Zell, David

From: Rebecca Kelner [rebecca@kelnerinc.com]
Sent: Tuesday, September 18, 2012 8:26 AM
To: Zell, David
Subject: RE: ACMS SUMTER SOLID WASTE CLASS I LANDFILL; 1190053-001-AV
Attachments: 1400-02 ACMS NSPS-NMOC-REVISED 2012.09.pdf

2nd copy attached 09 2

That's correct- the typo is on the first page of the NMOC report and the 108.7 is correct. I'm attaching the revised page 1 of the NMOC report for your files.

Revision to Tier I NMOC Emission Rate Report dated 06/29/12.

Thank you,
Rebecca

From: Zell, David [mailto:David.Zell@dep.state.fl.us]
Sent: Monday, September 17, 2012 5:28 PM
To: 'Rebecca Kelner'
Subject: RE: ACMS SUMTER SOLID WASTE CLASS I LANDFILL; 1190053-001-AV

Rebecca,

I took the Mg/yr values I used directly from the Tier 1 NMOC Emission Rate Report in Attachment 4 (NMOC Emissions Model) in the LandGEM Summary Report in the Results table on page **Report - 8** where it shows the following for NMOC:

Year	NMOC (Mg/yr)
1	1.087E+02
2	2.153E+02
3	3.201E+02
4	4.233E+02
5	5.249E+02

I believe that with E+02 representing $x10^2$, this would mean results ranging from 108.7* to 524.9 Mg/yr.
*(*Note – I do have to admit being very surprised at how fast the NMOC emissions went up in the first year of the landfill.)*

Please correct me if I have misinterpreted this. While you are correct that this would not directly affect the permit conditions, it would significantly affect the statements in notes in the permit, statement of basis, and my internal permitting memo as to when a Tier 2 NMOC analysis would be required or the Subpart WWW landfill gas collection and control system requirements could be triggered (i.e., potentially after the 2013 Tier ! NMOC emission rate report is submitted with NMOC emissions > 50 Mg/yr for 2013).

If there is any question that what I have referenced in the permitting notes is incorrect, please do not have the public notice published until this is resolved and, if necessary, I revise the permit documents and they are re-issued.

Thanks,

David

David Zell
FDEP SW District (Tampa)
Air Permit Engineering Specialist

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Monday, September 17, 2012 4:30 PM
To: Zell, David
Subject: RE: ACMS SUMTER SOLID WASTE CLASS I LANDFILL; 1190053-001-AV

David,

Thanks for sending out the draft permit. In the Statement of Basis and at the top of page 7 of 17 (Section A) of the permit, there is a minor typo regarding the emissions:

*(** NMOC Emission Rate Report Note - Subpart WWW 40 CFR 60.757(b) requires that an initial Tier I NMOC emission rate report shall be submitted. The Tier I MNOC emission estimate procedure uses a very conservative (i.e., high) EPA default value for C_{NMOC}, the concentration of NMOC in the landfill gas (LFG) generated by the landfill. This default value is typically significantly higher than the actual site-specific value for C_{NMOC}. This means that the resulting NMOC emission rate estimate is also very conservative, again typically significantly overestimating the site-specific NMOC emissions. If the report submitted using the Tier 1 default EPA MNOC concentration value shows NMOC emission > 50 MG/year for the year of the report, then under the provisions of 40 CFR 60.754(a)(2)(ii) and 60.757(c)(1), the owner or operator has the option to conduct Tier 2 sampling and analysis to establish a site specific NMOC concentration value and, within 180 days of the first Tier 1 emission rate report that shows > 50 Mg/Year, resubmit a revised NMOC emission rate report based on this Tier 2 site specific concentration value. The Tier I NMOC Emission Rate Report submitted for this facility on June 29, 2012 showed NMOC emissions of 0 Mg/yr for 2012 and 108.7 Mg/yr for 2013. This means that when the 2013 annual NMOC emission rate report is submitted, if it is still based on the Tier I default concentration value it will likely show NMOC emissions > 50 Mg/yr, thereby triggering the provisions discussed above.)*

The Tier I Emissions Rate Report indicates 10.87 Mg/yr in 2013 and 52.49 Mg/yr in 2017. I don't believe this will affect any of the permit conditions.

Thank you,
Rebecca Kelner, P.E.

From: Moore, Carol [mailto:Carol.Moore@dep.state.fl.us]
Sent: Monday, September 17, 2012 2:55 PM
To: cdean001@tampabay.rr.com
Cc: mconnel@sumtersolidwaste.com; Rebecca@kelnerinc.com; Zell, David; Zhang-Torres
Subject: ACMS SUMTER SOLID WASTE CLASS I LANDFILL; 1190053-001-AV
Importance: High

Attention: Mr. Charles Dean, Jr., President

Owner/Company Name: ACMS, INC.
Facility Name: ACMS SUMTER SOLID WASTE CLASS I LANDFILL
Project Number: 1190053-001-AV
Permit Status: DRAFT/PROPOSED
Permit Activity: NEW TITLEV FACILITY
Facility County: SUMTER

Click on the following link to access the permit project documents:
http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1190053.001.AV.D_pdf.zip

Dear Mr. Dean:

IMPORTANT: We must receive verification, by email, stating that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

calculated for the first five years of landfill operations (assumed to be 2013 - 2017) in accordance with 40 CFR 60.757(b) and 40 CFR 60.754(a) using Tier 1variables is as follows:

Table 1: ACMS Class I Landfill NMOC Emissions Summary (corrected)

Model Year	L_o (m^3/MG)[a]	C_{NMOC} (ppmv as hexane)[b]	k ($year^{-1}$)[c]	Waste in Place (Tons)[d]	★ Calculated NMOC (MG)[e]
2013	170	4,000	0.05	501,562	108.7
2014	170	4,000	0.05	516,609	215.3
2015	170	4,000	0.05	532,107	320.1
2016	170	4,000	0.05	548,070	423.3
2017	170	4,000	0.05	564,512	524.9

Notes to Table 1:
a – Per 40 CFR 60.754(a)(1)
b – Per 40 CFR 60.754(a)(1)
c – Per 40 CFR 60.754(a)(1)
d – Sourced from *Revised Attachment E.4 Design Life Calculations,* ACMS Class I Landfill Solid Waste Permit Application Response to FDEP Request for Additional Information, by Jones Edmunds, dated September 2010, provided herein as Attachment 3
e – Calculated in accordance with 40 CFR 60.754(a)(1)(i), modeling results are provided in Attachment 4. The ACMS Landfill is a new facility with no waste-in-place, the NMOC emissions calculated for year one of landfill operations are indicative of emissions in 2013.

The calculated NMOC emissions rate in the first year exceeds the 50 megagrams threshold, based on very conservative waste acceptance rates. The facility will therefore submit annual NMOC emissions rate reports in lieu of the 5-year report. The next annual NMOC emission rate report will be submitted on or before the date of this report. Should you have any further questions or comments, please feel free to contact me at (352) 672-8060.

Sincerely,

R. Kelner

Rebecca Kelner, P.E.
Principal

Attachments
xc: Marilyn Connell, ACMS
Charlie Dean, ACMS
Division of Air Resources Management, FDEP Tallahassee

Zell, David

From: Zell, David
Sent: Thursday, August 09, 2012 11:36 AM
To: 'Rebecca Kelner'
Cc: Zhang-Torres
Subject: RE: ACMS Title V Permit Application

Rebecca,

There is no application fee for a Title V air operation permit (initial, revision or renewal). Title V facilities pay Title V annual emissions fees rather than permit application processing fees. (After the initial Title V operation permit is issued, there will also be no fees for any future air construction permits.)

Please let me know if you have any additional questions.

David

David Zell
FDEP SW District (Tampa)
Air Permit Engineering Specialist

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Thursday, August 09, 2012 11:03 AM
To: Zell, David
Subject: RE: ACMS Title V Permit Application

Good morning David,

I wanted to confirm the Air Operations Application fee of $750 for this project – Air Operations Permit for a source that is not required to measure actual emissions.

Thank you,

Rebecca Kelner, P.E.

From: Zell, David [mailto:David.Zell@dep.state.fl.us]
Sent: Thursday, August 02, 2012 8:53 AM
To: 'Rebecca Kelner'
Cc: Zhang-Torres
Subject: RE: ACMS Title V Permit Application

Rebecca,

I have been asked to enquire as to the status of the Title V air operation permit application for the ACMS Class I landfill.

Federal New Source Performance Standard (NSPS) 40 CFR 60 Subpart WWW (Performance Standards for Municipal Solid Waste Landfills) requires that a Title V operation permit application be submitted no later than 90 days after commencement of construction of the MSW landfill (40 CFR 60.752(c)(2)). Based upon the date of May 21, 2012 for the start of construction of the landfill liner (from the June 29, 2012 NMOC Emission Rate Report for the ACMS Class I Landfill), the Title V operation permit application is due no later than **August 19, 2012**.

Thank you for your assistance with this. Please let me know if you have any questions.

Zell, David

From: Rebecca Kelner [rebecca@kelnerinc.com]
Sent: Thursday, August 02, 2012 8:55 AM
To: Zell, David
Cc: Zhang-Torres
Subject: RE: ACMS Title V Permit Application

Thank you for the check-in David. We will have the permit in before the deadline on the 19th.

Regards,
Rebecca Kelner, P.E.

From: Zell, David [mailto:David.Zell@dep.state.fl.us]
Sent: Thursday, August 02, 2012 8:53 AM
To: 'Rebecca Kelner'
Cc: Zhang-Torres
Subject: RE: ACMS Title V Permit Application

Rebecca,

I have been asked to enquire as to the status of the Title V air operation permit application for the ACMS Class I landfill.

Federal New Source Performance Standard (NSPS) 40 CFR 60 Subpart WWW (Performance Standards for Municipal Solid Waste Landfills) requires that a Title V operation permit application be submitted no later than 90 days after commencement of construction of the MSW landfill (40 CFR 60.752(c)(2)). Based upon the date of May 21, 2012 for the start of construction of the landfill liner (from the June 29, 2012 NMOC Emission Rate Report for the ACMS Class I Landfill), the Title V operation permit application is due no later than **August 19, 2012**.

Thank you for your assistance with this. Please let me know if you have any questions.

David Zell
FDEP SW District (Tampa)
Air Permit Engineering Specialist

PHONE: 813-632-7600 extension 118

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Thursday, July 12, 2012 5:22 PM
To: Zell, David
Subject: RE: ACMS Title V Permit Application

David,

To follow up on our conversation regarding the ACMS pre-application meeting: the owner would like to cancel the Monday meeting since you and I have discussed the important permitting points, such as (1)estimating all emissions over the 5 year permit period 2013 – 2017 (2) including ZZZZ emissions from stationary reciprocating engines (emergency generators are included, transportable equipment such as light plants and water pumps are not included) (3)Including the PM fugitive emissions from dust from road activities.

Please let me know if the Department would still like to meet. I will be in Tampa on Monday and it is not a problem to meet if you think it is still necessary.

Thank you,

Zell, David

From: Zell, David
Sent: Friday, July 13, 2012 8:48 AM
To: 'Rebecca Kelner'
Cc: Zhang-Torres
Subject: RE: ACMS Title V Permit Application

Rebecca,

Cancelling the Monday meeting is fine. The purpose of the pre-application meeting was to make sure that you and the applicant understood the application and NSPS 40 CFR 60 Subpart WWW requirements, and had an opportunity to ask any questions. Based on our phone conversation, I feel that you have a good handle on the applicable requirements for the facility and what needs to be included in the application. We are available to answer questions any time, and after the application is submitted we will work with you by email or phone to get any of our review questions answered promptly.

David

David Zell
FDEP SW District (Tampa)
Air Permit Engineering Specialist

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Thursday, July 12, 2012 5:22 PM
To: Zell, David
Subject: RE: ACMS Title V Permit Application

David,

To follow up on our conversation regarding the ACMS pre-application meeting: the owner would like to cancel the Monday meeting since you and I have discussed the important permitting points, such as (1)estimating all emissions over the 5 year permit period 2013 – 2017 (2) including ZZZZ emissions from stationary reciprocating engines (emergency generators are included, transportable equipment such as light plants and water pumps are not included) (3)Including the PM fugitive emissions from dust from road activities.

Please let me know if the Department would still like to meet. I will be in Tampa on Monday and it is not a problem to meet if you think it is still necessary.

Thank you,

Rebecca Kelner, P.E.

From: Zhang-Torres [mailto:Cindy.Zhang-Torres@dep.state.fl.us]
Sent: Wednesday, June 27, 2012 1:52 PM
To: 'Rebecca Kelner'
Cc: mconnell@sumtersolidwaste.com; cdean001@tampabay.rr.com; Zell, David; Wong, Robert; Pelz, Susan
Subject: RE: ACMS Title V Permit Application

Hello Ms. Kelner,

Zell, David

From: Rebecca Kelner [rebecca@kelnerinc.com]
Sent: Thursday, July 12, 2012 5:22 PM
To: Zell, David
Subject: RE: ACMS Title V Permit Application

David,

To follow up on our conversation regarding the ACMS pre-application meeting: the owner would like to cancel the Monday meeting since you and I have discussed the important permitting points, such as (1)estimating all emissions over the 5 year permit period 2013 – 2017 (2) including ZZZZ emissions from stationary reciprocating engines (emergency generators are included, transportable equipment such as light plants and water pumps are not included) (3)Including the PM fugitive emissions from dust from road activities.

Please let me know if the Department would still like to meet. I will be in Tampa on Monday and it is not a problem to meet if you think it is still necessary.

Thank you,

Rebecca Kelner, P.E.

From: Zhang-Torres [mailto:Cindy.Zhang-Torres@dep.state.fl.us]
Sent: Wednesday, June 27, 2012 1:52 PM
To: 'Rebecca Kelner'
Cc: mconnell@sumtersolidwaste.com; cdean001@tampabay.rr.com; Zell, David; Wong, Robert; Pelz, Susan
Subject: RE: ACMS Title V Permit Application

Hello Ms. Kelner,

Thank you for your phone call this morning. We look forward to meeting with you to discuss ACMS's Title V operating permit application. David Zell, one of our permitting engineers familiar with Title V permits for landfills, and myself can meet with you on July 16 at 2:30 PM.

Please let me know if this time is convenient for you as well.

Best Regards,

Cindy Zhang-Torres

Cindy Zhang-Torres, PE III
Air Permitting Manager
FDEP
Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: (813)632-7600, ext. 107
Fax: (813)632-7668

Zell, David

From: Zell, David
Sent: Thursday, July 05, 2012 3:20 PM
To: Grondahl, Max
Cc: Zhang-Torres
Subject: FW: ACMS Class I Landfill Capacity Analysis and Emissions Rate Report (Facility ID 1190053)
Attachments: 1400-02 ACMS NSPS.pdf

Max,

FYI, see above attachment referenced below. We also got a hard copy today.

Let me know if you want to see the hard copy (since you guys are going all-electronic, I thought that all you would want would be the electronic file which is attached to the consultant's email).

They do not have an air permit (Title V operation permit application to be submitted). I entered the facility into ARMS Inventory in order to get a Facility ID assigned – which is **1190053**.

Also, we (Cindy and I) have a pre-application meeting with them (permittee and consultant) planned for 07/16/12.

Dave

From: Zhang-Torres
Sent: Thursday, July 05, 2012 2:11 PM
To: Zell, David
Subject: FW: ACMS Class I Landfill Capacity Analysis and Emissions Rate Report

---

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Friday, June 29, 2012 12:45 PM
To: Zhang-Torres
Cc: Pelz, Susan; cdean001@tampabay.rr.com; mconnell@sumtersolidwaste.com
Subject: ACMS Class I Landfill Capacity Analysis and Emissions Rate Report

Ms. Zhang-Torres,

Please see the attached submittal for the ACMS Class I Landfill. I will send a hard copy for your receipt early next week.

Best Regards,

Rebecca Kelner, P.E.

Kelner Engineering
1050 N.E. 10th Pl.
Gainesville, Florida 32601
352.672.8060 (P)
866.722.0656 (F)

Zell, David

From: Zell, David
Sent: Thursday, July 05, 2012 12:34 PM
To: Zhang-Torres
Cc: Zell, David
Subject: Accepted: ACMS Pre-Application Meeting + PHONE CALL NOTE

Cindy,

FYI and for the file:

I just got off the phone with the consultant for ACMS (Rebecca Kelner) who called to discuss the Title V application in preparation for our meeting. During the 20 minute call we discussed whether greenhouse gas emissions needed to be addressed in the Title V application *(I said no)*, if there would be any emission units in addition to the landfill itself *(I said fugitive PM/PM10 from vehicle road traffic and earthmoving operations (which I told her to estimate), and stationary RICE engines (if any – I discussed what the current guidance is on what stationary means)*, the initial design capacity and NMOC emission estimate report *(which she said had already been submitted)*, Subpart WWW requirements and what would be included in the permit *(she said the initial NMOC report (which uses very conservative (high) values for waste acceptance rates) shows > 50Mg/yr by the 5th year, so I told her we would have to include a section with Subpart WWW requirements (LFG collection and control system design plan and installation requirements) that would go into effect if and when submitted NMOC estimate shows ≥ 50 Mg/year).*

Dave

David Zell
FDEP SW District (Tampa)
Air Permit Engineering Specialist

Zell, David

From: Zhang-Torres
Sent: Thursday, July 05, 2012 2:11 PM
To: Zell, David
Subject: FW: ACMS Class I Landfill Capacity Analysis and Emissions Rate Report
Attachments: 1400-02 ACMS NSPS.pdf

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Friday, June 29, 2012 12:45 PM
To: Zhang-Torres
Cc: Pelz, Susan; cdean001@tampabay.rr.com; mconnell@sumtersolidwaste.com
Subject: ACMS Class I Landfill Capacity Analysis and Emissions Rate Report

Ms. Zhang-Torres,

Please see the attached submittal for the ACMS Class I Landfill. I will send a hard copy for your receipt early next week.

Best Regards,

Rebecca Kelner, P.E.

Kelner Engineering
1050 N.E. 10th Pl.
Gainesville, Florida 32601
352.672.8060 (P)
866.722.0656 (F)

kelner engineering

June 29, 2012

Ms. Cindy Zhang-Torres, P.E.
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

RE: **NMOC Emission Rate Report as required by the MSW Landfill NSPS**
ACMS Class I Landfill 1190053

Dear Ms. Zhang-Torres:

On behalf of ACMS, Inc., Kelner Engineering is pleased to submit this initial design capacity report and 5-Year NMOC Emissions Rate Report in accordance with the requirements of 40 CFR 60, Subpart WWW.

The ACMS Class I Landfill consists of a 58.8-acre permitted facility located in Sumterville, Florida. The landfill is under construction and no waste has been placed at the facility. The landfill has been issued State of Florida Solid Waste permits 161263-005-SC/01 (Solid Waste Construction Permit) and 161263-004-SO/01 (Solid Waste Operations Permit). The Solid Waste Construction permit authorizes construction of Subcells 1 – 4 (58.8 acres), having total waste capacity of 8,500,000 cubic yards (6,499,100 m^3). A location map showing Subcells 1 – 4 is provided in Attachment 1.

Sitework for Subcells 1 and 2 (29.3 acres) of the Class I Landfill began February 20, 2012, and landfill liner construction began May 21, 2012. The facility is anticipated to receive waste the first quarter of 2013.

The design capacity of the ACMS Class I Landfill, Subcells 1 – 4 is 8,500,000 CY (6,499,100 m^3), according to the permit application documents through which the Solid Waste Construction Permit was issued. The volume of the landfill was calculated as the total volume between the bottom sand drainage layer and the top of the landfill final cover, less two feet of final cover soil. Attachment E.5.c *Design Life Calculations* of the document ACMS Class I Landfill Solid Waste Permit Application dated July 2010, prepared by Jones Edmunds shows the capacity calculations and is provided in Attachment 2 to this report.

In accordance with 40 CFR 60.752(b), solid waste facilities with design capacities greater than 2.5 million cubic meters must either submit an annual NMOC emissions rate report to demonstrate NMOC emissions are below 50 megagrams, or comply with the gas collection and control system provisions of 40 CFR 60.752(b)(2). The NMOC emissions rate has been

calculated for the first five years of landfill operations (assumed to be 2013 - 2017) in accordance with 40 CFR 60.757(b) and 40 CFR 60.754(a) using Tier 1variables is as follows:

Table 1: ACMS Class I Landfill NMOC Emissions Summary

Model Year	L_o (m^3/MG)[a]	C_{NMOC} (ppmv as hexane)[b]	k ($year^{-1}$)[c]	Waste in Place (Tons)[d]	Calculated NMOC (MG)[e]
2013	170	4,000	0.05	501,562	10.87
2014	170	4,000	0.05	516,609	21.53
2015	170	4,000	0.05	532,107	32.01
2016	170	4,000	0.05	548,070	42.33
2017	170	4,000	0.05	564,512	52.49

See LandGEM results

Incorrect off by a factor of 10 (should be 10X higher) (see 9/18/12 email & revised table) DG 9/18/12

Notes to Table 1:
a – Per 40 CFR 60.754(a)(1)
b – Per 40 CFR 60.754(a)(1)
c – Per 40 CFR 60.754(a)(1)
d – Sourced from *Revised Attachment E.4 Design Life Calculations,* ACMS Class I Landfill Solid Waste Permit Application Response to FDEP Request for Additional Information, by Jones Edmunds, dated September 2010, provided herein as Attachment 3
e – Calculated in accordance with 40 CFR 60.754(a)(1)(i), modeling results are provided in Attachment 4. The ACMS Landfill is a new facility with no waste-in-place, the NMOC emissions calculated for year one of landfill operations are indicative of emissions in 2013.

The calculated NMOC emissions rate in the fifth year exceeds the 50 megagrams threshold. The facility will therefore submit annual NMOC emissions rate reports in lieu of the 5-year report. The next annual NMOC emission rate report will be submitted on or before the date of this report. Should you have any further questions or comments, please feel free to contact me at (352) 672-8060.

Sincerely,

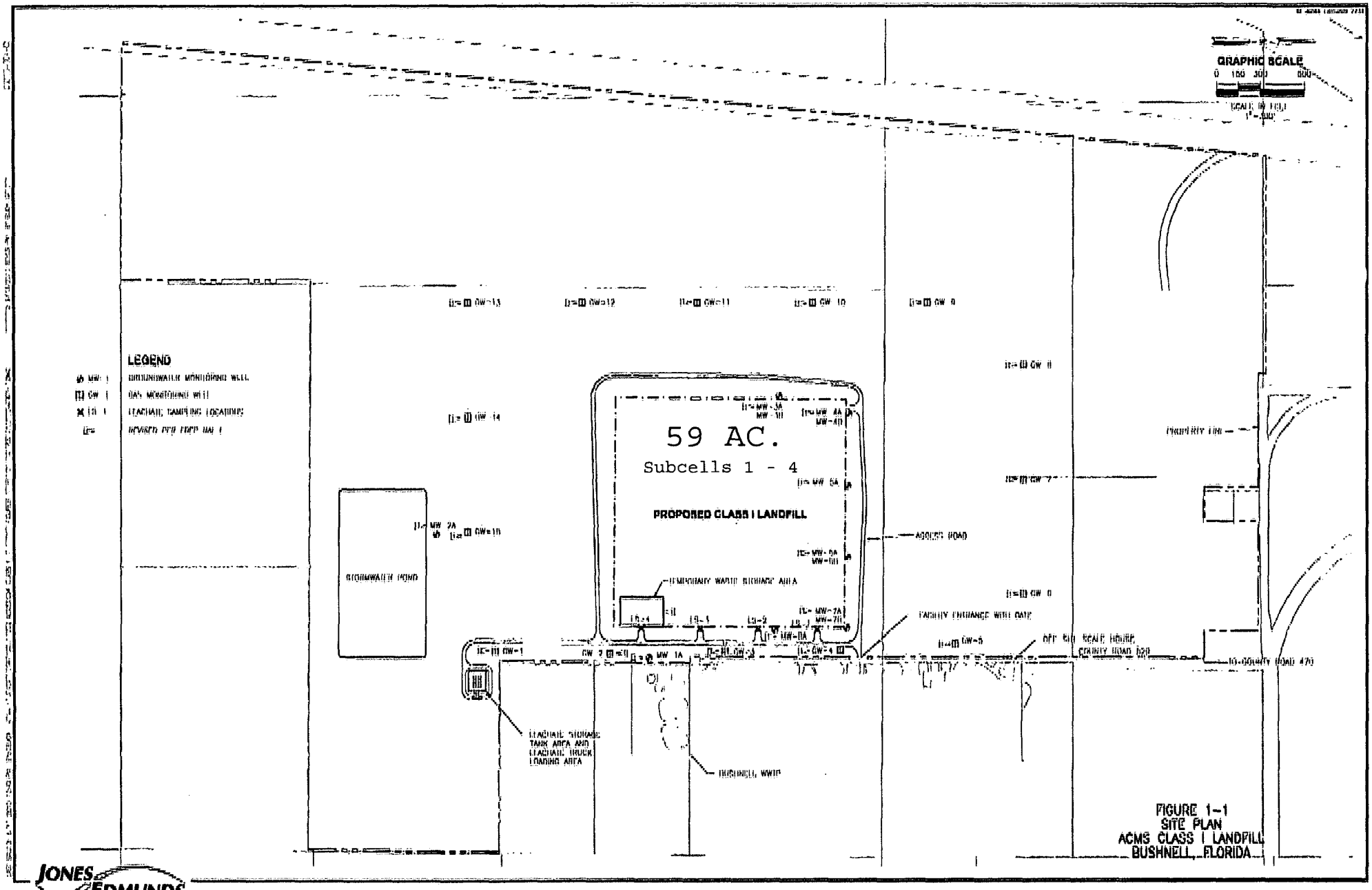
R. Kelner

Rebecca Kelner, P.E.
Principal

Attachments
xc: Marilyn Connell, ACMS
Charlie Dean, ACMS
Division of Air Resources Management, FDEP Tallahassee

ATTACHMENT 1

LOCATION MAP



Reference: ACMS, Inc. Class I Landfill Closure and Long-Term Care Plan, prepared by Jones Edmunds and Associates, September 2010

ATTACHMENT 2

LANDFILL CAPACITY CALCULATIONS

ATTACHMENT E.5.c

DESIGN LIFE CALCULATIONS

JONES EDMUNDS
ENGINEERS | ARCHITECTS | SCIENTISTS

PROJECT NUMBER: 01200-004-01 SHEET: 1 OF 1
PROJECT NAME: ACMS CLASS I LANDFILL
SUBJECT: WASTE PROJECTIONS AND DESIGN LIFE
BY: J. HAESELER Date: 3/15/2010
CHECKED BY: Date: 3/24/10

Objective: Provide the projected solid waste quantities and anticipated design life for the build-out of the ACMS Class I Landfill.

Data:

Total available Class I disposal volume, V_T =	8,500,000	yd^3 (See attached CAD report)
Annual operating days =	306	days/year
Annual daily tonnage increase =	3%	
Apparent waste density =	1,200	lb/yd^3

Tonnage Projections and Design Life

Year	Daily Tonnage [tons/day]	Annual Tonnage [tons/year]	Annual Volume [yd^3]	Volume Remaining [yd^3]
1	1,500	459,000	765,000	7,735,000
2	1,545	472,770	787,950	6,947,050
3	1,591	486,953	811,589	6,135,462
4	1,639	501,562	835,936	5,299,525
5	1,688	516,609	861,014	4,438,511
6	1,739	532,107	886,845	3,551,666
7	1,791	548,070	913,450	2,638,216
8	1,845	564,512	940,854	1,697,363
9	1,900	581,447	969,079	728,284
10	1,957	598,891	998,151	(269,868)

Conclusion:

Total Capacity		
Landfill Volume =	**8,500,000**	**yd^3**
Landfill Capacity =	**5,100,000**	**tons**
Design Life =	**9.25**	**years**

ACMS 01200-004-01

Volume Performed By: Buck Golden
Volume QC Performed By: Paul Upstill

Surface Notes:

Pg-sand: 2' sand layer over bottom liner design.

Pg-fc: Final cover design, 3:1 side slopes, 20' wide terraces at elevations 125, 185, and 245. 100'x100' top, 5% slope to Peak elevation of 307.50. Then lowered 2 feet to represent top of waste.

Drawing Used

\\jeacad\drafting\01200 ACMS\Capacity Analysis\004 Class I LF\20100622\

Volumes

Index	Base Surface	Comparison Surface	Cut	Fill	Net	Net Graph
1	pg-sand	pg-fc	00.00 Cu. Yd.	8534191.55 Cu. Yd.	8534191.55 Cu. Yd.	

ATTACHMENT 3

ANNUAL WASTE TONNAGE REFERENCE

REVISED ATTACHMENT E.~~5.e~~4

DESIGN LIFE CALCULATIONS

Reference: ACMS Class I Landfill Solid Waste Permit Application Response to FDEP Request for Additional Information, by Jones Edmunds, September 2010

JONES EDMUNDS
ENGINEERS | ARCHITECTS | SCIENTISTS

PROJECT NUMBER: 01200-004-01 SHEET: 1 OF 3
PROJECT NAME: ACMS CLASS I LANDFILL
SUBJECT: ATTACH. E.4. - WASTE PROJECTIONS AND DESIGN LIFE
BY: JHAESELER Date: 3/16/2010
CHECKED BY: JDEVITA Date: 3/23/2010
REVISED: TMCKNIGHT Date: 8/24/2010

Objective: 1. Provide the current and projected population and area to be served by the proposed site in accordance with 62-701.330(3)(d)1., FAC.
2. Provide the anticipated type, annual quantity, and source of solid waste expressed in tons in accordance with 62-701.330(3)(d)2., FAC.

Discussion: It is unknown at the time of application which communities will send waste to the ACMS Class I Landfill. For the purposes of providing a current and projected population in accordance with Rule 62-701.330(3)(d)1., FAC, we have assumed that the following percentages of waste from each of the neighboring counties will be disposed of at the ACMS Class I Landfill.

County	Fraction
Sumter	83%
Lake	50%
Citrus	50%
Marion	25%
Hernando	50%

Data: Current and future population data was obtained from the Bureau of Economic and Business Research's "Florida Statistical Abstract 2009."

County	Population[1] 2008	Projections[2] 2010	2015	2020	2025	2030	2035
Sumter	93,034	98,200	117,600	139,400	161,200	182,400	203,200
Lake	288,379	293,500	328,300	368,500	407,500	444,000	478,400
Citrus	142,043	144,400	155,800	168,700	181,300	193,300	204,800
Marion	329,418	331,800	362,500	398,800	433,600	466,300	497,000
Hernando	164,907	170,200	187,600	207,300	226,700	245,400	263,500

[1]Reference 1, Table 1.14.
[2]Reference 1, Table 1.41, Medium Projection

Municipal Solid Waste Disposal Per Capita data by County was obtained from Florida Department of Environmental Protection's Solid Waste Management in Florida 2008 Annual Report.

County	Per Capita Disposal[3] [ton/capita]
Sumter	1.39
Lake	0.98
Citrus	0.92
Marion	0.71
Hernando	0.9

[3]Reference 2, Table 1B.

Calculation: 1. Determine the current and future population to be served by the ACMS Class I Landfill.

County	Fraction Served	Population[1] 2008	Projections[2] 2010	2015	2020	2025	2030	2035
Sumter	83%	77,218	81,506	97,608	115,702	133,796	151,392	168,656
Lake	50%	144,190	146,750	164,150	184,250	203,750	222,000	239,200
Citrus	50%	71,022	72,200	77,900	84,350	90,650	96,650	102,400
Marion	25%	82,355	82,950	90,625	99,700	108,400	116,575	124,250
Hernando	50%	82,454	85,100	93,800	103,650	113,350	122,700	131,750
Total		457,237	468,506	524,083	587,652	649,946	709,317	766,256
Avg. Annual % Change of Total			2.5%	2.4%	2.4%	2.1%	1.8%	1.6%

Calculation (cont):

2. Calculate the current and future waste generation based on the population to be served and the per capita MSW generation rates.

County	Per Capita Disposal [ton/ca-yr]	Tonnage 2008 [ton/yr]	Tonnage Projections 2010 [ton/yr]	2015 [ton/yr]	2020 [ton/yr]	2025 [ton/yr]	2030 [ton/yr]	2035 [ton/yr]
Sumter	1.39	107,333	113,293	135,675	160,826	185,976	210,435	234,432
Lake	0.98	141,306	143,815	160,867	180,565	199,675	217,560	234,416
Citrus	0.92	65,340	66,424	71,668	77,602	83,398	88,918	94,208
Marion	0.71	58,472	58,895	64,344	70,787	76,964	82,768	88,218
Hernando	0.90	74,208	76,590	84,420	93,285	102,015	110,430	118,575
Total		446,659	459,017	516,974	583,065	648,028	710,111	769,848
Avg. Annual % Change of Total			2.8%	2.5%	2.6%	2.2%	1.9%	1.7%

Conclusions The current and projected population and area to be served by the proposed site:

Year	Projected Population	Avg. Annual % Change	Projected Tonnage	Avg. Annual % Change
2010	468,506		459,017	
2015	524,083	2.4%	516,974	2.5%
2020	587,652	2.4%	583,065	2.6%
2025	649,946	2.1%	648,028	2.2%
2030	709,317	1.8%	710,111	1.9%
2035	766,256	1.6%	769,848	1.7%

For the first year (2010), the daily tonnage rate is:
459017 tons/year / 306 operating days/year = 1,500 tons/day

The typical average annual increase in projected population and projected tonnage ranges from 1.6% to 2.6%. An annual increase of 3% was selected as a conservative growth rate.

References:
1. Bureau of Economic and Business Research, "Florida Statistical Abstract 2009," University of Florida, 43rd Edition.
2. Florida Department of Environmental Protection, "Solid Waste Management in Florida 2008 Annual Report," http://www.dep.state.fl.us/waste/categories/recycling/SWreportdata/08_data.htm

JONES EDMUNDS
ENGINEERS | ARCHITECTS | SCIENTISTS

PROJECT NUMBER: 01200-004-01 SHEET: 3 OF 3
PROJECT NAME: ACMS CLASS I LANDFILL
SUBJECT: ATTACH. E.4. - WASTE PROJECTIONS AND DESIGN LIFE
BY: JHAESELER Date: 3/16/2010
CHECKED BY: JDEVITA Date: 3/23/2010
REVISED: TMCKNIGHT Date: 8/24/2010

Objective: Provide the projected solid waste quantities and anticipated design life for the build-out of the ACMS Class I Landfill.

Data:

Total available Class I disposal volume, V_T =	8,500,000	yd^3 (See attached CAD report)
Annual operating days =	306	days/year
Annual daily tonnage increase =	3%	
Apparent waste density =	1,200	lb/yd^3

Tonnage Projections and Design Life

Year	Daily Tonnage [tons/day]	Annual Tonnage [tons/year]	Annual Volume [yd^3]	Volume Remaining [yd^3]
2010	1,500	459,000	765,000	7,735,000
2011	1,545	472,770	787,950	6,947,050
2012	1,591	486,953	811,589	6,135,462
2013	1,639	501,562	835,936	5,299,525
2014	1,688	516,609	861,014	4,438,511
2015	1,739	532,107	886,845	3,551,666
2016	1,791	548,070	913,450	2,638,216
2017	1,845	564,512	940,854	1,697,363
2018	1,900	581,447	969,079	728,284
2019	1,957	598,891	998,151	(269,868)

Conclusion:

Total Capacity

Landfill Volume =	**8,500,000**	**yd^3**
Landfill Capacity =	**5,100,000**	**tons**
Design Life =	**9.25**	**years**

Florida Statistical Abstract 2009

Forty-third Edition

Your Florida Data Source

Bureau of Economic and Business Research
Warrington College of Business Administration

UF | UNIVERSITY of FLORIDA

The Foundation for The Gator Nation

Table 1.14. COUNTY RANKINGS AND DENSITY: POPULATION ESTIMATES, RANK PERCENTAGE DISTRIBUTION, LAND AREA, AND DENSITY IN THE STATE AND COUNTIES OF FLORIDA, APRIL 1, 2008

County	Estimates			Land area 1/ (square miles)	Density	
	Number	Rank in state	Percentage of state		Persons per square mile	Rank in state
Florida	18,807,219	(X)	100.00	53,926.8	349	(X)
Alachua	252,388	23	1.34	874.3	289	23
Baker	25,890	52	0.14	585.2	44	51
Bay	169,307	27	0.90	763.7	222	28
Bradford	29,059	50	0.15	293.1	99	38
Brevard	556,213	10	2.96	1,018.2	546	12
Broward	1,758,494	2	9.35	1,205.4	1,459	2
Calhoun	14,310	63	0.08	567.3	25	60
Charlotte	165,781	28	0.88	693.6	239	27
Citrus	142,043	32	0.76	583.8	243	26
Clay	185,168	25	0.98	601.1	308	20
Collier	332,854	15	1.77	2,025.3	164	34
Columbia	66,121	40	0.35	797.1	83	41
DeSoto	34,487	48	0.18	637.3	54	47
Dixie	15,963	60	0.08	704.0	23	62
Duval	904,971	7	4.81	773.7	1,170	6
Escambia	313,480	18	1.67	662.4	473	14
Flagler	95,512	35	0.51	485.0	197	32
Franklin	12,331	64	0.07	544.3	23	63
Gadsden	50,611	43	0.27	516.1	98	39
Gilchrist	17,256	57	0.09	348.9	49	50
Glades	11,323	65	0.06	773.6	15	66
Gulf	16,923	58	0.09	554.6	31	57
Hamilton	14,779	61	0.08	514.9	29	59
Hardee	27,909	51	0.15	637.3	44	52
Hendry	41,216	44	0.22	1,152.5	36	56
Hernando	164,907	29	0.88	478.3	345	18
Highlands	100,207	34	0.53	1,028.3	97	40
Hillsborough	1,200,541	4	6.38	1,050.9	1,142	7
Holmes	19,757	56	0.11	482.5	41	54
Indian River	141,667	33	0.75	503.2	282	24
Jackson	52,639	42	0.28	915.6	57	45
Jefferson	14,553	62	0.08	597.7	24	61
Lafayette	8,287	66	0.04	542.8	15	65
Lake	288,379	19	1.53	953.2	303	21
Lee	623,725	8	3.32	803.6	776	8
Leon	274,892	21	1.46	666.7	412	17

See footnotes at end of table.

Continued . . .

Table 1.14. COUNTY RANKINGS AND DENSITY: POPULATION ESTIMATES, RANK PERCENTAGE DISTRIBUTION, LAND AREA, AND DENSITY IN THE STATE AND COUNTIES OF FLORIDA, APRIL 1, 2008 (Continued)

	Estimates			Land area 1/	Density	
County	Number	Rank in state	Percentage of state	(square miles)	Persons per square mile	Rank in state
Levy	40,817	46	0.22	1,118.4	36	55
Liberty	8,158	67	0.04	835.9	10	67
Madison	20,152	55	0.11	691.8	29	58
Manatee	317,699	17	1.69	741.0	429	16
Marion	329,418	16	1.75	1,578.9	209	30
Martin	143,868	31	0.76	555.6	259	25
Miami-Dade	2,477,289	1	13.17	1,946.1	1,273	4
Monroe	76,081	37	0.40	996.9	76	42
Nassau	71,915	39	0.38	651.6	110	36
Okaloosa	197,597	24	1.05	935.6	211	29
Okeechobee	40,003	47	0.21	773.9	52	48
Orange	1,114,979	5	5.93	907.5	1,229	5
Osceola	273,709	22	1.46	1,321.9	207	31
Palm Beach	1,294,654	3	6.88	1,974.1	656	10
Pasco	438,668	12	2.33	744.9	589	11
Pinellas	938,461	6	4.99	279.9	3,353	1
Polk	585,733	9	3.11	1,874.4	312	19
Putnam	74,989	38	0.40	721.9	104	37
St. Johns	181,180	26	0.96	609.0	297	22
St. Lucie	276,585	20	1.47	572.5	483	13
Santa Rosa	144,136	30	0.77	1,016.9	142	35
Sarasota	393,608	14	2.09	571.6	689	9
Seminole	426,413	13	2.27	308.2	1,384	3
Sumter	93,034	36	0.49	545.7	170	33
Suwannee	40,927	45	0.22	687.6	60	44
Taylor	23,199	54	0.12	1,041.9	22	64
Union	15,974	59	0.08	240.3	66	43
Volusia	510,750	11	2.72	1,103.3	463	15
Wakulla	30,717	49	0.16	606.7	51	49
Walton	57,784	41	0.31	1,057.6	55	46
Washington	24,779	53	0.13	579.9	43	53

(X) Not applicable.
1/ Land area figures represent the total area in the counties in 2000 and are not adjusted for lands which cannot be developed (government-owned parks or reserves) or are uninhabitable (swamps or marshes).

Source: University of Florida, Bureau of Economic and Business Research, Population Program, *Florida Estimates of Population, April 1, 2008.* Census data from U.S. Census Bureau.

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Florida	18,807.2						
Low		18,471.4	19,243.2	20,214.4	21,162.3	22,049.9	22,886.0
Medium		18,881.4	20,055.9	21,417.5	22,738.2	23,979.0	25,148.3
High		19,664.9	21,474.9	23,339.7	25,177.6	26,951.6	28,674.1
Alachua	252.4						
Low		245.8	249.2	252.2	253.8	253.9	252.5
Medium		256.1	270.2	286.1	301.6	316.3	330.4
High		266.3	292.6	321.0	350.5	380.8	411.9
Baker	25.9						
Low		25.2	25.8	26.3	26.7	26.9	27.0
Medium		26.3	28.0	29.9	31.8	33.6	35.2
High		27.3	30.3	33.5	36.9	40.4	44.0
Bay	169.3						
Low		164.4	166.8	169.0	170.3	170.5	169.6
Medium		171.2	180.9	191.8	202.4	212.4	222.0
High		178.1	195.9	215.1	235.2	255.7	276.8
Bradford	29.1						
Low		28.2	28.8	28.9	29.0	29.0	28.9
Medium		29.1	30.6	31.7	32.9	34.0	35.1
High		30.0	32.4	34.6	36.9	39.2	41.5
Brevard	556.2						
Low		534.5	542.4	551.2	556.3	557.1	553.9
Medium		556.7	587.9	625.2	661.1	694.1	724.8
High		579.0	636.7	701.6	768.3	835.6	903.7
Broward	1,758.5						
Low		1,693.2	1,682.0	1,671.2	1,655.8	1,635.4	1,610.4
Medium		1,745.6	1,787.2	1,835.0	1,880.0	1,921.2	1,958.9
High		1,797.9	1,896.7	2,001.8	2,107.4	2,212.6	2,317.4
Calhoun	14.3						
Low		13.7	13.6	13.4	13.2	12.9	12.6
Medium		14.3	14.7	15.2	15.7	16.1	16.5
High		14.9	15.9	17.1	18.2	19.4	20.5
Charlotte	165.8						
Low		160.9	165.4	169.5	172.5	174.2	174.8
Medium		167.6	179.2	192.2	204.9	217.0	228.4
High		174.3	194.1	215.7	238.2	261.3	285.1
Citrus	142.0						
Low		138.6	143.9	148.8	152.6	155.3	156.8
Medium		144.4	155.8	168.7	181.3	193.3	204.8
High		150.1	168.9	189.4	210.8	232.9	255.9
Clay	185.2						
Low		177.6	186.7	195.4	201.6	204.9	205.6
Medium		186.9	206.4	229.2	251.2	271.8	291.2
High		196.3	228.2	264.4	302.3	341.5	381.8
Collier	332.9						
Low		315.2	328.4	341.6	350.9	355.8	355.9
Medium		331.8	363.3	400.7	437.4	472.0	504.2
High		348.4	401.3	462.1	526.3	592.9	661.0

See footnote at end of table.

Continued . . .

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA (Continued)

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Columbia	66.1						
Low		65.0	66.4	67.6	68.5	68.8	68.7
Medium		67.8	71.9	76.7	81.3	85.7	89.9
High		70.5	77.9	86.1	94.5	103.2	112.2
DeSoto	34.5						
Low		34.0	34.5	35.0	35.3	35.6	35.7
Medium		35.1	36.6	38.4	40.1	41.8	43.3
High		36.1	38.9	41.9	45.0	48.1	51.4
Dixie	16.0						
Low		15.2	15.3	15.1	14.8	14.2	13.6
Medium		16.1	17.4	18.4	19.4	20.3	21.1
High		17.1	19.5	21.8	24.1	26.4	28.9
Duval	905.0						
Low		880.8	900.2	917.9	929.8	935.3	934.7
Medium		917.5	975.5	1,041.0	1,104.7	1,165.0	1,222.4
High		954.2	1,056.7	1,168.2	1,284.0	1,402.9	1,525.1
Escambia	313.5						
Low		305.9	306.3	306.6	306.2	305.0	303.1
Medium		315.4	325.3	336.6	347.6	358.1	368.3
High		324.9	345.4	367.3	389.7	412.7	436.1
Flagler	95.5						
Low		90.5	102.6	113.3	121.2	126.2	128.3
Medium		96.3	115.6	137.5	158.7	178.9	198.0
High		102.1	130.5	163.0	197.8	234.3	272.7
Franklin	12.3						
Low		11.9	12.2	12.1	11.8	11.6	11.3
Medium		12.4	13.3	13.7	14.1	14.4	14.8
High		12.9	14.4	15.3	16.3	17.3	18.4
Gadsden	50.6						
Low		50.4	51.2	51.9	52.6	53.1	53.4
Medium		51.9	54.3	57.0	59.7	62.2	64.7
High		53.5	57.7	62.2	66.9	71.8	76.8
Gilchrist	17.3						
Low		16.2	16.0	15.7	15.1	14.3	13.1
Medium		17.6	19.0	20.6	22.2	23.7	25.1
High		19.1	22.1	25.7	29.4	33.3	37.4
Glades	11.3						
Low		11.2	11.1	11.1	11.0	10.8	10.6
Medium		11.6	12.1	12.6	13.0	13.5	13.9
High		12.1	13.1	14.1	15.1	16.2	17.3
Gulf	16.9						
Low		15.8	15.3	14.7	14.0	13.3	12.4
Medium		16.8	17.3	17.9	18.4	18.9	19.4
High		17.9	19.4	21.1	22.8	24.6	26.4
Hamilton	14.8						
Low		14.2	13.9	13.7	13.4	13.1	12.8
Medium		14.8	15.1	15.6	16.0	16.4	16.7
High		15.4	16.4	17.4	18.5	19.7	20.8

See footnote at end of table.

Continued . . .

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA (Continued)

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Hardee	27.9						
Low		27.5	27.2	26.9	26.5	26.1	25.7
Medium		28.4	28.9	29.5	30.1	30.7	31.2
High		29.2	30.7	32.2	33.8	35.3	36.9
Hendry	41.2						
Low		41.0	42.2	43.4	44.4	45.1	45.3
Medium		42.7	45.7	49.2	52.7	56.1	59.2
High		44.4	49.6	55.3	61.3	67.6	74.0
Hernando	164.9						
Low		161.7	169.7	176.8	181.9	185.0	186.1
Medium		170.2	187.6	207.3	226.7	245.4	263.5
High		178.7	207.4	239.1	272.9	308.4	345.6
Highlands	100.2						
Low		97.8	100.2	102.5	104.1	105.0	105.1
Medium		101.9	108.6	116.3	123.7	130.7	137.4
High		106.0	117.7	130.5	143.8	157.4	171.5
Hillsborough	1,200.5						
Low		1,157.1	1,191.3	1,228.2	1,255.4	1,271.3	1,276.8
Medium		1,205.3	1,290.6	1,392.5	1,491.2	1,583.0	1,668.8
High		1,253.5	1,398.5	1,563.2	1,733.7	1,907.0	2,083.3
Holmes	19.8						
Low		19.3	19.1	18.9	18.6	18.3	17.9
Medium		20.1	20.7	21.4	22.1	22.8	23.4
High		20.9	22.4	24.0	25.7	27.4	29.1
Indian River	141.7						
Low		135.2	140.1	144.3	147.1	148.4	148.1
Medium		142.3	155.0	169.3	183.4	196.9	209.9
High		149.4	171.2	195.2	220.7	247.3	275.1
Jackson	52.6						
Low		53.5	54.2	54.9	55.4	55.8	56.0
Medium		55.1	57.5	60.2	62.9	65.5	68.0
High		56.8	61.1	65.7	70.5	75.5	80.6
Jefferson	14.6						
Low		14.3	14.1	13.9	13.7	13.5	13.2
Medium		14.9	15.3	15.8	16.3	16.8	17.3
High		15.4	16.6	17.7	19.0	20.2	21.5
Lafayette	8.3						
Low		9.4	9.3	9.3	9.2	9.1	8.9
Medium		9.8	10.1	10.6	11.0	11.3	11.7
High		10.2	11.0	11.8	12.7	13.6	14.6
Lake	288.4						
Low		278.9	297.0	314.3	327.0	334.8	338.0
Medium		293.5	328.3	368.5	407.5	444.0	478.4
High		308.2	363.0	425.2	490.6	558.1	627.7
Lee	623.7						
Low		585.6	620.4	649.8	667.8	673.8	668.5
Medium		622.9	701.0	789.6	875.7	957.1	1,034.4
High		660.3	789.6	935.0	1,089.5	1,251.4	1,420.7

See footnote at end of table.

Continued . . .

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA (Continued)

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Leon	274.9						
Low		264.8	265.1	265.7	264.9	262.5	258.6
Medium		275.8	287.5	301.5	314.9	327.3	338.8
High		286.8	311.2	338.2	365.9	393.8	421.9
Levy	40.8						
Low		40.0	41.6	43.1	44.2	45.0	45.5
Medium		41.7	45.1	48.8	52.5	56.1	59.4
High		43.4	48.9	54.8	61.1	67.6	74.2
Liberty	8.2						
Low		8.4	8.4	8.3	8.2	8.0	7.8
Medium		8.9	9.5	10.2	10.8	11.5	12.1
High		9.5	10.7	12.0	13.4	14.9	16.6
Madison	20.2						
Low		19.5	19.8	19.6	19.3	18.9	18.5
Medium		20.3	21.5	22.2	22.9	23.6	24.3
High		21.1	23.2	24.9	26.6	28.4	30.2
Manatee	317.7						
Low		306.6	315.0	324.0	330.6	334.3	335.4
Medium		319.4	341.3	367.4	392.7	416.3	438.4
High		332.2	369.8	412.4	456.6	501.5	547.2
Marion	329.4						
Low		315.2	327.6	339.9	347.9	351.4	350.7
Medium		331.8	362.5	398.8	433.6	466.3	497.0
High		348.3	400.4	459.9	521.8	585.6	651.4
Martin	143.9						
Low		137.9	138.1	138.5	138.0	136.7	134.5
Medium		143.6	149.8	157.1	164.1	170.4	176.2
High		149.4	162.1	176.2	190.6	205.0	219.5
Miami-Dade	2,477.3						
Low		2,406.3	2,411.4	2,417.8	2,416.5	2,406.8	2,389.2
Medium		2,480.8	2,561.3	2,654.0	2,743.0	2,825.9	2,903.5
High		2,555.2	2,719.3	2,896.0	3,075.6	3,256.2	3,438.1
Monroe	76.1						
Low		72.4	69.0	65.8	62.6	59.6	56.6
Medium		74.6	73.5	72.3	71.2	70.2	69.2
High		76.9	77.8	78.8	79.7	80.6	81.5
Nassau	71.9						
Low		72.2	76.6	80.4	83.3	85.3	86.2
Medium		76.0	84.6	94.3	103.9	113.1	122.0
High		79.8	93.6	108.8	125.0	142.1	160.1
Okaloosa	197.6						
Low		188.9	191.1	193.6	194.8	194.5	192.9
Medium		196.8	207.2	219.6	231.5	242.4	252.5
High		204.7	224.3	246.4	269.0	291.8	314.7
Okeechobee	40.0						
Low		39.3	40.1	40.6	40.9	41.1	41.2
Medium		40.5	42.6	44.5	46.4	48.2	50.0
High		41.7	45.2	48.6	52.0	55.6	59.2

See footnote at end of table.

Continued . . .

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA (Continued)

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Orange	1,115.0						
Low		1,063.3	1,095.8	1,128.9	1,149.6	1,156.4	1,150.3
Medium		1,119.2	1,212.8	1,324.5	1,433.2	1,535.0	1,630.8
High		1,175.2	1,339.3	1,527.3	1,724.4	1,927.4	2,136.3
Osceola	273.7						
Low		263.5	289.9	313.0	329.4	338.6	341.0
Medium		280.3	327.0	380.1	431.6	480.4	526.7
High		297.1	368.9	450.5	537.4	628.8	724.6
Palm Beach	1,294.7						
Low		1,234.3	1,241.1	1,252.0	1,255.1	1,249.0	1,234.6
Medium		1,285.7	1,346.0	1,420.4	1,491.7	1,556.8	1,616.6
High		1,337.1	1,457.0	1,593.4	1,733.2	1,873.5	2,014.3
Pasco	438.7						
Low		415.6	429.0	442.4	450.4	453.0	450.6
Medium		437.5	474.8	519.1	561.6	601.4	638.8
High		459.4	524.4	598.6	675.6	755.1	836.9
Pinellas	938.5						
Low		901.4	877.3	852.9	828.2	803.4	778.3
Medium		929.3	933.1	937.1	941.1	944.9	948.7
High		957.2	989.3	1,021.6	1,054.1	1,087.0	1,120.0
Polk	585.7						
Low		562.7	581.7	599.4	613.0	621.9	626.4
Medium		586.2	630.1	679.6	728.1	774.3	818.5
High		609.6	682.9	762.9	846.5	932.9	1,022.1
Putnam	75.0						
Low		72.7	72.0	71.4	70.7	69.8	68.7
Medium		74.9	76.5	78.4	80.3	82.0	83.6
High		77.2	81.2	85.6	90.0	94.4	98.9
St. Johns	181.2						
Low		180.9	198.7	214.1	225.6	232.8	235.7
Medium		192.5	224.2	260.0	295.6	330.2	363.9
High		204.0	252.9	308.1	368.1	432.3	500.9
St. Lucie	276.6						
Low		260.1	277.1	291.6	301.4	305.7	304.2
Medium		276.7	313.1	354.3	395.2	434.1	470.6
High		293.3	352.7	419.6	491.7	567.8	646.5
Santa Rosa	144.1						
Low		141.3	146.9	152.5	156.9	159.8	161.3
Medium		147.1	159.1	172.9	186.3	198.9	210.6
High		153.0	172.5	194.1	216.7	239.7	263.1
Sarasota	393.6						
Low		380.2	392.9	404.8	413.8	419.8	422.8
Medium		396.0	425.5	458.9	491.5	522.7	552.4
High		411.9	461.2	515.2	571.5	629.7	689.9
Seminole	426.4						
Low		407.6	412.5	418.0	420.8	420.4	417.1
Medium		424.6	447.2	474.2	500.0	523.9	546.0
High		441.6	484.2	532.0	581.1	630.6	680.6

See footnote at end of table.

Continued . . .

Table 1.41. PROJECTIONS: ESTIMATES, APRIL 1, 2008, AND PROJECTIONS SPECIFIED YEARS APRIL 1, 2010 THROUGH 2035, IN THE STATE AND COUNTIES OF FLORIDA (Continued)

(in thousands, rounded to hundreds)

County	Estimates 2008	Projections 2010	2015	2020	2025	2030	2035
Sumter	93.0						
Low		92.3	104.3	114.9	123.1	128.7	131.8
Medium		98.2	117.6	139.4	161.2	182.4	203.2
High		104.1	132.8	165.3	200.8	239.1	280.1
Suwannee	40.9						
Low		43.5	44.9	46.2	47.2	47.8	48.1
Medium		45.4	48.7	52.4	56.0	59.5	62.8
High		47.2	52.7	58.8	65.1	71.7	78.5
Taylor	23.2						
Low		23.1	23.2	23.4	23.3	23.2	22.9
Medium		24.0	25.2	26.5	27.8	28.9	30.0
High		25.0	27.3	29.7	32.2	34.8	37.4
Union	16.0						
Low		15.3	15.0	14.7	14.3	13.8	13.1
Medium		16.3	17.0	17.9	18.8	19.6	20.4
High		17.3	19.1	21.2	23.3	25.5	27.9
Volusia	510.8						
Low		489.8	493.8	498.6	500.2	498.1	492.9
Medium		510.3	535.5	565.6	594.4	620.9	645.3
High		530.7	579.7	634.6	690.7	747.2	804.1
Wakulla	30.7						
Low		30.5	32.7	34.6	36.2	37.3	37.9
Medium		32.1	36.1	40.6	45.1	49.4	53.6
High		33.7	39.9	46.9	54.3	62.1	70.4
Walton	57.8						
Low		54.8	57.8	60.4	61.9	62.3	61.7
Medium		58.3	65.3	73.4	81.2	88.6	95.5
High		61.8	73.5	86.9	101.0	115.8	131.1
Washington	24.8						
Low		24.6	24.5	24.3	23.9	23.3	22.4
Medium		26.1	27.8	29.6	31.4	33.1	34.7
High		27.7	31.2	35.0	39.0	43.2	47.5

Note: The medium projection is the one we believe is most likely to provide an accurate forecast of future population. The high and low projections indicate the range in which future populations are likely to fall. They do not represent absolute limits to growth; for any county, the future population may be above the high projection or below the low projection. If future distributions of errors are similar to past distributions, however, future populations will fall between high and low projections in approximately two-thirds of Florida's counties. For a detailed description of projection methodology, see the source.

Source: University of Florida, Bureau of Economic and Business Research, Population Program, *Florida Population Studies,* March 2009, Volume 42, Bulletin No. 153.

Table 1B: Co[illegible] Municipal Solid Waste Disposal[1] Per [illegible]pita by Descending Population Rank (CY 2008)

County	Population[2]	Municipal Solid Waste (Landfilled and Combusted) Tons Per Capita[3]								
		2000	2001	2002	2003	2004	2005	2006	2007	2008
Miami-Dade	2,477,289	1.40	1.37	1.40	1.38	1.34	1.48	1.62	1.45	1.20
Broward	1,758,494	1.19	1.17	1.31	1.38	1.51	1.56	1.64	1.42	1.15
Palm Beach	1,294,654	0.96	0.98	1.00	1.03	1.13	1.15	1.15	1.02	1.12
Hillsborough	1,200,541	1.18	1.15	1.04	1.19	1.42	1.41	1.38	1.11	1.07
Orange	1,114,979	1.35	1.31	1.54	1.85	1.41	1.63	1.45	1.38	1.22
Pinellas	938,461	1.20	1.25	1.60	1.29	1.44	1.50	1.51	1.23	1.25
Duval	904,971	1.09	2.53	1.22	1.80	1.62	1.90	1.39	1.38	1.36
Lee	623,725	1.21	1.39	1.42	1.53	1.61	1.60	1.66	1.21	1.12
Polk	585,733	1.49	1.54	1.36	1.37	1.21	1.37	1.16	1.34	1.14
Brevard	556,213	0.90	1.44	1.43	1.39	1.41	2.03	1.68	1.35	1.35
Volusia	510,750	1.35	1.02	1.21	1.06	1.36	1.23	1.02	1.08	0.92
Pasco	438,668	1.32	1.01	0.98	0.95	0.93	0.96	1.02	1.18	1.08
Seminole	426,413	1.14	0.88	0.95	0.77	1.02	1.06	1.01	0.97	0.87
Sarasota	393,608	1.16	1.14	1.15	0.85	0.84	1.14	0.84	1.10	1.06
Collier	332,854	0.88	1.42	1.61	1.63	1.71	1.54	1.93	1.05	1.31
Marion	329,418	0.66	0.83	0.81	0.84	0.63	1.12	0.78	0.79	0.71
Manatee	317,699	1.28	1.32	1.20	1.20	1.00	0.90	1.18	1.05	0.97
Escambia	313,480	1.17	1.53	1.13	1.56	1.75	2.79	1.95	1.28	1.46
Lake	288,379	0.95	0.82	1.01	0.98	1.20	1.30	1.22	0.97	0.98
St. Lucie	276,585	0.70	0.70	1.03	0.80	2.07	1.84	1.62	1.11	0.87
Leon	274,892	1.14	0.90	1.61	0.99	1.30	1.33	1.39	1.04	0.98
Osceola	273,709	1.90	1.30	1.17	1.11	1.10	1.78	1.84	1.12	0.91
Alachua	252,388	0.71	0.75	0.74	0.77	0.75	0.66	0.91	1.16	1.10
Okaloosa	197,597	1.23	0.98	1.91	1.04	1.23	2.65	1.53	1.47	1.23
Clay	185,168	0.73	0.62	0.70	0.95	1.05	0.96	0.90	0.88	0.71
St. Johns	181,180	0.85	1.35	1.55	1.61	1.74	1.73	2.13	1.09	1.23
Bay	169,307	1.08	1.15	1.09	1.61	1.33	2.54	2.47	2.31	1.82
Charlotte	165,781	0.78	1.15	0.81	0.86	1.20	2.33	1.65	0.95	0.77
Hernando	164,907	0.99	1.09	1.21	1.00	1.35	1.30	1.26	1.07	0.90
Santa Rosa	144,136	1.32	2.23	2.23	1.13	2.43	4.39	1.62	1.02	0.73
Martin	143,868	1.01	1.01	1.03	1.90	1.24	2.15	1.29	1.19	1.10
Citrus	142,043	1.37	1.00	1.33	1.37	1.44	1.38	0.98	1.21	0.92
Indian River	141,667	1.45	1.61	2.40	2.55	2.60	2.18	2.01	1.99	1.44
Highlands	100,207	0.86	1.13	1.03	0.87	1.01	1.09	1.27	1.28	1.18
Flagler	95,512	2.01	1.04	1.73	1.43	1.13	1.39	1.38	0.94	0.76
Sumter	93,034	0.53	0.58	0.57	0.66	0.85	0.68	1.17	0.74	1.39
Monroe	76,081	1.67	1.75	1.74	1.81	2.17	2.58	2.49	1.70	1.71
Putnam	74,989	0.80	0.96	0.90	0.93	0.90	0.53	0.55	0.94	0.85
Nassau	71,915	0.77	1.02	1.50	1.55	0.81	1.87	2.17	1.42	0.87
Columbia	66,121	1.05	1.14	1.40	1.38	0.86	0.92	0.88	0.98	0.93
Walton	57,784	3.42	2.60	2.14	2.28	1.72	5.05	2.42	2.30	2.19
Jackson	52,639	0.71	0.87	0.67	0.81	1.12	1.13	1.13	0.78	0.65
Gadsden	50,611	0.66	0.64	0.66	0.65	0.67	0.82	1.01	1.06	1.09
Hendry	41,216	1.00	0.79	1.13	1.10	1.23	1.27	1.37	1.11	0.97
Suwannee	40,927	0.62	0.50	2.77	2.56	3.46	3.77	4.06	4.45	3.57
Levy	40,817	0.57	0.68	1.12	0.66	0.66	0.70	0.61	0.65	0.56
Okeechobee	40,003	0.87	1.04	1.03	0.88	1.15	1.20	1.72	1.33	1.92
Desoto	34,487	0.79	0.87	0.85	0.73	0.91	1.16	1.00	1.04	0.85
Wakulla	30,717	0.37	0.37	0.29	0.63	0.52	0.41	0.66	0.35	0.38
Bradford	29,059	0.62	0.75	0.65	0.59	0.64	0.67	0.64	0.73	0.75
Hardee	27,909	0.57	0.71	0.76	0.78	0.77	1.16	0.87	0.70	0.62
Baker	25,890	0.69	0.77	0.74	0.71	0.71	0.82	0.67	0.98	0.99
Washington	24,779	0.62	0.80	0.53	1.29	1.29	1.29	1.83	1.88	1.82
Taylor	23,199	0.44	0.91	0.92	0.84	0.89	0.81	0.82	0.79	0.76
Madison	20,152	0.82	1.17	0.88	0.91	0.90	0.81	0.54	0.55	0.46
Holmes	19,757	0.39	0.70	0.30	0.26	0.46	0.50	0.46	0.30	0.29
Gilchrist	17,256	0.36	0.40	0.50	0.37	0.34	0.30	0.30	0.35	0.32
Gulf	16,923	1.34	1.04	1.08	1.29	1.27	1.46	1.36	1.30	1.28
Union	15,974	0.62	0.93	0.71	0.79	0.66	0.63	0.74	0.72	0.68
Dixie	15,963	0.92	0.72	0.75	0.76	0.68	0.69	0.61	0.59	0.53
Hamilton	14,779	0.56	0.45	0.28	0.14	0.23	0.32	0.36	0.34	0.35
Jefferson	14,553	0.83	1.07	0.67	0.78	0.78	0.91	0.93	0.77	0.89
Calhoun	14,310	0.35	0.39	0.42	0.43	0.44	0.87	0.45	0.61	0.40
Franklin	12,331	0.98	1.35	1.48	1.58	1.94	2.59	1.39	1.31	1.48
Glades	11,323	0.84	0.70	0.65	0.83	0.76	1.00	1.54	1.11	1.51
Lafayette	8,287	0.30	0.39	0.44	0.42	0.42	0.48	0.49	0.47	0.47
Liberty	8,158	0.35	0.47	0.59	0.90	0.88	0.51	0.30	0.54	0.41
State	18,807,219	1.17	1.25	1.28	1.30	1.34	1.52	1.43	1.24	1.13
		2000	2001	2002	2003	2004	2005	2006	2007	2008

1 Disposal means Municipal Solid Waste landfilled and combusted.

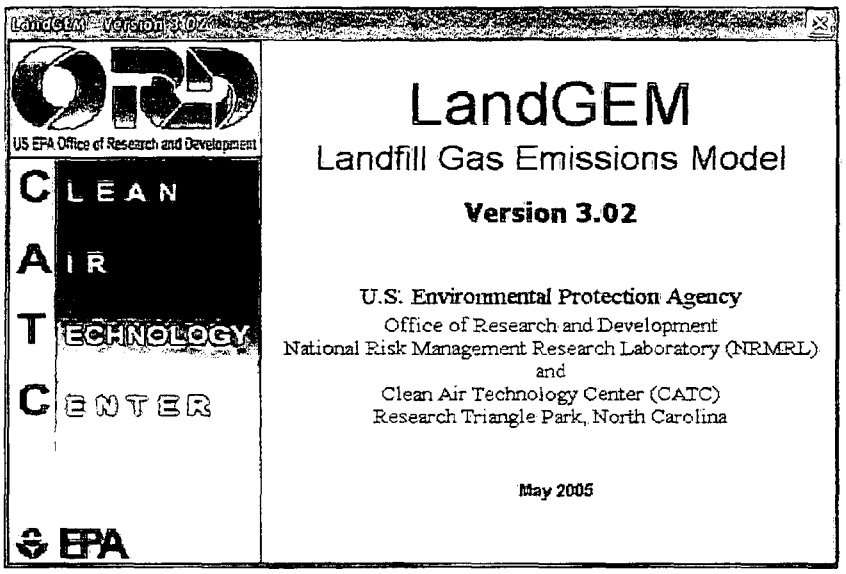
2 Official 2008 Governor's Office estimates.

3 Calendar year data provided by the county in the municipal solid waste report.

8/5/2010

ATTACHMENT 4

NMOC EMISSIONS MODEL



Summary Report

Landfill Name or Identifier: ACMS CLASS I LANDFILL - NMOC RATE REPORT

Date: Tuesday, June 26, 2012

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation: $$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10}\right) e^{-kt_{ij}}$$

Where,

Q_{CH_4} = annual methane generation in the year of the calculation (m^3/year)
i = 1-year time increment
n = (year of the calculation) - (initial year of waste acceptance)
j = 0.1-year time increment
k = methane generation rate ($year^{-1}$)
L_o = potential methane generation capacity (m^3/Mg)
M_i = mass of waste accepted in the i^{th} year (Mg)
t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (decimal years, e.g., 3.2 years)

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

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

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year		
Landfill Closure Year (with 80-year limit)	**5**	
Actual Closure Year (without limit)	***5***	
Have Model Calculate Closure Year?	**No**	
Waste Design Capacity		*megagrams*

MODEL PARAMETERS

Methane Generation Rate, k	**0.050**	$year^{-1}$
Potential Methane Generation Capacity, L_o	**170**	m^3/Mg
NMOC Concentration	**4,000**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**NMOC**
Gas / Pollutant #3:	**Methane**
Gas / Pollutant #4:	**Carbon dioxide**

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
0	455,965	501,562	0	0
1	469,645	516,609	455,965	501,562
2	483,734	532,107	925,610	1,018,171
3	498,245	548,070	1,409,344	1,550,278
4	513,193	564,512	1,907,589	2,098,348
5	0	0	2,420,782	2,662,860
6	0	0	2,420,782	2,662,860
7	0	0	2,420,782	2,662,860
8	0	0	2,420,782	2,662,860
9	0	0	2,420,782	2,662,860
10	0	0	2,420,782	2,662,860
11	0	0	2,420,782	2,662,860
12	0	0	2,420,782	2,662,860
13	0	0	2,420,782	2,662,860
14	0	0	2,420,782	2,662,860
15	0	0	2,420,782	2,662,860
16	0	0	2,420,782	2,662,860
17	0	0	2,420,782	2,662,860
18	0	0	2,420,782	2,662,860
19	0	0	2,420,782	2,662,860
20	0	0	2,420,782	2,662,860
21	0	0	2,420,782	2,662,860
22	0	0	2,420,782	2,662,860
23	0	0	2,420,782	2,662,860
24	0	0	2,420,782	2,662,860
25	0	0	2,420,782	2,662,860
26	0	0	2,420,782	2,662,860
27	0	0	2,420,782	2,662,860
28	0	0	2,420,782	2,662,860
29	0	0	2,420,782	2,662,860
30	0	0	2,420,782	2,662,860
31	0	0	2,420,782	2,662,860
32	0	0	2,420,782	2,662,860
33	0	0	2,420,782	2,662,860
34	0	0	2,420,782	2,662,860
35	0	0	2,420,782	2,662,860
36	0	0	2,420,782	2,662,860
37	0	0	2,420,782	2,662,860
38	0	0	2,420,782	2,662,860
39	0	0	2,420,782	2,662,860

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
40	0	0	2,420,782	2,662,860
41	0	0	2,420,782	2,662,860
42	0	0	2,420,782	2,662,860
43	0	0	2,420,782	2,662,860
44	0	0	2,420,782	2,662,860
45	0	0	2,420,782	2,662,860
46	0	0	2,420,782	2,662,860
47	0	0	2,420,782	2,662,860
48	0	0	2,420,782	2,662,860
49	0	0	2,420,782	2,662,860
50	0	0	2,420,782	2,662,860
51	0	0	2,420,782	2,662,860
52	0	0	2,420,782	2,662,860
53	0	0	2,420,782	2,662,860
54	0	0	2,420,782	2,662,860
55	0	0	2,420,782	2,662,860
56	0	0	2,420,782	2,662,860
57	0	0	2,420,782	2,662,860
58	0	0	2,420,782	2,662,860
59	0	0	2,420,782	2,662,860
60	0	0	2,420,782	2,662,860
61	0	0	2,420,782	2,662,860
62	0	0	2,420,782	2,662,860
63	0	0	2,420,782	2,662,860
64	0	0	2,420,782	2,662,860
65	0	0	2,420,782	2,662,860
66	0	0	2,420,782	2,662,860
67	0	0	2,420,782	2,662,860
68	0	0	2,420,782	2,662,860
69	0	0	2,420,782	2,662,860
70	0	0	2,420,782	2,662,860
71	0	0	2,420,782	2,662,860
72	0	0	2,420,782	2,662,860
73	0	0	2,420,782	2,662,860
74	0	0	2,420,782	2,662,860
75	0	0	2,420,782	2,662,860
76	0	0	2,420,782	2,662,860
77	0	0	2,420,782	2,662,860
78	0	0	2,420,782	2,662,860
79	0	0	2,420,782	2,662,860

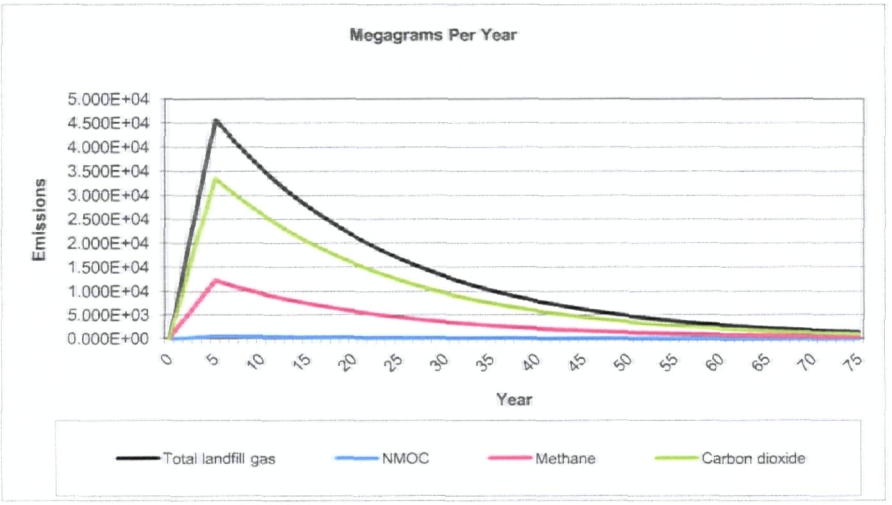
Pollutant Parameters

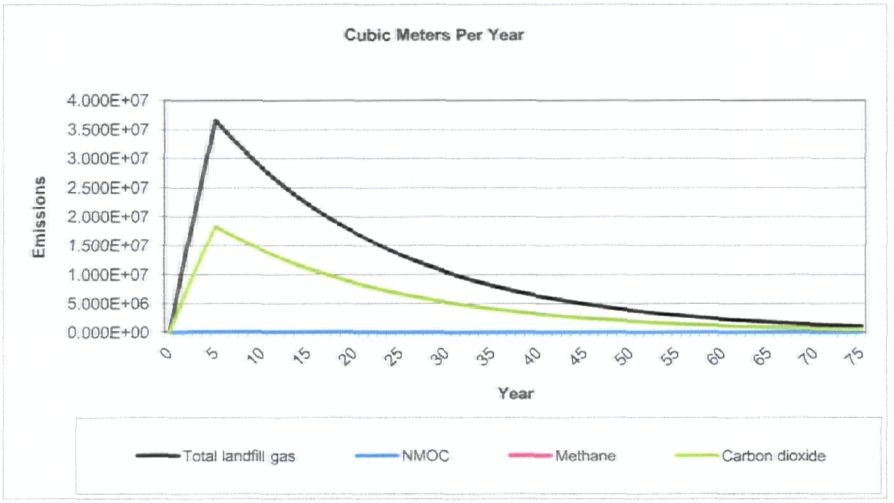
		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Gases	Total landfill gas		0.00		
	Methane		16.04		
	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
Pollutants	1,1,1-Trichloroethane (methyl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

Pollutant Parameters (Continued)

		Gas / Pollutant Default Parameters:		***User-specified Pollutant Parameters:***	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Pollutants	Ethyl mercaptan (ethanethiol) - VOC	2.3	62.13		
	Ethylbenzene - HAP/VOC	4.6	106.16		
	Ethylene dibromide - HAP/VOC	1.0E-03	187.88		
	Fluorotrichloromethane - VOC	0.76	137.38		
	Hexane - HAP/VOC	6.6	86.18		
	Hydrogen sulfide	36	34.08		
	Mercury (total) - HAP	2.9E-04	200.61		
	Methyl ethyl ketone - HAP/VOC	7.1	72.11		
	Methyl isobutyl ketone - HAP/VOC	1.9	100.16		
	Methyl mercaptan - VOC	2.5	48.11		
	Pentane - VOC	3.3	72.15		
	Perchloroethylene (tetrachloroethylene) - HAP	3.7	165.83		
	Propane - VOC	11	44.09		
	t-1,2-Dichloroethene - VOC	2.8	96.94		
	Toluene - No or Unknown Co-disposal - HAP/VOC	39	92.13		
	Toluene - Co-disposal - HAP/VOC	170	92.13		
	Trichloroethylene (trichloroethene) - HAP/VOC	2.8	131.40		
	Vinyl chloride - HAP/VOC	7.3	62.50		
	Xylenes - HAP/VOC	12	106.16		

Graphs


Megagrams Per Year
Emissions
5.000E+04
4.500E+04
4.000E+04
3.500E+04
3.000E+04
2.500E+04
2.000E+04
1.500E+04
1.000E+04
5.000E+03
0.000E+00
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
Year
Total landfill gas
NMOC
Methane
Carbon dioxide


Cubic Meters Per Year
Emissions
4.000E+07
3.500E+07
3.000E+07
2.500E+07
2.000E+07
1.500E+07
1.000E+07
5.000E+06
0.000E+00
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
Year
Total landfill gas
NMOC
Methane
Carbon dioxide


User-specified Unit (units shown in legend below)
Emissions
3.000E+03
2.500E+03
2.000E+03
1.500E+03
1.000E+03
5.000E+02
0.000E+00
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
Year
Total landfill gas (av ft^3/min)
NMOC (av ft^3/min)
Methane (av ft^3/min)
Carbon dioxide (av ft^3/min)

Results

Year	Total landfill gas			NMOC		
	(Mg/year)	(m^3/year)	(av ft^3/min)	(Mg/year)	(m^3/year)	(av ft^3/min)
0	0	0	0	0	0	0
1	9.466E+03	7.580E+06	5.093E+02	1.087E+02	3.032E+04	2.037E+00
2	1.875E+04	1.502E+07	1.009E+03	2.153E+02	6.007E+04	4.036E+00
3	2.788E+04	2.233E+07	1.500E+03	3.201E+02	8.930E+04	6.000E+00
4	3.687E+04	2.952E+07	1.983E+03	4.233E+02	1.181E+05	7.934E+00
5	4.572E+04	3.661E+07	2.460E+03	5.249E+02	1.464E+05	9.840E+00
6	4.349E+04	3.483E+07	2.340E+03	4.993E+02	1.393E+05	9.360E+00
7	4.137E+04	3.313E+07	2.226E+03	4.750E+02	1.325E+05	8.903E+00
8	3.935E+04	3.151E+07	2.117E+03	4.518E+02	1.260E+05	8.469E+00
9	3.743E+04	2.997E+07	2.014E+03	4.298E+02	1.199E+05	8.056E+00
10	3.561E+04	2.851E+07	1.916E+03	4.088E+02	1.141E+05	7.663E+00
11	3.387E+04	2.712E+07	1.822E+03	3.889E+02	1.085E+05	7.289E+00
12	3.222E+04	2.580E+07	1.733E+03	3.699E+02	1.032E+05	6.934E+00
13	3.065E+04	2.454E+07	1.649E+03	3.519E+02	9.816E+04	6.596E+00
14	2.915E+04	2.334E+07	1.569E+03	3.347E+02	9.338E+04	6.274E+00
15	2.773E+04	2.221E+07	1.492E+03	3.184E+02	8.882E+04	5.968E+00
16	2.638E+04	2.112E+07	1.419E+03	3.029E+02	8.449E+04	5.677E+00
17	2.509E+04	2.009E+07	1.350E+03	2.881E+02	8.037E+04	5.400E+00
18	2.387E+04	1.911E+07	1.284E+03	2.740E+02	7.645E+04	5.137E+00
19	2.270E+04	1.818E+07	1.222E+03	2.607E+02	7.272E+04	4.886E+00
20	2.160E+04	1.729E+07	1.162E+03	2.480E+02	6.918E+04	4.648E+00
21	2.054E+04	1.645E+07	1.105E+03	2.359E+02	6.580E+04	4.421E+00
22	1.954E+04	1.565E+07	1.051E+03	2.244E+02	6.259E+04	4.206E+00
23	1.859E+04	1.489E+07	1.000E+03	2.134E+02	5.954E+04	4.000E+00
24	1.768E+04	1.416E+07	9.513E+02	2.030E+02	5.664E+04	3.805E+00
25	1.682E+04	1.347E+07	9.049E+02	1.931E+02	5.387E+04	3.620E+00
26	1.600E+04	1.281E+07	8.608E+02	1.837E+02	5.125E+04	3.443E+00
27	1.522E+04	1.219E+07	8.188E+02	1.747E+02	4.875E+04	3.275E+00
28	1.448E+04	1.159E+07	7.789E+02	1.662E+02	4.637E+04	3.116E+00
29	1.377E+04	1.103E+07	7.409E+02	1.581E+02	4.411E+04	2.964E+00
30	1.310E+04	1.049E+07	7.048E+02	1.504E+02	4.196E+04	2.819E+00
31	1.246E+04	9.978E+06	6.704E+02	1.431E+02	3.991E+04	2.682E+00
32	1.185E+04	9.491E+06	6.377E+02	1.361E+02	3.796E+04	2.551E+00
33	1.127E+04	9.028E+06	6.066E+02	1.294E+02	3.611E+04	2.426E+00
34	1.072E+04	8.588E+06	5.770E+02	1.231E+02	3.435E+04	2.308E+00
35	1.020E+04	8.169E+06	5.489E+02	1.171E+02	3.268E+04	2.196E+00
36	9.704E+03	7.771E+06	5.221E+02	1.114E+02	3.108E+04	2.088E+00
37	9.231E+03	7.392E+06	4.966E+02	1.060E+02	2.957E+04	1.987E+00
38	8.781E+03	7.031E+06	4.724E+02	1.008E+02	2.812E+04	1.890E+00
39	8.352E+03	6.688E+06	4.494E+02	9.590E+01	2.675E+04	1.798E+00
40	7.945E+03	6.362E+06	4.275E+02	9.122E+01	2.545E+04	1.710E+00
41	7.558E+03	6.052E+06	4.066E+02	8.677E+01	2.421E+04	1.626E+00
42	7.189E+03	5.757E+06	3.868E+02	8.254E+01	2.303E+04	1.547E+00
43	6.838E+03	5.476E+06	3.679E+02	7.851E+01	2.190E+04	1.472E+00
44	6.505E+03	5.209E+06	3.500E+02	7.468E+01	2.084E+04	1.400E+00
45	6.188E+03	4.955E+06	3.329E+02	7.104E+01	1.982E+04	1.332E+00
46	5.886E+03	4.713E+06	3.167E+02	6.758E+01	1.885E+04	1.267E+00
47	5.599E+03	4.483E+06	3.012E+02	6.428E+01	1.793E+04	1.205E+00
48	5.326E+03	4.265E+06	2.865E+02	6.115E+01	1.706E+04	1.146E+00
49	5.066E+03	4.057E+06	2.726E+02	5.816E+01	1.623E+04	1.090E+00

Results (Continued)

Year	Total landfill gas			NMOC		
	(Mg/year)	(m^3/year)	(av ft^3/min)	(Mg/year)	(m^3/year)	(av ft^3/min)
50	4.819E+03	3.859E+06	2.593E+02	5.533E+01	1.544E+04	1.037E+00
51	4.584E+03	3.671E+06	2.466E+02	5.263E+01	1.468E+04	9.865E-01
52	4.360E+03	3.492E+06	2.346E+02	5.006E+01	1.397E+04	9.384E-01
53	4.148E+03	3.321E+06	2.232E+02	4.762E+01	1.329E+04	8.926E-01
54	3.945E+03	3.159E+06	2.123E+02	4.530E+01	1.264E+04	8.491E-01
55	3.753E+03	3.005E+06	2.019E+02	4.309E+01	1.202E+04	8.077E-01
56	3.570E+03	2.859E+06	1.921E+02	4.099E+01	1.143E+04	7.683E-01
57	3.396E+03	2.719E+06	1.827E+02	3.899E+01	1.088E+04	7.308E-01
58	3.230E+03	2.587E+06	1.738E+02	3.709E+01	1.035E+04	6.952E-01
59	3.073E+03	2.460E+06	1.653E+02	3.528E+01	9.842E+03	6.613E-01
60	2.923E+03	2.340E+06	1.573E+02	3.356E+01	9.362E+03	6.290E-01
61	2.780E+03	2.226E+06	1.496E+02	3.192E+01	8.905E+03	5.983E-01
62	2.645E+03	2.118E+06	1.423E+02	3.036E+01	8.471E+03	5.692E-01
63	2.516E+03	2.014E+06	1.354E+02	2.888E+01	8.058E+03	5.414E-01
64	2.393E+03	1.916E+06	1.288E+02	2.747E+01	7.665E+03	5.150E-01
65	2.276E+03	1.823E+06	1.225E+02	2.613E+01	7.291E+03	4.899E-01
66	2.165E+03	1.734E+06	1.165E+02	2.486E+01	6.935E+03	4.660E-01
67	2.060E+03	1.649E+06	1.108E+02	2.365E+01	6.597E+03	4.433E-01
68	1.959E+03	1.569E+06	1.054E+02	2.249E+01	6.275E+03	4.216E-01
69	1.864E+03	1.492E+06	1.003E+02	2.140E+01	5.969E+03	4.011E-01
70	1.773E+03	1.420E+06	9.538E+01	2.035E+01	5.678E+03	3.815E-01
71	1.686E+03	1.350E+06	9.073E+01	1.936E+01	5.401E+03	3.629E-01
72	1.604E+03	1.284E+06	8.630E+01	1.842E+01	5.138E+03	3.452E-01
73	1.526E+03	1.222E+06	8.209E+01	1.752E+01	4.887E+03	3.284E-01
74	1.451E+03	1.162E+06	7.809E+01	1.666E+01	4.649E+03	3.124E-01
75	1.381E+03	1.106E+06	7.428E+01	1.585E+01	4.422E+03	2.971E-01
76	1.313E+03	1.052E+06	7.066E+01	1.508E+01	4.207E+03	2.826E-01
77	1.249E+03	1.000E+06	6.721E+01	1.434E+01	4.001E+03	2.689E-01
78	1.188E+03	9.516E+05	6.394E+01	1.364E+01	3.806E+03	2.557E-01
79	1.130E+03	9.052E+05	6.082E+01	1.298E+01	3.621E+03	2.433E-01
80	1.075E+03	8.610E+05	5.785E+01	1.235E+01	3.444E+03	2.314E-01
81	1.023E+03	8.190E+05	5.503E+01	1.174E+01	3.276E+03	2.201E-01
82	9.729E+02	7.791E+05	5.235E+01	1.117E+01	3.116E+03	2.094E-01
83	9.255E+02	7.411E+05	4.979E+01	1.063E+01	2.964E+03	1.992E-01
84	8.803E+02	7.049E+05	4.736E+01	1.011E+01	2.820E+03	1.895E-01
85	8.374E+02	6.706E+05	4.505E+01	9.614E+00	2.682E+03	1.802E-01
86	7.966E+02	6.379E+05	4.286E+01	9.145E+00	2.551E+03	1.714E-01
87	7.577E+02	6.067E+05	4.077E+01	8.699E+00	2.427E+03	1.631E-01
88	7.208E+02	5.772E+05	3.878E+01	8.275E+00	2.309E+03	1.551E-01
89	6.856E+02	5.490E+05	3.689E+01	7.872E+00	2.196E+03	1.476E-01
90	6.522E+02	5.222E+05	3.509E+01	7.488E+00	2.089E+03	1.404E-01
91	6.204E+02	4.968E+05	3.338E+01	7.122E+00	1.987E+03	1.335E-01
92	5.901E+02	4.725E+05	3.175E+01	6.775E+00	1.890E+03	1.270E-01
93	5.613E+02	4.495E+05	3.020E+01	6.445E+00	1.798E+03	1.208E-01
94	5.340E+02	4.276E+05	2.873E+01	6.130E+00	1.710E+03	1.149E-01
95	5.079E+02	4.067E+05	2.733E+01	5.831E+00	1.627E+03	1.093E-01
96	4.831E+02	3.869E+05	2.599E+01	5.547E+00	1.548E+03	1.040E-01
97	4.596E+02	3.680E+05	2.473E+01	5.276E+00	1.472E+03	9.891E-02
98	4.372E+02	3.501E+05	2.352E+01	5.019E+00	1.400E+03	9.408E-02
99	4.158E+02	3.330E+05	2.237E+01	4.774E+00	1.332E+03	8.949E-02
100	3.956E+02	3.167E+05	2.128E+01	4.542E+00	1.267E+03	8.513E-02

Results (Continued)

Year	Total landfill gas			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
101	3.763E+02	3.013E+05	2.024E+01	4.320E+00	1.205E+03	8.098E-02
102	3.579E+02	2.866E+05	1.926E+01	4.109E+00	1.146E+03	7.703E-02
103	3.405E+02	2.726E+05	1.832E+01	3.909E+00	1.091E+03	7.327E-02
104	3.239E+02	2.593E+05	1.742E+01	3.718E+00	1.037E+03	6.970E-02
105	3.081E+02	2.467E+05	1.657E+01	3.537E+00	9.867E+02	6.630E-02
106	2.930E+02	2.347E+05	1.577E+01	3.364E+00	9.386E+02	6.307E-02
107	2.787E+02	2.232E+05	1.500E+01	3.200E+00	8.928E+02	5.999E-02
108	2.652E+02	2.123E+05	1.427E+01	3.044E+00	8.493E+02	5.706E-02
109	2.522E+02	2.020E+05	1.357E+01	2.896E+00	8.079E+02	5.428E-02
110	2.399E+02	1.921E+05	1.291E+01	2.755E+00	7.685E+02	5.163E-02
111	2.282E+02	1.827E+05	1.228E+01	2.620E+00	7.310E+02	4.912E-02
112	2.171E+02	1.738E+05	1.168E+01	2.492E+00	6.953E+02	4.672E-02
113	2.065E+02	1.654E+05	1.111E+01	2.371E+00	6.614E+02	4.444E-02
114	1.964E+02	1.573E+05	1.057E+01	2.255E+00	6.292E+02	4.227E-02
115	1.869E+02	1.496E+05	1.005E+01	2.145E+00	5.985E+02	4.021E-02
116	1.777E+02	1.423E+05	9.563E+00	2.041E+00	5.693E+02	3.825E-02
117	1.691E+02	1.354E+05	9.096E+00	1.941E+00	5.415E+02	3.639E-02
118	1.608E+02	1.288E+05	8.653E+00	1.846E+00	5.151E+02	3.461E-02
119	1.530E+02	1.225E+05	8.231E+00	1.756E+00	4.900E+02	3.292E-02
120	1.455E+02	1.165E+05	7.829E+00	1.671E+00	4.661E+02	3.132E-02
121	1.384E+02	1.108E+05	7.447E+00	1.589E+00	4.434E+02	2.979E-02
122	1.317E+02	1.054E+05	7.084E+00	1.512E+00	4.217E+02	2.834E-02
123	1.252E+02	1.003E+05	6.739E+00	1.438E+00	4.012E+02	2.696E-02
124	1.191E+02	9.540E+04	6.410E+00	1.368E+00	3.816E+02	2.564E-02
125	1.133E+02	9.075E+04	6.097E+00	1.301E+00	3.630E+02	2.439E-02
126	1.078E+02	8.632E+04	5.800E+00	1.238E+00	3.453E+02	2.320E-02
127	1.025E+02	8.211E+04	5.517E+00	1.177E+00	3.285E+02	2.207E-02
128	9.754E+01	7.811E+04	5.248E+00	1.120E+00	3.124E+02	2.099E-02
129	9.279E+01	7.430E+04	4.992E+00	1.065E+00	2.972E+02	1.997E-02
130	8.826E+01	7.068E+04	4.749E+00	1.013E+00	2.827E+02	1.899E-02
131	8.396E+01	6.723E+04	4.517E+00	9.639E-01	2.689E+02	1.807E-02
132	7.986E+01	6.395E+04	4.297E+00	9.169E-01	2.558E+02	1.719E-02
133	7.597E+01	6.083E+04	4.087E+00	8.722E-01	2.433E+02	1.635E-02
134	7.226E+01	5.786E+04	3.888E+00	8.297E-01	2.315E+02	1.555E-02
135	6.874E+01	5.504E+04	3.698E+00	7.892E-01	2.202E+02	1.479E-02
136	6.539E+01	5.236E+04	3.518E+00	7.507E-01	2.094E+02	1.407E-02
137	6.220E+01	4.980E+04	3.346E+00	7.141E-01	1.992E+02	1.339E-02
138	5.916E+01	4.738E+04	3.183E+00	6.793E-01	1.895E+02	1.273E-02
139	5.628E+01	4.507E+04	3.028E+00	6.461E-01	1.803E+02	1.211E-02
140	5.353E+01	4.287E+04	2.880E+00	6.146E-01	1.715E+02	1.152E-02

Results (Continued)

Year	Methane			Carbon dioxide		
	(Mg/year)	(m^3/year)	(av ft^3/min)	(Mg/year)	(m^3/year)	(av ft^3/min)
0	0	0	0	0	0	0
1	2.528E+03	3.790E+06	2.546E+02	6.937E+03	3.790E+06	2.546E+02
2	5.009E+03	7.509E+06	5.045E+02	1.374E+04	7.509E+06	5.045E+02
3	7.447E+03	1.116E+07	7.500E+02	2.043E+04	1.116E+07	7.500E+02
4	9.847E+03	1.476E+07	9.917E+02	2.702E+04	1.476E+07	9.917E+02
5	1.221E+04	1.831E+07	1.230E+03	3.351E+04	1.831E+07	1.230E+03
6	1.162E+04	1.741E+07	1.170E+03	3.187E+04	1.741E+07	1.170E+03
7	1.105E+04	1.656E+07	1.113E+03	3.032E+04	1.656E+07	1.113E+03
8	1.051E+04	1.576E+07	1.059E+03	2.884E+04	1.576E+07	1.059E+03
9	9.999E+03	1.499E+07	1.007E+03	2.743E+04	1.499E+07	1.007E+03
10	9.511E+03	1.426E+07	9.579E+02	2.610E+04	1.426E+07	9.579E+02
11	9.047E+03	1.356E+07	9.112E+02	2.482E+04	1.356E+07	9.112E+02
12	8.606E+03	1.290E+07	8.667E+02	2.361E+04	1.290E+07	8.667E+02
13	8.186E+03	1.227E+07	8.245E+02	2.246E+04	1.227E+07	8.245E+02
14	7.787E+03	1.167E+07	7.843E+02	2.137E+04	1.167E+07	7.843E+02
15	7.407E+03	1.110E+07	7.460E+02	2.032E+04	1.110E+07	7.460E+02
16	7.046E+03	1.056E+07	7.096E+02	1.933E+04	1.056E+07	7.096E+02
17	6.702E+03	1.005E+07	6.750E+02	1.839E+04	1.005E+07	6.750E+02
18	6.376E+03	9.556E+06	6.421E+02	1.749E+04	9.556E+06	6.421E+02
19	6.065E+03	9.090E+06	6.108E+02	1.664E+04	9.090E+06	6.108E+02
20	5.769E+03	8.647E+06	5.810E+02	1.583E+04	8.647E+06	5.810E+02
21	5.487E+03	8.225E+06	5.527E+02	1.506E+04	8.225E+06	5.527E+02
22	5.220E+03	7.824E+06	5.257E+02	1.432E+04	7.824E+06	5.257E+02
23	4.965E+03	7.443E+06	5.001E+02	1.362E+04	7.443E+06	5.001E+02
24	4.723E+03	7.080E+06	4.757E+02	1.296E+04	7.080E+06	4.757E+02
25	4.493E+03	6.734E+06	4.525E+02	1.233E+04	6.734E+06	4.525E+02
26	4.274E+03	6.406E+06	4.304E+02	1.173E+04	6.406E+06	4.304E+02
27	4.065E+03	6.093E+06	4.094E+02	1.115E+04	6.093E+06	4.094E+02
28	3.867E+03	5.796E+06	3.894E+02	1.061E+04	5.796E+06	3.894E+02
29	3.678E+03	5.514E+06	3.705E+02	1.009E+04	5.514E+06	3.705E+02
30	3.499E+03	5.245E+06	3.524E+02	9.600E+03	5.245E+06	3.524E+02
31	3.328E+03	4.989E+06	3.352E+02	9.132E+03	4.989E+06	3.352E+02
32	3.166E+03	4.746E+06	3.189E+02	8.687E+03	4.746E+06	3.189E+02
33	3.012E+03	4.514E+06	3.033E+02	8.263E+03	4.514E+06	3.033E+02
34	2.865E+03	4.294E+06	2.885E+02	7.860E+03	4.294E+06	2.885E+02
35	2.725E+03	4.085E+06	2.744E+02	7.477E+03	4.085E+06	2.744E+02
36	2.592E+03	3.885E+06	2.611E+02	7.112E+03	3.885E+06	2.611E+02
37	2.466E+03	3.696E+06	2.483E+02	6.765E+03	3.696E+06	2.483E+02
38	2.345E+03	3.516E+06	2.362E+02	6.435E+03	3.516E+06	2.362E+02
39	2.231E+03	3.344E+06	2.247E+02	6.121E+03	3.344E+06	2.247E+02
40	2.122E+03	3.181E+06	2.137E+02	5.823E+03	3.181E+06	2.137E+02
41	2.019E+03	3.026E+06	2.033E+02	5.539E+03	3.026E+06	2.033E+02
42	1.920E+03	2.878E+06	1.934E+02	5.269E+03	2.878E+06	1.934E+02
43	1.827E+03	2.738E+06	1.840E+02	5.012E+03	2.738E+06	1.840E+02
44	1.738E+03	2.604E+06	1.750E+02	4.767E+03	2.604E+06	1.750E+02
45	1.653E+03	2.477E+06	1.665E+02	4.535E+03	2.477E+06	1.665E+02
46	1.572E+03	2.357E+06	1.583E+02	4.314E+03	2.357E+06	1.583E+02
47	1.496E+03	2.242E+06	1.506E+02	4.103E+03	2.242E+06	1.506E+02
48	1.423E+03	2.132E+06	1.433E+02	3.903E+03	2.132E+06	1.433E+02
49	1.353E+03	2.028E+06	1.363E+02	3.713E+03	2.028E+06	1.363E+02

Results (Continued)

Year	Methane			Carbon dioxide		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
50	1.287E+03	1.929E+06	1.296E+02	3.532E+03	1.929E+06	1.296E+02
51	1.224E+03	1.835E+06	1.233E+02	3.360E+03	1.835E+06	1.233E+02
52	1.165E+03	1.746E+06	1.173E+02	3.196E+03	1.746E+06	1.173E+02
53	1.108E+03	1.661E+06	1.116E+02	3.040E+03	1.661E+06	1.116E+02
54	1.054E+03	1.580E+06	1.061E+02	2.892E+03	1.580E+06	1.061E+02
55	1.002E+03	1.503E+06	1.010E+02	2.751E+03	1.503E+06	1.010E+02
56	9.536E+02	1.429E+06	9.604E+01	2.616E+03	1.429E+06	9.604E+01
57	9.071E+02	1.360E+06	9.135E+01	2.489E+03	1.360E+06	9.135E+01
58	8.628E+02	1.293E+06	8.690E+01	2.367E+03	1.293E+06	8.690E+01
59	8.208E+02	1.230E+06	8.266E+01	2.252E+03	1.230E+06	8.266E+01
60	7.807E+02	1.170E+06	7.863E+01	2.142E+03	1.170E+06	7.863E+01
61	7.426E+02	1.113E+06	7.479E+01	2.038E+03	1.113E+06	7.479E+01
62	7.064E+02	1.059E+06	7.115E+01	1.938E+03	1.059E+06	7.115E+01
63	6.720E+02	1.007E+06	6.768E+01	1.844E+03	1.007E+06	6.768E+01
64	6.392E+02	9.581E+05	6.438E+01	1.754E+03	9.581E+05	6.438E+01
65	6.080E+02	9.114E+05	6.124E+01	1.668E+03	9.114E+05	6.124E+01
66	5.784E+02	8.669E+05	5.825E+01	1.587E+03	8.669E+05	5.825E+01
67	5.502E+02	8.247E+05	5.541E+01	1.510E+03	8.247E+05	5.541E+01
68	5.233E+02	7.844E+05	5.271E+01	1.436E+03	7.844E+05	5.271E+01
69	4.978E+02	7.462E+05	5.014E+01	1.366E+03	7.462E+05	5.014E+01
70	4.735E+02	7.098E+05	4.769E+01	1.299E+03	7.098E+05	4.769E+01
71	4.504E+02	6.752E+05	4.536E+01	1.236E+03	6.752E+05	4.536E+01
72	4.285E+02	6.422E+05	4.315E+01	1.176E+03	6.422E+05	4.315E+01
73	4.076E+02	6.109E+05	4.105E+01	1.118E+03	6.109E+05	4.105E+01
74	3.877E+02	5.811E+05	3.905E+01	1.064E+03	5.811E+05	3.905E+01
75	3.688E+02	5.528E+05	3.714E+01	1.012E+03	5.528E+05	3.714E+01
76	3.508E+02	5.258E+05	3.533E+01	9.625E+02	5.258E+05	3.533E+01
77	3.337E+02	5.002E+05	3.361E+01	9.156E+02	5.002E+05	3.361E+01
78	3.174E+02	4.758E+05	3.197E+01	8.709E+02	4.758E+05	3.197E+01
79	3.019E+02	4.526E+05	3.041E+01	8.284E+02	4.526E+05	3.041E+01
80	2.872E+02	4.305E+05	2.893E+01	7.880E+02	4.305E+05	2.893E+01
81	2.732E+02	4.095E+05	2.751E+01	7.496E+02	4.095E+05	2.751E+01
82	2.599E+02	3.895E+05	2.617E+01	7.130E+02	3.895E+05	2.617E+01
83	2.472E+02	3.705E+05	2.490E+01	6.783E+02	3.705E+05	2.490E+01
84	2.351E+02	3.525E+05	2.368E+01	6.452E+02	3.525E+05	2.368E+01
85	2.237E+02	3.353E+05	2.253E+01	6.137E+02	3.353E+05	2.253E+01
86	2.128E+02	3.189E+05	2.143E+01	5.838E+02	3.189E+05	2.143E+01
87	2.024E+02	3.034E+05	2.038E+01	5.553E+02	3.034E+05	2.038E+01
88	1.925E+02	2.886E+05	1.939E+01	5.282E+02	2.886E+05	1.939E+01
89	1.831E+02	2.745E+05	1.844E+01	5.025E+02	2.745E+05	1.844E+01
90	1.742E+02	2.611E+05	1.754E+01	4.780E+02	2.611E+05	1.754E+01
91	1.657E+02	2.484E+05	1.669E+01	4.547E+02	2.484E+05	1.669E+01
92	1.576E+02	2.363E+05	1.587E+01	4.325E+02	2.363E+05	1.587E+01
93	1.499E+02	2.247E+05	1.510E+01	4.114E+02	2.247E+05	1.510E+01
94	1.426E+02	2.138E+05	1.436E+01	3.913E+02	2.138E+05	1.436E+01
95	1.357E+02	2.034E+05	1.366E+01	3.722E+02	2.034E+05	1.366E+01
96	1.291E+02	1.934E+05	1.300E+01	3.541E+02	1.934E+05	1.300E+01
97	1.228E+02	1.840E+05	1.236E+01	3.368E+02	1.840E+05	1.236E+01
98	1.168E+02	1.750E+05	1.176E+01	3.204E+02	1.750E+05	1.176E+01
99	1.111E+02	1.665E+05	1.119E+01	3.048E+02	1.665E+05	1.119E+01
100	1.057E+02	1.584E+05	1.064E+01	2.899E+02	1.584E+05	1.064E+01

Results (Continued)

Year	Methane			Carbon dioxide		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
101	1.005E+02	1.507E+05	1.012E+01	2.758E+02	1.507E+05	1.012E+01
102	9.560E+01	1.433E+05	9.629E+00	2.623E+02	1.433E+05	9.629E+00
103	9.094E+01	1.363E+05	9.159E+00	2.495E+02	1.363E+05	9.159E+00
104	8.651E+01	1.297E+05	8.712E+00	2.374E+02	1.297E+05	8.712E+00
105	8.229E+01	1.233E+05	8.287E+00	2.258E+02	1.233E+05	8.287E+00
106	7.827E+01	1.173E+05	7.883E+00	2.148E+02	1.173E+05	7.883E+00
107	7.446E+01	1.116E+05	7.499E+00	2.043E+02	1.116E+05	7.499E+00
108	7.083E+01	1.062E+05	7.133E+00	1.943E+02	1.062E+05	7.133E+00
109	6.737E+01	1.010E+05	6.785E+00	1.849E+02	1.010E+05	6.785E+00
110	6.409E+01	9.606E+04	6.454E+00	1.758E+02	9.606E+04	6.454E+00
111	6.096E+01	9.137E+04	6.139E+00	1.673E+02	9.137E+04	6.139E+00
112	5.799E+01	8.692E+04	5.840E+00	1.591E+02	8.692E+04	5.840E+00
113	5.516E+01	8.268E+04	5.555E+00	1.513E+02	8.268E+04	5.555E+00
114	5.247E+01	7.865E+04	5.284E+00	1.440E+02	7.865E+04	5.284E+00
115	4.991E+01	7.481E+04	5.027E+00	1.369E+02	7.481E+04	5.027E+00
116	4.748E+01	7.116E+04	4.781E+00	1.303E+02	7.116E+04	4.781E+00
117	4.516E+01	6.769E+04	4.548E+00	1.239E+02	6.769E+04	4.548E+00
118	4.296E+01	6.439E+04	4.326E+00	1.179E+02	6.439E+04	4.326E+00
119	4.086E+01	6.125E+04	4.115E+00	1.121E+02	6.125E+04	4.115E+00
120	3.887E+01	5.826E+04	3.915E+00	1.066E+02	5.826E+04	3.915E+00
121	3.697E+01	5.542E+04	3.724E+00	1.014E+02	5.542E+04	3.724E+00
122	3.517E+01	5.272E+04	3.542E+00	9.650E+01	5.272E+04	3.542E+00
123	3.346E+01	5.015E+04	3.369E+00	9.179E+01	5.015E+04	3.369E+00
124	3.182E+01	4.770E+04	3.205E+00	8.732E+01	4.770E+04	3.205E+00
125	3.027E+01	4.538E+04	3.049E+00	8.306E+01	4.538E+04	3.049E+00
126	2.880E+01	4.316E+04	2.900E+00	7.901E+01	4.316E+04	2.900E+00
127	2.739E+01	4.106E+04	2.759E+00	7.515E+01	4.106E+04	2.759E+00
128	2.606E+01	3.905E+04	2.624E+00	7.149E+01	3.905E+04	2.624E+00
129	2.478E+01	3.715E+04	2.496E+00	6.800E+01	3.715E+04	2.496E+00
130	2.358E+01	3.534E+04	2.374E+00	6.469E+01	3.534E+04	2.374E+00
131	2.243E+01	3.361E+04	2.259E+00	6.153E+01	3.361E+04	2.259E+00
132	2.133E+01	3.198E+04	2.148E+00	5.853E+01	3.198E+04	2.148E+00
133	2.029E+01	3.042E+04	2.044E+00	5.568E+01	3.042E+04	2.044E+00
134	1.930E+01	2.893E+04	1.944E+00	5.296E+01	2.893E+04	1.944E+00
135	1.836E+01	2.752E+04	1.849E+00	5.038E+01	2.752E+04	1.849E+00
136	1.747E+01	2.618E+04	1.759E+00	4.792E+01	2.618E+04	1.759E+00
137	1.661E+01	2.490E+04	1.673E+00	4.558E+01	2.490E+04	1.673E+00
138	1.580E+01	2.369E+04	1.592E+00	4.336E+01	2.369E+04	1.592E+00
139	1.503E+01	2.253E+04	1.514E+00	4.125E+01	2.253E+04	1.514E+00
140	1.430E+01	2.143E+04	1.440E+00	3.923E+01	2.143E+04	1.440E+00

Zell, David

From: Zhang-Torres
Sent: Wednesday, June 27, 2012 1:52 PM
To: 'Rebecca Kelner'
Cc: mconnell@sumtersolidwaste.com; cdean001@tampabay.rr.com; Zell, David; Wong, Robert; Pelz, Susan
Subject: RE: ACMS Title V Permit Application

Hello Ms. Kelner,

Thank you for your phone call this morning. We look forward to meeting with you to discuss ACMS's Title V operating permit application. David Zell, one of our permitting engineers familiar with Title V permits for landfills, and myself can meet with you on July 16 at 2:30 PM.

Please let me know if this time is convenient for you as well.

Best Regards,

Cindy Zhang-Torres

Cindy Zhang-Torres, PE III
Air Permitting Manager
FDEP
Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: (813)632-7600, ext. 107
Fax: (813)632-7668

From: Rebecca Kelner [mailto:rebecca@kelnerinc.com]
Sent: Wednesday, June 27, 2012 12:02 PM
To: Zhang-Torres
Cc: mconnell@sumtersolidwaste.com; cdean001@tampabay.rr.com
Subject: ACMS Title V Permit Application

Cindy,

I discussed the permit application with ACMS this morning. We'd like to propose a review meeting with you on the afternoon of July 16th for the Title V Operations Permit Application. Please let me know if this is convenient for you and your staff.