Mitchell, DARM, Title V Section, Bureau of Air Regulation

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL (including the DRAFT Permit package) were sent by INTERNET E-mail on the same date to the person(s) listed:

Mr. Gregg Worley - USEPA Region 4
Mr. Joel Huey - USEPA Region 4

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Devin Jones *July 3, 2002*
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit Project No.: 0950113-002-AV
Renewal to Title V Air Operation Permit No. 0950113-001-AV
Orange County Solid Waste Management Facility
Orange County

The Florida Department of Environmental Protection (permitting authority) gives notice of its intent to issue a Title V Air Operation Permit Renewal to the Orange County Board of County Commissioners for the Orange County Solid Waste Management Facility located at 5901 Young Pine Road, Orlando, Orange County. This is a renewal to Title V Air Operation Permit No. 0950113-001-AV. The applicant's name and address are: Orange County Board of County Commissioners; James W. Becker, Orange County Solid Waste Division, 5901 Young Pine Road, Orlando, Florida 32829.

The permitting authority will issue the PROPOSED Permit, and subsequent FINAL Permit, in accordance with the conditions of the DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will accept written comments concerning the proposed DRAFT Permit issuance action for a period of 30 (thirty) days from the date of publication of this Notice. Written comments should be provided to the Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida, 32803 (Telephone: 407/894-7555; Fax: 407/897-5963). Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the permitting authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 of the Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, FL 32399-3000 (Telephone: 850/488-9730; Fax: 850/487-4938). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of the notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the applicable time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code (F.A.C.).

A petition that disputes the material facts on which the permitting authority's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address and telephone number of the petitioner; name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how petitioner's substantial rights will be affected by the agency determination;

(c) A statement of how and when the petitioner received notice of the agency action or proposed action;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so state;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle petitioner to relief;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and,

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the permitting authority's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available for this proceeding.

In addition to the above, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Permitting Authority:

Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, Florida, 32803
Telephone: 407/894-7555
Fax: 407/897-5963

The complete project file includes the DRAFT Permit, the application for renewal, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact Alan Zahm, P.E., at the above address, or call 407/893-3335, for additional information.

Orange County Board of County Commissioners
Orange County Solid Waste Management Facility
Facility ID No.: 0950113
Orange County

Title V Air Operation Permit Renewal

DRAFT Permit Project No.: 0950113-002-AV
Renewal of Title V Air Operation Permit No.: 0950113-001-AV

Permitting Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

Compliance Authority:

DEP Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

Telephone: 407/894-7555
Fax: 407/897-5963

RED ___ YELLOW ___ GREEN ___ NO PERMIT REQ ___

HISTORY SHEET

SITE/WAFR/AIR#: 0950113-002 TYPE: AV SUBTYPE: 05

SITE/WAFR/AIR NAME: Orange Co Landfill

PROJECT NAME: _____

DATE	TIME BEGIN	TIME END	TOTAL TIME	COMMENTS	POSITION TITLE
ENTERED	AUG 29	2001	30		OAS
10/23				INCOMPLETE	EIV
10/25				RAI	EIV
12/3				PSD REMINDER LETTER SENT	EIV
1/23				RESP REC'D	EIV
2/20				RAI 2	EIV
2/21/02				RAI faxed x2	SS
5/7				COMPLETE	EIV
7/3/02				Draft Permit Copied & mailed	SS
8/12/02				Proposed permit scanned	SS
8/12/02				Proposed permit electronically transmitted	SS
8/13/02				Proposed permit also Copied & mailed	SS
10/10/02				Final permit transmitted electronically	SS



ORANGE COUNTY UTILITIES - SOLID WASTE DIVISION

5901 Young Pine Road • Orlando, Florida 32829
407-836-6600 • Fax 407-836-6629

TOM ^{DM} 2-16-04
Balan
File

RECEIVED
FEB 13 2004
Central Dist. - DEP

February 12, 2004

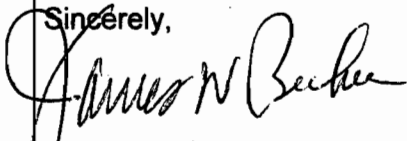
Leonard Kozlov
Air Resources Management
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Re: **Orange County Solid Waste Management Facility**
FDEP Permit No. 0950113-002-AV

Mr. Kozlov:

Please consider attaching the enclosed addendum to the Gas Collection and Control System Design Plan for landfill gas extraction wells at the Pre-1985 and Class III Landfills at the subject facility. This addendum is submitted to address wells with diminished gas generation rates.

Sincerely,


James W. Becker
Program Manager

DM/dm

Attachment

Cc: David Penoyer, SCS Engineers

Environmental Consultants

3655 Maguire Blvd.
Suite 150
Orlando, FL 32803407 893-0130
FAX 407 893-6361**SCS ENGINEERS**December 30, 2003
File No. 09199036.17

S/D 12/30/03

Mr. James Flynt, P.E.
Orange County Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829

Subject: Addendum to the Gas Collection and Control System Design Plan
Standard Operating Procedure for Landfill Gas Extraction Wells at the
Pre-1985 and Class III Landfills
Orange County Solid Waste Management Facility, Orange County, Florida
FDEP Permit No. 0950113-002-AV

Dear Jim:

As you know, in accordance with the New Source Performance Standards (NSPS) for municipal solid waste landfills, Orange County is required to operate each landfill gas (LFG) extraction well in compliance with certain criteria. Per Title 40 of the Code of Federal Regulations (CFR) Part 60.753(b), (c), and (d), Orange County is required to:

- Operate the collection system with negative pressure at each wellhead except under certain conditions such as increased well temperature, when a geomembrane cap is installed and an acceptable pressure limit is specified in the gas collection and control system (GCCS) design plan, or when a landfill fire is present.
- Operate each wellhead with a LFG temperature less than 55 degrees Celsius (131 degrees Fahrenheit) and either a nitrogen level less than 20 percent or an oxygen concentration less than 5 percent by volume.
- Operate the GCCS so that the methane concentration at the surface of the landfill is less than 500 parts per million by volume (ppmv).

The first and third criteria listed above were included in the NSPS by the U.S. Environmental Protection Agency (U.S. EPA) in order to require landfill owners/operators to minimize fugitive emissions of LFG to the atmosphere. The second criterion, which is related to oxygen and nitrogen concentration in the gas at each well, is based on historical LFG industry operations and maintenance guidelines aimed at reducing the potential for landfill fires or negatively affecting microbes involved in the anaerobic decomposition of the waste. High oxygen concentrations can occur due to operating the wellfield too aggressively, resulting in the infiltration of ambient air through the cover soils. If the oxygen concentration within a landfill exceeds five percent by volume, the possibility of a landfill fire is greatly enhanced. Note that because most field instruments measure oxygen, and not nitrogen, the method of compliance typically is based on a

five-percent oxygen concentration, rather than the 20-percent nitrogen requirement at each wellhead.

Unfortunately, the Rule does not provide guidance on how to address an individual criterion when it has the potential to conflict with one of the other criteria. For example, in some situations it may not be possible to maintain compliance with both the vacuum and gas quality requirements of the NSPS. This may be true in the case of a low or diminishing LFG generation rate, when the application of even a small vacuum (i.e., 0.1 to 0.5 inches of water column (in-w.c.)) to a well or collector may cause the oxygen concentration to exceed the NSPS limit of five percent. This typically occurs because LFG is not being generated at a sufficient rate to allow for continuous extraction by the GCCS.

If the LFG generation rate is so low, applying vacuum typically will only worsen the gas quality (i.e., increase the oxygen content), resulting in continued oxygen exceedances. One approach to remedying this situation is to shut down the well for a period of time until gas quality improves and the oxygen concentration declines to below five percent. Once the oxygen concentration is below this level, the well can be reopened and LFG extraction resumed. However, because this approach requires a non-negative pressure at the wellhead, this technique is not compliant with the NSPS.

Therefore, if gas quality cannot be maintained, the only alternative allowed by the NSPS is to decommission the well, provided there are no exceedances of the surface emissions monitoring limit. While such wells could be decommissioned, SCS Engineers (SCS) feels it would be better to leave them in place in case future conditions render them necessary.

PROPOSED STANDARD OPERATING PROCEDURE

SCS proposes to establish the following standard operating procedure for wells at which poor gas quality is recorded despite the application of minimal vacuum (i.e., less than 0.5 in-w.c.). This standard operating procedure is proposed as an addendum to the GCCS design plan for the Pre-1985 and Class III landfills dated August 24, 2001.

When excess oxygen is detected, the wellhead valve will be adjusted to minimize vacuum. If after more than one hour of decreased vacuum the oxygen concentration does not decline to allowable levels, the wellhead will be shut off until the gas quality recovers. The well will continue to be monitored on a monthly basis, and the wellhead valve opened to purge any accumulated gas and relieve any pressure that may have developed. If, during the routine monthly monitoring, the oxygen concentration is below five percent, the well will be brought back on line until the gas quality again declines.

Gas concentration and pressure will continue to be monitored and recorded during the months in which the wells are shut off. However, a zero pressure will not be considered an exceedance of the wellhead pressure criterion included in 40 CFR 60.753(b). If a positive pressure is recorded,

Mr. James Flynt, P.E.
December 30, 2003
Page 3

the well will be reopened to relieve any pressure and to purge the accumulated gas from the well. Quarterly surface emissions monitoring will continue to be used to demonstrate the effective capture and control of LFG from the landfill. In the case of exceedance of the 500-ppmv surface emissions monitoring limit, standard remediation steps will be conducted, including evaluating the need for returning the well to full-time service.

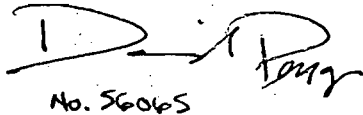
Note that wells under this standard operating procedure will not be physically disconnected from the GCCS, which will allow the County to quickly return the wells to service if the need arises. If in the future wells are to be permanently decommissioned, the County will submit a formal notice of well decommissioning to the Florida Department of Environmental Protection (FDEP).

Please forward this proposed standard operating procedure/addendum to the GCCS design plan to FDEP at the following address:

Air Resources Management
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Please call us if you have any questions or need additional information.

Sincerely,



No. 56065

David H. Penoyer, P.E.
Project Manager



Raymond J. Dever, P.E., DEE
Vice President
SCS ENGINEERS

cc: John Sullivan, SCS Field Services

**ORANGE COUNTY LANDFILL
TITLE V PERMIT RENEWAL
APPLICATION**

Prepared for:
Orange County Solid Waste Division
Orange County, Florida

Prepared by:
CH2M/G&R
The Joint Venture
Orlando, Florida

August 27, 2001

Project No. 011021.03



UTILITIES DEPARTMENT • SOLID WASTE DIVISION

5901 Young Pine Road • Orlando, Florida 32829
407-836-6601 • Fax 407-836-6658

August 27, 2001

FILE

Mr. Leonard T. Kozlov, P.E.
Department of Environmental Protection
Central District
3319 Maquire Blvd, Suite 232
Orlando, FL 32803-3767

**RE: Orange County – AP
Orange County Solid Waste Management Facility
Title V Permit Renewal Application**

Dear Mr. Kozlov:

Attached are four copies of the Title V Permit renewal application for the Orange County Solid Waste Management Facility. This renewal application includes two emission units (EUs). EU No. 1 is for the flare station and fugitive emissions from the landfill cells. EU No. 2 is for fugitive emissions from all other activities at the facility. Emission projections using results from the recent NMOC Tier 2 testing for the Class III and Pre-85 Cells and future landfill cells are also included. Synthetic limits are not being requested for the flare station since the only emission-triggering PSD parameter from a flare would be carbon monoxide, which is exempt from PSD requirements pursuant to Rule 62-212.400(2)(a)2c, F.A.C. The County reserves the right to revisit this issue in the future, should it be in the County's best interest to do so.

If there are any questions regarding this submittal, please call me at (407) 836-6600.

Sincerely,

A handwritten signature in cursive script that reads "James W. Becker".

James W. Becker, Manager
Solid Waste Division

Cc: Dan Morrical, P.E., Solid Waste Division
Stan Keely, P.E., WCG Inc.
Bo Bruner, P.E., CH2MHill
David Pelham, P.E., WCG Inc

EXHIBIT F

EMISSION PROJECTION CALCULATIONS

Potential to Emit *							
FROM FLARE & LANDFILL							
Year	VOC	VC	CO	NO _x	SO ₂	SO ₂	PM
1972	0	0.00	0	0	0	0	0
1973	0	0.02	0	0	0	0	0
1974	0	0.05	0	0	0	0	0
1975	0	0.08	0	0	0	0	0
1976	0	0.11	0	0	0	0	0
1977	1	0.15	0	0	0	0	0
1978	1	0.19	0	0	0	0	0
1979	1	0.23	0	0	0	0	0
1980	1	0.28	0	0	0	0	0
1981	1	0.32	0	0	0	0	0
1982	1	0.36	0	0	0	0	0
1983	1	0.40	0	0	0	0	0
1984	0	0.45	0	0	0	0	0
1985	1	0.51	0	0	0	0	0
1986	2	0.58	0	0	1	1	0
1987	3	0.64	0	0	1	1	0
1988	4	0.71	0	0	1	1	0
1989	4	0.77	0	0	1	1	0
1990	5	0.84	0	0	2	2	0
1991	6	0.92	0	0	2	2	0
1992	7	1.00	0	0	2	2	0
1993	10	1.07	0	0	2	2	0
1994	13	1.15	0	0	2	2	0
1995	16	1.23	0	0	3	3	0
1996	19	1.31	0	0	3	3	0
1997	22	1.38	0	0	3	3	0
1998	7	1.45	246	13	3	1	6
1999	7	1.51	259	14	3	1	6
2000	8	1.56	272	14	4	1	6
2001	8	1.60	281	15	4	1	6
2002	9	1.67	351	15	4	1	7
2003	9	1.75	358	16	4	1	7
2004	11	1.82	364	16	4	1	7
2005	15	1.89	371	17	4	1	7
2006	19	1.96	366	17	4.6	1	7
2007	23	2.03	352	16	4.8	1	7
2008	14	2.11	338	15	5.0	1	7
2009	15	2.18	440	21	5.2	1	9
2010	15	2.25	453	22	5.4	1	9
2011	16	2.30	465	23	6	1	10
2012	16	2.35	477	23	6	2	10
2013	17	2.40	488	24	6	2	10
2014	17	2.45	499	25	6	2	10
2015	18	2.50	509	25	6	2	11
2016	18	2.55	519	26	6	2	11
2017	19	2.60	528	26	7	2	11
2018	19	2.66	537	27	7	2	11
2019	20	2.71	546	27	7	2	12
2020	20	2.76	555	28	7	2	12
2021	20	2.82	563	28	7	2	12
2022	21	2.87	570	29	7	2	12
2023	21	2.93	578	29	7	2	13
2024	21	2.98	585	30	7	2	13
2025	22	3.04	592	30	7	2	13
2026	22	3.10	599	31	8	2	13
2027	22	3.15	605	31	8	2	13
2028	22	3.21	611	31	8	2	13
2029	21	3.08	587	30	7	2	13
2030	20	2.96	564	29	7	2	12

* VOC (NMOC) and VC projections from LANDGEM, Remaining from AP-42 Emission Factors



ORANGE COUNTY SOLID WASTE DIVISION

Date: 8/28/01

THIS WILL ACKNOWLEDGE RECEIPT OF:

Hand delivery to:

TO: FDEP
3319 Maguire Blvd #232

ATTN: Leonard Kozlov PE.

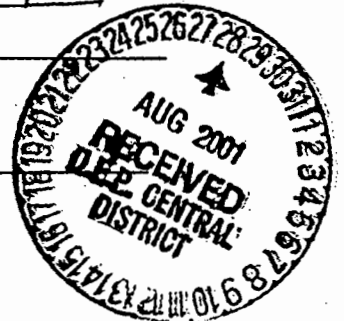
OFFICE/EXT: _____

FAX NO.: _____

Contents:

Title V Permit Renewal Application 4 copies
Orange Co. Solid Waste Mgmt. Facility

FROM: Jim Becker
EXT: 407-836-6600



PLEASE ACQUIRE STAMP and/or SIGNATURE

Return to Solid Waste Division.....Att: Janet Mumma: 407/836-6600

Received By:

Signature

Date

Print Name / Title



UTILITIES DEPARTMENT . SOLID WASTE DIVISION

5901 Young Pine Road • Orlando, Florida 32829
407-836-6601 • Fax 407-836-6658

January 22, 2001

Ms. Debra Laisure, P.E.
Air Resources Management
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767



**RE: Orange County Solid Waste Division
File 0950113-001
Title V Permit Renewal RAI Submittal**

Dear Ms. Laisure:

Attached is our response to your request for information facsimile dated October 26, 2001 (copy enclosed). This response addresses each of the items requested in the order requested. Four copies of the complete bound renewal application are provided with revisions per Items 1 and 2 in this submittal to avoid having multiple documents comprising this permit renewal application. The monitoring records requested in Item 3 are attached separately.

Item 1. Please see the attached Title V application including the completed Section III for EU 001, pages 14, 15, 16, 20, 21 and 22.

Item 2. Please see Exhibit H and the revised page 17 of Section III for the maximum annual rate calculation for the flare.

Item 3. The previous 12 months of compliance records are attached. Pursuant to your telephone conversation with Mr. David Pelham, these records include

- A. surface methane emissions monitoring for the months of October 2000 through September 2001, and
- B. wellhead monitoring for the last quarter of 2000 and the first three quarters of 2001.

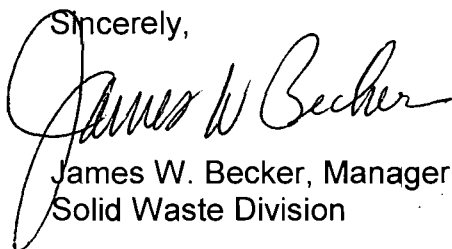
Item 4. Class III/Pre-85 Cells Landfill gas control system status:

- a. Complete.
- b. Complete.
- c. Certification of Construction Completion documents are scheduled for submittal no later than June 1, 2002.

Debra Laisure
FDEP
Response to RAI Dated October 26, 2001
January 22, 2002
Page Two

We trust that this submittal provides the Department with the necessary information to complete the review of the permit renewal application. If there are any questions, please call Mr. Dan Morrival, P.E., our Chief Engineer for the Solid Waste Division, at (407)836-6600.

Sincerely,



James W. Becker, Manager
Solid Waste Division

Enclosures

CC: Dan Morrival, P.E., Chief Engineer, Solid Waste Division
Stan Keely, P.E., WCG Inc.
Bo Bruner, P.E., CH2MHill
David Pelham, P.E., WCG Inc.

Reviewer: DEB LAISURE **PERMIT APPLICATION REVIEW**

Application date: 8/28/01 Review date: 10/25/01 Draft date: 6/7/1/02

Type of permit applied for:

- Construction Permit
- Operating Permit
- General Permit (_____)
- Permit Modification (_____)
- Major Source
- Title V
- FESOP

Permittee:

ORANGE CO BOFCC
5901 YOUNG PINE ROAD
ORLANDO FL 32829

Attention: JAMES W. BECKER Position: DIVISION MGR (SW)

Project: T-V RENEWAL
ORANGE CO LANDFILL

Facility Location:

SAME AS ABOVE

File or Permit # 0950113-002 Expiration Date: _____

Ccs: DAN MORRICAL

DAVID PELHAM

Project description: APPLICANT SEEKS TO RENEW A TITLE
V AIR OPERATION PERMIT. THE FACILITY IS A
LANDFILL W/A FLARE. FACILITY HAS BEEN
UNDER ENFORCEMENT FOR NOT INSTALLING THE
GAS COLLECTION SYSTEM IN SOME CLOSED AREAS
OF THE LANDFILL. FACILITY IS PREPARING TO
CONSTRUCT NEW CELLS & WILL MODIFY T-V
PERMIT WHEN THESE ARE COMPLETE.

Rule Applicability: TITLE V CORE LIST, NSPS WWW

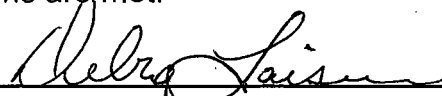
Emissions Summary:	lb/hr	ton/yr *
VOC		89
VC		1,67
CO		281 351
NO _x		15
SO ₂		4
SO ₂		1
PM		67

* FOR YEAR 2002

Comments: 6/27/02 CAROLINE INFORMS PERMITTING THAT ENFORCEMENT ISSUES HAVE BEEN RESOLVED.

Conclusion:

Based upon the application, the Department has been provided reasonable assurance the source can be operated in compliance with applicable air pollution rules and regulations provided the source is operated as specified in the application and permit conditions are met.



ORANGE COUNTY LANDFILL

RAI

TITLE V PERMIT RENEWAL

APPLICATION

Prepared for:
Orange County Solid Waste Division
Orange County, Florida

Prepared by:
CH2M/G&R
The Joint Venture
Orlando, Florida

January 21, 2002

Project No. 011021.03



TABLE OF CONTENTS

Section

PERMIT APPLICATION

Exhibit A – SITE LOCATION

Exhibit B – SITE PLAN

Exhibit C – TITLE V CORE LIST OF RULES

Exhibit D – PROCESS FLOW DIAGRAM

Exhibit E – INSIGNIFICANT & FUGITIVE EMISSION SOURCES

Exhibit F – LFG COLLECTION SYSTEM O&M PLAN

Exhibit G – LANDGEM MODEL RESULTS

Exhibit H – EMISSION PROJECTION CALCULATIONS





Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Orange County Board of County Commissioners	
2. Site Name: Orange County Solid Waste Management Facility	
3. Facility Identification Number: 0950113 [] Unknown	
4. Facility Location: Street Address or Other Locator: 5901 Young Pine Road City: Orlando County: Orange Zip Code: 32829	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Contact

1. Name and Title of Application Contact: James W. Becker, Solid Waste Division Manager
2. Application Contact Mailing Address: Organization/Firm: Orange County Solid Waste Division Street Address: 5901 Young Pine Road City: Orlando State: FL Zip Code: 32829
3. Application Contact Telephone Numbers: Telephone: (407)836-6600 Fax: (407)836-6629

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: _____

Reason for revision: _____

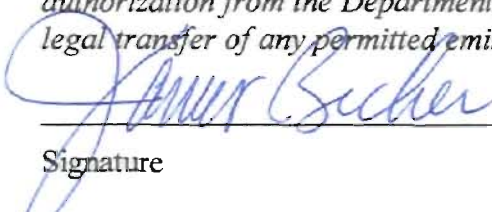
- Title V Permit Renewal

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: James W. Becker Solid Waste Division Manager	jim.becker@afl.net
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Solid Waste Division Street Address: 5901 Young Pine Road City: Orlando State: FL Zip Code: 32829	dan.morriscal@aofl.net
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (407)836-6600 Fax: (407)836-6629	
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [] , if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.</i>	
 Signature	01/22/02 Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: David M. Pelham Registration Number: 42032	dipelham@wag1.com
2. Professional Engineer Mailing Address: Organization/Firm: CH2/G&R Joint Venture Street Address: 8875 Hidden River Parkway, Suite 225 City: Tampa State: FL Zip Code: 33637	
3. Professional Engineer Telephone Numbers: Telephone: (813)979-7144 Fax: (813)979-1872	

813 288 1849

4. 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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 in the corresponding application for air construction permit and with all provisions contained in such permit.

David M. Pellicci

Signature

Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Open Flare for Landfill Gas emission control per Subpart WWW and fugitive LFG emissions	AF2C	N/A
002	Other fugitive emissions from Landfill Operations	AF2C	N/A

Application Processing Fee

Check one: [] Attached - Amount: \$ _____ [X] Not Applicable

Construction/Modification Information N/A

1. Description of Proposed Project or Alterations:

2. Projected or Actual Date of Commencement of Construction:

3. Projected Date of Completion of Construction:

Application Comment

This application is to renew the existing permit (permit NO. 0950113-001-AV) for the operation of landfill gas (LFG) flares, fugitive LFG emissions from closed and active Class I and Class III landfill cells, yard waste mulching and composting, asbestos disposal, temporary household hazardous collection and storage, borrow pit operations, materials recovery, white goods collection, equipment fueling and maintenance, above ground fuel tanks, leachate management, and other solid waste management activities.

The renewed permit resulting from this application is anticipated to be modified within 180 days of the initial operation of the next landfill cell (Cell 9) and subsequent emission control device and again within 180 days of the commencement of operation of flares to be constructed for the Pre-1985 Class I and Class III Landfill emission controls.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 481.20 North (km): 3150.30			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 28/28/52 Longitude (DD/MM/SS): 81/11/30			
3. Governmental Facility Code: 3	4. Facility Status Code: A	5. Facility Major Group SIC Code: 99	6. Facility SIC(s): 99
7. Facility Comment (limit to 500 characters): See Application Comment			

Facility Contact

1. Name and Title of Facility Contact: James W. Becker, Solid Waste Division Manager		
2. Facility Contact Mailing Address: Organization/Firm: Orange County Solid Waste Division Street Address: 5901 Young Pine Road City: Orlando State: FL Zip Code: 32829		
3. Facility Contact Telephone Numbers: Telephone: (407)836-6600 Fax: (407)836-6629		

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input checked="" type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): 40 CFR Part 60, Section 725(2)(b) designates all MSW landfill with a design capacity exceeding 2.5 million megagrams in design capacity as a Title V facility. This facility exceeds this minimum design capacity threshold; therefore, this facility is subject to Title V permitting.	

List of Applicable Regulations

See Exhibit C for DEP's Core List of Rules	
40 CFR Part 60, Subpart WWW	Standards of Performance for MSW Landfill Emissions

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
CO	A	MAJOR			No Emission Cap is requested.
NOX	B	NOT MAJOR OR SYN		MINOR	No Emission Cap is requested.
PM10	B	↓			No Emission Cap is requested.
SO2	B				No Emission Cap is requested.
VOC	B				No Emission Cap is requested.
HAPS	B				No Emission Cap is requested.
H085	B			ETHYL BENZENE	No Emission Cap is requested.
H104	B			HEXANE	No Emission Cap is requested.
H120	B			MEK	No Emission Cap is requested.
H169	B			TOLUENE	No Emission Cap is requested.
H186	B			XYLENES	No Emission Cap is requested.
H128	B			MeCl	No Emission Cap is requested.
H167	B			TETRACHLORO-	No Emission Cap is requested.
H184	B			ETHYLENE VINYL CHLORIDE	No Emission Cap is requested.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit F</u> <input type="checkbox"/> Not Applicable <u>REMOVED - NO CHANGE FROM ORIGINAL SUBMISSION</u>
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input checked="" type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one) <input type="checkbox"/> 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). <input checked="" type="checkbox"/> 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. <input type="checkbox"/> 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. Regulated or Unregulated Emissions Unit? (Check one) <input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. <input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Open Flare for LFG combustion and fugitive landfill emissions			
4. Emissions Unit Identification Number: Existing EU is split <input checked="" type="checkbox"/> No ID ID: <input type="checkbox"/> ID Unknown			
5. Emissions Unit Status Code: A	6. Initial Startup Date: 1972	7. Emissions Unit Major Group SIC Code: 99	8. Acid Rain Unit? [No]
9. Emissions Unit Comment: (Limit to 500 Characters) The entire solid waste management facility was included in the initial Emission Unit #001. This EU has been split into 2 separate EUs to describe emissions from the landfill gas emissions control (open flare), fugitive landfill gas emissions, and the remaining solid waste management activities. The flare is a pollution control device; therefore, is not subject to PSD review per 62-212, F.A.C. EU001 includes the flare station and landfill gas collection systems of Cells A-K, Cell 7B, and Cell 8, which became operational in 1998. Fugitive emissions from these landfill cells as well as the Class III landfill and Pre-85 cells are included in EU001.			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
 The open flare provides the landfill gas (NMOC) emissions control as required by 40 CFR Part 60, Subpart WWW, Section 750.

2. Control Device or Method Code(s): 023 *FLARING*

Emissions Unit Details

1. Package Unit:	
Manufacturer: John Zink	Model Number: ZEF 12x35
2. Generator Nameplate Rating: N/A	MW
3. Incinerator Information:	
Dwell Temperature: 1500-1600 °F	
Dwell Time: N/A	seconds
Incinerator Afterburner Temperature: N/A	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	182	mmbtu/hr
2. Maximum Incineration Rate:	N/A lb/hr	tons/day
3. Maximum Process or Throughput Rate:	5500 scfm	
4. Maximum Production Rate:	N/A	
5. Requested Maximum Operating Schedule:	24 hours/day	days/week
	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	The landfill will have fugitive emissions 24 hours per day. This application does not propose synthetic emissions on the flare, although the flare operated less than 1% of the time. Remaining gas is sold to an off-site user. Two blowers, each with a 2750 scfm capacity provide the 5500 scfm maximum process rate. Max. Heat Input Rate calculation included in Exhibit H.	

**C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

List of Applicable Regulations

See Exhibit C for DEP's Core List of Rules	
40 CFR Part 60, Subpart WWW	Standards of Performance for MSW Landfill

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? EU001-A		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): The EU has 2 emission sources, the flare and fugitive emissions from various landfill cells. This emission unit may include additional emission points upon completion of the Class III/Pre 1985 landfill emission control system and the Cell 9 landfill control system.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A			
5. Discharge Type Code: V	6. Stack Height: 35 feet	7. Exit Diameter: 1 feet	
8. Exit Temperature: 1500-1600 °F	9. Actual Volumetric Flow Rate: 433 cfm for 1433 minutes	10. Water Vapor: N/A %	
11. Maximum Dry Standard Flow Rate: N/A dscfm		12. Nonstack Emission Point Height: 0 feet	
13. Emission Point UTM Coordinates: This field is optional and may be left blank per instructions. Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters): The blower/flare station maximum flow rate is 5500 scfm based on the blower capacity of 2750 scfm for 2 blowers. Fields 10 and 11 are N/A due to the instructions statement that this field is for emission units regulated under grain-loading standards.			

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Stack emissions from the open flare.		
2. Source Classification Code (SCC): 50200601		3. SCC Units: Million cubic feet processed
4. Maximum Hourly Rate: 0.33	5. Maximum Annual Rate:2891	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0042	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: 551
10. Segment Comment (limit to 200 characters): Max. annual Rate (Item 5) calculation included in Exhibit H. Max. sulfur content and BTU content provided by BEI.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fugitive emissions from landfills.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:0	5. Maximum Annual Rate:0	6. Estimated Annual Activity Factor:1
7. Maximum % Sulfur:0.1	8. Maximum % Ash:0	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

**F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO	N/A	N/A	NS
NOX	023	N/A	NS
PM10	N/A	N/A	NS
SO2	023	N/A	NS
VOC	023	N/A	NS
HAPS	023	N/A	NS
H085	023	N/A	NS
H104	023	N/A	NS
H120	023	N/A	NS
H169	023	N/A	NS
H186	023	N/A	NS
H128	023	N/A	NS
H167	023	N/A	NS
H184	023	N/A	NS
H009	023	N/A	NS

Emissions Unit Information Section 1 of 2

Pollutant Detail Information Page _____ of _____

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

N/A

Potential/Fugitive Emissions

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		4. Synthetically Limited? [] tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): This section is not applicable since this EU is not emissions-limited or includes Pre-construction Review Pollutants.			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:VE0	2. Basis for Allowable Opacity: [X] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: 0 % Exceptional Conditions: 0 % Maximum Period of Excess Opacity Allowed: 5 MIN PER 2 HOUR PERIOD min/hour	
4. Method of Compliance: EPA Method 22	
5. Visible Emissions Comment (limit to 200 characters): 40 CFR Part 60.19: Flares shall be operated with no visible emissions except for a period not to exceed a total of five minutes during any two consecutive hours.	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

N/A

Continuous Monitoring System: Continuous Monitor _____ of _____

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:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit D</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit H</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit H</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit H</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [] Attached, Document ID: _____ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [] Attached, Document ID: _____ [X] Not Applicable
13. Identification of Additional Applicable Requirements [] Attached, Document ID: _____ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [] Attached, Document ID: _____ [X] Not Applicable per 40 CFR 64.2 (a) (1) and (2)
15. Acid Rain Part Application (Hard-copy Required) [] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Solid waste management activities not specifically associated with landfill gas controls, such as vehicle maintenance, PM emissions from roads, portable generator emissions, etc.</p>			
<p>4. Emissions Unit Identification Number: Existing EU split <input checked="" type="checkbox"/> No ID ID: <input type="checkbox"/> ID Unknown</p>			
5. Emissions Unit Status Code: A	6. Initial Startup Date: 1972	7. Emissions Unit Major Group SIC Code: 99	8. Acid Rain Unit? [No]
<p>9. Emissions Unit Comment: (Limit to 500 Characters) This EU was a portion of the previous EU # 001, which included emissions from landfills. The new split EU does not include landfill gas emissions, but does include PM emissions from road traffic, yard waste management, fuel storage tanks, etc.</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
Most roads have been paved and additional dust control is accomplished with water application.

2. Control Device or Method Code(s): 061

Emissions Unit Details

1. Package Unit:	
Manufacturer: N/A	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)
N/A**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

**C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

N/A

List of Applicable Regulations

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

N/A

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?		2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet	
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):			

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Hauling (emissions from vehicle-miles traveled by haul trucks and maintenance vehicles) emissions are estimated for paved and unpaved roads.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Per application instructions, the hourly and annual rates can not be defined for facility-wide fugitive emissions and "0" is to be entered where the rate does not apply.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Emissions from internal combustion industrial engines, such as pumps and portable generators.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM10	061	108	NS
CO	N/A	N/A	NS
CO2	N/A	N/A	NS

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)
N/A**

Potential/Fugitive Emissions

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		lb/hour	tons/year
4. Equivalent Allowable Emissions:			
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

N/A

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: _____ % Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

N/A

Continuous Monitoring System: Continuous Monitor _____ of _____

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:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

N/A

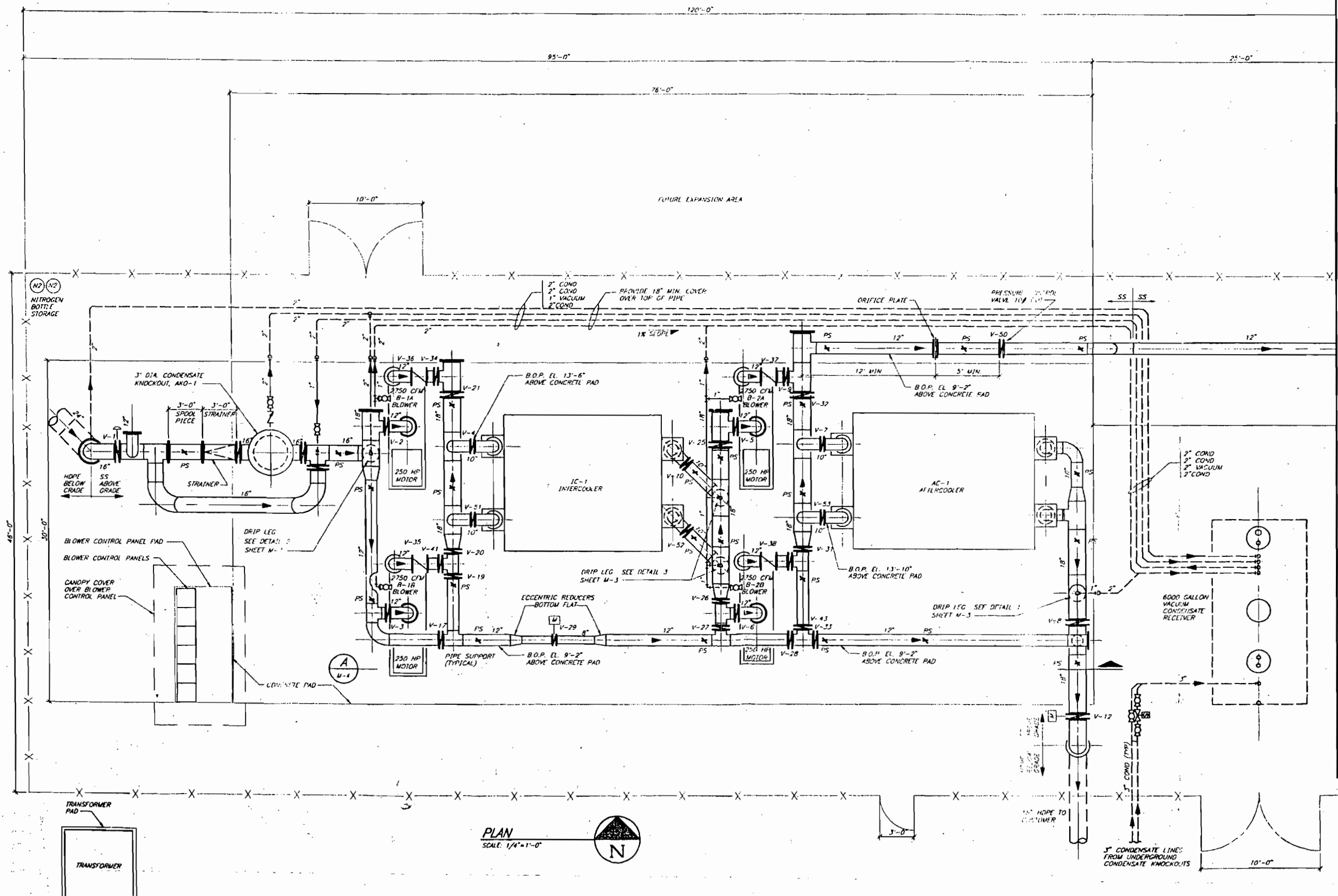
Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

REV	DESCRIPTION	DATE
1	OWNER REVIEW	6/1/97
2	EQUIPMENT BID ISSUE	6/17/97
3	AIR PERMIT	7/8/97
4	SOLID WASTE PERMIT	9/15/97
5	REVISED SOLID WASTE PLAN	9/29/97



PLAN
SCALE: 1/4"=1'-0"



MATCH LINE

3131 South State Street
Ann Arbor MI 48106

ROY TURKNETT ENGINEERS
CONSULTANTS

Roy Turknett Engineers
Consulting Engineers
Mechanical - Electrical

8010 DULCAY ROAD
(804) 778-7540

PO BOX 111
PENSACOLA, FLORIDA 32544
Fax (904) 778-7576

DESIGNED BY: R. TURKNETT
CHECKED BY: []
SCALE: AS NOTED
DATE: 8-18-97

BIOHAZARD ENERGY SYSTEM
ORANGE COUNTY UTILITY DIVISION
ORANGE COUNTY, FLORIDA

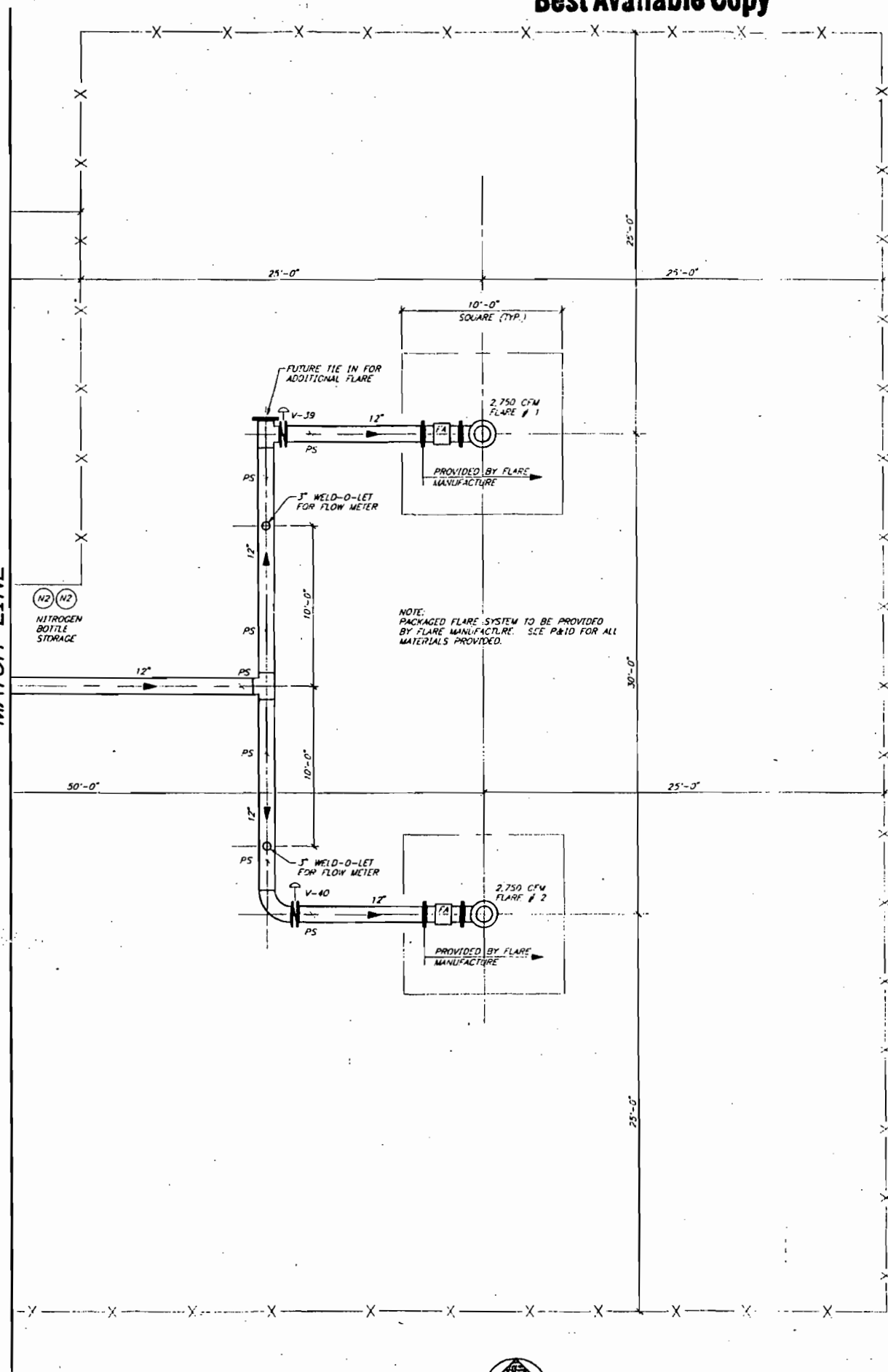
MECHANICAL
LANDFILL GAS BLOWER PIPING PLAN

DIVISION: [] CONTRACT: [] SHEET: M-2

Best Available Copy

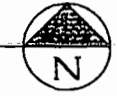
REV	DESCRIPTION	BY	DATE
△	OWNER REVIEW		6/4/97
△	EQUIPMENT BID ISSUE		6/17/97
△	AIR PERMIT		7/18/97
△	SOLID WASTE PERMIT		9/13/97
△	REVISED SOLID WASTE PERMIT		9/28/97

MATCH LINE



NOTE:
PACKAGED FLARE SYSTEM TO BE PROVIDED
BY FLARE MANUFACTURE. SEE P&ID FOR ALL
MATERIALS PROVIDED.

PLAN
SCALE: 1/4"=1'-0"



3131 South State Street
Ann Arbor MI 48108

DESIGNED: D. MALZER
SCALE: AS NOTED
PART: 01 (WELDED GASLINE AND PIPING)

CONSULTANTS

Roy Turknett Engineers
Consulting Engineers
Mechanical - Electrical
8010 DUCKY ROAD JACKSONVILLE, FLORIDA 32214
(904) 778-7540 FAX (904) 778-7534

DESIGNED: R. TURKNETT
SCALE: AS NOTED
PART: 01 (WELDED GASLINE AND PIPING)

BIO MASS ENERGY SYSTEMS
ORANGE COUNTY UTILITY DIVISION
ORANGE COUNTY, FLORIDA

MECHANICAL

**LANDFILL GAS
BLOWER PIPING
PLAN**

DIVISION: _____ CONTRACT: _____ SHEET: M-3 OF 4

ORANGE COUNTY LANDFILL MONTHLY CONDENSATE LOG 1998

7B CONDENSATE SUMPS

Sump #	Date							Totals
	1							
	2							
	3							
	4							
	5							

Sump #	Date							Totals
	1							
	2							
	3							
	4							
	5							

Sump #	Date							Totals
	1							
	2							
	3							
	4							
	5							

Sump #	Date							Totals
	1							
	2							
	3							
	4							
	5							

Monthly Totals

Sump #

Vacuum Recovery Tank Hours:

- 1
- 2
- 3
- 4
- 5

Pump #1
Pump #2

TOTAL CONDENSATE COLLECTED:

DTE BIOMASS ENERGY, INC
ORLANDO GAS PRODUCERS, INC
LANDFILL GAS RECOVERY FACILITY
ORANGE COUNTY LANDFILL
ORLANDO, FL

LANDFILL GAS COLLECTION SYSTEM OPERATION AND MAINTENANCE PLAN

A. General Description

The Orange County Landfill Gas Recovery Facility ("Facility") consists of the following:

- 81 vertical landfill gas ("LFG") recovery well in cell A-K;
- 59 vertical and 23 horizontal LFG recovery wells in cells 7B and 8;
- LFG collection headers ranging in size from 4" diameter to 18" diameter;
- LFG transmission pipeline ranging in size to 24" diameter; and
- A central blower and flare station.

LFG is recovered from the wells under vacuum and brought to the central blower and flare station located just north of Cells 7B/8, adjacent to the leachate holding tank. The facility is approximately 130'x85' and is oriented roughly northeast-southwest with the flares to the northeast and the main transmission pipe and inlet plenum to the southwest.

B. Compressor Equipment

The blower and flare station consists of four centrifugal blowers and two flare units placed in two parallel trains operating in series. LFG enters the first stage centrifugal blowers through a balancing plenum from a demister knockout. From the balancing plenum, LFG is compressed by two parallel 2750 SCFM centrifugal blowers into a second plenum. From the second plenum, LFG flows through an intercooler reducing temperature to 120°F and into another plenum. A second stage centrifugal blower consisting of two parallel 2750 SCFM blowers compresses the LFG to 19.75 PSIG into another plenum.

From the second stage centrifugal blower outlet, LFG can flow into a pair of flares for oxidation, or into an aftercooler. The LFG flows out of the aftercooler at 120°F into a 1.5 mile long 18" pipeline for delivery to the Orlando Utilities Commission Stanton Energy Center.

Bypass piping is located around all filters, blowers, and coolers to allow for equipment servicing during active production. The bypass piping also provides the flexibility to send LFG from any one of the four blowers to the two flares to ensure continuous LFG extraction during scheduled or unscheduled system outages.

A below ground condensate receiver located within the blower and flare station is designed to receive all condensate generated by the facility. Condensate collects in the bottom of the vessel until a preset level is reached, at which time one of two pumps are energized to pump the contents of the vessel to the exiting leachate holding tank. Condensate drain lines connected the condensate receiver are provided at key locations in the processing facility.

C. Open Flare System

Equipment: (2) John Zink 12" OD x 35" OAH Elevated Flare Systems complete with flame arrestor and control panels

The flare system consists of two equally sized elevated LFG flares each consisting of a utility tip and stack. The flare tip is constructed from stainless steel materials and includes a 310SS windshield that creates a preheated zone to help initiate combustion as well as minimize the effects of the wind on the combustion process. The A-105 carbon steel stack provides the structural support for the flare tip and the required elevation for safe radiant heat exposure. The flare control system provides the controls, safety system, and operating logic for the entire system. The control panel employs the use of an Allen Bradley SLC-500 Programmable logic controller. Flare ignition is provided by a propane-fueled pilot assembly with electronic ignition. A full-flow, low-headloss flame arrestor is located at the flare inlet as the last item before the burner assembly. A compressed nitrogen operated, spring-return, fail-closed valve is located upstream the flame arrestor and automatically closes on condition of the flame failure to prevent release of LFG.

D. Flare Operating Design Parameters

Process Variables	Required Values
LFG flow rate	2,750 scfm
Gas composition (expected)	
Methane	55%
Carbon dioxide	45%
Oxygen	≤3%
Nitrogen	≤3%
NMOCs, HAPs, others	<1%
Design heat release rate (lower heat value)	80.0 MMBtu/hr
Operating temperature	1500-1600°F
Destruction efficiency	≥98%

Combustion and operational control is provided by a Flame Control Panel. Flame verification for the pilot flame is accomplished by a thermocouple assembly. The main flame is monitored by two thermocouple assemblies mounted in the flame zone of the windshield. A differential pressure gage is located on both sides of the flame arrestor housing to detect plugging of the

flame bank elements. The flame arrestor contains a thermocouple to indicate the presence of a backflame condition. A manual butterfly valve installed ahead of the fail-closed valve permits balancing flows between flares when necessary.

Provisions have been made to add an additional first stage blower, intercooler, second stage blower, aftercooler and flare as LFG production increases.

E. Safety

It is the policy of DTE Biomass Energy to give primary consideration to the health and safety of all its employees. DTE Biomass Energy is committed to compliance with all applicable federal, state and local safety and health regulations. It is the policy of the Company to maintain safe working conditions through the proper design of equipment, development of safe work practices, effective job instruction and the use of approved personal protective equipment.

Responsibility for safety is shared by all employees. Employees are responsible for their own safety as well as the safety of others. Employees are our most valuable asset. DTE Biomass Energy will not require employees to perform work that they feel cannot be done safely. Employees are the most vital and significant element in the total success of our operation. It is the position of DTE Biomass Energy that all accidents can be prevented through the safety attitudes and action of all employees.

All work performed shall at a minimum comply with the safety standards set forth in the DTE Biomass Energy Safety Policy and Procedures Manual that includes confined space entry procedures, blood born pathogen exposure control, first aid, hazard communication/right-to-know, hearing conservation program, personnel evacuation and fire protection, plant structural safety, protective tagging, recordkeeping, and training requirements.

Additionally, all work shall be performed in compliance with the safety standards set forth in the SWANA Landfill Gas Division Health and Safety Task Force, "A Compilation of Landfill Gas Laboratory and Field Practices and Procedures", dated March, 1992.

F. Wellfield System Objectives

The objectives of system operations and balancing are:

- Optimize active landfill gas recovery by maximizing flow and heating value.
- Minimize air intrusion by limiting nitrogen and oxygen content.
- Maintain the recovery rate at or near the production rate.
- Continually evaluate system performance to identify operational constraints and recommend solutions to problems.

G. Routine Operations

- Collect collection system operational data at all valves and strategic monitoring locations including:
 - Vacuum
 - Gas composition (CO₂, O₂, N₂, CH₄)
- Collect individual well operational data including:
 - Flow measurement
 - Vacuum
 - Gas composition (CO₂, O₂, N₂, CH₄)
 - Gas temperature
- Pump, monitor and record volume and frequency of service for all condensate knockouts.
- Interface with landfill operations personnel to coordinate collection activities in areas of active landfilling and respond to landfill operational needs.

H. Reporting

- Provide a monthly system operations report including:
 - Total flow of gas
 - Average monthly Btu value of LFG
 - Summary of data collected at strategic monitoring collection system locations
 - Summary of data collected at individual wells
 - A summary of maintenance tasks performed
 - A recommendation of additional maintenance or repair items needed
 - Recommendations of enhancements to improve collection system operations and performance

I. Unscheduled Operations

- Respond to call out by ADAS
- Respond to emergency calls by on-site personnel

J. Start-Up System Inspection

The following steps must be taken prior to initial system startup:

- Inspect all wellhead connections, flanges, valves, and sample ports.
- Fully open all header and lateral piping butterfly valves.
- Open all wellhead valves to 10% of full flow.

K. Routine Wellfield Balancing

Well monitoring and balancing on a routine basis is necessary to maximize energy recovery while minimizing air intrusion. Each individual LFG collection well is equipped with a Landtec Accu-Flo wellhead and shut off valve to facilitate the tuning process. Each Accu-Flo wellhead includes a gas flow meter, flow control valve, impact tube, pressure port, sample port, temperature gauge, flex hose, and dust cover.

Well readings including flow, pressure, and gas quality are measured and recorded utilizing the Landtec GEM-500 LFG analyzer. The GEM-500 is a multi-functional analyzer that incorporates an infrared gas analyzer to measure CH₄ and CO₂, an O₂ analyzer, temperature probe, and pressure gauges. Information on the calibration, operation, maintenance, and data logging features of the GEM-500 can be found in the OEM operations and maintenance guide supplied with the instrument.

Well balancing involves the analysis of gas quality to determine the maximum sustainable flow from an individual well. As vacuum is applied to a well casing, LFG is extracted from the surrounding area or "zone of influence". A sample void of N₂ and O₂ indicates that the well is extracting LFG at a rate less than the rate of generation in the zone of influence. As the applied vacuum is increased, the well will begin to extract LFG at a rate faster than rate of generation in the zone of influence causing "overpull". Overpull occurs when LFG is extracted at a rate that causes the introduction of atmosphere into the surrounding landfill area. Initially, the LFG quality will change to first indicate N₂ intrusion and eventually O₂ intrusion. As the N₂ level rises, a corresponding decrease in CH₄ content results in the decrease of the overall energy recovered from a well. The individual control valve at each wellhead is used to control flow and vacuum in response to these gas quality measurements and in advance of any long term detrimental effect from continued overpull. The use of N₂ levels to indicate the appropriate rate of extraction is the most effective way to tune or balance individual well to maximize energy recovery while minimizing air intrusion.

At no time will levels of N₂ be allowed to exceed 20% by volume, O₂ be allowed to exceed 5% by volume, or gas temperature be allowed to exceed 131° F.

Initial operations and balancing of the system will require weekly sampling and tuning of each active recovery well. At no time during facility operations will individual wells be sampled and tuned less than one time per month.

Additional well tuning and reference information can be found in the SWANA guidance document "Landfill Gas Operations and Maintenance Manual of Practice", dated March, 1997.

L. Maintenance And Repairs-Laterals and Headers

Maintenance and repair of sections of lateral and header piping may require isolation from the blower station vacuum source. System components can be isolated through the use of shut

valves. Butterfly shut off valves are provided at strategic locations so that maintenance work can be performed while the collection system remains operational. LFG flow can be directed in two directions from most areas of the collection system by the use of these valves to minimize the areas collection areas impacted during maintenance and repairs.

M. LFG Collection Wells

Each individual LFG collection well is equipped with a Landtec Accu-Flo wellhead and shut off valve. All maintenance and repair work upstream of this valve can be performed safely by simply closing the valve. All wellhead work downstream of this valve will require the closing the shut off valve at the lateral or header serving the well.

N. Troubleshooting

At times, the gas extraction system will react to a situation which was not previously recognized. The operator must determine the cause of the reaction and decide how to remedy the problem. This section is included to provide a rationale for determining the cause of the problem. The use of monitoring multiple parameters is important when troubleshooting system symptoms. Monitoring equipment must be checked and calibrated, and the initial symptoms rechecked to ensure that the symptoms are not the result of false readings. Check the following items first before spending more time determining what happened:

1. Equipment integrity.
2. Monitoring data.
3. Follow the general guidelines presented below.

Problem

Investigation/Procedure

Fluctuating pressure

- Check well heads upstream and downstream for large pressure change to indicate location of liquid blockage.
- Use header buried service valves to isolate pipe sections to aid in blockage location.
- Check surface of landfill for areas of pronounced differential settlement which may have caused pipe settlement and a liquid blockage.

Sudden increase in vacuum in a well

- Check if well screen is blinded by liquids in well.
- Reduce well valve setting and check for recovery.
- Readjust well vacuum.

Sudden decrease in vacuum
in a well

- Check for change in pressure and flow in wells.
- Readjust well vacuum.

Oxygen > 2 percent at Blower
Station with 4:1 N₂ to O₂ ratio

- Indicative of air intrusion directly into collection system
- Check gas monitoring instruments (hoses, battery, and calibration).
- Check gas quality at strategic monitoring locations throughout collection system.
- Check integrity of wells (monitoring ports, hoses, flanges, valves, etc.).
- Identify air source and repair

Oxygen > 2 percent at Blower
Station with >4:1 N₂ to O₂ ratio

- Indicative of overpull by wells
- Check gas monitoring instruments (hoses, battery, calibration).
- Check gas quality at strategic monitoring locations throughout collection system.
- Check gas quality at integrity of wells (monitoring ports, hoses, flanges, valves, etc.).
- Identify overpull source and reduce flow.
- Readjust system as needed.

Oxygen > 5 percent at Well

- Check gas monitoring instruments (hoses, battery, calibration).
- Check gas quality at strategic monitoring locations throughout collection system
- Check integrity of wells (monitoring ports, hoses, flanges, valves, etc.).
- Reduce vacuum applied to well
- Readjust system as needed.

Methane decrease in a well

- Check gas monitoring instruments (hoses, battery, without oxygen detection calibration).
- Check integrity of wells (monitoring ports, hoses, flanges, valves, etc.).
- Check likely areas for air intrusion through cover soil (cracks, ruts, holes, etc.).
- Reduce vacuum on well until methane percent returns to previous percent (i.e., close to background levels).
- Readjust system as needed.

N. Personnel Requirements

Blower/Flare Station and Wellfield Requirements

- (1) Facility Manager – Full time
Overall facility management responsibility
- (2) Fuel Technician – Full Time
Responsible for routine data collection, system adjustments and repairs
- (3) Laborer – Part Time
Responsible for condensate pumping and assists as directed

O. Contact list

<u>Facility Manager – Charlie Hedges</u>	
1. Phone:	407-207-7121
2. Mobile:	407-948-8112
3. Pager:	888-513-2136
4. Home:	407-568-8103
5. FAX:	407-207-7183
<u>Gas Recovery Technician - Jeff Macek</u>	
1. Phone:	407-207-7121
2. Pager:	800-697-0952
3. Home:	470-207-8821
4. FAX:	407-207-7183
<u>Vice President of Operations - Richard DiGia</u>	
1. Phone:	734-997-2100
2. Mobile:	734-516-0187
3. Pager:	800-670-5024
4. FAX:	734-668-1541

ORANGE COUNTY, ORLANDO Landfill Gas Recovery System Daily Checklist

Date:				
Weather:				
Tech:				
Time:				

Compressor Station:

OUC Pipeline On/Off:				
----------------------	--	--	--	--

Flare Station:

On/Off:				
Nitrogen Bottle Pressure V39:				
Nitrogen Bottle Pressure V40:				

Safety Valve:

Valve Position (on/off):				
Nitrogen Bottle Pressure:				

LFG Composition:

CH4:				
CO2:				
O2:				
Bal:				

Inlet Header Data:

Inlet Vacuum:				
Inlet Temperature:				
Knock-out Level:				
Knock-out Diff. psi:				

Blower Data:

Blower #1A:

Hours:				
Amps:				
Discharge psi:				
Discharge Temp:				

Blower #2A:

Hours:				
Amps:				
Discharge psi:				
Discharge Temp:				

Blower #1B:

Hours:				
Amps:				
Discharge psi:				
Discharge Temp:				

Blower #2B:

Hours:				
Amps:				
Discharge psi:				
Discharge Temp:				

Intercooler:

Hours:				
Discharge psi:				
Discharge Temp:				

Aftercooler:

Hours:				
Discharge psi:				
Discharge Temp:				

Outlet Pipeline:

Line Pressure psi:				
--------------------	--	--	--	--

Vacuum Recovery Tank:

Pump #1 Hours:				
Pump #2 Hours:				

Flow in SCFM

--	--	--	--	--

ORANGE COUNTY DAILY MAIN VALVE READINGS

	DATE							
PLANT	CH4							
	CO2							
	O2							
	BAL							
	VAC							

MAIN VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

A-K VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

7-B VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

	DATE							
PLANT	CH4							
	CO2							
	O2							
	BAL							
	VAC							

MAIN VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

A-K VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

7-B VALVE	CH4							
	CO2							
	O2							
	BAL							
	VAC							

ORANGE COUNTY LANDFILL MONTHLY CONDENSATE LOG 1998

A-K CONDENSATE SUMPS

Sump #	Date							Totals
	Gallons Pumped							
1								
2								
3								
4								
5								

Sump #	Date							Totals
	Gallons Pumped							
1								
2								
3								
4								
5								

Sump #	Date							Totals
	Gallons Pumped							
1								
2								
3								
4								
5								

Sump #	Date							Totals
	Gallons Pumped							
1								
2								
3								
4								
5								

Monthly Totals

Sump #
1
2
3
4
5

TOTAL CONDENSATE COLLECTED:

ORANGE COUNTY LANDFILL MONTHLY CONDENSATE LOG 1998

TRANSMISSION LINE SUMPS

Sump #	Date							Totals
1								
2								
3								
4								
5								

Sump #	Date							Totals
1								
2								
3								
4								
5								

Sump #	Date							Totals
1								
2								
3								
4								
5								

Sump #	Date							Totals
1								
2								
3								
4								
5								

Monthly Totals

Sump #
1
2
3
4
5

TOTAL CONDENSATE COLLECTED:

ITEM 3A
SURFACE MONITORING DATA

4th QUARTER
2000



ORANGE COUNTY UTILITIES - SOLID WASTE DIVISION
5901 Young Pine Road • Orlando, Florida 32829
(407) 836-6600 • Fax (407) 836-6629

January 19, 2001

Mr. John Turner
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

**RE: Orange County Landfill December 2000 Quarterly Surface Emissions
Monitoring Report (Permit No. 0950113-001-AV)**

Dear Mr. Turner:

Please find attached two copies of the above referenced report. Initial field testing was conducted on December 11 and 14, 2000. Results of the initial monitoring indicated we had three (3) sampling locations at Cell 7B with exceedances of 500 ppm or greater.

The areas of Cell 7B where the exceedances were found were repaired by January 6, 2001, by Landsaver, Inc., of Richmond, Virginia. Field sampling of all 3 repaired locations on the same day indicated results below 500 ppm at all three (3) locations. Follow up sampling on January 18, 2001, confirmed values below 500 ppm. Please refer to the attached reports.

We have scheduled our next quarterly surface methane emissions monitoring event for Tuesday, March 13, 2001.

If you have any questions or comments, please call me at 407-836-6616 or Michael Rogers, P.G., at 836-6680.

Sincerely,

James W. Becker, Manager
Solid Waste Division

Attachments: Quarterly SMEM Reports for Cells A-K and 7B

Cc: Anthony Cotter, Orange County
Stan Keely, WCG



Calibration Precision Data and Calculation Form

Date: 12-11-00 (START CELL 7B MONITORING)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: D.M. ROGERS

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 12-11-00

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	2.2	499	496.8	∅
2	0.3	492	492.0	∅
3	0.1	499	499.0	∅

Average = $\Sigma(D - A) \div 3 =$ ∅ = E

Calibration Precision = $E \div A \times 100 =$ ∅

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Background Methane Concentration Data and Calculation Form

Date: 12-11-00

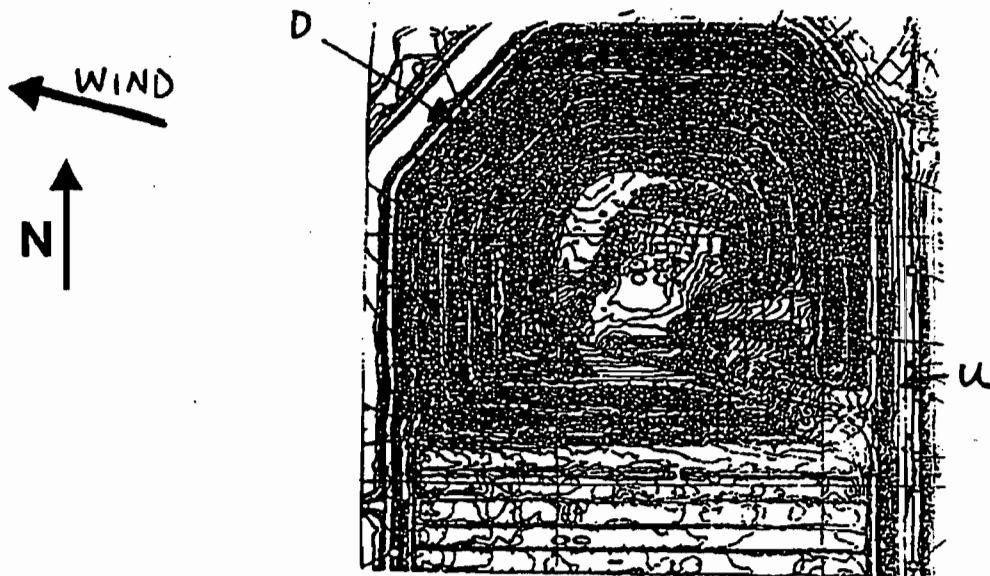
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: D. M. ROGERS

Date of instrument calibration: 12-11-00

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.3 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 6.8 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 =$ 4.6 = Background Methane Concentration

Description of meteorological conditions/notes: 84°f, 52 RH, PARTLY CLOUDY

Surface Methane Concentration Data Form

Date: 12-11-00

Page 3 of 3

Weather Conditions: 84°F, 52RH, PARTLY CLOUDY

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: D.M. ROGERS

Date of instrument calibration: 12-11-00

Background methane concentration (ppm) = 4.6 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)

NO EXCEEDANCES

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 12-14-00 (CELL 7B COMPLETE)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: D.M. ROGERS

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: _____

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-1.4	504	504	5
2	0.1	495	495	∅
3	0.1	495	495	∅

Average = $\Sigma(D - A) \div 3 =$ 1.7 = E

Calibration Precision = $E \div A \times 100 =$ 0.34

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: CELL 7B MONITORING RESUMED 12-14-00 AT 9:00AM BY D.M. ROGERS.

Background Methane Concentration Data and Calculation Form

Date: 12-14-00

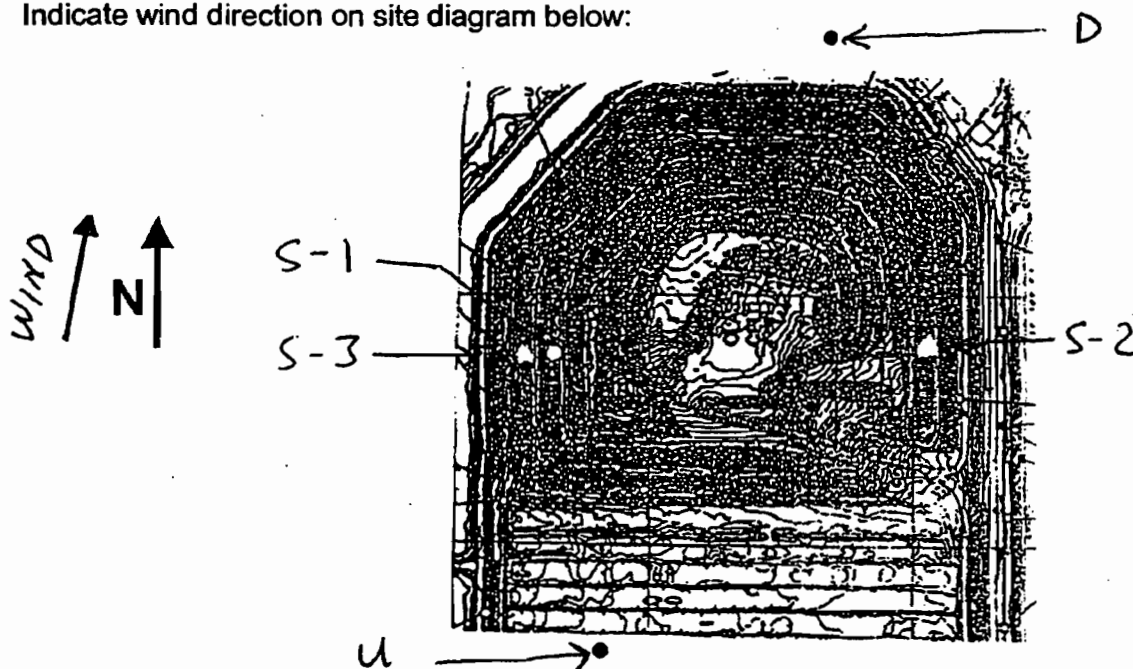
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: D.M. ROGERS

Date of instrument calibration: 12-14-00

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.2 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 6.2 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

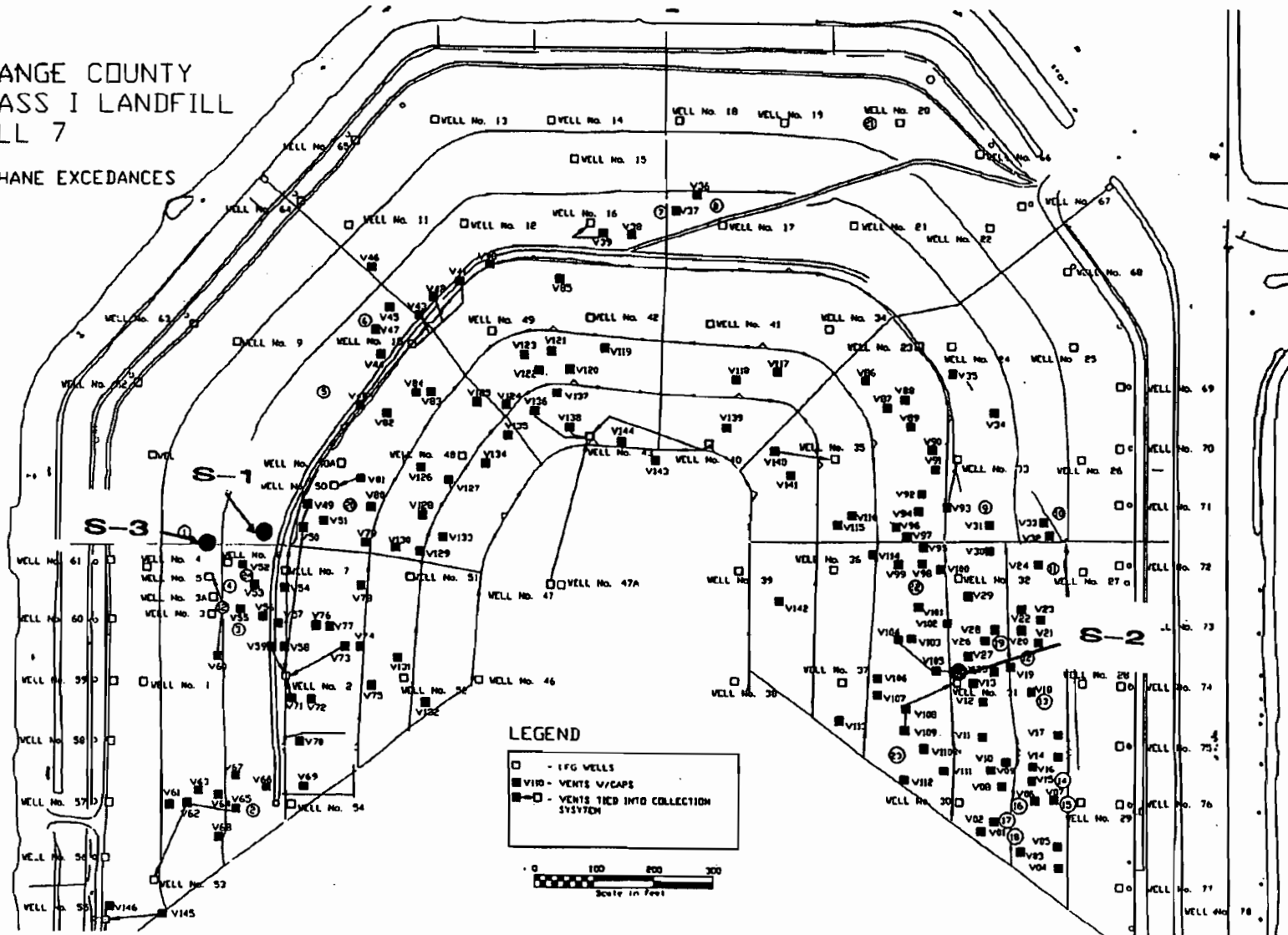
Average = $(U+D) \div 2 =$ 4.2 = Background Methane Concentration

Description of meteorological conditions/notes: 72°F, 73RH,
PARTLY CLOUDY

Best Available Copy

ORANGE COUNTY
CLASS I LANDFILL
CELL 7

METHANE EXCEEDANCES



ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Surface Methane Concentration Data Form

Date: 12-14-00

Page 3 of 3

Weather Conditions: 72° F, 73 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: D.M. ROGERS

Date of instrument calibration: 12-14-00

Background methane concentration (ppm) = 4.2 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 NORTH OF W-7	Y	2168	2168	2163.80
S-2 AREA OF W-31	Y	4151	4151	4146.80
S-3 NORTH OF W-5	Y	1700	1700	1695.80

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 12-14-00 (Cells A-K)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: D.M. ROGERS

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 12-14-00

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-1.4	504	504	5
2	0.1	495	495	0
3	0.1	495	495	0

Average = $\Sigma(D - A) \div 3 =$ 1.7 = E

Calibration Precision = $E \div A \times 100 =$ 0.34

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: CELL AK MONITORED BY OSCAR RAMOS STARTING AT 1:00 PM ON 12-14-00.

Background Methane Concentration Data and Calculation Form

Date: 12-14-00

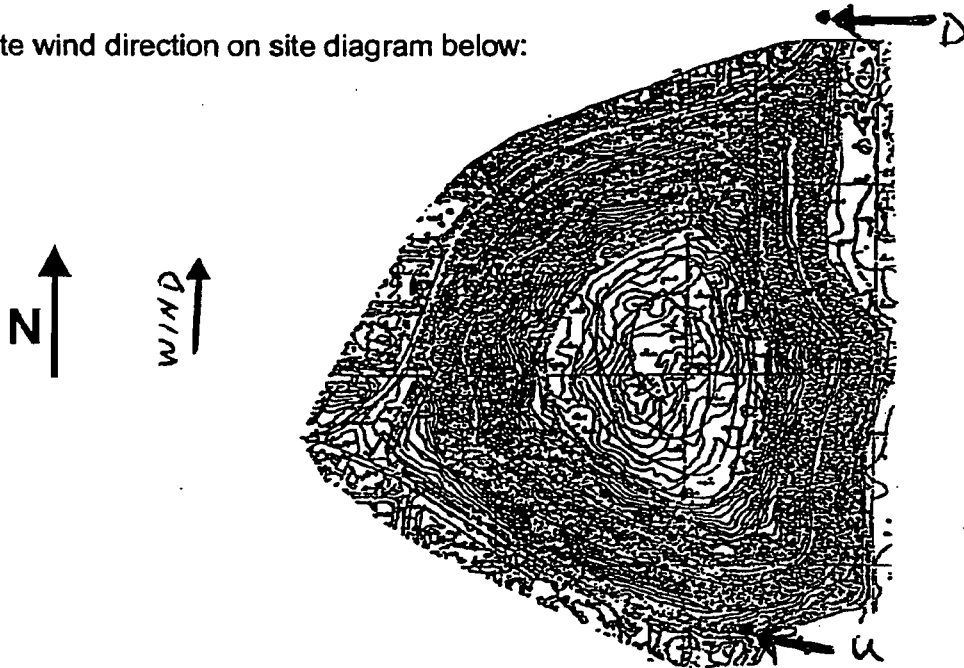
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: OSCAR RAMOS

Date of instrument calibration: 12-14-00

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.0 = U.
Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 2.3 = D
Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = (U+D)÷2= 2.2 = Background Methane Concentration

Description of meteorological conditions/notes: 86° F, 56 RH,
PARTLY CLOUDY

Surface Methane Concentration Data Form

Date: 12-14-00

Page 3 of 3

Weather Conditions: 86°F 56 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: OSCAR RAMOS

Date of instrument calibration: 12-14-00

Background methane concentration (ppm) = 2.2 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)

NO EXCEEDANCES

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: SAT, JAN 6, 2001 (CELL 7B REMONITORING)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: D.M. ROGERS

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 1-6-01

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0.8	494	493.2	6.8
2	0.3	495	494.7	5.3
3	0.1	497	496.9	3.1

Average = $\Sigma(D - A) \div 3 = 5.1 = E$

Calibration Precision = $E \div A \times 100 = 1.02$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes:

Background Methane Concentration Data and Calculation Form

Date: 1-6-01

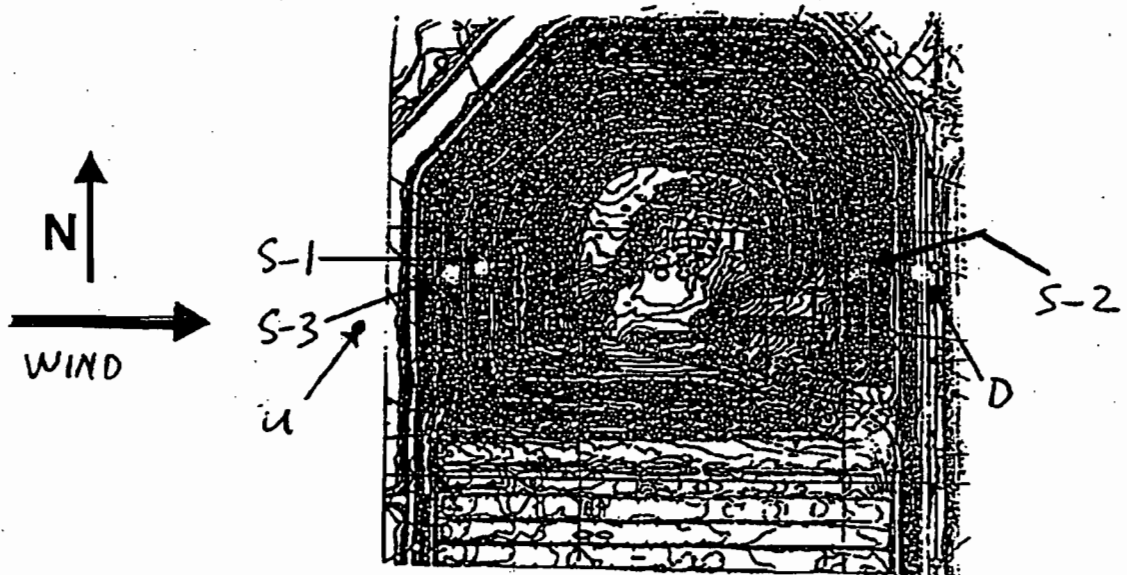
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: D. M. ROGERS

Date of instrument calibration: 1-5-01

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 3.1 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 4.5 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken.

Average = $(U+D) \div 2 =$ 3.8 = Background Methane Concentration

Description of meteorological conditions/notes: 65°F, 26 RH, PARTLY CLOUDY, BREEZY

Best Available Copy

Surface Methane Concentration Data Form

Date: 1-6-01

Page 3 of 3

Weather Conditions: PARTLY CLOUDY, BREEZY, 65°F, 26 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: D. M. ROGERS

Date of instrument calibration: 1-6-01

Background methane concentration (ppm) = 3.8 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 ^{NOF} W-7	Y	38	38	34.2
S-2 ^{AREA} W-31 _{PI}	Y	6	6	2.2
S-3 ^{NOF} W-5	Y	5	5	1.2

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 1-18-2001 (FINAL MONITORING)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: P.M. ROGERS

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 1-18-2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-0.4	498	497.6	2.4
2	∅	497	497.0	3.0
3	∅	498	498.0	2.0

Average = $\sum(D - A) \div 3 =$ 2.5 = E

Calibration Precision = $E \div A \times 100 =$ 0.5

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Background Methane Concentration Data and Calculation Form

Date: 1-18-01

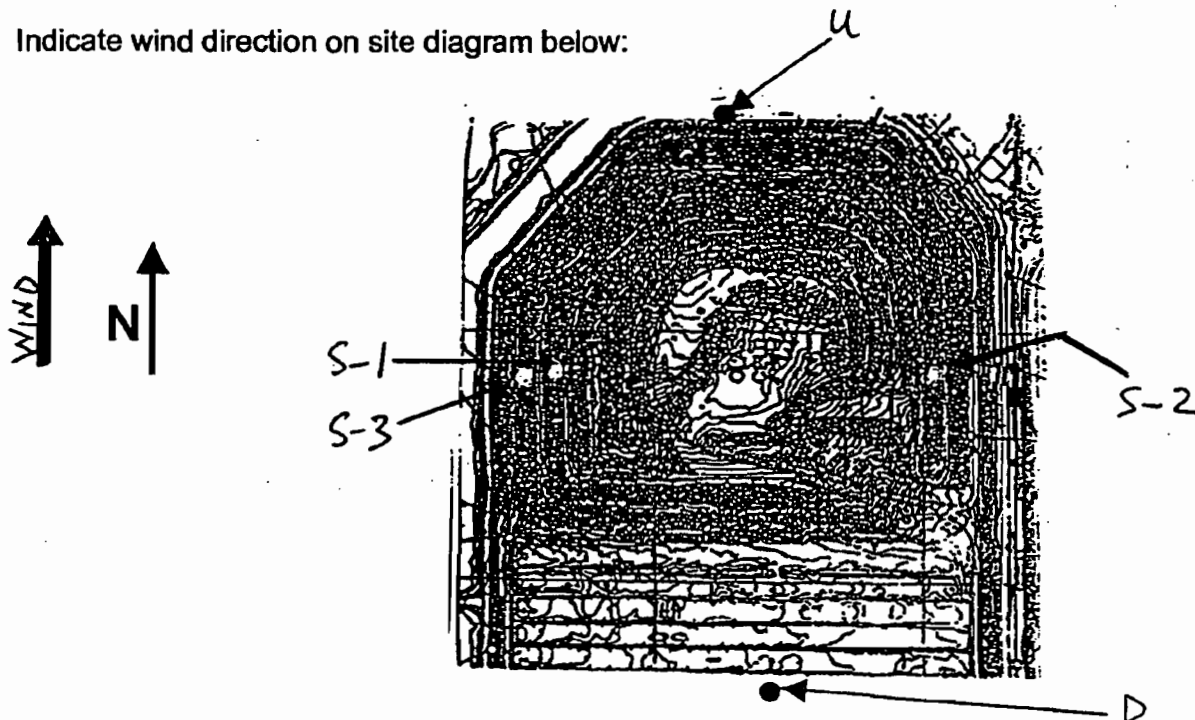
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: D. M. ROGERS

Date of instrument calibration: 1-18-01

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.6 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 12.4 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 =$ 7.5 = Background Methane Concentration

Description of meteorological conditions/notes: 80°F 44 RH PARTLY CLOUDY

Surface Methane Concentration Data Form

Date: 1-18-01

Page 3 of 3

Weather Conditions: 80°F 44 RH PARTLY CLOUDY

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: D. M. ROGERS

Date of instrument calibration: 1-18-01

Background methane concentration (ppm) = 7.5 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1	Y	7.1	7.1	∅
S-2	Y	8.1	8.1	0.6
S-3	Y	18.3	18.3	10.8

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

1st QUARTER
2001

Best Available Copy

May 21, 2001

Mr. John Tumer
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

RE: Orange County Landfill March 2001 Quarterly Surface Emissions Monitoring Report (Permit No. 0950113-001-AV)

Dear Mr. Tumer:

Please find attached two copies of the above referenced report. Field testing was initiated on March 16, 2001 and completed on March, 30, 2001. The reason for it taking 14 days (11 work days) to complete the testing was because of rain and/or very windy conditions existing at the site. The sampling protocol in Title V requires testing to be "performed during typical meteorological conditions".

The results of the monitoring indicated we had **four (4)** sampling locations at Cell 7B with exceedances of 500 ppm or greater. The areas of Cell 7B, where the exceedances were found, were repaired by April 11 2001, by Landsaver, Inc. of Richmond, Virginia. Field sampling of all **four (4)** repaired locations on the same day indicated results below 500 ppm at all locations. Follow up final sampling on April 23, 2001, confirmed values below 500 ppm. Please refer to the attached reports.

We have tentatively scheduled our next quarterly surface methane emissions monitoring event for **Tuesday, June 5, 2001**.

Also, please replace the attached sampling page dated 1-6-01 with the previously submitted form. The date on the previous form was incorrectly labeled as 1-5-01.

If you have any questions or comments, please call me at 407-836-6616 or Michael Rogers, P.G. at 836-6680.

Sincerely,

James W. Becker, Manager
Solid Waste Division

Attachments: Quarterly Surface Methane Emissions Monitoring Reports for Cells A-K and 7B

Cc: Teresa Remudo-Fries, Orange County
Anthony Cotter, Orange County
Stan Keely, WCG

01718782 017207 1.000

Best Available Copy

Calibration Precision Data and Calculation Form

Date: 3/16/2001 (Started)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers/Ayman Faour

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 3/16/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	1.1	495	494	6
2	0.4	493	493	7
3	0.1	492	492	8

$$\text{Average} = \frac{\sum(D - A)}{3} = \underline{\quad} = E$$

$$\text{Calibration Precision} = \frac{E}{A} \times 100 = \underline{1.4\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Best Available Copy

Background Methane Concentration Data and Calculation Form

Date: 3/16/2001

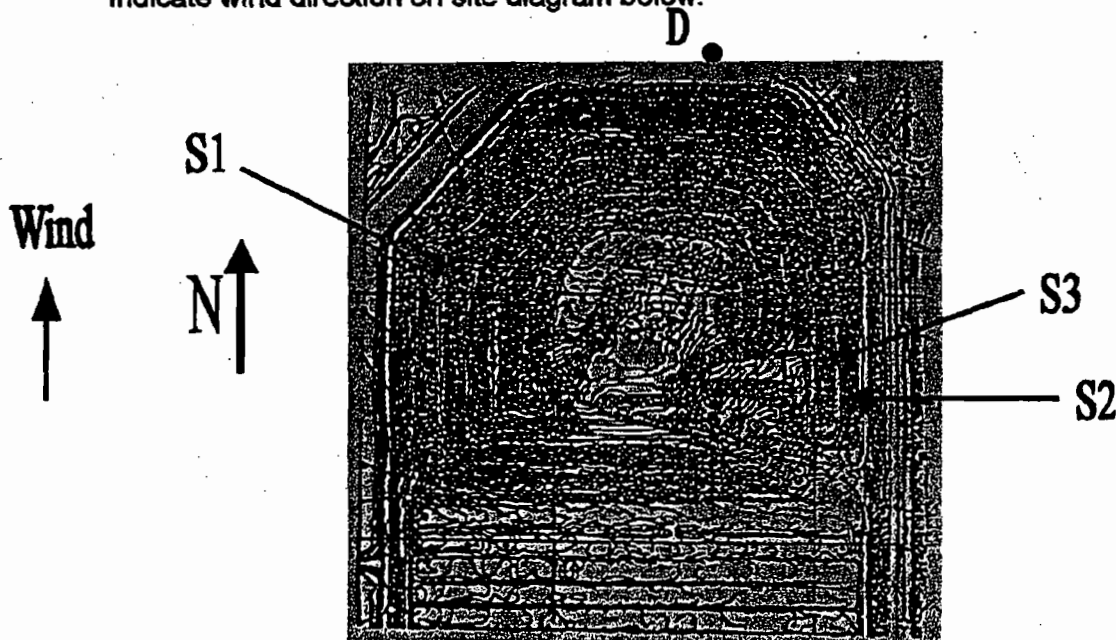
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: M. Rogers/A. Faour

Date of instrument calibration: 3/16/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.6 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 2.4 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D)+2 = \underline{2.5}$ = Background Methane Concentration

Description of meteorological conditions/notes: 76°F, .77 RH, Cloudy, moderately windy

Best Available Copy

Surface Methane Concentration Data Form

Date: 3/16/2001

Weather Conditions: 76°F, 77 RH, Cloudy, moderately windy

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: A. Faour

Date of instrument calibration: 3/16/2001

Background methane concentration (ppm) = 2.5 = A

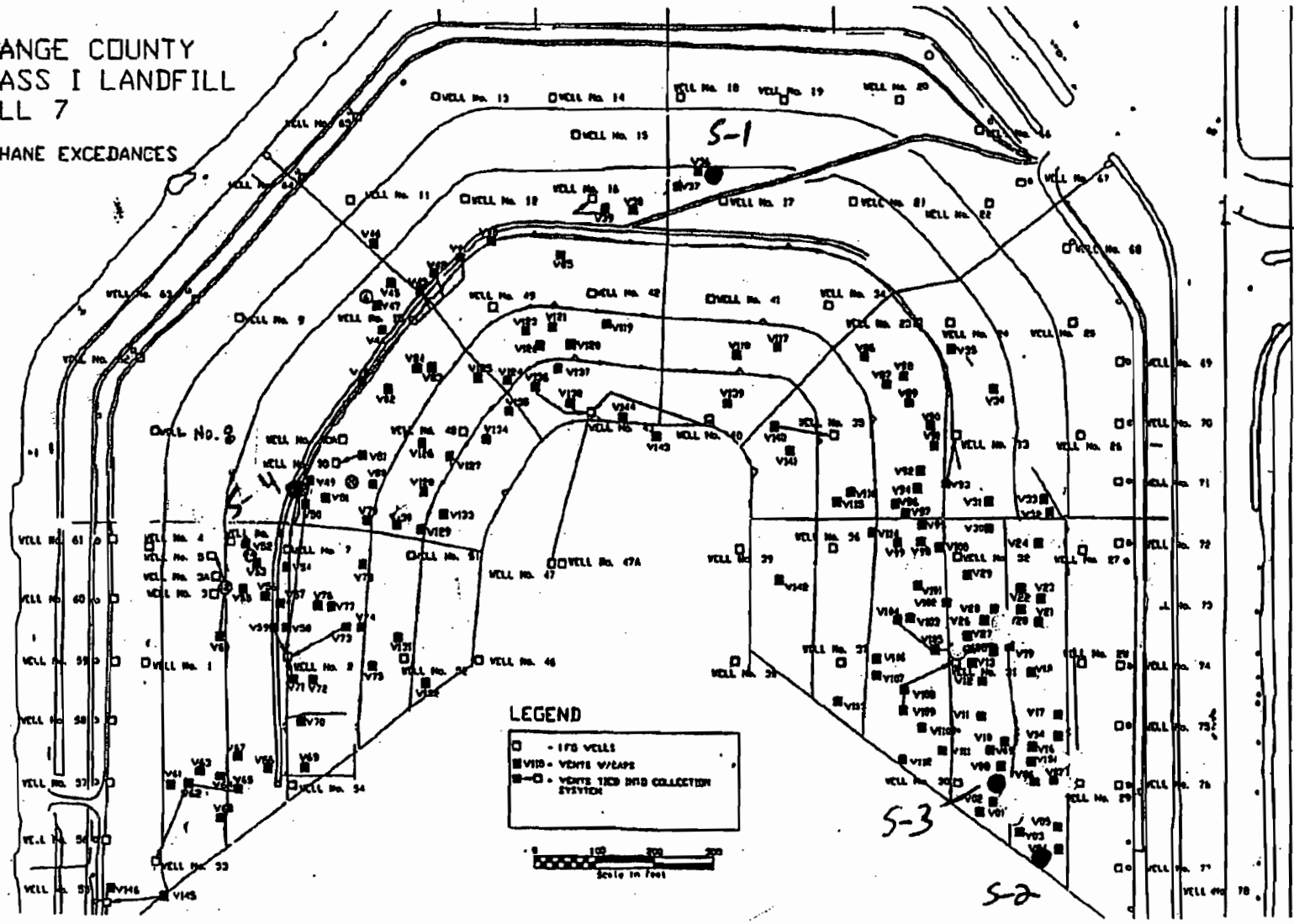
Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1	Y	939	939	936.5
S-2	Y	2658	2658	2655.5
S-3	Y	1123	1123	1120.5

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

ORANGE COUNTY
CLASS I LANDFILL
CELL 7

METHANE EXCEDANCES



Background Methane Concentration Data and Calculation Form

Date: 3/22/2001

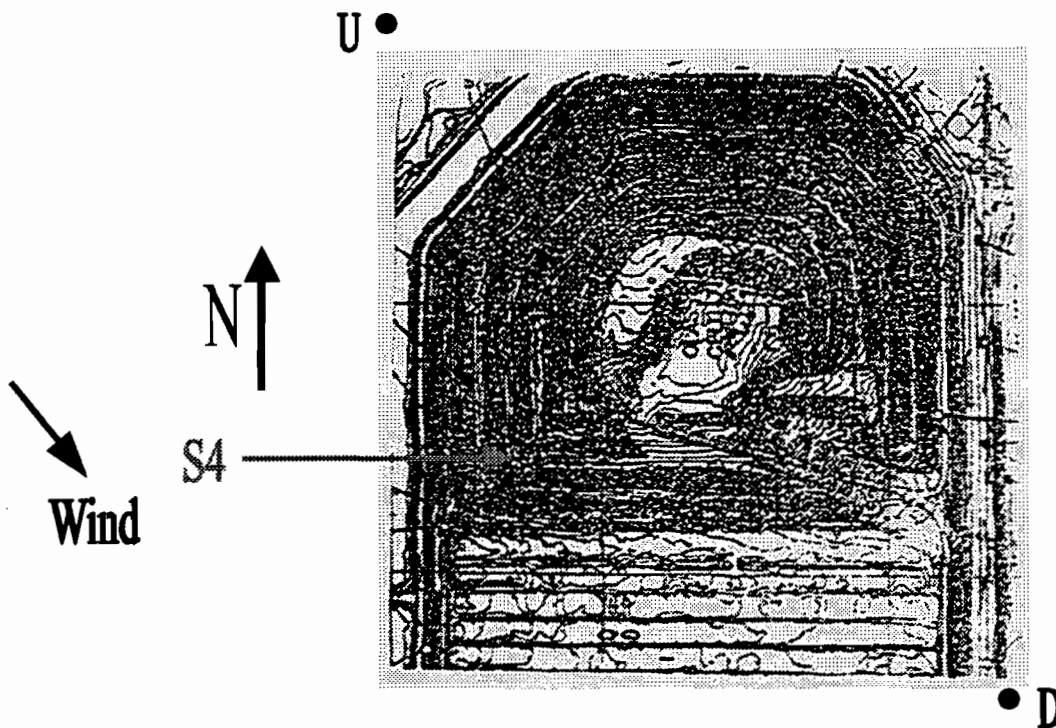
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: A. Faour

Date of instrument calibration: 3/22/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.9 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 3.4 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{3.2}$ = Background Methane Concentration

Description of meteorological conditions/notes: 69°F, 36 RH

Calibration Precision Data and Calculation Form

Date: 3/22/2001 (Resumed)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Ayman Faour

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 3/22/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0	500	500	0
2	0.4	496	495.6	4.4
3	0.2	498	497.8	2.2

$$\text{Average} = \sum(D - A) \div 3 = \underline{2.2} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{0.44 \%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Surface Methane Concentration Data Form

Date: 3/22/2001

Weather Conditions: 69°F, 36 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: A. Faour

Date of instrument calibration: 3/22/2001

Background methane concentration (ppm) = 3.2 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-4	Y	742	742	739

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 3/30/2001 (Started & Completed)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Ayman Faour

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = **A**

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 3/30/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0.1	494	493.9	6.1
2	0.2	493	492.8	7.2
3	0.2	496	495.8	4.2

Average = $\Sigma(D - A) \div 3 = \underline{5.8} = E$

Calibration Precision = $E \div A \times 100 = \underline{1.2\%}$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Background Methane Concentration Data and Calculation Form

Date: 3/30/2001

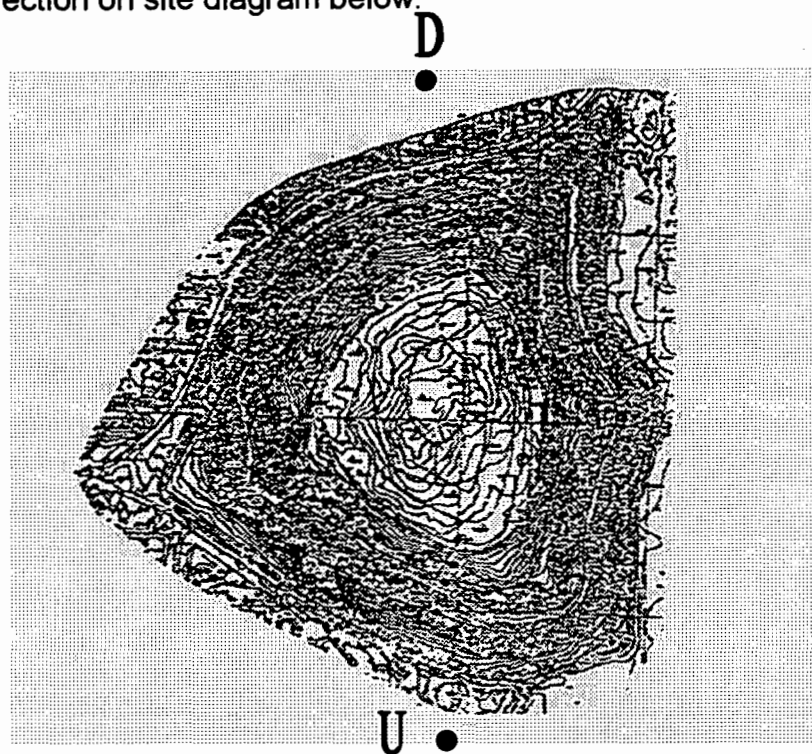
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Ayman Faour

Date of instrument calibration: 3/30/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 3.4 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 3.5 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{3.45}$ = Background Methane Concentration

Description of meteorological conditions/notes: 77°F, 67 RH

Surface Methane Concentration Data Form

Date: 3/30/2001

Page ___ of ___

Weather Conditions: 77°F, 67 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Ayman Faour/Odette Padron

Date of instrument calibration: 3/30/2001

Background methane concentration (ppm) = 3.45 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
<h1>No Exceedances</h1>				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 4/12/2001 (completed)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: D.M.Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = **A**

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 4/12/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0	493	493	7
2	0.1	494	494	6
3	0.2	495	495	5

Average = $\Sigma(D - A) \div 3 = \underline{6} = E$

Calibration Precision = $E \div A \times 100 = \underline{1.2} \%$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Background Methane Concentration Data and Calculation Form

Date: 4/12/2001

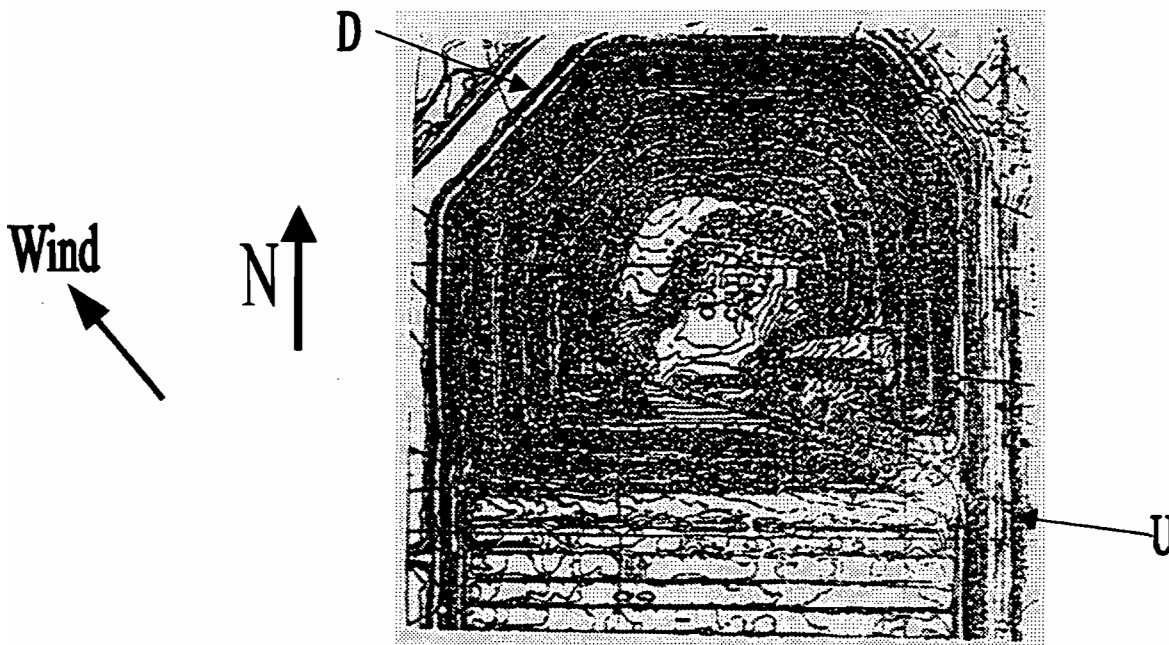
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: D.M.Rogers

Date of instrument calibration: 4/12/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.0 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 6.0 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{4.0}$ = Background Methane Concentration

Description of meteorological conditions/notes: 83°F, 58 RH, Cloudy, Slight wind

Surface Methane Concentration Data Form

Date: 4/12/2001

Weather Conditions: 83°F, 58 RH, Cloudy, Slight wind

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: D.M.Rogers

Date of instrument calibration: 4/12/2001

Background methane concentration (ppm) = 4.0 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
No Exceedances				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 4/23/2001 (rechecked)

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: A.Faour

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = **A**

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 4/22/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0.5	494	493.5	6.5
2	0.1	495	494.9	5.1
3	0.3	495	494.7	5.3

Average = $\Sigma(D - A) \div 3 = \underline{5.6} = E$

Calibration Precision = $E \div A \times 100 = \underline{1.1\%}$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: _____

Background Methane Concentration Data and Calculation Form

Date: 4/23/2001

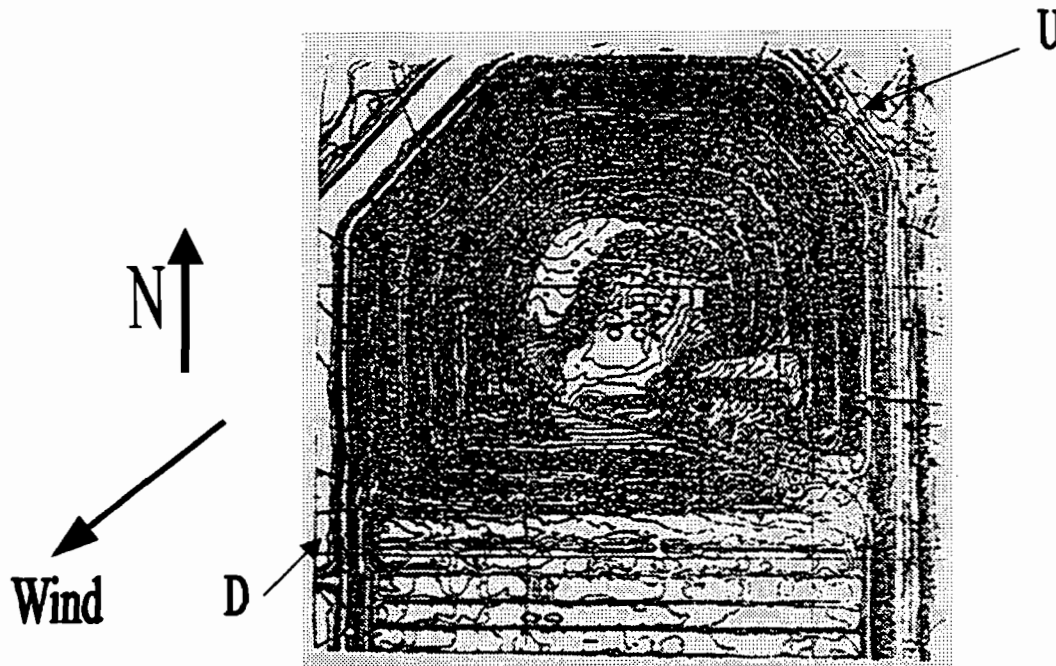
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: A.Faour

Date of instrument calibration: 4/23/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 3.9 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 11.3 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{7.6}$ = Background Methane Concentration

Description of meteorological conditions/notes: 85°F, 63 RH, Slight wind

Surface Methane Concentration Data Form

Date: 4/23/2001

Weather Conditions: 85°F, 63 RH, Slight wind

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: A. Faour

Date of instrument calibration: 4/23/2001

Background methane concentration (ppm) = 7.6 = **A**

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
No Exceedances				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

2nd QUARTER
2001

July 11, 2001

Mr. John Turner
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

**RE: Orange County Landfill June 2001 Quarterly Surface Emissions Monitoring Report
(Permit No. 0950113-001-AV)**

Dear Mr. Turner:

Please find attached two copies of the above referenced report. Field testing was initiated on **June 5, 2001**. The results of the monitoring indicated we had **three (3)** sampling locations at Cell 7B with exceedances of 500 ppm or greater. The areas of Cell 7B where the exceedances were found were repaired by **June 18, 2001**, by Landsaver, Inc. of Richmond, Virginia. Field sampling of all **three (3)** repaired locations on the same day indicated results below 500 ppm at all locations.

Final 30 day follow up sampling was conducted on **July 6, 2001**. Field testing confirmed all values below 500 ppm. Please refer to the attached reports.

We have tentatively scheduled our next quarterly surface methane emissions monitoring event for **Tuesday, September 11, 2001**.

If you have any questions or comments, please call me at 407-836-6616 or Michael Rogers, P.G. at 836-6680.

Sincerely,

James W. Becker, Manager
Solid Waste Division

Attachments: Quarterly Surface Methane Emissions Monitoring Reports for Cells A-K and 7B

Cc: Teresa Remudo-Fries, Orange County
Anthony Cotter, Orange County
Stan Keely, WCG

Calibration Precision Data and Calculation Form

Date: 6/5/2001 (Started & Completed)

Cell AK

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 6/5/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-0.2	485	485	15.0
2	0.1	490	490	10.0
3	0.1	495	495	5.0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{10} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{2\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 85° F, 70 RH

Background Methane Concentration Data and Calculation Form

Date: 6/5/2001

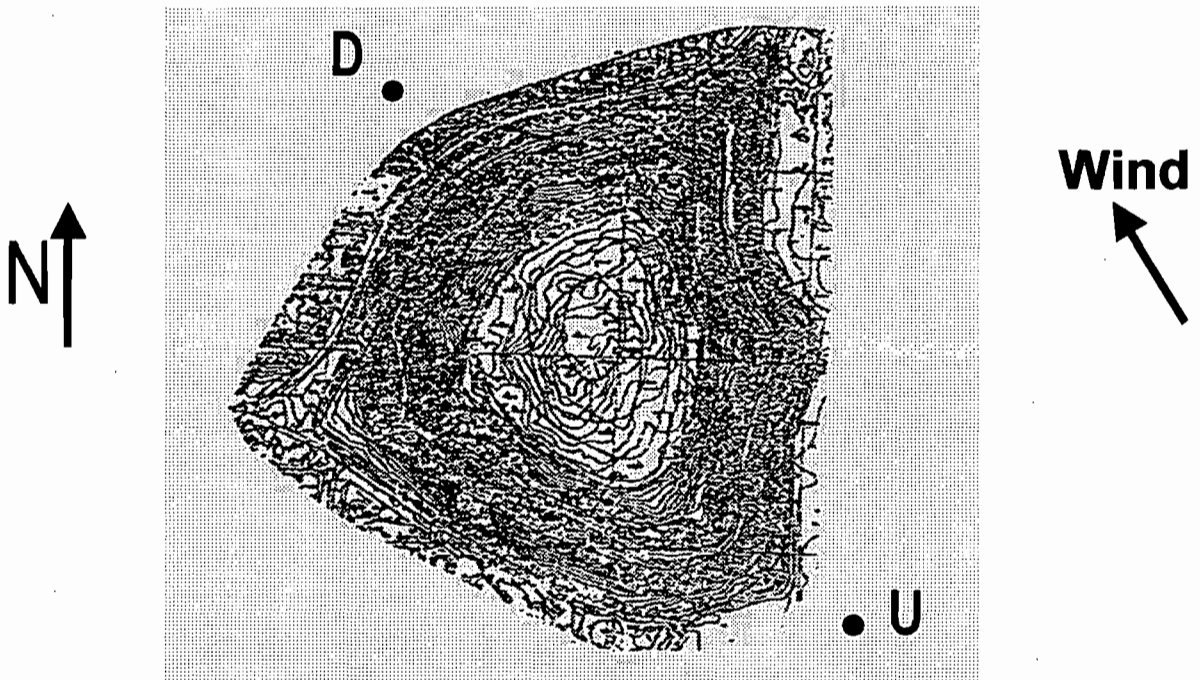
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 6/5/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.8 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 3.4 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{3.1}$ = Background Methane Concentration

Description of meteorological conditions/notes: 85°F, 70 RH

Surface Methane Concentration Data Form

Date: 6/5/2001

Weather Conditions: 85°F, 70 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 6/5/2001

Background methane concentration (ppm) = 3.1 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
No Exceedances				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 6/6/2001 (started but stopped due to rain)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 6/6/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	2.0	494	492	8.0
2	0.2	495	495	5.0
3	0.0	495	495	5.0

Average = $\Sigma(D - A) \div 3 = \underline{6.0} = E$

Calibration Precision = $E \div A \times 100 = \underline{1.2\%}$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 88° F, 75 RH

Background Methane Concentration Data and Calculation Form

Date: 6/6/2001

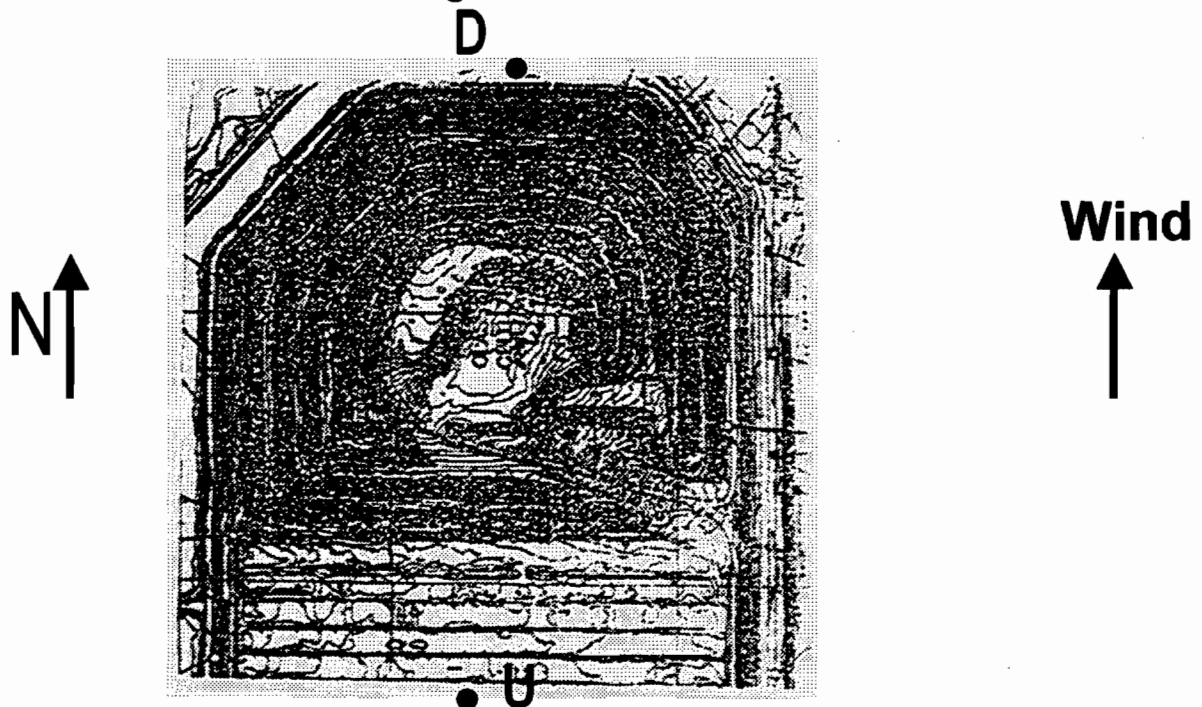
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 6/6/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.8 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 3.4 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{3.1}$ = Background Methane Concentration

Description of meteorological conditions/notes: 88°F, 75 RH

Surface Methane Concentration Data Form

Date: 6/6/2001

Weather Conditions: 85°F, 70 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 6/6/2001

Background methane concentration (ppm) = 3.1 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
<h1>No Exceedances</h1>				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 6/8/2001 (resumed testing)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 6/8/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	1.0	489	488	12.0
2	0.1	490	490	5.0
3	0.1	494	494	6.0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{7.7} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{1.5\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 90° F, 70 RH

Background Methane Concentration Data and Calculation Form

Date: 6/8/2001

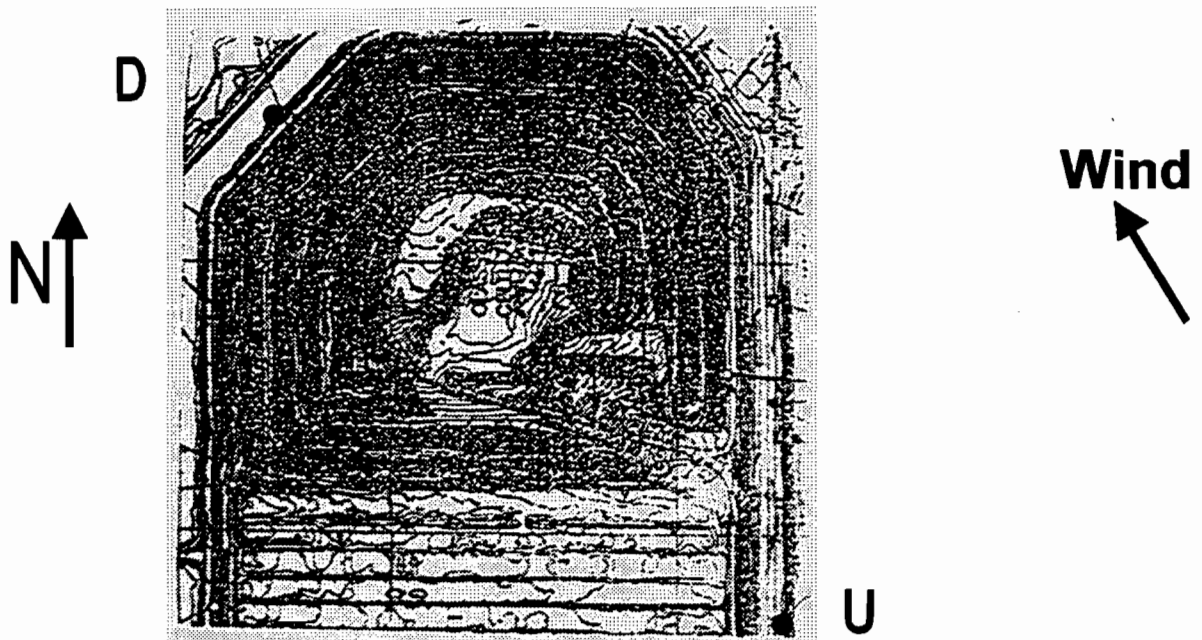
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 6/8/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 3.3 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 4.2 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{3.8}$ = Background Methane Concentration

Description of meteorological conditions/notes: 90°F, 70 RH

Surface Methane Concentration Data Form

Date: 6/8/2001

Weather Conditions: 85°F, 70 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 6/8/2001

Background methane concentration (ppm) = 3.8 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 (V-55)	Y	855	855	851
S-2 (V-69)	Y	1200	1200	1196
S-3 (v-110)	Y	2622	2622	2618

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 6/18/2001 (Re-testing)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 6/18/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-0.3	490	490	10.0
2	2.0	493	491	9.0
3	1.1	496	495	5.0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{8.0} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{1.6\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 91° F, 68 RH, partly cloudy, slight wind

Background Methane Concentration Data and Calculation Form

Date: 6/18/2001

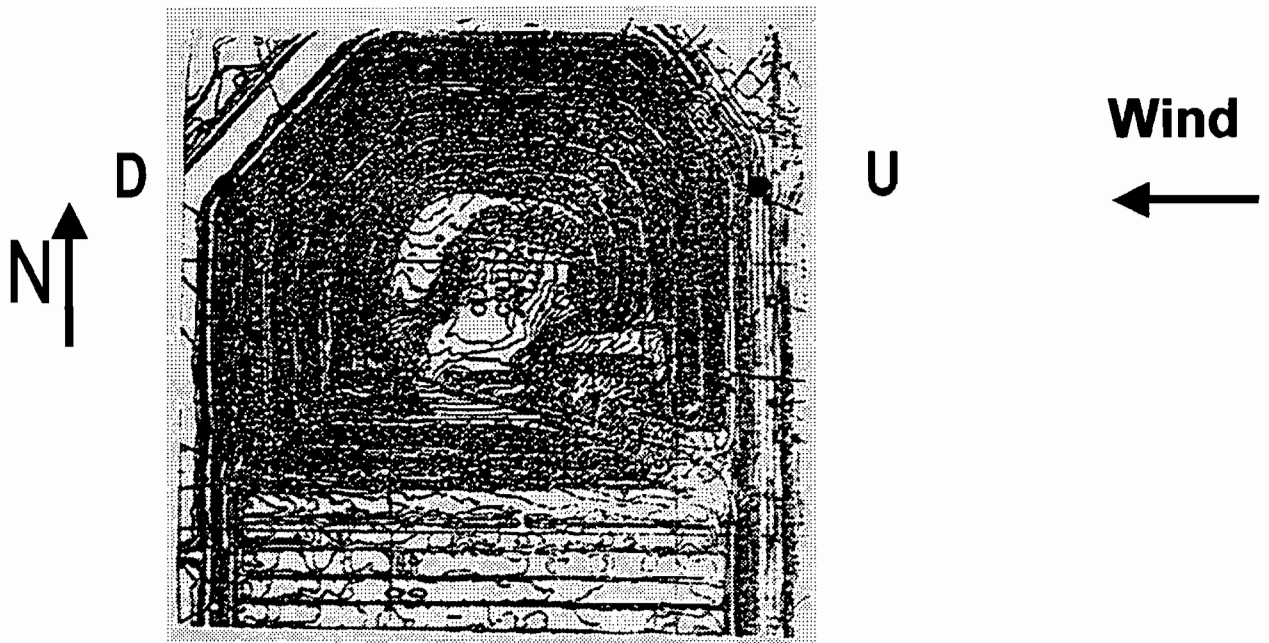
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 6/18/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 3.8 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 4.8 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{4.3}$ = Background Methane Concentration

Description of meteorological conditions/notes: 91° F, 68 RH, partly cloudy, slight wind

Surface Methane Concentration Data Form

Date: 6/18/2001

Weather Conditions: 91° F, 68 RH, partly cloudy, slight wind

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 6/18/2001

Background methane concentration (ppm) = 4.3 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 (V-55)	Y	15	15	10.7
S-2 (V-69)	Y	8	8	3.7
S-3 (v-110)	Y	22	22	17.7

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: Repairs of the above sampled locations (S-1, S-2, & S-3) were completed by Landsaver, Inc. by 12:00 PM 6/18/01. Final methane testing of locations were completed by 3:00 PM on the same day by Mike Rogers of the Orange County Solid Waste Division. Final testing above indicated no exceedances and Landsaver, Inc. was released from the Site.

Calibration Precision Data and Calculation Form

Date: 7/6/2001 (Final 30 day testing)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 7/6/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0.6	485	484	16.0
2	1.2	490	489	11.0
3	1.1	496	495	5.0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{10.7} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{2.14\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 88° F, 62 RH, clear, slight wind

Background Methane Concentration Data and Calculation Form

Date: 7/6/2001

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 7/6/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 4.2 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 5.6 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = 4.9 =$ Background Methane Concentration

Description of meteorological conditions/notes: 88° F, 62 RH, clear, slight wind

Surface Methane Concentration Data Form

Date: 7/6/2001

Weather Conditions: 88° F, 62 RH, clear, slight wind

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 7/6/2001

Background methane concentration (ppm) = 4.9 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 (V-55)	Y	4.5	4.5	0
S-2 (V-69)	Y	16	16	11
S-3 (v-110)	Y	25	25	20

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes:

3rd QUARTER
2001



UTILITIES DEPARTMENT . SOLID WASTE DIVISION

5901 Young Pine Road • Orlando, Florida 32829
407-836-6601 • Fax 407-836-6658

Revised 10/11/01

October 10, 2001

Mr. John Turner
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

RE: **Orange County Landfill September 2001 Quarterly Surface Emissions Monitoring Report (Permit No. 0950113-001-AV)**

Dear Mr. Turner:

Please find attached two copies of the above referenced report. Field testing was initiated on **September 7, 2001**. The results of the monitoring indicated we had **six (6)** sampling locations at Cell 7B with exceedances of 500 ppm or greater. The areas of Cell 7B where the exceedances were found were repaired by **September 29, 2001**, by Landsaver, Inc. of Richmond, Virginia.

Final 30-day follow up sampling was conducted on **October 2, 2001**. Field testing confirmed all values below 500 ppm. Please refer to the attached reports.

We have tentatively scheduled our next quarterly surface methane emissions monitoring event for **Tuesday, December 4, 2001**.

If you have any questions or comments, please call me at 407-836-6616 or Michael Rogers, P.G. at 836-6680.

Sincerely,

A handwritten signature in black ink that reads "James W. Becker".

James W. Becker, Manager
Solid Waste Division

Attachments: Quarterly Surface Methane Emissions Monitoring Reports for Cells A-K and 7B

Cc: Teresa Remudo-Fries, Orange County
Anthony Cotter, Orange County
Stan Keely, WCG

Calibration Precision Data and Calculation Form

Date: 9/7/2001 (Testing started and completed)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Mike Rogers

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 9/7/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-0.3	501	501	1
2	0.1	500	499.1	0
3	0	500	500	0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{0} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{0\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 74° F, 91 RH in AM on west side of 7B; 86° F, 66 RH in PM on east side of 7B

Background Methane Concentration Data and Calculation Form

Date: 9/7/2001

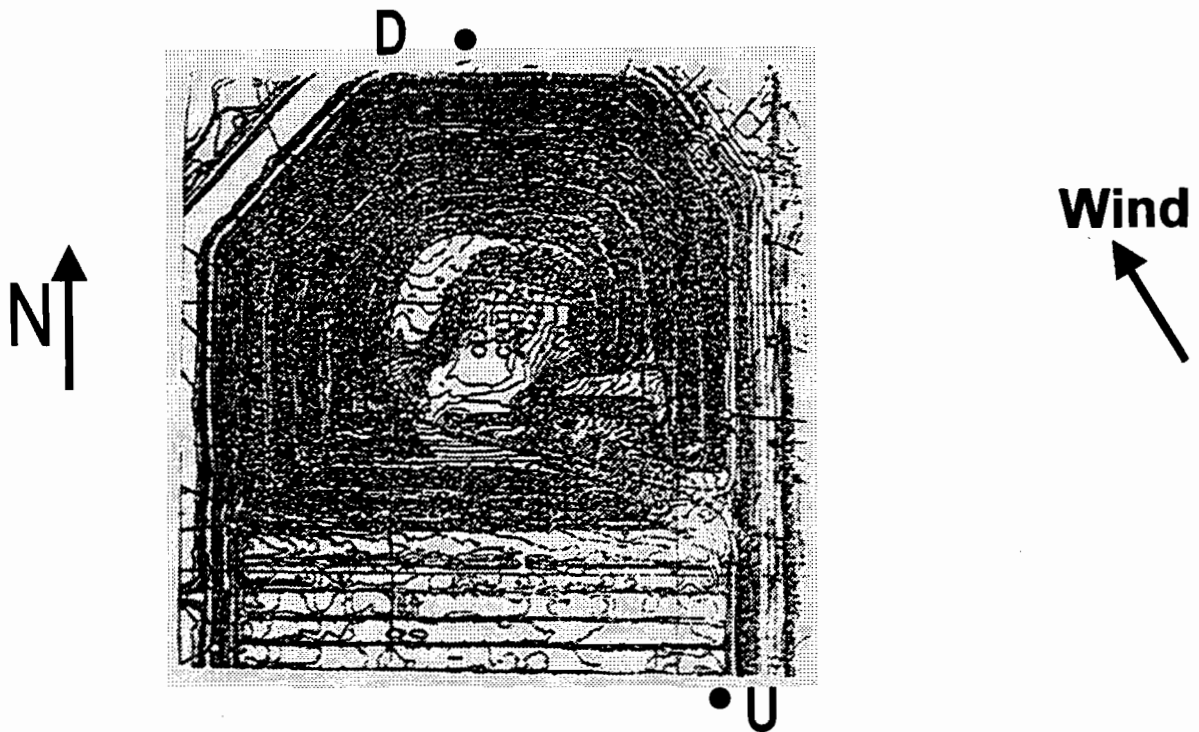
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 9/7/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.3 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 2.3 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{2.3}$ = Background Methane Concentration

Description of meteorological conditions/notes:

Surface Methane Concentration Data Form

Date: 9/7/2001

Weather Conditions: Tropical Pattern of Rain in PM

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 9/7/2001

Background methane concentration (ppm) = 2.3 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 (V-52)	Y	8,872	8,872	8,870
S-2 (V-155)	Y	11,855	11,855	11,853
S-3 (W-17)	Y	1,193	1,193	1,191
S-4 (V-37)	Y	7,500	7,500	6,498
S-5 (V-153)	Y	11,410	11,410	11,408
S-6 (V-38)	Y	1,357	1,357	1,355

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: 74° F, 91 RH in AM on west side of 7B; 86 ° F, 66 RH in PM on east side of 7B

Calibration Precision Data and Calculation Form

Date: 10/02/2001 (Final testing)

Cell 7B

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Rogers/Guilfoyle

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 10/02/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-0.5	501	501	1.0
2	0.2	498	497.8	0
3	0.3	500	499.7	0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{.33} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{.07\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 70°, 63 RH, Partly cloudy, moderate win

Background Methane Concentration Data and Calculation Form

Date: 10/02/2001

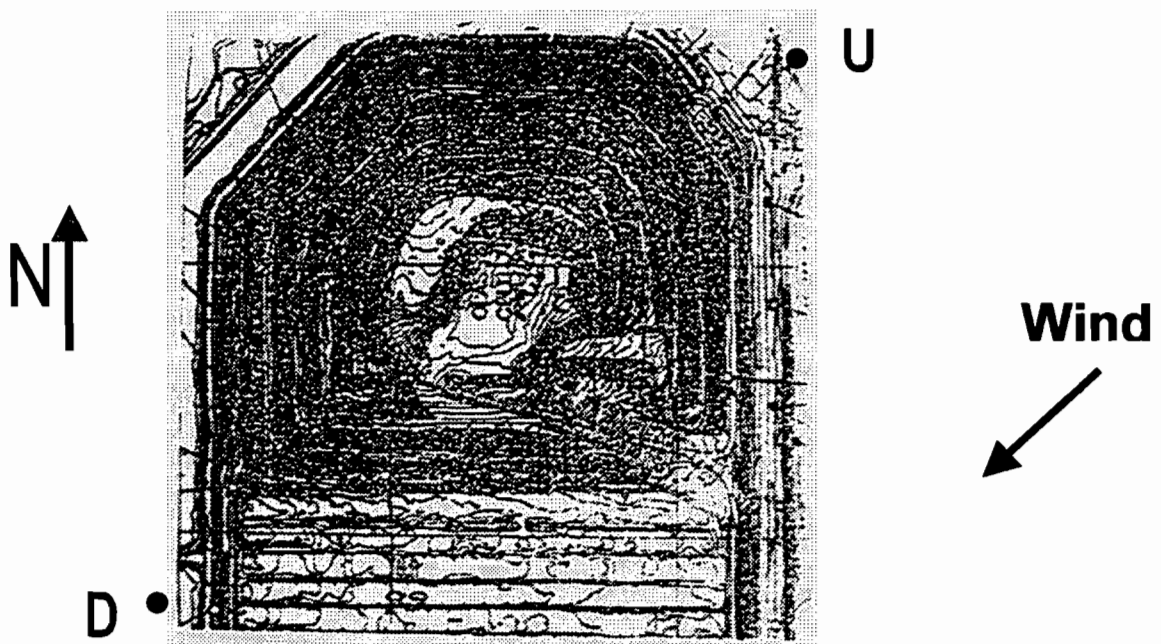
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 10/02/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.1 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 2.0 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{2.1}$ = Background Methane Concentration

Description of meteorological conditions/notes: 70°, 63 RH, Partly cloudy, moderate wind

Surface Methane Concentration Data Form

Date: 10/02/2001

Weather Conditions:

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 10/02/2001

Background methane concentration (ppm) = 2.1 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
S-1 (W17)	Y	RETEST	<500	
S-2 (V-37)	Y	RETEST	<500	
S-3 (V-38)	Y	RETEST	<500	
S-4 (V-155)	Y	RETEST	<500	
S-5 (V-52)	Y	RETEST	<500	
S-6 (V-153)	Y	RETEST	<500	

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 9/21/2001 (Testing started but stopped due to depletion of hydrogen in instrument) Cell AK

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Amy Guilfoyle

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 9/21/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	-1.7	500	500	0
2	0.3	500	499.7	0
3	0.1	500	499.9	0

$$\text{Average} = \Sigma(D - A) \div 3 = \underline{0} = E$$

$$\text{Calibration Precision} = E \div A \times 100 = \underline{0\%}$$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 85° F, 60 RH

Background Methane Concentration Data and Calculation Form

Date: 9/21/2001

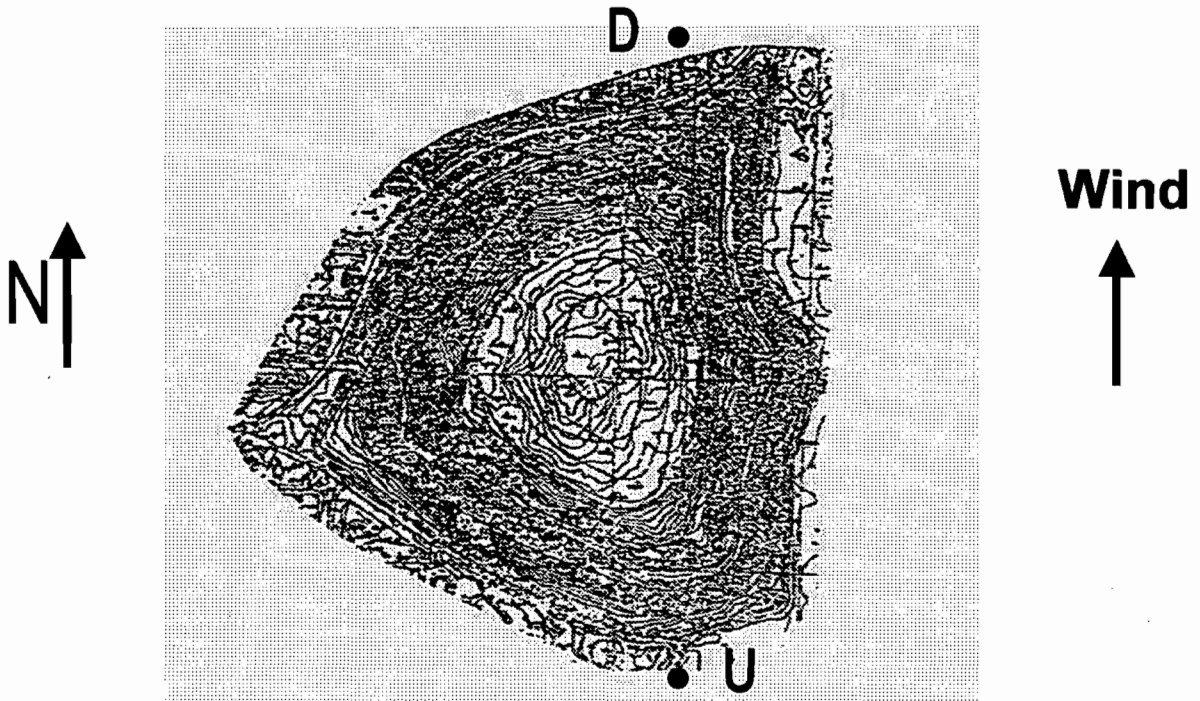
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Mike Rogers

Date of instrument calibration: 9/21/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.3 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 2.5 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{2.4}$ = Background Methane Concentration

Description of meteorological conditions/notes: 85 °F, 60 RH

Surface Methane Concentration Data Form

Date: 9/21/2001

Weather Conditions:

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Mike Rogers

Date of instrument calibration: 9/21/2001

Background methane concentration (ppm) = 2.4 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
No Exceedances				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

Calibration Precision Data and Calculation Form

Date: 9/27/2001 (Testing resumed)

Cell AK

Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of person performing calibration precision test: Amy Guilfoyle

Date of zero gas certification: Nov. 30, 2000

Calibration gas concentration (ppm): 500 = A

Date of calibration gas certification: Nov. 30, 2000

Date of instrument calibration: 9/27/2001

Trial Number	Zero Gas Reading (B) (ppm)	Calibration Gas Reading (C) (ppm)	Net Calibration Gas Reading (D) [C - B=D] (ppm)	Difference D - A=Absolute Value (ppm)
1	0.3	501	500.7	0.7
2	0	500	500	0
3	0	505	505	5

Average = $\Sigma(D - A) \div 3 = \underline{1.9} = E$

Calibration Precision = $E \div A \times 100 = \underline{.38\%}$

If the calibration is greater than 10%, then the instrument is not acceptable for use.

Notes: 80° F, 72 RH, slight wind, cloudy

Background Methane Concentration Data and Calculation Form

Date: 9/27/2001

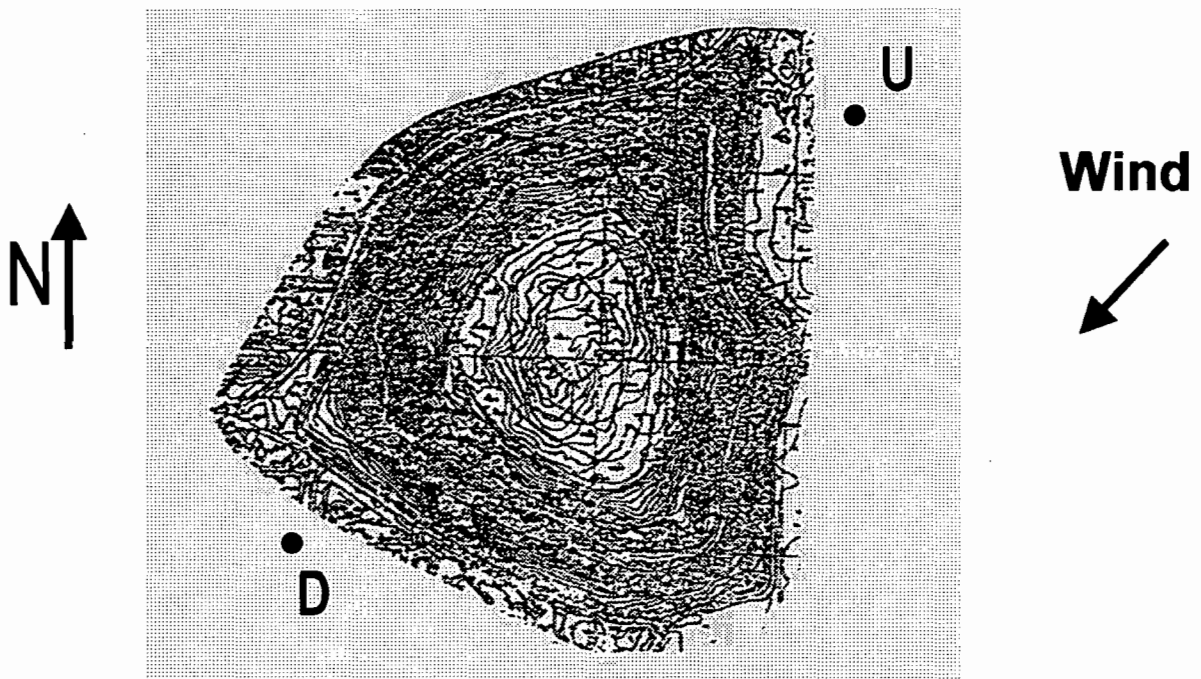
Instrument make/model: TEI 680 HVM

Instrument serial number: 680-65793-350

Name of Person performing background concentration test: Rogers/Guilfoyle

Date of instrument calibration: 9/27/2001

Indicate wind direction on site diagram below:



Upwind methane concentration (ppm): 2.0 = U

Indicate with a "U" on site diagram the location where upwind concentration was taken.

Downwind methane concentration (ppm): 3.0 = D

Indicate with a "D" on site diagram the location where downwind concentration was taken

Average = $(U+D) \div 2 = \underline{2.5}$ = Background Methane Concentration

Description of meteorological conditions/notes: 80°F, 72 RH, slight wind, cloudy

Surface Methane Concentration Data Form

Date: 9/27/2001

Weather Conditions: 80°F, 72 RH

Instrument make/model: TEI 680 HVM

Name of person performing surface methane monitoring: Rogers/Guilfoyle

Date of instrument calibration: 9/27/2001

Background methane concentration (ppm) = 2.5 = A

Location Identification*	Synthetic Cover (Y/N)	Initial FID Reading = B (ppm)	FID Reading with Carbon Filter Installed = C (ppm)	Methane Concentration Above Background = C-A (ppm)
<h1>No Exceedances</h1>				

*Identify each location with a unique number and reference that reference that number on a map showing the monitoring route. Also, reference the identification number on data forms for subsequent remonitoring.

Notes: _____

ITEM 3B
LFG WELLHEAD MONITORING DATA

CELL A-K
(OCT. 2000 – SEPT. 2001)

Orlando Gas Producers

Cell A-K
October 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	10/16/2000	0.3	-2.8	95	CLOSED
OAKEW005	10/16/2000	0.2	-4.1	100	CLOSED
OAKEW006	10/16/2000	1.9	-4.5	96	CLOSED
OAKEW00A	10/16/2000	0.5	-24.4	103	CLOSED
OAKEW00B	10/16/2000	0.2	-46.8	117	
OAKEW00C	10/16/2000	0.2	-54.1	122	
OAKEW00D	10/16/2000	0.5	-63.8	116	
OAKEW00E	10/16/2000	1.2	-15.1	93	
OAKEW00F	10/16/2000	0.7	-62.4	96	
OAKEW00G	10/16/2000	0.2	-10.7	105	
OAKEW012	10/16/2000	8.8	-6.5	96	CLOSED
OAKEW013	10/16/2000	1	-6	98	CLOSED
OAKEW017	10/16/2000	0.3	-5.6	83	CLOSED
OAKEW018	10/16/2000	0.2	-6.5	94	CLOSED
OAKEW019	10/16/2000	0.1	-10.2	96	
OAKEW021	10/16/2000	0	-8.6	90	CLOSED
OAKEW025	10/16/2000	6.3	-11.8	97	CLOSED
OAKEW026	10/16/2000	3.3	-12	94	CLOSED
OAKEW028	10/16/2000	1	-6	88	
OAKEW032	10/16/2000	3.9	-14.3	79	CLOSED
OAKEW034	10/16/2000	0.2	-51.5	102	
OAKEW035	10/16/2000	0.7	-54.7	96	
OAKEW036	10/16/2000	0.2	-60.3	106	
OAKEW037	10/16/2000	1.4	-45.1	117	
OAKEW038	10/16/2000	0	-13.4	91	CLOSED
OAKEW041	10/16/2000	0.8	-14.8	85	CLOSED
OAKEW042	10/16/2000	0.2	-23.5	90	CLOSED
OAKEW043	10/16/2000	0	-55.8	105	
OAKEW044	10/16/2000	0.5	-57.5	97	
OAKEW045	10/16/2000	0.2	-60.3	100	
OAKEW046	10/16/2000	0	-57.2	110	
OAKEW047	10/16/2000	0.7	-44.3	102	
OAKEW048	10/16/2000	0.2	-15.1	87	CLOSED
OAKEW051	10/16/2000	9	-14.8	98	CLOSED
OAKEW052	10/16/2000	0.6	-17.1	91	CLOSED
OAKEW053	10/16/2000	0.1	-41.7	108	
OAKEW054	10/16/2000	14.7	-31.7	91	CLOSED
OAKEW055	10/16/2000	0.2	-52.9	108	
OAKEW056	10/16/2000	0.5	-43.3	111	
OAKEW057	10/16/2000	0.2	-34.8	110	
OAKEW058	10/16/2000	0.2	-19.7	98	CLOSED
OAKEW063	10/16/2000	1.8	-16.6	94	CLOSED
OAKEW064	10/16/2000	0	-45.6	86	
OAKEW065	10/16/2000	14.3	-32	121	CLOSED
OAKEW066	10/16/2000	0.2	-47.5	108	
OAKEW067	10/16/2000	19.7	-41	93	CLOSED
OAKEW068	10/16/2000	1.4	-39	96	CLOSED
OAKEW069	10/16/2000	0	-36.5	113	
OAKEW070	10/16/2000	0.2	-22.4	105	CLOSED
OAKEW071	10/16/2000	0.6	-14.2	91	CLOSED
OAKEW072	10/16/2000	0.7	-25.7	79	CLOSED



Orlando Gas Producers

Cell A-K
October 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	10/16/2000	1	-12.3	82	CLOSED
OAKEW076	10/16/2000	1	-21.6	102	CLOSED
OAKEW077	10/16/2000	0.1	-21.2	101	CLOSED
OAKEW078	10/16/2000	0.2	-47.4	105	
OAKEW079	10/16/2000	0.2	-40.4	114	
OAKEW080	10/16/2000	0.8	-48.2	102	
OAKEW081	10/16/2000	0.7	-39.7	95	CLOSED
OAKEW082	10/16/2000	0.2	-28.7	111	
OAKEW083	10/16/2000	0.2	-18	91	CLOSED
OAKEW088	10/16/2000	0.7	-28.2	105	CLOSED
OAKEW089	10/16/2000	0.2	-23.3	91	CLOSED
OAKEW090	10/16/2000	4.9	-34.9	110	CLOSED
OAKEW091	10/16/2000	0.2	-40.7	108	
OAKEW092	10/16/2000	0.1	-45.2	111	
OAKEW093	10/16/2000	0	-46.8	105	
OAKEW094	10/16/2000	0.7	-23.5	100	CLOSED
OAKEW095	10/16/2000	2.6	-16.2	88	CLOSED
OAKEW096	10/16/2000	0.2	-15.5	81	CLOSED
OAKEW097	10/16/2000	1.5	-16.2	78	CLOSED
OAKEW099	10/16/2000	1.2	-22.2	85	CLOSED
OAKEW100	10/16/2000	0.2	-29.8	98	CLOSED
OAKEW101	10/16/2000	0.2	-35.1	112	
OAKEW102	10/16/2000	0.3	-37.1	104	CLOSED
OAKEW103	10/16/2000	0.5	-32.2	113	
OAKEW104	10/16/2000	0.4	-22.6	109	CLOSED
OAKEW105	10/16/2000	0.5	-15.7	87	CLOSED
OAKEW109	10/16/2000	1.3	-22.3	87	CLOSED
OAKEW110	10/16/2000	0.6	-29.4	94	CLOSED
OAKEW111	10/16/2000	0.5	-20.6	94	CLOSED
OAKEW112	10/16/2000	0.8	-21.2	110	CLOSED
OAKEW113	10/16/2000	0.2	-20.9	111	CLOSED
OAKEW114	10/16/2000	0.5	-8.2	84	CLOSED
OAKEW117	10/16/2000	2.4	-17	86	CLOSED
OAKEW118	10/16/2000	0.4	-17.9	83	CLOSED
OAKEW119	10/16/2000	1.3	-21.2	91	CLOSED
OAKEW121	10/16/2000	11.7	-14.6	87	CLOSED
OAKEW123	10/16/2000	0.5	-12.9	82	CLOSED
OAKEW124	10/16/2000	0.3	-7.7	83	CLOSED

Orlando Gas Producers

Cell A-K
November 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	11/1/2000	0.8	-0.5	73	;closed
OAKEW005	11/1/2000	0.5	-1.4	78	;closed
OAKEW006	11/1/2000	2	-1.7	81	;closed
OAKEW00A	11/1/2000	1	-13.7	92	;closed
OAKEW00B	11/1/2000	0.9	-31.7	116	
OAKEW00C	11/1/2000	0.5	-40.2	123	
OAKEW00D	11/1/2000	0.6	-43.4	117	
OAKEW00E	11/1/2000	1.1	-8.1	91	;closed
OAKEW00F	11/1/2000	0.7	-42.1	96	;closed
OAKEW00G	11/1/2000	0.7	-5.1	104	;closed
OAKEW012	11/1/2000	7	-2.8	82	;closed
OAKEW013	11/1/2000	1.2	-2.3	89	;closed
OAKEW017	11/1/2000	0.6	-1.5	93	;closed
OAKEW018	11/1/2000	0.7	-3.1	91	;closed
OAKEW019	11/1/2000	0.6	-4.8	95	;closed
OAKEW021	11/1/2000	0.7	-4.1	91	;closed
OAKEW025	11/1/2000	15	-5.9	87	;closed
OAKEW026	11/1/2000	0.8	-31.9	103	
OAKEW028	11/1/2000	0.7	0	92	
OAKEW032	11/1/2000	0.7	-8.1	87	;closed
OAKEW034	11/1/2000	0.7	-42.6	99	
OAKEW035	11/1/2000	0.8	-43.6	94	
OAKEW036	11/1/2000	1	-44.4	101	
OAKEW037	11/1/2000	0.7	-39.1	117	
OAKEW038	11/1/2000	0.7	-7.2	91	;closed
OAKEW041	11/1/2000	1.4	-7.5	69	;closed
OAKEW042	11/1/2000	0.7	-0.2	84	;closed
OAKEW043	11/1/2000	0.7	-41.4	106	
OAKEW044	11/1/2000	1.6	-38.8	98	;closed
OAKEW045	11/1/2000	0.9	-43.7	103	
OAKEW046	11/1/2000	0.8	-42.6	110	
OAKEW047	11/1/2000	0.8	-30.5	103	
OAKEW048	11/1/2000	0.9	-8.1	87	;closed
OAKEW051	11/1/2000	8.4	-7.8	75	;closed
OAKEW052	11/1/2000	0.8	-10	89	;closed
OAKEW053	11/1/2000	0.6	-20.7	107	
OAKEW054	11/1/2000	15.7	0.4	91	;closed
OAKEW055	11/1/2000	0.5	-37.7	109	
OAKEW056	11/1/2000	0.7	-30.2	110	
OAKEW057	11/1/2000	0.6	-23.6	109	

OAKEW058	11/1/2000	20.4	-10.8	96	;closed
OAKEW063	11/1/2000	1.6	-8.2	89	;closed
OAKEW064	11/1/2000	11.9	-18.6	112	;closed
OAKEW065	11/1/2000	0.8	-30.9	108	
OAKEW066	11/1/2000	0.9	-30.9	108	
OAKEW067	11/1/2000	16.4	-25.8	91	;closed
OAKEW068	11/1/2000	13.4	-24	104	;closed
OAKEW069	11/1/2000	0.7	-23.5	113	
OAKEW070	11/1/2000	0.7	-12.9	100	;closed
OAKEW071	11/1/2000	0.9	-7.3	87	;closed
OAKEW072	11/1/2000	13.8	-4.3	76	;closed
OAKEW075	11/2/2000	0.8	-39.8	76	;closed
OAKEW076	11/1/2000	1	-11.8	99	;closed
OAKEW077	11/1/2000	3.2	-16.2	85	;closed
OAKEW078	11/1/2000	0.6	-29.8	104	
OAKEW079	11/1/2000	0.8	-25.1	114	
OAKEW080	11/1/2000	0.8	-29.9	101	
OAKEW081	11/1/2000	0.9	-24.9	103	
OAKEW082	11/1/2000	1.7	-16.5	110	
OAKEW083	11/1/2000	0.8	-9.9	88	;closed
OAKEW088	11/1/2000	1	-17.5	90	;closed
OAKEW088	11/1/2000	2.7	-17.5	85	;closed
OAKEW089	11/1/2000	5.5	-17.6	87	;closed
OAKEW090	11/1/2000	5	-20.4	105	;closed
OAKEW091	11/1/2000	0.7	-24.6	107	
OAKEW092	11/1/2000	0.7	-27.7	111	
OAKEW093	11/1/2000	1.2	-32	103	
OAKEW094	11/1/2000	1.2	-13.4	92	;closed
OAKEW095	11/1/2000	0.9	0	91	;closed
OAKEW096	11/1/2000	3.3	-7.5	82	;closed
OAKEW097	11/1/2000	20.9	-6.6	73	;closed
OAKEW099	11/1/2000	9.1	-11.3	76	;closed
OAKEW100	11/1/2000	20.4	-0.2	87	;closed
OAKEW101	11/1/2000	0.8	-20.1	107	;closed
OAKEW102	11/1/2000	0.7	-22.8	107	
OAKEW103	11/1/2000	0.7	-22.9	113	
OAKEW104	11/1/2000	2.6	-12.4	107	;closed
OAKEW105	11/1/2000	0.9	-7.7	87	;closed
OAKEW109	11/1/2000	2.5	-11.4	85	;closed
OAKEW110	11/1/2000	1	-17	90	;closed
OAKEW111	11/1/2000	0.8	-10.9	97	;closed
OAKEW111	11/1/2000	0.8	-0.2	90	;closed
OAKEW112	11/1/2000	0.9	-11.2	99	;closed
OAKEW113	11/1/2000	0.7	-11.2	101	;closed
OAKEW114	11/1/2000	0.6	-2.6	77	;closed
OAKEW117	11/1/2000	2.8	-8	85	;closed
OAKEW118	11/1/2000	0.7	-8.5	79	;closed
OAKEW119	11/1/2000	1.4	-11.2	86	;closed
OAKEW121	11/1/2000	10.4	-6.5	82	;closed
OAKEW123	11/1/2000	0.6	-3.5	78	;closed
OAKEW124	11/1/2000	0.5	-1.7	80	;closed

Orlando Gas Producers

Cell A-K
December 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	12/12/2000	14	-0.6	94	CLOSED
OAKEW005	12/12/2000	0.6	-0.8	78	CLOSED
OAKEW006	12/12/2000	0.2	-0.8	79	CLOSED
OAKEW00A	12/13/2000	0.4	-19.7	74	CLOSED
OAKEW00B	12/13/2000	2	-40.5	114	CLOSED
OAKEW00C	12/13/2000	0.2	-47.8	126	
OAKEW00D	12/13/2000	0	-53.8	114	
OAKEW00E	12/12/2000	0.8	-8	85	CLOSED
OAKEW00F	12/12/2000	0.5	-28.5	89	CLOSED
OAKEW00G	12/13/2000	0.2	-5.1	91	CLOSED
OAKEW012	12/12/2000	2.8	-1.1	91	CLOSED
OAKEW013	12/12/2000	9.5	-1.1	94	CLOSED
OAKEW017	12/12/2000	1.1	-1.4	83	CLOSED
OAKEW018	12/12/2000	1.4	-0.2	87	
OAKEW019	12/12/2000	1.3	0	87	CLOSED
OAKEW021	12/13/2000	1.6	-3.6	89	CLOSED
OAKEW025	12/12/2000	12.3	-6.4	104	CLOSED
OAKEW026	12/13/2000	0.1	-55.3	92	
OAKEW028	12/13/2000	0	-53	91	
OAKEW032	12/12/2000	0.8	-9.2	83	CLOSED
OAKEW034	12/13/2000	0.7	-48.6	101	
OAKEW035	12/13/2000	1.1	-47.5	89	
OAKEW036	12/13/2000	2.5	-47.2	92	CLOSED
OAKEW037	12/13/2000	1.2	-49.4	117	
OAKEW038	12/13/2000	0.4	-8.5	84	CLOSED
OAKEW041	12/12/2000	0.3	-9.6	78	CLOSED
OAKEW042	12/12/2000	2	-17.5	93	CLOSED
OAKEW043	12/13/2000	0.7	-48.4	105	
OAKEW044	12/13/2000	0.5	-45.8	96	CLOSED
OAKEW045	12/13/2000	0	-53.6	100	
OAKEW046	12/13/2000	0.2	-51.6	108	
OAKEW047	12/13/2000	0.9	-28.4	101	
OAKEW048	12/13/2000	0.4	-9.4	80	CLOSED
OAKEW051	12/12/2000	9.6	-10.1	88	CLOSED
OAKEW052	12/12/2000	1.3	-11.9	85	CLOSED
OAKEW053	12/13/2000	1.5	-36.2	106	CLOSED
OAKEW054	12/13/2000	15.8	-25.7	91	CLOSED
OAKEW055	12/13/2000	0.4	-43.6	107	
OAKEW056	12/13/2000	0.7	-30.8	113	

OAKEW057	12/13/2000	0.1	-23.4	109	
OAKEW058	12/13/2000	3.1	-13.8	94	CLOSED
OAKEW063	12/12/2000	1.7	-10.8	93	CLOSED
OAKEW064	12/12/2000	0.6	-18.2	87	
OAKEW065	12/13/2000	13.4	-28.7	112	CLOSED
OAKEW066	12/13/2000	0.5	-40.9	108	
OAKEW067	12/13/2000	17.2	-36.7	82	CLOSED
OAKEW068	12/13/2000	17.4	-31.8	101	CLOSED
OAKEW069	12/13/2000	0	-27.3	114	
OAKEW070	12/13/2000	0.8	-16.2	105	CLOSED
OAKEW071	12/13/2000	0.2	-9.9	76	CLOSED
OAKEW072	12/12/2000	0.2	-13.8	74	CLOSED
OAKEW075	12/12/2000	0.9	-8	79	
OAKEW076	12/12/2000	0.3	-16.1	99	CLOSED
OAKEW077	12/12/2000	0.5	-22.9	94	CLOSED
OAKEW078	12/13/2000	0	-45.7	104	
OAKEW079	12/13/2000	0.5	-35.7	112	
OAKEW080	12/13/2000	0	-38.8	99	
OAKEW081	12/13/2000	0	-32.2	102	CLOSED
OAKEW082	12/13/2000	0.1	-20.8	108	CLOSED
OAKEW083	12/13/2000	0.1	-13.2	84	CLOSED
OAKEW088	12/12/2000	0.6	-17.9	89	CLOSED
OAKEW089	12/12/2000	0.9	-25.1	79	CLOSED
OAKEW090	12/13/2000	3.7	-31.3	98	CLOSED
OAKEW091	12/13/2000	0	-34.7	106	CLOSED
OAKEW092	12/13/2000	0	-44.6	109	
OAKEW093	12/13/2000	0.1	-50.2	102	
OAKEW094	12/13/2000	0.5	-18.6	94	CLOSED
OAKEW095	12/12/2000	7	-10.4	79	CLOSED
OAKEW096	12/12/2000	5.1	-9.6	81	CLOSED
OAKEW097	12/12/2000	1	-10	73	CLOSED
OAKEW099	12/12/2000	7	0	74	CLOSED
OAKEW100	12/12/2000	5.8	-25.2	97	CLOSED
OAKEW101	12/12/2000	0.2	-27.9	107	
OAKEW102	12/13/2000	0.7	-34.8	103	CLOSED
OAKEW103	12/13/2000	0	-24	111	CLOSED
OAKEW104	12/13/2000	0.7	-18.3	92	CLOSED
OAKEW105	12/13/2000	0.4	-13.1	80	CLOSED
OAKEW109	12/12/2000	2.3	-15.6	88	CLOSED
OAKEW110	12/13/2000	1	-24.9	88	CLOSED
OAKEW111	12/13/2000	0.4	-16.2	83	CLOSED
OAKEW112	12/13/2000	0.7	-16.6	89	CLOSED
OAKEW113	12/13/2000	0.3	-16.5	98	CLOSED
OAKEW114	12/12/2000	1.5	-4	75	CLOSED
OAKEW117	12/12/2000	4	-10.8	90	CLOSED
OAKEW118	12/12/2000	0.6	-11.4	76	CLOSED
OAKEW119	12/13/2000	0.9	-16.4	77	CLOSED
OAKEW121	12/12/2000	14.9	-7.3	76	CLOSED
OAKEW123	12/12/2000	0.3	-6.1	76	CLOSED
OAKEW124	12/12/2000	6.5	-3	76	CLOSED

Orlando Gas Producers

Cell A-K

January 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	1/23/01	0.7	-14.2	80	
OAKEW076	1/23/01	4.1	-7.3	80	;closed
OAKEW077	1/23/01	3.5	-14.5	86	;closed
OAKEW078	1/24/01	0.2	-45.2	101	
OAKEW079	1/24/01	0.5	-25.7	112	
OAKEW080	1/24/01	0	-28.1	96	
OAKEW081	1/24/01	0	-24.5	94	
OAKEW082	1/24/01	0	-14.7	97	
OAKEW083	1/23/01	0.4	-6.4	76	;closed
OAKEW088	1/23/01	0.6	-10.3	76	;closed
OAKEW089	1/23/01	0.7	-16.1	83	;closed
OAKEW090	1/24/01	5.5	-22	101	;closed
OAKEW091	1/24/01	0	-24.3	106	
OAKEW092	1/24/01	0	-40	105	
OAKEW093	1/24/01	0	-47.5	98	
OAKEW094	1/23/01	0.9	-9.4	86	;closed
OAKEW095	1/23/01	6.1	0	68	;closed
OAKEW096	1/23/01	2	-4.4	68	;closed
OAKEW097	1/23/01	0.3	0.1	63	;closed
OAKEW099	1/23/01	4.8	-10.3	69	;closed
OAKEW100	1/23/01	6.4	0	93	;closed
OAKEW101	1/23/01	3.1	0	79	;closed
OAKEW102	1/24/01	0.1	-24	102	
OAKEW103	1/24/01	0	-12.9	96	
OAKEW104	1/23/01	0.2	0	96	;closed
OAKEW105	1/23/01	0.4	-4.5	77	;closed
OAKEW109	1/23/01	7.2	-7.9	66	;closed
OAKEW110	1/23/01	2.5	0	73	;closed
OAKEW111	1/23/01	0.8	7.5	83	;closed
OAKEW112	1/23/01	1.4	-6.3	97	;closed
OAKEW113	1/23/01	2.7	0	63	;closed
OAKEW114	1/23/01	0	-2.5	74	
OAKEW117	1/23/01	2.8	-5.2	83	;closed
OAKEW118	1/23/01	0.2	-5.3	64	;closed
OAKEW119	1/23/01	5.7	7	72	;closed
OAKEW121	1/23/01	11.4	-3.9	73	;closed
OAKEW123	1/23/01	0	-5.6	68	
OAKEW124	1/23/01	0.2	-1.8	70	

Orlando Gas Producers

Cell A-K
January 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	1/23/01	0.1	-1.3	57	;closed
OAKEW005	1/23/01	1.4	0	68	;closed
OAKEW006	1/24/01	1.1	-0.1	103	;closed
OAKEW00A	1/23/01	1.2	0	68	;closed
OAKEW00B	1/24/01	0	-33.1	113	
OAKEW00C	1/24/01	9.5	-35.5	129	;closed
OAKEW00D	1/24/01	0	-58.7	112	
OAKEW00E	1/23/01	3.4	-3.4	67	;closed
OAKEW00F	1/23/01	1.1	-23.9	86	
OAKEW00G	1/23/01	0.1	-3.7	82	;closed
OAKEW012	1/23/01	18.6	-0.3	66	;closed
OAKEW013	1/23/01	16.7	-0.4	89	;closed
OAKEW017	1/23/01	0.2	0	86	
OAKEW018	1/23/01	0.2	0.6	64	
OAKEW019	1/23/01	0.2	0.4	76	;closed
OAKEW021	1/23/01	0.3	-1.6	82	;closed
OAKEW025	1/23/01	15.2	-3.1	84	;closed
OAKEW026	1/24/01	0.3	-24.1	105	
OAKEW028	1/24/01	0.2	-26	102	
OAKEW032	1/23/01	3.5	-3.3	71	;closed
OAKEW034	1/24/01	0.6	-50.6	95	
OAKEW035	1/24/01	1.3	-39.6	84	;closed
OAKEW036	1/24/01	11.8	-41.7	87	;closed
OAKEW037	1/24/01	1.8	-48.6	114	
OAKEW038	1/23/01	13	-7.2	66	;closed
OAKEW041	1/23/01	5.2	-3.2	72	;closed
OAKEW042	1/23/01	4.6	-7.9	74	;closed
OAKEW043	1/24/01	0.4	-48	102	
OAKEW044	1/24/01	0.7	-37	93	;closed
OAKEW045	1/24/01	0.4	-58.7	97	
OAKEW046	1/24/01	0	-56.7	105	
OAKEW047	1/24/01	0	-28.1	99	
OAKEW048	1/23/01	0.8	-8	80	;closed
OAKEW051	1/23/01	6.7	-3.7	92	;closed
OAKEW052	1/23/01	0.9	-3.8	74	;closed
OAKEW053	1/24/01	0	-12.8	91	
OAKEW054	1/24/01	9.2	-18.9	98	;closed
OAKEW055	1/24/01	1.1	-37.3	104	
OAKEW056	1/24/01	1.3	-27.4	110	;closed
OAKEW057	1/24/01	0	-21.8	107	
OAKEW058	1/23/01	4.2	-8.3	82	;closed
OAKEW063	1/23/01	18.3	-4.2	67	;closed
OAKEW064	1/24/01	0	-34.1	114	
OAKEW065	1/24/01	5	-19.6	105	;closed
OAKEW066	1/24/01	11.5	-30.4	106	;closed
OAKEW067	1/24/01	3.1	-27	64	;closed
OAKEW068	1/24/01	14	-26.4	109	;closed
OAKEW069	1/24/01	0	-24.4	112	
OAKEW070	1/23/01	0.4	-9.7	92	;closed
OAKEW071	1/23/01	0.9	-4.6	76	;closed
OAKEW072	1/23/01	5.3	-2.6	67	;closed

Orlando Gas Producers

Cell A-K
March 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	3/7/01	0.5	-5.8	69	closed
OAKEW076	3/7/01	0.8	-23.8	103	
OAKEW077	3/7/01	3	-13.7	100	closed
OAKEW078	3/7/01	1	-44.9	99	
OAKEW079	3/7/01	1.1	-23.5	109	
OAKEW080	3/7/01	1.2	-15.5	94	
OAKEW081	3/7/01	0	-10.4	98	
OAKEW082	3/7/01	0.1	-5	109	
OAKEW083	3/7/01	2.3	-0.5	86	closed
OAKEW088	3/7/01	1.9	-10.2	86	closed
OAKEW089	3/7/01	3.3	-12.6	88	closed
OAKEW090	3/7/01	0.4	-15.5	93	closed
OAKEW091	3/7/01	2.7	-16.1	103	
OAKEW092	3/7/01	1.6	-15.1	111	
OAKEW093	3/7/01	0.9	-17.3	98	
OAKEW094	3/7/01	0.5	-2.1	84	closed
OAKEW095	3/7/01	4.8	-1	61	closed
OAKEW096	3/7/01	0	-0.8	62	closed
OAKEW097	3/7/01	1.3	-6.4	64	closed
OAKEW099	3/7/01	0	-8.1	65	closed
OAKEW100	3/7/01	3.8	-10.4	88	closed
OAKEW101	3/7/01	4.6	-11.7	110	closed
OAKEW102	3/7/01	8.1	-13	92	closed
OAKEW103	3/7/01	0	-5.1	111	
OAKEW104	3/7/01	1.5	-1.5	80	closed
OAKEW105	3/7/01	0.5	-0.5	82	closed
OAKEW109	3/7/01	2.4	-5.8	70	closed
OAKEW110	3/7/01	3.8	-7.8	88	closed
OAKEW111	3/7/01	0.3	-1	90	closed
OAKEW112	3/7/01	1.5	-1	105	closed
OAKEW113	3/7/01	0.8	-1.1	96	
OAKEW114	3/7/01	0	-0.4	77	closed
OAKEW117	3/7/01	0	-1.7	61	closed
OAKEW118	3/7/01	0	-1.3	68	closed
OAKEW119	3/7/01	2.3	-1.3	80	closed
OAKEW121	3/7/01	0	-1.1	67	closed
OAKEW123	3/7/01	0.2	-1.5	68	closed
OAKEW124	3/7/01	9.8	-0.3	69	closed

Orlando Gas Producers

Cell A-K
March 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	3/7/01	8.1	-0.4	60	closed
OAKEW005	3/7/01	0.3	0	51	closed
OAKEW006	3/7/01	5.7	0	67	closed
OAKEW00A	3/7/01	1.4	-2.1	85	closed
OAKEW00B	3/7/01	0.2	-29.5	115	
OAKEW00C	3/7/01	2.5	-12.7	125	
OAKEW00D	3/7/01	1.1	-70.1	110	
OAKEW00E	3/7/01	0.2	-1	74	
OAKEW00F	3/7/01	5	-66.9	93	closed
OAKEW00G	3/7/01	1	-1.6	90	
OAKEW012	3/7/01	17.5	0	58	closed
OAKEW013	3/7/01	8.2	-0.2	75	closed
OAKEW017	3/7/01	1.6	-4.5	83	
OAKEW018	3/7/01	1.4	-7.8	74	closed
OAKEW019	3/7/01	0.9	-2.6	93	closed
OAKEW021	3/7/01	0.7	-1.7	91	
OAKEW025	3/7/01	6.5	-0.6	89	closed
OAKEW026	3/7/01	0.4	-5.1	96	
OAKEW028	3/7/01	1	-4.2	101	
OAKEW032	3/7/01	1.5	-1.3	82	closed
OAKEW034	3/7/01	0.4	-10.9	95	
OAKEW035	3/7/01	1.9	-14.1	77	
OAKEW036	3/7/01	8.9	-11.6	76	closed
OAKEW037	3/7/01	1.1	-22	114	
OAKEW038	3/7/01	0.3	-1	85	
OAKEW041	3/7/01	16.1	-2.8	48	closed
OAKEW042	3/7/01	1.7	-6.1	89	closed
OAKEW043	3/7/01	0.8	-8	105	
OAKEW044	3/7/01	5	-9.1	69	closed
OAKEW045	3/7/01	0.5	-14.9	93	
OAKEW046	3/7/01	0.5	-8.3	110	
OAKEW047	3/7/01	0.6	-11.3	103	
OAKEW048	3/7/01	0.1	-0.1	81	
OAKEW051	3/7/01	6.3	-3.5	74	closed
OAKEW052	3/7/01	1.6	-3.9	89	closed
OAKEW053	3/7/01	0.8	-16	107	
OAKEW054	3/7/01	17.5	-10	93	closed
OAKEW055	3/7/01	0.2	-17	102	
OAKEW056	3/7/01	0	-7.2	105	
OAKEW057	3/7/01	0.8	-5.9	103	
OAKEW058	3/7/01	1	-1.9	85	closed
OAKEW063	3/7/01	2.7	-7.4	86	closed
OAKEW064	3/7/01	1	-14	70	closed
OAKEW065	3/7/01	0.5	-17.1	103	closed
OAKEW066	3/7/01	10.9	-19.6	65	closed
OAKEW067	3/7/01	0.6	-10.7	96	closed
OAKEW068	3/7/01	12.8	-10.1	110	closed
OAKEW069	3/7/01	0	-7.8	111	
OAKEW070	3/7/01	0.2	-0.8	86	closed
OAKEW071	3/7/01	8.2	-0.4	75	closed
OAKEW072	3/7/01	15.4	-2.7	59	closed

Orlando Gas Producers

Cell A-K
April 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	4/16/01	14.7	-2.1	83	closed
OAKEW076	4/16/01	2.9	-7.4	99	closed
OAKEW077	4/16/01	6.3	-13.3	100	closed
OAKEW078	4/16/01	1.4	-30.5	100	
OAKEW079	4/16/01	1.5	-26.8	109	
OAKEW080	4/16/01	1	-24.4	95	
OAKEW081	4/16/01	0.9	-19.4	102	
OAKEW082	4/16/01	1.2	-14.9	107	
OAKEW083	4/16/01	1	-6.8	93	closed
OAKEW088	4/16/01	1.5	-10.1	95	closed
OAKEW089	4/16/01	2.4	-15.8	99	closed
OAKEW090	4/16/01	4.5	-18.8	107	closed
OAKEW091	4/16/01	1.5	-23.3	103	
OAKEW092	4/16/01	1.3	-20.7	113	
OAKEW093	4/16/01	1.5	-24.6	99	
OAKEW094	4/16/01	1.3	-9.3	94	closed
OAKEW095	4/16/01	1.2	-4.6	84	closed
OAKEW096	4/16/01	7.9	-5.1	87	closed
OAKEW097	4/16/01	18.5	-4.3	88	closed
OAKEW099	4/16/01	4.9	-11.1	88	closed
OAKEW100	4/16/01	3.3	-15	104	closed
OAKEW101	4/16/01	0.8	-19.9	109	
OAKEW102	4/16/01	1.4	-19.7	99	
OAKEW103	4/16/01	1	-12.9	114	
OAKEW104	4/16/01	1.3	-7.8	97	closed
OAKEW105	4/16/01	1.5	-5.4	95	closed
OAKEW109	4/16/01	1.3	-23.8	81	closed
OAKEW110	4/16/01	1.3	-15	97	closed
OAKEW111	4/16/01	1.6	-7.5	96	closed
OAKEW112	4/16/01	1.7	-7.2	109	closed
OAKEW113	4/16/01	1.6	-7	105	closed
OAKEW114	4/16/01	4.2	-1.7	83	closed
OAKEW117	4/16/01	6.1	-7.2	91	closed
OAKEW118	4/16/01	2.7	-5.8	85	closed
OAKEW119	4/16/01	1.6	-7.5	88	closed
OAKEW121	4/16/01	9.5	-4	86	closed
OAKEW123	4/16/01	4.5	-3.2	84	closed
OAKEW124	4/16/01	1.5	-2.4	81	closed

Orlando Gas Producers

Cell A-K
April 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	4/16/01	1.5	-2.2	80	closed
OAKEW005	4/16/01	6	-3.9	90	closed
OAKEW006	4/16/01	1.4	-3.6	81	closed
OAKEW00A	4/16/01	3.4	-8.8	103	closed
OAKEW00B	4/16/01	1.3	-40.3	115	
OAKEW00C	4/16/01	1.1	-24.5	127	
OAKEW00D	4/3/01	0.9	-57.8	112	
OAKEW00E	4/16/01	3.3	-1.1	85	closed
OAKEW00F	4/16/01	0.7	-70.9	95	
OAKEW00G	4/16/01	1.3	-1.7	104	closed
OAKEW012	4/16/01	14	-6	91	closed
OAKEW013	4/16/01	16.9	-5.1	104	closed
OAKEW017	4/16/01	1.3	-6	99	
OAKEW018	4/16/01	0.9	-14.1	87	
OAKEW019	4/16/01	0.7	-8.6	95	
OAKEW021	4/16/01	1.4	0	94	closed
OAKEW025	4/16/01	14.2	-1.8	117	closed
OAKEW026	4/3/01	1	-31	89	
OAKEW028	4/16/01	1.1	-13.1	100	
OAKEW032	4/16/01	1.6	-0.9	87	closed
OAKEW034	4/3/01	1.7	-19.2	97	
OAKEW035	4/3/01	0.9	-20.8	86	
OAKEW036	4/3/01	1.7	-24	89	closed
OAKEW037	4/3/01	1.1	-14.6	116	
OAKEW038	4/16/01	2	-8.7	87	closed
OAKEW041	4/16/01	14.3	-0.6	87	closed
OAKEW042	4/16/01	1.4	-3.8	93	closed
OAKEW043	4/3/01	4.6	-12.3	107	closed
OAKEW044	4/3/01	1.2	-20	92	
OAKEW045	4/3/01	0	-36.4	99	
OAKEW046	4/3/01	0.6	-27	120	
OAKEW047	4/3/01	0.6	-25.2	98	
OAKEW048	4/16/01	1.7	-9.3	92	closed
OAKEW051	4/16/01	9.5	-0.8	87	closed
OAKEW052	4/16/01	2.6	-1.9	87	closed
OAKEW053	4/16/01	1.2	-21.7	108	
OAKEW054	4/16/01	19.3	-14.7	111	closed
OAKEW055	4/16/01	0.9	-22.5	104	closed
OAKEW056	4/16/01	1.6	-18.5	114	
OAKEW057	4/3/01	0.3	-14.5	103	
OAKEW058	4/16/01	2.4	-9.9	95	closed
OAKEW063	4/16/01	3.9	-3.5	92	closed
OAKEW064	4/16/01	3.2	-6.5	102	closed
OAKEW065	4/16/01	3.5	-15	123	closed
OAKEW066	4/16/01	2.9	-21.1	106	closed
OAKEW067	4/16/01	7.3	-23.3	87	closed
OAKEW068	4/16/01	17.8	-18.1	129	closed
OAKEW069	4/16/01	1.5	-18.2	112	
OAKEW070	4/16/01	1.2	-9.3	101	closed
OAKEW071	4/16/01	1.1	-5.2	89	closed
OAKEW072	4/16/01	7.5	-4	85	closed

Orlando Gas Producers

Cell A-K
May 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW076	5/16/01	4.9	-5.7	93	;closed
OAKEW077	5/16/01	6.1	-12.4	95	;closed
OAKEW078	5/16/01	1.4	-39.1	93	
OAKEW079	5/16/01	0.5	-35.8	93	
OAKEW080	5/16/01	0.9	-35.8	98	
OAKEW081	5/16/01	1.6	-30.4	87	
OAKEW082	5/16/01	1.1	-24.3	106	
OAKEW083	5/16/01	1.6	-9.1	94	;closed
OAKEW088	5/16/01	6.7	-12.4	95	;closed
OAKEW089	5/16/01	0.3	-18.5	96	;closed
OAKEW090	5/16/01	12.2	-26.5	98	;closed
OAKEW091	5/16/01	1.2	-0.1	98	
OAKEW092	5/16/01	0.4	-29	110	
OAKEW093	5/16/01	1.6	-33.1	106	
OAKEW094	5/16/01	0.6	-13.4	93	;closed
OAKEW095	5/10/01	5.3	-10	88	;closed
OAKEW096	5/10/01	6.4	-9.5	89	;closed
OAKEW097	5/9/01	2.3	-8.4	80	;closed
OAKEW099	5/9/01	9.3	-14.8	99	;closed
OAKEW100	5/16/01	0.5	-16.6	97	;closed
OAKEW101	5/16/01	0.6	-23.5	95	
OAKEW102	5/16/01	0.9	-26.6	99	
OAKEW103	5/16/01	0.5	-19	114	
OAKEW104	5/16/01	1.9	-6.8	93	;closed
OAKEW105	5/16/01	0.6	-7	102	;closed
OAKEW109	5/9/01	1.6	-13.7	87	
OAKEW110	5/16/01	0.3	-16.7	99	;closed
OAKEW111	5/16/01	1.4	-9.4	95	;closed
OAKEW112	5/16/01	0	-9.7	102	;closed
OAKEW113	5/16/01	1.1	-9.7	96	;closed
OAKEW114	5/9/01	2.3	-3.6	81	;closed
OAKEW117	5/9/01	3.6	-9.3	99	;closed
OAKEW118	5/9/01	3.9	-9.7	85	;closed
OAKEW119	5/16/01	1.9	-9.4	99	;closed
OAKEW121	5/9/01	13.1	-6.1	85	;closed
OAKEW123	5/9/01	0.1	-4.6	78	;closed
OAKEW124	5/9/01	0.5	-2.2	80	;closed

Orlando Gas Producers

Cell A-K
May 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	5/9/01	1.1	-0.6	82	;closed
OAKEW005	5/9/01	4.8	-1.7	81	;closed
OAKEW006	5/9/01	0.5	-1.4	81	;closed
OAKEW00A	5/16/01	2.3	-9.4	103	;closed
OAKEW00B	5/16/01	1.3	-51	114	
OAKEW00C	5/15/01	0.1	-29.4	98	
OAKEW00D	5/15/01	1.5	-73.5	111	
OAKEW00E	5/16/01	4.9	-2.1	94	;closed
OAKEW00F	5/16/01	0	-74.3	91	
OAKEW00G	5/16/01	3.4	-1.8	100	;closed
OAKEW012	5/17/01	1.4	-28.2	101	;closed
OAKEW013	5/17/01	1.2	-31.3	106	;closed
OAKEW017	5/16/01	0.8	-5	96	
OAKEW018	5/16/01	1.2	-10.8	91	
OAKEW019	5/16/01	5.2	-2.9	92	;closed
OAKEW021	5/16/01	13.4	-1	97	;closed
OAKEW025	5/16/01	1.8	-1.7	92	;closed
OAKEW026	5/17/01	0.7	-41.5	90	
OAKEW032	5/16/01	1.9	-4.4	95	
OAKEW034	5/15/01	1.3	-24.4	87	
OAKEW035	5/15/01	0.3	-26.1	89	
OAKEW036	5/15/01	18.2	-31.5	103	;closed
OAKEW037	5/15/01	1.1	-20.7	117	
OAKEW038	5/16/01	14.7	-4.1	92	;closed
OAKEW041	5/9/01	1.6	-6.9	87	;closed
OAKEW042	5/16/01	12	-6.3	98	;closed
OAKEW043	5/15/01	3.6	-12.9	107	;closed
OAKEW044	5/15/01	0.7	-27.4	95	
OAKEW045	5/15/01	0	-54.5	91	
OAKEW046	5/15/01	0.3	-31	106	
OAKEW047	5/15/01	0.7	-40.3	97	
OAKEW048	5/16/01	0.9	-5.4	90	;closed
OAKEW051	5/9/01	10.8	-7.3	92	;closed
OAKEW052	5/16/01	7.1	-5.9	96	;closed
OAKEW053	5/15/01	0	-36.7	105	
OAKEW054	5/15/01	18.7	-16.8	99	;closed
OAKEW055	5/15/01	1.6	-25.6	112	
OAKEW056	5/15/01	1.4	-24.2	114	
OAKEW057	5/15/01	0.5	-22.8	107	
OAKEW058	5/16/01	3.2	-5.4	93	;closed
OAKEW063	5/16/01	7.7	-6.3	91	;closed
OAKEW064	5/16/01	5.1	-10.8	103	;closed
OAKEW065	5/16/01	0.3	-20.5	115	;closed
OAKEW066	5/16/01	8.2	-26.5	100	;closed
OAKEW067	5/16/01	15.5	-32.1	86	;closed
OAKEW068	5/16/01	11.1	-25.6	99	;closed
OAKEW069	5/16/01	0.4	-24.8	112	
OAKEW070	5/16/01	1.1	-12.1	107	;closed
OAKEW071	5/16/01	3.8	-6.4	97	;closed
OAKEW072	5/10/01	1.9	-10.5	81	;closed
OAKEW075	5/9/01	0.5	-7.2	83	;closed

Orlando Gas Producers

Cell A-K
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	6/11/01	0.2	-0.4	91	
OAKEW005	6/11/01	0.2	-0.4	87	
OAKEW006	6/11/01	0.6	-0.3	92	
OAKEW00A	6/12/01	0.4	-6.4	93	
OAKEW00B	6/12/01	0.8	-28.2	114	
OAKEW00C	6/12/01	0.5	-16.3	99	
OAKEW00D	6/12/01	0.8	-39.5	113	
OAKEW00E	6/12/01	0.1	-1.1	91	
OAKEW00F	6/12/01	0.1	-41.2	95	
OAKEW00G	6/12/01	0.5	-0.2	91	
OAKEW012	6/12/01	0.6	-0.2	94	
OAKEW013	6/12/01	0	-3.5	105	
OAKEW017	6/12/01	0	-3.6	88	
OAKEW018	6/12/01	0.1	-7	89	
OAKEW019	6/12/01	0.3	-0.3	92	
OAKEW021	6/12/01	1.3	-0.3	95	
OAKEW025	6/12/01	0	-1.5	111	
OAKEW026	6/12/01	0.5	-29.2	91	
OAKEW028	6/12/01	0.3	-1.2	102	
OAKEW032	6/12/01	0.3	-3.5	89	
OAKEW034	6/12/01	1.4	-14.6	100	
OAKEW035	6/12/01	1.2	-15.4	94	
OAKEW036	6/12/01	0.4	-11.6	96	
OAKEW037	6/12/01	0.4	-11.3	118	
OAKEW038	6/12/01	1	-1.4	95	
OAKEW041	6/11/01	1.1	-2.9	94	
OAKEW042	6/12/01	0.4	-3.6	89	
OAKEW043	6/12/01	1.6	-6.1	96	
OAKEW044	6/12/01	1.4	-18.8	96	
OAKEW045	6/12/01	0	-31.3	98	
OAKEW046	6/12/01	0	-17.9	107	
OAKEW047	6/12/01	0.1	-24.1	97	
OAKEW048	6/12/01	1	-2.2	92	
OAKEW051	6/11/01	8.2	-2.9	96	CLOSED
OAKEW052	6/12/01	0.6	-3.5	91	
OAKEW053	6/12/01	0.3	-21.8	104	
OAKEW054	6/12/01	1.5	-8.6	97	
OAKEW055	6/12/01	1	-13.9	100	
OAKEW056	6/12/01	0.4	-13.1	113	
OAKEW057	6/12/01	0.3	-14.6	106	
OAKEW058	6/12/01	0.8	-4.5	94	
OAKEW063	6/12/01	1.7	-2.5	94	
OAKEW064	6/12/01	0.2	-5.4	92	
OAKEW065	6/12/01	1.5	-10.8	114	
OAKEW066	6/12/01	17.2	-14.7	94	CLOSED
OAKEW067	6/13/01	2.1	-16.6	77	
OAKEW068	6/13/01	0.9	-14.2	82	
OAKEW069	6/13/01	1	-13.7	112	
OAKEW070	6/12/01	0.8	-6.8	92	
OAKEW071	6/12/01	0.6	-3.7	92	
OAKEW072	6/11/01	2.1	-1.5	103	

Orlando Gas Producers

Cell A-K
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	6/11/01	1.8	-1.8	94	
OAKEW076	6/12/01	0	-5.3	93	
OAKEW077	6/12/01	0.2	-9.6	93	
OAKEW077	6/12/01	0.2	-9.3	92	
OAKEW078	6/13/01	0.1	-22.3	101	
OAKEW079	6/13/01	0	-20.2	110	
OAKEW080	6/13/01	0.3	-20.4	96	
OAKEW081	6/13/01	0.1	-17.2	100	
OAKEW082	6/13/01	0	-13.4	106	
OAKEW083	6/12/01	0.5	-5.3	90	
OAKEW088	6/12/01	0	-6.3	92	
OAKEW089	6/12/01	0.5	-10.8	92	
OAKEW090	6/13/01	2.1	-14	82	
OAKEW091	6/13/01	0.7	-17.6	104	
OAKEW092	6/13/01	1.3	-17.2	111	
OAKEW093	6/13/01	0.2	-20.8	100	
OAKEW094	6/12/01	0.4	-8.1	93	
OAKEW095	6/11/01	10.3	-4.5	95	CLOSED
OAKEW096	6/11/01	12.1	-3.4	93	CLOSED
OAKEW097	6/11/01	3.1	-3	93	
OAKEW099	6/11/01	4.3	-3	99	
OAKEW100	6/12/01	0.7	0	93	
OAKEW101	6/12/01	0.9	-4.4	106	
OAKEW102	6/13/01	2.2	-15.1	99	
OAKEW103	6/13/01	0.1	-11.3	113	
OAKEW104	6/12/01	0.1	-6.2	94	
OAKEW105	6/12/01	0.3	-3.5	93	
OAKEW109	6/11/01	14.8	-6.1	96	CLOSED
OAKEW110	6/12/01	0.9	0	93	CLOSED
OAKEW111	6/12/01	1	-4.8	92	
OAKEW112	6/12/01	1	-4.4	93	
OAKEW113	6/12/01	0	-5.4	106	
OAKEW114	6/11/01	6	-0.8	96	CLOSED
OAKEW117	6/11/01	3.2	-3.9	98	
OAKEW118	6/11/01	9.8	-3.9	96	CLOSED
OAKEW119	6/12/01	1	-4.5	94	
OAKEW121	6/11/01	7.4	-2.6	95	CLOSED
OAKEW123	6/11/01	1.2	-0.7	91	
OAKEW124	6/11/01	1	0	93	

Orlando Gas Producers

Cell A-K
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW075	6/11/01	1.8	-1.8	94	
OAKEW076	6/12/01	0	-5.3	93	
OAKEW077	6/12/01	0.2	-9.6	93	
OAKEW077	6/12/01	0.2	-9.3	92	
OAKEW078	6/13/01	0.1	-22.3	101	
OAKEW079	6/13/01	0	-20.2	110	
OAKEW080	6/13/01	0.3	-20.4	96	
OAKEW081	6/13/01	0.1	-17.2	100	
OAKEW082	6/13/01	0	-13.4	106	
OAKEW083	6/12/01	0.5	-5.3	90	
OAKEW088	6/12/01	0	-6.3	92	
OAKEW089	6/12/01	0.5	-10.8	92	
OAKEW090	6/13/01	2.1	-14	82	
OAKEW091	6/13/01	0.7	-17.6	104	
OAKEW092	6/13/01	1.3	-17.2	111	
OAKEW093	6/13/01	0.2	-20.8	100	
OAKEW094	6/12/01	0.4	-8.1	93	
OAKEW095	6/11/01	10.3	-4.5	95	CLOSED
OAKEW096	6/11/01	12.1	-3.4	93	CLOSED
OAKEW097	6/11/01	3.1	-3	93	
OAKEW099	6/11/01	4.3	-3	99	
OAKEW100	6/12/01	0.7	0	93	
OAKEW101	6/12/01	0.9	-4.4	106	
OAKEW102	6/13/01	2.2	-15.1	99	
OAKEW103	6/13/01	0.1	-11.3	113	
OAKEW104	6/12/01	0.1	-6.2	94	
OAKEW105	6/12/01	0.3	-3.5	93	
OAKEW109	6/11/01	14.8	-6.1	96	CLOSED
OAKEW110	6/12/01	0.9	0	93	CLOSED
OAKEW111	6/12/01	1	-4.8	92	
OAKEW112	6/12/01	1	-4.4	93	
OAKEW113	6/12/01	0	-5.4	106	
OAKEW114	6/11/01	6	-0.8	96	CLOSED
OAKEW117	6/11/01	3.2	-3.9	98	
OAKEW118	6/11/01	9.8	-3.9	96	CLOSED
OAKEW119	6/12/01	1	-4.5	94	
OAKEW121	6/11/01	7.4	-2.6	95	CLOSED
OAKEW123	6/11/01	1.2	-0.7	91	
OAKEW124	6/11/01	1	0	93	

Orlando Gas Producers

Cell A-K
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	6/11/01	0.2	-0.4	91	
OAKEW005	6/11/01	0.2	-0.4	87	
OAKEW006	6/11/01	0.6	-0.3	92	
OAKEW00A	6/12/01	0.4	-6.4	93	
OAKEW00B	6/12/01	0.8	-28.2	114	
OAKEW00C	6/12/01	0.5	-16.3	99	
OAKEW00D	6/12/01	0.8	-39.5	113	
OAKEW00E	6/12/01	0.1	-1.1	91	
OAKEW00F	6/12/01	0.1	-41.2	95	
OAKEW00G	6/12/01	0.5	-0.2	91	
OAKEW012	6/12/01	0.6	-0.2	94	
OAKEW013	6/12/01	0	-3.5	105	
OAKEW017	6/12/01	0	-3.6	88	
OAKEW018	6/12/01	0.1	-7	89	
OAKEW019	6/12/01	0.3	-0.3	92	
OAKEW021	6/12/01	1.3	-0.3	95	
OAKEW025	6/12/01	0	-1.5	111	
OAKEW026	6/12/01	0.5	-29.2	91	
OAKEW028	6/12/01	0.3	-1.2	102	
OAKEW032	6/12/01	0.3	-3.5	89	
OAKEW034	6/12/01	1.4	-14.6	100	
OAKEW035	6/12/01	1.2	-15.4	94	
OAKEW036	6/12/01	0.4	-11.6	96	
OAKEW037	6/12/01	0.4	-11.3	118	
OAKEW038	6/12/01	1	-1.4	95	
OAKEW041	6/11/01	1.1	-2.9	94	
OAKEW042	6/12/01	0.4	-3.6	89	
OAKEW043	6/12/01	1.6	-6.1	96	
OAKEW044	6/12/01	1.4	-18.8	96	
OAKEW045	6/12/01	0	-31.3	98	
OAKEW046	6/12/01	0	-17.9	107	
OAKEW047	6/12/01	0.1	-24.1	97	
OAKEW048	6/12/01	1	-2.2	92	
OAKEW051	6/11/01	8.2	-2.9	96	CLOSED
OAKEW052	6/12/01	0.6	-3.5	91	
OAKEW053	6/12/01	0.3	-21.8	104	
OAKEW054	6/12/01	1.5	-8.6	97	
OAKEW055	6/12/01	1	-13.9	100	
OAKEW056	6/12/01	0.4	-13.1	113	
OAKEW057	6/12/01	0.3	-14.6	106	
OAKEW058	6/12/01	0.8	-4.5	94	
OAKEW063	6/12/01	1.7	-2.5	94	
OAKEW064	6/12/01	0.2	-5.4	92	
OAKEW065	6/12/01	1.5	-10.8	114	
OAKEW066	6/12/01	17.2	-14.7	94	CLOSED
OAKEW067	6/13/01	2.1	-16.6	77	
OAKEW068	6/13/01	0.9	-14.2	82	
OAKEW069	6/13/01	1	-13.7	112	
OAKEW070	6/12/01	0.8	-6.8	92	
OAKEW071	6/12/01	0.6	-3.7	92	
OAKEW072	6/11/01	2.1	-1.5	103	

Orlando Gas Producers

Cell AK

July 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW070	7/9/2001	1.4	-4.9	98	CLOSED
OAKEW071	7/9/2001	1.2	-2.2	84	CLOSED
OAKEW072	7/5/2001	2.6	-10	87	CLOSED
OAKEW075	7/5/2001	0.2	-0.6	88	CLOSED
OAKEW076	7/9/2001	0.2	-6.7	91	CLOSED
OAKEW077	7/9/2001	0.9	-7.6	78	CLOSED
OAKEW078	7/2/2001	0.3	-18.5	99	
OAKEW079	7/2/2001	0.4	0	111	
OAKEW080	7/2/2001	0.5	-14.4	86	
OAKEW081	7/2/2001	0.4	-9.8	99	
OAKEW082	7/3/2001	0.2	-3.6	109	
OAKEW083	7/9/2001	1.4	-2.7	90	CLOSED
OAKEW088	7/9/2001	0.2	-7.6	79	CLOSED
OAKEW089	7/9/2001	0.2	-11.9	79	CLOSED
OAKEW090	7/2/2001	13.7	-6.8	95	CLOSED
OAKEW091	7/2/2001	0.4	-7.4	103	
OAKEW092	7/2/2001	0.9	-10.8	108	
OAKEW093	7/2/2001	0.5	-1.7	110	
OAKEW094	7/9/2001	1.5	-3.9	81	CLOSED
OAKEW095	7/5/2001	1.9	-1	92	CLOSED
OAKEW096	7/5/2001	2.2	-1.2	92	CLOSED
OAKEW097	7/5/2001	1.4	-2.2	90	CLOSED
OAKEW099	7/5/2001	1.8	-5.1	93	
OAKEW100	7/9/2001	1.2	-10.3	91	CLOSED
OAKEW101	7/9/2001	0.2	-12.3	108	CLOSED
OAKEW102	7/2/2001	0	-6.1	95	
OAKEW103	7/2/2001	1.3	-4.1	101	
OAKEW104	7/9/2001	0.7	-2.1	94	CLOSED
OAKEW105	7/9/2001	0.5	-3.9	82	CLOSED
OAKEW109	7/5/2001	2.1	0	95	CLOSED
OAKEW110	7/9/2001	0.3	-7.8	96	CLOSED
OAKEW111	7/9/2001	0.3	-2	92	CLOSED
OAKEW112	7/9/2001	0	-1.4	92	CLOSED
OAKEW113	7/9/2001	0.9	-1.7	78	CLOSED
OAKEW114	7/5/2001	0.5	0	87	CLOSED
OAKEW117	7/5/2001	2.7	-0.3	94	CLOSED
OAKEW118	7/5/2001	0.9	-0.8	95	CLOSED
OAKEW119	7/5/2001	1.2	-5.7	93	CLOSED
OAKEW121	7/5/2001	0.6	0	92	CLOSED
OAKEW123	7/5/2001	0.1	-0.5	89	CLOSED
OAKEW124	7/5/2001	1.2	-0.5	87	CLOSED

Orlando Gas Producers

Cell AK
July 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	7/5/2001	0	-0.5	91	CLOSED
OAKEW005	7/5/2001	1.3	-0.9	87	
OAKEW006	7/5/2001	1.2	-0.3	93	
OAKEW00A	7/9/2001	0.6	-2.4	94	CLOSED
OAKEW00B	7/2/2001	0	-28.4	112	
OAKEW00C	7/2/2001	0	-14	91	
OAKEW00D	7/2/2001	1	-47.8	111	
OAKEW00E	7/9/2001	0.6	-4.8	85	CLOSED
OAKEW00F	7/9/2001	0.5	-12.2	92	
OAKEW00G	7/5/2001	0.5	-1.3	89	
OAKEW012	7/9/2001	1.4	-3.4	94	CLOSED
OAKEW013	7/5/2001	0	-0.6	83	CLOSED
OAKEW017	7/9/2001	0.4	-2.9	77	CLOSED
OAKEW018	7/9/2001	2.2	-13.1	87	CLOSED
OAKEW019	7/9/2001	1.2	-3.4	94	CLOSED
OAKEW021	7/5/2001	0.3	-1.2	89	CLOSED
OAKEW025	7/9/2001	4.9	-5.2	105	CLOSED
OAKEW026	7/2/2001	1.2	-33.7	90	
OAKEW028	7/2/2001	1.5	-12.8	101	
OAKEW032	7/9/2001	1.4	-6.3	87	
OAKEW034	7/2/2001	0.1	-17.2	93	
OAKEW035	7/2/2001	0.7	-14.8	89	
OAKEW036	7/2/2001	6	-20.8	103	CLOSED
OAKEW037	7/2/2001	0.8	-11.1	87	
OAKEW038	7/9/2001	1.5	-3.6	87	CLOSED
OAKEW041	7/5/2001	1.2	-3.1	91	CLOSED
OAKEW042	7/9/2001	0.2	-6.3	77	
OAKEW043	7/2/2001	1.1	-6.7	86	
OAKEW044	7/2/2001	3.8	-13.1	99	CLOSED
OAKEW045	7/2/2001	0.1	-35.2	97	
OAKEW046	7/2/2001	0.3	-16.9	106	
OAKEW047	7/2/2001	0	-25.3	89	
OAKEW048	7/9/2001	1.3	-4.1	84	CLOSED
OAKEW051	7/5/2001	1.1	-3.3	97	CLOSED
OAKEW052	7/9/2001	1.5	-6.1	87	CLOSED
OAKEW053	7/2/2001	0	-22.9	103	
OAKEW054	7/2/2001	0.3	-9.2	115	
OAKEW055	7/2/2001	0	-10.9	107	
OAKEW056	7/2/2001	0.5	-8.2	103	
OAKEW057	7/2/2001	1.2	-12.4	86	
OAKEW058	7/9/2001	0.3	-5.6	90	CLOSED
OAKEW063	7/9/2001	0.5	-4.1	79	CLOSED
OAKEW064	7/2/2001	15.2	-7.1	95	CLOSED
OAKEW065	7/2/2001	0	-10.1	95	CLOSED
OAKEW066	7/2/2001	0	-28.3	112	
OAKEW067	7/2/2001	16.6	-11.3	94	CLOSED
OAKEW068	7/2/2001	0	-8.1	94	CLOSED
OAKEW069	7/2/2001	0.1	-6.9	111	

Orlando Gas Producers

Cell AK
August 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F.)	Comments
OAKEW003	8/7/2001	1.6	0	81	CLOSED
OAKEW005	8/7/2001	0.6	0	82	CLOSED
OAKEW006	8/7/2001	0	-0.4	81	CLOSED
OAKEW00A	8/8/2001	0.2	-0.1	94	
OAKEW00B	8/13/2001	0.3	-41.8	111	
OAKEW00C	8/13/2001	0.5	-24.3	100	
OAKEW00D	8/13/2001	0.3	-67.6	108	
OAKEW00E	8/8/2001	0.5	-1.5	96	
OAKEW00F	8/15/2001	1.2	-8.6	92	
OAKEW00G	8/8/2001	2.3	0	102	CLOSED
OAKEW012	8/8/2001	11.1	-56.9	94	CLOSED
OAKEW013	8/8/2001	0.7	-0.1	100	
OAKEW017	8/8/2001	0	0	98	CLOSED
OAKEW018	8/8/2001	0.9	-1.3	99	CLOSED
OAKEW019	8/8/2001	0	-0.4	97	
OAKEW021	8/8/2001	3.6	-0.1	94	CLOSED
OAKEW025	8/8/2001	0	0	100	CLOSED
OAKEW026	8/13/2001	0.4	-4.1	94	
OAKEW028	8/13/2001	1.4	-5.6	88	
OAKEW032	8/8/2001	0.1	-2.9	92	
OAKEW034	8/13/2001	0	-25.9	93	
OAKEW035	8/13/2001	1	-21	91	
OAKEW036	8/13/2001	4.4	-19.3	94	CLOSED
OAKEW037	8/13/2001	1.3	-15.7	115	
OAKEW038	8/8/2001	0	-0.4	97	CLOSED
OAKEW041	8/7/2001	0.5	-2.8	85	CLOSED
OAKEW042	8/8/2001	1.6	-6.1	100	CLOSED
OAKEW043	8/13/2001	0.6	-10.7	100	
OAKEW044	8/13/2001	0.5	-17.2	95	
OAKEW045	8/13/2001	0.4	-18.5	98	
OAKEW046	8/13/2001	0.1	-19.1	97	
OAKEW047	8/13/2001	0.1	-36.4	93	
OAKEW048	8/8/2001	1.2	-1.4	96	CLOSED
OAKEW051	8/7/2001	1.6	-3	92	CLOSED
OAKEW052	8/8/2001	0.7	-2.7	100	CLOSED
OAKEW053	8/13/2001	0.7	-33.2	103	
OAKEW054	8/13/2001	1.9	-14.3	128	CLOSED
OAKEW055	8/13/2001	0.7	-16.3	105	
OAKEW056	8/13/2001	0.3	-15.6	112	
OAKEW057	8/13/2001	1.6	-19.7	103	
OAKEW058	8/8/2001	2	-1.9	100	CLOSED
OAKEW063	8/8/2001	1.7	-0.8	98	CLOSED
OAKEW064	8/13/2001	1.2	-12.4	92	
OAKEW065	8/13/2001	0.4	-12.8	119	CLOSED
OAKEW066	8/13/2001	1.9	-15.6	100	CLOSED

Orlando Gas Producers

Cell AK
August 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW067	8/13/2001	10.1	0	98	CLOSED
OAKEW068	8/13/2001	13.5	-20.3	100	CLOSED
OAKEW069	8/13/2001	0.9	-13.8	110	
OAKEW070	8/8/2001	0.1	-2.2	101	CLOSED
OAKEW071	8/8/2001	0.8	0	101	CLOSED
OAKEW072	8/7/2001	1.2	-5.1	82	CLOSED
OAKEW075	8/7/2001	0.3	-0.8	82	CLOSED
OAKEW076	8/8/2001	0.6	-2.9	98	CLOSED
OAKEW077	8/8/2001	0.7	-2.5	101	CLOSED
OAKEW078	8/13/2001	0.6	-28.8	101	
OAKEW079	8/13/2001	0.7	-15.2	99	
OAKEW080	8/13/2001	0.3	-15	101	
OAKEW081	8/13/2001	0.6	-11.8	104	CLOSED
OAKEW082	8/13/2001	0.5	-7.5	106	
OAKEW083	8/8/2001	1.3	-0.7	100	CLOSED
OAKEW088	8/8/2001	0.5	-3.2	97	CLOSED
OAKEW089	8/8/2001	0.3	-6.3	98	CLOSED
OAKEW090	8/13/2001	1.3	-7.2	104	CLOSED
OAKEW091	8/13/2001	0.5	-12.1	101	
OAKEW092	8/13/2001	0.2	-15.3	107	
OAKEW093	8/13/2001	0.6	-13.1	101	
OAKEW094	8/8/2001	1	-1.5	100	CLOSED
OAKEW095	8/7/2001	1.7	-0.6	85	CLOSED
OAKEW096	8/7/2001	0.7	-0.7	84	CLOSED
OAKEW097	8/7/2001	1.8	-2.2	82	CLOSED
OAKEW099	8/7/2001	2.6	-3.9	85	CLOSED
OAKEW100	8/8/2001	0.5	-5	101	CLOSED
OAKEW101	8/8/2001	0	-6.8	109	
OAKEW102	8/13/2001	0.6	-11.1	99	
OAKEW103	8/13/2001	0	-3.6	99	CLOSED
OAKEW104	8/8/2001	0.2	-0.2	103	
OAKEW105	8/8/2001	0.6	-1.6	96	
OAKEW109	8/7/2001	2.5	-2.4	86	CLOSED
OAKEW110	8/8/2001	0.3	-3.4	98	CLOSED
OAKEW111	8/8/2001	1.1	0	98	CLOSED
OAKEW112	8/8/2001	0	-0.2	108	
OAKEW113	8/8/2001	0.1	0	94	CLOSED
OAKEW114	8/7/2001	0	0	83	CLOSED
OAKEW117	8/7/2001	1.2	0	90	CLOSED
OAKEW118	8/7/2001	0.4	-0.5	81	CLOSED
OAKEW119	8/13/2001	1.1	-4.2	96	CLOSED
OAKEW121	8/7/2001	0.1	0	80	CLOSED
OAKEW123	8/7/2001	0.8	0	81	CLOSED
OAKEW124	8/7/2001	0.2	-1.5	82	CLOSED

Orlando Gas Producers

Cell AK
September 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW003	9/27/2001	0	0	78	
OAKEW005	9/27/2001	0	0	80	CLOSED
OAKEW006	9/27/2001	0	-0.6	82	
OAKEW00A	9/27/2001	0	-1.4	98	
OAKEW00B	9/27/2001	4.5	0	112	CLOSED
OAKEW00C	9/27/2001	0	-26.8	128	
OAKEW00D	9/27/2001	2.8	-6.9	104	
OAKEW00E	9/27/2001	0	-7.3	76	
OAKEW00F	9/27/2001	0	-33.4	94	
OAKEW00G	9/27/2001	0	0	84	CLOSED
OAKEW012	9/27/2001	0	-2.6	94	
OAKEW013	9/27/2001	0	-3.3	80	
OAKEW017	9/27/2001	0	-0.9	92	
OAKEW018	9/27/2001	0	-2.2	74	
OAKEW019	9/27/2001	0	-2	92	
OAKEW021	9/27/2001	0	-3.8	90	
OAKEW025	9/27/2001	4.4	0	80	CLOSED
OAKEW026	9/27/2001	0	-2.6	94	
OAKEW028	9/27/2001	1.3	-6.9	89	
OAKEW032	9/27/2001	0	-6.8	92	
OAKEW034	9/27/2001	0	-36.3	96	
OAKEW035	9/27/2001	0	-44.6	96	
OAKEW036	9/27/2001	0	-33.2	84	
OAKEW037	9/27/2001	0	-25	116	
OAKEW038	9/27/2001	0	-3.4	86	
OAKEW041	9/27/2001	0	0	80	CLOSED
OAKEW042	9/27/2001	3.2	0	98	CLOSED
OAKEW043	9/27/2001	0	-14	108	
OAKEW044	9/27/2001	0	-25.8	88	
OAKEW045	9/27/2001	0	-24.6	100	
OAKEW046	9/27/2001	0	-20.8	110	
OAKEW047	9/27/2001	0	-38.8	94	
OAKEW048	9/27/2001	0	-4.4	84	
OAKEW051	9/27/2001	0	0	74	CLOSED
OAKEW052	9/27/2001	0	0	92	CLOSED
OAKEW053	9/27/2001	0	-49.8	110	
OAKEW054	9/27/2001	0	-16.8	116	
OAKEW055	9/27/2001	0	-16	104	
OAKEW056	9/27/2001	0	-17.4	118	
OAKEW057	9/27/2001	0	-21.8	104	
OAKEW058	9/27/2001	0	-3.7	84	
OAKEW063	9/27/2001	1.5	0	90	CLOSED
OAKEW064	9/27/2001	0	-5.8	100	
OAKEW065	9/27/2001	0	-13.6	94	
OAKEW066	9/27/2001	3.3	0	90	CLOSED
OAKEW067	9/27/2001	0	-11.1	90	
OAKEW068	9/27/2001	0	0	96	CLOSED
OAKEW069	9/27/2001	0	-10.9	112	

Orlando Gas Producers

Cell AK

September 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
OAKEW070	9/27/2001	0	-2.7	90	
OAKEW071	9/27/2001	0	-0.8	84	
OAKEW072	9/27/2001	0	0	78	CLOSED
OAKEW075	9/27/2001	0	0	78	CLOSED
OAKEW076	9/27/2001	0	-4.7	102	
OAKEW077	9/27/2001	0.8	-7.4	98	
OAKEW078	9/27/2001	2.6	0	100	CLOSED
OAKEW079	9/27/2001	3.9	0	112	CLOSED
OAKEW080	9/27/2001	6.5	0	96	CLOSED
OAKEW081	9/27/2001	3.8	0	90	CLOSED
OAKEW082	9/27/2001	4.4	0	90	CLOSED
OAKEW083	9/27/2001	0	-1.6	88	
OAKEW088	9/27/2001	0	-5.5	96	
OAKEW089	9/27/2001	0	-3.5	94	
OAKEW090	9/27/2001	0	-0.6	94	
OAKEW091	9/27/2001	4.6	0	116	CLOSED
OAKEW092	9/27/2001	0.9	-12.6	110	
OAKEW093	9/27/2001	4.8	0.1	106	CLOSED
OAKEW094	9/27/2001	0	0	94	CLOSED
OAKEW095	9/27/2001	0	0	80	CLOSED
OAKEW096	9/27/2001	0	0	80	CLOSED
OAKEW097	9/27/2001	1.4	0	80	CLOSED
OAKEW099	9/27/2001	0.9	0	82	CLOSED
OAKEW100	9/27/2001	1.6	0	96	CLOSED
OAKEW101	9/27/2001	0	-8.3	106	
OAKEW102	9/27/2001	4.7	0	96	CLOSED
OAKEW103	9/27/2001	0	-1.1	94	
OAKEW104	9/27/2001	0	0	96	CLOSED
OAKEW105	9/27/2001	0	-6.1	100	
OAKEW109	9/27/2001	0	0	84	
OAKEW110	9/27/2001	4.8	0	94	CLOSED
OAKEW111	9/27/2001	0	-0.2	96	
OAKEW112	9/27/2001	0	-1.2	100	
OAKEW113	9/27/2001	0	-1.1	102	
OAKEW114	9/27/2001	0	-3.7	80	
OAKEW117	9/27/2001	0	0	80	CLOSED
OAKEW118	9/27/2001	0	0	80	CLOSED
OAKEW119	9/27/2001	0	-1.2	102	
OAKEW121	9/27/2001	0	0	82	CLOSED
OAKEW123	9/27/2001	0	-10.2	92	
OAKEW124	9/27/2001	0	-8	88	

CELL 7B
(OCT. 2000 – SEPT. 2001)

Orlando Gas Producers

Cell 7B
October 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	10/13/2000	16.8	-69.3	74	Closed
O7BEW002	10/13/2000	0	-82.6	80	
O7BEW004	10/13/2000	0.8	6	83	
O7BEW004	10/14/2000	18.7	-103.5	93	CLOSED
O7BEW005	10/13/2000	0.3	-79.2	112	
O7BEW007	10/13/2000	13.5	-63.6	116	Closed
O7BEW008	10/13/2000	4	-61.8	95	Closed
O7BEW009	10/13/2000	0.2	-74.2	91	
O7BEW010	10/13/2000	15.9	-55.7	80	Closed
O7BEW011	10/13/2000	1	-81	81	
O7BEW012	10/13/2000	0.2	-81.4	92	
O7BEW013	10/13/2000	13.2	-36.6	82	Closed
O7BEW014	10/13/2000	0	-0.6	74	
O7BEW015	10/13/2000	0	-81.9	66	
O7BEW016	10/13/2000	0.6	-80.8	92	
O7BEW017	10/13/2000	17.8	-78.6	107	Closed
O7BEW018	10/13/2000	0.4	-27	83	
O7BEW019	10/13/2000	0.2	-19.2	82	
O7BEW020	10/13/2000	12.7	-18.8	78	Closed
O7BEW021	10/13/2000	0.5	-49.9	89	
O7BEW022	10/13/2000	0.8	-74.6	80	
O7BEW023	10/13/2000	0.2	-47	84	
O7BEW024	10/13/2000	0	-0.9	79	
O7BEW025	10/13/2000	1.2	-26.6	85	
O7BEW026	10/13/2000	0.2	-84.6	80	
O7BEW027	10/13/2000	15.7	-17.7	76	Closed
O7BEW028	10/13/2000	0	-85	76	
O7BEW029	10/13/2000	0.1	-76.7	69	
O7BEW030	10/13/2000	1.4	-67.8	93	
O7BEW031	10/13/2000	0.6	-78.8	113	
O7BEW032	10/13/2000	5.5	-41.4	109	Closed
O7BEW033	10/13/2000	1.5	-32.6	105	
O7BEW034	10/13/2000	1.5	-83.9	83	
O7BEW035	10/13/2000	0	-20.9	78	
O7BEW036	10/13/2000	0.1	-77.8	93	
O7BEW037	10/13/2000	0.4	-83.9	76	
O7BEW038	10/13/2000	0.3	-18.1	127	
O7BEW039	10/13/2000	4.8	-84.6	83	Closed
O7BEW040	10/13/2000	0.8	0	80	
O7BEW041	10/13/2000	0.4	-71	92	
O7BEW042	10/13/2000	1.9	-82.6	78	
O7BEW043	10/13/2000				Closed
O7BEW046	10/13/2000	12.7	-76.3	83	Closed
O7BEW047	10/13/2000	0.1	-79.9	77	
O7BEW048	10/13/2000	0.2	-79.5	86	
O7BEW049	10/13/2000	0.1	-61.3	81	

Orlando Gas Producers

Cell 7B
October 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW050	10/13/2000	0.9	-60.9	93	
O7BEW051	10/13/2000	0	-19.3	108	
O7BEW052	10/13/2000	1.6	-76	88	
O7BEW053	10/13/2000	0.4	-51.8	91	
O7BEW054	10/13/2000	4.5	-74.2	102	Closed
O7BEW055	10/13/2000	0.4	-46.8	79	Closed
O7BEW056	10/13/2000	17.6	-64.2	78	Closed
O7BEW057	10/12/2000	20.4	0	100	Closed
O7BEW058	10/12/2000	15.2	-1.7	84	Closed
O7BEW059	10/12/2000	8.7	-5.3	88	Closed
O7BEW060	10/12/2000	10.6	4.7	87	Closed
O7BEW061	10/12/2000	19.1	3.2	89	Closed
O7BEW062	10/12/2000	10.7	0	77	Closed
O7BEW063	10/12/2000	7.2	-0.5	79	Closed
O7BEW064	10/12/2000	20.3	-41.4	80	Closed
O7BEW065	10/12/2000	20	-0.2	79	
O7BEW065	10/14/2000	20.5	-2.4	93	CLOSED
O7BEW067	10/12/2000	17.6	-95	83	Closed
O7BEW068	10/12/2000	1	-29.5	79	
O7BEW069	10/12/2000	5	-79.4	100	Closed
O7BEW070	10/12/2000	0.9	-71.5	95	
O7BEW071	10/12/2000	1.9	-7.5	78	
O7BEW072	10/12/2000	20.3	0	77	Closed
O7BEW073	10/12/2000	19.9	-15.3	77	Closed
O7BEW074	10/12/2000	19.4	-4.3	74	Closed
O7BEW075	10/12/2000	19.9	-65.9	74	Closed
O7BEW076	10/12/2000	19.8	-46.4	75	Closed
O7BEW077	10/12/2000	1.8	-61.1	104	
O7BEW078	10/12/2000	18.7	-74.1	70	
O7BEW078	10/15/2000	0.3	-75	91	
O7BEW47A	10/12/2000	19.9	-78.8	80	Closed
O7BEW50A	10/12/2000	11	-54.1	76	Closed
O7BEW77A	10/12/2000	1.2	-74.8	102	

Orlando Gas Producers

Cell 7B

November 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	11/3/2000	3.2	-70	83	closed
O7BEW002	11/2/2000	3.4	-32.3	97	closed
O7BEW004	11/3/2000	1.6	-75.7	88	
O7BEW005	11/3/2000	1.3	-65.2	107	
O7BEW007	11/2/2000	2.5	-65.4	113	
O7BEW008	11/3/2000	2.6	-18.1	105	closed
O7BEW009	11/3/2000	1.2	-77.4	92	
O7BEW010	11/2/2000	20.1	0	88	closed
O7BEW011	11/3/2000	0.8	-76.8	87	closed
O7BEW012	11/3/2000	1.2	-76.8	96	
O7BEW013	11/9/2000	1.8	-54.3	87	
O7BEW014	11/9/2000	11.4	-36.6	68	closed
O7BEW016	11/3/2000	1.3	-77.2	95	
O7BEW017	11/2/2000	0.2	-14	90	
O7BEW018	11/9/2000	0.4	-30.1	87	
O7BEW019	11/9/2000	0.5	-30.7	86	
O7BEW020	11/9/2000	0.1	-63.6	80	
O7BEW021	11/2/2000	3.6	-54.1	96	closed
O7BEW022	11/3/2000	1.7	-53.5	87	
O7BEW023	11/2/2000	1.1	-60.4	88	
O7BEW024	11/2/2000	10.9	-59.8	91	closed
O7BEW025	11/3/2000	0.6	0	87	
O7BEW026	11/3/2000	5.5	-21	88	closed
O7BEW027	11/3/2000	7.8	-17.9	86	closed
O7BEW028	11/3/2000	1.4	-59.3	86	
O7BEW029	11/3/2000	11.7	-58.2	89	closed
O7BEW030	11/2/2000	1.6	-45.8	102	
O7BEW031	11/2/2000	1.4	-53.1	107	
O7BEW032	11/2/2000	2	-52.6	111	
O7BEW033	11/6/2000	1.4	-62.5	99	
O7BEW034	11/2/2000	0.5	-53.6	90	
O7BEW035	11/2/2000	0.8	-51.5	86	
O7BEW036	11/2/2000	0.7	-57.3	99	
O7BEW037	11/9/2000	2	-80.1	103	
O7BEW038	11/2/2000	1.8	-61.2	124	
O7BEW039	11/2/2000	1.8	-64	142	
O7BEW040	11/2/2000	1.1	-76	124	
O7BEW041	11/2/2000	1	-79.2	99	
O7BEW042	11/2/2000	0.4	-69.1	88	

O7BEW043	11/3/2000	1.7	-74.2	140	
O7BEW046	11/2/2000	18.3	0	92	closed
O7BEW047	11/2/2000	1.4	-72.6	107	
O7BEW048	11/2/2000	0.6	-74.5	91	
O7BEW049	11/2/2000	0.5	-75.1	90	
O7BEW050	11/2/2000	1.4	-58.5	100	
O7BEW051	11/2/2000	9	13.8	97	closed
O7BEW052	11/2/2000	1.5	-38.2	98	
O7BEW053	11/3/2000	1.8	-72	96	
O7BEW054	11/2/2000	1.9	-35	110	
O7BEW055	11/10/2000	21.8	-74.2	76	closed
O7BEW056	11/10/2000	21.5	-5.8	76	closed
O7BEW057	11/10/2000	14.9	-76	75	closed
O7BEW058	11/10/2000	13	-22.6	75	closed
O7BEW059	11/10/2000	9.1	-45.6	74	closed
O7BEW060	11/10/2000	13.2	-112.1	73	closed
O7BEW061	11/9/2000	18.3	-97.3	90	closed
O7BEW062	11/9/2000	18.9	-97.5	83	closed
O7BEW063	11/9/2000	17.6	-5.9	82	closed
O7BEW064	11/9/2000	19.8	-85.7	87	closed
O7BEW065	11/9/2000	18.9	-4.2	82	closed
O7BEW067	11/6/2000	16.5	-2.8	91	closed
O7BEW068	11/6/2000	1.7	-2	84	
O7BEW069	11/6/2000	13.9	0	94	closed
O7BEW070	11/6/2000	14.8	0	90	closed
O7BEW071	11/6/2000	14.8	0	86	closed
O7BEW072	11/6/2000	15.4	0	83	closed
O7BEW073	11/6/2000	21.5	-33.4	87	closed
O7BEW074	11/6/2000	21.7	0	87	closed
O7BEW075	11/6/2000	21.8	0	92	closed
O7BEW076	11/6/2000	19.4	-41.3	85	closed
O7BEW077	11/6/2000	1.5	-50.6	100	
O7BEW078	11/6/2000	20.9	-60.4	92	closed
O7BEW47A	11/2/2000	0.4	-20	97	
O7BEW50A	11/2/2000	6.8	-71.1	97	closed
O7BEW77A	11/6/2000	1.5	-51.2	100	

Orlando Gas Producers

Cell 7B

December 2000

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	12/15/2000	1.6	-72.6	83	
O7BEW002	12/14/2000	3	-37.2	92	
O7BEW004	12/15/2000	2.3	-70.3	86	CLOSED
O7BEW005	12/14/2000	0.6	-74.3	106	
O7BEW007	12/14/2000	1.2	-65.3	112	
O7BEW008	12/15/2000	4.1	-14.8	109	CLOSED
O7BEW009	12/15/2000	0.7	-12	109	
O7BEW010	12/14/2000	11.3	-69.5	90	CLOSED
O7BEW011	12/15/2000	1.7	-86.9	82	
O7BEW012	12/15/2000	1.3	-84.8	93	
O7BEW013	12/15/2000	3.7	-41.2	85	CLOSED
O7BEW014	12/15/2000	20	0	75	CLOSED
O7BEW015	12/15/2000	0.3	-12	89	
O7BEW016	12/15/2000	0	-88.6	93	
O7BEW017	12/15/2000	0	-57.7	84	
O7BEW018	12/15/2000	0.5	-40.1	85	
O7BEW019	12/15/2000	1.2	-55.6	84	
O7BEW020	12/15/2000	0.9	-71.5	78	
O7BEW021	12/15/2000	12	-56.1	93	CLOSED
O7BEW022	12/15/2000	1.7	-61.4	85	
O7BEW023	12/14/2000	0.2	-62.9	87	
O7BEW024	12/14/2000	11.9	-59.4	86	CLOSED
O7BEW025	12/15/2000	0.3	-41.1	87	
O7BEW026	12/15/2000	1	-12.4	94	
O7BEW027	12/15/2000	2.5	-75.1	87	CLOSED
O7BEW028	12/15/2000	4.4	-75.8	85	CLOSED
O7BEW029	12/14/2000	16.9	-69	89	CLOSED
O7BEW030	12/14/2000	1.2	-59	100	
O7BEW031	12/15/2000	1.4	-73.2	104	
O7BEW032	12/14/2000	1.4	-70.3	110	
O7BEW033	12/14/2000	1.7	-68.1	97	
O7BEW034	12/15/2000	1.9	-76.7	99	
O7BEW035	12/14/2000	5.8	-32.4	85	CLOSED
O7BEW036	12/14/2000	0.8	-68.1	97	
O7BEW037	12/14/2000	17.2	-74.6	81	CLOSED
O7BEW038	12/14/2000	0.1	-74	126	
O7BEW039	12/12/2000	0.9	-74	72	
O7BEW040	12/14/2000	0.7	-91.4	124	
O7BEW041	12/14/2000	1.2	-90.9	98	

O7BEW042	12/14/2000	1.4	-89	84	
O7BEW043	12/13/2000	14.3	0	85	CLOSED
O7BEW044	12/14/2000	1.4	-2.7	143	
O7BEW045	12/11/2000	1.7	-14.7	131	
O7BEW046	12/14/2000	8.9	-74.8	82	CLOSED
O7BEW047	12/14/2000	0.1	-72.1	80	CLOSED
O7BEW048	12/14/2000	1.4	-77.1	89	
O7BEW049	12/14/2000	1.1	-84.8	85	
O7BEW050	12/14/2000	3.2	-68.7	95	CLOSED
O7BEW051	12/14/2000	0.8	-52.1	103	
O7BEW052	12/14/2000	1.9	-38.1	95	
O7BEW053	12/15/2000	0.7	-75.3	85	
O7BEW054	12/14/2000	1.4	-33	109	
O7BEW055	12/14/2000	15.2	-45.9	94	CLOSED
O7BEW056	12/14/2000	20.4	-20.7	94	CLOSED
O7BEW057	12/15/2000	19.2	-75.6	76	CLOSED
O7BEW058	12/15/2000	13.3	-7.3	74	CLOSED
O7BEW059	12/15/2000	15.6	-7.3	77	CLOSED
O7BEW060	12/15/2000	14.9	-7.4	72	CLOSED
O7BEW061	12/15/2000	18.2	-8.2	91	CLOSED
O7BEW062	12/15/2000	18.5	-7.5	84	CLOSED
O7BEW063	12/15/2000	16.8	-7.7	81	CLOSED
O7BEW064	12/15/2000	19	-75.3	88	CLOSED
O7BEW065	12/15/2000	17.1	-7.8	83	CLOSED
O7BEW067	12/15/2000	15.1	-5.6	90	CLOSED
O7BEW068	12/15/2000	2.6	-7.3	84	CLOSED
O7BEW069	12/15/2000	15.6	-8.2	93	CLOSED
O7BEW070	12/15/2000	15.8	-5.8	89	CLOSED
O7BEW071	12/15/2000	14.7	-5.9	87	CLOSED
O7BEW072	12/15/2000	16.1	-5.9	84	CLOSED
O7BEW073	12/15/2000	18.6	-75	87	CLOSED
O7BEW074	12/15/2000	18.7	-74.8	88	CLOSED
O7BEW075	12/15/2000	19	-74.5	84	CLOSED
O7BEW076	12/15/2000	19.4	-5.9	84	CLOSED
O7BEW077	12/15/2000	0.8	-66.3	101	
O7BEW078	12/15/2000	19.4	-63.4	93	CLOSED
O7BEW47A	12/14/2000	0.9	-44.7	84	
O7BEW50A	12/14/2000	10.3	-77.8	94	CLOSED
O7BEW77A	12/15/2000	2	-61.3	100	

Orlando Gas Producers

Cell 7B
January 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	1/19/01	2.2	-21.5	82	
O7BEW002	1/19/01	3.4	-82	93	;closed
O7BEW004	1/19/01	10.2	-15.6	85	;closed
O7BEW005	1/19/01	2.7	-81.6	106	
O7BEW007	1/19/01	2.6	-81.7	113	
O7BEW008	1/19/01	20.9	-68.4	110	;closed
O7BEW009	1/19/01	5.5	-98.8	93	;closed
O7BEW010	1/19/01	21	-65.6	91	;closed
O7BEW011	1/19/01	2.3	-28	83	
O7BEW012	1/19/01	1.8	-101.2	91	
O7BEW013	1/19/01	9.7	-16.7	84	;closed
O7BEW014	1/19/01	21.2	-71	76	;closed
O7BEW015	1/11/01	1.1	-1.7	95	
O7BEW016	1/19/01	1.4	-80.9	92	
O7BEW017	1/19/01	2.3	-106.5	83	
O7BEW018	1/19/01	2.5	-83.9	84	
O7BEW019	1/19/01	1.5	-70.8	83	
O7BEW020	1/19/01	1	-65.4	77	
O7BEW021	1/19/01	21.3	-66.2	94	;closed
O7BEW022	1/19/01	4.7	-96.2	84	;closed
O7BEW023	1/19/01	2.5	-52.2	86	
O7BEW024	1/19/01	21	-64.9	87	;closed
O7BEW025	1/19/01	1	-59.8	88	
O7BEW026	1/19/01	0.2	-59.8	93	
O7BEW027	1/19/01	2.7	-85.3	88	
O7BEW028	1/19/01	1	-86.6	84	
O7BEW029	1/19/01	21.2	-68	90	;closed
O7BEW030	1/19/01	3.3	-111.2	101	
O7BEW031	1/19/01	1.3	-86.9	103	
O7BEW032	1/29/01	1.8	-110.3	107	
O7BEW033	1/19/01	0.9	-93.4	95	
O7BEW034	1/19/01	1.6	-93.6	99	
O7BEW035	1/19/01	0.5	-89.2	84	
O7BEW036	1/19/01	0.5	-59.7	96	
O7BEW037	1/19/01	21.2	-68	82	;closed
O7BEW038	1/4/01	1.7	-63.8	149	
O7BEW038	1/9/01	2.2	-21.5	125	
O7BEW039	1/29/01	3.4	-141.1	133	;closed
O7BEW040	1/19/01	2.1	-112.8	119	
O7BEW041	1/19/01	1.3	-87.2	99	
O7BEW042	1/19/01	1.3	-87.2	84	
O7BEW043	1/4/01	1.3	-78.6	142	
O7BEW043	1/9/01	20.7	-76.2	129	;closed
O7BEW044	1/3/01	1	-1.2	141	
O7BEW044	1/5/01	1.8	-2.2	148	
O7BEW044	1/24/01	0.1	-4.5	117	
O7BEW045	1/29/01	2.7	-40.6	113	
O7BEW046	1/9/01	20.8	-52.3	58	;closed

Orlando Gas Producers

Cell 7B

January 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW047	1/19/01	21.1	-66.3	84	;closed
O7BEW048	1/30/01	2.3	-116.2	86	
O7BEW049	1/19/01	2.8	-29.9	84	
O7BEW050	1/19/01	1.6	-30.5	96	
O7BEW051	1/19/01	1.6	-31.3	102	
O7BEW052	1/19/01	2.3	-21.6	95	
O7BEW053	1/19/01	0.2	-65.7	84	
O7BEW054	1/19/01	8.9	-61.7	110	;closed
O7BEW055	1/19/01	20	-11	95	;closed
O7BEW056	1/19/01	19.5	-8.1	77	;closed
O7BEW057	1/19/01	6.6	-9.4	95	;closed
O7BEW058	1/19/01	3.4	-78.1	73	;closed
O7BEW059	1/19/01	19.9	-66.7	75	;closed
O7BEW060	1/19/01	19.4	-5.7	71	;closed
O7BEW061	1/19/01	19.9	-29	90	;closed
O7BEW062	1/19/01	18.5	-28.2	84	;closed
O7BEW063	1/19/01	5.8	-31.1	81	;closed
O7BEW064	1/19/01	17.3	-41.9	89	;closed
O7BEW065	1/19/01	6.5	-53.9	83	;closed
O7BEW067	1/19/01	21.4	-64.5	91	;closed
O7BEW068	1/19/01	21.1	-66.5	83	;closed
O7BEW069	1/19/01	21.3	-61.9	95	;closed
O7BEW070	1/19/01	21.4	-66.9	88	;closed
O7BEW071	1/19/01	21.3	-65.5	88	;closed
O7BEW072	1/19/01	21.2	-67.5	85	;closed
O7BEW073	1/19/01	21.3	-66.7	85	;closed
O7BEW074	1/19/01	21.2	-68.7	89	;closed
O7BEW075	1/19/01	14.9	-67	88	;closed
O7BEW076	1/19/01	21.2	-65.8	85	;closed
O7BEW077	1/19/01	1.3	-67.3	102	
O7BEW078	1/19/01	21.3	-65.5	94	;closed
O7BEW47A	1/19/01	2	-84.1	85	
O7BEW50A	1/19/01	0.7	-57.9	95	
O7BEW77A	1/19/01	0.8	-64.4	101	

Orlando Gas Producers

Cell 7B
February 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	2/12/01	2.8	-95.1	81	CLOSED
O7BEW002	2/12/01	1.7	-33.4	86	
O7BEW004	2/12/01	5.8	-40.9	85	CLOSED
O7BEW005	2/12/01	4.2	-86.4	103	CLOSED
O7BEW007	2/12/01	2.6	-72.2	111	
O7BEW008	2/8/01	15.7	-72.1	111	CLOSED
O7BEW009	2/8/01	6.4	-78.5	90	CLOSED
O7BEW010	2/8/01	18.6	-70.3	90	CLOSED
O7BEW011	2/12/01	2.8	-105.8	82	
O7BEW012	2/12/01	0.9	-26.2	97	
O7BEW013	2/8/01	5.2	-58	81	CLOSED
O7BEW014	2/8/01	18.5	-69.7	77	CLOSED
O7BEW015	2/8/01	0.8	-65.9	92	
O7BEW016	2/12/01	2.6	-84.3	89	
O7BEW017	2/12/01	2	-27.9	80	
O7BEW018	2/12/01	2.7	-55.8	81	
O7BEW019	2/12/01	2	-54.7	79	
O7BEW020	2/12/01	1.7	-30.4	73	
O7BEW021	2/12/01	3.7	-45.9	95	CLOSED
O7BEW022	2/8/01	4	-78.7	78	CLOSED
O7BEW023	2/13/01	2.2	-86.4	85	CLOSED
O7BEW024	2/12/01	17.1	-88.5	87	CLOSED
O7BEW025	2/12/01	1.7	-49.1	84	
O7BEW026	2/12/01	5	-9.4	91	CLOSED
O7BEW027	2/12/01	14.2	-1.9	73	CLOSED
O7BEW028	2/12/01	3.6	-46.5	81	CLOSED
O7BEW029	2/8/01	20	-90.3	79	CLOSED
O7BEW030	2/13/01	2.5	-91	84	
O7BEW031	2/13/01	2.8	-38.8	70	
O7BEW032	2/12/01	1.9	-86.5	88	
O7BEW033	2/13/01	2.1	-33.5	89	
O7BEW034	2/13/01	1.8	-95.2	81	
O7BEW035	2/13/01	6.2	-3.8	74	CLOSED
O7BEW036	2/13/01	1.8	-92.6	92	
O7BEW037	2/13/01	18.9	-92.9	64	CLOSED
O7BEW038	2/13/01	2.4	-90.8	122	
O7BEW039	2/8/01	5.7	-89.5	140	CLOSED
O7BEW040	2/13/01	0.8	-82	122	
O7BEW041	2/13/01	1.6	-95.8	87	
O7BEW042	2/13/01	1.7	-95.2	77	
O7BEW043	2/13/01	21.2	0	63	CLOSED
O7BEW044	2/9/01	1.7	-4.6	135	
O7BEW044	2/13/01	1.5	-6.3	133	
O7BEW044	2/23/01	3.6	-8.5	138	
O7BEW045	2/9/01	2.5	-33.3	116	
O7BEW046	2/13/01	9.4	-91.6	65	CLOSED
O7BEW047	2/13/01	1.7	-92.9	63	

Orlando Gas Producers

Cell 7B
February 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW048	2/13/01	1.3	-93.8	86	
O7BEW049	2/13/01	1.4	-93.8	77	
O7BEW050	2/12/01	2.3	-61.2	98	
O7BEW051	2/13/01	4.1	-2.8	101	CLOSED
O7BEW052	2/13/01	2	-38.5	88	
O7BEW053	2/12/01	2.5	-108.8	81	
O7BEW054	2/12/01	8.9	0	93	CLOSED
O7BEW055	2/12/01	16.7	-86.4	91	CLOSED
O7BEW056	2/12/01	18.8	-15.9	88	CLOSED
O7BEW057	2/12/01	11.5	-75.4	86	CLOSED
O7BEW058	2/8/01	5.3	-68.6	77	CLOSED
O7BEW059	2/12/01	12.9	-48.1	77	CLOSED
O7BEW060	2/12/01	18.3	-28.4	85	CLOSED
O7BEW061	2/12/01	16.6	-30.4	80	CLOSED
O7BEW062	2/12/01	14.2	-56.6	85	CLOSED
O7BEW063	2/8/01	4	-64.4	82	CLOSED
O7BEW064	2/12/01	19.2	-57	90	CLOSED
O7BEW065	2/8/01	8.4	-59.3	82	CLOSED
O7BEW067	2/12/01	15.2	-72	81	CLOSED
O7BEW068	2/8/01	11.4	-61.8	80	CLOSED
O7BEW069	2/8/01	11.2	-60.9	95	CLOSED
O7BEW070	2/12/01	18.8	-54.5	82	CLOSED
O7BEW071	2/12/01	16.6	-58.4	89	CLOSED
O7BEW072	2/12/01	16.9	-57.4	82	CLOSED
O7BEW073	2/12/01	16.9	-49.9	85	CLOSED
O7BEW074	2/12/01	16.9	-40.4	89	CLOSED
O7BEW075	2/8/01	14	-79.2	88	CLOSED
O7BEW076	2/8/01	19.7	-46.1	75	CLOSED
O7BEW077	2/8/01	1.4	-87	104	
O7BEW078	2/8/01	20.1	-81.4	64	CLOSED
O7BEW47A	2/13/01	1.6	-92.3	81	
O7BEW50A	2/12/01	11.1	-74.8	93	CLOSED
O7BEW77A	2/8/01	1.3	-67.5	105	

Orlando Gas Producers

Cell 7B
March 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	3/6/01	1.5	-93.5	75	
O7BEW002	3/6/01	1.8	-39.6	85	
O7BEW004	3/6/01	7.6	-27.9	84	closed
O7BEW005	3/6/01	1.2	-62.4	99	
O7BEW007	3/6/01	1.8	-59	110	
O7BEW008	3/6/01	10.9	-36.7	110	closed
O7BEW009	3/6/01	8.2	0	91	closed
O7BEW010	3/6/01	14.7	-26.2	88	closed
O7BEW011	3/6/01	15	-56.9	80	closed
O7BEW012	3/6/01	2.1	-63.5	95	
O7BEW013	3/6/01	7.4	-92.3	80	
O7BEW013	3/10/01	3	-27.8	81	closed
O7BEW014	3/6/01	9.4	-8.9	75	closed
O7BEW015	3/6/01	1.5	-6.2	90	
O7BEW016	3/6/01	1.1	-63.1	88	
O7BEW017	3/6/01	7.1	-25.7	80	
O7BEW017	3/10/01	1.3	-78.3	80	
O7BEW018	3/6/01	17	-63.5	79	closed
O7BEW019	3/6/01	1.6	-59.7	76	
O7BEW020	3/6/01	3.5	-56.1	70	
O7BEW021	3/6/01	15.9	-27.8	94	closed
O7BEW022	3/6/01	8.3	-10.6	76	closed
O7BEW023	3/6/01	5.9	-2.8	80	closed
O7BEW024	3/6/01	14.9	-35.5	86	closed
O7BEW025	3/6/01	2.6	-59.2	80	
O7BEW026	3/6/01	4.4	-1.8	91	closed
O7BEW027	3/6/01	19.1	-33.4	71	closed
O7BEW028	3/6/01	1.5	-53.6	73	
O7BEW029	3/6/01	20	-23.3	75	closed
O7BEW030	3/6/01	0.9	-53.2	83	
O7BEW031	3/6/01	1.8	-52.8	72	
O7BEW032	3/6/01	2.3	-53	70	
O7BEW033	3/6/01	9.3	-27.1	85	closed
O7BEW034	3/6/01	7.8	-90.9	120	
O7BEW034	3/10/01	1.7	-62.4	86	
O7BEW035	3/6/01	20.3	-17.2	73	closed
O7BEW036	3/6/01	5.9	-51.6	92	closed
O7BEW037	3/6/01	18.7	0	60	closed
O7BEW038	3/6/01	0.8	-91.1	77	
O7BEW039	3/6/01	4.3	-4.9	135	closed
O7BEW040	3/6/01	7.6	-90.9	120	
O7BEW040	3/6/01	0.9	-90	120	
O7BEW041	3/6/01	8.2	0	85	closed
O7BEW042	3/6/01	0.8	-1	59	
O7BEW043	3/6/01	5.8	-51.6	115	closed
O7BEW044	3/6/01	2.1	-2.9	125	
O7BEW045	3/6/01	1.9	-30.7	120	
O7BEW046	3/6/01	12.4	-88.1	56	closed

Orlando Gas Producers

Cell 7B
March 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW047	3/6/01	12.1	-89.1	56	closed
O7BEW048	3/6/01	11.7	-51.7	90	closed
O7BEW049	3/6/01	2.7	-77.2	100	closed
O7BEW050	3/6/01	5.2	-51	95	closed
O7BEW051	3/6/01	2.2	-76	100	
O7BEW052	3/6/01	2.1	-74.8	100	
O7BEW053	3/6/01	2.9	-75.8	100	
O7BEW054	3/6/01	2.8	-74.8	100	
O7BEW055	3/6/01	8.7	-1.6	90	closed
O7BEW056	3/6/01	20.4	-19.3	89	closed
O7BEW057	3/6/01	20.1	-50.4	84	closed
O7BEW058	3/6/01	12.7	-68.8	53	closed
O7BEW059	3/6/01	19.9	-32.1	75	closed
O7BEW060	3/6/01	20.6	-82.9	82	closed
O7BEW061	3/6/01	20.6	-83.8	77	closed
O7BEW062	3/6/01	20.5	-33.6	69	closed
O7BEW063	3/6/01	2.7	-78	100	closed
O7BEW064	3/6/01	20.2	-85.1	89	closed
O7BEW065	3/6/01	20	-67	80	closed
O7BEW067	3/6/01	20.2	-86.6	75	closed
O7BEW068	3/6/01	18.4	-66	75	closed
O7BEW069	3/6/01	20.3	-28.4	90	closed
O7BEW070	3/6/01	18.6	-46.8	80	closed
O7BEW071	3/6/01	20	-31	85	closed
O7BEW072	3/6/01	20.2	-74.8	81	closed
O7BEW073	3/6/01	18.3	-89.4	83	closed
O7BEW074	3/6/01	16.8	-90.9	85	closed
O7BEW075	3/6/01	16.7	-76.3	80	closed
O7BEW076	3/6/01	16.3	-44.5	74	closed
O7BEW077	3/6/01	1.6	-84.3	89	
O7BEW078	3/6/01	16.2	-46.6	63	closed
O7BEW47A	3/6/01	0.8	-1	59	
O7BEW50A	3/6/01	19.6	-66.4	90	closed
O7BEW77A	3/6/01	3.1	-76	100	

Orlando Gas Producers

Cell 7B
April 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	4/16/01	1.4	-0.6	87	
O7BEW002	4/5/01	1.6	-19.3	99	closed
O7BEW004	4/5/01	0.5	-69.8	81	
O7BEW005	4/5/01	0.2	-41.7	102	
O7BEW007	4/5/01	1	-58.7	92	
O7BEW008	4/5/01	0.3	-6.3	109	
O7BEW009	4/5/01	0	-11.4	94	
O7BEW010	4/5/01	10.5	-11.2	82	closed
O7BEW011	4/5/01	0.7	-75.2	83	
O7BEW012	4/5/01	0.7	-71.9	92	
O7BEW013	4/5/01	0	-1.4	96	
O7BEW014	4/5/01	0	-1	84	
O7BEW015	4/5/01	0.4	-74.7	71	
O7BEW016	4/5/01	0.4	-48.6	90	
O7BEW017	4/5/01	0.1	-0.9	82	
O7BEW018	4/5/01	0.3	-40.6	80	
O7BEW019	4/5/01	0.2	-19.7	78	
O7BEW020	4/5/01	0.4	-55.5	75	
O7BEW021	4/5/01	6.8	-37.9	88	closed
O7BEW022	4/5/01	1.2	-58.2	81	
O7BEW023	4/5/01	1.1	-71	84	
O7BEW024	4/5/01	17.6	-72.8	85	closed
O7BEW025	4/5/01	0.1	-35.7	84	
O7BEW026	4/5/01	0.3	-8.7	92	
O7BEW027	4/5/01	8	-3.2	85	closed
O7BEW028	4/5/01	0.3	-75	83	
O7BEW029	4/5/01	10.1	-68.3	81	closed
O7BEW030	4/5/01	0.2	-51.1	116	
O7BEW031	4/5/01	1	-56.2	84	
O7BEW032	4/5/01	1.3	-52	103	
O7BEW033	4/5/01	1	-64.6	92	
O7BEW034	4/12/01	1.1	-65.9	87	
O7BEW035	4/9/01	1.3	-17.2	86	
O7BEW036	4/9/01	1.2	-71.6	91	
O7BEW037	4/12/01	19.4	0	99	closed
O7BEW038	4/9/01	1	-74.8	124	
O7BEW039	4/17/01	1.1	-23.6	141	
O7BEW040	4/9/01	1.1	-81.9	123	
O7BEW041	4/12/01	0	-50	91	

Orlando Gas Producers

Cell 7B
April 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW042	4/9/01	0.9	-40.6	83	
O7BEW043	4/9/01	1.4	-73.5	125	
O7BEW044	4/9/01	0.7	-31.7	116	
O7BEW045	4/9/01	1.7	-6.9	132	
O7BEW046	4/9/01	0.8	-71.8	97	
O7BEW047	4/9/01	1.2	-71.5	98	
O7BEW048	4/12/01	0.1	-60.8	94	
O7BEW049	4/9/01	0.6	-28	85	
O7BEW050	4/5/01	0.3	-58.1	92	
O7BEW051	4/9/01	0.6	-18.5	129	
O7BEW052	4/12/01	1.6	-45.7	89	
O7BEW053	4/5/01	0.9	-70.6	84	
O7BEW054	4/5/01	0.9	-33	109	
O7BEW055	4/5/01	17.2	-1.5	87	closed
O7BEW056	4/16/01	2	-8.7	87	closed
O7BEW057	4/18/01	1.7	-9.3	83	closed
O7BEW058	4/18/01	1.1	-5.2	52	closed
O7BEW059	4/18/01	3.3	-15	74	closed
O7BEW060	4/18/01	14.2	-1.8	81	closed
O7BEW061	4/18/01	14	-6	76	closed
O7BEW062	4/18/01	16.9	-5.1	68	closed
O7BEW063	4/16/01	7.9	-5.1	99	closed
O7BEW064	4/18/01	1.2	-4.6	88	closed
O7BEW065	4/18/01	4.2	-1.7	79	closed
O7BEW067	4/18/01	2.7	-5.8	76	closed
O7BEW068	4/18/01	9.5	-4	74	closed
O7BEW069	4/18/01	6.1	-7.2	89	closed
O7BEW070	4/18/01	1.3	-23.8	79	closed
O7BEW071	4/18/01	4.9	-11.1	84	closed
O7BEW072	4/18/01	18.5	-4.3	80	closed
O7BEW073	4/18/01	9.5	-0.8	82	closed
O7BEW074	4/2/01	3.3	-19.2	88	closed
O7BEW075	4/18/01	19.4	0	81	closed
O7BEW076	4/9/01	17	-74	75	closed
O7BEW077	4/12/01	1.2	-59.7	93	
O7BEW078	4/18/01	20.2	-19.1	86	closed
O7BEW47A	4/9/01	0.5	-74.7	92	
O7BEW50A	4/5/01	13.5	-62	83	closed
O7BEW77A	4/5/01	1.5	-63.1	102	

Orlando Gas Producers

Cell 7B
May 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	5/15/01	1.6	-94	87	
O7BEW002	5/17/01	0.3	-47.9	87	
O7BEW004	5/15/01	1.2	-86.9	86	
O7BEW005	5/15/01	1	-90.8	102	
O7BEW007	5/17/01	1.1	-49	111	
O7BEW008	5/10/01	1.8	-8.7	126	
O7BEW009	5/14/01	1.6	-32.3	95	
O7BEW010	5/17/01	4.9	-36	77	;closed
O7BEW011	5/14/01	1.5	-104.3	85	
O7BEW012	5/17/01	1.7	-72.2	92	
O7BEW013	5/15/01	1.9	-6.2	92	
O7BEW014	5/15/01	19.3	0	82	;closed
O7BEW015	5/17/01	0.3	-55.7	96	
O7BEW016	5/17/01	0.6	-68	89	
O7BEW017	5/17/01	1.2	-46.5	88	
O7BEW018	5/15/01	1.9	-50.3	80	
O7BEW019	5/15/01	2.1	-26.4	82	
O7BEW020	5/15/01	0.7	-61	77	
O7BEW021	5/15/01	16.1	-4.9	90	;closed
O7BEW022	5/14/01	1.4	-57.6	87	
O7BEW023	5/15/01	1.9	-86.1	89	
O7BEW024	5/15/01	20.6	-99.9	81	;closed
O7BEW025	5/14/01	1.7	-32.3	87	
O7BEW026	5/14/01	1.6	-15.4	95	
O7BEW027	5/14/01	12	-0.5	88	;closed
O7BEW028	5/14/01	18	-29.7	85	;closed
O7BEW029	5/14/01	21.1	0	92	;closed
O7BEW030	5/15/01	1.8	-50.2	85	
O7BEW031	5/15/01	0.9	-60.4	80	
O7BEW032	5/15/01	1.7	-67.1	104	
O7BEW033	5/15/01	1.4	-84.6	93	
O7BEW034	5/17/01	1.2	-67.3	85	
O7BEW035	5/15/01	1	-45.8	86	
O7BEW036	5/15/01	7.3	-62.9	97	;closed
O7BEW037	5/15/01	0.7	-96.5	87	
O7BEW038	5/9/01	1.8	-73.4	119	
O7BEW039	5/7/01	1.4	-17.9	129	
O7BEW040	5/9/01	1.8	-92	82	
O7BEW041	5/17/01	1.6	-47.7	89	

Orlando Gas Producers

Cell 7B
May 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW042	5/17/01	5.3	-32.6	83	;closed
O7BEW043	5/9/01	20	-67.7	80	;closed
O7BEW044	5/9/01	1.7	-9.3	125	
O7BEW045	5/9/01	2	-51.9	109	
O7BEW046	5/9/01	14.8	-102.6	82	;closed
O7BEW047	5/9/01	10.9	-98.9	80	;closed
O7BEW048	5/10/01	7.1	-84.8	94	;closed
O7BEW049	5/17/01	0.4	-71.2	80	
O7BEW050	5/17/01	0.3	-49.9	94	
O7BEW051	5/10/01	1.2	-22.5	108	
O7BEW052	5/2/01	1.4	-60.7	90	
O7BEW053	5/15/01	0.9	-91	93	
O7BEW054	5/15/01	1.2	-67	108	
O7BEW055	5/15/01	8.7	-0.1	88	;closed
O7BEW056	5/15/01	2	-29.7	92	;closed
O7BEW057	5/15/01	20.9	-64.6	104	;closed
O7BEW058	5/15/01	1.8	-2.7	98	
O7BEW059	5/15/01	0.8	-2.8	84	
O7BEW060	5/15/01	2	-2.4	95	;closed
O7BEW061	5/15/01	2.3	-2.4	95	;closed
O7BEW062	5/14/01	10.9	-2	97	;closed
O7BEW063	5/14/01	13.2	-2.3	83	;closed
O7BEW064	5/14/01	13.4	-2.4	98	;closed
O7BEW065	5/14/01	20.9	-99.2	96	;closed
O7BEW067	5/14/01	11.2	-5.1	95	;closed
O7BEW068	5/14/01	3.8	-7.5	90	;closed
O7BEW069	5/14/01	1.9	-5.4	94	
O7BEW070	5/14/01	5.2	-3.4	94	;closed
O7BEW071	5/14/01	2.9	-3.2	88	;closed
O7BEW072	5/14/01	17.7	-6.8	88	;closed
O7BEW073	5/14/01	21	-23.3	94	;closed
O7BEW074	5/9/01	1.7	-105	89	
O7BEW075	5/14/01	13.2	-66	89	;closed
O7BEW076	5/9/01	19	-98	76	;closed
O7BEW077	5/9/01	1.2	-59	101	
O7BEW078	5/9/01	12.9	-87	95	;closed
O7BEW47A	5/9/01	0.8	-101.2	92	
O7BEW50A	5/9/01	2.1	-45	96	
O7BEW077A	5/9/01	1.6	-96	100	

Orlando Gas Producers

Cell 7B
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	6/6/01	1.1	-63.1	89	
O7BEW002	6/6/01	0.9	-17.7	94	
O7BEW004	6/6/01	1	-60.1	87	
O7BEW005	6/6/01	1	-64.5	103	
O7BEW007	6/6/01	0.3	-62.1	97	
O7BEW008	6/6/01	0.9	-3.2	119	
O7BEW009	6/6/01	0.5	-18.9	95	
O7BEW010	6/6/01	7.5	-35.5	97	CLOSED
O7BEW011	6/6/01	0.4	-65.5	89	
O7BEW012	6/6/01	1.4	-52.8	95	
O7BEW013	6/6/01	0.6	-21.7	90	
O7BEW014	6/6/01	1.4	-2.4	85	
O7BEW015	6/6/01	1.6	-84.8	80	
O7BEW016	6/6/01	1.4	-34	93	
O7BEW017	6/6/01	0.1	-71.3	91	
O7BEW018	6/6/01	1	-53.7	83	
O7BEW019	6/6/01	1.7	-39.1	82	
O7BEW020	6/5/01	1.6	-67.8	81	
O7BEW021	6/6/01	18.4	-21.9	95	CLOSED
O7BEW022	6/6/01	0.5	-43.8	88	
O7BEW023	6/4/01	1.3	-61	91	
O7BEW024	6/4/01	0.9	-62.2	91	
O7BEW025	6/6/01	0.2	-17.4	88	
O7BEW026	6/6/01	0.2	-7.9	95	
O7BEW027	6/6/01	0.5	-21.4	92	
O7BEW028	6/6/01	0.8	-61.4	88	
O7BEW029	6/6/01	18.7	-61	92	CLOSED
O7BEW030	6/4/01	0.4	-41.8	88	
O7BEW031	6/4/01	0.1	-46.2	93	
O7BEW032	6/4/01	0.1	-43.3	106	
O7BEW033	6/4/01	0.3	-43.4	99	
O7BEW034	6/4/01	0.1	-65	95	
O7BEW035	6/4/01	0.5	-16.6	89	
O7BEW036	6/4/01	0.1	-13.5	101	
O7BEW037	6/4/01	0.1	-65	86	
O7BEW038	6/6/01	1.6	-65.5	125	
O7BEW039	6/7/01	1.7	-20	122	
O7BEW040	6/6/01	0	-60.7	79	
O7BEW041	6/4/01	0.3	-63.8	96	

Orlando Gas Producers

Cell 7B
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW042	6/4/01	0.4	-40.2	87	
O7BEW043	6/6/01	0.1	-67	81	
O7BEW044	6/6/01	0.8	-4.3	107	
O7BEW045	6/6/01	1	-53.9	93	
O7BEW046	6/6/01	9.5	-61.3	89	CLOSED
O7BEW047	6/6/01	8.3	-58.5	86	CLOSED
O7BEW048	6/4/01	0.2	-63.7	93	
O7BEW049	6/4/01	0.5	-55.7	89	
O7BEW050	6/6/01	0.7	-41.6	98	
O7BEW051	6/4/01	0.7	-32.4	122	
O7BEW052	6/4/01	1.3	-33.6	94	
O7BEW053	6/6/01	0.2	-62.8	88	
O7BEW054	6/6/01	0.3	-60.3	97	
O7BEW055	6/6/01	10.6	-50.4	92	CLOSED
O7BEW056	6/6/01	19.5	-8.1	77	CLOSED
O7BEW057	6/6/01	20	-9.4	95	CLOSED
O7BEW058	6/6/01	1.6	-78.1	73	
O7BEW059	6/6/01	1.3	-66.7	75	
O7BEW060	6/6/01	19.4	-5.7	71	CLOSED
O7BEW061	6/6/01	19.9	-29	90	CLOSED
O7BEW062	6/6/01	18.5	-28.2	84	CLOSED
O7BEW063	6/6/01	5.8	-31.1	81	CLOSED
O7BEW064	6/6/01	17.3	-41.9	89	CLOSED
O7BEW065	6/6/01	6.5	-53.9	83	CLOSED
O7BEW067	6/7/01	0.8	-0.6	93	
O7BEW068	6/7/01	4.5	-0.2	88	CLOSED
O7BEW069	6/7/01	1.3	-0.3	96	
O7BEW070	6/7/01	1.4	-0.2	96	
O7BEW071	6/7/01	0.8	-0.1	92	
O7BEW072	6/7/01	0.9	-2.5	91	
O7BEW073	6/7/01	4.2	-15.9	98	CLOSED
O7BEW074	6/7/01	0.3	-21.3	94	
O7BEW075	6/7/01	19.3	-2.8	100	CLOSED
O7BEW076	6/7/01	19.6	-57.8	99	CLOSED
O7BEW077	6/7/01	0.5	-51.1	102	
O7BEW078	6/7/01	19.8	-60.3	101	CLOSED
O7BEW47A	6/6/01	0.2	-64.4	94	
O7BEW50A	6/6/01	0.3	-53.8	101	
O7BEW77A	6/7/01	0.6	-51.4	102	

Orlando Gas Producers

Cell 7B
July 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F.)	Comments
O7BEW001	7/9/2001	1.2	-7.6	93	
O7BEW002	7/3/2001	0.2	-16.5	93	
O7BEW004	7/9/2001	1.9	-42.3	89	
O7BEW005	7/3/2001	1	-66.2	102	
O7BEW007	7/3/2001	0.5	-56.2	95	
O7BEW008	7/9/2001	0.8	-0.5	114	
O7BEW009	7/9/2001	0.9	-30.4	94	
O7BEW010	7/3/2001	8.3	-4.8	98	CLOSED
O7BEW011	7/9/2001	1.1	-59.4	89	
O7BEW012	7/3/2001	1.2	-55.9	94	
O7BEW013	7/9/2001	4.6	-3	93	CLOSED
O7BEW014	7/9/2001	18.5	-0.1	85	CLOSED
O7BEW015	7/9/2001	1.3	-58.6	79	
O7BEW016	7/3/2001	1.2	-36.5	92	
O7BEW017	7/3/2001	0.1	-78.5	90	
O7BEW018	7/9/2001	0.5	-8	84	
O7BEW019	7/9/2001	0.3	-10	85	
O7BEW020	7/9/2001	0.4	-29.9	82	
O7BEW021	7/9/2001	6.1	-20.6	94	CLOSED
O7BEW022	7/9/2001	1.2	-43.5	86	
O7BEW023	7/3/2001	0.5	-91.6	92	
O7BEW024	7/3/2001	1.4	-22.8	90	
O7BEW025	7/9/2001	0.3	-25.8	87	
O7BEW026	7/9/2001	7.6	-15.9	94	CLOSED
O7BEW027	7/3/2001	1.3	-68.5	91	
O7BEW028	7/3/2001	1.2	-0.4	86	
O7BEW029	7/5/2001	15.2	-3.1	91	CLOSED
O7BEW030	7/3/2001	1.9	-74.8	92	
O7BEW031	7/3/2001	1.6	-72.6	105	
O7BEW032	7/3/2001	1.3	-76.8	102	
O7BEW033	7/3/2001	1.9	-17.2	95	
O7BEW034	7/3/2001	1.3	-67.6	95	
O7BEW035	7/9/2001	8.4	-42.2	90	CLOSED
O7BEW036	7/9/2001	1.3	-23.5	98	
O7BEW037	7/9/2001	15.8	-2.3	89	CLOSED
O7BEW038	7/6/2001	1.1	-85.4	122	
O7BEW039	7/2/2001	0.3	-11.7	130	
O7BEW040	7/6/2001	0.1	-63.4	105	
O7BEW041	7/2/2001	0.6	-36.2	96	
O7BEW042	7/2/2001	1.7	-37.6	88	
O7BEW043	7/3/2001	13.5	-68.3	91	CLOSED
O7BEW044	7/6/2001	1.3	-9.3	118	
O7BEW045	7/6/2001	0.5	-88.5	98	
O7BEW046	7/9/2001	8.8	-30	85	CLOSED
O7BEW047	7/9/2001	8.7	-73.2	82	CLOSED
O7BEW048	7/9/2001	1.2	-90.4	93	
O7BEW049	7/2/2001	1.3	-49.5	88	
O7BEW050	7/2/2001	0.9	-46.5	99	
O7BEW051	7/9/2001	1.3	-37.6	119	
O7BEW052	7/9/2001	1.1	-48.8	96	
O7BEW053	7/2/2001	1.4	-50.3	88	
O7BEW054	7/2/2001	1	-3.1	98	
O7BEW055	7/2/2001	15.9	-2.2	90	CLOSED
O7BEW056	7/5/2001	2.6	-10	87	CLOSED
O7BEW057	7/10/2001	18.6	-2.3	86	CLOSED
O7BEW058	7/10/2001	18.3	-39.9	86	CLOSED
O7BEW059	7/10/2001	14.7	-55.5	82	CLOSED
O7BEW060	7/10/2001	9	-57.5	86	CLOSED
O7BEW061	7/10/2001	19.1	0	86	CLOSED
O7BEW062	7/10/2001	18.1	-61	86	CLOSED
O7BEW063	7/10/2001	13.6	0	86	CLOSED
O7BEW064	7/10/2001	17.1	-2.7	86	CLOSED
O7BEW065	7/10/2001	13.1	-6.7	83	CLOSED
O7BEW067	7/10/2001	20.2	-8.6	89	CLOSED
O7BEW068	7/10/2001	1.8	-10.6	84	
O7BEW069	7/10/2001	0.8	-19.8	98	
O7BEW070	7/10/2001	20.4	-13.8	86	CLOSED
O7BEW071	7/10/2001	1.4	-21	90	
O7BEW072	7/10/2001	18.4	-11.7	82	CLOSED
O7BEW073	7/10/2001	18.2	-20.2	83	CLOSED
O7BEW074	7/10/2001	0.9	-47.9	89	
O7BEW075	7/10/2001	19.4	-19.3	83	CLOSED
O7BEW076	7/10/2001	20.1	-62.5	85	CLOSED
O7BEW077	7/10/2001	1.5	-55.2	98	
O7BEW078	7/10/2001	19.4	0	82	CLOSED
O7BEW47A	7/9/2001	1.2	-89.7	93	
O7BEW50A	7/9/2001	0.5	-52.3	102	
O7BEW77A	7/10/2001	1.2	-58.3	98	

Orlando Gas Producers

Cell 7B
August 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
O7BEW001	8/3/2001	1.2	-6.2	93	
O7BEW002	8/8/2001	13.6	0	90	CLOSED
O7BEW004	8/3/2001	1	-2.2	88	
O7BEW005	8/14/2001	1.2	-87.4	101	
O7BEW007	8/8/2001	0.3	-3	107	
O7BEW008	8/15/2001	1.7	-13.2	108	
O7BEW009	8/3/2001	0.9	-29.1	94	
O7BEW010	8/8/2001	6.3	0	93	CLOSED
O7BEW011	8/3/2001	1.1	-57.4	89	
O7BEW012	8/8/2001	1.8	-72.1	94	
O7BEW013	8/3/2001	4.6	-2.9	93	CLOSED
O7BEW014	8/3/2001	18.9	0	85	CLOSED
O7BEW015	8/14/2001	1.4	-93	80	
O7BEW016	8/8/2001	1.7	-38.9	94	
O7BEW017	8/8/2001	1.5	-36.7	90	
O7BEW018	8/3/2001	0.5	-10	84	
O7BEW019	8/3/2001	1.3	-9.8	85	
O7BEW020	8/14/2001	0.3	-47.7	84	
O7BEW021	8/14/2001	19.2	-0.4	99	CLOSED
O7BEW022	8/3/2001	1.4	-41.6	86	
O7BEW023	8/14/2001	3.8	-17.4	89	CLOSED
O7BEW024	8/14/2001	4.7	-52.5	99	CLOSED
O7BEW025	8/3/2001	0.5	-24.3	87	
O7BEW026	8/15/2001	1.3	-8.5	96	
O7BEW027	8/15/2001	9.9	-81.8	101	CLOSED
O7BEW028	8/15/2001	1.9	-86.7	89	
O7BEW029	8/15/2001	10.3	-74.3	97	CLOSED
O7BEW030	8/15/2001	0.8	-37.8	90	
O7BEW031	8/15/2001	1.3	-52.5	91	
O7BEW032	8/15/2001	0.2	-48.6	106	
O7BEW033	8/15/2001	0.5	-6.3	96	
O7BEW034	8/14/2001	0.9	-83.9	94	
O7BEW035	8/14/2001	0.3	-17.9	90	
O7BEW036	8/14/2001	1	-14.9	99	
O7BEW037	8/14/2001	18.7	-86.9	94	CLOSED
O7BEW038	8/15/2001	0.3	-53.3	123	
O7BEW039	8/6/2001	0.9	-13.8	136	
O7BEW040	8/6/2001	0.4	-54.9	112	
O7BEW041	8/14/2001	0.7	-72	95	
O7BEW042	8/14/2001	0.3	-67.1	91	
O7BEW043	8/6/2001	1.8	-79.8	99	
O7BEW044	8/8/2001	0.7	-8.4	116	
O7BEW045	8/3/2001	1.8	-51.4	103	
O7BEW046	8/14/2001	15.2	-78.2	96	CLOSED
O7BEW047	8/14/2001	4.3	-50.4	94	CLOSED
O7BEW048	8/14/2001	0	-19.2	94	
O7BEW049	8/14/2001	1.3	-80	92	
O7BEW050	8/8/2001	1.3	-81.7	100	
O7BEW051	8/14/2001	0.7	-31.7	114	
O7BEW052	8/14/2001	1.2	-40	97	
O7BEW053	8/14/2001	0.9	-69	91	
O7BEW054	8/8/2001	1.5	-39.2	106	
O7BEW055	8/8/2001	11.1	-56.9	94	CLOSED
O7BEW056	8/8/2001	9.8	-0.4	98	CLOSED
O7BEW057	8/15/2001	18.5	-10.4	87	CLOSED
O7BEW058	8/15/2001	16.8	-4.7	89	CLOSED
O7BEW059	8/15/2001	16.1	-0.4	87	CLOSED
O7BEW060	8/15/2001	7.1	-72.1	87	CLOSED
O7BEW061	8/15/2001	19	-35.2	82	CLOSED
O7BEW062	8/15/2001	5.5	-1.3	87	CLOSED
O7BEW063	8/15/2001	14.4	-0.2	84	CLOSED
O7BEW064	8/15/2001	12	-4.6	84	CLOSED
O7BEW065	8/15/2001	17	-93.9	86	CLOSED
O7BEW067	8/15/2001	4.7	-5.2	86	CLOSED
O7BEW068	8/14/2001	0.6	-15.9	86	
O7BEW069	8/8/2001	0.9	-1.3	99	CLOSED
O7BEW070	8/15/2001	17.8	-24.9	87	CLOSED
O7BEW071	8/14/2001	0.9	-26.2	91	
O7BEW072	8/14/2001	2.5	-13.3	95	CLOSED
O7BEW073	8/14/2001	20.3	-28.9	90	CLOSED
O7BEW074	8/14/2001	0.7	-88.6	91	
O7BEW075	8/6/2001	18.1	-28.9	107	CLOSED
O7BEW076	8/6/2001	19.8	-3.3	101	CLOSED
O7BEW077	8/6/2001	0.7	-77	106	
O7BEW078	8/6/2001	19.6	-0.5	89	CLOSED
O7BEW47A	8/14/2001	1.7	-86.4	100	
O7BEW50A	8/8/2001	0.3	-38.4	98	
O7BEW77A	8/6/2001	0.1	-73.5	105	

Orlando Gas Producers

Cell 7B
September 2001

Well Code	Date	Oxygen (%)	Static Pressure (H ₂ O)	Temperature (deg. F.)	Comments
O7BEW001	9/11/2001	1.1	0	90	
O7BEW002	9/12/2001	0	-71.4	90	
O7BEW004	9/11/2001	0	-2.9	92	
O7BEW005	9/11/2001	1.6	-0.3	98	
O7BEW007	9/12/2001	0	-41.5	104	
O7BEW008	9/11/2001	1.7	0	92	
O7BEW009	9/19/2001	0.9	-11.6	94	
O7BEW010	9/11/2001	15.8	0	90	closed
O7BEW011	9/11/2001	13.4	0	88	closed
O7BEW012	9/11/2001	1.7	-29.8	96	
O7BEW013	9/11/2001	21.4	-11.8	84	closed
O7BEW014	9/11/2001	20.2	0	80	closed
O7BEW015	9/12/2001	0	-77.6	90	
O7BEW016	9/11/2001	7.9	0	98	closed
O7BEW017	9/18/2001	1.3	-3.8	91	
O7BEW018	9/11/2001	1.8	-58	86	
O7BEW019	9/11/2001	1.6	-62.1	84	
O7BEW020	9/11/2001	0.8	-66.8	82	
O7BEW021	9/11/2001	12.6	-0.8	94	closed
O7BEW022	9/11/2001	13.2	0	86	closed
O7BEW023	9/11/2001	0.1	-16.2	88	
O7BEW024	9/19/2001	8.4	-0.8	84	closed
O7BEW025	9/11/2001	1.2	0	90	
O7BEW026	9/11/2001	1.3	-0.4	94	
O7BEW027	9/11/2001	2.5	-0.2	96	
O7BEW028	9/11/2001	11.8	-0.2	90	closed
O7BEW029	9/11/2001	18.1	0	98	closed
O7BEW030	9/11/2001	1.5	-25.6	92	
O7BEW031	9/11/2001	1.6	-28.2	84	
O7BEW032	9/11/2001	2.5	-29.6	100	
O7BEW033	9/11/2001	1.7	-30.5	94	
O7BEW034	9/11/2001	13.9	0	96	closed
O7BEW035	9/11/2001	1.7	-27.7	94	
O7BEW036	9/11/2001	1.8	-30.1	94	
O7BEW037	9/11/2001	1.7	-96.1	93	
O7BEW038	9/12/2001	0	-106.3	120	
O7BEW039	9/19/2001	0.5	-11.8	126	
O7BEW040	9/12/2001	0	-111.5	78	
O7BEW041	9/18/2001	0.5	-28.5	96	
O7BEW042	9/11/2001	1.6	-53.7	90	
O7BEW043	9/12/2001	1.9	-0.2	78	
O7BEW044	9/12/2001	0.5	-42.2	88	
O7BEW045	9/12/2001	0.9	-104	74	
O7BEW046	9/12/2001	14.5	0	78	closed
O7BEW047	9/12/2001	0.7	-97.8	90	
O7BEW048	9/12/2001	0	-60.6	92	
O7BEW049	9/12/2001	0	-72.6	90	
O7BEW050	9/12/2001	0	-36.2	100	
O7BEW051	9/12/2001	0	-72	112	
O7BEW052	9/12/2001	0.6	-30.2	92	
O7BEW053	9/19/2001	1.8	-16.2	95	
O7BEW054	9/11/2001	1.5	-27.2	102	
O7BEW055	9/11/2001	4.6	0	84	closed
O7BEW056	9/11/2001	21	0	86	closed
O7BEW057	9/11/2001	20.6	0	88	closed
O7BEW058	9/11/2001	21	0	88	closed
O7BEW059	9/11/2001	19.7	0	86	closed
O7BEW060	9/11/2001	18.3	0	82	closed
O7BEW061	9/11/2001	20.1	0	90	closed
O7BEW062	9/11/2001	21.2	0	92	closed
O7BEW063	9/11/2001	18.5	0	90	closed
O7BEW064	9/11/2001	21.3	-91.4	80	closed
O7BEW065	9/19/2001	15.6	-5.7	95	closed
O7BEW067	9/11/2001	21.2	-25	94	closed
O7BEW068	9/11/2001	8.2	-13.2	82	closed
O7BEW069	9/11/2001	12.1	-38.5	94	closed
O7BEW070	9/11/2001	21	-28.2	80	closed
O7BEW071	9/11/2001	12	-37.9	90	closed
O7BEW072	9/11/2001	19.6	-22	104	closed
O7BEW073	9/11/2001	0.2	-5	78	
O7BEW074	9/11/2001	20.7	-78.3	82	closed
O7BEW075	9/11/2001	20.7	-38.8	80	closed
O7BEW076	9/11/2001	20.6	-54	84	closed
O7BEW077	9/19/2001	1	-1	97	
O7BEW078	9/12/2001	16.5	0	128	closed
O7BEW47A	9/12/2001	1.8	-104.8	86	
O7BEW50A	9/11/2001	17.8	0	92	closed
O7BEW77A	9/19/2001	1.1	-12.9	111	

CELL 8
(OCT. 2000 – SEPT. 2001)

Orlando Gas Producers

Cell 8

January 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	1/4/01	1.6	-2	116	
CELL8002	1/3/01	1.7	-10.3	119	
CELL8003	1/25/01	1.7	-56.9	65	
CELL8004	1/5/01	11.1	-30.8	75	CLOSED
CELL8005	1/30/01	1.3	-11.4	120	
CELL8006	1/9/01	1.4	-3	119	
CELL800A	1/9/01	1.6	-30.7	123	
CELL800B	1/9/01	1.6	-35.1	95	
CELL800C	1/9/01	1.7	-33.7	96	
CELL8081	1/30/01	1.1	0.8	102	
CELL8082	1/9/01	1.1	-1.4	92	
CELL8083	1/29/01	2.2	-5.2	93	
CELL8084	1/26/01	0.2	-6	76	
CELL8085	1/30/01	0.2	-1	91	

NOTE: See Cell 7B data for Cell 8 wells prior to January 2001.

Orlando Gas Producers

Cell 8

February 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	2/9/01	0.8	-15.1	114	
CELL8002	2/9/01	1	-14.2	107	
CELL8003	2/9/01	0.7	-13.1	100	
CELL8004	2/22/01	11.2	-16.2	86	CLOSED
CELL8005	2/21/01	1.7	-13.1	121	
CELL8006	2/21/01	0.8	-81.9	110	
CELL800A	2/22/01	1.8	-56.9	120	
CELL800B	2/22/01	1.9	-53.4	111	
CELL800C	2/22/01	1.4	-54.5	97	
CELL8081	2/13/01	0.3	-6.1	104	
CELL8082	2/22/01	0.1	-0.4	63	
CELL8083	2/15/01	1.3	-9.3	95	
CELL8084	2/13/01	0.9	-6.2	96	
CELL8085	2/13/01	1.2	-1.9	91	

Orlando Gas Producers

Cell 8
March 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	3/23/01	1.9	-78.2	130	
CELL8002	3/22/01	3.1	-75.6	128	
CELL8004	3/28/01	11.6	0	95	CLOSED
CELL8005	3/23/01	0.4	-11.3	128	
CELL8006	3/28/01	0.9	-42.2	117	
CELL800A	3/28/01	1.8	-61	130	
CELL800B	3/27/01	1.8	-62.9	109	
CELL800C	3/27/01	1.4	-63.7	95	
CELL8081	3/20/01	2.4	-2.6	106	
CELL8082	3/26/01	3.5	-0.4	87	
CELL8083	3/20/01	0.6	-0.6	87	
CELL8084	3/28/01	1.4	-1	97	
CELL8085	3/28/01	0.6	-1.1	94	

Orlando Gas Producers

Cell 8
April 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	4/17/01	0.6	-53.4	94	
CELL8002	4/17/01	1.1	-53.2	95	
CELL8003	4/17/01	0.8	-49.2	94	
CELL8004	4/3/01	8.8	-46.4	94	CLOSED
CELL8005	4/17/01	0.7	-0.2	119	
CELL8006	4/3/01	0.3	-41.6	116	
CELL800A	4/3/01	1.8	-59.2	129	
CELL800B	4/17/01	0.4	-50.5	102	
CELL800C	4/17/01	0.3	-52.6	91	
CELL800D	4/3/01	1.2	-6.1	112	
CELL800E	4/4/01	1.8	-1	116	
CELL800F	4/4/01	1.3	-0.1	109	
CELL8081	4/3/01	13	0	106	CLOSED
CELL8082	4/3/01	1.1	-0.4	83	
CELL8083	4/9/01	0.9	-0.4	90	
CELL8084	4/11/01	0.5	-4.6	94	
CELL8085	4/3/01	0.7	-1.1	91	

Orlando Gas Producers

Cell 8
May 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	5/22/01	1.5	-91.2	107	
CELL8002	5/21/01	0.1	-25.2	111	
CELL8003	5/29/01	1.1	-88.6	98	
CELL8004	5/29/01	16.8	-57.1	82	CLOSED
CELL8005	5/31/01	1.5	-7.8	119	
CELL8006	5/21/01	0.1	-66.8	96	
CELL800A	5/21/01	1.5	-68.3	102	
CELL800B	5/21/01	1.5	-98.4	108	
CELL800C	5/21/01	0.7	-43	80	
CELL800D	5/2/01	0.9	-59.9	109	
CELL800E	5/2/01	0.3	-33.8	102	
CELL800F	5/2/01	1.7	-41.5	85	
CELL8081	5/22/01	1	-3.7	82	
CELL8082	5/8/01	1.3	-1.4	84	
CELL8083	5/22/01	0.1	-1	81	
CELL8084	5/22/01	1.7	-2.3	78	
CELL8085	5/8/01	2.6	-3.7	94	

Orlando Gas Producers

Cell 8
June 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	6/7/01	0.6	-57.6	95	
CELL8002	6/7/01	0.2	-50.5	91	
CELL8003	6/7/01	0.3	-58.6	88	
CELL8004	6/7/01	19.3	-12.4	80	CLOSED
CELL8005	6/7/01	0.1	-5.8	98	
CELL8006	6/7/01	1.6	-49.8	85	
CELL800A	6/7/01	0.2	-54.8	129	
CELL800B	6/7/01	0.2	-54.5	108	
CELL800C	6/7/01	1.3	-34.3	130	
CELL800D	6/7/01	1	-56.7	103	
CELL800E	6/7/01	0.4	-39.4	98	
CELL800F	6/7/01	0.5	-33.6	89	
CELL8081	6/7/01	3.3	-0.1	106	
CELL8082	6/7/01	0.6	-0.2	85	
CELL8083	6/7/01	1.6	-0.3	90	
CELL8084	6/7/01	1.1	-0.6	94	
CELL8085	6/7/01	1.3	-1.5	94	
CELL8086	6/7/01	1.2	-0.1	77	
CELL8087	6/7/01	1	-0.8	78	
CELL8088	6/7/01	0.5	-0.1	78	

Orlando Gas Producers

Cell 8
July 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	7/2/2001	1.7	-51.2	104	
CELL8002	7/3/2001	1.6	-72.6	97	
CELL8003	7/2/2001	0.3	-48.9	90	
CELL8004	7/3/2001	1.9	-4.8	85	CLOSED
CELL8005	7/3/2001	1.9	-17.2	109	
CELL8006	7/3/2001	1.3	-67.6	90	
CELL800A	7/2/2001	1.4	-50.3	118	
CELL800B	7/2/2001	1.3	-48	114	
CELL800C	7/2/2001	3.6	-47.8	124	
CELL800D	7/3/2001	1.5	-66.2	120	
CELL800E	7/2/2001	1.1	-55.6	99	
CELL800F	7/9/2001	1	-55	91	
CELL8081	7/3/2001	1.2	-14.1	83	
CELL8082	7/3/2001	1.2	-7.7	87	
CELL8083	7/3/2001	0.4	-8.7	92	
CELL8084	7/3/2001	0.5	-8.5	95	
CELL8085	7/3/2001	0.5	-8.3	92	
CELL8086	7/5/2001	1.1	-2.5	88	
CELL8087	7/5/2001	0.3	-4.5	88	
CELL8088	7/3/2001	1.2	-0.4	86	

Orlando Gas Producers

Cell 8
August 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	8/3/2001	1.4	-47	98	
CELL8002	8/7/2001	1.7	-60.9	99	
CELL8003	8/7/2001	0.3	-17	117	
CELL8004	8/7/2001	12.3	-31.1	101	CLOSED
CELL8005	8/7/2001	1.6	-22.4	122	
CELL8006	8/8/2001	0.7	-81.6	106	
CELL800A	8/8/2001	1.5	-79	95	
CELL800B	8/8/2001	1.4	-81.4	94	
CELL800C	8/8/2001	1.6	-72.9	93	
CELL800D	8/6/2001	0.5	-28.3	118	
CELL800E	8/6/2001	0.2	-36.5	116	
CELL800F	8/14/2001	1.4	-38.7	86	
CELL8081	8/7/2001	1.4	-0.4	92	
CELL8082	8/7/2001	1.2	-8.9	93	
CELL8083	8/7/2001	1.7	-13.2	99	
CELL8084	8/7/2001	0.9	-14.4	100	
CELL8085	8/7/2001	0.6	-13.9	97	
CELL8086	8/7/2001	1.2	-7.2	92	
CELL8087	8/3/2001	0.2	-2.6	80	
CELL8088	8/3/2001	1	-0.3	91	

Orlando Gas Producers

Cell 8

September 2001

Well Code	Date	Oxygen (%)	Static Pressure ("H ₂ O)	Temperature (deg. F)	Comments
CELL8001	9/20/2001	1.3	-37.2	96	
CELL8002	9/20/2001	1.4	-28.9	103	
CELL8003	9/20/2001	2.4	-35.6	98	
CELL8004	9/20/2001	19.4	0	105	closed
CELL8005	9/20/2001	1.2	-23.7	120	
CELL8006	9/20/2001	1.3	-53	94	
CELL800A	9/19/2001	1.2	0	90	
CELL800B	9/19/2001	1.5	-3.5	137	
CELL800C	9/19/2001	1.5	-33.6	115	
CELL800D	9/19/2001	1.5	-26.9	117	
CELL800E	9/21/2001	0.9	-8.2	93	
CELL800F	9/19/2001	1.1	-12.9	111	
CELL8081	9/19/2001	0.9	0	86	
CELL8082	9/19/2001	0.1	-3.8	91	
CELL8083	9/19/2001	1	-1	97	
CELL8084	9/19/2001	0.6	-1.6	100	
CELL8085	9/19/2001	4.6	-5.7	95	closed
CELL8086	9/19/2001	1.5	-6.2	99	
CELL8087	9/19/2001	0.5	-11.8	82	
CELL8088	9/19/2001	1.1	-11.7	82	

Department of Environmental Protection - Central District
Email Message

Laisure, Debra

From: Laisure, Debra
Sent: Thursday, January 03, 2002 3:41 PM
To: Arif, Syed
Subject: RE: Orange County Landfill

Syed -

I contacted the engineer who is working on the response to my completeness review letter and he directed me to a document submitted to us on March 26, 2001. I have scanned the document and created 2 Adobe .pdf files out of it (I had to do it this way because some of the pages of the document were duplexed and the 2nd file picks of the back side of these pages). The files are large, so rather than attaching them to this email, I have copied them to the Tallahassee Darm_Common drive (Thl_ptt1). They are not under any subdirectory of that drive and are labeled Tier II Testing Document 1.pdf and Tier II Testing Document 2.pdf. I will also make a hard copy of the report and send it up to you, but at least this way you can look at it in the interim.

Deb

-----Original Message-----

From: Arif, Syed
Sent: Wednesday, January 02, 2002 1:34 PM
To: Laisure, Debra
Cc: Linero, Alvaro
Subject: Orange County Landfill

Debra,

In reviewing the application submitted by Orange County for PSD implications, I need information that the applicant states in the application was previously submitted to FDEP. The applicant has a table titled Landfill NMOC Emissions which is based on Tier II calculations and the footnote makes reference to Tier II test results being submitted previously to FDEP. I will need the test results in order to verify the table submitted with the application. If there are any questions, please call me at 850-921-9528 or SC 291-9528.

Syed



Rec'd
12-5-01
Alan
File

The Joint Venture

630 N. Wymore Road □ Suite 370 □ Maitland, Florida 32751 □ (407) 647-6623 FAX (407) 539-0575

May 17, 2001

149101.9E.PM

Mr. James N. Bradner, P.E.
Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767

Subject: FDEP Solid Waste Construction & Operation Permit
Application Nos. SC48-0128169-009 and SO48-0128169-010
Orange County Landfill Southern Expansion Site, Cells 9-12
Orange County Solid Waste Management Facility

Dear Mr. Bradner:

Please consider this letter a request for clarification of FDEP's requirements for an air construction permit for the above referenced project.

We have conducted several pre-application meetings with FDEP's Central District staff during preparation of the above referenced permit application. We have also discussed this issue with staff from FDEP's Division of Air Resources Management. Based on these meetings and discussions, we understand that:

- An air construction permit is not required for this project since it is basically an expansion of an existing permitted solid waste facility for the purpose of providing additional solid waste disposal capacity;
- A control system will have to be permitted and constructed within five (5) years after the new disposal unit (Cell-9) is constructed and operational;
- The existing Title V Operation Permit for the Orange County Solid Waste Facility will have to be modified to include Cell 9 within 180-days after Cell 9 becomes operational;
- These requirements may be included as a specific conditions in the above referenced Solid Waste Construction/Operation Permit.

We hope that you concur with our understanding of FDEP's air permit requirements for this project. Please inform us immediately if you do not concur with our understanding.



Mr. James N. Bradner, P.E.

Page 2

May 17, 2001

149101.9E.PM

If you have any questions or comments, please contact Ron Beladi or me at your earliest convenience.

Sincerely,

CH2M/G&R



R. J. Bruner III, P.E.
Project Manager

GNV\Bradner 05_16_01 Air Permitting Letter.doc

c: Len Koslov/FDEP Central District
- Venkata Panchakarla/FDEP Tallahassee
Jim Becker/OCUD
Dan Morrival/OCUD

Jim Flynt/OCUD
Stan Keely/WCG
Ron Beladi/WCG



Last Transaction

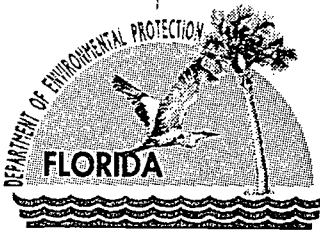
<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Dec 17	1:29pm	Fax Sent	818509226979	1:16	3	OK

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 3
To	SYED ARIF	
From	DEB LAISURE	
Co.	DEP TALLY	
Co.	DEP ORL	
Dept.		
Phone #	407 893 3991	
Fax #	850-922-6976 ⁹	
Fax #		

12/17/01

PROVIDED COPIES OF RATI & DEC 3RD
LETTER TO SYED BY FAX.

DCU



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

CERTIFIED MAIL

7001 0360 0000 8773 4147

Orange County Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829

Attention: James W. Becker,
Solid Waste Division Manager

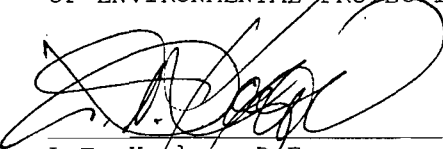
Orange County - AP
Orange County Landfill

Dear Mr. Becker:


This letter serves to inform you that it will be necessary for the County to submit a revised "Application for Air Permit - Title V Source", DEP Form 62-210.900(1), F.A.C., which reflects all changes resulting from the proposed expansion of the landfill. The revised application shall include a Prevention of Significant Deterioration (PSD) evaluation for the expansion to determine if the landfill will trip the PSD threshold, in accordance with 62-212.400, F.A.C. If the expansion project is determined to be a PSD project, a PSD construction permit must be obtained from the Department of Air Resource Management in Tallahassee prior to commencing any construction of the expansion or the landfill gas collection system.

If you have any questions, please contact this office at 407/893-3333 or write to the above address.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Date: 12-3-01


LTK/dl


DL

Cc: William Bostwick, DEP Central District
Clair Fancy, DEP BAR
Al Linero, DEP Tallahassee

"More Protection, Less Process"

Printed on recycled paper.

Department of Environmental Protection - Central District
Email Message

Laisure, Debra

From: Zahm, Alan
Sent: Thursday, November 29, 2001 4:30 PM
To: Laisure, Debra
Cc: Shine, Caroline; Vielhauer, Trina; Jones, Dina; Garfein, Vivian; Kozlov, Leonard
Subject: RE: Orange Co. Landfill

Deb, with this email please begin the correspondence asked by Len.

As an alternative I offer this option. Many times our section writes conditions for other programs and places them into our permits. For this situation, the solid waste section can write the standard language our program uses to apply for a Title V permit. They can place the condition into their permit and thereby making it more enforceable and more useful than a letter written before the construction begins.

So I present this for the Solid Waste Program's use.

Permit Application

7. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing at least 90 days prior to the expiration of the construction permit and submit an application for an extension of the construction permit.

A Title V operating permit revision is required for operation of this source. To obtain an operating permit, the permittee must demonstrate compliance with the conditions of the construction permit and submit the compliance test results to the Central Florida District office. The application shall be submitted no later than 180 days after the source has been placed in operation.

[Rule 62-4.220, F.A.C.]

Vivian, is this acceptable?

-----Original Message-----

From: Kozlov, Leonard
Sent: Tuesday, November 27, 2001 5:00 PM
To: Zahm, Alan
Cc: Shine, Caroline; Vielhauer, Trina; Jones, Dina; Garfein, Vivian
Subject: Orange Co. Landfill

Alan,

Please send a reminder letter to Orange Co. Landfill that they will have to revise their existing TV permit due to the fact they are increasing the design capacity of the landfill.

len

Department of Environmental Protection - Central District
Email Message

Laisure, Debra

From: Comer, Patricia
Sent: Friday, November 30, 2001 8:06 AM
To: Zahm, Alan; Laisure, Debra
Cc: Vielhauer, Trina; Kozlov, Leonard
Subject: FW: Orange Co. Landfill

Alan

Is this landfill subject to PSD? Landfills are now subject to PSD for NMOCs. If it is, an air construction permit is required. Also, there is no requirement that the compliance testing results be sent in before submitting the T5 application. In fact, that usually delays application for T5 and under federal statutes, facilities are not supposed to be operating "commercially" without at least a complete T5 application (I know, we haven't paid too much attention to that historically, but we are expecting a deficiency notice about our program from EPA that likely doesn't involve this issue, and we probably should try to avoid red flags)

Also, the submittal of the test results is a reasonable assurance issue and can be handled by T5 compliance plan I suggest the second proposed condition be changed to remove the second sentence, presuming you know that this is not a PSD activity.

-----Original Message-----

From: Vielhauer, Trina
Sent: Thursday, November 29, 2001 4:45 PM
To: Comer, Patricia
Subject: FW: Orange Co. Landfill

I'll stop by on this tomorrow...the County's in violation of the leachate collection requirements for CAA so we're negotiating a consent order. Meantime, the County submitted an app. to solid waste to expand their facility BUT didn't notify air for Title V purposes [their TV renewal is currently pending]...

-----Original Message-----

From: Zahm, Alan
Sent: Thursday, November 29, 2001 4:30 PM
To: Laisure, Debra
Cc: Shine, Caroline; Vielhauer, Trina; Jones, Dina; Garfein, Vivian; Kozlov, Leonard
Subject: RE: Orange Co. Landfill

Deb, with this email please begin the correspondence asked by Len.

As an alternative I offer this option. Many times our section writes conditions for other programs and places them into our permits. For this situation, the solid waste section can write the standard language our program uses to apply for a Title V permit. They can place the condition into their permit and thereby making it more enforceable and more useful than a letter written before the construction begins.

So I present this for the Solid Waste Program's use.

Permit Application

7. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing at least 90 days prior to the expiration of the construction permit and submit an application for an extension of the construction permit.

A Title V operating permit revision is required for operation of this source. To obtain an operating permit, the permittee must demonstrate compliance with the conditions of the

Department of Environmental Protection - Central District
Email Message

construction permit and submit the compliance test results to the Central Florida District office. The application shall be submitted no later than 180 days after the source has been placed in operation.

[Rule 62-4.220, F.A.C.]

Vivian, is this acceptable?

-----Original Message-----

From: Kozlov, Leonard
Sent: Tuesday, November 27, 2001 5:00 PM
To: Zahm, Alan
Cc: Shine, Caroline; Vielhauer, Trina; Jones, Dina; Garfein, Vivian
Subject: Orange Co. Landfill

Alan,

Please send a reminder letter to Orange Co. Landfill that they will have to revise their existing TV permit due to the fact they are increasing the design capacity of the landfill.

len



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

FAX TRANSMITTAL
DATE: October 26, 2001

TO:

NAME: David M. Pelham
COMPANY: CH2/G&R Joint Venture
TELEPHONE (FAX) NUMBER: 813-979-1872
PAGE 1 OF 3

FROM:

NAME: DEBRA LAISURE
PROGRAM: AIR RESOURCES MANAGEMENT
Orlando Fax Telephone Number (407) 897-5963
Suncom 342-5963
Orlando Voice Telephone Number (407) 893-3991 or 3334
Suncom 325-3991 or 3334
SENDER'S NAME: Debra

COMMENTS:



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

FAX TRANSMITTAL

DATE: October 26, 2001

TO:

NAME: James W. Becker
COMPANY: Orange County Solid Waste Division
TELEPHONE (FAX) NUMBER: 407-836-6629
PAGE 1 OF 3

FROM:

NAME: DEBRA LAISURE
PROGRAM: AIR RESOURCES MANAGEMENT
Orlando Fax Telephone Number (407) 897-5963
Suncom 342-5963
Orlando Voice Telephone Number (407) 893-3991 or 3334
Suncom 325-3991 or 3334

SENDER'S NAME: Debra

COMMENTS:



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

AIR RESOURCES COMPLETENESS REVIEW

SOURCE NAME: Orange County Solid Waste Division **DATE RECEIVED:** 08/28/01
DATE REVIEWED: 10/23/01

APPLICANT: James W. Becker, Solid Waste Division Manager

ADDRESS: Orange County Solid Waste Division **FILE:** 0950113-001
5901 Young Pine Road
Orlando, Florida 32829

Your application for this project has been received and reviewed for completeness. The following is needed to complete your application.

- ✓ 1. The open flare and landfill gas collection system identified as emissions unit 001 in the current application is a regulated emission unit. Provide completed Section III of the application with all applicable emission unit information.
- ✓ 2. Provide an explanation of how the maximum annual rate for the stack emissions from the open flare (segment 1 on page 17) were obtained. Provide example calculations as appropriate.
- ✓ 3. Provide copies of records maintained over the past 12 months to demonstrate compliance with 40 CFR 60.758.
- ✓ 4. Provide a status update on the following compliance activities:
 - a. Assess test data, complete design and appropriate application process, submit documents to the Department;
 - b. Complete construction documents, bidding, permitting and issue contract award for completion of the collection system in accordance with 40 CFR Subpart WWW in remaining non-exempt areas of the landfill; and
 - c. Complete construction of collection system and submit documentation signed by Responsible Official and Professional Engineer certifying the completion of the system in accordance with 40 CFR Subpart WWW. Conduct initial monitoring.

Pursuant to Rule 62-4.055, F.A.C., the applicant shall have 90 days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may

"More Protection, Less Process"

Printed on recycled paper.

Orange County Solid Waste Division


File: 0950113-002

Page 2 of 2

notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to 90 days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application.

If you have any questions, please fax Debra Laisure, P.E. at 407/897-5963 or write to her at the above address.

Sincerely,


Alan D. Zahn, P.E.
Permitting Supervisor

26 Oct '01

Date

AZ/dl

DL

cc: David M. Pelham, P.E., CH2/G&R Joint Venture

OPERATE PERMIT APPLICATION REVIEW CHECKLIST

REVIEWED 10/23/01

RAI 10/25/01
RAI 2 2/20/02
COMPLETE 5/7/02

Proj #: 0950113-002 Current/Previous Permit: 0950113-001-AV Exp'n Date 2/28/02

Company Name: ORANGE CO LANDFILL Source Name: ORANGE COUNTY LANDFILL

- ✓ 1. Owner's signature block is complete and fee paid. NO FEE - TITLE V
- ✓ 2. P.E.'s Certification complete (required for initial operation permit applications).
- ✓ 3. Alterations to source/control equipment/emission types have not resulted in significant emission increases. HOWEVER APPLICANT NOTES THAT PERMIT WILL BE MODIFIED POSSIBLY 2X, ONCE AFTER NEXT CELL IS STARTED + AGAIN AFTER LFGC INSTALLED
- OK 4. Compliance test report is complete and appears satisfactory. THIS APPEARS TO HAVE BEEN DONE FOR THE YEAR 2000.
- NO 5. Copies of required record keeping provided.
- UNK 6. The submitted information indicates permitted specific conditions have been met. ALTHOUGH, FACILITY IS UNDER ENFORCEMENT
- UNK 7. Malfunctions, if any, have been properly resolved.
- UNK 8. Pollution control equipment condition (Maintenance Schedule) appears satisfactory.
- ✓ 9. Annual Operating Reports submitted. PER ARMS (SEE ATTACHED)
- NO 10. Inspections by Department/OCEPD indicate satisfactory operation and maintenance. UNDER ENFORCEMENT
- N/A 11. Process weights, emission type/rate are within permitted limits.
- N/A 12. Fuel usage; fuel, use rates, heat input have been submitted. NOT REQ'D
- N/A 13. Operating hours; hrs/day, days/week, weeks/year are shown. NOT LIMITED
- NO 14. Emissions appear to meet standards. FACILITY IS UNDER ENFORCEMENT PRIMARILY FOR FAILING TO INSTALL A GAS COLLECTION SYSTEM IN ALL AREAS REQ'D TO HAVE ONE, OF E

Additional Comments: * SUBJECT TO NSPS (40 CFR 60) WWW
 * FACILITY IS CURRENTLY UNDER ENFORCEMENT
 1. RECORDKEEPING? 2. REGULATED EMISSION UNIT.
 3. STATUS UPDATE ON CERTIFICATION 4. CALCULATION EXPLA-NATION

The above checklist for the referenced operation permit application submitted by the permittee indicates compliance with the applicable provisions of the Florida Administrative Code, Title 62.

Debra C. Laisure, P.E.
 Engineer IV, Air Permitting
 Date: _____

FLARE DOES NOT
OPERATES CONTINUOUSLY
GAS GOES TO STATION

1. HOW HAS FACILITY DEMONSTRATED THAT INCREASE IN CO FROM FLARE WON'T CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY AMBIENT AIR QUALITY STANDARD?
- 2. WHY IS THE OPEN FLARE LISTED AS AN UNREGULATED EU?
- ✓ 3. WHAT ABOUT P14 INFO SUCH AS OPERATING HOURS?
- ✓ 4. WHY NO EMISSION POINT INFO FOR OPEN FLARE?
- ✓ 5. WHERE DOES THE MAX ANNUAL RATE FOR SEGMENT 50200601 COME FROM?
- ✓ 6. NO POLLUTANT INFO.
7. IF EU 2 ON APP TRULY HAS ONLY FUGITIVE EMISSIONS, THEN SECTION D SHOULD BE COMPLETED W/EMISSION POINT TYPE CODE = 4.
8. COMPLIANCE SCHEDULE

```

Query | Activity | Violation | Complnt | Help | Return | eXit
-----
                ARMS Compliance and Assurance Module
+----- Facility Current Compliance Status Summary ----- ARMCA050+
|POINT  AIRS ID: 0950113  Status: A Owner: Orange County Solid Waste Division |
|Office: CD      County: ORANGE      Name: Orange County Landfill      |
+-----+
|
| Overall Facility Status: SNC
| Inspection: SNC * AOR: IN * Test & Report: SNC * CEM: (All CEM) |
+-----+
|   |Obj|Obj|
| CA |Typ|Num|Object Description          ||CS *||
+-----+
|AOR |EU |001|Landfill Gas Flares 1500 acre Solid Waste Mgm|| *||
|CEM |EU |001|Landfill Gas Flares 1500 acre Solid Waste Mgm||  ||
|INSP|EU |001|Landfill Gas Flares 1500 acre Solid Waste Mgm||SNC *||
|TRPT|EU |001|Landfill Gas Flares 1500 acre Solid Waste Mgm||SNC *||
|   |EU |001|Landfill Gas Flares 1500 acre Solid Waste Mgm||SNC  ||
|AOR |EU |002|Landfill Gas Flares 1,500 acre S. Waste Manag||IN  *||
|CEM |EU |002|Landfill Gas Flares 1,500 acre S. Waste Manag||  ||
+-----+
|   Refer to the menu "HELP" option to explain this screen.
+-----+

```

Count: 7 v

```

Query | Activity | Violation | Complnt | Help | Return | eXit
-----
                ARMS Compliance and Assurance Module
+----- Facility Activity List ----- ARMCA010+
|POINT  AIRS ID: 0950113  Status: A Owner: Orange County Solid Waste Division |
|Office: CD      County: ORANGE      Name: Orange County Landfill      |
+-----+
|>| CA |Ty|Activity Code          |Date Due |Date Done |ACS|CCS|#VO|
+-----+
| |INSP|C |INS2-COMPLIANCE INSPECTION WALK | | |22-AUG-2001|SNC|SNC| 1| |
| |RESV| | WLI-WARNING LETTER ISSUED | | |16-NOV-1999| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |01-DEC-1999| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |24-JUL-2000| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |29-JAN-2001| | | |
| |INSP|C |INS2-COMPLIANCE INSPECTION WALK | | |05-FEB-2001|IN | | 0|
| |INSP|C |INS3-COMPLIANCE INSPECTION DETAI| | |01-JUN-2000|SNC|SNC| 1|
| |RESV| | WLI-WARNING LETTER ISSUED | | |16-NOV-1999| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |01-DEC-1999| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |24-JUL-2000| | | |
| |RESV| | EMT-ENFORCEMENT MEETING | | |29-JAN-2001| | | |
| | | | | | | | | | | |
+-----+

```

Violation-"V" [RETURN]. Test Detail-"I" [RETURN]. Activity Detail-[RETURN].
Count: *0

Query | Activity | Violation | Complnt | Help | Return | eXit
 ----- ARMS Compliance and Assurance Module -----

----- ARMCA011+
 | POINT AIRS ID: 0950113 Status: A Owner: Orange County Solid Waste Division |
 | Office: CD County: Orange Name: Orange County Landfill |
 +----- Compliance Activity Detail -----
 | CA: INSP Activity: INS2 COMPLIANCE INSPECTION WALK THROUGH # Viol: 1 |
 | Date Done: 22-AUG-2001 Date Due: Office: CD Ev: Y Act CS: SNC |
 | Notes: VCS: |

Obj	Obj	S		Cmpl	Viol		
Typ	Num	T	Object Description	Stat	CS	Comments	
EU	001	A	Landfill Gas Flares 1500 acre	SNC		Class Ill wells to be insta	
EU	002	I	Landfill Gas Flares 1,500 acre	IN			
FAC			Facility Wide	IN		1: 2: 3: 4: 5: 6:	

Activity has a Violation, UPDATES are Limited!
 Count: *1

Query | Activity | Violation | Complnt | Help | Return | eXit
 ----- ARMS Compliance and Assurance Module -----

----- ARMCA011+
 | POINT AIRS ID: 0950113 Status: A Owner: Orange County Solid Waste Division |
 | Office: CD County: Orange Name: Orange County Landfill |
 +-----
CA: INS	iol: 1	
Date D	Class Ill wells to be installed Jan 01	CS: SNC
Notes:	CS:	

Obj	Obj	S		Cmpl	Viol		
Typ	Num	T	Object Description	Stat	CS	Comments	
EU	001					e insta	
EU	002						
FAC			Facility Wide	IN		1: 2: 3: 4: 5: 6:	

Press Do to accept changes, PF4 to cancel.
 Count: *3

Query | Activity | Violation | Complnt | Help | Return | eXit
 ----- ARMS Compliance and Assurance Module -----

----- ARMCA011+
 |POINT AIRS ID: 0950113 Status: A Owner: Orange County Solid Waste Division |
 |Office: CD County: Orange Name: Orange County Landfill |
 +----- Compliance Activity Detail -----+
 |CA: INSP Activity: INS3 COMPLIANCE INSPECTION DETAILED # Viol: 1 |
 | Date Done: 01-JUN-2000 Date Due: Office: CD Ev: Y Act CS: SNC |
 | Notes: no collection system for class III VCS: |

Obj	Obj	S	Cmpl	Viol
Typ	Num	T	Stat	CS
Object Description			Comments	
EU	001	A	SNC	

Activity has a Violation, UPDATES are Limited!
 Count: *1

$$\frac{1576 \times 10^6 \text{ ft}^3}{\text{YR}}$$

10/10/01 SPOKE TO
LEN. BECAUSE
ORANGE CO LANDFILL
IS OUT OF COMPLIANCE
THE ONLY WAY WE
CAN RENEW THE
TITLE V PERMIT
IS TO ADD A
COMPLIANCE
SCHEDULE.

Within 20 days of written demand from the Department, Respondent shall make payment of the appropriate stipulated penalties to "The Department of Environmental Protection" by cashier's check or money order and shall include thereon the OGC number assigned to this Consent Order and the notation "Ecosystem Management and Restoration Trust Fund." Payment shall be sent to the Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803. The Department may make demands for payment at any time after violations occur. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce any of the terms of this Consent Order. Any penalties assessed under this paragraph shall be in addition to the settlement sum agreed to in paragraphs 19 of this Consent Order. If the Department is required to file a lawsuit to recover stipulated penalties under this paragraph, the Department will not be foreclosed from seeking civil penalties for violations of this Consent Order in an amount greater than the stipulated penalties due under this paragraph.

25. The Respondent shall comply with the following activities no later than the dates prescribed below:

SUBMITTED BY ORANGE COUNTY

Activity	Compliance Date
Assess test data, complete design and appropriate application process, submit documents to the Department.	April 29, 2001
Complete Construction Documents, Bidding, Permitting, and issue Contract Award for completion of the collection system in accordance with Subpart WWW in remaining non-exempt areas of the landfill.	August 29, 2001
Complete Construction of collection system and submit documentation signed by Responsible Official and Professional Engineer certifying the completion of the system in accordance with Subpart WWW. Conduct initial monitoring	January 18, 2002



UTILITIES DEPARTMENT . SOLID WASTE DIVISION

5901 Young Pine Road • Orlando, Florida 32829
407-836-6601 • Fax 407-836-6658

August 27, 2001



Mr. Leonard T. Kozlov, P.E.
Department of Environmental Protection
Central District
3319 Maquire Blvd, Suite 232
Orlando, FL 32803-3767

**RE: Orange County – AP
Orange County Solid Waste Management Facility
Title V Permit Renewal Application**

Dear Mr. Kozlov:

Attached are four copies of the Title V Permit renewal application for the Orange County Solid Waste Management Facility. This renewal application includes two emission units (EUs). EU No. 1 is for the flare station and fugitive emissions from the landfill cells. EU No. 2 is for fugitive emissions from all other activities at the facility. Emission projections using results from the recent NMOC Tier 2 testing for the Class III and Pre-85 Cells and future landfill cells are also included. Synthetic limits are not being requested for the flare station since the only emission-triggering PSD parameter from a flare would be carbon monoxide, which is exempt from PSD requirements pursuant to Rule 62-212.400(2)(a)2c, F.A.C. The County reserves the right to revisit this issue in the future, should it be in the County's best interest to do so.

If there are any questions regarding this submittal, please call me at (407) 836-6600.

Sincerely,

James W. Becker
James W. Becker, Manager
Solid Waste Division

Cc: Dan Morrical, P.E., Solid Waste Division
Stan Keely, P.E., WCG Inc.
Bo Bruner, P.E., CH2MHill
David Pelham, P.E., WCG Inc.



**ORANGE COUNTY LANDFILL
TITLE V PERMIT RENEWAL
APPLICATION**

Prepared for:
Orange County Solid Waste Division
Orange County, Florida

Prepared by:
CH2M/G&R
The Joint Venture
Orlando, Florida

August 27, 2001

Project No. 011021.03

TABLE OF CONTENTS

Section

PERMIT APPLICATION

Appendix A – SITE LOCATION

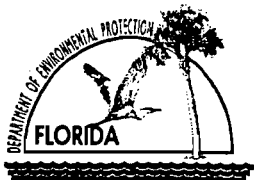
Appendix B – SITE PLAN

Appendix C – TITLE V CORE LIST OF RULES

Appendix D – INSIGNIFICANT & FUGITIVE EMISSION SOURCES

Appendix E – LANDGEM MODEL RESULTS

Appendix F – EMISSION PROJECTION CALCULATIONS



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

✓	1. Facility Owner/Company Name: Orange County Board of County Commissioners	
✓	2. Site Name: Orange County Solid Waste Management Facility	
✓	3. Facility Identification Number: 0950113 [] Unknown	
✓	4. Facility Location: Street Address or Other Locator: 5901 Young Pine Road City: Orlando County: Orange Zip Code: 32829	
✓	5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? ✓ [X] Yes [] No

CHECK ✓

Application Contact

✓	1. Name and Title of Application Contact: James W. Becker, Solid Waste Division Manager	
	2. Application Contact Mailing Address: Organization/Firm: Orange County Solid Waste Division Street Address: 5901 Young Pine Road City: Orlando State: FL Zip Code: 32829	
	3. Application Contact Telephone Numbers: Telephone: (407)836-6600 Fax: (407)836-6629	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: _____

Reason for revision: _____

- Title V Permit Renewal

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

James W. Becker

Solid Waste Division Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: Solid Waste Division

Street Address: 5901 Young Pine Road

City: Orlando

State: FL

Zip Code: 32829

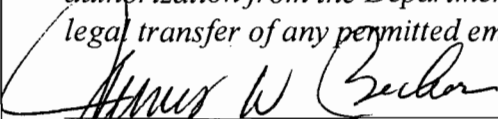
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

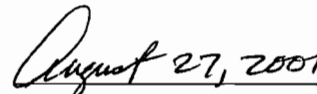
Telephone: (407)836-6600

Fax: (407)836-6629

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.*


Signature


Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: David M. Pelham

Registration Number: 42032

2. Professional Engineer Mailing Address:

Organization/Firm: CH2/G&R Joint Venture

Street Address: 8875 Hidden River Parkway, Suite 225

City: Tampa

State: FL

Zip Code: 33637

3. Professional Engineer Telephone Numbers:

Telephone: (813)979-7144

Fax: (813)979-1872

4. 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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 in the corresponding application for air construction permit and with all provisions contained in such permit.



Signature

8-27-01

Date

(seal)

* Attach any exception to certification statement.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

N/A

2. Projected or Actual Date of Commencement of Construction:

3. Projected Date of Completion of Construction:

Application Comment

This application is for the operation of landfill gas (LFG) flares, fugitive LFG emissions from closed and active Class I and Class III landfill cells, yard waste mulching and composting, asbestos disposal, temporary household hazardous collection and storage, borrow pit operations, materials recovery, white goods collection, equipment fueling and maintenance, above ground fuel tanks, leachate management, and other solid waste management activities.

This permit renewal resulting from this application is anticipated to be modified within 180 days of the initial operation of the next landfill cell (Cell 9) and subsequent emission control device and within 180 days of the operation of flares to be constructed for the Pre-85 Class I and Class III Landfill emission controls.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 481.20 North (km): 3150.30			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 28/28/52 Longitude (DD/MM/SS): 81/11/30			
3. Governmental Facility Code: 2	4. Facility Status Code: A	5. Facility Major Group SIC Code: 99	6. Facility SIC(s): 99
7. Facility Comment (limit to 500 characters): See Application Comment			

Facility Contact

1. Name and Title of Facility Contact: James W. Becker, Solid Waste Division Manager <i>NEW</i> AS OF 2000		
2. Facility Contact Mailing Address: Organization/Firm: Orange County Solid Waste Division ✓ Street Address: 5901 Young Pine Road ✓ City: Orlando State: FL Zip Code: 32829		
3. Facility Contact Telephone Numbers: Telephone: (407)836-6600 Fax: (407)836-6629 ✓		

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input checked="" type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): 40 CFR Part 60, Section 725(2)(b) designates all MSW landfills with a design capacity exceeding 2.5 million megagrams as a Title V facility. This facility exceeds this minimum design capacity threshold; therefore, this facility is subject to Title V permitting.	

List of Applicable Regulations

See Exhibit C for DEP's Core List of Rules	
40 CFR Part 60, Subpart WWW	Standards of Performance for MSW Landfill Emissions

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
CO	A MAJOR				No Emission Cap is requested.
NOX	B NOT MAJOR OR SYNTHETIC MINOR				No Emission Cap is requested.
PM10	B				No Emission Cap is requested.
VOC	B				No Emission Cap is requested.
HAPS	B				No Emission Cap is requested.
H085	B			ETHYL BENZENE	No Emission Cap is requested.
H104	B			HEXANE	No Emission Cap is requested.
H120	B			MEK	No Emission Cap is requested.
H169	B			TOLUENE	No Emission Cap is requested.
H186	B			XYLENES	No Emission Cap is requested.
H128	B			METHYLENE CHLORIDE	No Emission Cap is requested.
H167	B			TETRACHLOROETHYLENE	No Emission Cap is requested.
CO2	B			↓ XYLENES	No Emission Cap is requested.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input checked="" type="checkbox"/> Attached, Document ID: <u>Exhibit E</u> <input type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input checked="" type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

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. Regulated or Unregulated Emissions Unit? (Check one)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. *UPDATED, SEE SUBMISSION DATED 1/23/02*

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Open Flare for LFG combustion, landfill gas collection system, and fugitive landfill gas emissions.

4. Emissions Unit Identification Number: No ID
ID: ID Unknown

5. Emissions Unit Status Code: A	6. Initial Startup Date: 1972	7. Emissions Unit Major Group SIC Code: 99	8. Acid Rain Unit? [No]
----------------------------------	-------------------------------	--------------------------------------------	-------------------------

9. Emissions Unit Comment: (Limit to 500 Characters) *The entire solid waste management facility was included in the initial Emission Unit #001. The original EU has been split into 2 separate EUs to describe emissions from the landfill gas emissions control (open flare) and the landfills and remaining solid waste management activities. The flare is a pollution-control device; therefore, per Rule 62-212, F.A.C. it is not subject to the PSD review. EU No. 1 includes the flare station and landfill gas collection system of Cells A-K, Cell 7B, and Cell 8, which became operational in 1998. Fugitive emissions from these landfill cells, as well as the Class III Landfill and Pre-85 cells are included in EU No. 1.*

SEE 62-212.400(2)(a)2.c., FAC

SPLIT UP PER 5 APP INSTEAD

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

The open flare provides the landfill gas (NMOC) emission control as required by 40 CFR Part 60, Subpart WWW, Section 750.

2. Control Device or Method Code(s): 023 *FLARING*

Emissions Unit Details

1. Package Unit:		
Manufacturer:	John Zink	Model Number:
2. Generator Nameplate Rating: N/A MW		
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

UPDATED
 1/23/02

B. EMISSIONS UNIT CAPACITY INFORMATION

(Regulated Emissions Units Only)

N/A

UPDATED 1/23/02

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

N/A *UPDATED*
1/23/02

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?	2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

UPDATED 1/23/02

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Stack emissions from the open flare		
2. Source Classification Code (SCC): 50200601		3. SCC Units: Million Cubic Feet Processed
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 1,576	6. Estimated Annual Activity Factor: 0.0003
7. Maximum % Sulfur: 0.1	8. Maximum % Ash:	9. Million Btu per SCC Unit: 550
10. Segment Comment (limit to 200 characters): Flare capacity is rated at 3,000 scfm, but typically operates 200 minutes per year. Remaining gas is sold off-site.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fugitive emissions from landfills.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:0	5. Maximum Annual Rate:0	6. Estimated Annual Activity Factor: 1
7. Maximum % Sulfur: 0.1	8. Maximum % Ash: 0	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

**F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO	N/A	N/A	NS
NOX	023	N/A	NS
PM10	N/A	N/A	NS
VOC	023	N/A	NS
HAPS	023	N/A	NS
H085	023	N/A	NS
H104	023	N/A	NS
H120	023	N/A	NS
H169	023	N/A	NS
H186	023	N/A	NS
H128	023	N/A	NS
H167	023	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

**(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

2

N/A

Potential/Fugitive Emissions

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		4. Synthetically Limited? [] tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			

Emissions Unit Information Section _____ of _____

Pollutant Detail Information Page _____ of _____

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

(Regulated Emissions Units Only)

N/A

UPDATED 1/23/02

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Solid waste management activities</p>			
<p>4. Emissions Unit Identification Number: <input checked="" type="checkbox"/> No ID</p> <p>ID: <input type="checkbox"/> ID Unknown</p>			
5. Emissions Unit Status Code: A	6. Initial Startup Date: 1972	7. Emissions Unit Major Group SIC Code: 99	8. Acid Rain Unit? <input type="checkbox"/> No
<p>9. Emissions Unit Comment: (Limit to 500 Characters) This EU was a portion of the previous EU # 001, which included emissions from landfills. The new split EU does not include landfill gas emissions, but does include PM emissions from road traffic, yard waste management, etc.</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
 Most roads have been paved and additional dust control is accomplished with water application.

2. Control Device or Method Code(s): 061

Emissions Unit Details

1. Package Unit:		
Manufacturer: N/A		Model Number:
2. Generator Nameplate Rating:	MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

N/A

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

N/A

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?		2. Emission Point Type Code: <i>5</i>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet	
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Hauling (emissions from vehicle-miles traveled by haul trucks and maintenance vehicles). Emissions are estimated for paved and unpaved roads.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Per application instructions, the hourly and annual rates can not be defined for facility-wide fugitive emissions and "0" is to be entered where the rate does not apply.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Emissions from internal combustion industrial engines, such as pumps and portable generators.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM10	061	108	NS
CO	N/A	N/A	NS
CO2	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		4. Synthetically Limited? [] tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

N/A

Supplemental Requirements

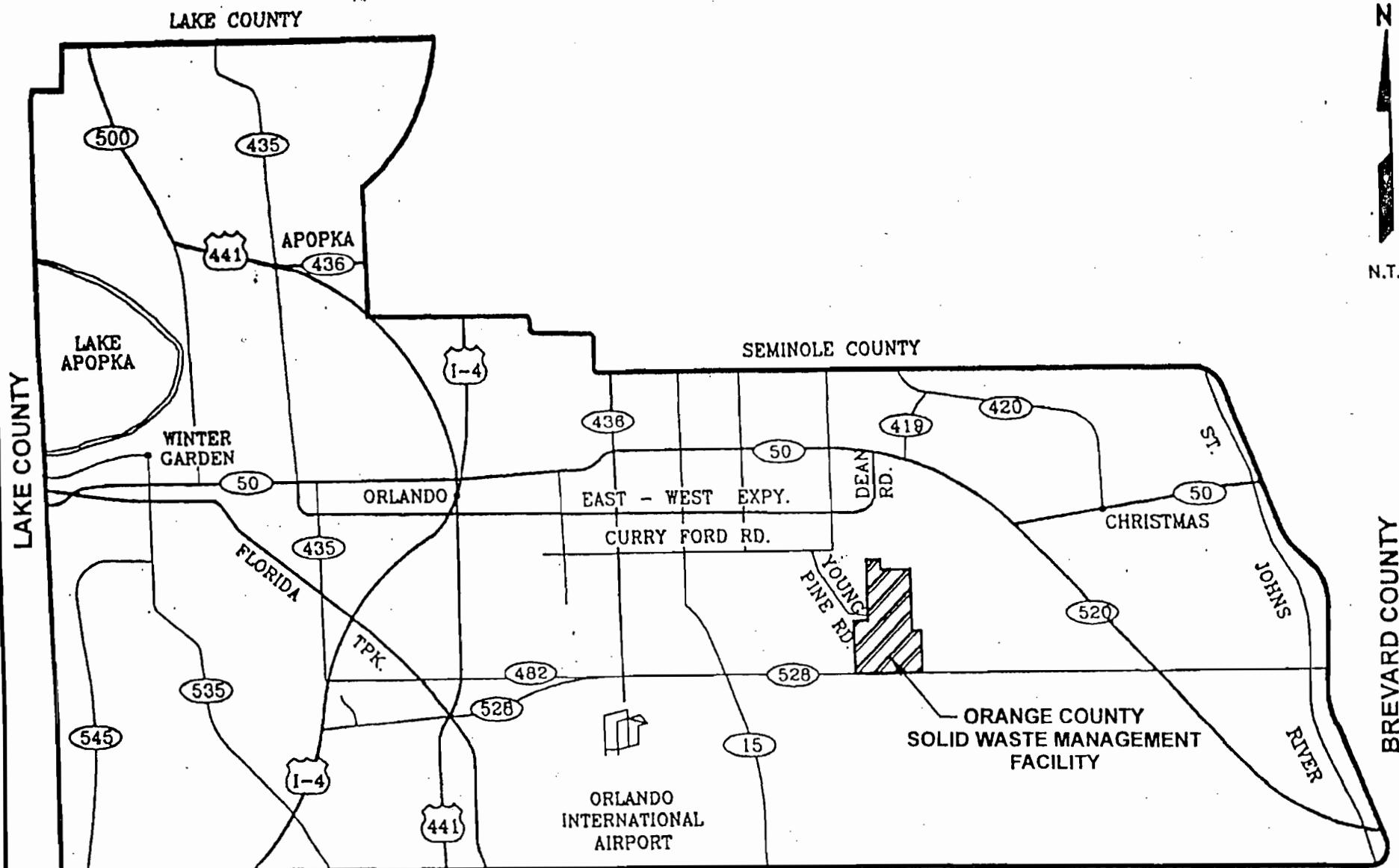
1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

EXHIBIT A

SITE LOCATION



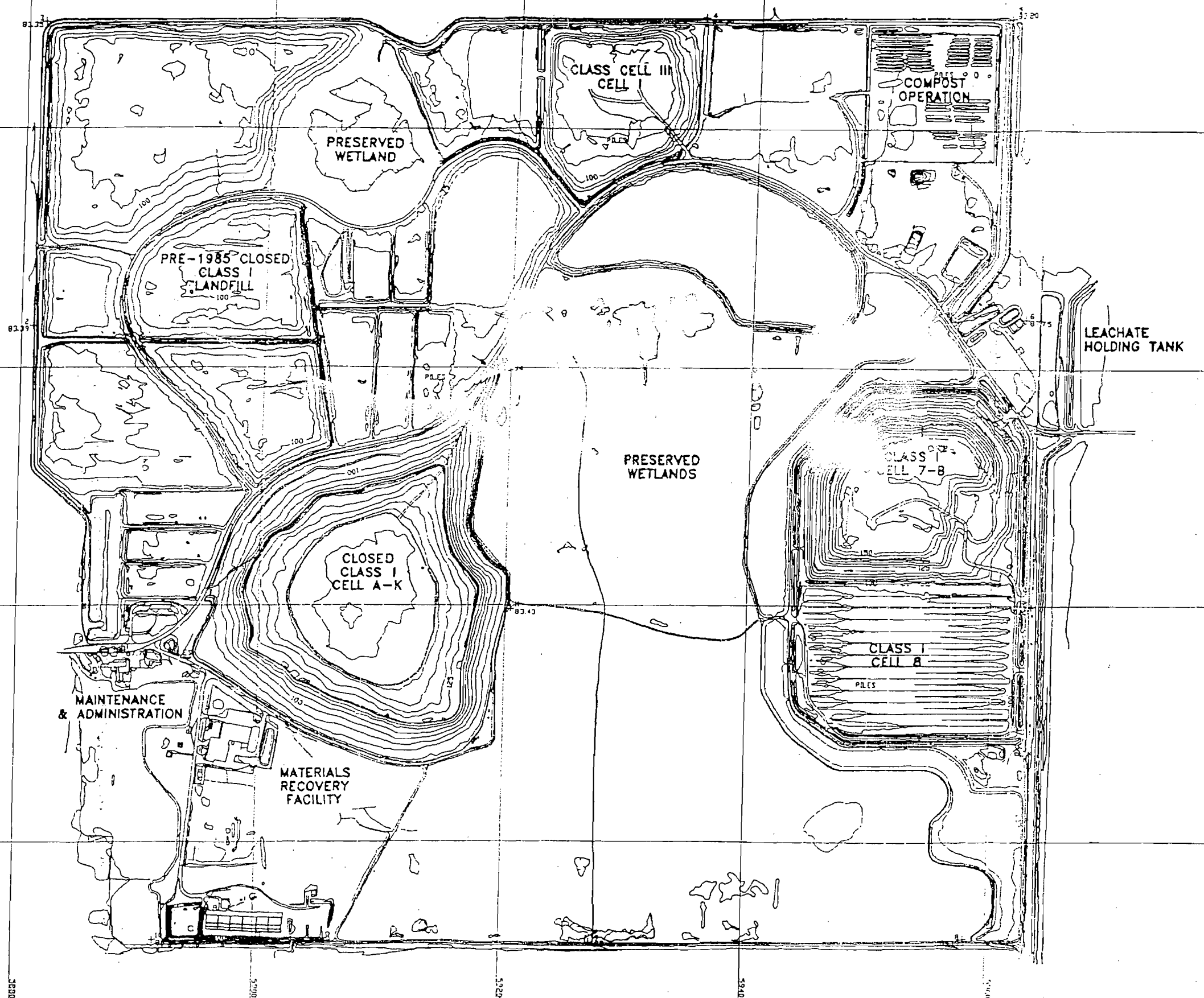
**ORANGE COUNTY GENERAL LOCATION
SOLID WASTE MANAGEMENT FACILITY
ORANGE COUNTY, FLORIDA**

EXHIBIT A



EXHIBIT B

SITE PLAN



NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED

RELIEF OF DOCUMENT'S
 THE DOCUMENT AND THE DEAR AND DESIGN INCORPORATED HEREIN
 AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS THE PROPERTY OF
 CHM/GR AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS
 WITHOUT THE WRITTEN AUTHORIZATION OF CHM/GR AND/OR THE
 JOINT VENTURE.

DESIGNED	DATE	
CHECKED	DATE	
APPROVED	DATE	
DATE	CADD FILE NAME	BY

CHM/GR

EXHIBIT B-1
 SOLID WASTE MANAGEMENT FACILITY
 ORANGE COUNTY, FLORIDA

SHEET OF

EXHIBIT C

TITLE V CORE LIST OF RULES

Title V Core List

Effective: 03/21/96

The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.

Federal: (description)

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: (description)

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 04-18-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.

62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 01-01-96

62-210.300, F.A.C.: Permits Required.

Title V Core List

Effective: 03/21/96

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.350, F.A.C.: Public Notice and Comment.

62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to
Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.400, F.A.C.: Emission Estimates.

62-210.650, F.A.C.: Circumvention.

62-210.700, F.A.C.: Excess Emissions.

62-210.900, F.A.C.: Forms and Instructions. **TITLE V SOURCE**

62-210.900(1) Application for Air Permit - ~~Long Form~~, Form and Instructions.

62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and
Instructions.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 01-01-96

62-212.700, F.A.C.: Source Reclassification.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 01-01-96

62-213.205, F.A.C.: Annual Emissions Fee.

62-213.210, F.A.C.: Permit Application Processing Fee.

62-213.400, F.A.C.: Permits and Permit Revisions Required.

62-213.410, F.A.C.: Changes Without Permit Revision.

62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.

62-213.420, F.A.C.: Permit Applications.

62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.

62-213.440, F.A.C.: Permit Content.

62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.

62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form and Instructions.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS,
effective 01-01-96

62-296.310(3), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

**CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS
MONITORING,** effective 01-01-96

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions
Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94

62-257, F.A.C.: Asbestos Notification and Fee, effective 12-31-95

62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling,
effective 04-16-92

n:\t5permit\canned\core.lst

EXHIBIT D
INSIGNIFICANT
&
FUGITIVE EMISSION
SOURCES

EXHIBIT D
INSIGNIFICANT & FUGITIVE EMISSION SOURCES

This exhibit summarizes sources and equipment at the landfill, which may be considered to be fugitive or insignificant sources.

FUGITIVE EMISSIONS

Table 1 provides a summary of fugitive sources as currently exist at the landfill along with the rationale for their designation as fugitive.

TABLE 1 SUMMARY OF FUGITIVE EMISSION SOURCES		
Source	Rational/Status	Comments
A-K Class I closed landfill cells	F.A.C. 62-701.600	FDEP Permit No. SF48-128169-005
Yardwaste composing operation	F.A.C. 62.701.520	FDEP Permit No. SO48-128169-006
Existing 7B/8 and Class III active landfill cells	F.A.C. 62.701.340 (3)(d)	FDEP Permit No. SO48-128169-006
Vehicular traffic on paved roads	F.A.C. 62.701.500 (12)	FDEP Permit No. SO48-128169-006
Leachate Collection System	F.A.C. 62.701.500 (5)(b)	FDEP Permit No. SO48-128169-006
Borrow pit activities	F.A.C. 62.701.400	FDEP permit No. ERP-48-136293
Asbestos disposal area	F.A.C. 62.701.520 (4)(a)	FDEP Permit No. SO48-128169-006

INSIGNIFICANT ACTIVITIES

Table 2 summarizes the list of equipment, activities and operations with insignificant emissions.

TABLE 2 LIST OF INSIGNIFICANT ACTIVITIES	
Source Description	Insignificant Status
Vehicle and Landfill Maintenance Activities	
SHOP	
Welding equipment	
Gas dispensing	F.A.C. 62-252.300
Diesel dispensing	F.A.C. 62-252.300
Propane Tank	F.A.C. 62-762
Painting equipment (limited to aerosol cans)	
Special waste containers (Antifreeze, transmission/hydraulic oils, motor oils)	F.A.C. 62-701.520
High pressure washer	
Steam Cleaner	
Calibration gases (for equipment)	F.A.C. 62-242.400 (5)
Safety-Kleen station	
Vehicle maintenance	F.A.C. 62-242.400
Truck wash	
Mobile fuelers (3)	F.A.C. 62-252.500
Mobile truck lube (3)	F.A.C. 62-242.400

**TABLE 2
LIST OF INSIGNIFICANT ACTIVITIES**

Source Description	Insignificant Status
STORAGE TANKS	
1,000-gallon unleaded gas (2)	F.A.C. 62-762
500-gallon hydraulic oil (2)	F.A.C. 62-762
500-gallon Engine oil (1)	F.A.C. 62-762
12,000-gallon diesel fuel (2)	F.A.C. 62-762
2,800-gallon mobile fuel tanker dispenser (1)	F.A.C. 62-762
Kerosene, grease, oil, drums (55 gal. Each)	F.A.C. 62-762
10,000-gallon diesel (1)	F.A.C. 62-762
Wastewater & Leachate Management	
Leachate holding tank	F.A.C. 62-701.500 (8)(d)
6,000-gallon leachate storage tank (Material Recovery Facility)	F.A.C. 62-701.400 (6)(b)(6)(c)
Wastewater and leachate collection system	F.A.C. 62-604
Pump stations	F.A.C. 62-604
Leachate collection systems	F.A.C. 62-701.500 (5)(b)
Cleanouts at wastewater force mains	F.A.C. 62-604
Air Release Valves on force mains	F.A.C. 62-604
Cleanouts at leachate collection laterals	F.A.C. 62-701.500 (8)(d)
2,000-gallon Septic tanks (4)	F.A.C. 62-600.630
Landfill Gas Management	
Landfill gas migration detection probes (8)	F.A.C. 62-701.400 (10)
Household Hazard Waste Drop-off Area at a Citizen Center	
Exhaust fans in the enclosed storage bldgs. (3)	
2,000-gallon waste oil storage tank (1)	F.A.C. 62-762
100-gallon (igloo) waste oil storage tank (1)	F.A.C. 62-762
Used waste chemical storage – 42 gallon drums	F.A.C. 62-762
6,000-gallon Stormwater Storage Tank	FDEP Permit No. ERP48-0138811-002-SI

**TABLE 2
LIST OF INSIGNIFICANT ACTIVITIES**

Source Description	Insignificant Status
Miscellaneous Activities	
Air compressor (electrically operated) (3)	Used at various locations at the landfill
Air compressor (gasoline operated) (8)	Used at various locations at the landfill
Stormwater ponds (5)	F.A.C. 17-302
Groundwater monitoring wells (96)	F.A.C. 17-701.510 (3) (d) (6)
Roads (water for dust controls)	F.A.C. 17-701.500 (11) (c)
Waste dump into landfill	F.A.C. 17-701.500 (7) (c)
Daily cover placement	F.A.C. 17-701.500 (7) (e) (6)
Office activities	F.A.C. 62-242.400 (1) & (2)
Staff vehicles (37)	F.A.C. 62-242.400 (1) & (2)
Bathroom vents (15)	
Window air conditioners (4)	F.A.C. 62-213.300 (3) (p) (1)
Central air conditioner compressors (9)	F.A.C. 62-213.300 (3) (p) (1)
Ventilation fans (7)	
Exhaust vent	
Unrelated Activities	
500-gallon above ground diesel fuel	F.A.C. 62-762
Window air conditioners (3)	F.A.C. 62-213.300 (3) (p) (1)
Central air conditioner compressors (6)	F.A.C. 62-213.300 (3) (p) (1)
Bathroom vents (2)	

EXHIBIT E

LANDGEM MODEL RESULTS

NMOC and HAP summary projections are provided the following spreadsheets. Thses projections were copiled using EPA's LANDGEM Model with AP-42 default criteria and the recently completed Tier 2 testing at the landfill for NMOC concentrations from various landfill cells.

LANDFILL NMOC EMISSIONS (Ton/Yr)							
Year	Pre-85	AK	7B	8	9	Class III	Total
1973	0.2						0.2
1974	0.3	0.1					0.5
1975	0.5	0.4					0.9
1976	0.7	0.6					1.3
1977	1.0	0.7					1.7
1978	1.2	0.7					1.9
1979	1.5	0.8				0.7	2.9
1980	1.8	0.7				0.6	3.2
1981	2.1	0.7				0.6	3.4
1982	2.3	0.7				0.6	3.6
1983	2.6	0.6				0.6	3.9
1984	2.9	0.6				0.5	4.1
1985	3.3	1.4				0.6	5.4
1986	3.2	2.5				0.6	6.3
1987	3.1	3.5				0.6	7.1
1988	2.9	4.5				0.6	8.0
1989	2.8	5.4				0.5	8.8
1990	2.7	6.3				0.5	9.5
1991	2.6	7.2				0.5	10.3
1992	2.5	7.1	1.6			0.5	11.6
1993	2.4	6.8	5.7			0.7	15.6
1994	2.3	6.5	9.6			1.1	19.5
1995	2.2	6.3	13.7			1.4	23.6
1996	2.1	6.0	18.0			1.6	27.8
1997	2.0	5.8	22.1			1.8	31.8
1998	2.0	5.6	23.2	2.5		2.0	35.2
1999	1.9	5.4	22.3	6.6		2.2	38.3
2000	1.8	5.1	21.5	10.5		2.4	41.4
2001	1.7	4.9	20.6	13.7		2.5	43.5
2002	1.7	4.8	19.8	16.9		2.4	45.5
2003	1.6	4.6	19.0	20.0		2.3	47.5
2004	1.5	4.4	18.3	23.1	1.0	2.2	50.6
2005	1.5	4.2	17.6	26.2	6.3	2.1	57.8
2006	1.4	4.1	16.9	26.9	11.5	2.0	62.7
2007	1.4	3.9	16.2	25.8	16.6	1.9	65.8
2008	1.3	3.7	15.6	24.8	21.4	1.9	68.8
2009	1.3	3.6	15.0	23.8	26.1	1.8	71.6
2010	1.2	3.5	14.4	22.9	30.6	1.7	74.3
2011	1.2	3.3	13.8	22.0	35.0	1.7	76.9
2012	1.1	3.2	13.3	21.1	39.1	1.6	79.4
2013	1.1	3.1	12.8	20.3	43.1	1.5	81.8
2014	1.0	2.9	12.3	19.5	46.9	1.5	84.2
2015	1.0	2.8	11.8	18.8	50.6	1.4	86.4
2016	1.0	2.7	11.3	18.0	54.2	1.4	88.5
2017	0.9	2.6	10.9	17.3	57.6	1.3	90.6
2018	0.9	2.5	10.4	16.6	60.8	1.3	92.6
2019	0.8	2.4	10.0	16.0	64.0	1.2	94.5
2020	0.8	2.3	9.6	15.4	67.0	1.2	96.3
2021	0.8	2.2	9.3	14.7	69.9	1.1	98.0
2022	0.8	2.1	8.9	14.2	72.7	1.1	99.7
2023	0.7	2.1	8.6	13.6	75.4	1.0	101.3
2024	0.7	2.0	8.2	13.1	77.9	1.0	102.9
2025	0.7	1.9	7.9	12.6	80.4	0.9	104.4
2026	0.6	1.8	7.6	12.1	82.8	0.9	105.8
2027	0.6	1.7	7.3	11.6	85.1	0.9	107.2
2028	0.6	1.7	7.0	11.1	81.7	0.8	103.0
2029	0.6	1.6	6.7	10.7	78.5	0.8	99.0
2030	0.5	1.6	6.5	10.3	75.5	0.8	95.1

Assumes AP-42 Defaults of $k = 0.04/\text{yr}$, $L_0 = 100 \text{ m}^3/\text{mg}$, and Tier 2 test results previously submitted to FDEP. Tier 2 NMOC: A-K NMOC=78, 7B/8 NMOC=279, Class III NMOC=62, Pre-85 NMOC=34. No controls are assumed.

NMOC Summary

HAP Emission Projections

Controlled emissions from MSW landfills include hazardous air pollutants (HAPs), which are estimated using EPA's LANDGEM Model. With the Model, AP-42 default criteria are used for the methane generation rate constant, $k = 0.04/\text{yr}$, and the methane generation potential, $L_0 = 100 \text{ m}^3/\text{yr}$. Model output is considered to be uncontrolled emissions. AP-42, Chapter 2.4 Municipal Solid Waste Landfills, also provides a procedure to estimate the controlled emissions of a pollutant. The equation for this procedure is as follows using the 2001 1,1,1-Trichloroethane emission as an example:

$$\eta_{\text{cnt}} := 98$$

$$\eta_{\text{col}} := 75$$

$$\text{UM} := \frac{.203}{.9072} \text{ tpy}$$

$$\text{CM} := \text{UM} \cdot \left(1 - \frac{\eta_{\text{col}}}{100}\right) + \left(\text{UM} \cdot \frac{\eta_{\text{col}}}{100}\right) \cdot \left(1 - \frac{\eta_{\text{cnt}}}{100}\right)$$

$$\text{CM} = 0.059 \text{ tpy}$$

Where:

η_{cnt} = Emission Control efficiency

η_{col} = Collection system efficiency

UM = Uncontrolled Mass Emission (from LANDGEM Model); converted to tpy

CM = Controlled Mass Emission, tpy

η_{cnt} is assumed to be 98% per NSPS minimum requirements for a flare

η_{col} is assumed to be 75% per AP-42, Ch. 2.4.4.2 where site-specific collection efficiencies are not known through comprehensive sampling programs

PROJECTED HAP EMISSIONS

HAP Name	Uncontrolled Emission (mg/yr)			Controlled HAP Emissions		
				2001	2007	2027
	2001	2007	2027	(tpy)		
1 1,1,1-Trichloroethane	0.20	0.26	0.40	0.06	0.08	0.12
2 1,1,2,2-Tetrachloroethane	0.59	0.75	1.16	0.17	0.22	0.34
3 1,1,2-Trichloroethane	0.04	0.05	0.08	0.01	0.02	0.02
4 1,1-Dichloroethane	0.74	0.90	1.45	0.22	0.26	0.42
5 1,1-Dichloroethene	0.06	0.08	0.12	0.02	0.02	0.04
6 1,2-Dichloroethane	0.13	0.16	0.25	0.04	0.05	0.07
7 1,2-Dichloropropane	0.06	0.08	0.13	0.02	0.02	0.04
8 Acrylonitrile	1.07	1.35	2.09	0.31	0.39	0.61
9 Benzene	0.47	0.58	0.93	0.14	0.17	0.27
10 Carbon Disulfide	0.14	0.18	0.28	0.04	0.05	0.08
11 Carbon Tetrachloride	0.00	0.00	0.00	0.00	0.00	0.00
12 Carbonyl Sulfide	0.09	0.12	0.18	0.03	0.03	0.05
13 Chlorobenzene	0.09	0.11	0.18	0.03	0.03	0.05
14 Chloroethane	0.26	0.32	0.50	0.07	0.09	0.15
15 Chloroform	0.01	0.01	0.02	0.00	0.00	0.01
16 Chloromethane	0.19	0.25	0.38	0.06	0.07	0.11
17 Dichlorobenzene	0.10	0.12	0.19	0.03	0.04	0.06
18 Dichloromethane	3.85	4.88	7.57	1.13	1.43	2.21
19 Ethylbenzene	1.55	1.97	3.05	0.45	0.57	0.89
20 Ethylene Dibromide	0.00	0.00	0.00	0.00	0.00	0.00
21 Hexane	1.80	2.28	3.53	0.52	0.66	1.03
22 Mercury	0.00	0.00	0.00	0.00	0.00	0.00
23 Methyl Ethyl Ketone	1.62	2.06	3.19	0.47	0.60	0.93
24 Methyl Isobutyl Ketone	0.59	0.75	1.17	0.17	0.22	0.34
25 Perchloroethylene	1.96	2.49	3.86	0.57	0.73	1.13
26 Toluene	11.49	14.56	22.58	3.36	4.25	6.60
27 Trichloroethene	1.18	1.49	2.31	0.34	0.43	0.67
28 Vinyl Chloride	1.46	1.84	2.86	0.43	0.54	0.84
29 Xylene	4.08	5.16	8.01	1.19	1.51	2.34
SUM	33.82	42.81	66.48	9.88	12.50	19.42

$$66.48 \frac{\text{Mg}}{\text{YR}} = 73.3 \frac{\text{TONS}}{\text{YR}}$$

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 : 0.0400 1/yr ***** User Mode Selection *****
 COC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : 1,1,1-Trichloroethane (HAP)
 Molecular Wt = 133.41 Concentration = 0.480000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1,1-Trichloroethane (HAP) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.900E-04	5.225E-02
1973	1.392E+05	2.955E-03	5.326E-01
1974	3.050E+05	6.372E-03	1.148E+00
1975	4.974E+05	1.022E-02	1.842E+00
1976	7.027E+05	1.420E-02	2.558E+00
1977	9.562E+05	1.904E-02	3.431E+00
1978	1.235E+06	2.424E-02	4.368E+00
1979	1.523E+06	2.941E-02	5.300E+00
1980	1.839E+06	3.501E-02	6.309E+00
1981	2.162E+06	4.051E-02	7.301E+00
1982	2.473E+06	4.555E-02	8.209E+00
1983	2.806E+06	5.085E-02	9.164E+00
1984	3.186E+06	5.696E-02	1.027E+01
1985	3.624E+06	6.406E-02	1.154E+01
1986	4.159E+06	7.295E-02	1.315E+01
1987	4.685E+06	8.130E-02	1.465E+01
1988	5.257E+06	9.029E-02	1.627E+01
1989	5.783E+06	9.796E-02	1.765E+01
1990	6.365E+06	1.065E-01	1.920E+01
1991	7.016E+06	1.162E-01	2.095E+01
1992	7.727E+06	1.268E-01	2.285E+01
1993	8.389E+06	1.360E-01	2.450E+01
1994	9.086E+06	1.455E-01	2.621E+01
1995	9.822E+06	1.554E-01	2.801E+01
1996	1.059E+07	1.658E-01	2.987E+01
1997	1.135E+07	1.753E-01	3.160E+01
1998	1.206E+07	1.837E-01	3.311E+01
1999	1.274E+07	1.909E-01	3.440E+01
2000	1.342E+07	1.979E-01	3.567E+01
2001	1.403E+07	2.032E-01	3.661E+01
2002	1.482E+07	2.121E-01	3.822E+01
2003	1.563E+07	2.211E-01	3.984E+01
2004	1.646E+07	2.301E-01	4.146E+01
2005	1.731E+07	2.391E-01	4.310E+01
2006	1.818E+07	2.483E-01	4.474E+01
2007	1.907E+07	2.574E-01	4.639E+01
2008	1.997E+07	2.666E-01	4.805E+01
2009	2.090E+07	2.759E-01	4.972E+01
2010	2.184E+07	2.852E-01	5.139E+01
2011	2.265E+07	2.913E-01	5.250E+01
2012	2.348E+07	2.975E-01	5.362E+01
2013	2.432E+07	3.038E-01	5.475E+01

2014	2.518E+07	3.102E-01	5.589E+01
15	2.605E+07	3.166E-01	5. E+01
16	2.694E+07	3.231E-01	5.823E+01
2017	2.785E+07	3.297E-01	5.942E+01
18	2.876E+07	3.364E-01	6.062E+01
19	2.970E+07	3.431E-01	6.183E+01
20	3.065E+07	3.499E-01	6.306E+01
2021	3.162E+07	3.568E-01	6.429E+01
22	3.260E+07	3.637E-01	6.554E+01
23	3.360E+07	3.707E-01	6.680E+01
2024	3.461E+07	3.778E-01	6.808E+01
2025	3.564E+07	3.849E-01	6.936E+01
26	3.668E+07	3.920E-01	7.065E+01
27	3.775E+07	3.993E-01	7.196E+01
2028	3.882E+07	4.064E-01	7.324E+01
2029	3.882E+07	3.905E-01	7.037E+01
30	3.882E+07	3.752E-01	6.761E+01
31	3.882E+07	3.605E-01	6.496E+01
2032	3.882E+07	3.463E-01	6.241E+01
33	3.882E+07	3.328E-01	5.997E+01
34	3.882E+07	3.197E-01	5.762E+01
35	3.882E+07	3.072E-01	5.536E+01
2036	3.882E+07	2.951E-01	5.319E+01
37	3.882E+07	2.836E-01	5.110E+01
38	3.882E+07	2.724E-01	4.910E+01
2039	3.882E+07	2.618E-01	4.717E+01
2040	3.882E+07	2.515E-01	4.532E+01
41	3.882E+07	2.416E-01	4.355E+01
42	3.882E+07	2.322E-01	4.184E+01
2043	3.882E+07	2.231E-01	4.020E+01
2044	3.882E+07	2.143E-01	3.862E+01
45	3.882E+07	2.059E-01	3.711E+01
46	3.882E+07	1.978E-01	3.565E+01
2047	3.882E+07	1.901E-01	3.425E+01
48	3.882E+07	1.826E-01	3.291E+01
49	3.882E+07	1.755E-01	3.162E+01
2050	3.882E+07	1.686E-01	3.038E+01
2051	3.882E+07	1.620E-01	2.919E+01
52	3.882E+07	1.556E-01	2.804E+01
53	3.882E+07	1.495E-01	2.695E+01
2054	3.882E+07	1.437E-01	2.589E+01
2055	3.882E+07	1.380E-01	2.487E+01
56	3.882E+07	1.326E-01	2.390E+01
57	3.882E+07	1.274E-01	2.296E+01
2058	3.882E+07	1.224E-01	2.206E+01
2059	3.882E+07	1.176E-01	2.120E+01
60	3.882E+07	1.130E-01	2.036E+01
61	3.882E+07	1.086E-01	1.957E+01
2062	3.882E+07	1.043E-01	1.880E+01
63	3.882E+07	1.002E-01	1.806E+01
64	3.882E+07	9.629E-02	1.735E+01
65	3.882E+07	9.252E-02	1.667E+01
2066	3.882E+07	8.889E-02	1.602E+01
67	3.882E+07	8.540E-02	1.539E+01
68	3.882E+07	8.206E-02	1.479E+01
2069	3.882E+07	7.884E-02	1.421E+01
2070	3.882E+07	7.575E-02	1.365E+01
71	3.882E+07	7.278E-02	1.312E+01
72	3.882E+07	6.992E-02	1.260E+01
2073	3.882E+07	6.718E-02	1.211E+01
2074	3.882E+07	6.455E-02	1.163E+01
75	3.882E+07	6.202E-02	1.118E+01
76	3.882E+07	5.958E-02	1.074E+01
2077	3.882E+07	5.725E-02	1.032E+01
78	3.882E+07	5.500E-02	9.913E+00
79	3.882E+07	5.285E-02	9.524E+00
2080	3.882E+07	5.077E-02	9.150E+00
2081	3.882E+07	4.878E-02	8.792E+00

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 R : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : 1,1,2,2-Tetrachloroethane (HAP/VOC)
 Molecular Wt = 167.85 Concentration = 1.110000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1,2,2-Tetrachloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	8.436E-04	1.208E-01
1973	1.392E+05	8.598E-03	1.232E+00
1974	3.050E+05	1.854E-02	2.655E+00
1975	4.974E+05	2.974E-02	4.260E+00
1976	7.027E+05	4.130E-02	5.916E+00
1977	9.562E+05	5.539E-02	7.934E+00
1978	1.235E+06	7.053E-02	1.010E+01
1979	1.523E+06	8.557E-02	1.226E+01
1980	1.839E+06	1.019E-01	1.459E+01
1981	2.162E+06	1.179E-01	1.688E+01
1982	2.473E+06	1.325E-01	1.898E+01
1983	2.806E+06	1.479E-01	2.119E+01
1984	3.186E+06	1.657E-01	2.374E+01
1985	3.624E+06	1.864E-01	2.670E+01
1986	4.159E+06	2.122E-01	3.040E+01
1987	4.685E+06	2.365E-01	3.388E+01
1988	5.257E+06	2.627E-01	3.763E+01
1989	5.783E+06	2.850E-01	4.083E+01
1990	6.365E+06	3.099E-01	4.440E+01
1991	7.016E+06	3.382E-01	4.844E+01
1992	7.727E+06	3.690E-01	5.285E+01
1993	8.389E+06	3.956E-01	5.666E+01
1994	9.086E+06	4.232E-01	6.062E+01
1995	9.822E+06	4.523E-01	6.478E+01
1996	1.059E+07	4.823E-01	6.908E+01
1997	1.135E+07	5.101E-01	7.307E+01
1998	1.206E+07	5.345E-01	7.657E+01
1999	1.274E+07	5.553E-01	7.954E+01
2000	1.342E+07	5.758E-01	8.248E+01
2001	1.403E+07	5.911E-01	8.466E+01
2002	1.482E+07	6.171E-01	8.839E+01
2003	1.563E+07	6.432E-01	9.213E+01
2004	1.646E+07	6.694E-01	9.589E+01
2005	1.731E+07	6.958E-01	9.966E+01
2006	1.818E+07	7.223E-01	1.035E+02
2007	1.907E+07	7.489E-01	1.073E+02
2008	1.997E+07	7.757E-01	1.111E+02
2009	2.090E+07	8.027E-01	1.150E+02
2010	2.184E+07	8.297E-01	1.189E+02
2011	2.265E+07	8.475E-01	1.214E+02
2012	2.348E+07	8.656E-01	1.240E+02
2013	2.432E+07	8.839E-01	1.266E+02

2014	2.518E+07	9.024E-01	1.203E+02
2015	2.605E+07	9.211E-01	1.133E+02
2016	2.694E+07	9.401E-01	1.347E+02
2017	2.785E+07	9.592E-01	1.374E+02
2018	2.876E+07	9.786E-01	1.402E+02
2019	2.970E+07	9.982E-01	1.430E+02
2020	3.065E+07	1.018E+00	1.458E+02
2021	3.162E+07	1.038E+00	1.487E+02
2022	3.260E+07	1.058E+00	1.516E+02
2023	3.360E+07	1.079E+00	1.545E+02
2024	3.461E+07	1.099E+00	1.574E+02
2025	3.564E+07	1.120E+00	1.604E+02
2026	3.668E+07	1.141E+00	1.634E+02
2027	3.775E+07	1.162E+00	1.664E+02
2028	3.882E+07	1.182E+00	1.694E+02
2029	3.882E+07	1.136E+00	1.627E+02
2030	3.882E+07	1.092E+00	1.564E+02
2031	3.882E+07	1.049E+00	1.502E+02
2032	3.882E+07	1.008E+00	1.443E+02
2033	3.882E+07	9.681E-01	1.387E+02
2034	3.882E+07	9.302E-01	1.332E+02
2035	3.882E+07	8.937E-01	1.280E+02
2036	3.882E+07	8.587E-01	1.230E+02
2037	3.882E+07	8.250E-01	1.182E+02
2038	3.882E+07	7.926E-01	1.135E+02
2039	3.882E+07	7.616E-01	1.091E+02
2040	3.882E+07	7.317E-01	1.048E+02
2041	3.882E+07	7.030E-01	1.007E+02
2042	3.882E+07	6.754E-01	9.675E+01
2043	3.882E+07	6.490E-01	9.296E+01
2044	3.882E+07	6.235E-01	8.931E+01
2045	3.882E+07	5.991E-01	8.581E+01
2046	3.882E+07	5.756E-01	8.244E+01
2047	3.882E+07	5.530E-01	7.921E+01
2048	3.882E+07	5.313E-01	7.611E+01
2049	3.882E+07	5.105E-01	7.312E+01
2050	3.882E+07	4.905E-01	7.025E+01
2051	3.882E+07	4.712E-01	6.750E+01
2052	3.882E+07	4.528E-01	6.485E+01
2053	3.882E+07	4.350E-01	6.231E+01
2054	3.882E+07	4.180E-01	5.987E+01
2055	3.882E+07	4.016E-01	5.752E+01
2056	3.882E+07	3.858E-01	5.526E+01

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
E : 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Pollutant : 1,1,2-Trichloroethane (HAP/VOC)
Molecular Wt = 133.41 Concentration = 0.100000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	1,1,2-Trichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	6.041E-05	1.089E-02
1973	1.392E+05	6.157E-04	1.110E-01
1974	3.050E+05	1.327E-03	2.392E-01
1975	4.974E+05	2.130E-03	3.838E-01
1976	7.027E+05	2.957E-03	5.330E-01
1977	9.562E+05	3.966E-03	7.148E-01
1978	1.235E+06	5.050E-03	9.101E-01
1979	1.523E+06	6.127E-03	1.104E+00
1980	1.839E+06	7.294E-03	1.314E+00
1981	2.162E+06	8.440E-03	1.521E+00
1982	2.473E+06	9.490E-03	1.710E+00
1983	2.806E+06	1.059E-02	1.909E+00
1984	3.186E+06	1.187E-02	2.139E+00
1985	3.624E+06	1.334E-02	2.405E+00
1986	4.159E+06	1.520E-02	2.739E+00
1987	4.685E+06	1.694E-02	3.052E+00
1988	5.257E+06	1.881E-02	3.390E+00
1989	5.783E+06	2.041E-02	3.678E+00
1990	6.365E+06	2.219E-02	4.000E+00
1991	7.016E+06	2.421E-02	4.364E+00
1992	7.727E+06	2.642E-02	4.761E+00
1993	8.389E+06	2.832E-02	5.104E+00
1994	9.086E+06	3.030E-02	5.461E+00
1995	9.822E+06	3.239E-02	5.836E+00
1996	1.059E+07	3.453E-02	6.223E+00
1997	1.135E+07	3.653E-02	6.583E+00
1998	1.206E+07	3.827E-02	6.898E+00
1999	1.274E+07	3.976E-02	7.166E+00
2000	1.342E+07	4.123E-02	7.430E+00
2001	1.403E+07	4.232E-02	7.627E+00
2002	1.482E+07	4.418E-02	7.963E+00
2003	1.563E+07	4.605E-02	8.300E+00
2004	1.646E+07	4.793E-02	8.638E+00
2005	1.731E+07	4.982E-02	8.978E+00
2006	1.818E+07	5.172E-02	9.321E+00
2007	1.907E+07	5.363E-02	9.665E+00
2008	1.997E+07	5.555E-02	1.001E+01
2009	2.090E+07	5.747E-02	1.036E+01
2010	2.184E+07	5.941E-02	1.071E+01
2011	2.265E+07	6.069E-02	1.094E+01
2012	2.348E+07	6.198E-02	1.117E+01
2013	2.432E+07	6.329E-02	1.141E+01

2014	2.518E+07	6.462E-02	1.164E+01
2015	2.605E+07	6.596E-02	1.1 +01
2016	2.694E+07	6.731E-02	1.215E+01
2017	2.785E+07	6.869E-02	1.238E+01
2018	2.876E+07	7.007E-02	1.263E+01
2019	2.970E+07	7.148E-02	1.288E+01
2020	3.065E+07	7.289E-02	1.314E+01
2021	3.162E+07	7.432E-02	1.339E+01
2022	3.260E+07	7.577E-02	1.365E+01
2023	3.360E+07	7.723E-02	1.392E+01
2024	3.461E+07	7.870E-02	1.418E+01
2025	3.564E+07	8.018E-02	1.445E+01
2026	3.668E+07	8.168E-02	1.472E+01
2027	3.775E+07	8.319E-02	1.499E+01
2028	3.882E+07	8.467E-02	1.526E+01
2029	3.882E+07	8.135E-02	1.466E+01
2030	3.882E+07	7.816E-02	1.409E+01
2031	3.882E+07	7.510E-02	1.353E+01
2032	3.882E+07	7.215E-02	1.300E+01
2033	3.882E+07	6.932E-02	1.249E+01
2034	3.882E+07	6.661E-02	1.200E+01
2035	3.882E+07	6.399E-02	1.153E+01
2036	3.882E+07	6.148E-02	1.108E+01
2037	3.882E+07	5.907E-02	1.065E+01
2038	3.882E+07	5.676E-02	1.023E+01
2039	3.882E+07	5.453E-02	9.828E+00
2040	3.882E+07	5.239E-02	9.442E+00
2041	3.882E+07	5.034E-02	9.072E+00
2042	3.882E+07	4.837E-02	8.716E+00
2043	3.882E+07	4.647E-02	8.374E+00
2044	3.882E+07	4.465E-02	8.046E+00
2045	3.882E+07	4.290E-02	7.731E+00
2046	3.882E+07	4.121E-02	7.427E+00
2047	3.882E+07	3.960E-02	7.136E+00
2048	3.882E+07	3.805E-02	6.856E+00
2049	3.882E+07	3.655E-02	6.588E+00
2050	3.882E+07	3.512E-02	6.329E+00
2051	3.882E+07	3.374E-02	6.081E+00
2052	3.882E+07	3.242E-02	5.843E+00
2053	3.882E+07	3.115E-02	5.614E+00
2054	3.882E+07	2.993E-02	5.393E+00
2055	3.882E+07	2.875E-02	5.182E+00
2056	3.882E+07	2.763E-02	4.979E+00
2057	3.882E+07	2.654E-02	4.784E+00
2058	3.882E+07	2.550E-02	4.596E+00
2059	3.882E+07	2.450E-02	4.416E+00
2060	3.882E+07	2.354E-02	4.243E+00
2061	3.882E+07	2.262E-02	4.076E+00
2062	3.882E+07	2.173E-02	3.916E+00

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
: 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
r Pollutant : 1,1-Dichloroethane (HAP/VOC)
ecular Wt = 98.96 Concentration = 2.350000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	1,1-Dichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.053E-03	2.558E-01
1973	1.392E+05	1.073E-02	2.607E+00
1974	3.050E+05	2.314E-02	5.622E+00
1975	4.974E+05	3.712E-02	9.019E+00
1976	7.027E+05	5.155E-02	1.252E+01
1977	9.562E+05	6.914E-02	1.680E+01
1978	1.235E+06	8.803E-02	2.139E+01
1979	1.523E+06	1.068E-01	2.595E+01
1980	1.839E+06	1.271E-01	3.089E+01
1981	2.162E+06	1.471E-01	3.574E+01
1982	2.473E+06	1.654E-01	4.019E+01
1983	2.806E+06	1.847E-01	4.487E+01
1984	3.186E+06	2.069E-01	5.026E+01
1985	3.624E+06	2.326E-01	5.652E+01
1986	4.159E+06	2.649E-01	6.436E+01
1987	4.685E+06	2.952E-01	7.173E+01
1988	5.257E+06	3.279E-01	7.966E+01
1989	5.783E+06	3.558E-01	8.643E+01
1990	6.365E+06	3.869E-01	9.399E+01
1991	7.016E+06	4.221E-01	1.025E+02
1992	7.727E+06	4.605E-01	1.119E+02
1993	8.389E+06	4.937E-01	1.200E+02
1994	9.086E+06	5.283E-01	1.283E+02
1995	9.822E+06	5.645E-01	1.372E+02
1996	1.059E+07	6.020E-01	1.462E+02
1997	1.135E+07	6.367E-01	1.547E+02
1998	1.206E+07	6.672E-01	1.621E+02
1999	1.274E+07	6.931E-01	1.684E+02
2000	1.342E+07	7.187E-01	1.746E+02
2001	1.403E+07	7.378E-01	1.792E+02
2002	1.482E+07	7.702E-01	1.871E+02
2003	1.563E+07	8.028E-01	1.950E+02
2004	1.646E+07	8.356E-01	2.030E+02
2005	1.731E+07	8.685E-01	2.110E+02
2006	1.818E+07	9.016E-01	2.190E+02
2007	1.907E+07	9.348E-01	2.271E+02
2008	1.997E+07	9.683E-01	2.352E+02
2009	2.090E+07	1.002E+00	2.434E+02
2010	2.184E+07	1.036E+00	2.516E+02
2011	2.265E+07	1.058E+00	2.570E+02
2012	2.348E+07	1.080E+00	2.625E+02
2013	2.432E+07	1.103E+00	2.680E+02

2014	2.518E+07	1.126E+00	2.737E+02
2015	2.605E+07	1.150E+00	2.7 +02
2016	2.694E+07	1.173E+00	2.851E+02
2017	2.785E+07	1.197E+00	2.909E+02
2018	2.876E+07	1.221E+00	2.968E+02
2019	2.970E+07	1.246E+00	3.027E+02
2020	3.065E+07	1.271E+00	3.087E+02
2021	3.162E+07	1.296E+00	3.148E+02
2022	3.260E+07	1.321E+00	3.209E+02
2023	3.360E+07	1.346E+00	3.271E+02
2024	3.461E+07	1.372E+00	3.333E+02
2025	3.564E+07	1.398E+00	3.396E+02
2026	3.668E+07	1.424E+00	3.459E+02
2027	3.775E+07	1.450E+00	3.523E+02
2028	3.882E+07	1.476E+00	3.586E+02
2029	3.882E+07	1.418E+00	3.445E+02
2030	3.882E+07	1.362E+00	3.310E+02
2031	3.882E+07	1.309E+00	3.180E+02
2032	3.882E+07	1.258E+00	3.056E+02
2033	3.882E+07	1.208E+00	2.936E+02
2034	3.882E+07	1.161E+00	2.821E+02
2035	3.882E+07	1.116E+00	2.710E+02
2036	3.882E+07	1.072E+00	2.604E+02
2037	3.882E+07	1.030E+00	2.502E+02
2038	3.882E+07	9.894E-01	2.404E+02
2039	3.882E+07	9.506E-01	2.309E+02
2040	3.882E+07	9.133E-01	2.219E+02
2041	3.882E+07	8.775E-01	2.132E+02
2042	3.882E+07	8.431E-01	2.048E+02
2043	3.882E+07	8.100E-01	1.968E+02
2044	3.882E+07	7.783E-01	1.891E+02
2045	3.882E+07	7.478E-01	1.817E+02
2046	3.882E+07	7.184E-01	1.745E+02
2047	3.882E+07	6.903E-01	1.677E+02
2048	3.882E+07	6.632E-01	1.611E+02
2049	3.882E+07	6.372E-01	1.548E+02
2050	3.882E+07	6.122E-01	1.487E+02
2051	3.882E+07	5.882E-01	1.429E+02
2052	3.882E+07	5.651E-01	1.373E+02
2053	3.882E+07	5.430E-01	1.319E+02
2054	3.882E+07	5.217E-01	1.267E+02
2055	3.882E+07	5.012E-01	1.218E+02
2056	3.882E+07	4.816E-01	1.170E+02
2057	3.882E+07	4.627E-01	1.124E+02
2058	3.882E+07	4.446E-01	1.080E+02
2059	3.882E+07	4.271E-01	1.038E+02
2060	3.882E+07	4.104E-01	9.970E+01
2061	3.882E+07	3.943E-01	9.579E+01
2062	3.882E+07	3.788E-01	9.204E+01
2063	3.882E+07	3.640E-01	8.843E+01
2064	3.882E+07	3.497E-01	8.496E+01
2065	3.882E+07	3.360E-01	8.163E+01
2066	3.882E+07	3.228E-01	7.843E+01
2067	3.882E+07	3.102E-01	7.535E+01
2068	3.882E+07	2.980E-01	7.240E+01
2069	3.882E+07	2.863E-01	6.956E+01
2070	3.882E+07	2.751E-01	6.683E+01
2071	3.882E+07	2.643E-01	6.421E+01
2072	3.882E+07	2.539E-01	6.169E+01
2073	3.882E+07	2.440E-01	5.927E+01
2074	3.882E+07	2.344E-01	5.695E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 i : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : 1,1-Dichloroethene (HAP/VOC)
 Molecular Wt = 96.94 Concentration = 0.200000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1-Dichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	8.779E-05	2.177E-02
1973	1.392E+05	8.947E-04	2.219E-01
1974	3.050E+05	1.929E-03	4.785E-01
1975	4.974E+05	3.095E-03	7.675E-01
1976	7.027E+05	4.298E-03	1.066E+00
1977	9.562E+05	5.764E-03	1.430E+00
1978	1.235E+06	7.339E-03	1.820E+00
1979	1.523E+06	8.905E-03	2.209E+00
1980	1.839E+06	1.060E-02	2.629E+00
1981	2.162E+06	1.227E-02	3.042E+00
1982	2.473E+06	1.379E-02	3.420E+00
1983	2.806E+06	1.540E-02	3.818E+00
1984	3.186E+06	1.725E-02	4.277E+00
1985	3.624E+06	1.939E-02	4.810E+00
1986	4.159E+06	2.209E-02	5.478E+00
1987	4.685E+06	2.461E-02	6.105E+00
1988	5.257E+06	2.734E-02	6.780E+00
1989	5.783E+06	2.966E-02	7.356E+00
1990	6.365E+06	3.225E-02	7.999E+00
1991	7.016E+06	3.519E-02	8.727E+00
1992	7.727E+06	3.839E-02	9.522E+00
1993	8.389E+06	4.116E-02	1.021E+01
1994	9.086E+06	4.404E-02	1.092E+01
1995	9.822E+06	4.706E-02	1.167E+01
1996	1.059E+07	5.018E-02	1.245E+01
1997	1.135E+07	5.308E-02	1.317E+01
1998	1.206E+07	5.562E-02	1.380E+01
1999	1.274E+07	5.778E-02	1.433E+01
2000	1.342E+07	5.992E-02	1.486E+01
2001	1.403E+07	6.151E-02	1.525E+01
2002	1.482E+07	6.421E-02	1.593E+01
2003	1.563E+07	6.693E-02	1.660E+01
2004	1.646E+07	6.966E-02	1.728E+01
2005	1.731E+07	7.240E-02	1.796E+01
2006	1.818E+07	7.516E-02	1.864E+01
2007	1.907E+07	7.794E-02	1.933E+01
2008	1.997E+07	8.072E-02	2.002E+01
2009	2.090E+07	8.353E-02	2.072E+01
2010	2.184E+07	8.634E-02	2.141E+01
2011	2.265E+07	8.820E-02	2.187E+01
2012	2.348E+07	9.007E-02	2.234E+01
2013	2.432E+07	9.198E-02	2.281E+01

2014	2.518E+07	9.390E-02	2.379E+01
2015	2.605E+07	9.585E-02	2.426E+01
2016	2.694E+07	9.782E-02	2.476E+01
2017	2.785E+07	9.982E-02	2.526E+01
2018	2.876E+07	1.018E-01	2.576E+01
2019	2.970E+07	1.039E-01	2.627E+01
2020	3.065E+07	1.059E-01	2.679E+01
2021	3.162E+07	1.080E-01	2.731E+01
2022	3.260E+07	1.101E-01	2.784E+01
2023	3.360E+07	1.122E-01	2.837E+01
2024	3.461E+07	1.144E-01	2.890E+01
2025	3.564E+07	1.165E-01	2.944E+01
2026	3.668E+07	1.187E-01	2.998E+01
2027	3.775E+07	1.209E-01	3.052E+01
2028	3.882E+07	1.231E-01	2.932E+01
2029	3.882E+07	1.182E-01	2.817E+01
2030	3.882E+07	1.136E-01	2.707E+01
2031	3.882E+07	1.091E-01	2.601E+01
2032	3.882E+07	1.049E-01	2.499E+01
2033	3.882E+07	1.007E-01	2.401E+01
2034	3.882E+07	9.680E-02	2.307E+01
2035	3.882E+07	9.300E-02	2.216E+01
2036	3.882E+07	8.935E-02	2.129E+01
2037	3.882E+07	8.585E-02	2.046E+01
2038	3.882E+07	8.248E-02	1.966E+01
2039	3.882E+07	7.925E-02	1.888E+01
2040	3.882E+07	7.614E-02	1.814E+01
2041	3.882E+07	7.316E-02	1.743E+01
2042	3.882E+07	7.029E-02	1.675E+01
2043	3.882E+07	6.753E-02	1.609E+01
2044	3.882E+07	6.488E-02	1.546E+01
2045	3.882E+07	6.234E-02	1.485E+01
2046	3.882E+07	5.990E-02	1.427E+01
2047	3.882E+07	5.755E-02	1.371E+01
2048	3.882E+07	5.529E-02	1.318E+01
2049	3.882E+07	5.312E-02	1.266E+01
2050	3.882E+07	5.104E-02	1.216E+01
2051	3.882E+07	4.904E-02	1.169E+01
2052	3.882E+07	4.712E-02	1.123E+01
2053	3.882E+07	4.527E-02	1.079E+01
2054	3.882E+07	4.349E-02	1.036E+01
2055	3.882E+07	4.179E-02	9.958E+00
2056	3.882E+07	4.015E-02	9.567E+00
2057	3.882E+07	3.857E-02	9.192E+00
2058	3.882E+07	3.706E-02	8.832E+00
2059	3.882E+07	3.561E-02	8.485E+00
2060	3.882E+07	3.421E-02	8.153E+00
2061	3.882E+07	3.287E-02	7.833E+00
2062	3.882E+07	3.158E-02	7.526E+00
2063	3.882E+07	3.034E-02	7.231E+00
2064	3.882E+07	2.915E-02	6.947E+00
2065	3.882E+07	2.801E-02	6.675E+00
2066	3.882E+07	2.691E-02	6.413E+00
2067	3.882E+07	2.586E-02	6.162E+00
2068	3.882E+07	2.484E-02	5.920E+00
2069	3.882E+07	2.387E-02	5.688E+00
2070	3.882E+07	2.293E-02	5.465E+00
2071	3.882E+07	2.203E-02	

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
W : 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Primary Pollutant : 1,2-Dichloroethane (HAP/VOC)
Molecular Wt = 98.96 Concentration = 0.410000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	1,2-Dichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.837E-04	4.463E-02
1973	1.392E+05	1.872E-03	4.549E-01
1974	3.050E+05	4.037E-03	9.808E-01
1975	4.974E+05	6.476E-03	1.573E+00
1976	7.027E+05	8.994E-03	2.185E+00
1977	9.562E+05	1.206E-02	2.931E+00
1978	1.235E+06	1.536E-02	3.731E+00
1979	1.523E+06	1.864E-02	4.527E+00
1980	1.839E+06	2.218E-02	5.389E+00
1981	2.162E+06	2.567E-02	6.236E+00
1982	2.473E+06	2.886E-02	7.012E+00
1983	2.806E+06	3.222E-02	7.828E+00
1984	3.186E+06	3.609E-02	8.768E+00
1985	3.624E+06	4.059E-02	9.860E+00
1986	4.159E+06	4.622E-02	1.123E+01
1987	4.685E+06	5.151E-02	1.251E+01
1988	5.257E+06	5.721E-02	1.390E+01
1989	5.783E+06	6.207E-02	1.508E+01
1990	6.365E+06	6.750E-02	1.640E+01
1991	7.016E+06	7.364E-02	1.789E+01
1992	7.727E+06	8.035E-02	1.952E+01
1993	8.389E+06	8.614E-02	2.093E+01
1994	9.086E+06	9.217E-02	2.239E+01
1995	9.822E+06	9.849E-02	2.393E+01
1996	1.059E+07	1.050E-01	2.552E+01
1997	1.135E+07	1.111E-01	2.699E+01
1998	1.206E+07	1.164E-01	2.828E+01
1999	1.274E+07	1.209E-01	2.938E+01
2000	1.342E+07	1.254E-01	3.047E+01
2001	1.403E+07	1.287E-01	3.127E+01
2002	1.482E+07	1.344E-01	3.265E+01
2003	1.563E+07	1.401E-01	3.403E+01
2004	1.646E+07	1.458E-01	3.542E+01
2005	1.731E+07	1.515E-01	3.681E+01
2006	1.818E+07	1.573E-01	3.821E+01
2007	1.907E+07	1.631E-01	3.962E+01
2008	1.997E+07	1.689E-01	4.104E+01
2009	2.090E+07	1.748E-01	4.247E+01
2010	2.184E+07	1.807E-01	4.390E+01
2011	2.265E+07	1.846E-01	4.484E+01
2012	2.348E+07	1.885E-01	4.580E+01
2013	2.432E+07	1.925E-01	4.676E+01

014	2.518E+07	1.965E-01	4.77E+01
015	2.605E+07	2.006E-01	4.87E+01
2016	2.694E+07	2.047E-01	4.974E+01
2017	2.785E+07	2.089E-01	5.075E+01
018	2.876E+07	2.131E-01	5.178E+01
019	2.970E+07	2.174E-01	5.281E+01
2020	3.065E+07	2.217E-01	5.386E+01
2021	3.162E+07	2.260E-01	5.492E+01
022	3.260E+07	2.304E-01	5.598E+01
023	3.360E+07	2.349E-01	5.706E+01
2024	3.461E+07	2.393E-01	5.815E+01
025	3.564E+07	2.439E-01	5.924E+01
026	3.668E+07	2.484E-01	6.035E+01
2027	3.775E+07	2.530E-01	6.147E+01
2028	3.882E+07	2.575E-01	6.256E+01
029	3.882E+07	2.474E-01	6.011E+01
030	3.882E+07	2.377E-01	5.775E+01
2031	3.882E+07	2.284E-01	5.549E+01
2032	3.882E+07	2.194E-01	5.331E+01
033	3.882E+07	2.108E-01	5.122E+01
034	3.882E+07	2.026E-01	4.921E+01
2035	3.882E+07	1.946E-01	4.728E+01
2036	3.882E+07	1.870E-01	4.543E+01
037	3.882E+07	1.797E-01	4.365E+01
038	3.882E+07	1.726E-01	4.194E+01
2039	3.882E+07	1.658E-01	4.029E+01
040	3.882E+07	1.593E-01	3.871E+01
041	3.882E+07	1.531E-01	3.719E+01
2042	3.882E+07	1.471E-01	3.574E+01
2043	3.882E+07	1.413E-01	3.434E+01
044	3.882E+07	1.358E-01	3.299E+01
045	3.882E+07	1.305E-01	3.170E+01
2046	3.882E+07	1.253E-01	3.045E+01
2047	3.882E+07	1.204E-01	2.926E+01
048	3.882E+07	1.157E-01	2.811E+01
049	3.882E+07	1.112E-01	2.701E+01
2050	3.882E+07	1.068E-01	2.595E+01
051	3.882E+07	1.026E-01	2.493E+01
052	3.882E+07	9.860E-02	2.395E+01
053	3.882E+07	9.473E-02	2.302E+01
2054	3.882E+07	9.102E-02	2.211E+01
055	3.882E+07	8.745E-02	2.125E+01
056	3.882E+07	8.402E-02	2.041E+01
2057	3.882E+07	8.073E-02	1.961E+01
2058	3.882E+07	7.756E-02	1.884E+01
059	3.882E+07	7.452E-02	1.810E+01
060	3.882E+07	7.160E-02	1.739E+01
2061	3.882E+07	6.879E-02	1.671E+01
2062	3.882E+07	6.609E-02	1.606E+01
063	3.882E+07	6.350E-02	1.543E+01
064	3.882E+07	6.101E-02	1.482E+01
2065	3.882E+07	5.862E-02	1.424E+01

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
: 0.0400 1/yr ***** User Mode Selection *****
MOC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Air Pollutant : 1,2-Dichloropropane (HAP/VOC)
Molecular Wt = 112.99 Concentration = 0.180000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	1,2-Dichloropropane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	9.209E-05	1.960E-02
1973	1.392E+05	9.386E-04	1.997E-01
1974	3.050E+05	2.024E-03	4.306E-01
1975	4.974E+05	3.246E-03	6.908E-01
1976	7.027E+05	4.508E-03	9.593E-01
1977	9.562E+05	6.047E-03	1.287E+00
1978	1.235E+06	7.699E-03	1.638E+00
1979	1.523E+06	9.341E-03	1.988E+00
1980	1.839E+06	1.112E-02	2.366E+00
1981	2.162E+06	1.287E-02	2.738E+00
1982	2.473E+06	1.447E-02	3.078E+00
1983	2.806E+06	1.615E-02	3.436E+00
1984	3.186E+06	1.809E-02	3.849E+00
1985	3.624E+06	2.034E-02	4.329E+00
1986	4.159E+06	2.317E-02	4.930E+00
1987	4.685E+06	2.582E-02	5.494E+00
1988	5.257E+06	2.868E-02	6.102E+00
1989	5.783E+06	3.111E-02	6.620E+00
1990	6.365E+06	3.383E-02	7.199E+00
1991	7.016E+06	3.691E-02	7.855E+00
1992	7.727E+06	4.028E-02	8.570E+00
1993	8.389E+06	4.318E-02	9.188E+00
1994	9.086E+06	4.620E-02	9.831E+00
1995	9.822E+06	4.937E-02	1.051E+01
1996	1.059E+07	5.264E-02	1.120E+01
1997	1.135E+07	5.569E-02	1.185E+01
1998	1.206E+07	5.835E-02	1.242E+01
1999	1.274E+07	6.062E-02	1.290E+01
2000	1.342E+07	6.286E-02	1.337E+01
2001	1.403E+07	6.452E-02	1.373E+01
2002	1.482E+07	6.736E-02	1.433E+01
2003	1.563E+07	7.021E-02	1.494E+01
2004	1.646E+07	7.307E-02	1.555E+01
2005	1.731E+07	7.595E-02	1.616E+01
2006	1.818E+07	7.885E-02	1.678E+01
2007	1.907E+07	8.175E-02	1.740E+01
2008	1.997E+07	8.468E-02	1.802E+01
2009	2.090E+07	8.762E-02	1.864E+01
2010	2.184E+07	9.057E-02	1.927E+01
2011	2.265E+07	9.252E-02	1.969E+01
2012	2.348E+07	9.449E-02	2.011E+01
2013	2.432E+07	9.648E-02	2.053E+01

14	2.518E+07	9.851E-02	2.07E+01
15	2.605E+07	1.006E-01	2.1E+01
2016	2.694E+07	1.026E-01	2.184E+01
2017	2.785E+07	1.047E-01	2.228E+01
18	2.876E+07	1.068E-01	2.273E+01
19	2.970E+07	1.090E-01	2.319E+01
2020	3.065E+07	1.111E-01	2.365E+01
2021	3.162E+07	1.133E-01	2.411E+01
22	3.260E+07	1.155E-01	2.458E+01
23	3.360E+07	1.177E-01	2.505E+01
2024	3.461E+07	1.200E-01	2.553E+01
25	3.564E+07	1.222E-01	2.601E+01
26	3.668E+07	1.245E-01	2.650E+01
27	3.775E+07	1.268E-01	2.698E+01
2028	3.882E+07	1.291E-01	2.747E+01
29	3.882E+07	1.240E-01	2.639E+01
30	3.882E+07	1.192E-01	2.535E+01
2031	3.882E+07	1.145E-01	2.436E+01
2032	3.882E+07	1.100E-01	2.341E+01
33	3.882E+07	1.057E-01	2.249E+01
34	3.882E+07	1.015E-01	2.161E+01
2035	3.882E+07	9.756E-02	2.076E+01
2036	3.882E+07	9.373E-02	1.994E+01
37	3.882E+07	9.006E-02	1.916E+01
38	3.882E+07	8.653E-02	1.841E+01
2039	3.882E+07	8.313E-02	1.769E+01
40	3.882E+07	7.987E-02	1.700E+01
41	3.882E+07	7.674E-02	1.633E+01
42	3.882E+07	7.373E-02	1.569E+01
2043	3.882E+07	7.084E-02	1.507E+01
44	3.882E+07	6.806E-02	1.448E+01
45	3.882E+07	6.539E-02	1.392E+01
2046	3.882E+07	6.283E-02	1.337E+01
2047	3.882E+07	6.037E-02	1.285E+01
48	3.882E+07	5.800E-02	1.234E+01
49	3.882E+07	5.573E-02	1.186E+01
2050	3.882E+07	5.354E-02	1.139E+01
2051	3.882E+07	5.144E-02	1.095E+01
52	3.882E+07	4.942E-02	1.052E+01
53	3.882E+07	4.749E-02	1.010E+01
2054	3.882E+07	4.562E-02	9.708E+00
55	3.882E+07	4.384E-02	9.328E+00
56	3.882E+07	4.212E-02	8.962E+00
57	3.882E+07	4.047E-02	8.610E+00
2058	3.882E+07	3.888E-02	8.273E+00
59	3.882E+07	3.735E-02	7.948E+00
60	3.882E+07	3.589E-02	7.637E+00
2061	3.882E+07	3.448E-02	7.337E+00
2062	3.882E+07	3.313E-02	7.050E+00
63	3.882E+07	3.183E-02	6.773E+00
64	3.882E+07	3.058E-02	6.508E+00
2065	3.882E+07	2.938E-02	6.252E+00
2066	3.882E+07	2.823E-02	6.007E+00
67	3.882E+07	2.712E-02	5.772E+00
68	3.882E+07	2.606E-02	5.545E+00
2069	3.882E+07	2.504E-02	5.328E+00
70	3.882E+07	2.406E-02	5.119E+00
71	3.882E+07	2.311E-02	4.918E+00
72	3.882E+07	2.221E-02	4.725E+00
2073	3.882E+07	2.134E-02	4.540E+00
74	3.882E+07	2.050E-02	4.362E+00

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
R : 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
r Pollutant : Acrylonitrile (HAP/VOC)
Molecular Wt = 53.06 Concentration = 6.330000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	Acrylonitrile (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.521E-03	6.891E-01
1973	1.392E+05	1.550E-02	7.023E+00
1974	3.050E+05	3.342E-02	1.514E+01
1975	4.974E+05	5.361E-02	2.429E+01
1976	7.027E+05	7.445E-02	3.374E+01
1977	9.562E+05	9.986E-02	4.525E+01
1978	1.235E+06	1.271E-01	5.761E+01
1979	1.523E+06	1.543E-01	6.990E+01
1980	1.839E+06	1.836E-01	8.321E+01
1981	2.162E+06	2.125E-01	9.628E+01
1982	2.473E+06	2.389E-01	1.083E+02
1983	2.806E+06	2.667E-01	1.209E+02
1984	3.186E+06	2.988E-01	1.354E+02
1985	3.624E+06	3.360E-01	1.522E+02
1986	4.159E+06	3.826E-01	1.734E+02
1987	4.685E+06	4.264E-01	1.932E+02
1988	5.257E+06	4.736E-01	2.146E+02
1989	5.783E+06	5.138E-01	2.328E+02
1990	6.365E+06	5.587E-01	2.532E+02
1991	7.016E+06	6.096E-01	2.762E+02
1992	7.727E+06	6.651E-01	3.014E+02
1993	8.389E+06	7.131E-01	3.231E+02
1994	9.086E+06	7.629E-01	3.457E+02
1995	9.822E+06	8.153E-01	3.694E+02
1996	1.059E+07	8.694E-01	3.939E+02
1997	1.135E+07	9.196E-01	4.167E+02
1998	1.206E+07	9.636E-01	4.366E+02
1999	1.274E+07	1.001E+00	4.536E+02
2000	1.342E+07	1.038E+00	4.703E+02
2001	1.403E+07	1.066E+00	4.828E+02
2002	1.482E+07	1.112E+00	5.040E+02
2003	1.563E+07	1.159E+00	5.254E+02
2004	1.646E+07	1.207E+00	5.468E+02
2005	1.731E+07	1.254E+00	5.683E+02
2006	1.818E+07	1.302E+00	5.900E+02
2007	1.907E+07	1.350E+00	6.118E+02
2008	1.997E+07	1.398E+00	6.336E+02
2009	2.090E+07	1.447E+00	6.556E+02
2010	2.184E+07	1.496E+00	6.778E+02
2011	2.265E+07	1.528E+00	6.923E+02
2012	2.348E+07	1.560E+00	7.071E+02
2013	2.432E+07	1.593E+00	7.220E+02

14	2.518E+07	1.627E+00	7.377E+02
15	2.605E+07	1.661E+00	7.577E+02
2016	2.694E+07	1.695E+00	7.679E+02
2017	2.785E+07	1.729E+00	7.835E+02
18	2.876E+07	1.764E+00	7.994E+02
19	2.970E+07	1.799E+00	8.154E+02
2020	3.065E+07	1.835E+00	8.315E+02
2021	3.162E+07	1.871E+00	8.479E+02
22	3.260E+07	1.908E+00	8.643E+02
23	3.360E+07	1.944E+00	8.810E+02
2024	3.461E+07	1.981E+00	8.978E+02
25	3.564E+07	2.019E+00	9.147E+02
26	3.668E+07	2.056E+00	9.317E+02
27	3.775E+07	2.094E+00	9.490E+02
2028	3.882E+07	2.132E+00	9.659E+02
29	3.882E+07	2.048E+00	9.280E+02
30	3.882E+07	1.968E+00	8.916E+02
2031	3.882E+07	1.891E+00	8.567E+02
2032	3.882E+07	1.816E+00	8.231E+02
33	3.882E+07	1.745E+00	7.908E+02
34	3.882E+07	1.677E+00	7.598E+02
2035	3.882E+07	1.611E+00	7.300E+02
2036	3.882E+07	1.548E+00	7.014E+02
37	3.882E+07	1.487E+00	6.739E+02
38	3.882E+07	1.429E+00	6.475E+02
2039	3.882E+07	1.373E+00	6.221E+02
40	3.882E+07	1.319E+00	5.977E+02
41	3.882E+07	1.267E+00	5.743E+02
42	3.882E+07	1.218E+00	5.517E+02
2043	3.882E+07	1.170E+00	5.301E+02
44	3.882E+07	1.124E+00	5.093E+02
45	3.882E+07	1.080E+00	4.893E+02
2046	3.882E+07	1.038E+00	4.702E+02
2047	3.882E+07	9.969E-01	4.517E+02
48	3.882E+07	9.578E-01	4.340E+02
49	3.882E+07	9.203E-01	4.170E+02
2050	3.882E+07	8.842E-01	4.006E+02
2051	3.882E+07	8.495E-01	3.849E+02
52	3.882E+07	8.162E-01	3.698E+02
53	3.882E+07	7.842E-01	3.553E+02
2054	3.882E+07	7.535E-01	3.414E+02
55	3.882E+07	7.239E-01	3.280E+02
56	3.882E+07	6.955E-01	3.152E+02
57	3.882E+07	6.683E-01	3.028E+02
2058	3.882E+07	6.420E-01	2.909E+02
59	3.882E+07	6.169E-01	2.795E+02
60	3.882E+07	5.927E-01	2.686E+02
2061	3.882E+07	5.694E-01	2.580E+02
2062	3.882E+07	5.471E-01	2.479E+02
63	3.882E+07	5.257E-01	2.382E+02
64	3.882E+07	5.051E-01	2.289E+02
2065	3.882E+07	4.853E-01	2.199E+02
2066	3.882E+07	4.662E-01	2.113E+02
67	3.882E+07	4.479E-01	2.030E+02
68	3.882E+07	4.304E-01	1.950E+02
2069	3.882E+07	4.135E-01	1.874E+02
70	3.882E+07	3.973E-01	1.800E+02
71	3.882E+07	3.817E-01	1.730E+02
72	3.882E+07	3.667E-01	1.662E+02
2073	3.882E+07	3.524E-01	1.597E+02
74	3.882E+07	3.385E-01	1.534E+02
75	3.882E+07	3.253E-01	1.474E+02
2076	3.882E+07	3.125E-01	1.416E+02
2077	3.882E+07	3.003E-01	1.361E+02
78	3.882E+07	2.885E-01	1.307E+02
79	3.882E+07	2.772E-01	1.256E+02
2080	3.882E+07	2.663E-01	1.207E+02

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
W : 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Primary Pollutant : Benzene (HAP/VOC)
Molecular Wt = 78.12 Concentration = 1.910000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	Benzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	6.756E-04	2.079E-01
1973	1.392E+05	6.886E-03	2.119E+00
1974	3.050E+05	1.485E-02	4.569E+00
1975	4.974E+05	2.382E-02	7.330E+00
1976	7.027E+05	3.308E-02	1.018E+01
1977	9.562E+05	4.436E-02	1.365E+01
1978	1.235E+06	5.648E-02	1.738E+01
1979	1.523E+06	6.853E-02	2.109E+01
1980	1.839E+06	8.158E-02	2.511E+01
1981	2.162E+06	9.440E-02	2.905E+01
1982	2.473E+06	1.061E-01	3.266E+01
1983	2.806E+06	1.185E-01	3.647E+01
1984	3.186E+06	1.327E-01	4.085E+01
1985	3.624E+06	1.493E-01	4.593E+01
1986	4.159E+06	1.700E-01	5.231E+01
1987	4.685E+06	1.894E-01	5.830E+01
1988	5.257E+06	2.104E-01	6.475E+01
1989	5.783E+06	2.283E-01	7.025E+01
1990	6.365E+06	2.482E-01	7.639E+01
1991	7.016E+06	2.708E-01	8.335E+01
1992	7.727E+06	2.955E-01	9.094E+01
1993	8.389E+06	3.168E-01	9.749E+01
1994	9.086E+06	3.389E-01	1.043E+02
1995	9.822E+06	3.622E-01	1.115E+02
1996	1.059E+07	3.862E-01	1.189E+02
1997	1.135E+07	4.085E-01	1.257E+02
1998	1.206E+07	4.281E-01	1.317E+02
1999	1.274E+07	4.447E-01	1.369E+02
2000	1.342E+07	4.611E-01	1.419E+02
2001	1.403E+07	4.734E-01	1.457E+02
2002	1.482E+07	4.942E-01	1.521E+02
2003	1.563E+07	5.151E-01	1.585E+02
2004	1.646E+07	5.361E-01	1.650E+02
2005	1.731E+07	5.572E-01	1.715E+02
2006	1.818E+07	5.784E-01	1.780E+02
2007	1.907E+07	5.998E-01	1.846E+02
2008	1.997E+07	6.212E-01	1.912E+02
2009	2.090E+07	6.428E-01	1.978E+02
2010	2.184E+07	6.645E-01	2.045E+02
2011	2.265E+07	6.787E-01	2.089E+02
2012	2.348E+07	6.932E-01	2.133E+02
2013	2.432E+07	7.078E-01	2.179E+02

2014	2.518E+07	7.227E-01	2.224E+02
2015	2.605E+07	7.377E-01	2.2 +02
2016	2.694E+07	7.528E-01	2.31 +02
2017	2.785E+07	7.682E-01	2.364E+02
2018	2.876E+07	7.837E-01	2.412E+02
2019	2.970E+07	7.994E-01	2.460E+02
2020	3.065E+07	8.153E-01	2.509E+02
2021	3.162E+07	8.313E-01	2.558E+02
2022	3.260E+07	8.474E-01	2.608E+02
2023	3.360E+07	8.637E-01	2.658E+02
2024	3.461E+07	8.802E-01	2.709E+02
2025	3.564E+07	8.968E-01	2.760E+02
2026	3.668E+07	9.135E-01	2.811E+02
2027	3.775E+07	9.304E-01	2.863E+02
2028	3.882E+07	9.470E-01	2.915E+02
2029	3.882E+07	9.099E-01	2.800E+02
2030	3.882E+07	8.742E-01	2.690E+02
2031	3.882E+07	8.399E-01	2.585E+02
2032	3.882E+07	8.070E-01	2.484E+02
2033	3.882E+07	7.753E-01	2.386E+02
2034	3.882E+07	7.449E-01	2.293E+02
2035	3.882E+07	7.157E-01	2.203E+02
2036	3.882E+07	6.877E-01	2.116E+02
2037	3.882E+07	6.607E-01	2.033E+02
2038	3.882E+07	6.348E-01	1.954E+02
2039	3.882E+07	6.099E-01	1.877E+02
2040	3.882E+07	5.860E-01	1.803E+02
2041	3.882E+07	5.630E-01	1.733E+02
2042	3.882E+07	5.409E-01	1.665E+02
2043	3.882E+07	5.197E-01	1.600E+02
2044	3.882E+07	4.993E-01	1.537E+02
2045	3.882E+07	4.798E-01	1.477E+02
2046	3.882E+07	4.610E-01	1.419E+02
2047	3.882E+07	4.429E-01	1.363E+02
2048	3.882E+07	4.255E-01	1.310E+02
2049	3.882E+07	4.088E-01	1.258E+02
2050	3.882E+07	3.928E-01	1.209E+02
2051	3.882E+07	3.774E-01	1.161E+02
2052	3.882E+07	3.626E-01	1.116E+02
2053	3.882E+07	3.484E-01	1.072E+02
2054	3.882E+07	3.347E-01	1.030E+02
2055	3.882E+07	3.216E-01	9.898E+01
2056	3.882E+07	3.090E-01	9.509E+01
2057	3.882E+07	2.969E-01	9.137E+01
2058	3.882E+07	2.852E-01	8.778E+01
2059	3.882E+07	2.740E-01	8.434E+01
2060	3.882E+07	2.633E-01	8.103E+01
2061	3.882E+07	2.530E-01	7.786E+01
2062	3.882E+07	2.431E-01	7.480E+01
2063	3.882E+07	2.335E-01	7.187E+01
2064	3.882E+07	2.244E-01	6.905E+01
2065	3.882E+07	2.156E-01	6.635E+01
2066	3.882E+07	2.071E-01	6.374E+01
2067	3.882E+07	1.990E-01	6.124E+01
2068	3.882E+07	1.912E-01	5.884E+01
2069	3.882E+07	1.837E-01	5.654E+01
2070	3.882E+07	1.765E-01	5.432E+01
2071	3.882E+07	1.696E-01	5.219E+01
2072	3.882E+07	1.629E-01	5.014E+01
2073	3.882E+07	1.565E-01	4.818E+01
2074	3.882E+07	1.504E-01	4.629E+01

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
: 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
r Pollutant : Carbon Disulfide (HAP/VOC)
lecular Wt = 76.14 Concentration = 0.580000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
ar Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	Carbon Disulfide (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.000E-04	6.314E-02
1973	1.392E+05	2.038E-03	6.435E-01
1974	3.050E+05	4.394E-03	1.388E+00
1975	4.974E+05	7.049E-03	2.226E+00
1976	7.027E+05	9.789E-03	3.091E+00
1977	9.562E+05	1.313E-02	4.146E+00
1978	1.235E+06	1.672E-02	5.278E+00
1979	1.523E+06	2.028E-02	6.405E+00
1980	1.839E+06	2.414E-02	7.624E+00
1981	2.162E+06	2.794E-02	8.822E+00
1982	2.473E+06	3.141E-02	9.919E+00
1983	2.806E+06	3.507E-02	1.107E+01
1984	3.186E+06	3.928E-02	1.240E+01
1985	3.624E+06	4.417E-02	1.395E+01
1986	4.159E+06	5.031E-02	1.589E+01
1987	4.685E+06	5.607E-02	1.770E+01
1988	5.257E+06	6.227E-02	1.966E+01
1989	5.783E+06	6.756E-02	2.133E+01
1990	6.365E+06	7.347E-02	2.320E+01
1991	7.016E+06	8.015E-02	2.531E+01
1992	7.727E+06	8.745E-02	2.761E+01
1993	8.389E+06	9.376E-02	2.961E+01
1994	9.086E+06	1.003E-01	3.168E+01
1995	9.822E+06	1.072E-01	3.385E+01
1996	1.059E+07	1.143E-01	3.610E+01
1997	1.135E+07	1.209E-01	3.818E+01
1998	1.206E+07	1.267E-01	4.001E+01
1999	1.274E+07	1.316E-01	4.156E+01
2000	1.342E+07	1.365E-01	4.310E+01
2001	1.403E+07	1.401E-01	4.424E+01
2002	1.482E+07	1.463E-01	4.618E+01
2003	1.563E+07	1.524E-01	4.814E+01
2004	1.646E+07	1.587E-01	5.010E+01
2005	1.731E+07	1.649E-01	5.208E+01
2006	1.818E+07	1.712E-01	5.406E+01
2007	1.907E+07	1.775E-01	5.605E+01
2008	1.997E+07	1.839E-01	5.806E+01
2009	2.090E+07	1.903E-01	6.008E+01
2010	2.184E+07	1.967E-01	6.210E+01
2011	2.265E+07	2.009E-01	6.343E+01
2012	2.348E+07	2.052E-01	6.479E+01
2013	2.432E+07	2.095E-01	6.615E+01

2014	2.518E+07	2.139E-01	6.754E+01
2015	2.605E+07	2.183E-01	6.8 +01
2016	2.694E+07	2.228E-01	7.030E+01
2017	2.785E+07	2.274E-01	7.179E+01
2018	2.876E+07	2.320E-01	7.324E+01
2019	2.970E+07	2.366E-01	7.471E+01
2020	3.065E+07	2.413E-01	7.619E+01
2021	3.162E+07	2.460E-01	7.769E+01
2022	3.260E+07	2.508E-01	7.920E+01
2023	3.360E+07	2.556E-01	8.072E+01
2024	3.461E+07	2.605E-01	8.226E+01
2025	3.564E+07	2.654E-01	8.381E+01
2026	3.668E+07	2.704E-01	8.537E+01
2027	3.775E+07	2.754E-01	8.695E+01
2028	3.882E+07	2.803E-01	8.850E+01
2029	3.882E+07	2.693E-01	8.503E+01
2030	3.882E+07	2.587E-01	8.170E+01
2031	3.882E+07	2.486E-01	7.850E+01
2032	3.882E+07	2.388E-01	7.542E+01
2033	3.882E+07	2.295E-01	7.246E+01
2034	3.882E+07	2.205E-01	6.962E+01
2035	3.882E+07	2.118E-01	6.689E+01
2036	3.882E+07	2.035E-01	6.427E+01
2037	3.882E+07	1.955E-01	6.175E+01
2038	3.882E+07	1.879E-01	5.933E+01
2039	3.882E+07	1.805E-01	5.700E+01
2040	3.882E+07	1.734E-01	5.476E+01
2041	3.882E+07	1.666E-01	5.262E+01
2042	3.882E+07	1.601E-01	5.055E+01
2043	3.882E+07	1.538E-01	4.857E+01
2044	3.882E+07	1.478E-01	4.667E+01
2045	3.882E+07	1.420E-01	4.484E+01
2046	3.882E+07	1.364E-01	4.308E+01
2047	3.882E+07	1.311E-01	4.139E+01
2048	3.882E+07	1.259E-01	3.977E+01
2049	3.882E+07	1.210E-01	3.821E+01
2050	3.882E+07	1.163E-01	3.671E+01
2051	3.882E+07	1.117E-01	3.527E+01
2052	3.882E+07	1.073E-01	3.389E+01
2053	3.882E+07	1.031E-01	3.256E+01
2054	3.882E+07	9.907E-02	3.128E+01
2055	3.882E+07	9.518E-02	3.006E+01
2056	3.882E+07	9.145E-02	2.888E+01
2057	3.882E+07	8.786E-02	2.774E+01
2058	3.882E+07	8.442E-02	2.666E+01
2059	3.882E+07	8.111E-02	2.561E+01
2060	3.882E+07	7.793E-02	2.461E+01
2061	3.882E+07	7.487E-02	2.364E+01
2062	3.882E+07	7.194E-02	2.272E+01
2063	3.882E+07	6.912E-02	2.182E+01
2064	3.882E+07	6.641E-02	2.097E+01
2065	3.882E+07	6.380E-02	2.015E+01
2066	3.882E+07	6.130E-02	1.936E+01
2067	3.882E+07	5.890E-02	1.860E+01
2068	3.882E+07	5.659E-02	1.787E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 R : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Carbon Tetrachloride (HAP/VOC)
 Molecular Wt = 153.84 Concentration = 0.004000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Tetrachloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.786E-06	4.355E-04
1973	1.392E+05	2.840E-05	4.438E-03
1974	3.050E+05	6.123E-05	9.569E-03
1975	4.974E+05	9.823E-05	1.535E-02
1976	7.027E+05	1.364E-04	2.132E-02
1977	9.562E+05	1.830E-04	2.859E-02
1978	1.235E+06	2.329E-04	3.640E-02
1979	1.523E+06	2.826E-04	4.417E-02
1980	1.839E+06	3.364E-04	5.258E-02
1981	2.162E+06	3.893E-04	6.084E-02
1982	2.473E+06	4.377E-04	6.841E-02
1983	2.806E+06	4.886E-04	7.637E-02
1984	3.186E+06	5.474E-04	8.554E-02
1985	3.624E+06	6.155E-04	9.620E-02
1986	4.159E+06	7.010E-04	1.096E-01
1987	4.685E+06	7.813E-04	1.221E-01
1988	5.257E+06	8.676E-04	1.356E-01
1989	5.783E+06	9.414E-04	1.471E-01
1990	6.365E+06	1.024E-03	1.600E-01
1991	7.016E+06	1.117E-03	1.745E-01
1992	7.727E+06	1.219E-03	1.904E-01
1993	8.389E+06	1.306E-03	2.042E-01
1994	9.086E+06	1.398E-03	2.185E-01
1995	9.822E+06	1.494E-03	2.335E-01
1996	1.059E+07	1.593E-03	2.489E-01
1997	1.135E+07	1.685E-03	2.633E-01
1998	1.206E+07	1.765E-03	2.759E-01
1999	1.274E+07	1.834E-03	2.866E-01
2000	1.342E+07	1.902E-03	2.972E-01
2001	1.403E+07	1.952E-03	3.051E-01
2002	1.482E+07	2.038E-03	3.185E-01
2003	1.563E+07	2.124E-03	3.320E-01
2004	1.646E+07	2.211E-03	3.455E-01
2005	1.731E+07	2.298E-03	3.591E-01
2006	1.818E+07	2.386E-03	3.728E-01
2007	1.907E+07	2.474E-03	3.866E-01
2008	1.997E+07	2.562E-03	4.004E-01
2009	2.090E+07	2.651E-03	4.143E-01
2010	2.184E+07	2.740E-03	4.283E-01
2011	2.265E+07	2.799E-03	4.375E-01
2012	2.348E+07	2.859E-03	4.468E-01
2013	2.432E+07	2.919E-03	4.562E-01

14	2.518E+07	2.980E-03	4.657E-01
15	2.605E+07	3.042E-03	4.712E-01
2016	2.694E+07	3.105E-03	4.852E-01
2017	2.785E+07	3.168E-03	4.951E-01
18	2.876E+07	3.232E-03	5.051E-01
19	2.970E+07	3.297E-03	5.152E-01
2020	3.065E+07	3.362E-03	5.255E-01
2021	3.162E+07	3.428E-03	5.358E-01
22	3.260E+07	3.495E-03	5.462E-01
23	3.360E+07	3.562E-03	5.567E-01
2024	3.461E+07	3.630E-03	5.673E-01
2025	3.564E+07	3.698E-03	5.780E-01
26	3.668E+07	3.767E-03	5.888E-01
27	3.775E+07	3.837E-03	5.997E-01
2028	3.882E+07	3.906E-03	6.104E-01
29	3.882E+07	3.752E-03	5.864E-01
30	3.882E+07	3.605E-03	5.634E-01
2031	3.882E+07	3.464E-03	5.413E-01
2032	3.882E+07	3.328E-03	5.201E-01
33	3.882E+07	3.198E-03	4.997E-01
34	3.882E+07	3.072E-03	4.801E-01
2035	3.882E+07	2.952E-03	4.613E-01
2036	3.882E+07	2.836E-03	4.432E-01
37	3.882E+07	2.725E-03	4.258E-01
38	3.882E+07	2.618E-03	4.091E-01
2039	3.882E+07	2.515E-03	3.931E-01
2040	3.882E+07	2.417E-03	3.777E-01
41	3.882E+07	2.322E-03	3.629E-01
2042	3.882E+07	2.231E-03	3.486E-01
2043	3.882E+07	2.143E-03	3.350E-01
44	3.882E+07	2.059E-03	3.218E-01
45	3.882E+07	1.979E-03	3.092E-01
2046	3.882E+07	1.901E-03	2.971E-01
2047	3.882E+07	1.826E-03	2.854E-01
48	3.882E+07	1.755E-03	2.743E-01
49	3.882E+07	1.686E-03	2.635E-01
2050	3.882E+07	1.620E-03	2.532E-01
2051	3.882E+07	1.556E-03	2.432E-01
52	3.882E+07	1.495E-03	2.337E-01
53	3.882E+07	1.437E-03	2.245E-01
2054	3.882E+07	1.380E-03	2.157E-01
2055	3.882E+07	1.326E-03	2.073E-01
56	3.882E+07	1.274E-03	1.992E-01
57	3.882E+07	1.224E-03	1.913E-01
2058	3.882E+07	1.176E-03	1.838E-01
59	3.882E+07	1.130E-03	1.766E-01
60	3.882E+07	1.086E-03	1.697E-01
2061	3.882E+07	1.043E-03	1.631E-01
2062	3.882E+07	1.002E-03	1.567E-01
63	3.882E+07	9.631E-04	1.505E-01
64	3.882E+07	9.253E-04	1.446E-01
2065	3.882E+07	8.890E-04	1.389E-01
2066	3.882E+07	8.542E-04	1.335E-01
67	3.882E+07	8.207E-04	1.283E-01
68	3.882E+07	7.885E-04	1.232E-01
2069	3.882E+07	7.576E-04	1.184E-01
2070	3.882E+07	7.279E-04	1.138E-01
71	3.882E+07	6.993E-04	1.093E-01
2072	3.882E+07	6.719E-04	1.050E-01
2073	3.882E+07	6.456E-04	1.009E-01
74	3.882E+07	6.203E-04	9.694E-02
75	3.882E+07	5.959E-04	9.314E-02
2076	3.882E+07	5.726E-04	8.948E-02
2077	3.882E+07	5.501E-04	8.598E-02
78	3.882E+07	5.286E-04	8.260E-02
79	3.882E+07	5.078E-04	7.937E-02
2080	3.882E+07	4.879E-04	7.625E-02

=====
 Model Parameters
 =====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 W : 0.0400 1/yr ***** User Mode Selection *****
 OC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Carbonyl Sulfide (HAP/VOC)
 Molecular Wt = 60.07 Concentration = 0.490000 ppmV

=====
 Landfill Parameters
 =====

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

=====
 Model Results
 =====

Year	Refuse In Place (Mg)	Carbonyl Sulfide (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.333E-04	5.334E-02
1973	1.392E+05	1.358E-03	5.437E-01
1974	3.050E+05	2.929E-03	1.172E+00
1975	4.974E+05	4.698E-03	1.880E+00
1976	7.027E+05	6.525E-03	2.611E+00
1977	9.562E+05	8.751E-03	3.503E+00
1978	1.235E+06	1.114E-02	4.459E+00
1979	1.523E+06	1.352E-02	5.411E+00
1980	1.839E+06	1.609E-02	6.441E+00
1981	2.162E+06	1.862E-02	7.453E+00
1982	2.473E+06	2.094E-02	8.380E+00
1983	2.806E+06	2.337E-02	9.355E+00
1984	3.186E+06	2.618E-02	1.048E+01
1985	3.624E+06	2.944E-02	1.178E+01
1986	4.159E+06	3.353E-02	1.342E+01
1987	4.685E+06	3.737E-02	1.496E+01
1988	5.257E+06	4.150E-02	1.661E+01
1989	5.783E+06	4.503E-02	1.802E+01
1990	6.365E+06	4.897E-02	1.960E+01
1991	7.016E+06	5.342E-02	2.138E+01
1992	7.727E+06	5.829E-02	2.333E+01
1993	8.389E+06	6.249E-02	2.501E+01
1994	9.086E+06	6.686E-02	2.676E+01
1995	9.822E+06	7.145E-02	2.860E+01
1996	1.059E+07	7.619E-02	3.049E+01
1997	1.135E+07	8.059E-02	3.226E+01
1998	1.206E+07	8.445E-02	3.380E+01
1999	1.274E+07	8.773E-02	3.511E+01
2000	1.342E+07	9.097E-02	3.641E+01
2001	1.403E+07	9.338E-02	3.737E+01
2002	1.482E+07	9.749E-02	3.902E+01
2003	1.563E+07	1.016E-01	4.067E+01
2004	1.646E+07	1.058E-01	4.233E+01
2005	1.731E+07	1.099E-01	4.399E+01
2006	1.818E+07	1.141E-01	4.567E+01
2007	1.907E+07	1.183E-01	4.736E+01
2008	1.997E+07	1.226E-01	4.905E+01
2009	2.090E+07	1.268E-01	5.075E+01
2010	2.184E+07	1.311E-01	5.247E+01
2011	2.265E+07	1.339E-01	5.359E+01
2012	2.348E+07	1.367E-01	5.473E+01
2013	2.432E+07	1.396E-01	5.589E+01

2014	2.518E+07	1.426E-01	5.77E+01
2015	2.605E+07	1.455E-01	5.12E+01
2016	2.694E+07	1.485E-01	5.944E+01
2017	2.785E+07	1.515E-01	6.065E+01
2018	2.876E+07	1.546E-01	6.188E+01
2019	2.970E+07	1.577E-01	6.312E+01
2020	3.065E+07	1.608E-01	6.437E+01
2021	3.162E+07	1.640E-01	6.563E+01
2022	3.260E+07	1.672E-01	6.691E+01
2023	3.360E+07	1.704E-01	6.820E+01
2024	3.461E+07	1.736E-01	6.949E+01
2025	3.564E+07	1.769E-01	7.080E+01
2026	3.668E+07	1.802E-01	7.213E+01
2027	3.775E+07	1.835E-01	7.346E+01
2028	3.882E+07	1.868E-01	7.477E+01
2029	3.882E+07	1.795E-01	7.184E+01
2030	3.882E+07	1.724E-01	6.902E+01
2031	3.882E+07	1.657E-01	6.632E+01
2032	3.882E+07	1.592E-01	6.372E+01
2033	3.882E+07	1.529E-01	6.122E+01
2034	3.882E+07	1.470E-01	5.882E+01
2035	3.882E+07	1.412E-01	5.651E+01
2036	3.882E+07	1.357E-01	5.429E+01
2037	3.882E+07	1.303E-01	5.217E+01
2038	3.882E+07	1.252E-01	5.012E+01
2039	3.882E+07	1.203E-01	4.815E+01
2040	3.882E+07	1.156E-01	4.627E+01
2041	3.882E+07	1.111E-01	4.445E+01
2042	3.882E+07	1.067E-01	4.271E+01
2043	3.882E+07	1.025E-01	4.103E+01
2044	3.882E+07	9.850E-02	3.943E+01
2045	3.882E+07	9.464E-02	3.788E+01
2046	3.882E+07	9.093E-02	3.639E+01
2047	3.882E+07	8.737E-02	3.497E+01
2048	3.882E+07	8.394E-02	3.360E+01
2049	3.882E+07	8.065E-02	3.228E+01
2050	3.882E+07	7.749E-02	3.101E+01
2051	3.882E+07	7.445E-02	2.980E+01
2052	3.882E+07	7.153E-02	2.863E+01
2053	3.882E+07	6.872E-02	2.751E+01
2054	3.882E+07	6.603E-02	2.643E+01
2055	3.882E+07	6.344E-02	2.539E+01
2056	3.882E+07	6.095E-02	2.440E+01
2057	3.882E+07	5.856E-02	2.344E+01
2058	3.882E+07	5.627E-02	2.252E+01
2059	3.882E+07	5.406E-02	2.164E+01
2060	3.882E+07	5.194E-02	2.079E+01
2061	3.882E+07	4.990E-02	1.997E+01
2062	3.882E+07	4.795E-02	1.919E+01
2063	3.882E+07	4.607E-02	1.844E+01
2064	3.882E+07	4.426E-02	1.772E+01
2065	3.882E+07	4.253E-02	1.702E+01
2066	3.882E+07	4.086E-02	1.635E+01
2067	3.882E+07	3.926E-02	1.571E+01
2068	3.882E+07	3.772E-02	1.510E+01
2069	3.882E+07	3.624E-02	1.450E+01
2070	3.882E+07	3.482E-02	1.394E+01
2071	3.882E+07	3.345E-02	1.339E+01
2072	3.882E+07	3.214E-02	1.286E+01
2073	3.882E+07	3.088E-02	1.236E+01
2074	3.882E+07	2.967E-02	1.187E+01
2075	3.882E+07	2.851E-02	1.141E+01
2076	3.882E+07	2.739E-02	1.096E+01
2077	3.882E+07	2.631E-02	1.053E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 Rate : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Chlorobenzene (HAP/VOC)
 Molecular Wt = 112.56 Concentration = 0.250000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chlorobenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.274E-04	2.722E-02
1973	1.392E+05	1.299E-03	2.774E-01
1974	3.050E+05	2.800E-03	5.981E-01
1975	4.974E+05	4.492E-03	9.594E-01
1976	7.027E+05	6.238E-03	1.332E+00
1977	9.562E+05	8.366E-03	1.787E+00
1978	1.235E+06	1.065E-02	2.275E+00
1979	1.523E+06	1.292E-02	2.761E+00
1980	1.839E+06	1.538E-02	3.286E+00
1981	2.162E+06	1.780E-02	3.803E+00
1982	2.473E+06	2.002E-02	4.275E+00
1983	2.806E+06	2.235E-02	4.773E+00
1984	3.186E+06	2.503E-02	5.346E+00
1985	3.624E+06	2.815E-02	6.012E+00
1986	4.159E+06	3.206E-02	6.847E+00
1987	4.685E+06	3.573E-02	7.631E+00
1988	5.257E+06	3.968E-02	8.475E+00
1989	5.783E+06	4.305E-02	9.195E+00
1990	6.365E+06	4.681E-02	9.999E+00
1991	7.016E+06	5.107E-02	1.091E+01
1992	7.727E+06	5.572E-02	1.190E+01
1993	8.389E+06	5.974E-02	1.276E+01
1994	9.086E+06	6.392E-02	1.365E+01
1995	9.822E+06	6.831E-02	1.459E+01
1996	1.059E+07	7.284E-02	1.556E+01
1997	1.135E+07	7.705E-02	1.646E+01
1998	1.206E+07	8.073E-02	1.724E+01
1999	1.274E+07	8.387E-02	1.791E+01
2000	1.342E+07	8.697E-02	1.858E+01
2001	1.403E+07	8.927E-02	1.907E+01
2002	1.482E+07	9.320E-02	1.991E+01
2003	1.563E+07	9.714E-02	2.075E+01
2004	1.646E+07	1.011E-01	2.160E+01
2005	1.731E+07	1.051E-01	2.245E+01
2006	1.818E+07	1.091E-01	2.330E+01
2007	1.907E+07	1.131E-01	2.416E+01
2008	1.997E+07	1.172E-01	2.503E+01
2009	2.090E+07	1.212E-01	2.589E+01
2010	2.184E+07	1.253E-01	2.677E+01
2011	2.265E+07	1.280E-01	2.734E+01
2012	2.348E+07	1.307E-01	2.792E+01
2013	2.432E+07	1.335E-01	2.851E+01

2014	2.518E+07	1.363E-01	2.911E+01
2015	2.605E+07	1.391E-01	2.97E+01
2016	2.694E+07	1.420E-01	3.03E+01
2017	2.785E+07	1.449E-01	3.095E+01
2018	2.876E+07	1.478E-01	3.157E+01
2019	2.970E+07	1.508E-01	3.220E+01
2020	3.065E+07	1.538E-01	3.284E+01
2021	3.162E+07	1.568E-01	3.349E+01
2022	3.260E+07	1.598E-01	3.414E+01
2023	3.360E+07	1.629E-01	3.479E+01
2024	3.461E+07	1.660E-01	3.546E+01
2025	3.564E+07	1.691E-01	3.612E+01
2026	3.668E+07	1.723E-01	3.680E+01
2027	3.775E+07	1.755E-01	3.748E+01
2028	3.882E+07	1.786E-01	3.815E+01
2029	3.882E+07	1.716E-01	3.665E+01
2030	3.882E+07	1.649E-01	3.522E+01
2031	3.882E+07	1.584E-01	3.383E+01
2032	3.882E+07	1.522E-01	3.251E+01
2033	3.882E+07	1.462E-01	3.123E+01
2034	3.882E+07	1.405E-01	3.001E+01
2035	3.882E+07	1.350E-01	2.883E+01
2036	3.882E+07	1.297E-01	2.770E+01
2037	3.882E+07	1.246E-01	2.662E+01
2038	3.882E+07	1.197E-01	2.557E+01
2039	3.882E+07	1.150E-01	2.457E+01
2040	3.882E+07	1.105E-01	2.361E+01
2041	3.882E+07	1.062E-01	2.268E+01
2042	3.882E+07	1.020E-01	2.179E+01
2043	3.882E+07	9.802E-02	2.094E+01
2044	3.882E+07	9.417E-02	2.012E+01
2045	3.882E+07	9.048E-02	1.933E+01
2046	3.882E+07	8.693E-02	1.857E+01
2047	3.882E+07	8.352E-02	1.784E+01
2048	3.882E+07	8.025E-02	1.714E+01
2049	3.882E+07	7.710E-02	1.647E+01
2050	3.882E+07	7.408E-02	1.582E+01
2051	3.882E+07	7.117E-02	1.520E+01
2052	3.882E+07	6.838E-02	1.461E+01
2053	3.882E+07	6.570E-02	1.403E+01
2054	3.882E+07	6.313E-02	1.348E+01
2055	3.882E+07	6.065E-02	1.295E+01
2056	3.882E+07	5.827E-02	1.245E+01
2057	3.882E+07	5.599E-02	1.196E+01
2058	3.882E+07	5.379E-02	1.149E+01
2059	3.882E+07	5.168E-02	1.104E+01
2060	3.882E+07	4.966E-02	1.061E+01
2061	3.882E+07	4.771E-02	1.019E+01
2062	3.882E+07	4.584E-02	9.791E+00
2063	3.882E+07	4.404E-02	9.407E+00
2064	3.882E+07	4.231E-02	9.038E+00
2065	3.882E+07	4.066E-02	8.684E+00
2066	3.882E+07	3.906E-02	8.343E+00
2067	3.882E+07	3.753E-02	8.016E+00
2068	3.882E+07	3.606E-02	7.702E+00
2069	3.882E+07	3.464E-02	7.400E+00
2070	3.882E+07	3.329E-02	7.110E+00
2071	3.882E+07	3.198E-02	6.831E+00
2072	3.882E+07	3.073E-02	6.563E+00
2073	3.882E+07	2.952E-02	6.306E+00
2074	3.882E+07	2.836E-02	6.059E+00
2075	3.882E+07	2.725E-02	5.821E+00
2076	3.882E+07	2.618E-02	5.593E+00
2077	3.882E+07	2.516E-02	5.373E+00

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 U : 0.0400 1/yr ***** User Mode Selection *****
 OC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Chloroethane (HAP/VOC)
 Molecular Wt = 64.52 Concentration = 1.250000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroethane (HAP/VOC) Emission Rate (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	3.652E-04	1.361E-01
1973	1.392E+05	3.722E-03	1.387E+00
1974	3.050E+05	8.025E-03	2.990E+00
1975	4.974E+05	1.287E-02	4.797E+00
1976	7.027E+05	1.788E-02	6.662E+00
1977	9.562E+05	2.398E-02	8.935E+00
1978	1.235E+06	3.053E-02	1.138E+01
1979	1.523E+06	3.704E-02	1.380E+01
1980	1.839E+06	4.409E-02	1.643E+01
1981	2.162E+06	5.102E-02	1.901E+01
1982	2.473E+06	5.737E-02	2.138E+01
1983	2.806E+06	6.404E-02	2.386E+01
1984	3.186E+06	7.174E-02	2.673E+01
1985	3.624E+06	8.067E-02	3.006E+01
1986	4.159E+06	9.187E-02	3.424E+01
1987	4.685E+06	1.024E-01	3.816E+01
1988	5.257E+06	1.137E-01	4.237E+01
1989	5.783E+06	1.234E-01	4.597E+01
1990	6.365E+06	1.342E-01	5.000E+01
1991	7.016E+06	1.464E-01	5.455E+01
1992	7.727E+06	1.597E-01	5.951E+01
1993	8.389E+06	1.712E-01	6.380E+01
1994	9.086E+06	1.832E-01	6.827E+01
1995	9.822E+06	1.958E-01	7.295E+01
1996	1.059E+07	2.088E-01	7.779E+01
1997	1.135E+07	2.208E-01	8.229E+01
1998	1.206E+07	2.314E-01	8.622E+01
1999	1.274E+07	2.404E-01	8.957E+01
2000	1.342E+07	2.493E-01	9.288E+01
2001	1.403E+07	2.559E-01	9.534E+01
2002	1.482E+07	2.671E-01	9.954E+01
2003	1.563E+07	2.784E-01	1.037E+02
2004	1.646E+07	2.898E-01	1.080E+02
2005	1.731E+07	3.012E-01	1.122E+02
2006	1.818E+07	3.127E-01	1.165E+02
2007	1.907E+07	3.242E-01	1.208E+02
2008	1.997E+07	3.358E-01	1.251E+02
2009	2.090E+07	3.474E-01	1.295E+02
2010	2.184E+07	3.592E-01	1.338E+02
2011	2.265E+07	3.669E-01	1.367E+02
2012	2.348E+07	3.747E-01	1.396E+02
2013	2.432E+07	3.826E-01	1.426E+02

014	2.518E+07	3.906E-01	1.47E+02
015	2.605E+07	3.987E-01	1.48E+02
2016	2.694E+07	4.069E-01	1.516E+02
017	2.785E+07	4.152E-01	1.547E+02
018	2.876E+07	4.236E-01	1.579E+02
019	2.970E+07	4.321E-01	1.610E+02
2020	3.065E+07	4.407E-01	1.642E+02
021	3.162E+07	4.493E-01	1.674E+02
022	3.260E+07	4.580E-01	1.707E+02
023	3.360E+07	4.669E-01	1.740E+02
2024	3.461E+07	4.758E-01	1.773E+02
025	3.564E+07	4.847E-01	1.806E+02
026	3.668E+07	4.938E-01	1.840E+02
027	3.775E+07	5.029E-01	1.874E+02
2028	3.882E+07	5.119E-01	1.907E+02
029	3.882E+07	4.918E-01	1.833E+02
030	3.882E+07	4.725E-01	1.761E+02
2031	3.882E+07	4.540E-01	1.692E+02
032	3.882E+07	4.362E-01	1.625E+02
033	3.882E+07	4.191E-01	1.562E+02
034	3.882E+07	4.026E-01	1.500E+02
2035	3.882E+07	3.869E-01	1.442E+02
036	3.882E+07	3.717E-01	1.385E+02
037	3.882E+07	3.571E-01	1.331E+02
038	3.882E+07	3.431E-01	1.279E+02
2039	3.882E+07	3.297E-01	1.228E+02
040	3.882E+07	3.167E-01	1.180E+02
041	3.882E+07	3.043E-01	1.134E+02
2042	3.882E+07	2.924E-01	1.090E+02
2043	3.882E+07	2.809E-01	1.047E+02
044	3.882E+07	2.699E-01	1.006E+02
045	3.882E+07	2.593E-01	9.663E+01
2046	3.882E+07	2.492E-01	9.284E+01
047	3.882E+07	2.394E-01	8.920E+01
048	3.882E+07	2.300E-01	8.571E+01
049	3.882E+07	2.210E-01	8.234E+01
2050	3.882E+07	2.123E-01	7.912E+01
051	3.882E+07	2.040E-01	7.601E+01
052	3.882E+07	1.960E-01	7.303E+01
053	3.882E+07	1.883E-01	7.017E+01
2054	3.882E+07	1.809E-01	6.742E+01
055	3.882E+07	1.738E-01	6.477E+01
056	3.882E+07	1.670E-01	6.223E+01
2057	3.882E+07	1.605E-01	5.979E+01
2058	3.882E+07	1.542E-01	5.745E+01
059	3.882E+07	1.481E-01	5.520E+01
060	3.882E+07	1.423E-01	5.303E+01
2061	3.882E+07	1.367E-01	5.095E+01
062	3.882E+07	1.314E-01	4.896E+01
063	3.882E+07	1.262E-01	4.704E+01
064	3.882E+07	1.213E-01	4.519E+01
2065	3.882E+07	1.165E-01	4.342E+01
066	3.882E+07	1.120E-01	4.172E+01
067	3.882E+07	1.076E-01	4.008E+01
068	3.882E+07	1.033E-01	3.851E+01
2069	3.882E+07	9.929E-02	3.700E+01
070	3.882E+07	9.540E-02	3.555E+01
071	3.882E+07	9.166E-02	3.416E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 R : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Chloroform (HAP/VOC)
 Molecular Wt = 119.38 Concentration = 0.024000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroform (HAP/VOC) Emission Rate (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	1.297E-05	2.613E-03
1973	1.392E+05	1.322E-04	2.663E-02
1974	3.050E+05	2.851E-04	5.741E-02
1975	4.974E+05	4.573E-04	9.211E-02
1976	7.027E+05	6.351E-04	1.279E-01
1977	9.562E+05	8.518E-04	1.716E-01
1978	1.235E+06	1.085E-03	2.184E-01
1979	1.523E+06	1.316E-03	2.650E-01
1980	1.839E+06	1.566E-03	3.155E-01
1981	2.162E+06	1.813E-03	3.651E-01
1982	2.473E+06	2.038E-03	4.104E-01
1983	2.806E+06	2.275E-03	4.582E-01
1984	3.186E+06	2.548E-03	5.133E-01
1985	3.624E+06	2.866E-03	5.772E-01
1986	4.159E+06	3.264E-03	6.573E-01
1987	4.685E+06	3.638E-03	7.326E-01
1988	5.257E+06	4.040E-03	8.136E-01
1989	5.783E+06	4.383E-03	8.827E-01
1990	6.365E+06	4.766E-03	9.599E-01
1991	7.016E+06	5.200E-03	1.047E+00
1992	7.727E+06	5.674E-03	1.143E+00
1993	8.389E+06	6.083E-03	1.225E+00
1994	9.086E+06	6.508E-03	1.311E+00
1995	9.822E+06	6.955E-03	1.401E+00
1996	1.059E+07	7.416E-03	1.494E+00
1997	1.135E+07	7.845E-03	1.580E+00
1998	1.206E+07	8.220E-03	1.655E+00
1999	1.274E+07	8.539E-03	1.720E+00
2000	1.342E+07	8.855E-03	1.783E+00
2001	1.403E+07	9.089E-03	1.831E+00
2002	1.482E+07	9.489E-03	1.911E+00
2003	1.563E+07	9.891E-03	1.992E+00
2004	1.646E+07	1.029E-02	2.073E+00
2005	1.731E+07	1.070E-02	2.155E+00
2006	1.818E+07	1.111E-02	2.237E+00
2007	1.907E+07	1.152E-02	2.319E+00
2008	1.997E+07	1.193E-02	2.402E+00
2009	2.090E+07	1.234E-02	2.486E+00
2010	2.184E+07	1.276E-02	2.570E+00
2011	2.265E+07	1.303E-02	2.625E+00
2012	2.348E+07	1.331E-02	2.681E+00
2013	2.432E+07	1.359E-02	2.737E+00

2014	2.518E+07	1.388E-02	2.79E+00
2015	2.605E+07	1.416E-02	2.8E+00
2016	2.694E+07	1.446E-02	2.911E+00
2017	2.785E+07	1.475E-02	2.971E+00
2018	2.876E+07	1.505E-02	3.031E+00
2019	2.970E+07	1.535E-02	3.091E+00
2020	3.065E+07	1.565E-02	3.153E+00
2021	3.162E+07	1.596E-02	3.215E+00
2022	3.260E+07	1.627E-02	3.277E+00
2023	3.360E+07	1.659E-02	3.340E+00
2024	3.461E+07	1.690E-02	3.404E+00
2025	3.564E+07	1.722E-02	3.468E+00
2026	3.668E+07	1.754E-02	3.533E+00
2027	3.775E+07	1.787E-02	3.598E+00
2028	3.882E+07	1.818E-02	3.662E+00
2029	3.882E+07	1.747E-02	3.519E+00
2030	3.882E+07	1.679E-02	3.381E+00
2031	3.882E+07	1.613E-02	3.248E+00
2032	3.882E+07	1.550E-02	3.121E+00
2033	3.882E+07	1.489E-02	2.998E+00
2034	3.882E+07	1.430E-02	2.881E+00
2035	3.882E+07	1.374E-02	2.768E+00
2036	3.882E+07	1.320E-02	2.659E+00
2037	3.882E+07	1.269E-02	2.555E+00
2038	3.882E+07	1.219E-02	2.455E+00
2039	3.882E+07	1.171E-02	2.359E+00
2040	3.882E+07	1.125E-02	2.266E+00
2041	3.882E+07	1.081E-02	2.177E+00
2042	3.882E+07	1.039E-02	2.092E+00
2043	3.882E+07	9.980E-03	2.010E+00
2044	3.882E+07	9.588E-03	1.931E+00
2045	3.882E+07	9.212E-03	1.855E+00
2046	3.882E+07	8.851E-03	1.783E+00
2047	3.882E+07	8.504E-03	1.713E+00
2048	3.882E+07	8.171E-03	1.646E+00
2049	3.882E+07	7.850E-03	1.581E+00
2050	3.882E+07	7.542E-03	1.519E+00
2051	3.882E+07	7.247E-03	1.459E+00
2052	3.882E+07	6.963E-03	1.402E+00
2053	3.882E+07	6.690E-03	1.347E+00
2054	3.882E+07	6.427E-03	1.294E+00
2055	3.882E+07	6.175E-03	1.244E+00
2056	3.882E+07	5.933E-03	1.195E+00
2057	3.882E+07	5.700E-03	1.148E+00
2058	3.882E+07	5.477E-03	1.103E+00
2059	3.882E+07	5.262E-03	1.060E+00
2060	3.882E+07	5.056E-03	1.018E+00
2061	3.882E+07	4.858E-03	9.783E-01
2062	3.882E+07	4.667E-03	9.399E-01
2063	3.882E+07	4.484E-03	9.031E-01
2064	3.882E+07	4.308E-03	8.677E-01
2065	3.882E+07	4.139E-03	8.337E-01
2066	3.882E+07	3.977E-03	8.010E-01
2067	3.882E+07	3.821E-03	7.696E-01
2068	3.882E+07	3.671E-03	7.394E-01
2069	3.882E+07	3.527E-03	7.104E-01
2070	3.882E+07	3.389E-03	6.825E-01
2071	3.882E+07	3.256E-03	6.558E-01
2072	3.882E+07	3.128E-03	6.301E-01
2073	3.882E+07	3.006E-03	6.054E-01
2074	3.882E+07	2.888E-03	5.816E-01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 Rate : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Chloromethane (HAP/VOC)
 Molecular Wt = 50.49 Concentration = 1.210000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloromethane (HAP/VOC) Emission Rate (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	2.766E-04	1.317E-01
1973	1.392E+05	2.819E-03	1.343E+00
1974	3.050E+05	6.079E-03	2.895E+00
1975	4.974E+05	9.752E-03	4.644E+00
1976	7.027E+05	1.354E-02	6.449E+00
1977	9.562E+05	1.816E-02	8.649E+00
1978	1.235E+06	2.313E-02	1.101E+01
1979	1.523E+06	2.806E-02	1.336E+01
1980	1.839E+06	3.340E-02	1.591E+01
1981	2.162E+06	3.865E-02	1.840E+01
1982	2.473E+06	4.346E-02	2.069E+01
1983	2.806E+06	4.851E-02	2.310E+01
1984	3.186E+06	5.434E-02	2.588E+01
1985	3.624E+06	6.111E-02	2.910E+01
1986	4.159E+06	6.960E-02	3.314E+01
1987	4.685E+06	7.756E-02	3.693E+01
1988	5.257E+06	8.614E-02	4.102E+01
1989	5.783E+06	9.346E-02	4.450E+01
1990	6.365E+06	1.016E-01	4.840E+01
1991	7.016E+06	1.109E-01	5.280E+01
1992	7.727E+06	1.210E-01	5.761E+01
1993	8.389E+06	1.297E-01	6.176E+01
1994	9.086E+06	1.388E-01	6.608E+01
1995	9.822E+06	1.483E-01	7.062E+01
1996	1.059E+07	1.581E-01	7.530E+01
1997	1.135E+07	1.673E-01	7.965E+01
1998	1.206E+07	1.753E-01	8.346E+01
1999	1.274E+07	1.821E-01	8.670E+01
2000	1.342E+07	1.888E-01	8.991E+01
2001	1.403E+07	1.938E-01	9.229E+01
2002	1.482E+07	2.023E-01	9.635E+01
2003	1.563E+07	2.109E-01	1.004E+02
2004	1.646E+07	2.195E-01	1.045E+02
2005	1.731E+07	2.281E-01	1.086E+02
2006	1.818E+07	2.368E-01	1.128E+02
2007	1.907E+07	2.456E-01	1.169E+02
2008	1.997E+07	2.544E-01	1.211E+02
2009	2.090E+07	2.632E-01	1.253E+02
2010	2.184E+07	2.721E-01	1.296E+02
2011	2.265E+07	2.779E-01	1.323E+02
2012	2.348E+07	2.838E-01	1.352E+02
2013	2.432E+07	2.898E-01	1.380E+02

14	2.518E+07	2.959E-01	1.4007+02
15	2.605E+07	3.020E-01	1.4 +02
2016	2.694E+07	3.082E-01	1.468E+02
2017	2.785E+07	3.145E-01	1.498E+02
18	2.876E+07	3.209E-01	1.528E+02
19	2.970E+07	3.273E-01	1.559E+02
2020	3.065E+07	3.338E-01	1.590E+02
2021	3.162E+07	3.404E-01	1.621E+02
22	3.260E+07	3.470E-01	1.652E+02
23	3.360E+07	3.536E-01	1.684E+02
2024	3.461E+07	3.604E-01	1.716E+02
25	3.564E+07	3.672E-01	1.748E+02
26	3.668E+07	3.740E-01	1.781E+02
27	3.775E+07	3.809E-01	1.814E+02
2028	3.882E+07	3.877E-01	1.846E+02
29	3.882E+07	3.725E-01	1.774E+02
30	3.882E+07	3.579E-01	1.704E+02
2031	3.882E+07	3.439E-01	1.638E+02
2032	3.882E+07	3.304E-01	1.573E+02
33	3.882E+07	3.175E-01	1.512E+02
34	3.882E+07	3.050E-01	1.452E+02
2035	3.882E+07	2.930E-01	1.395E+02
2036	3.882E+07	2.816E-01	1.341E+02
37	3.882E+07	2.705E-01	1.288E+02
38	3.882E+07	2.599E-01	1.238E+02
2039	3.882E+07	2.497E-01	1.189E+02
40	3.882E+07	2.399E-01	1.143E+02
41	3.882E+07	2.305E-01	1.098E+02
42	3.882E+07	2.215E-01	1.055E+02
2043	3.882E+07	2.128E-01	1.013E+02
44	3.882E+07	2.045E-01	9.736E+01
45	3.882E+07	1.964E-01	9.354E+01
2046	3.882E+07	1.887E-01	8.987E+01
2047	3.882E+07	1.813E-01	8.635E+01
48	3.882E+07	1.742E-01	8.296E+01
49	3.882E+07	1.674E-01	7.971E+01
2050	3.882E+07	1.608E-01	7.658E+01
2051	3.882E+07	1.545E-01	7.358E+01
52	3.882E+07	1.485E-01	7.070E+01
53	3.882E+07	1.426E-01	6.792E+01
2054	3.882E+07	1.370E-01	6.526E+01
2055	3.882E+07	1.317E-01	6.270E+01
56	3.882E+07	1.265E-01	6.024E+01
57	3.882E+07	1.216E-01	5.788E+01
2058	3.882E+07	1.168E-01	5.561E+01
59	3.882E+07	1.122E-01	5.343E+01
60	3.882E+07	1.078E-01	5.134E+01
2061	3.882E+07	1.036E-01	4.932E+01
2062	3.882E+07	9.952E-02	4.739E+01
63	3.882E+07	9.562E-02	4.553E+01
64	3.882E+07	9.187E-02	4.375E+01
2065	3.882E+07	8.826E-02	4.203E+01
2066	3.882E+07	8.480E-02	4.038E+01
67	3.882E+07	8.148E-02	3.880E+01
68	3.882E+07	7.828E-02	3.728E+01
2069	3.882E+07	7.521E-02	3.582E+01
2070	3.882E+07	7.226E-02	3.441E+01
71	3.882E+07	6.943E-02	3.306E+01

=====
 Model Parameters
 =====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 r Pollutant : Dichlorobenzene (VOC/HAP for 1,4 isomer)
 Molecular Wt = 147.00 Concentration = 0.210000 ppmV

=====
 Landfill Parameters
 =====

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

=====
 Model Results
 =====

Year	Refuse In Place (Mg)	Dichlorobenzene (VOC/HAP for 1,4 isomer) (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	1.398E-04	2.286E-02
1973	1.392E+05	1.425E-03	2.330E-01
1974	3.050E+05	3.072E-03	5.024E-01
1975	4.974E+05	4.928E-03	8.059E-01
1976	7.027E+05	6.843E-03	1.119E+00
1977	9.562E+05	9.178E-03	1.501E+00
1978	1.235E+06	1.169E-02	1.911E+00
1979	1.523E+06	1.418E-02	2.319E+00
1980	1.839E+06	1.688E-02	2.760E+00
1981	2.162E+06	1.953E-02	3.194E+00
1982	2.473E+06	2.196E-02	3.591E+00
1983	2.806E+06	2.451E-02	4.009E+00
1984	3.186E+06	2.746E-02	4.491E+00
1985	3.624E+06	3.088E-02	5.050E+00
1986	4.159E+06	3.517E-02	5.752E+00
1987	4.685E+06	3.919E-02	6.410E+00
1988	5.257E+06	4.353E-02	7.119E+00
1989	5.783E+06	4.722E-02	7.724E+00
1990	6.365E+06	5.135E-02	8.399E+00
1991	7.016E+06	5.603E-02	9.164E+00
1992	7.727E+06	6.113E-02	9.998E+00
1993	8.389E+06	6.554E-02	1.072E+01
1994	9.086E+06	7.012E-02	1.147E+01
1995	9.822E+06	7.494E-02	1.226E+01
1996	1.059E+07	7.991E-02	1.307E+01
1997	1.135E+07	8.452E-02	1.382E+01
1998	1.206E+07	8.857E-02	1.449E+01
1999	1.274E+07	9.201E-02	1.505E+01
2000	1.342E+07	9.541E-02	1.560E+01
2001	1.403E+07	9.793E-02	1.602E+01
2002	1.482E+07	1.022E-01	1.672E+01
2003	1.563E+07	1.066E-01	1.743E+01
2004	1.646E+07	1.109E-01	1.814E+01
2005	1.731E+07	1.153E-01	1.885E+01
2006	1.818E+07	1.197E-01	1.957E+01
2007	1.907E+07	1.241E-01	2.030E+01
2008	1.997E+07	1.285E-01	2.102E+01
2009	2.090E+07	1.330E-01	2.175E+01
2010	2.184E+07	1.375E-01	2.249E+01
2011	2.265E+07	1.404E-01	2.297E+01
2012	2.348E+07	1.434E-01	2.346E+01
2013	2.432E+07	1.464E-01	2.395E+01

14	2.518E+07	1.495E-01	2.415E+01
15	2.605E+07	1.526E-01	2.415E+01
2016	2.694E+07	1.558E-01	2.547E+01
2017	2.785E+07	1.589E-01	2.599E+01
18	2.876E+07	1.621E-01	2.652E+01
19	2.970E+07	1.654E-01	2.705E+01
2020	3.065E+07	1.687E-01	2.759E+01
2021	3.162E+07	1.720E-01	2.813E+01
22	3.260E+07	1.753E-01	2.867E+01
23	3.360E+07	1.787E-01	2.923E+01
2024	3.461E+07	1.821E-01	2.978E+01
2025	3.564E+07	1.855E-01	3.034E+01
26	3.668E+07	1.890E-01	3.091E+01
27	3.775E+07	1.925E-01	3.148E+01
2028	3.882E+07	1.959E-01	3.204E+01
29	3.882E+07	1.882E-01	3.079E+01
30	3.882E+07	1.809E-01	2.958E+01
2031	3.882E+07	1.738E-01	2.842E+01
2032	3.882E+07	1.670E-01	2.731E+01
33	3.882E+07	1.604E-01	2.624E+01
34	3.882E+07	1.541E-01	2.521E+01
2035	3.882E+07	1.481E-01	2.422E+01
2036	3.882E+07	1.423E-01	2.327E+01
37	3.882E+07	1.367E-01	2.236E+01
38	3.882E+07	1.313E-01	2.148E+01
2039	3.882E+07	1.262E-01	2.064E+01
2040	3.882E+07	1.212E-01	1.983E+01
41	3.882E+07	1.165E-01	1.905E+01
2042	3.882E+07	1.119E-01	1.830E+01
2043	3.882E+07	1.075E-01	1.759E+01
44	3.882E+07	1.033E-01	1.690E+01
45	3.882E+07	9.926E-02	1.623E+01
2046	3.882E+07	9.537E-02	1.560E+01
2047	3.882E+07	9.163E-02	1.499E+01
48	3.882E+07	8.803E-02	1.440E+01
49	3.882E+07	8.458E-02	1.383E+01
2050	3.882E+07	8.127E-02	1.329E+01
2051	3.882E+07	7.808E-02	1.277E+01
52	3.882E+07	7.502E-02	1.227E+01
53	3.882E+07	7.208E-02	1.179E+01
2054	3.882E+07	6.925E-02	1.133E+01
2055	3.882E+07	6.653E-02	1.088E+01
56	3.882E+07	6.393E-02	1.046E+01
2057	3.882E+07	6.142E-02	1.005E+01
2058	3.882E+07	5.901E-02	9.652E+00
2059	3.882E+07	5.670E-02	9.273E+00
60	3.882E+07	5.447E-02	8.910E+00
2061	3.882E+07	5.234E-02	8.560E+00
2062	3.882E+07	5.029E-02	8.225E+00
63	3.882E+07	4.831E-02	7.902E+00
64	3.882E+07	4.642E-02	7.592E+00
2065	3.882E+07	4.460E-02	7.295E+00
2066	3.882E+07	4.285E-02	7.008E+00
67	3.882E+07	4.117E-02	6.734E+00
68	3.882E+07	3.956E-02	6.470E+00
2069	3.882E+07	3.801E-02	6.216E+00
2070	3.882E+07	3.652E-02	5.972E+00
71	3.882E+07	3.508E-02	5.738E+00
2072	3.882E+07	3.371E-02	5.513E+00
2073	3.882E+07	3.239E-02	5.297E+00
2074	3.882E+07	3.112E-02	5.089E+00

=====
 Model Parameters
 =====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 W : 0.0400 1/yr ***** User Mode Selection *****
 OC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Dichloromethane (HAP)
 Molecular Wt = 84.93 Concentration = 14.300000 ppmV

=====
 Landfill Parameters
 =====

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

=====
 Model Results
 =====

Year	Refuse In Place (Mg)	Dichloromethane (HAP) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	5.499E-03	1.557E+00
1973	1.392E+05	5.605E-02	1.587E+01
1974	3.050E+05	1.208E-01	3.421E+01
1975	4.974E+05	1.939E-01	5.488E+01
1976	7.027E+05	2.692E-01	7.621E+01
1977	9.562E+05	3.611E-01	1.022E+02
1978	1.235E+06	4.597E-01	1.301E+02
1979	1.523E+06	5.578E-01	1.579E+02
1980	1.839E+06	6.640E-01	1.880E+02
1981	2.162E+06	7.684E-01	2.175E+02
1982	2.473E+06	8.639E-01	2.446E+02
1983	2.806E+06	9.644E-01	2.730E+02
1984	3.186E+06	1.080E+00	3.058E+02
1985	3.624E+06	1.215E+00	3.439E+02
1986	4.159E+06	1.384E+00	3.917E+02
1987	4.685E+06	1.542E+00	4.365E+02
1988	5.257E+06	1.712E+00	4.848E+02
1989	5.783E+06	1.858E+00	5.260E+02
1990	6.365E+06	2.020E+00	5.720E+02
1991	7.016E+06	2.204E+00	6.240E+02
1992	7.727E+06	2.405E+00	6.808E+02
1993	8.389E+06	2.578E+00	7.299E+02
1994	9.086E+06	2.759E+00	7.810E+02
1995	9.822E+06	2.948E+00	8.346E+02
1996	1.059E+07	3.144E+00	8.899E+02
1997	1.135E+07	3.325E+00	9.414E+02
1998	1.206E+07	3.484E+00	9.864E+02
1999	1.274E+07	3.620E+00	1.025E+03
2000	1.342E+07	3.753E+00	1.063E+03
2001	1.403E+07	3.853E+00	1.091E+03
2002	1.482E+07	4.022E+00	1.139E+03
2003	1.563E+07	4.193E+00	1.187E+03
2004	1.646E+07	4.364E+00	1.235E+03
2005	1.731E+07	4.535E+00	1.284E+03
2006	1.818E+07	4.708E+00	1.333E+03
2007	1.907E+07	4.882E+00	1.382E+03
2008	1.997E+07	5.057E+00	1.431E+03
2009	2.090E+07	5.232E+00	1.481E+03
2010	2.184E+07	5.409E+00	1.531E+03
2011	2.265E+07	5.525E+00	1.564E+03
2012	2.348E+07	5.642E+00	1.597E+03
2013	2.432E+07	5.762E+00	1.631E+03

14	2.518E+07	5.882E+00	1.665E+03
15	2.605E+07	6.004E+00	1.7 +03
16	2.694E+07	6.128E+00	1.735E+03
2017	2.785E+07	6.253E+00	1.770E+03
18	2.876E+07	6.379E+00	1.806E+03
19	2.970E+07	6.507E+00	1.842E+03
2020	3.065E+07	6.636E+00	1.879E+03
2021	3.162E+07	6.766E+00	1.915E+03
22	3.260E+07	6.898E+00	1.953E+03
23	3.360E+07	7.030E+00	1.990E+03
2024	3.461E+07	7.164E+00	2.028E+03
2025	3.564E+07	7.299E+00	2.066E+03
26	3.668E+07	7.435E+00	2.105E+03
27	3.775E+07	7.573E+00	2.144E+03
2028	3.882E+07	7.708E+00	2.182E+03
29	3.882E+07	7.406E+00	2.097E+03
30	3.882E+07	7.115E+00	2.014E+03
31	3.882E+07	6.836E+00	1.935E+03
2032	3.882E+07	6.568E+00	1.859E+03
33	3.882E+07	6.311E+00	1.787E+03
34	3.882E+07	6.063E+00	1.716E+03
2035	3.882E+07	5.826E+00	1.649E+03
2036	3.882E+07	5.597E+00	1.585E+03
37	3.882E+07	5.378E+00	1.522E+03
38	3.882E+07	5.167E+00	1.463E+03
2039	3.882E+07	4.964E+00	1.405E+03
2040	3.882E+07	4.770E+00	1.350E+03
41	3.882E+07	4.583E+00	1.297E+03
42	3.882E+07	4.403E+00	1.246E+03
2043	3.882E+07	4.230E+00	1.198E+03
44	3.882E+07	4.064E+00	1.151E+03
45	3.882E+07	3.905E+00	1.105E+03
2046	3.882E+07	3.752E+00	1.062E+03
2047	3.882E+07	3.605E+00	1.020E+03
48	3.882E+07	3.463E+00	9.805E+02
49	3.882E+07	3.328E+00	9.420E+02
2050	3.882E+07	3.197E+00	9.051E+02
2051	3.882E+07	3.072E+00	8.696E+02
52	3.882E+07	2.951E+00	8.355E+02
53	3.882E+07	2.836E+00	8.027E+02
2054	3.882E+07	2.724E+00	7.713E+02
2055	3.882E+07	2.618E+00	7.410E+02
56	3.882E+07	2.515E+00	7.120E+02
57	3.882E+07	2.416E+00	6.840E+02
2058	3.882E+07	2.322E+00	6.572E+02
59	3.882E+07	2.231E+00	6.315E+02
60	3.882E+07	2.143E+00	6.067E+02
2061	3.882E+07	2.059E+00	5.829E+02
2062	3.882E+07	1.978E+00	5.601E+02
63	3.882E+07	1.901E+00	5.381E+02
64	3.882E+07	1.826E+00	5.170E+02
2065	3.882E+07	1.755E+00	4.967E+02
2066	3.882E+07	1.686E+00	4.772E+02
67	3.882E+07	1.620E+00	4.585E+02
68	3.882E+07	1.556E+00	4.406E+02
2069	3.882E+07	1.495E+00	4.233E+02
2070	3.882E+07	1.437E+00	4.067E+02
71	3.882E+07	1.380E+00	3.907E+02

=====
 Model Parameters
 =====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 K : 0.0400 1/yr ***** User Mode Selection *****
 OC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Tr Pollutant : Ethylbenzene (HAP/VOC)
 Molecular Wt = 106.17 Concentration = 4.610000 ppmV

=====
 Landfill Parameters
 =====

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

=====
 Model Results
 =====

Year	Refuse In Place (Mg)	Ethylbenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.216E-03	5.019E-01
1973	1.392E+05	2.259E-02	5.115E+00
1974	3.050E+05	4.870E-02	1.103E+01
1975	4.974E+05	7.813E-02	1.769E+01
1976	7.027E+05	1.085E-01	2.457E+01
1977	9.562E+05	1.455E-01	3.295E+01
1978	1.235E+06	1.853E-01	4.195E+01
1979	1.523E+06	2.248E-01	5.091E+01
1980	1.839E+06	2.676E-01	6.060E+01
1981	2.162E+06	3.096E-01	7.012E+01
1982	2.473E+06	3.481E-01	7.884E+01
1983	2.806E+06	3.887E-01	8.801E+01
1984	3.186E+06	4.354E-01	9.859E+01
1985	3.624E+06	4.896E-01	1.109E+02
1986	4.159E+06	5.576E-01	1.263E+02
1987	4.685E+06	6.214E-01	1.407E+02
1988	5.257E+06	6.901E-01	1.563E+02
1989	5.783E+06	7.487E-01	1.696E+02
1990	6.365E+06	8.142E-01	1.844E+02
1991	7.016E+06	8.883E-01	2.012E+02
1992	7.727E+06	9.692E-01	2.195E+02
1993	8.389E+06	1.039E+00	2.353E+02
1994	9.086E+06	1.112E+00	2.518E+02
1995	9.822E+06	1.188E+00	2.691E+02
1996	1.059E+07	1.267E+00	2.869E+02
1997	1.135E+07	1.340E+00	3.035E+02
1998	1.206E+07	1.404E+00	3.180E+02
1999	1.274E+07	1.459E+00	3.303E+02
2000	1.342E+07	1.513E+00	3.425E+02
2001	1.403E+07	1.553E+00	3.516E+02
2002	1.482E+07	1.621E+00	3.671E+02
2003	1.563E+07	1.690E+00	3.826E+02
2004	1.646E+07	1.759E+00	3.982E+02
2005	1.731E+07	1.828E+00	4.139E+02
2006	1.818E+07	1.897E+00	4.297E+02
2007	1.907E+07	1.967E+00	4.455E+02
2008	1.997E+07	2.038E+00	4.615E+02
2009	2.090E+07	2.109E+00	4.775E+02
2010	2.184E+07	2.180E+00	4.936E+02
2011	2.265E+07	2.226E+00	5.042E+02
2012	2.348E+07	2.274E+00	5.149E+02
2013	2.432E+07	2.322E+00	5.258E+02

2014	2.518E+07	2.371E+00	5.367+02
2015	2.605E+07	2.420E+00	5.4 +02
2016	2.694E+07	2.470E+00	5.592E+02
2017	2.785E+07	2.520E+00	5.706E+02
2018	2.876E+07	2.571E+00	5.822E+02
2019	2.970E+07	2.622E+00	5.938E+02
2020	3.065E+07	2.674E+00	6.056E+02
2021	3.162E+07	2.727E+00	6.175E+02
2022	3.260E+07	2.780E+00	6.295E+02
2023	3.360E+07	2.833E+00	6.416E+02
2024	3.461E+07	2.887E+00	6.538E+02
2025	3.564E+07	2.942E+00	6.661E+02
2026	3.668E+07	2.996E+00	6.786E+02
2027	3.775E+07	3.052E+00	6.911E+02
2028	3.882E+07	3.106E+00	7.035E+02
2029	3.882E+07	2.985E+00	6.759E+02
2030	3.882E+07	2.868E+00	6.494E+02
2031	3.882E+07	2.755E+00	6.239E+02
2032	3.882E+07	2.647E+00	5.994E+02
2033	3.882E+07	2.543E+00	5.759E+02
2034	3.882E+07	2.444E+00	5.534E+02
2035	3.882E+07	2.348E+00	5.317E+02
2036	3.882E+07	2.256E+00	5.108E+02
2037	3.882E+07	2.167E+00	4.908E+02
2038	3.882E+07	2.082E+00	4.715E+02
2039	3.882E+07	2.001E+00	4.530E+02
2040	3.882E+07	1.922E+00	4.353E+02
2041	3.882E+07	1.847E+00	4.182E+02
2042	3.882E+07	1.774E+00	4.018E+02
2043	3.882E+07	1.705E+00	3.861E+02
2044	3.882E+07	1.638E+00	3.709E+02
2045	3.882E+07	1.574E+00	3.564E+02
2046	3.882E+07	1.512E+00	3.424E+02
2047	3.882E+07	1.453E+00	3.290E+02
2048	3.882E+07	1.396E+00	3.161E+02
2049	3.882E+07	1.341E+00	3.037E+02
2050	3.882E+07	1.288E+00	2.918E+02
2051	3.882E+07	1.238E+00	2.803E+02
2052	3.882E+07	1.189E+00	2.693E+02
2053	3.882E+07	1.143E+00	2.588E+02
2054	3.882E+07	1.098E+00	2.486E+02
2055	3.882E+07	1.055E+00	2.389E+02
2056	3.882E+07	1.014E+00	2.295E+02
2057	3.882E+07	9.738E-01	2.205E+02
2058	3.882E+07	9.356E-01	2.119E+02
2059	3.882E+07	8.989E-01	2.036E+02
2060	3.882E+07	8.637E-01	1.956E+02
2061	3.882E+07	8.298E-01	1.879E+02
2062	3.882E+07	7.973E-01	1.805E+02
2063	3.882E+07	7.660E-01	1.735E+02
2064	3.882E+07	7.360E-01	1.667E+02
2065	3.882E+07	7.071E-01	1.601E+02

=====
 Model Parameters
 =====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Ethylene Dibromide (HAP/VOC)
 Molecular Wt = 187.88 Concentration = 0.001000 ppmV

=====
 Landfill Parameters
 =====

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

=====
 Model Results
 =====

Year	Refuse In Place (Mg)	Ethylene Dibromide (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	8.507E-07	1.089E-04
1973	1.392E+05	8.670E-06	1.110E-03
1974	3.050E+05	1.869E-05	2.392E-03
1975	4.974E+05	2.999E-05	3.838E-03
1976	7.027E+05	4.165E-05	5.330E-03
1977	9.562E+05	5.586E-05	7.148E-03
1978	1.235E+06	7.112E-05	9.101E-03
1979	1.523E+06	8.629E-05	1.104E-02
1980	1.839E+06	1.027E-04	1.314E-02
1981	2.162E+06	1.189E-04	1.521E-02
1982	2.473E+06	1.336E-04	1.710E-02
1983	2.806E+06	1.492E-04	1.909E-02
1984	3.186E+06	1.671E-04	2.139E-02
1985	3.624E+06	1.879E-04	2.405E-02
1986	4.159E+06	2.140E-04	2.739E-02
1987	4.685E+06	2.385E-04	3.052E-02
1988	5.257E+06	2.649E-04	3.390E-02
1989	5.783E+06	2.874E-04	3.678E-02
1990	6.365E+06	3.126E-04	4.000E-02
1991	7.016E+06	3.410E-04	4.364E-02
1992	7.727E+06	3.721E-04	4.761E-02
1993	8.389E+06	3.989E-04	5.104E-02
1994	9.086E+06	4.268E-04	5.461E-02
1995	9.822E+06	4.561E-04	5.836E-02
1996	1.059E+07	4.863E-04	6.223E-02
1997	1.135E+07	5.144E-04	6.583E-02
1998	1.206E+07	5.390E-04	6.898E-02
1999	1.274E+07	5.600E-04	7.166E-02
2000	1.342E+07	5.807E-04	7.430E-02
2001	1.403E+07	5.960E-04	7.627E-02
2002	1.482E+07	6.223E-04	7.963E-02
2003	1.563E+07	6.486E-04	8.300E-02
2004	1.646E+07	6.750E-04	8.638E-02
2005	1.731E+07	7.016E-04	8.978E-02
2006	1.818E+07	7.284E-04	9.321E-02
2007	1.907E+07	7.552E-04	9.665E-02
2008	1.997E+07	7.822E-04	1.001E-01
2009	2.090E+07	8.094E-04	1.036E-01
2010	2.184E+07	8.367E-04	1.071E-01
2011	2.265E+07	8.547E-04	1.094E-01
2012	2.348E+07	8.729E-04	1.117E-01
2013	2.432E+07	8.913E-04	1.141E-01

2014	2.518E+07	9.100E-04	1.164E-01
2015	2.605E+07	9.289E-04	1.1 -01
2016	2.694E+07	9.480E-04	1.213E-01
2017	2.785E+07	9.673E-04	1.238E-01
2018	2.876E+07	9.868E-04	1.263E-01
2019	2.970E+07	1.007E-03	1.288E-01
2020	3.065E+07	1.027E-03	1.314E-01
2021	3.162E+07	1.047E-03	1.339E-01
2022	3.260E+07	1.067E-03	1.365E-01
2023	3.360E+07	1.088E-03	1.392E-01
2024	3.461E+07	1.108E-03	1.418E-01
2025	3.564E+07	1.129E-03	1.445E-01
2026	3.668E+07	1.150E-03	1.472E-01
2027	3.775E+07	1.172E-03	1.499E-01
2028	3.882E+07	1.192E-03	1.526E-01
2029	3.882E+07	1.146E-03	1.466E-01
2030	3.882E+07	1.101E-03	1.409E-01
2031	3.882E+07	1.058E-03	1.353E-01
2032	3.882E+07	1.016E-03	1.300E-01
2033	3.882E+07	9.763E-04	1.249E-01
2034	3.882E+07	9.380E-04	1.200E-01
2035	3.882E+07	9.012E-04	1.153E-01
2036	3.882E+07	8.659E-04	1.108E-01
2037	3.882E+07	8.319E-04	1.065E-01
2038	3.882E+07	7.993E-04	1.023E-01
2039	3.882E+07	7.680E-04	9.828E-02
2040	3.882E+07	7.379E-04	9.442E-02
2041	3.882E+07	7.089E-04	9.072E-02
2042	3.882E+07	6.811E-04	8.716E-02
2043	3.882E+07	6.544E-04	8.374E-02
2044	3.882E+07	6.288E-04	8.046E-02
2045	3.882E+07	6.041E-04	7.731E-02
2046	3.882E+07	5.804E-04	7.427E-02
2047	3.882E+07	5.577E-04	7.136E-02
2048	3.882E+07	5.358E-04	6.856E-02
2049	3.882E+07	5.148E-04	6.588E-02
2050	3.882E+07	4.946E-04	6.329E-02
2051	3.882E+07	4.752E-04	6.081E-02
2052	3.882E+07	4.566E-04	5.843E-02
2053	3.882E+07	4.387E-04	5.614E-02
2054	3.882E+07	4.215E-04	5.393E-02
2055	3.882E+07	4.049E-04	5.182E-02
2056	3.882E+07	3.891E-04	4.979E-02
2057	3.882E+07	3.738E-04	4.784E-02
2058	3.882E+07	3.592E-04	4.596E-02
2059	3.882E+07	3.451E-04	4.416E-02
2060	3.882E+07	3.315E-04	4.243E-02
2061	3.882E+07	3.185E-04	4.076E-02
2062	3.882E+07	3.060E-04	3.916E-02
2063	3.882E+07	2.940E-04	3.763E-02
2064	3.882E+07	2.825E-04	3.615E-02
2065	3.882E+07	2.714E-04	3.474E-02
2066	3.882E+07	2.608E-04	3.337E-02
2067	3.882E+07	2.506E-04	3.207E-02
2068	3.882E+07	2.407E-04	3.081E-02
2069	3.882E+07	2.313E-04	2.960E-02
2070	3.882E+07	2.222E-04	2.844E-02
2071	3.882E+07	2.135E-04	2.732E-02
2072	3.882E+07	2.052E-04	2.625E-02
2073	3.882E+07	1.971E-04	2.522E-02
2074	3.882E+07	1.894E-04	2.423E-02
2075	3.882E+07	1.820E-04	2.328E-02
2076	3.882E+07	1.748E-04	2.237E-02
2077	3.882E+07	1.680E-04	2.149E-02
2078	3.882E+07	1.614E-04	2.065E-02
2079	3.882E+07	1.550E-04	1.984E-02
2080	3.882E+07	1.490E-04	1.906E-02
2081	3.882E+07	1.431E-04	1.832E-02

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 K : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Hexane (HAP/VOC)
 Molecular Wt = 86.18 Concentration = 6.570000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Hexane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.564E-03	7.152E-01
1973	1.392E+05	2.613E-02	7.289E+00
1974	3.050E+05	5.634E-02	1.572E+01
1975	4.974E+05	9.038E-02	2.521E+01
1976	7.027E+05	1.255E-01	3.502E+01
1977	9.562E+05	1.683E-01	4.696E+01
1978	1.235E+06	2.143E-01	5.979E+01
1979	1.523E+06	2.601E-01	7.255E+01
1980	1.839E+06	3.096E-01	8.636E+01
1981	2.162E+06	3.582E-01	9.993E+01
1982	2.473E+06	4.027E-01	1.124E+02
1983	2.806E+06	4.496E-01	1.254E+02
1984	3.186E+06	5.036E-01	1.405E+02
1985	3.624E+06	5.664E-01	1.580E+02
1986	4.159E+06	6.450E-01	1.799E+02
1987	4.685E+06	7.188E-01	2.005E+02
1988	5.257E+06	7.983E-01	2.227E+02
1989	5.783E+06	8.662E-01	2.416E+02
1990	6.365E+06	9.419E-01	2.628E+02
1991	7.016E+06	1.028E+00	2.867E+02
1992	7.727E+06	1.121E+00	3.128E+02
1993	8.389E+06	1.202E+00	3.354E+02
1994	9.086E+06	1.286E+00	3.588E+02
1995	9.822E+06	1.374E+00	3.834E+02
1996	1.059E+07	1.466E+00	4.089E+02
1997	1.135E+07	1.550E+00	4.325E+02
1998	1.206E+07	1.624E+00	4.532E+02
1999	1.274E+07	1.688E+00	4.708E+02
2000	1.342E+07	1.750E+00	4.882E+02
2001	1.403E+07	1.796E+00	5.011E+02
2002	1.482E+07	1.875E+00	5.232E+02
2003	1.563E+07	1.955E+00	5.453E+02
2004	1.646E+07	2.034E+00	5.675E+02
2005	1.731E+07	2.114E+00	5.899E+02
2006	1.818E+07	2.195E+00	6.124E+02
2007	1.907E+07	2.276E+00	6.350E+02
2008	1.997E+07	2.357E+00	6.577E+02
2009	2.090E+07	2.439E+00	6.805E+02
2010	2.184E+07	2.522E+00	7.035E+02
2011	2.265E+07	2.576E+00	7.186E+02
2012	2.348E+07	2.630E+00	7.339E+02
2013	2.432E+07	2.686E+00	7.494E+02

2014	2.518E+07	2.742E+00	7.651E+02
2015	2.605E+07	2.799E+00	7.851E+02
2016	2.694E+07	2.857E+00	7.970E+02
2017	2.785E+07	2.915E+00	8.133E+02
2018	2.876E+07	2.974E+00	8.297E+02
2019	2.970E+07	3.034E+00	8.463E+02
2020	3.065E+07	3.094E+00	8.631E+02
2021	3.162E+07	3.154E+00	8.800E+02
2022	3.260E+07	3.216E+00	8.971E+02
2023	3.360E+07	3.278E+00	9.144E+02
2024	3.461E+07	3.340E+00	9.318E+02
2025	3.564E+07	3.403E+00	9.494E+02
2026	3.668E+07	3.466E+00	9.671E+02
2027	3.775E+07	3.531E+00	9.849E+02
2028	3.882E+07	3.594E+00	1.003E+03
2029	3.882E+07	3.453E+00	9.632E+02
2030	3.882E+07	3.317E+00	9.255E+02
2031	3.882E+07	3.187E+00	8.892E+02
2032	3.882E+07	3.062E+00	8.543E+02
2033	3.882E+07	2.942E+00	8.208E+02
2034	3.882E+07	2.827E+00	7.886E+02
2035	3.882E+07	2.716E+00	7.577E+02
2036	3.882E+07	2.609E+00	7.280E+02
2037	3.882E+07	2.507E+00	6.994E+02
2038	3.882E+07	2.409E+00	6.720E+02
2039	3.882E+07	2.314E+00	6.457E+02
2040	3.882E+07	2.224E+00	6.204E+02
2041	3.882E+07	2.136E+00	5.960E+02
2042	3.882E+07	2.053E+00	5.727E+02
2043	3.882E+07	1.972E+00	5.502E+02
2044	3.882E+07	1.895E+00	5.286E+02
2045	3.882E+07	1.821E+00	5.079E+02
2046	3.882E+07	1.749E+00	4.880E+02
2047	3.882E+07	1.681E+00	4.689E+02
2048	3.882E+07	1.615E+00	4.505E+02
2049	3.882E+07	1.551E+00	4.328E+02
2050	3.882E+07	1.491E+00	4.158E+02
2051	3.882E+07	1.432E+00	3.995E+02
2052	3.882E+07	1.376E+00	3.839E+02
2053	3.882E+07	1.322E+00	3.688E+02
2054	3.882E+07	1.270E+00	3.543E+02
2055	3.882E+07	1.220E+00	3.405E+02
2056	3.882E+07	1.173E+00	3.271E+02
2057	3.882E+07	1.127E+00	3.143E+02
2058	3.882E+07	1.082E+00	3.020E+02
2059	3.882E+07	1.040E+00	2.901E+02
2060	3.882E+07	9.991E-01	2.787E+02
2061	3.882E+07	9.600E-01	2.678E+02
2062	3.882E+07	9.223E-01	2.573E+02

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
: 0.0400 1/yr ***** User Mode Selection *****
IOC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Air Pollutant : Mercury (HAP)
Molecular Wt = 200.61 Concentration = 0.000253 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	Mercury (HAP) Emission Rate (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	2.298E-07	2.754E-05
1973	1.392E+05	2.342E-06	2.807E-04
1974	3.050E+05	5.050E-06	6.052E-04
1975	4.974E+05	8.102E-06	9.709E-04
1976	7.027E+05	1.125E-05	1.348E-03
1977	9.562E+05	1.509E-05	1.808E-03
1978	1.235E+06	1.921E-05	2.303E-03
1979	1.523E+06	2.331E-05	2.794E-03
1980	1.839E+06	2.775E-05	3.326E-03
1981	2.162E+06	3.211E-05	3.848E-03
1982	2.473E+06	3.610E-05	4.327E-03
1983	2.806E+06	4.030E-05	4.830E-03
1984	3.186E+06	4.515E-05	5.411E-03
1985	3.624E+06	5.077E-05	6.085E-03
1986	4.159E+06	5.782E-05	6.929E-03
1987	4.685E+06	6.444E-05	7.723E-03
1988	5.257E+06	7.156E-05	8.577E-03
1989	5.783E+06	7.764E-05	9.305E-03
1990	6.365E+06	8.443E-05	1.012E-02
1991	7.016E+06	9.212E-05	1.104E-02
1992	7.727E+06	1.005E-04	1.205E-02
1993	8.389E+06	1.078E-04	1.291E-02
1994	9.086E+06	1.153E-04	1.382E-02
1995	9.822E+06	1.232E-04	1.477E-02
1996	1.059E+07	1.314E-04	1.574E-02
1997	1.135E+07	1.390E-04	1.665E-02
1998	1.206E+07	1.456E-04	1.745E-02
1999	1.274E+07	1.513E-04	1.813E-02
2000	1.342E+07	1.569E-04	1.880E-02
2001	1.403E+07	1.610E-04	1.930E-02
2002	1.482E+07	1.681E-04	2.015E-02
2003	1.563E+07	1.752E-04	2.100E-02
2004	1.646E+07	1.824E-04	2.186E-02
2005	1.731E+07	1.895E-04	2.272E-02
2006	1.818E+07	1.968E-04	2.358E-02
2007	1.907E+07	2.040E-04	2.445E-02
2008	1.997E+07	2.113E-04	2.533E-02
2009	2.090E+07	2.187E-04	2.621E-02
2010	2.184E+07	2.260E-04	2.709E-02
2011	2.265E+07	2.309E-04	2.767E-02
2012	2.348E+07	2.358E-04	2.826E-02
2013	2.432E+07	2.408E-04	2.886E-02

14	2.518E+07	2.458E-04	2.946E-02
15	2.605E+07	2.509E-04	3.000E-02
16	2.694E+07	2.561E-04	3.069E-02
2017	2.785E+07	2.613E-04	3.132E-02
18	2.876E+07	2.666E-04	3.195E-02
19	2.970E+07	2.719E-04	3.259E-02
2020	3.065E+07	2.773E-04	3.324E-02
2021	3.162E+07	2.828E-04	3.389E-02
22	3.260E+07	2.883E-04	3.455E-02
23	3.360E+07	2.938E-04	3.521E-02
2024	3.461E+07	2.994E-04	3.588E-02
2025	3.564E+07	3.050E-04	3.656E-02
26	3.668E+07	3.107E-04	3.724E-02
27	3.775E+07	3.165E-04	3.793E-02
2028	3.882E+07	3.221E-04	3.861E-02
29	3.882E+07	3.095E-04	3.709E-02
30	3.882E+07	2.974E-04	3.564E-02
31	3.882E+07	2.857E-04	3.424E-02
2032	3.882E+07	2.745E-04	3.290E-02
33	3.882E+07	2.637E-04	3.161E-02
34	3.882E+07	2.534E-04	3.037E-02
2035	3.882E+07	2.435E-04	2.918E-02
2036	3.882E+07	2.339E-04	2.803E-02
37	3.882E+07	2.247E-04	2.693E-02
38	3.882E+07	2.159E-04	2.588E-02
2039	3.882E+07	2.075E-04	2.486E-02
2040	3.882E+07	1.993E-04	2.389E-02
41	3.882E+07	1.915E-04	2.295E-02
42	3.882E+07	1.840E-04	2.205E-02
2043	3.882E+07	1.768E-04	2.119E-02
44	3.882E+07	1.699E-04	2.036E-02
45	3.882E+07	1.632E-04	1.956E-02
2046	3.882E+07	1.568E-04	1.879E-02
2047	3.882E+07	1.506E-04	1.805E-02
48	3.882E+07	1.447E-04	1.735E-02
49	3.882E+07	1.391E-04	1.667E-02
2050	3.882E+07	1.336E-04	1.601E-02
2051	3.882E+07	1.284E-04	1.539E-02
52	3.882E+07	1.233E-04	1.478E-02
53	3.882E+07	1.185E-04	1.420E-02
2054	3.882E+07	1.139E-04	1.365E-02
2055	3.882E+07	1.094E-04	1.311E-02
56	3.882E+07	1.051E-04	1.260E-02
57	3.882E+07	1.010E-04	1.210E-02
2058	3.882E+07	9.702E-05	1.163E-02
59	3.882E+07	9.322E-05	1.117E-02
60	3.882E+07	8.956E-05	1.073E-02
61	3.882E+07	8.605E-05	1.031E-02
2062	3.882E+07	8.268E-05	9.909E-03
63	3.882E+07	7.944E-05	9.520E-03
64	3.882E+07	7.632E-05	9.147E-03
2065	3.882E+07	7.333E-05	8.788E-03
2066	3.882E+07	7.045E-05	8.444E-03
67	3.882E+07	6.769E-05	8.112E-03
68	3.882E+07	6.504E-05	7.794E-03

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 K: 0.0400 1/yr ***** User Mode Selection *****
 NOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Methyl Ethyl Ketone (HAP/VOC)
 Molecular Wt = 72.11 Concentration = 7.090000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methyl Ethyl Ketone (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.315E-03	7.718E-01
1973	1.392E+05	2.359E-02	7.866E+00
1974	3.050E+05	5.087E-02	1.696E+01
1975	4.974E+05	8.161E-02	2.721E+01
1976	7.027E+05	1.133E-01	3.779E+01
1977	9.562E+05	1.520E-01	5.068E+01
1978	1.235E+06	1.935E-01	6.453E+01
1979	1.523E+06	2.348E-01	7.829E+01
1980	1.839E+06	2.795E-01	9.320E+01
1981	2.162E+06	3.234E-01	1.078E+02
1982	2.473E+06	3.637E-01	1.213E+02
1983	2.806E+06	4.060E-01	1.354E+02
1984	3.186E+06	4.548E-01	1.516E+02
1985	3.624E+06	5.114E-01	1.705E+02
1986	4.159E+06	5.824E-01	1.942E+02
1987	4.685E+06	6.491E-01	2.164E+02
1988	5.257E+06	7.209E-01	2.403E+02
1989	5.783E+06	7.821E-01	2.608E+02
1990	6.365E+06	8.505E-01	2.836E+02
1991	7.016E+06	9.279E-01	3.094E+02
1992	7.727E+06	1.012E+00	3.376E+02
1993	8.389E+06	1.085E+00	3.619E+02
1994	9.086E+06	1.161E+00	3.872E+02
1995	9.822E+06	1.241E+00	4.138E+02
1996	1.059E+07	1.323E+00	4.412E+02
1997	1.135E+07	1.400E+00	4.667E+02
1998	1.206E+07	1.467E+00	4.891E+02
1999	1.274E+07	1.524E+00	5.080E+02
2000	1.342E+07	1.580E+00	5.268E+02
2001	1.403E+07	1.622E+00	5.408E+02
2002	1.482E+07	1.693E+00	5.646E+02
2003	1.563E+07	1.765E+00	5.884E+02
2004	1.646E+07	1.837E+00	6.125E+02
2005	1.731E+07	1.909E+00	6.366E+02
2006	1.818E+07	1.982E+00	6.608E+02
2007	1.907E+07	2.055E+00	6.852E+02
2008	1.997E+07	2.129E+00	7.097E+02
2009	2.090E+07	2.203E+00	7.344E+02
2010	2.184E+07	2.277E+00	7.591E+02
2011	2.265E+07	2.326E+00	7.754E+02
2012	2.348E+07	2.375E+00	7.919E+02
2013	2.432E+07	2.425E+00	8.087E+02

14	2.518E+07	2.476E+00	8.27E+02
15	2.605E+07	2.528E+00	8.42E+02
2016	2.694E+07	2.580E+00	8.601E+02
2017	2.785E+07	2.632E+00	8.776E+02
18	2.876E+07	2.685E+00	8.954E+02
19	2.970E+07	2.739E+00	9.133E+02
2020	3.065E+07	2.793E+00	9.314E+02
2021	3.162E+07	2.848E+00	9.497E+02
22	3.260E+07	2.904E+00	9.681E+02
23	3.360E+07	2.960E+00	9.868E+02
2024	3.461E+07	3.016E+00	1.006E+03
25	3.564E+07	3.073E+00	1.025E+03
26	3.668E+07	3.130E+00	1.044E+03
2027	3.775E+07	3.188E+00	1.063E+03
2028	3.882E+07	3.245E+00	1.082E+03
29	3.882E+07	3.118E+00	1.039E+03
30	3.882E+07	2.995E+00	9.987E+02
2031	3.882E+07	2.878E+00	9.595E+02
2032	3.882E+07	2.765E+00	9.219E+02
33	3.882E+07	2.657E+00	8.858E+02
34	3.882E+07	2.552E+00	8.510E+02
2035	3.882E+07	2.452E+00	8.177E+02
2036	3.882E+07	2.356E+00	7.856E+02
37	3.882E+07	2.264E+00	7.548E+02
38	3.882E+07	2.175E+00	7.252E+02
2039	3.882E+07	2.090E+00	6.968E+02
40	3.882E+07	2.008E+00	6.694E+02
41	3.882E+07	1.929E+00	6.432E+02
2042	3.882E+07	1.853E+00	6.180E+02
2043	3.882E+07	1.781E+00	5.937E+02
44	3.882E+07	1.711E+00	5.705E+02
45	3.882E+07	1.644E+00	5.481E+02
2046	3.882E+07	1.579E+00	5.266E+02
2047	3.882E+07	1.518E+00	5.060E+02
48	3.882E+07	1.458E+00	4.861E+02
49	3.882E+07	1.401E+00	4.671E+02
2050	3.882E+07	1.346E+00	4.487E+02
2051	3.882E+07	1.293E+00	4.312E+02
52	3.882E+07	1.242E+00	4.142E+02
53	3.882E+07	1.194E+00	3.980E+02
2054	3.882E+07	1.147E+00	3.824E+02
55	3.882E+07	1.102E+00	3.674E+02
56	3.882E+07	1.059E+00	3.530E+02
2057	3.882E+07	1.017E+00	3.392E+02
2058	3.882E+07	9.773E-01	3.259E+02
59	3.882E+07	9.390E-01	3.131E+02
60	3.882E+07	9.022E-01	3.008E+02
2061	3.882E+07	8.668E-01	2.890E+02
2062	3.882E+07	8.328E-01	2.777E+02
63	3.882E+07	8.002E-01	2.668E+02
64	3.882E+07	7.688E-01	2.563E+02
2065	3.882E+07	7.386E-01	2.463E+02
2066	3.882E+07	7.097E-01	2.366E+02
67	3.882E+07	6.819E-01	2.273E+02
68	3.882E+07	6.551E-01	2.184E+02
2069	3.882E+07	6.294E-01	2.099E+02
70	3.882E+07	6.048E-01	2.016E+02
71	3.882E+07	5.810E-01	1.937E+02

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Methyl Isobutyl Ketone (HAP/VOC)
 Molecular Wt = 100.16 Concentration = 1.870000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methyl Isobutyl Ketone (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	8.481E-04	2.036E-01
1973	1.392E+05	8.643E-03	2.075E+00
1974	3.050E+05	1.864E-02	4.474E+00
1975	4.974E+05	2.990E-02	7.177E+00
1976	7.027E+05	4.152E-02	9.966E+00
1977	9.562E+05	5.569E-02	1.337E+01
1978	1.235E+06	7.090E-02	1.702E+01
1979	1.523E+06	8.603E-02	2.065E+01
1980	1.839E+06	1.024E-01	2.458E+01
1981	2.162E+06	1.185E-01	2.844E+01
1982	2.473E+06	1.332E-01	3.198E+01
1983	2.806E+06	1.487E-01	3.570E+01
1984	3.186E+06	1.666E-01	3.999E+01
1985	3.624E+06	1.874E-01	4.497E+01
1986	4.159E+06	2.134E-01	5.122E+01
1987	4.685E+06	2.378E-01	5.708E+01
1988	5.257E+06	2.641E-01	6.339E+01
1989	5.783E+06	2.865E-01	6.878E+01
1990	6.365E+06	3.116E-01	7.479E+01
1991	7.016E+06	3.399E-01	8.160E+01
1992	7.727E+06	3.709E-01	8.903E+01
1993	8.389E+06	3.976E-01	9.545E+01
1994	9.086E+06	4.255E-01	1.021E+02
1995	9.822E+06	4.547E-01	1.091E+02
1996	1.059E+07	4.848E-01	1.164E+02
1997	1.135E+07	5.128E-01	1.231E+02
1998	1.206E+07	5.374E-01	1.290E+02
1999	1.274E+07	5.582E-01	1.340E+02
2000	1.342E+07	5.789E-01	1.390E+02
2001	1.403E+07	5.942E-01	1.426E+02
2002	1.482E+07	6.203E-01	1.489E+02
2003	1.563E+07	6.466E-01	1.552E+02
2004	1.646E+07	6.730E-01	1.615E+02
2005	1.731E+07	6.995E-01	1.679E+02
2006	1.818E+07	7.261E-01	1.743E+02
2007	1.907E+07	7.529E-01	1.807E+02
2008	1.997E+07	7.798E-01	1.872E+02
2009	2.090E+07	8.069E-01	1.937E+02
2010	2.184E+07	8.341E-01	2.002E+02
2011	2.265E+07	8.520E-01	2.045E+02
2012	2.348E+07	8.702E-01	2.089E+02
2013	2.432E+07	8.885E-01	2.133E+02

014	2.518E+07	9.072E-01	2.179E+02
015	2.605E+07	9.260E-01	2. E+02
2016	2.694E+07	9.450E-01	2.268E+02
2017	2.785E+07	9.643E-01	2.315E+02
018	2.876E+07	9.838E-01	2.362E+02
019	2.970E+07	1.003E+00	2.409E+02
2020	3.065E+07	1.023E+00	2.457E+02
2021	3.162E+07	1.043E+00	2.505E+02
022	3.260E+07	1.064E+00	2.553E+02
023	3.360E+07	1.084E+00	2.603E+02
2024	3.461E+07	1.105E+00	2.652E+02
025	3.564E+07	1.126E+00	2.702E+02
026	3.668E+07	1.147E+00	2.753E+02
027	3.775E+07	1.168E+00	2.803E+02
2028	3.882E+07	1.189E+00	2.853E+02
029	3.882E+07	1.142E+00	2.742E+02
030	3.882E+07	1.097E+00	2.634E+02
2031	3.882E+07	1.054E+00	2.531E+02
2032	3.882E+07	1.013E+00	2.432E+02
033	3.882E+07	9.733E-01	2.336E+02
034	3.882E+07	9.351E-01	2.245E+02
2035	3.882E+07	8.984E-01	2.157E+02
2036	3.882E+07	8.632E-01	2.072E+02
037	3.882E+07	8.294E-01	1.991E+02
038	3.882E+07	7.968E-01	1.913E+02
2039	3.882E+07	7.656E-01	1.838E+02
040	3.882E+07	7.356E-01	1.766E+02
041	3.882E+07	7.067E-01	1.696E+02
042	3.882E+07	6.790E-01	1.630E+02
2043	3.882E+07	6.524E-01	1.566E+02
044	3.882E+07	6.268E-01	1.505E+02
045	3.882E+07	6.022E-01	1.446E+02
2046	3.882E+07	5.786E-01	1.389E+02
2047	3.882E+07	5.559E-01	1.334E+02
048	3.882E+07	5.341E-01	1.282E+02
049	3.882E+07	5.132E-01	1.232E+02
2050	3.882E+07	4.931E-01	1.184E+02
2051	3.882E+07	4.737E-01	1.137E+02
052	3.882E+07	4.552E-01	1.093E+02
053	3.882E+07	4.373E-01	1.050E+02
2054	3.882E+07	4.202E-01	1.009E+02
055	3.882E+07	4.037E-01	9.690E+01
056	3.882E+07	3.879E-01	9.310E+01
057	3.882E+07	3.727E-01	8.945E+01
2058	3.882E+07	3.580E-01	8.595E+01
059	3.882E+07	3.440E-01	8.258E+01
060	3.882E+07	3.305E-01	7.934E+01
2061	3.882E+07	3.176E-01	7.623E+01
2062	3.882E+07	3.051E-01	7.324E+01
063	3.882E+07	2.931E-01	7.037E+01
064	3.882E+07	2.816E-01	6.761E+01
2065	3.882E+07	2.706E-01	6.496E+01
2066	3.882E+07	2.600E-01	6.241E+01
067	3.882E+07	2.498E-01	5.996E+01
068	3.882E+07	2.400E-01	5.761E+01
2069	3.882E+07	2.306E-01	5.535E+01
070	3.882E+07	2.216E-01	5.318E+01
071	3.882E+07	2.129E-01	5.110E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 K : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Perchloroethylene (HAP/VOC)
 Molecular Wt = 165.83 Concentration = 3.730000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Perchloroethylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.801E-03	4.061E-01
1973	1.392E+05	2.854E-02	4.138E+00
1974	3.050E+05	6.155E-02	8.923E+00
1975	4.974E+05	9.873E-02	1.431E+01
1976	7.027E+05	1.371E-01	1.988E+01
1977	9.562E+05	1.839E-01	2.666E+01
1978	1.235E+06	2.341E-01	3.395E+01
1979	1.523E+06	2.841E-01	4.119E+01
1980	1.839E+06	3.382E-01	4.903E+01
1981	2.162E+06	3.913E-01	5.674E+01
1982	2.473E+06	4.400E-01	6.379E+01
1983	2.806E+06	4.912E-01	7.121E+01
1984	3.186E+06	5.502E-01	7.977E+01
1985	3.624E+06	6.187E-01	8.971E+01
1986	4.159E+06	7.046E-01	1.022E+02
1987	4.685E+06	7.853E-01	1.139E+02
1988	5.257E+06	8.721E-01	1.264E+02
1989	5.783E+06	9.462E-01	1.372E+02
1990	6.365E+06	1.029E+00	1.492E+02
1991	7.016E+06	1.123E+00	1.628E+02
1992	7.727E+06	1.225E+00	1.776E+02
1993	8.389E+06	1.313E+00	1.904E+02
1994	9.086E+06	1.405E+00	2.037E+02
1995	9.822E+06	1.502E+00	2.177E+02
1996	1.059E+07	1.601E+00	2.321E+02
1997	1.135E+07	1.694E+00	2.455E+02
1998	1.206E+07	1.775E+00	2.573E+02
1999	1.274E+07	1.844E+00	2.673E+02
2000	1.342E+07	1.912E+00	2.772E+02
2001	1.403E+07	1.962E+00	2.845E+02
2002	1.482E+07	2.049E+00	2.970E+02
2003	1.563E+07	2.135E+00	3.096E+02
2004	1.646E+07	2.222E+00	3.222E+02
2005	1.731E+07	2.310E+00	3.349E+02
2006	1.818E+07	2.398E+00	3.477E+02
2007	1.907E+07	2.486E+00	3.605E+02
2008	1.997E+07	2.575E+00	3.734E+02
2009	2.090E+07	2.665E+00	3.863E+02
2010	2.184E+07	2.755E+00	3.994E+02
2011	2.265E+07	2.814E+00	4.079E+02
2012	2.348E+07	2.874E+00	4.166E+02
2013	2.432E+07	2.934E+00	4.254E+02

2014	2.518E+07	2.996E+00	4.37+02
2015	2.605E+07	3.058E+00	4.47+02
2016	2.694E+07	3.121E+00	4.525E+02
2017	2.785E+07	3.185E+00	4.617E+02
2018	2.876E+07	3.249E+00	4.710E+02
2019	2.970E+07	3.314E+00	4.805E+02
2020	3.065E+07	3.380E+00	4.900E+02
2021	3.162E+07	3.446E+00	4.996E+02
2022	3.260E+07	3.513E+00	5.093E+02
2023	3.360E+07	3.581E+00	5.191E+02
2024	3.461E+07	3.649E+00	5.290E+02
2025	3.564E+07	3.718E+00	5.390E+02
2026	3.668E+07	3.787E+00	5.490E+02
2027	3.775E+07	3.857E+00	5.592E+02
2028	3.882E+07	3.926E+00	5.692E+02
2029	3.882E+07	3.772E+00	5.469E+02
2030	3.882E+07	3.624E+00	5.254E+02
2031	3.882E+07	3.482E+00	5.048E+02
2032	3.882E+07	3.345E+00	4.850E+02
2033	3.882E+07	3.214E+00	4.660E+02
2034	3.882E+07	3.088E+00	4.477E+02
2035	3.882E+07	2.967E+00	4.302E+02
2036	3.882E+07	2.851E+00	4.133E+02
2037	3.882E+07	2.739E+00	3.971E+02
2038	3.882E+07	2.632E+00	3.815E+02
2039	3.882E+07	2.528E+00	3.666E+02
2040	3.882E+07	2.429E+00	3.522E+02
2041	3.882E+07	2.334E+00	3.384E+02
2042	3.882E+07	2.242E+00	3.251E+02
2043	3.882E+07	2.154E+00	3.124E+02
2044	3.882E+07	2.070E+00	3.001E+02
2045	3.882E+07	1.989E+00	2.884E+02
2046	3.882E+07	1.911E+00	2.770E+02
2047	3.882E+07	1.836E+00	2.662E+02
2048	3.882E+07	1.764E+00	2.557E+02
2049	3.882E+07	1.695E+00	2.457E+02
2050	3.882E+07	1.628E+00	2.361E+02
2051	3.882E+07	1.564E+00	2.268E+02
2052	3.882E+07	1.503E+00	2.179E+02
2053	3.882E+07	1.444E+00	2.094E+02
2054	3.882E+07	1.388E+00	2.012E+02
2055	3.882E+07	1.333E+00	1.933E+02
2056	3.882E+07	1.281E+00	1.857E+02
2057	3.882E+07	1.231E+00	1.784E+02
2058	3.882E+07	1.182E+00	1.714E+02
2059	3.882E+07	1.136E+00	1.647E+02
2060	3.882E+07	1.092E+00	1.583E+02
2061	3.882E+07	1.049E+00	1.520E+02
2062	3.882E+07	1.008E+00	1.461E+02
2063	3.882E+07	9.681E-01	1.404E+02
2064	3.882E+07	9.301E-01	1.349E+02
2065	3.882E+07	8.936E-01	1.296E+02
2066	3.882E+07	8.586E-01	1.245E+02
2067	3.882E+07	8.249E-01	1.196E+02
2068	3.882E+07	7.926E-01	1.149E+02
2069	3.882E+07	7.615E-01	1.104E+02
2070	3.882E+07	7.317E-01	1.061E+02
2071	3.882E+07	7.030E-01	1.019E+02
2072	3.882E+07	6.754E-01	9.792E+01
2073	3.882E+07	6.489E-01	9.408E+01
2074	3.882E+07	6.235E-01	9.039E+01
2075	3.882E+07	5.990E-01	8.685E+01
2076	3.882E+07	5.755E-01	8.344E+01
2077	3.882E+07	5.530E-01	8.017E+01
2078	3.882E+07	5.313E-01	7.703E+01
2079	3.882E+07	5.105E-01	7.401E+01
2080	3.882E+07	4.904E-01	7.111E+01
2081	3.882E+07	4.712E-01	6.832E+01

=====
Model Parameters
=====

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
: 0.0400 1/yr ***** User Mode Selection *****
OC : 250.00 ppmv ***** User Mode Selection *****
Methane : 50.0000 % volume
Carbon Dioxide : 50.0000 % volume
Pollutant : Toluene (HAP/VOC)
Molecular Wt = 92.14 Concentration = 39.300000 ppmV

=====
Landfill Parameters
=====

Landfill type : No Co-Disposal
Year Opened : 1971 Current Year : 2030 Closure Year: 2030
Capacity : 38815000 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

=====
Model Results
=====

Year	Refuse In Place (Mg)	Toluene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.640E-02	4.278E+00
1973	1.392E+05	1.671E-01	4.360E+01
1974	3.050E+05	3.603E-01	9.402E+01
1975	4.974E+05	5.780E-01	1.508E+02
1976	7.027E+05	8.027E-01	2.095E+02
1977	9.562E+05	1.077E+00	2.809E+02
1978	1.235E+06	1.371E+00	3.577E+02
1979	1.523E+06	1.663E+00	4.340E+02
1980	1.839E+06	1.980E+00	5.166E+02
1981	2.162E+06	2.291E+00	5.978E+02
1982	2.473E+06	2.576E+00	6.721E+02
1983	2.806E+06	2.875E+00	7.503E+02
1984	3.186E+06	3.221E+00	8.405E+02
1985	3.624E+06	3.622E+00	9.452E+02
1986	4.159E+06	4.125E+00	1.076E+03
1987	4.685E+06	4.597E+00	1.200E+03
1988	5.257E+06	5.106E+00	1.332E+03
1989	5.783E+06	5.539E+00	1.445E+03
1990	6.365E+06	6.024E+00	1.572E+03
1991	7.016E+06	6.572E+00	1.715E+03
1992	7.727E+06	7.171E+00	1.871E+03
1993	8.389E+06	7.688E+00	2.006E+03
1994	9.086E+06	8.226E+00	2.146E+03
1995	9.822E+06	8.790E+00	2.294E+03
1996	1.059E+07	9.373E+00	2.446E+03
1997	1.135E+07	9.915E+00	2.587E+03
1998	1.206E+07	1.039E+01	2.711E+03
1999	1.274E+07	1.079E+01	2.816E+03
2000	1.342E+07	1.119E+01	2.920E+03
2001	1.403E+07	1.149E+01	2.998E+03
2002	1.482E+07	1.199E+01	3.129E+03
2003	1.563E+07	1.250E+01	3.262E+03
2004	1.646E+07	1.301E+01	3.395E+03
2005	1.731E+07	1.352E+01	3.529E+03
2006	1.818E+07	1.404E+01	3.663E+03
2007	1.907E+07	1.456E+01	3.798E+03
2008	1.997E+07	1.508E+01	3.934E+03
2009	2.090E+07	1.560E+01	4.071E+03
2010	2.184E+07	1.613E+01	4.208E+03
2011	2.265E+07	1.647E+01	4.298E+03
2012	2.348E+07	1.682E+01	4.390E+03
2013	2.432E+07	1.718E+01	4.482E+03

14	2.518E+07	1.754E+01	4.576E+03
15	2.605E+07	1.790E+01	4.13E+03
16	2.694E+07	1.827E+01	4.76E+03
2017	2.785E+07	1.864E+01	4.865E+03
18	2.876E+07	1.902E+01	4.963E+03
19	2.970E+07	1.940E+01	5.062E+03
20	3.065E+07	1.979E+01	5.163E+03
2021	3.162E+07	2.017E+01	5.264E+03
22	3.260E+07	2.057E+01	5.366E+03
23	3.360E+07	2.096E+01	5.470E+03
2024	3.461E+07	2.136E+01	5.574E+03
2025	3.564E+07	2.176E+01	5.679E+03
26	3.668E+07	2.217E+01	5.785E+03
27	3.775E+07	2.258E+01	5.892E+03
2028	3.882E+07	2.298E+01	5.997E+03
29	3.882E+07	2.208E+01	5.762E+03
30	3.882E+07	2.122E+01	5.536E+03
31	3.882E+07	2.038E+01	5.319E+03
2032	3.882E+07	1.958E+01	5.110E+03
33	3.882E+07	1.882E+01	4.910E+03
34	3.882E+07	1.808E+01	4.717E+03
35	3.882E+07	1.737E+01	4.532E+03
2036	3.882E+07	1.669E+01	4.355E+03
37	3.882E+07	1.603E+01	4.184E+03
38	3.882E+07	1.541E+01	4.020E+03
2039	3.882E+07	1.480E+01	3.862E+03
2040	3.882E+07	1.422E+01	3.711E+03
41	3.882E+07	1.366E+01	3.565E+03
42	3.882E+07	1.313E+01	3.425E+03
2043	3.882E+07	1.261E+01	3.291E+03
44	3.882E+07	1.212E+01	3.162E+03
45	3.882E+07	1.164E+01	3.038E+03
46	3.882E+07	1.119E+01	2.919E+03
2047	3.882E+07	1.075E+01	2.805E+03
48	3.882E+07	1.033E+01	2.695E+03
49	3.882E+07	9.922E+00	2.589E+03
2050	3.882E+07	9.533E+00	2.487E+03
2051	3.882E+07	9.159E+00	2.390E+03
52	3.882E+07	8.800E+00	2.296E+03
53	3.882E+07	8.455E+00	2.206E+03
2054	3.882E+07	8.123E+00	2.120E+03
2055	3.882E+07	7.805E+00	2.037E+03
56	3.882E+07	7.499E+00	1.957E+03
57	3.882E+07	7.205E+00	1.880E+03
2058	3.882E+07	6.922E+00	1.806E+03
2059	3.882E+07	6.651E+00	1.735E+03
60	3.882E+07	6.390E+00	1.667E+03
61	3.882E+07	6.139E+00	1.602E+03
2062	3.882E+07	5.899E+00	1.539E+03
63	3.882E+07	5.667E+00	1.479E+03
64	3.882E+07	5.445E+00	1.421E+03
2065	3.882E+07	5.232E+00	1.365E+03
2066	3.882E+07	5.026E+00	1.312E+03
67	3.882E+07	4.829E+00	1.260E+03
68	3.882E+07	4.640E+00	1.211E+03
2069	3.882E+07	4.458E+00	1.163E+03
2070	3.882E+07	4.283E+00	1.118E+03
71	3.882E+07	4.115E+00	1.074E+03
72	3.882E+07	3.954E+00	1.032E+03
2073	3.882E+07	3.799E+00	9.913E+02
2074	3.882E+07	3.650E+00	9.524E+02
75	3.882E+07	3.507E+00	9.151E+02
76	3.882E+07	3.369E+00	8.792E+02
2077	3.882E+07	3.237E+00	8.447E+02

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 R : 0.0400 1/yr ***** User Mode Selection *****
 OC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Trichloroethene (HAP/VOC)
 Molecular Wt = 131.38 Concentration = 2.820000 ppmv

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Trichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	1.678E-03	3.070E-01
1973	1.392E+05	1.710E-02	3.129E+00
1974	3.050E+05	3.686E-02	6.746E+00
1975	4.974E+05	5.914E-02	1.082E+01
1976	7.027E+05	8.213E-02	1.503E+01
1977	9.562E+05	1.102E-01	2.016E+01
1978	1.235E+06	1.402E-01	2.566E+01
1979	1.523E+06	1.702E-01	3.114E+01
1980	1.839E+06	2.026E-01	3.707E+01
1981	2.162E+06	2.344E-01	4.289E+01
1982	2.473E+06	2.635E-01	4.823E+01
1983	2.806E+06	2.942E-01	5.384E+01
1984	3.186E+06	3.295E-01	6.031E+01
1985	3.624E+06	3.706E-01	6.782E+01
1986	4.159E+06	4.221E-01	7.724E+01
1987	4.685E+06	4.704E-01	8.608E+01
1988	5.257E+06	5.224E-01	9.560E+01
1989	5.783E+06	5.668E-01	1.037E+02
1990	6.365E+06	6.163E-01	1.128E+02
1991	7.016E+06	6.724E-01	1.231E+02
1992	7.727E+06	7.337E-01	1.343E+02
1993	8.389E+06	7.866E-01	1.439E+02
1994	9.086E+06	8.416E-01	1.540E+02
1995	9.822E+06	8.994E-01	1.646E+02
1996	1.059E+07	9.590E-01	1.755E+02
1997	1.135E+07	1.014E+00	1.856E+02
1998	1.206E+07	1.063E+00	1.945E+02
1999	1.274E+07	1.104E+00	2.021E+02
2000	1.342E+07	1.145E+00	2.095E+02
2001	1.403E+07	1.175E+00	2.151E+02
2002	1.482E+07	1.227E+00	2.246E+02
2003	1.563E+07	1.279E+00	2.340E+02
2004	1.646E+07	1.331E+00	2.436E+02
2005	1.731E+07	1.384E+00	2.532E+02
2006	1.818E+07	1.436E+00	2.628E+02
2007	1.907E+07	1.489E+00	2.725E+02
2008	1.997E+07	1.543E+00	2.823E+02
2009	2.090E+07	1.596E+00	2.921E+02
2010	2.184E+07	1.650E+00	3.019E+02
2011	2.265E+07	1.685E+00	3.084E+02
2012	2.348E+07	1.721E+00	3.150E+02
2013	2.432E+07	1.758E+00	3.216E+02

14	2.518E+07	1.794E+00	3.284E+02
15	2.605E+07	1.832E+00	3.300E+02
16	2.694E+07	1.869E+00	3.421E+02
17	2.785E+07	1.907E+00	3.491E+02
18	2.876E+07	1.946E+00	3.561E+02
19	2.970E+07	1.985E+00	3.632E+02
20	3.065E+07	2.024E+00	3.705E+02
21	3.162E+07	2.064E+00	3.777E+02
22	3.260E+07	2.104E+00	3.851E+02
23	3.360E+07	2.145E+00	3.925E+02
24	3.461E+07	2.186E+00	4.000E+02
25	3.564E+07	2.227E+00	4.075E+02
26	3.668E+07	2.268E+00	4.151E+02
27	3.775E+07	2.310E+00	4.228E+02
2028	3.882E+07	2.351E+00	4.303E+02
29	3.882E+07	2.259E+00	4.134E+02
30	3.882E+07	2.171E+00	3.972E+02
31	3.882E+07	2.086E+00	3.817E+02
2032	3.882E+07	2.004E+00	3.667E+02
33	3.882E+07	1.925E+00	3.523E+02
34	3.882E+07	1.850E+00	3.385E+02
2035	3.882E+07	1.777E+00	3.252E+02
2036	3.882E+07	1.707E+00	3.125E+02
37	3.882E+07	1.641E+00	3.002E+02
38	3.882E+07	1.576E+00	2.884E+02
2039	3.882E+07	1.514E+00	2.771E+02
40	3.882E+07	1.455E+00	2.663E+02
41	3.882E+07	1.398E+00	2.558E+02
42	3.882E+07	1.343E+00	2.458E+02
2043	3.882E+07	1.290E+00	2.362E+02
44	3.882E+07	1.240E+00	2.269E+02
45	3.882E+07	1.191E+00	2.180E+02
2046	3.882E+07	1.145E+00	2.095E+02
2047	3.882E+07	1.100E+00	2.012E+02
48	3.882E+07	1.057E+00	1.934E+02
49	3.882E+07	1.015E+00	1.858E+02
2050	3.882E+07	9.753E-01	1.785E+02
2051	3.882E+07	9.371E-01	1.715E+02
52	3.882E+07	9.003E-01	1.648E+02
53	3.882E+07	8.650E-01	1.583E+02
2054	3.882E+07	8.311E-01	1.521E+02
55	3.882E+07	7.985E-01	1.461E+02
56	3.882E+07	7.672E-01	1.404E+02
57	3.882E+07	7.371E-01	1.349E+02
2058	3.882E+07	7.082E-01	1.296E+02
59	3.882E+07	6.805E-01	1.245E+02
60	3.882E+07	6.538E-01	1.196E+02
2061	3.882E+07	6.281E-01	1.150E+02
2062	3.882E+07	6.035E-01	1.104E+02
63	3.882E+07	5.799E-01	1.061E+02
64	3.882E+07	5.571E-01	1.020E+02
2065	3.882E+07	5.353E-01	9.795E+01
2066	3.882E+07	5.143E-01	9.411E+01
67	3.882E+07	4.941E-01	9.042E+01
68	3.882E+07	4.747E-01	8.688E+01
2069	3.882E+07	4.561E-01	8.347E+01
70	3.882E+07	4.382E-01	8.020E+01
71	3.882E+07	4.211E-01	7.705E+01

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 W : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Major Pollutant : Vinyl Chloride (HAP/VOC)
 Molecular Wt = 62.50 Concentration = 7.340000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Vinyl Chloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1972	1.361E+04	2.077E-03	7.991E-01
1973	1.392E+05	2.117E-02	8.144E+00
1974	3.050E+05	4.565E-02	1.756E+01
1975	4.974E+05	7.323E-02	2.817E+01
1976	7.027E+05	1.017E-01	3.912E+01
1977	9.562E+05	1.364E-01	5.247E+01
1978	1.235E+06	1.737E-01	6.680E+01
1979	1.523E+06	2.107E-01	8.105E+01
1980	1.839E+06	2.508E-01	9.648E+01
1981	2.162E+06	2.902E-01	1.116E+02
1982	2.473E+06	3.263E-01	1.255E+02
1983	2.806E+06	3.643E-01	1.401E+02
1984	3.186E+06	4.081E-01	1.570E+02
1985	3.624E+06	4.589E-01	1.765E+02
1986	4.159E+06	5.226E-01	2.010E+02
1987	4.685E+06	5.824E-01	2.240E+02
1988	5.257E+06	6.468E-01	2.488E+02
1989	5.783E+06	7.018E-01	2.700E+02
1990	6.365E+06	7.632E-01	2.936E+02
1991	7.016E+06	8.326E-01	3.203E+02
1992	7.727E+06	9.084E-01	3.495E+02
1993	8.389E+06	9.739E-01	3.747E+02
1994	9.086E+06	1.042E+00	4.009E+02
1995	9.822E+06	1.114E+00	4.284E+02
1996	1.059E+07	1.187E+00	4.568E+02
1997	1.135E+07	1.256E+00	4.832E+02
1998	1.206E+07	1.316E+00	5.063E+02
1999	1.274E+07	1.367E+00	5.260E+02
2000	1.342E+07	1.418E+00	5.454E+02
2001	1.403E+07	1.455E+00	5.598E+02
2002	1.482E+07	1.519E+00	5.845E+02
2003	1.563E+07	1.584E+00	6.092E+02
2004	1.646E+07	1.648E+00	6.341E+02
2005	1.731E+07	1.713E+00	6.590E+02
2006	1.818E+07	1.778E+00	6.841E+02
2007	1.907E+07	1.844E+00	7.094E+02
2008	1.997E+07	1.910E+00	7.348E+02
2009	2.090E+07	1.976E+00	7.603E+02
2010	2.184E+07	2.043E+00	7.859E+02
2011	2.265E+07	2.087E+00	8.028E+02
2012	2.348E+07	2.131E+00	8.199E+02
2013	2.432E+07	2.176E+00	8.372E+02

2014	2.518E+07	2.222E+00	8.547E+02
2015	2.605E+07	2.268E+00	8.72E+02
2016	2.694E+07	2.315E+00	8.904E+02
2017	2.785E+07	2.362E+00	9.086E+02
2018	2.876E+07	2.410E+00	9.269E+02
2019	2.970E+07	2.458E+00	9.455E+02
2020	3.065E+07	2.507E+00	9.642E+02
2021	3.162E+07	2.556E+00	9.831E+02
2022	3.260E+07	2.605E+00	1.002E+03
2023	3.360E+07	2.656E+00	1.022E+03
2024	3.461E+07	2.706E+00	1.041E+03
2025	3.564E+07	2.757E+00	1.061E+03
2026	3.668E+07	2.809E+00	1.080E+03
2027	3.775E+07	2.860E+00	1.100E+03
2028	3.882E+07	2.912E+00	1.120E+03
2029	3.882E+07	2.797E+00	1.076E+03
2030	3.882E+07	2.688E+00	1.034E+03
2031	3.882E+07	2.582E+00	9.934E+02
2032	3.882E+07	2.481E+00	9.544E+02
2033	3.882E+07	2.384E+00	9.170E+02
2034	3.882E+07	2.290E+00	8.810E+02
2035	3.882E+07	2.201E+00	8.465E+02
2036	3.882E+07	2.114E+00	8.133E+02
2037	3.882E+07	2.031E+00	7.814E+02
2038	3.882E+07	1.952E+00	7.508E+02
2039	3.882E+07	1.875E+00	7.213E+02
2040	3.882E+07	1.802E+00	6.931E+02
2041	3.882E+07	1.731E+00	6.659E+02
2042	3.882E+07	1.663E+00	6.398E+02
2043	3.882E+07	1.598E+00	6.147E+02
2044	3.882E+07	1.535E+00	5.906E+02
2045	3.882E+07	1.475E+00	5.674E+02
2046	3.882E+07	1.417E+00	5.452E+02
2047	3.882E+07	1.362E+00	5.238E+02
2048	3.882E+07	1.308E+00	5.033E+02
2049	3.882E+07	1.257E+00	4.835E+02
2050	3.882E+07	1.208E+00	4.646E+02
2051	3.882E+07	1.160E+00	4.464E+02
2052	3.882E+07	1.115E+00	4.289E+02
2053	3.882E+07	1.071E+00	4.120E+02
2054	3.882E+07	1.029E+00	3.959E+02
2055	3.882E+07	9.888E-01	3.804E+02
2056	3.882E+07	9.500E-01	3.654E+02
2057	3.882E+07	9.127E-01	3.511E+02
2058	3.882E+07	8.769E-01	3.373E+02
2059	3.882E+07	8.426E-01	3.241E+02
2060	3.882E+07	8.095E-01	3.114E+02
2061	3.882E+07	7.778E-01	2.992E+02
2062	3.882E+07	7.473E-01	2.875E+02
2063	3.882E+07	7.180E-01	2.762E+02
2064	3.882E+07	6.898E-01	2.654E+02
2065	3.882E+07	6.628E-01	2.550E+02
2066	3.882E+07	6.368E-01	2.450E+02
2067	3.882E+07	6.118E-01	2.354E+02
2068	3.882E+07	5.878E-01	2.261E+02

Model Parameters

Lo : 100.00 m³ / Mg ***** User Mode Selection *****
 K : 0.0400 1/yr ***** User Mode Selection *****
 VOC : 250.00 ppmv ***** User Mode Selection *****
 Methane : 50.0000 % volume
 Carbon Dioxide : 50.0000 % volume
 Air Pollutant : Xylene (HAP/VOC)
 Molecular Wt = 106.17 Concentration = 12.100000 ppmV

Landfill Parameters

Landfill type : No Co-Disposal
 Year Opened : 1971 Current Year : 2030 Closure Year: 2030
 Capacity : 38815000 Mg
 Average Acceptance Rate Required from
 Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Xylene (HAP/VOC) (Mg/yr)	Emission Rate (Cubic m/yr)
1972	1.361E+04	5.817E-03	1.317E+00
1973	1.392E+05	5.928E-02	1.343E+01
1974	3.050E+05	1.278E-01	2.895E+01
1975	4.974E+05	2.051E-01	4.644E+01
1976	7.027E+05	2.848E-01	6.449E+01
1977	9.562E+05	3.819E-01	8.649E+01
1978	1.235E+06	4.863E-01	1.101E+02
1979	1.523E+06	5.900E-01	1.336E+02
1980	1.839E+06	7.024E-01	1.591E+02
1981	2.162E+06	8.127E-01	1.840E+02
1982	2.473E+06	9.138E-01	2.069E+02
1983	2.806E+06	1.020E+00	2.310E+02
1984	3.186E+06	1.143E+00	2.588E+02
1985	3.624E+06	1.285E+00	2.910E+02
1986	4.159E+06	1.463E+00	3.314E+02
1987	4.685E+06	1.631E+00	3.693E+02
1988	5.257E+06	1.811E+00	4.102E+02
1989	5.783E+06	1.965E+00	4.450E+02
1990	6.365E+06	2.137E+00	4.840E+02
1991	7.016E+06	2.332E+00	5.280E+02
1992	7.727E+06	2.544E+00	5.761E+02
1993	8.389E+06	2.727E+00	6.176E+02
1994	9.086E+06	2.918E+00	6.608E+02
1995	9.822E+06	3.118E+00	7.062E+02
1996	1.059E+07	3.325E+00	7.530E+02
1997	1.135E+07	3.517E+00	7.965E+02
1998	1.206E+07	3.686E+00	8.346E+02
1999	1.274E+07	3.829E+00	8.670E+02
2000	1.342E+07	3.970E+00	8.991E+02
2001	1.403E+07	4.075E+00	9.229E+02
2002	1.482E+07	4.255E+00	9.635E+02
2003	1.563E+07	4.435E+00	1.004E+03
2004	1.646E+07	4.616E+00	1.045E+03
2005	1.731E+07	4.797E+00	1.086E+03
2006	1.818E+07	4.980E+00	1.128E+03
2007	1.907E+07	5.164E+00	1.169E+03
2008	1.997E+07	5.349E+00	1.211E+03
2009	2.090E+07	5.534E+00	1.253E+03
2010	2.184E+07	5.721E+00	1.296E+03
2011	2.265E+07	5.844E+00	1.323E+03
2012	2.348E+07	5.968E+00	1.352E+03
2013	2.432E+07	6.094E+00	1.380E+03

14	2.518E+07	6.222E+00	1.47E+03
15	2.605E+07	6.351E+00	1.47E+03
2016	2.694E+07	6.482E+00	1.468E+03
2017	2.785E+07	6.614E+00	1.498E+03
18	2.876E+07	6.748E+00	1.528E+03
19	2.970E+07	6.883E+00	1.559E+03
2020	3.065E+07	7.019E+00	1.590E+03
2021	3.162E+07	7.157E+00	1.621E+03
22	3.260E+07	7.296E+00	1.652E+03
23	3.360E+07	7.436E+00	1.684E+03
2024	3.461E+07	7.578E+00	1.716E+03
25	3.564E+07	7.721E+00	1.748E+03
26	3.668E+07	7.865E+00	1.781E+03
2027	3.775E+07	8.010E+00	1.814E+03
2028	3.882E+07	8.153E+00	1.846E+03
29	3.882E+07	7.834E+00	1.774E+03
30	3.882E+07	7.527E+00	1.704E+03
2031	3.882E+07	7.231E+00	1.638E+03
2032	3.882E+07	6.948E+00	1.573E+03
33	3.882E+07	6.675E+00	1.512E+03
34	3.882E+07	6.414E+00	1.452E+03
2035	3.882E+07	6.162E+00	1.395E+03
2036	3.882E+07	5.921E+00	1.341E+03
37	3.882E+07	5.688E+00	1.288E+03
38	3.882E+07	5.465E+00	1.238E+03
2039	3.882E+07	5.251E+00	1.189E+03
40	3.882E+07	5.045E+00	1.143E+03
41	3.882E+07	4.847E+00	1.098E+03
2042	3.882E+07	4.657E+00	1.055E+03
2043	3.882E+07	4.475E+00	1.013E+03
44	3.882E+07	4.299E+00	9.736E+02
45	3.882E+07	4.131E+00	9.354E+02
2046	3.882E+07	3.969E+00	8.987E+02
2047	3.882E+07	3.813E+00	8.635E+02
48	3.882E+07	3.664E+00	8.296E+02
49	3.882E+07	3.520E+00	7.971E+02
2050	3.882E+07	3.382E+00	7.658E+02
51	3.882E+07	3.249E+00	7.358E+02
52	3.882E+07	3.122E+00	7.070E+02
53	3.882E+07	2.999E+00	6.792E+02
2054	3.882E+07	2.882E+00	6.526E+02
55	3.882E+07	2.769E+00	6.270E+02
56	3.882E+07	2.660E+00	6.024E+02
2057	3.882E+07	2.556E+00	5.788E+02
2058	3.882E+07	2.456E+00	5.561E+02
59	3.882E+07	2.359E+00	5.343E+02
60	3.882E+07	2.267E+00	5.134E+02
2061	3.882E+07	2.178E+00	4.932E+02
2062	3.882E+07	2.093E+00	4.739E+02
63	3.882E+07	2.011E+00	4.553E+02
64	3.882E+07	1.932E+00	4.375E+02
2065	3.882E+07	1.856E+00	4.203E+02
2066	3.882E+07	1.783E+00	4.038E+02
67	3.882E+07	1.713E+00	3.880E+02
68	3.882E+07	1.646E+00	3.728E+02
2069	3.882E+07	1.582E+00	3.582E+02
70	3.882E+07	1.520E+00	3.441E+02
71	3.882E+07	1.460E+00	3.306E+02
2072	3.882E+07	1.403E+00	3.177E+02
2073	3.882E+07	1.348E+00	3.052E+02
74	3.882E+07	1.295E+00	2.932E+02
75	3.882E+07	1.244E+00	2.817E+02
2076	3.882E+07	1.195E+00	2.707E+02
2077	3.882E+07	1.148E+00	2.601E+02
78	3.882E+07	1.103E+00	2.499E+02
79	3.882E+07	1.060E+00	2.401E+02
2080	3.882E+07	1.019E+00	2.307E+02
2081	3.882E+07	9.787E-01	2.216E+02

EXHIBIT F

EMISSION PROJECTION CALCULATIONS

Methane projections from the LANDGEM Model are used to estimate the flare emissions, which are based on gas flow. Table 2.4-5 from AP-42 Ch. 2.4 is included to provide the emission rates of various flare pollutants. These emission factors are used in the Potential to Emit table. A sample calculation for the 2001 CO is provided below.

$$\text{CH}_4 := 749000000 \text{ cf}$$

$$\text{CO} := 750 \frac{\text{lb}}{\text{MMcf}}$$

$$E := \text{CO} \cdot \frac{\text{CH}_4}{\frac{1000000}{2000}}$$

$$E = 280.875 \text{ tpy CO}$$

Methane Generation (SCF/yr)

Year	Pre-85	AK	7B	8	9	Class III	Total (SCF/yr)
1972	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	-
1988	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-
1995	-	-	-	x	-	-	-
1996	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-
1998	-	286,534,877	334,886,149	23,786,603	-	-	645,207,628
1999	-	275,300,550	321,746,353	62,933,401	-	-	659,980,305
2000	-	264,502,893	309,162,319	100,883,989	-	-	674,549,202
2001	-	254,141,907	297,014,955	131,847,858	-	-	683,004,720
2002	71,980,673	244,177,892	285,383,656	162,335,359	-	90,986,137	854,863,718
2003	69,168,519	234,571,154	274,189,027	192,372,958	-	87,413,383	857,715,041
2004	66,443,698	225,401,085	263,431,067	222,013,585	-	83,999,418	861,288,853
2005	63,841,146	216,548,594	253,109,778	251,283,703	-	80,704,545	865,487,765
2006	61,343,394	208,053,379	243,185,461	258,058,704	-	77,528,763	848,169,700
2007	58,932,975	199,915,439	233,658,117	247,949,133	-	74,472,074	814,927,738
2008	56,627,358	192,055,380	224,488,048	238,236,535	308,685,952	71,574,173	1,091,667,446
2009	54,409,075	184,552,597	215,675,254	228,894,444	376,250,701	68,755,667	1,128,537,739
2010	52,278,126	177,287,997	207,219,736	219,922,862	441,036,642	66,056,253	1,163,801,616
2011	50,217,043	170,340,975	199,121,494	211,295,322	503,361,352	63,475,931	1,197,812,117
2012	48,260,762	163,671,834	191,301,132	203,011,826	563,304,226	60,975,003	1,230,524,783
2013	46,356,881	157,240,877	183,798,349	195,045,908	620,865,264	58,593,167	1,261,900,444
2014	44,540,334	151,087,800	176,573,446	187,397,567	676,044,466	56,290,725	1,291,934,338
2015	42,793,654	145,172,907	169,666,121	180,040,341	729,238,804	54,107,376	1,321,019,203
2016	41,116,842	139,456,501	162,996,980	173,000,692	780,448,279	51,963,723	1,348,983,017
2017	39,509,896	134,017,975	156,605,720	166,199,227	829,275,918	49,939,163	1,375,547,899
2018	37,955,351	128,738,239	150,492,341	159,688,875	876,515,666	47,954,299	1,401,344,771
2019	36,470,674	123,696,686	144,577,448	153,416,706	921,770,551	46,088,528	1,426,020,593
2020	35,038,396	118,853,619	138,900,739	147,409,187	965,040,573	44,302,151	1,449,544,664
2021	33,658,519	114,169,341	133,462,213	141,639,850	1,007,119,676	42,555,471	1,472,605,072
2022	32,348,509	109,723,247	128,222,174	136,082,233	1,047,213,917	40,888,186	1,494,478,266
2023	31,073,433	105,396,245	123,220,318	130,736,334	1,085,720,266	39,276,476	1,515,423,074
2024	29,850,757	101,267,729	118,377,252	125,628,619	1,122,638,725	37,736,222	1,535,499,305
2025	28,680,482	97,298,003	113,732,671	120,679,693	1,158,366,266	36,259,484	1,555,016,599
2026	27,562,607	93,487,065	109,286,577	115,968,951	1,192,505,916	34,834,352	1,573,645,468
2027	26,479,665	89,834,916	104,999,273	111,416,997	1,225,454,648	33,468,766	1,591,654,266
2028	25,449,124	86,301,860	100,870,757	107,050,298	1,177,420,954	32,158,756	1,529,251,749
2029	24,453,517	82,927,592	96,901,030	102,842,388	1,131,372,124	30,896,383	1,469,393,033
2030	23,492,843	79,672,416	93,129,790	98,819,731	1,086,911,184	29,685,617	1,411,711,580

Potential to Emit *							
FROM FLARE & LANDFILL							
Year	VOC	VC	CO	NO _x	SO ₂	SO ₂	PM
1972	0	0.00	0	0	0	0	0
1973	0	0.02	0	0	0	0	0
1974	0	0.05	0	0	0	0	0
1975	0	0.08	0	0	0	0	0
1976	0	0.11	0	0	0	0	0
1977	1	0.15	0	0	0	0	0
1978	1	0.19	0	0	0	0	0
1979	1	0.23	0	0	0	0	0
1980	1	0.28	0	0	0	0	0
1981	1	0.32	0	0	0	0	0
1982	1	0.36	0	0	0	0	0
1983	1	0.40	0	0	0	0	0
1984	0	0.45	0	0	0	0	0
1985	1	0.51	0	0	0	0	0
1986	2	0.58	0	0	1	1	0
1987	3	0.64	0	0	1	1	0
1988	4	0.71	0	0	1	1	0
1989	4	0.77	0	0	1	1	0
1990	5	0.84	0	0	2	2	0
1991	6	0.92	0	0	2	2	0
1992	7	1.00	0	0	2	2	0
1993	10	1.07	0	0	2	2	0
1994	13	1.15	0	0	2	2	0
1995	16	1.23	0	0	3	3	0
1996	19	1.31	0	0	3	3	0
1997	22	1.38	0	0	3	3	0
1998	7	1.45	246	13	3	1	6
1999	7	1.51	259	14	3	1	6
2000	8	1.56	272	14	4	1	6
2001	8	1.60	281	15	4	1	6
2002	9	1.67	351	15	4	1	7
2003	9	1.75	358	16	4	1	7
2004	11	1.82	364	16	4	1	7
2005	15	1.89	371	17	4	1	7
2006	19	1.96	366	17	4.6	1	7
2007	23	2.03	352	16	4.8	1	7
2008	14	2.11	338	15	5.0	1	7
2009	15	2.18	440	21	5.2	1	9
2010	15	2.25	453	22	5.4	1	9
2011	16	2.30	465	23	6	1	10
2012	16	2.35	477	23	6	2	10
2013	17	2.40	488	24	6	2	10
2014	17	2.45	499	25	6	2	10
2015	18	2.50	509	25	6	2	11
2016	18	2.55	519	26	6	2	11
2017	19	2.60	528	26	7	2	11
2018	19	2.66	537	27	7	2	11
2019	20	2.71	546	27	7	2	12
2020	20	2.76	555	28	7	2	12
2021	20	2.82	563	28	7	2	12
2022	21	2.87	570	29	7	2	12
2023	21	2.93	578	29	7	2	13
2024	21	2.98	585	30	7	2	13
2025	22	3.04	592	30	7	2	13
2026	22	3.10	599	31	8	2	13
2027	22	3.15	605	31	8	2	13
2028	22	3.21	611	31	8	2	13
2029	21	3.08	587	30	7	2	13
2030	20	2.96	564	29	7	2	12

* VOC (NMOC) and VC projections from LANDGEM, Remaining from AP-42 Emission Factors



WCG, Inc.
 Professional Engineers
 630 N. Wymore Road, Suite 370
 Maitland, Florida 32751
 (407)647-6623 fax: (407)539-0575
 www.wcg1.com

Subject: Waste on Fuel
 Job: _____ Sheet 2 of 2
 Calculated by: J Date 7/12/0
 Checked by: DMP Date 7-17-0
 Scale: _____

Pumps - T&A + Sump - Gasoline

Avg gpy: 3413

$$(3413 \frac{\text{gal}}{\text{yr}}) \left(\frac{6.2 \text{ lb}}{\text{gal}} \right) (5) = 105803 \text{ lb}$$

$$(105,803 \text{ lb}) \left(\frac{20,300 \text{ gal}}{\text{lb}} \right) \left(\frac{1}{2100} \right) = 2143 \text{ mmole/yr}$$

Pollutant	Factor	lb pollutant/yr		
NOx	1.63	3501	lb NOx/yr	1.751 tpy
CO	62.7	134,690	lb CO/yr	67.340 tpy
SOx	0.084	180	lb SOx/yr	0.090 tpy
pm-10	0.1	215	lb pm-10/yr	0.108 tpy
CO ₂	154	330,792	lb CO ₂ /yr	165.396 tpy



Based OCU Leachate Analysis Report - 4/12/01
and OCU records for Leachate Flow from 5/1/00 to 4/1/00 ?

Annual Leachate Flow = 0.047 mgd
 $(17,057.3 \text{ gal}) \left(\frac{365 \text{ d}}{\text{yr}} \right) = 46,714 \text{ gal} = 1.5 \text{ MG} = 0.047 \text{ mgd}$

Conversion from ug/L to tons per year: $\frac{\text{lb}}{\text{day}} = 8.314 \left(\frac{\text{MG}}{\text{d}} \right) (\text{mgd})$

$(8.314) (0.047 \text{ mgd}) \left(\frac{1 \text{ kg}}{2.2 \text{ lb}} \times 10^3 \right) \left(\frac{365 \text{ d}}{\text{yr}} \right) \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right) = 7.13 \times 10^{-5}$

Carbon Disulfide = $(25.5 \frac{\text{mg}}{\text{L}}) (7.13 \times 10^{-5}) = 0.002 \frac{\text{ton}}{\text{yr}}$

Acetone = $(2790 \frac{\text{mg}}{\text{L}}) (7.13 \times 10^{-5}) = 0.213 \text{ ton/yr}$

2-Butanone = $(1990 \frac{\text{mg}}{\text{L}}) (7.13 \times 10^{-5}) = 0.142 \text{ ton/yr}$

4-methyl-2-pentanone = $(40.4) (7.13 \times 10^{-5}) = 0.003 \text{ ton/yr}$

Toluene = $(22.0 \text{ ug/L}) (7.13 \times 10^{-5}) = 0.002 \text{ ton/yr}$

Ethylbenzene = $(15 \text{ ug/L}) (7.13 \times 10^{-5}) = 0.001 \text{ ton/yr}$

m,p-Xylenes = $(22 \text{ ug/L}) (7.13 \times 10^{-5}) = 0.002 \text{ ton/yr}$

o-Xylene = $(7.2) (7.13 \times 10^{-5}) = 0.001 \text{ ton/yr}$

1,4-Dichlorobenzene = $(9.4) (7.13 \times 10^{-5}) = 0.001 \text{ ton/yr}$

Total LEACHATE

VOC EMISSIONS 0.367 tpy



$$e = K (SL)^{.65} (W)^{1.5}$$

where e = emission factor, g/vmt

K = constant, .9

SL = silt loading g/m^2 , 7.4 g/m^2 Act 1-15

W = weight tons

Source: EPA = Emission Factor Documentation for Ap-42, Section 132.1.

Light trucks/passenger vehicles assumed weight = 2.3 tons

Per OCSW 35 light trucks vehicles

Selected brand vehicles for annual mileage

3,150 miles per yr = 3,150

$$e = .9 (7.4)^{.65} (2.3)^{1.5} = 11.5 \frac{g}{\text{veh mile}}$$

$$11.5 \left(35 \text{ vehicles} \right) \left(3,150 \frac{\text{mi}}{\text{yr}} \right) = 1267875 g = \underline{1.4 \text{ tons}}$$

Haulers / County Equipment

Per OCSW records for haulage and heavy trucks

Distance = 2.4 mile each way or 4.8 round trip

Assume county equipment makes 5 trips per day

Average weight 25 tons

Landfill traffic

= 29,840 trips/yr

County vehicles = 21

$$e = .9 (7.4)^{.65} (25 \text{ tons})^{1.5} = 413 \text{ g/veh mile}$$

$$\left(413 \frac{g}{\text{veh mile}} \right) \left(29,840 \frac{\text{trips}}{\text{yr}} \left(\frac{4.8 \text{ miles}}{\text{trip}} \right) = 5 \frac{\text{trips}}{\text{day}} \left(\frac{4.8 \text{ miles}}{\text{trip}} \right) (21 \text{ vehicles}) \right)$$

$$= \underline{59,362,768 g} = \underline{65.4 \text{ tons}}$$



WCG, Inc.
 Professional Engineers
 630 N. Wymore Road, Suite 370
 Maitland, Florida 32751
 (407)647-6623 fax: (407)539-0575
 www.wcg1.com

Subject noise Factor
 Job _____ Sheet 1 of 2
 Calculated by C Date 7/17/01
 Checked by DMP Date 7-17-01
 Scale _____

Emission Factors for uncontrolled Gasoline and Diesel

Source: EPA AP-42

Assume $GM = 6.2 \frac{lbs}{gallon}$

Light tower - Diesel

4 eo

Avg Fuel = 350 gpy

$$\left(\frac{350 \text{ gallon}}{\text{year}} \right) \left(\frac{6.2 \text{ lbs}}{1 \text{ gallon}} \right) = 2170 (4eo) = 8680 \text{ lbs/yr fuel}$$

$$\left(\frac{8680 \text{ lbs}}{\text{yr}} \right) \left(\frac{19,300 \text{ BTU}}{\text{lb}} \right) \left(\frac{1}{10^6} \right) = 167.5 \text{ MM BTU/yr}$$

Pollutant	Factor lb/mmBtu	X by 167.5 mmBtu/yr	= lb pollutant/yr
NOx	4.41	=	739 lb NOx/yr
CO	.95	=	157 lb CO/yr
SOx	.29	=	48.6 lb SOx/yr
PM-10	.31	=	52 lb PM-10/yr
CO2	164	=	27,470 lb CO2/yr

Generators - Diesel

4 eo

Avg Fuel = 54 gpy

$$\left(\frac{54 \text{ gal}}{\text{yr}} \right) \left(\frac{6.2 \text{ lbs}}{\text{gallon}} \right) (4eo) = 1339.2 \frac{\text{lb}}{\text{yr}}$$

Pollutant	Factor lb/mmBtu	lb pollutant	(1339.2 $\frac{\text{lb}}{\text{yr}}$) $\left(\frac{19,300 \text{ BTU}}{\text{lb}} \right) \left(\frac{1}{10^6} \right) = 25.8 \frac{\text{lb}}{\text{fuel yr}}$
NOx	4.41	=	113.9 lb NOx/yr 0.057 tpy
CO	.95	=	24.5 lb CO/yr 0.012 tpy
SOx	.29	=	7.5 lb SOx/yr 0.004 tpy
PM-10	.31	=	30 lb PM-10/yr 0.040 tpy
CO2	164	=	4231 lb CO2/yr 2.116 tpy

PERMIT DATA FORM

CHECK
IF
NEW: _____

SITE WAFR AIR
 ID# ID#: 0950113

SITE/WAFR/FACILITY NAME: ORANGE CO LANDFILL

PROJECT NAME: TITLE V RENEWAL

DESC: _____

TYPE CODE: AV SUBCODE: 05 CHECK IF: GP__ EXEMPT__

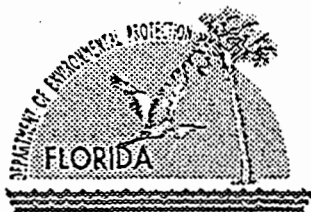
CORRECT FEE: 0

PROCESSOR: DEC

AMOUNT RCV'D: 0

AMOUNT REFUND: 0

MONIES DUE: _____



Department of Environmental Protection

Central District
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803-3767

Jeb Bush
Governor

David B. Struhs
Secretary

MEETING ATTENDANCE RECORD

Purpose: ORANGE COUNTY L/F, CELLS 9-12, ^{GAS MGMT} Date: MAY 17, 2001

Name (please print)	Affiliation
GEORGE CHERYAN	DEP
Alan Zahm	FDEP-AIR
LEN KOZLOV	FDEP-AIR
DAVE PEUHAM	CH/WGE JV
Ron BEGADI	CHEM/GAR-JV
Bo Bruner	CHEM/GAR

MEETING ATTENDANCE RECORD



The Joint Venture

630 N. Wymore Road □ Suite 370 □ Maitland, Florida 32751 □ (407) 647-6623 FAX (407) 539-0575

May 17, 2001

149101.9E.PM

Mr. James N. Bradner, P.E.
Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767

Subject: FDEP Solid Waste Construction & Operation Permit
Application Nos. SC48-0128169-009 and SO48-0128169-010
Orange County Landfill Southern Expansion Site, Cells 9-12
Orange County Solid Waste Management Facility

Dear Mr. Bradner:

Please consider this letter a request for clarification of FDEP's requirements for an air construction permit for the above referenced project.

We have conducted several pre-application meetings with FDEP's Central District staff during preparation of the above referenced permit application. We have also discussed this issue with staff from FDEP's Division of Air Resources Management. Based on these meetings and discussions, we understand that:

- An air construction permit is not required for this project since it is basically an expansion of an existing permitted solid waste facility for the purpose of providing additional solid waste disposal capacity;
- A control system will have to be permitted and constructed within five (5) years after the new disposal unit (Cell-9) is constructed and operational;
- The existing Title V Operation Permit for the Orange County Solid Waste Facility will have to be modified to include Cell 9 within 180-days after Cell 9 becomes operational; *in year 2005*
- These requirements may be included as a specific conditions in the above referenced Solid Waste Construction/Operation Permit.

We hope that you concur with our understanding of FDEP's air permit requirements for this project. Please inform us immediately if you do not concur with our understanding.



Mr. James N. Bradner, P.E.

Page 2

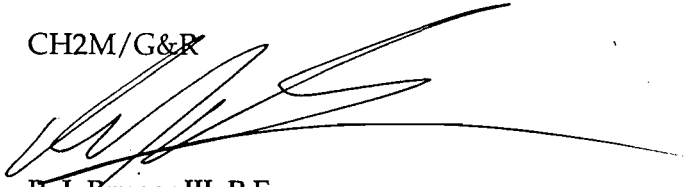
May 17, 2001

149101.9E.PM

If you have any questions or comments, please contact Ron Beladi or me at your earliest convenience.

Sincerely,

CH2M/G&R



R. J. Bruner III, P.E.
Project Manager

GNV\Bradner 05_16_01 Air Permitting Letter.doc

c: Len Koslov/FDEP Central District
Venkata Panchakarla/FDEP Tallahassee
Jim Becker/OCUD
Dan Morrical/OCUD

Jim Flynt/OCUD
Stan Keely/WCG
Ron Beladi/WCG



Department of Environmental Protection - Central District
Email Message

Laisure, Debra

From: Edwards, Mary Lou
Sent: Tuesday, November 28, 2000 10:31 AM
To: Jones, Dina; Williams, Elizabeth; Shine, Caroline
Cc: Zahm, Alan; Laisure, Debra
Subject: RE: Orange County Solid Waste Correct Address

FYI

Johnny Edwards was notified by Michael L. Chandler, Director, Orange County Utilities Department, on February 8, 2000, that James Becker, Manager, Solid Waste Division @ 5901 Young Pine Road, (no zip code) officially became the "Responsible Official" for the purposes of the subject permit.

His letter was written on letterhead bearing Mr. Chandler's name and address as 109 East Church Street, Orlando, FL 32801-3318. There is nothing mentioned in the letter about sending future correspondence to Mr. Becker at the Young Pine Road address vs. the Church Street address. Therefore, the permit was updated with only the name changed in the permit designating Mr. Becker as the new contact person.

-----Original Message-----

From: Jones, Dina
Sent: Tuesday, November 28, 2000 10:02 AM
To: Williams, Elizabeth; Shine, Caroline; Edwards, Mary Lou
Subject: Orange County Solid Waste Correct Address

Janet from the Orange Co SW Dept called to say that DEP's correspondence has been going to the wrong address. The correct address is: Orange County Solid Waste Dept. - 5901 Young Pine Rd, Orlando, FL 32829-7428, Telephone # 407-836-6600. Please change your records.

INTEROFFICE MEMORANDUM

Date: 21-Sep-2000 09:39am
From: Jeff Rustin ORL
RUSTIN_J
Dept: Central District Office
Tel No: 407/894-7555

Subject: Landfill Checklist

Alan,

The landfill checklist file is attached. It has 14 items.
Item 15 requirement could be have a beer, take 2 aspirins, and call DEP in the morning.

No.	Requirement	What exactly is required from us to comply ?????	Time Interval	Deadline
✓ 1	NMOC Report (Must do No.1, 2 or 3)	Submit Annual Emission (NMOC) Report (rate less than 50 megagrams per year)	every year	
✓ 2	NMOC Estimate (Must do No. 1, 2, or 3)	Submit 5 year NMOC estimate (rate less than 50 megagrams per year)	every 5 years or when actual waste acceptance rate exceeds estimated waste acceptance rate	
✓ 3	Collection system Installation (Must do 1, 2, or 3)	Install the collection system which meets the design requirements of condition 60.752(b)(2)(ii), get DEP plan approval. (rate not calculated or greater than 50 megagrams per year)	within 18 months of design plan submittal	
✓ 4	Recordkeeping	Keep up-to-date, readily accessible records for the life of the control equipment of the data listed in conditions as measured during the initial performance test or compliance determination	last 5 years-note: frequency varies depending on parameter	
✓ 5	AOR Report	Follow instructions, Annual Operating Report (AOR) for Air Pollutant Emitting Facility, Form, and Instructions. Submit completed report by March 1 of the following year. Rule 62-210.370(3), FAC and Rule 62-210.900, FAC	every year	1-Mar
✓ 6	Annual Emission Fee	Pay an annual emission fee in accordance with Rule 62-213, FAC between January 15 and March 1 of each year.	every year	1-Mar
✓ 7	Monitoring Reports	The permittee shall submit reports of any required monitoring at least every six (6) months. Rule 62-213.440 (1)(b) 3 a., FAC.	every 6 months	
✓ 8	Permit Renewal	Submit application 180 days before permit expiration date.	every 5 years	
✓ 9	Plant operation problem	Notify DEP immediately. Rule 62-4.130, FAC	when a problem occurs	
✓ 10	Statement of Compliance	Submit Statement of Compliance. Rule 62-213.440(3), FAC	every year.	
No.	Requirement	What exactly is required from us to comply ?????	Time Interval	Deadline
11	Performance Test	Conduct performance test and submit report.	Within 60 days after achieving maximum production rate, but not later than 180 days after initial startup	
12	Opacity readings	Conduct opacity readings according to EPA Method 9 Submit results.	Same as above if performance test is not required. If performance test is required, conduct opacity readings concurrently with performance test or within 30 days thereafter if unable to conduct due to adverse visibility conditions or other conditions	
✓ 13	Compliance provision Gas collection header system pressure-verify sufficient flow rate	Measure gage pressure in the gas collection header. Initiate action to correct exceedance (positive pressure) within 5 calendar days, except for the three conditions allowed under condition 60.753(b). Correction not achieved within 15 calendar days of the first measurement, expand gas collection system to correct exceedance within 120 days.	measure monthly	5 days 15 days 120 days
✓ 14	Compliance provision Well temperature and nitrogen and oxygen-verify no excess air infiltration	Monitor each well monthly for temperature and nitrogen and oxygen. Initiate action to correct exceedance within 5 calendar days. Correction not achieved within 15 calendar days of the first measure- ment, expand gas collection system to correct exceedance within 120 days.	measure monthly	5 days 15 days 120 days



Jeb Bush
Governor

Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

June 30, 2000

OCD-AP-00-164

James Becker, Manager
Orange County Solid Waste Department
109 East Church Street
Orlando, Florida 32801-7000

Orange County - AP
Solid Waste Management Facility
Permit No. 0950113-001-AV

Dear Mr. Becker:

In response to Mr. Morrical's two e-mails dated June 21, 2000 and another e-mail dated June 8, 2000, the applicable NSPS Subpart WWW rule does not allow a relaxation of the quarterly surface monitoring requirement. In addition, the Class III portion of the landfill is required to have landfill gas collection and control per 40 CFR 60.753(a).

If you have any questions, please call John Turner at 407-893-3333 or write to me at the above address.

Sincerely,

L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

LTK/jt

cc: Dan Morrical, P.E.
Bill Bostwick, P.E., FDEP

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 28-Jun-2000 12:33pm

From: Caroline Shine ORL
SHINE_C

Dept: Central District Office

Tel No: 407/893-3336

Subject: Re: Orange Co Landfill

John,

1) Orange County can not separate the cells from the landfill. In other words, The provisions of WWW is for municipal solid waste landfill and "not a cell" that commenced construction, reconstruction or modification on or after May 30, 1991. municipal solid waste landfill means an entire disposal facility in a contiguous geographical space wither household waste is placed in or on land and can be separated by access roads. The MSW may also received commercial sold waste, nonhazardous sludge, industrial waste.....

Municipal solid waste landfill that commenced construction, reconstruction or modification on or before May 30, 1991 are subject to Subpart Cc. Orange County is subject to WWW.

2) There is nothing in the rule to allow a facility to option to the quarterly monitoring requirement because of successful monitoring on past observances. Additionally, all of Orange County surface monitoring for last year is invalid because of improper calibration procedures. As you call in the meeting on yesterday, the Brevard County representative was conducting Orange County's monitoring, but the readings were invalid.

Orange County has only conducted one valid monitoring quarter, and that during the first quarter of 2000.

It looks like he is asking you to release him of his Subpart WWW requirements. I would suggest he write to EPA directly or Tallahassee for release from WWW requirements.

I think we need to schedule a meeting and possibly include Len regarding a couple of issues (see Dan's e-mail to follow). I think you have a copy of my last inspection and referral.

- 1) Are they required to collect gas from the class III area which includes some class I material (landfill vs cells)?
- 2) Can we waive the quarterly surface monitoring to go to annual?

INTEROFFICE MEMORANDUM

Date: 28-Jun-2000 10:49am
From: John B. Turner ORL
TURNER_JB
Dept: Central District Office
Tel No: 407/894-7555

Subject: Orange Co Landfill

I think we need to schedule a meeting and possibly include Len regarding a couple of issues (see Dan's e-mail to follow). I think you have a copy of my last inspection and referral.

- 1) Are they required to collect gas from the class III area which includes some class I material (landfill vs cells)?
- 2) Can we waive the quarterly surface monitoring to go to annual?

INTEROFFICE MEMORANDUM

Date: 21-Jun-2000 02:05pm
From: Dan.Morrical
Dan.Morrical@co.orange.fl.us
Dept:
Tel No:

Subject: FW: Status of Surface Methane Emissions Remonitoring & FW: Request for Additional Days to Remonitor Surface Methane Emissions

John, I also faxed this, since I did not have your correct email address. I discovered you have a B in your address, so I am resending it.

Dan Morrival, P.E.
Chief Engineer, Environmental Engineering Section
Orange County Utilities-Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829
Voice: (407) 836-6654 Fax: (407) 836-6629

-----Original Message-----

From: Morrival, Dan
Sent: Tuesday, June 20, 2000 4:00 PM
To: 'john.turner@dep.state.fl.us'
Cc: 'c.hedges@worldnet.att.net'; Ramos, Oscar; Slinker, Donald
Subject: Status of Surface Methane Emissions Remonitoring & FW: Request for Additional Days to Remonitor Surface Methane Emissions

John, I am forwarding the email I sent to Garry regarding the request for additional days to remonitor the 23 exceedances we found on 6/1. Per your telephone call, this email is to give you an update on our progress on locating the problems at the 23 exceedances on Cell 7B, repairing them, and remonitoring them to show a good faith effort.

Note, I also requested that we go to annual emissions testing on Cells A-K in the email to Garry, since we have never received an exceedance on this landfill in the four quarterly monitoring events conducted. I would appreciate your consideration of this request.

The liner repair contractor fixed liner tears in all but four of the locations and they now read below the 500 ppm methane. The exceedances in the remaining four locations have been traced to loose caps on the vent pipes. Biomass Energy, Inc. (BEI), the LFG system owner & operator has not been able to solve these problems to date, but we are scheduled to work with them tomorrow to stop the leaks from these loose fitting vent caps.

As soon as these remaining four locations have been fixed, we will remonitor them and I will send you the remonitoring results for all 23 locations.

Dan Morrival, P.E.
Chief Engineer, Environmental Engineering Section
Orange County Utilities-Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829

Voice: (407) 836-6654

Fax: (407) 836-6629

-----Original Message-----

From: Morrical, Dan

Sent: Thursday, June 08, 2000 12:25 PM

To: 'garry.kuberski@dep.state.fl.us'

Cc: Becker, Jim; Flynt, James; Ramos, Oscar; Slinker, Donald; 'charles hedges'

Subject: Request for Additional Days to Remonitor Surface Methane Emissions

Garry, as we discussed this morning, we conducted our quarterly surface emissions monitoring on Thursday, June 1. Because we found 23 exceedances on Cell 7B, it is going to be impossible to get the leaks located and repaired within the 10-day remonitoring period stated in our Title V permit. Therefore, as you directed, we are requesting an extension of time to allow us to repair the liner leaks and remonitor these locations. It is hard to estimate the time that will be required to expose the liner leaks for repair, because the cover soil over the liner varies significantly throughout the landfill.

We would like to initially ask for two (2) weeks extension, which would give us until Saturday, June 24 to make the repairs and do the remonitoring. If it looks like it will take longer than this, we will contact you to request additional time. However, we intend to do everything in our power to expedite the repair and remonitoring of these exceedances.

We would also like to request to go to annual monitoring of our A-K Cell. There have been four quarterly monitoring events of this cell and no exceedances have been found to date.

Dan Morrical, P.E.

Chief Engineer, Environmental Engineering Section

Orange County Utilities-Solid Waste Division

5901 Young Pine Road

Orlando, Florida 32829

Voice: (407) 836-6654

Fax: (407) 836-6629

INTEROFFICE MEMORANDUM

Date: 21-Jun-2000 02:15pm
From: Dan.Morrical
Dan.Morrical@co.orange.fl.us
Dept:
Tel No:

Subject: Issue from last (6/1/00) LFG inspection

John, I conferred with Stan Keely, with our Joint Venture consultant and he noted that the Class I landfill under the Class III and the other pre-1985 landfill cells are not required to have active LFG systems, because of the wording in Subpart WWW, 60.750, Applicability. This section states in (a) that:

"The provisions of this subpart apply to each municipal solid waste landfill that commence construction, reconstruction, or modification on or after May 30, 1991..."

Construction of these cells commenced before May 30, 1991.

Please let me know if you have any additional questions or concerns regarding this issue. Thanks.

Dan Morrival, P.E.
Chief Engineer, Environmental Engineering Section
Orange County Utilities-Solid Waste Division
5901 Young Pine Road
Orlando, Florida 32829
Voice: (407) 836-6654 Fax: (407) 836-6629

Handwritten note: landfill vs cells

INTEROFFICE MEMORANDUM

Date: 16-Feb-2000 11:44am
From: Cindy.Hauschild
Cindy.Hauschild@co.orange.fl.us
Dept:
Tel No:

To: Mary.Lou.Edwards (Mary.Lou.Edwards@dep.state.fl.us)

Subject: Dan Morrival Fax Received ok....Thank You

Fax Received
Feb 16, 2000

RFC-822-headers:

Delivery-receipt-to: Cindy.Hauschild@co.orange.fl.us

Received: from epic50.dep.state.fl.us ([199.73.195.8])

by mail.deporl.dep.state.fl.us (PMDF V5.2-32 #37974)

with ESMTP id <01JLZ2R49P06000DKJ@mail.deporl.dep.state.fl.us> for

EDWARDS_ML@a1.deporl.dep.state.fl.us

(ORCPT rfc822;Mary.Lou.Edwards@dep.state.fl.us); Wed, 16 Feb 2000 11:40:14 EST

Received: from emsdetect.citizens-first.co.orange.fl.us ([192.234.90.15])

by mail.epic50.dep.state.fl.us (PMDF V5.2-32 #31508)

with ESMTP id <01JLZ2RT399M005ZF5@mail.epic50.dep.state.fl.us> for

EDWARDS_ML@a1.deporl.dep.state.fl.us

(ORCPT rfc822;Mary.Lou.Edwards@dep.state.fl.us); Wed,

16 Feb 2000 11:40:48 -0500 (EST)

Received: from emsbridge.citizens-first.co.orange.fl.us (unverified)

by emsdetect.citizens-first.co.orange.fl.us

(Content Technologies SMTPRS 2.0.15)

with ESMTP id <B0000732152@emsdetect.citizens-first.co.orange.fl.us> for

<Mary.Lou.Edwards@dep.state.fl.us>; Wed, 16 Feb 2000 11:44:11 -0500

Received: by emsbridge.ocfl.net with Internet Mail Service (5.5.2650.21)

id <1H4G0A7H>; Wed, 16 Feb 2000 11:42:53 -0500

X-Mailer: Internet Mail Service (5.5.2650.21)



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

FAX TRANSMITTAL

DATE: February 16, 2000

TO:

NAME: Dan Morrival
COMPANY: Orange County Solid Waste Department
TELEPHONE (FAX) NUMBER: (407) 836-6629
PAGE 1 OF 3

FROM:

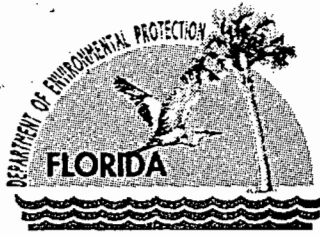
NAME: MARY LOU EDWARDS
PROGRAM: AIR RESOURCES MANAGEMENT
Orlando Fax Telephone Number (407) 897-5963
Suncom 342-5963
Orlando Voice Telephone Number (407) 893-3334 or 3333
Suncom 325-3334 or 3333
SENDER'S NAME: Mary Lou Edwards

COMMENTS:

Per request from Cindy Hauschild - 2nd FAX

Re: Change of Permit Conditions for Orange County Solid Waste Management Facility -
Permit No. 0950113-001-AV.

2nd FAX



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

Orange County Solid Waste Department
109 East Church Street
Orlando, Florida 32801-7000

Attention: Michael L. Chandler, Director

Orange County - AP
Permit No.: 0950113-001-AV
Orange County Solid Waste Management Facility
Change of Conditions

Dear Mr. Chandler:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Responsible Official

From: Michael L. Chandler, Manager

To: James Becker, Manager

Title V Permit, Section II. Facility-Wide Conditions - Page 2 of 4 - Condition No. 1

Delete: The permittee shall submit all applications, tests, reports, notifications, or other submittals required by this permit to the Orange County Environmental Protection Department.

All other conditions remain the same.

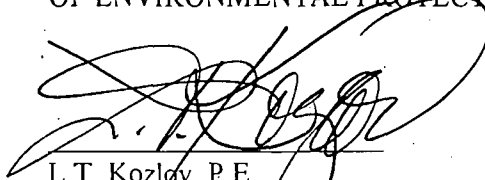
"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Michael L. Chandler, Direct
Orange County Solid Waste Facility
Change of Conditions Permit No.: 0950113-001-AV
Page 2

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Date: 7-15-00



LTK/wje

cc: Dan Morrical, P.E., Chief Engineer – Orange County Solid Waste Division
James Becker, Manager – Orange County Solid Waste Division
Scott Sheplak, DARM, BAR, Title V Section
Mr. Gregg Worley, U.S. EPA, Region 4 (INTERNET E-mail Memorandum)
Mr. Joel Huey, U.S. EPA, Region 4 (INTERNET E-mail Memorandum)

HP OfficeJet
Personal Printer/Fax/Copier/Scanner

Fax History Report for
Orlando Air Resources
407-897-5963
Feb-16-20 11:38am

Last Fax

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Feb 16	11:37am	Sent	94078366629	0:58	3	OK

INTEROFFICE MEMORANDUM

Date: 16-Feb-2000 11:04am
From: Cindy.Hauschild
Cindy.Hauschild@co.orange.fl.us
Dept:
Tel No:

To: Mary.Lou.Edwards (Mary.Lou.Edwards@dep.state.fl.us)

Subject: Fax to Dan Morrival 2/15/00

Ms. Edwards:

There was a fax sent to Dan Morrival -Orange County Solid Waste Dept. yesterday afternoon from Alan Zahm/Air REsources Mgmt...by you. It was to be a 3 page fax and only the first page was received. This was also faxed to the wrong number, Dan's correct fax # is 407-836-6629. Could you please refax this to the correct #? If you have any questions please give me a call or email.

Thank You..

Cindy Hauschild (407) 836-6676

Cindy.Hauschild@ocfl.net <mailto:Cindy.Hauschild@ocfl.net>

Admin. Specialist

Orange County Solid Waste Division

RFC-822-headers:

Delivery-receipt-to: Cindy.Hauschild@co.orange.fl.us

Received: from epic50.dep.state.fl.us ([199.73.195.8])

by mail.deporl.dep.state.fl.us (PMDF V5.2-32 #37974)

with ESMTP id <01JLZ1CUPZ88000DKJ@mail.deporl.dep.state.fl.us> for

EDWARDS_ML@a1.deporl.dep.state.fl.us

(ORCPT rfc822;Mary.Lou.Edwards@dep.state.fl.us); Wed, 16 Feb 2000 11:00:30 EST

Received: from emsdetect.citizens-first.co.orange.fl.us ([192.234.90.15])

by mail.epic50.dep.state.fl.us (PMDF V5.2-32 #31508)

with ESMTP id <01JLZ1DJB5UQ006177@mail.epic50.dep.state.fl.us> for

EDWARDS_ML@a1.deporl.dep.state.fl.us

(ORCPT rfc822;Mary.Lou.Edwards@dep.state.fl.us); Wed,

16 Feb 2000 11:01:03 -0500 (EST)

Received: from emsbridge.citizens-first.co.orange.fl.us (unverified)

by emsdetect.citizens-first.co.orange.fl.us

(Content Technologies SMTPRS 2.0.15)

with ESMTP id <B0000731890@emsdetect.citizens-first.co.orange.fl.us> for

<Mary.Lou.Edwards@dep.state.fl.us>; Wed, 16 Feb 2000 11:04:27 -0500

Received: by emsbridge.ocfl.net with Internet Mail Service (5.5.2650.21)

id <1H4G0AW7>; Wed, 16 Feb 2000 11:03:09 -0500

X-Mailer: Internet Mail Service (5.5.2650.21)

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 16-Feb-2000 08:47am
From: Lorayne Hattal ORL
HATTAL_L
Dept: Central District Office
Tel No: 407/894-7555

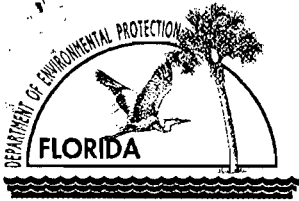
To: Mary Lou Edwards ORL

(EDWARDS_ML)

Subject: MESSAGE

2/16 8:50 A.M.

CINDY WITH ORANGE COUNTY SOLID WASTE AT 407 836-6676. SHE NEEDS YOU TO REFAX A
THREE PAGE FAX TO DAN MORRICAL



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

FAX TRANSMITTAL
DATE: FEBRUARY 15, 2000

TO:

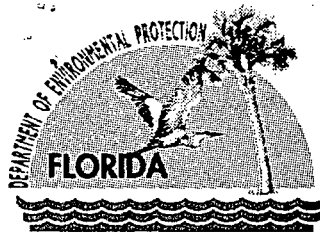
NAME: DAN MORRICAL
COMPANY: ORANGE COUNTY SOLID WASTE DEPT
TELEPHONE (FAX) NUMBER: (407) 836-7299
PAGE 1 OF 3

FROM:

NAME: ALAN ZAHM
PROGRAM: AIR RESOURCES MANAGEMENT
Orlando Fax Telephone Number (407) 897-5963
Suncom 342-5963
Orlando Voice Telephone Number (407) 893-3334 or 3333
Suncom 325-3334 or 3333
SENDER'S NAME: Mary Lou Edwards

**COMMENTS: CHANGE OF PERMIT CONDITIONS FOR ORANGE COUNTY
SOLID WASTE MANAGEMENT FACILITY -
PERMIT NO. 0950113-001-AV**

1ST FAX



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

Orange County Solid Waste Department
109 East Church Street
Orlando, Florida 32801-7000

Attention: Michael L. Chandler, Director

Orange County - AP
Permit No.: 0950113-001-AV
Orange County Solid Waste Management Facility
Change of Conditions

Dear Mr. Chandler:

We are in receipt of a request for a change of the permit conditions. The conditions are changed as follows:

Responsible Official

From: Michael L. Chandler, Manager

To: James Becker, Manager

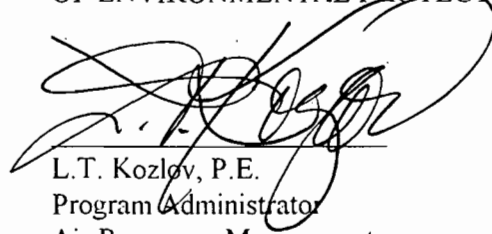
Title V Permit, Section II. Facility-Wide Conditions - Page 2 of 4 - Condition No. 1

Delete: The permittee shall submit all applications, tests, reports, notifications, or other submittals required by this permit to the Orange County Environmental Protection Department.

All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



L.T. Kozlov, P.E.
Program Administrator
Air Resources Management

Date: 7-15-00



LTK/wje

- cc: Dan Morriscal, P.E., Chief Engineer – Orange County Solid Waste Division
James Becker, Manager – Orange County Solid Waste Division
Scott Sheplak, DARM, BAR, Title V Section
Mr. Gregg Worley, U.S. EPA, Region 4 (INTERNET E-mail Memorandum)
Mr. Joel Huey, U.S. EPA, Region 4 (INTERNET E-mail Memorandum)

Best Available Copy

HP OfficeJet
Personal Printer/Fax/Copier/Scanner

Fax History Report for
Orange Air Resources
407-897-5963
Feb-15-20 5:00pm

Last Fax

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Feb 15	4:59pm	Sent	94078367299	1:22	3	OK



UTILITIES DEPARTMENT
MICHAEL L. CHANDLER, Director
 109 East Church Street
 Orlando, FL 32801-3318
 Telephone (407) 836-7000
 Fax (407) 836-7299
 E-Mail: michael.chandler@ocfl.net

February 8, 2000

Mr. Johnny Edwards
 Florida Department of Environmental Protection
 Air Resources Management
 Central District Office
 3319 Maguire Boulevard, Suite 232
 Orlando, Florida 32803-3767

**RE: Title V Permit Number 0950113-001-AV
 Orange County Landfill**

Dear Mr. Edwards:

On January 28, 2000, Mr. James Becker, Orange County Solid Waste Division, 5901 Young Pine Road, officially became the "Responsible Official" for the purposes of the subject permit as defined in 62-210.200(247).

If you have any questions, please feel free to contact Dan Morrival, P.E. at (407) 836-6654.

Sincerely,

Michael L. Chandler
 Director

James Becker, Manager
 Solid Waste Division

MLC/ch

cc: James Becker, Manager, Orange County Utilities, Solid Waste Division
 Dan Morrival, P.E., Chief Engineer, Orange County Utilities, Solid Waste Division
 Stanley J. Keely, P.E., Glace & Radcliffe Inc.
 File: Other Permits-Title V-Permits-F-





ORANGE COUNTY UTILITIES - SOLID WASTE DIVISION

Facsimile Transmittal

DATE: 2/10/00

TOTAL PAGES: 2 (including cover)

PROJECT/SUBJECT: Responsible Official Change

TO: DEP

ATTN: Johnny Edwards

OFFICE/EXT:

FAX NO.: 407-897-5963

FROM: Dan Morrill

EXT:

- Hard Copy / Original to Follow URGENT Voice Response Requested

COMMENTS / INSTRUCTIONS:

Johnny - Please fax me the approval letter when complete. Thanks.

X

2/10 DAN CALLED, HE'S IN A HURRY

File:



UTILITIES DEPARTMENT
MICHAEL L. CHANDLER, Director

109 East Church Street
Orlando, FL 32801-3318
Telephone (407) 836-7000
Fax (407) 836-7899
E-Mail: michael.chandler@ocfl.net

February 8, 2000

Mr. Johnny Edwards
Florida Department of Environmental Protection
Air Resources Management
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

RE: Title V Permit Number 0950113-001-AV
Orange County Landfill

Dear Mr. Edwards:

On January 28, 2000, Mr. James Becker, Orange County Solid Waste Division, 5901 Young Pine Road, officially became the "Responsible Official" for the purposes of the subject permit as defined in 62-210.200(247).

If you have any questions, please feel free to contact Dan Morrical, P.E. at (407) 836-6654.

Sincerely,

Handwritten signature of Michael L. Chandler in cursive.

Michael L. Chandler
Director

Handwritten signature of James Becker in cursive.

James Becker, Manager
Solid Waste Division

MLC/ch

cc: James Becker, Manager, Orange County Utilities, Solid Waste Division
Dan Morrical, P.E., Chief Engineer, Orange County Utilities, Solid Waste Division
Stanley J. Keely, P.E., Glace & Radcliffe Inc.
File: Other Permits-Title V-Permits-F-



UTILITIES DEPARTMENT
MICHAEL L. CHANDLER, Director

109 East Church Street
Orlando, FL 32801-3818
Telephone (407) 836-7000
Fax (407) 836-7299
E-Mail: michael.chandler@ocfl.net



T → AZ

January 21, 2000

Mr. John Turner
Florida Department of Environmental Protection
Air Resources Management
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Dear Mr. Turner:

Mr. James Becker, Manager, Orange County Solid Waste Division, 5901 Young Pine Road, Orlando, FL 32829, is authorized to sign as the owner/authorized representative for all permits, applications and other official documents relating to the Orange County Solid Waste Division.

If you have any questions, please feel free to contact Dan Morrical, P.E. at (407) 836-6654.

Sincerely,

Michael L. Chandler
Director

MLC/ch

cc: James Becker, Manager, Orange County Utilities, Solid Waste Division
Stanley J. Keely, P.E., Glace & Radcliffe Inc.
File: Other Permits-Title V-Permits-F-



UTILITIES DEPARTMENT
MICHAEL L. CHANDLER, Director
 109 East Church Street
 Orlando, FL 32801-3318
 Telephone (407) 836-7000
 Fax (407) 836-7299
 E-Mail: michael.chandler@ocfl.net

January 20, 2000

Mr. John Turner
 Florida department of Environmental Protection
 Air Resources Management
 Central District Office
 3319 Maguire Boulevard, Suite 232
 Orlando, Florida 32803-3767



**RE: Title V Permit Number 0950113-001-AV
 Orange County, Florida**

Dear Mr. Turner:

We request the removal of the permit condition listed in Section II Facility-wide Conditions, Condition Number 1 which states that the permittee shall submit all applications, tests, reports, notifications or other submittals to the Orange County Environmental Protection Department.

If you have any questions, please feel free to contact Dan Morrical, P.E. at (407) 836-6654.

Sincerely,

Michael L. Chandler
 Director
 Orange County Utilities Department

MLC/ch

cc: James Becker, Manager, Orange County Utilities, Solid Waste Division
 Stanley J. Keely, P.E., Glace & Radcliffe Inc.
 File: Other Permits-Title V-Permits-F-