



1715 North Westshore Blvd, Suite 875  
Tampa, Florida 33607  
tel: 813 281-2900  
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March 29, 2013

Mr. John Power  
Solid Waste Manager  
Pasco County Solid Waste  
14230 Hays Road  
Spring Hill, FL 34610

Subject: West Pasco Class I Landfill – WACS ID No SWD/51/45799  
Power Plant Siting Certification PA87-23  
Annual Remaining Disposal Capacity and Site Life Calculations

Dear Mr. Power:

CDM Smith is submitting four (4) copies of the remaining disposal capacity and annual site life estimate for Class I Cells SW-2 and A-4 for the subject landfill.

Please forward one signed and sealed original to the FDEP division listed below. If you have any questions or comments regarding this letter or the data presented herein, please call me at (813) 281-2900.

Sincerely,

Aamod Sonawane, P.E., BCEE  
Senior Project Manager  
CDM Smith Inc.

Enclosures

- 1) Mr. Steve Morgan  
Solid Waste Section  
Florida Department of Environmental Protection  
Southwest District Office  
13051 N. Telecom Parkway  
Temple Terrace, Florida 33637

Dept. Of Environmental Protection

APR 11 2013

Southwest District





**Pasco County Utilities**

**West Pasco Class I Landfill – WACS ID SWD/51/45799  
Power Plant Certification No. PA87-23**

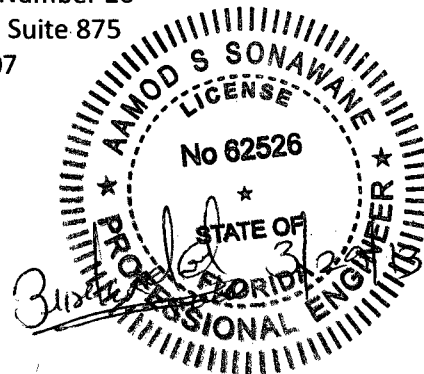
**Solid Waste Cell SW-2 and Ash Cell A-4  
Annual Remaining Disposal Capacity and Site Life Calculations**

**14230 Hays Road  
Spring Hill, Pasco County, Florida**

**March 2013**

**Prepared for:  
Pasco County Utilities  
7530 Little Road  
New Port Richey, FL 34654**

**Prepared by:  
CDM Smith Inc.  
Certification of Authorization Number 20  
1715 North Westshore Blvd., Suite 875  
Tampa, Florida 33607**



**Aamod Sonawane, P.E.  
Florida Registered  
Professional Engineer No. 62526**

<b>CDM Smith</b>	Calculation Form (Excel)	Job #	6104-94747.WA4.SITELIFE
Client: Pasco County		Calc By: <u>RV</u>	
Project: West Pasco Class I Landfill : Cell SW-2		Date: <u>3/15/13</u>	
Detail: Site Life Estimate		Checked By: <u>AS</u>	
		Date: <u>3/25/13</u>	
<b>Landfill Capacity/Remaining Life Calculation</b>			
1.0	<b>Purpose/Objective</b> Calculate remaining site life of West Pasco Class I Landfill - Cell SW-		
2.0	<b>Procedure</b> (a) Calculate the remaining disposal capacity consistent with the permitted buildout, using County provided topographic survey. (b) Estimate remaining air-space from existing topographic survey. (c) Estimate remaining site life using historical disposal rate as a guideline.		
3.0	<b>References/Data Sources</b> (a) Topographical Survey of the landfill (attached). (b) Permitted buildout of the landfill cell (2002).		
4.0	<b>Assumptions and Limitations</b> (a) MSW landfilled in Cell SW-2 is a bypass waste that is not combusted in the WTE plant. Air space from the top one foot of build out is deducted as a provision for an intermediate cover. (b) Assume a density of one ton per 1.43 CY i.e. 1400 lbs/CY for landfilled municipal solid waste (MSW). (c) Assume a daily cover of 6 inches for approximate 5 foot lifts. Daily cover is approximately 0.5 ft/ 5 ft = 10% by volume.		
5.0	<b>Calculations</b> (a) Air space remaining for West Pasco Class I Landfill Cell SW-2 (from AutoCAD computations) from the attached survey from February 2013 = 173,493 CY (b) Divide remaining volume by disposal rate Assume density of MSW at 1 ton per 1.43 CY = 1,400 lbs/CY As per Attachment 1, average historical disposal rate = 1,656 tpy. Use a conservative estimated average disposal rate of 2,650 tpy Estimated future air space consumption = 3,786 CY/year Estimated 10% volume for daily cover = 379 CY/year Total estimated future air space consumption = 4,164 CY/year Estimated remaining site life = 41.66 years		
6.0	<b>Conclusions/Results</b> The remaining site life of West Pasco Class I - Cell SW-2 is approximately 42 years from February 2013.		

CDM Smith Calculation Form (Excel)		Job # 6104-94747.WA4.SITELIFE	
Client: Pasco County		Calc By: <u>RV</u>	
Project: West Pasco Class I Landfill : Cell A-4		Date: 3/15/13	
Detail: Site Life Estimate		Checked By: <u>AS</u>	
		Date: 3/25/2013	
<b>Landfill Capacity/Remaining Life Calculation</b>			
1.0	<b>Purpose/Objective</b> Calculate the remaining site life of West Pasco Class I Landfill - Cell A-4		
2.0	<b>Procedure</b> (a) Calculate the remaining disposal capacity consistent with the permitted buildout, using County provided topographic survey. (b) Estimate remaining air-space from existing topographic survey. (c) Estimate remaining site life using historical disposal rate as a guideline.		
3.0	<b>References/Data Sources</b> (a) Topographical Survey of the landfill (attached) (b) Permitted buildout of the landfill cell (2008)		
4.0	<b>Assumptions and Limitations</b> (a) Historical average disposal rate = 81,300 tons/year (tpy) per Attachment 1. (b) Assume a density of 82 lbs/ft <sup>3</sup> = 2214 lbs/CY for ash. (c) Daily cover is not required for ash cell. (e) It is anticipated that a flexible membrane liner ("rain tarp") will be used for intermediate cover on the ash cell after reaching the permitted elevations.		
5.0	<b>Calculations</b>		
	(a) Air space remaining for West Pasco Class I Landfill Cell A-4 (from AutoCAD) from the attached survey	1,146,627	CY
	from February 2013 =		
	(b) Divide remaining volume by disposal rate		
	Assume density of Ash = 82 lbs/ft <sup>3</sup> =	2,214	lbs/CY
	As per Attachment 1, average historical disposal rate = 81,300 tpy		
	Use a conservative estimated average disposal rate of 84,500 tpy	84,500	tons/year
	Estimated future air space consumption =	76,332	CY/year
	Estimated remaining site life =	15.02	years
6.0	<b>Conclusions/Results</b> The remaining site life of West Pasco Class I - Cell A-4 is approximately 15 years from February 2013.		

Attachment 1  
Tonnage Data  
(Reporting Year 2012)

**PASCO COUNTY UTILITIES - SOLID WASTE**  
**YEAR 2012 TONNAGE SUMMARY FROM COUNTY DATA**

<b>Period</b>	<b>West Pasco Class III</b>	<b>West Pasco Class I - ASH</b>	<b>West Pasco Class I - MSW</b>
Jan-12	222.14	6,908.97	53.77
Feb-12	248.56	5,951.54	107.01
Mar-12	269.35	5,655.72	37.65
Apr-12	231.76	6,815.60	291.05
May-12	200.89	7,157.43	284.08
Jun-12	214.42	6,790.95	22.05
Jul-12	253.34	6,623.27	78.26
Aug-12	306.52	5,953.22	246.85
Sep-12	187.69	5,776.06	103.32
Oct-12	336.40	5,040.41	87.76
Nov-12	189.03	6,731.67	20.61
Dec-12	162.10	7,238.16	124.96
2012 Total (tons)	2,822.20	76,643.00	1,457.37
* Historical Total (tons)	9,864.36	289,210.25	5,997.07
Total of above two rows**	12,686.56	365,853.25	7,454.44
<b>Average landfilled tonnage (tons/year)</b>	<b>2,819.24</b>	<b>81,300.72</b>	<b>1,656.54</b>

\* Denotes Total landfilled tonnage from July 2008 through December 2011. This was reported in Attachment 1 of 'West Pasco Class I Site Life Estimate' dated March 30, 2012 for reporting year 2011 by CDM Smith.

\*\* Denotes tonnage values for period from July 2008 through December 2012 (54 Months)

PASCO COUNTY UTILITIES - SOLID WASTE  
 TONNAGE SUMMARY - FY 2012  
 Quarter Ending March 31, 2012

MATERIAL	West Pasco Class III Tonnage			West Pasco Class I Tonnage			WTE Tonnage			EPTS Tonnage		
	JANUARY	FEBRUARY	MARCH	JANUARY	FEBRUARY	MARCH	JANUARY	FEBRUARY	MARCH	JANUARY	FEBRUARY	MARCH
1 Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	26,248.88	25,563.91	28,821.76	5,451.30	5,277.71	6,050.52
2 Class III Waste	355.90	375.44	456.02	0.00	0.00	0.00	0.00	0.00	0.00	9.08	6.21	11.33
3 Ash Residue	0.00	0.00	0.00	6,908.97	5,951.54	5,655.72	0.00	0.00	0.00	0.00	0.00	0.00
4 Other Wastes	83.91	81.50	55.26	53.77	107.01	37.65	0.00	86.91	0.00	7.25	3.71	4.47
<b>Total Tonnage Weighted IN</b>	<b>439.81</b>	<b>456.94</b>	<b>511.28</b>	<b>6,962.74</b>	<b>6,058.55</b>	<b>5,693.37</b>	<b>26,248.88</b>	<b>25,650.82</b>	<b>28,821.76</b>	<b>5,467.63</b>	<b>5,287.63</b>	<b>6,066.32</b>
LESS: Yard Trash Stored/Mulched/to WTE	(133.76)	(126.88)	(186.67)									
Waste Tires Stored/Chipped/to WTE	(83.91)	(81.50)	(55.26)									
<b>Total Tonnage Landfilled</b>	<b>222.14</b>	<b>248.56</b>	<b>269.35</b>	<b>6,962.74</b>	<b>6,058.55</b>	<b>5,693.37</b>						
<b>Total Tonnage Processed by WTE</b>							<b>26,248.88</b>	<b>25,650.82</b>	<b>28,821.76</b>			
<b>Total Tonnage Received @ Transfer Station</b>										<b>5,467.63</b>	<b>5,287.63</b>	<b>6,066.32</b>

ASH CELL **	6,908.97	5,951.54	5,655.72
SOLID WASTE CELL	53.77	107.01	37.65

\*\* = Ash Residue is the only Material Disposed of in the Ash Landfill.

PASCO COUNTY UTILITIES - SOLID WASTE  
 TONNAGE SUMMARY - FY 2012  
 Quarter Ending June 30, 2012

MATERIAL	West Pasco Class III Tonnage			West Pasco Class I Tonnage			WTE Tonnage			EPTS Tonnage		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE	APRIL	MAY	JUNE	APRIL	MAY	JUNE
1 Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	26,246.24	26,107.60	27,261.32	5,393.95	5,057.24	4,978.70
2 Class III Waste	392.11	362.20	374.59	0.00	0.00	0.00	176.36	304.34	461.48	10.15	7.00	5.16
3 Ash Residue	0.00	0.00	0.00	6,815.60	7,157.43	6,790.95	0.00	0.00	0.00	0.00	0.00	0.00
4 Other Wastes	77.20	57.71	69.05	291.05	284.08	22.05	0.00	325.63	176.36	6.40	5.69	9.50
<b>Total Tonnage Weighted IN</b>	<b>469.31</b>	<b>419.91</b>	<b>443.64</b>	<b>7,106.65</b>	<b>7,441.51</b>	<b>6,813.00</b>	<b>26,422.60</b>	<b>26,737.57</b>	<b>27,899.16</b>	<b>5,410.50</b>	<b>5,069.93</b>	<b>4,993.36</b>
LESS: Yard Trash Stored/Mulched/to WTE	(160.35)	(161.31)	(160.17)									
Waste Tires Stored/Chipped/to WTE	(77.20)	(57.71)	(69.05)									
<b>Total Tonnage Landfilled</b>	<b>231.76</b>	<b>200.89</b>	<b>214.42</b>	<b>7,106.65</b>	<b>7,441.51</b>	<b>6,813.00</b>						
<b>Total Tonnage Processed by WTE</b>							<b>26,422.60</b>	<b>26,737.57</b>	<b>27,899.16</b>			
<b>Total Tonnage Received @ Transfer Station</b>										<b>5,410.50</b>	<b>5,069.93</b>	<b>4,993.36</b>

ASH CELL **	6,815.60	7,157.43	6,790.95
SOLID WASTE CELL	291.05	284.08	22.05

\*\* = Ash Residue is the only Material Disposed of in the Ash Landfill.



PASCO COUNTY UTILITIES - SOLID WASTE

TONNAGE SUMMARY - FY 2012

Quarter Ending September 30, 2012

MATERIAL	West Pasco Class III Tonnage			West Pasco Class I Tonnage			WTE Tonnage			EPTS Tonnage		
	JULY	AUGUST	SEPTEMBER	JULY	AUGUST	SEPTEMBER	JULY	AUGUST	SEPTEMBER	JULY	AUGUST	SEPTEMBER
1 Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	28,021.14	27,236.44	23,922.12	5,061.49	5,022.33	4,383.66
2 Class III Waste	441.55	434.97	325.60	0.00	0.00	0.00	266.07	318.06	160.59	11.45	9.89	10.20
3 Ash Residue	0.00	0.00	0.00	6,623.27	5,953.22	5,776.06	0.00	0.00	0.00	0.00	0.00	0.00
4 Other Wastes	56.07	46.95	64.81	78.26	246.85	103.32	0.00	13.30	42.64	5.66	7.12	4.09
<b>Total Tonnage Weighted IN</b>	<b>497.62</b>	<b>481.92</b>	<b>390.41</b>	<b>6,701.53</b>	<b>6,200.07</b>	<b>5,879.38</b>	<b>28,287.21</b>	<b>27,567.80</b>	<b>24,125.35</b>	<b>5,078.60</b>	<b>5,039.34</b>	<b>4,397.95</b>
LESS: Yard Trash Stored/Mulched/to WTE	(188.21)	(128.45)	(137.91)									
Waste Tires Stored/Chipped/to WTE	(56.07)	(46.95)	(64.81)									
<b>Total Tonnage Landfilled</b>	<b>253.34</b>	<b>306.52</b>	<b>187.69</b>	<b>6,701.53</b>	<b>6,200.07</b>	<b>5,879.38</b>						
<b>Total Tonnage Processed by WTE</b>							<b>28,287.21</b>	<b>27,567.80</b>	<b>24,125.35</b>			
<b>Total Tonnage Received @ Transfer Station</b>										<b>5,078.60</b>	<b>5,039.34</b>	<b>4,397.95</b>

ASH CELL **	6,623.27	5,953.22	5,776.06
SOLID WASTE CELL	78.26	246.85	103.32

\*\* = Ash Residue is the only Material Disposed of in the Ash Landfill.

PASCO COUNTY UTILITIES - SOLID WASTE

TONNAGE SUMMARY - FY 2013

Quarter Ending December 31, 2012

MATERIAL	West Pasco Class III Tonnage			West Pasco Class I Tonnage			WTE Tonnage			EPTS Tonnage		
	OCTOBER	NOVEMBER	DECEMBER	OCTOBER	NOVEMBER	DECEMBER	OCTOBER	NOVEMBER	DECEMBER	OCTOBER	NOVEMBER	DECEMBER
1 Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	26,364.82	25,550.53	25,394.91	5,055.93	4,965.76	4,985.57
2 Class III Waste	515.66	303.00	257.04	0.00	0.00	0.00	184.45	198.80	191.15	7.99	13.33	10.61
3 Ash Residue	0.00	0.00	0.00	5,040.41	6,731.67	7,238.16	0.00	0.00	0.00	0.00	0.00	0.00
4 Other Wastes	80.83	48.53	98.95	87.76	20.61	124.96	4.68	60.47	128.99	6.08	5.52	5.71
<b>Total Tonnage Weighted IN</b>	<b>596.49</b>	<b>351.53</b>	<b>355.99</b>	<b>5,128.17</b>	<b>6,752.28</b>	<b>7,363.12</b>	<b>26,553.95</b>	<b>25,809.80</b>	<b>25,715.05</b>	<b>5,070.00</b>	<b>4,984.61</b>	<b>5,001.89</b>
LESS: Yard Trash Stored/Mulched/to WTE	(179.26)	(113.97)	(94.94)									
Waste Tires Stored/Chipped/to WTE	(80.83)	(48.53)	(98.95)									
<b>Total Tonnage Landfilled</b>	<b>336.40</b>	<b>189.03</b>	<b>162.10</b>	<b>5,128.17</b>	<b>6,752.28</b>	<b>7,363.12</b>						
<b>Total Tonnage Processed by WTE</b>							<b>26,553.95</b>	<b>25,809.80</b>	<b>25,715.05</b>			
<b>Total Tonnage Received @ Transfer Station</b>										<b>5,070.00</b>	<b>4,984.61</b>	<b>5,001.89</b>

ASH CELL **	5,040.41	6,731.67	7,238.16
SOLID WASTE CELL	87.76	20.61	124.96

\*\* = Ash Residue is the only Material Disposed of in the Ash Landfill.

Attachment 2

Topographic Survey for Cells SW-2 and A-4

(February 2013)

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# **ATTENTION**



**Blueprints were  
removed from this  
location in the file and  
inserted separately.**

**CDM  
Smith**

cdmsmith.com

