

OCULUS INSERT FORM

Catalog: Solid Waste

Disposition: SJP

Profiles: Permitting Authorization **Discovery Compliance**
Enforcement Legal Cleanup Fiscal

County: Citrus Desoto Hardee Hernando **Hillsborough** Manatee
Marion Pasco Pinellas Polk Sarasota Sumter

Facility ID: 41193 **Document Date:** _____ **Received Date:** _____

Document Type:

| | | | |
|------------------------------|------------------------------|-----------------------|----------------------------|
| Incoming Correspondence | Outgoing Correspondence | Warning Letter | Miscellaneous |
| Intent to Issue/Deny Related | Inspection Related | Consent Order | Noncompliance Related |
| Permit Issued/Denied Related | Monitoring Plan/Report | NOV | Site Maps/Sketches/Drawing |
| Permit Application Related | Periodic Site Reports | Final Order | Complaint Related |
| Cost Estimate Related | Meeting Related | Penalty Authorization | |
| Other _____ | Site Assessment | Case Closure Related | |

Facility Type:

| | | | |
|---------------------------|------------------------------|-----------------------|-------------------|
| Class I (100) | Resource Recovery Fac. (800) | Waste to Energy (820) | YTPF [SOPF] (330) |
| Class III (300) | Material Recovery (810) | WTCC (751) | |
| C&D Debris Disposal (540) | Transfer Station (750) | WTPF (710) | |
| Soil Treatment (632) | Unauthor. Disposal/Complaint | Other _____ | |

Document Subject: 2013 Annual top & capacity



August 26, 2013

SOLID WASTE
SECTION

AUG 28 2013

Received

AUG 28 2013

BSHW

Mr. Richard Tedder, P.E.
Solid Waste Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 4565
Tallahassee, FL 32399

Dept. of Environmental Protection

SEP 03 2013

Southwest District

RE: Remaining Disposal Capacity and Site Life - Reporting Year 2013
Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9)
Southeast County Landfill - Hillsborough County, Florida
Permit No.: 35435-014-S0/01

Dear Mr. Tedder:

On behalf of the Hillsborough County Public Utilities Department, Solid Waste Management Group (SWMG), HDR has prepared the remaining disposal capacity and site life estimates for Phases I-VI and the Capacity Expansion Area (CEA) (Permit No 35435-014-S0/01- SO), Southeast County Landfill (SCLF), Hillsborough County, Florida in accordance with Rule 62-701.500(13)(c) and Specific Condition Part C.13.c of the facility's solid waste operations permit.

Annual Topographic Survey and Remaining Capacity Analysis

The aerial topographic survey was performed by Pickett and Associates, Inc. (Pickett) on July 04, 2013 (see Attachment A) and demonstrates that Phases I-VI and the CEA Sections 7, 8, and 9 have been filled in general accordance with the permitted operations sequence plans including that the sides slopes are no greater than 4H to 1V (Phases I-VI) and 3H to 1V (CEA Sections 7, 8, and 9) and the top elevations do not exceed the permitted maximum design height elevation of 255 feet NVGD and 285 feet NGVD for Phases I-VI and the CEA Sections 7, 8, and 9, respectively. In addition, waste has not been placed outside the permitted limits of waste/liner in both Phases I-VI and the CEA Sections 7, 8, and 9.

Using AutoCAD software, the gross remaining airspace volumes were calculated using the permitted conceptual final build-out contours for the Phases I-VI and the CEA Sections 7, 8, and 9, and comparing the surfaces to the July 04, 2013 topographic survey (refer to Attachment A for volume summaries). The estimated gross remaining airspace for the Phases I-VI and the CEA Sections 7, 8, and 9 is 9,235,447 cubic yards (CY) based on the airspace analyses performed using AutoCAD.

Assumptions used in calculating the remaining site life are discussed in the notes provided in Table 1. Based on the information provided by the SWMG, approximately 217,017 tons of municipal solid waste (MSW) was disposed of at the SCLF between July 1, 2012 and June 30, 2013. Of the 217,017 tons disposed of at the SCLF during this time period, no MSW was disposed of in Phases I-VI due to ongoing sinkhole remediation. Assuming an apparent waste density of 1,900 pounds per cubic yard (PCY), the estimated annual airspace consumed in cubic yards was 228,439 CY in the CEA Sections 7, 8, and 9. The apparent waste density is defined as the actual waste tonnage disposed divided by the volume of airspace consumed by both waste and daily cover soil.

SEP 03 2013

Southwest District

Remaining Disposal Capacity and Site Life for the CEA (Section 7, 8, and 9)

The estimated remaining airspace of CEA Sections 7, 8, and 9 is 1,157,099 CY which was calculated by subtracting the final cover soil volume of 157,996 CY from the gross remaining air space of 1,315,095 CY (see Table 1 attached). Using the assumptions listed on Table 1, the remaining site life for the CEA Sections 7, 8, and 9 was estimated to be approximately 8.8 years from July 4, 2013 (refer to Table 1 attached). The estimated remaining site life will fluctuate depending on the future waste composition and disposal rates.

Remaining Disposal Capacity and Site Life for Phases I-VI

The estimated remaining airspace of Phases I-VI is 7,254,483 CY which was calculated by subtracting the final cover soil volume of 665,869 CY from the gross remaining air space of 7,920,352 CY (see Table 1 attached)). Using the assumptions listed on Table 1, the remaining site life for Phases I-VI was estimated to be approximately 29.7 years from July 4, 2013 (refer to Table 1 attached). The estimated remaining site life will fluctuate depending on the future waste composition and disposal rates.

As previously discussed with the FDEP, waste filling in Phases I-VI was temporarily stopped in December 2010 due to the development of a sinkhole along the west side of the Phase V area. Remediation of the sinkhole area is scheduled to be completed in May 2014. The SWMG submitted an Operation Permit Renewal (Renewal) application in June 2013 that proposes resuming waste filling in Phases I-VI in 2014. As part of the Renewal application, a geotechnical evaluation was conducted in the sinkhole area. Based on the recommendations of the geotechnical evaluation, the proposed final grading plan for Phases I-VI was revised, providing a setback of future waste grades from the sinkhole area. Although there was no waste placed in Phases I-VI, the remaining airspace within Phases I-VI decreased slightly during 2013 due to the revised final grades.

Please contact me anytime at 813-262-2776 if you have questions or require additional information.

Sincerely,
HDR Engineering, Inc.



Richard Siemering
Solid Waste Department Manager

Attachments (2) – Table 1 and Topographic Survey (Attachment A)

Xc: Patricia Berry, SWMG
Larry Ruiz, SWMG
Ron Cope, EPC

SOLID WASTE SECTION

AUG 28 2013

Table 1
Projected Remaining Capacity and Site Life
Phase I-VI and Capacity Expansion Area (Section 7-9)
Southeast County Landfill
Hillsborough County, Florida
August 26, 2013

Dept. of Environmental Protection
SEP 03 2013
Southwest District

Phases I - VI Remaining Gross Air Space⁴ = 7,920,352 CY
 Phases I - VI Estimated Final Cover Soils = 665,869 CY
 CEA Sections 7-9 Remaining Gross Air Space⁴ = 1,315,095 CY
 CEA Section 7-9 Estimated Final Cover Soils = 157,996 CY
 Total Gross Remaining Air Space = 9,235,447 CY

Design Life Estimates from Table Below:
 CEA Sections 7-9 = 8.8 years
 Phases I-VI = 29.7 years

Total Remaining Net Air Space (Gross Air Space - Final Cover Soils) = 8,411,582 CY
 Annual Disposal Rate Increase = 1.5%
 Apparent Waste Density = 1,900 lbs/CY

| Year | Projected Disposal Rates ^{1,2} Tons | Diversion to Section 7-9 % | Diversion to Phases I-VI % | Waste to Phases I-VI Tons | Waste to Phases I-VI CY ³ | Waste to Sections 7-9 Tons | Waste to Sections 7-9 CY ³ | Remaining Capacity for Phases I-VI ⁵ CY | Remaining Capacity for Sections 7-9 ⁵ CY |
|---------------------------------------|---|-------------------------------|-------------------------------|------------------------------|---|-------------------------------|--|---|--|
| Beginning Capacity as of July 4, 2013 | | | | | | | | | |
| | | | | | | | | 7,254,483.00 | 1,157,099.00 |
| 2013 | 108,508.50 | 100% | 0% | 0.00 | 0.00 | 108,508.50 | 114,219.47 | 7,254,483.00 | 1,042,879.53 |
| 2014 | 217,017.00 | 50% | 50% | 108,508.50 | 114,219.47 | 108,508.50 | 114,219.47 | 7,140,263.53 | 928,660.05 |
| 2015 | 220,272.26 | 50% | 50% | 110,136.13 | 115,932.77 | 110,136.13 | 115,932.77 | 7,024,330.76 | 812,727.29 |
| 2016 | 223,576.34 | 50% | 50% | 111,788.17 | 117,671.76 | 111,788.17 | 117,671.76 | 6,906,659.00 | 695,055.53 |
| 2017 | 226,929.98 | 50% | 50% | 113,464.99 | 119,436.83 | 113,464.99 | 119,436.83 | 6,787,222.17 | 575,618.70 |
| 2018 | 230,333.93 | 50% | 50% | 115,166.97 | 121,228.39 | 115,166.97 | 121,228.39 | 6,665,993.78 | 454,390.31 |
| 2019 | 233,788.94 | 50% | 50% | 116,894.47 | 123,046.81 | 116,894.47 | 123,046.81 | 6,542,946.97 | 331,343.50 |
| 2020 | 237,295.78 | 50% | 50% | 118,647.89 | 124,892.51 | 118,647.89 | 124,892.51 | 6,418,054.46 | 206,450.98 |
| 2021 | 240,855.21 | 50% | 50% | 120,427.61 | 126,765.90 | 120,427.61 | 126,765.90 | 6,291,288.56 | 79,685.08 |
| 2022 | 244,468.04 | 31% | 69% | 168,682.95 | 177,561.00 | 75,785.09 | 79,773.78 | 6,113,727.56 | 0.00 |
| 2023 | 248,135.06 | 0% | 100% | 248,135.06 | 261,194.80 | 0.00 | 0.00 | 5,852,532.75 | 0.00 |
| 2024 | 251,857.09 | 0% | 100% | 251,857.09 | 265,112.72 | 0.00 | 0.00 | 5,587,420.03 | 0.00 |
| 2025 | 255,634.94 | 0% | 100% | 255,634.94 | 269,089.42 | 0.00 | 0.00 | 5,318,330.61 | 0.00 |
| 2026 | 259,469.47 | 0% | 100% | 259,469.47 | 273,125.76 | 0.00 | 0.00 | 5,045,204.86 | 0.00 |
| 2027 | 263,361.51 | 0% | 100% | 263,361.51 | 277,222.64 | 0.00 | 0.00 | 4,767,982.22 | 0.00 |
| 2028 | 267,311.93 | 0% | 100% | 267,311.93 | 281,380.98 | 0.00 | 0.00 | 4,486,601.23 | 0.00 |
| 2029 | 271,321.61 | 0% | 100% | 271,321.61 | 285,601.70 | 0.00 | 0.00 | 4,200,999.54 | 0.00 |
| 2030 | 275,391.44 | 0% | 100% | 275,391.44 | 289,885.72 | 0.00 | 0.00 | 3,911,113.81 | 0.00 |
| 2031 | 279,522.31 | 0% | 100% | 279,522.31 | 294,234.01 | 0.00 | 0.00 | 3,616,879.80 | 0.00 |
| 2032 | 283,715.14 | 0% | 100% | 283,715.14 | 298,647.52 | 0.00 | 0.00 | 3,318,232.29 | 0.00 |
| 2033 | 287,970.87 | 0% | 100% | 287,970.87 | 303,127.23 | 0.00 | 0.00 | 3,015,105.05 | 0.00 |
| 2034 | 292,290.43 | 0% | 100% | 292,290.43 | 307,674.14 | 0.00 | 0.00 | 2,707,430.91 | 0.00 |
| 2035 | 296,674.79 | 0% | 100% | 296,674.79 | 312,289.25 | 0.00 | 0.00 | 2,395,141.66 | 0.00 |
| 2036 | 301,124.91 | 0% | 100% | 301,124.91 | 316,973.59 | 0.00 | 0.00 | 2,078,168.07 | 0.00 |
| 2037 | 305,641.78 | 0% | 100% | 305,641.78 | 321,728.19 | 0.00 | 0.00 | 1,756,439.88 | 0.00 |
| 2038 | 310,226.41 | 0% | 100% | 310,226.41 | 326,554.12 | 0.00 | 0.00 | 1,429,885.76 | 0.00 |
| 2039 | 314,879.81 | 0% | 100% | 314,879.81 | 331,452.43 | 0.00 | 0.00 | 1,098,433.33 | 0.00 |
| 2040 | 319,603.01 | 0% | 100% | 319,603.01 | 336,424.22 | 0.00 | 0.00 | 762,009.11 | 0.00 |
| 2041 | 324,397.05 | 0% | 100% | 324,397.05 | 341,470.58 | 0.00 | 0.00 | 420,538.53 | 0.00 |
| 2042 | 329,263.01 | 0% | 100% | 329,263.01 | 346,592.64 | 0.00 | 0.00 | 73,945.90 | 0.00 |
| 2043 | 334,201.95 | 0% | 21% | 70,516.61 | 74,228.01 | 0.00 | 0.00 | 0.00 | 0.00 |

Notes:

- 1 Projected disposal rate tonnages based on historical tonnage received in 2012/2013 and annual increase based on Hillsborough County Planning Commission Population Estimates of 1.5% average annual increases for 2004 - 2025.
- 2 Project disposal rate for 2013 based on approximately 6 months remaining in 2013 (July 1 - December 31) = 217,017 x 6 months / 12 months = 108,508.5 tons.
- 3 Cubic yard conversion from tons based on 1,900 lbs/cy apparent waste density based on typical waste densities calculated using monthly surveys and tonnage reports by the County.
- 4 Remaining estimated air space based on Pickett's July 4, 2013 aerial topographic survey and permitted final bulldout contours.
- 5 Remaining volumes and site life calculations based on gross remaining air space. Final cover soil for Phases I-VI has been deducted from the available air space. The total remaining air space for Phases I-VI is 7,920,352 cubic yards. From the financial assurance cost estimates, it was estimated that 665,869 cubic yards of final cover soil would be needed for closure of Phases I-VI. Therefore, the total available net remaining air space for waste and daily cover soil is 7,920,352 - 665,869 cubic yards = 7,254,483 cubic yards. A reduction in remaining air space is the result of revised final grades in the sinkhole area. Remaining volumes and site life calculations based on gross remaining air space. Final cover soil for CEA has been deducted from the available air space. The total remaining air space for the CEA (Sections 7-9) is 1,315,095 cubic yards. From the financial assurance cost estimates, it was estimated that 157,996 cubic yards of final cover soil would be needed for closure of the CEA (Sections 7-9). Therefore, the total available net remaining air space for waste and daily cover soil is 1,315,095 - 157,996 cubic yards = 1,157,099 cubic yards.

Dept. of Environmental Protection

SEP 03 2013

Southwest District

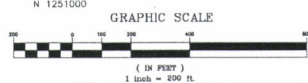
ATTACHMENT A

TOPOGRAPHIC SURVEY

N 1249000 N 1250000 N 1251000 N 1252000 N 1253000 N 1254000 N 1255000



N 1249000 N 1250000 N 1251000 N 1252000 N 1253000 N 1254000 N 1255000



TOPOGRAPHIC SURVEY
SOUTHEAST LANDFILL
LOCATED IN SECS 14,15,22,&23 TWP 32S
RNG 23E, HILLSBOROUGH COUNTY, FLORIDA
PREPARED FOR: WASTE MANAGEMENT

SURVEYOR'S NOTES:
1. North, the grid, and the coordinates shown herein are referenced by the West Zone of the Florida State Plane Coordinate System, NAD 83, 1990 adjustment.
2. Elevations are to National Geodetic Vertical Datum of 1929.
3. This topographic survey was prepared by photogrammetric methods. See the attached report for more accuracy and surveyor's signature and seal. This map is limited to those features visible on aerial photography.

PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC.
405 W. UNIVERSITY AVENUE
PALM BEACH, FLORIDA 33408
PHONE 561-833-5500
FAX 561-834-1444

THIS MAP AND ATTACHED REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHERS AND ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RASSED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

| NO. | DATE | APPROVED | REVISION |
|-----|----------|----------|------------------|
| 1 | 06/07/13 | RP | ORIGINAL RELEASE |

Horizontal Scale: 1" = 200'
Edited by: RP
Compiled by: BC
Flight Date: 07/04/13
Scale: 1:1924 = 1:30,000

| (THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE) | | (THESE FEATURES ARE TO SCALE) | |
|--|----------------------|-------------------------------|--|
| △ | CONTROL | ▬ | PAVED ROAD |
| PT | TARGET NUMBER | ▬ | CONCRETE SURFACE |
| N | NORTHING | ▬ | UNPAVED ROAD |
| E | EASTING | ▬ | FENCE |
| ○ | ELEVATION | ▬ | GLASS/RAIL |
| ○ | UTILITY POLE | ▬ | WALL |
| ○ | LIGHT POLE | ▬ | STRUCTURE |
| ○ | SON | ▬ | TREE LINE |
| ○ | POST | ▬ | SHRUB LINE |
| ○ | CATCH BASIN | ▬ | PIPELINE |
| ○ | MISCELLANEOUS SYMBOL | ▬ | EDGE OF WATER |
| ○ | SWAMP/MARSH | ▬ | SWAMPLINE |
| ○ | MANHOLE | ▬ | OBSERVED CONTOUR |
| ○ | HYDRANT | ▬ | DEPRESSION CONTOUR |
| ○ | TREE | ▬ | (THESE INFORMATIONAL LABELS ARE NOT SCALE DEPENDENT) |
| ○ | PALM | ▬ | N.E. WATER ELEVATION |
| ○ | SHRUB | ▬ | 120.1 SPOT ELEVATION |
| | | ▬ | 120.1 OBSERVED SPOT |
| | | ▬ | MISC MISCELLANEOUS |

SURVEYOR'S REPORT

Southeast Landfill Hillsborough County, Florida

Prepared for:



Prepared by:



PICKETT & ASSOCIATES PROJECT NO.: 11994-13B
TITLE/TYPE OF SURVEY: TOPOGRAPHIC SURVEY
DATE OF SURVEY: 07/04/13

NOTE: THIS REPORT AND ACCOMPANYING MAP TITLED "SOUTHEAST LANDFILL", ARE NOT FULL AND COMPLETE WITHOUT THE OTHER AND ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

ACCURACY STATEMENT: The following stated plus or minus tolerances encompass a minimum of 90% of the difference between photogrammetrically measured values and any ground truth of all well-identified features. Mapped features will meet or exceed the Florida Minimum Technical Standards.

VERTICAL: Contours may be measured to an estimated vertical positional accuracy of 0.5'. Spot elevations and well-identified features have been measured to an estimated vertical positional accuracy of 0.25'.

HORIZONTAL: Well-identified features have been measured to an estimated horizontal positional accuracy of 1.66', as per Florida Minimum Technical Standards. All measurements are in U.S. Survey Feet.

MAP PLOTTING: This map is intended to be displayed at a scale of 1" = 50' (1:600) or smaller.

DATUM:

HORIZONTAL: Coordinates are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83/90 adjustment. Referenced to Hillsborough County Horizontal Control Monuments LW-E and LW-D.

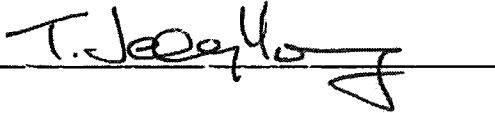
VERTICAL: Elevations are to National Geodetic Vertical Datum of 1929, and are referenced to Hillsborough County Horizontal Control Monuments LW-E and LW-D.

Control Points Used:

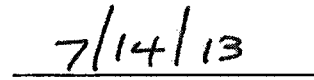
| <u>Pt#</u> | <u>Easting</u> | <u>Northing</u> | <u>Elevation</u> |
|------------|----------------|-----------------|------------------|
| 4530 | 597249.91 | 1253593.61 | 125.08 |
| 4532 | 594975.02 | 1250721.79 | 130.97 |
| 6426 | 600531.06 | 1252289.80 | 148.40 |
| 10000 | 596658.59 | 1249409.50 | 126.59 |
| 10002 | 594444.64 | 1249416.46 | 127.42 |
| 10004 | 598710.90 | 1249383.77 | 126.01 |
| 10006 | 598999.12 | 1250855.31 | 137.37 |
| 10014 | 599697.57 | 1251577.37 | 134.55 |
| 10019 | 601089.81 | 1254397.27 | 122.83 |
| 10021 | 598104.00 | 1254421.53 | 114.20 |
| 10023 | 595105.45 | 1254273.93 | 96.12 |
| 16273 | 596207.45 | 1252551.28 | 127.03 |

Measurement Methods: In areas where vegetation makes the ground difficult to determine contours are shown dashed and do not meet the above stated accuracy. This map is limited to those features visible on aerial photography. Color aerial photography was acquired at a negative scale of 1:3960, scanned at a 16-micron resolution and mapped using softcopy photogrammetric techniques.

Limitations: This mapping should be used for preliminary design work only and should not replace an actual field survey where the required accuracy is greater than the accuracy stated in this report. No responsibility is assumed for areas outside the contracted scope.



T. JEFFREY YOUNG, PSM, CP
FLORIDA REGISTRATION NO. 5440
PICKETT AND ASSOCIATES, INC.
FLORIDA REGISTRATION NO. 364



SURVEY DATE

SEP 03 2013

Memo

| | |
|--------------------------------------|---|
| To: Richard Siemering; Robert Curtis | Southwest District |
| From: David Dixon HDD | Project: Hillsborough County – Site Life Calculations |
| CC: | |
| Date: August 20, 2013 | Job No: 096-193806-002 |

RE: Current Available LF Volume in Phase I - VI

Rich and Bob,

Here is the remaining airspace in Phases I-VI. The HDR Lift 23 final design contours from drawing file Phases I-VI Sequence Lift 23 Revised Final, DWG No. 14, "Phases I-VI Operating Sequence-Phases I-IV Lift 23 (Final Lift)" were compared to the July 04, 2013 semi-annual topographic survey by Pickett using Autodesk Civil 3D 2011. The HDR ProjectWise drawing file name used to perform the calculations is Remaining Capacity for Phases 1-6 and Capacity Expansion Area and contains all surfaces listed below. The results of the volumes are as follows:

Volume Surface: Volume - July 2013 Topo vs Lift 23 Updated Final Buildout

Description: Full Volume for Phases 1-6

Volume Fill: **7,920,352.40**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Gross Remaining Volume Per Phase:

Volume Surface: Volume - Phase I

Description: July 2013 Topo vs Phase I Area Updated Final Design 5-2013

Volume Fill: **1,834,958.71**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Phase II

Description: July 2013 Topo vs Phase II Area Updated Final Design 5-2013

Volume Fill: **1,498,961.57**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Phase III

Description: July 2013 Topo vs Phase III Area Updated Final Design 5-2013

Volume Fill: **1,313,066.36**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Phase IV

Description: July 2013 Topo vs Phase IV Area Updated Final Design 5-2013

Volume Fill: **997,071.75**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Phase V

Description: July 2013 Topo vs Phase V Area Updated Final Design 5-2013

Volume Fill: **307,612.81**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Phase VI

Description: July 2013 Topo vs Phase VI Area Updated Final Design 5-2013

Volume Fill: **1,966,746.83**

Compare Surface: PHI-VI_Lift 23 Updated Final

Base Surface: Existing Topo - 07-04-2013

| | |
|--------------------------------------|---|
| To: Richard Siemering; Robert Curtis | |
| From: David Dixon <i>HDD</i> | Project: Hillsborough County – Site Life Calculations |
| CC: | |
| Date: August 20, 2013 | Job No: 096-193806-002 |

RE: Current Available LF Volume in Section 7, 8 and 9

Rich and Bob,

Here is the available volume in Sections 7, 8 and 9 of the Capacity Expansion Area of Southeast County Landfill as of July 04, 2013. I've compared a surface made from the July 04, 2013 existing topographic survey by Pickett versus the design final contours from Fill Sequence 18, HDR ProjectWise drawing file Capacity Expansion Area SEQ18, sheet C-07 of the Sections 7, 8, 9 Fill Sequence plans by HDR. The HDR ProjectWise drawing file name used to perform the calculations is Remaining Capacity for Phases 1-6 and Capacity Expansion Area and contains all surfaces listed below. The results of the volumes are as follows:

Volume Surface: Volume - July 2013 vs Seq 18 Full Buildout

Description: Full Volume for Capacity Expansion Area 7-8-9

Volume Fill: **1,315,094.64**

Compare Surface: CEA_SEQ-18_FULLBUILD

Base Surface: Existing Topo - 07-04-2013

Gross Remaining Volume Per Section:

Volume Surface: Volume - Section 7

Description: July 2013 Topo vs Section 7 Fill Area

Volume Fill: **538,489.80**

Compare Surface: CEA_SEQ-18_FULLBUILD

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Section 8

Description: July 2013 Topo vs Section 8 Fill Area

Volume Fill: **210,140.64**

Compare Surface: CEA_SEQ-18_FULLBUILD

Base Surface: Existing Topo - 07-04-2013

Volume Surface: Volume - Section 9

Description: July 2013 Topo vs Section 8 Fill Area

Volume Fill: **565,365.35**

Compare Surface: CEA_SEQ-18_FULLBUILD

Base Surface: Existing Topo - 07-04-2013



Dept. of Environmental Protection
 SEP 03 2013
 Southwest District

| <p>11994-138 1</p> | <p>TOPOGRAPHIC SURVEY SOUTHEAST LANDFILL LOCATED IN SECS 14,15,22,&23 TWP 32S RNG 23E, HILLSBOROUGH COUNTY, FLORIDA PREPARED FOR: WASTE MANAGEMENT</p> | <p>SURVEYOR'S NOTES: 1) North, the grid, and the coordinates shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 1990 adjustment. 2) Elevations are to National Geodetic Vertical Datum of 1929. 3) This topographic survey was prepared by photogrammetric methods. See the attached report for map accuracy and surveyor's signature and seal. This map is limited to those features visible on aerial photography.</p> | <p>PICKETT SURVEYING & PHOTOGRAMMETRY PICKETT ASSOCIATES, INC. 475 SOUTH FIRST AVENUE TAMPA, FLORIDA 33602 PHONE: (813) 233-9300 FAX: (813) 233-1994</p> | <p>THIS MAP AND ATTACHED REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER AND ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>APPROVED</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>08/07/13</td> <td>JW</td> <td>ORIGINAL RELEASE</td> </tr> </tbody> </table> | No. | DATE | APPROVED | REVISION | 01 | 08/07/13 | JW | ORIGINAL RELEASE | <p>LEGEND: (THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE) CONTROL POINT NORTHING EASTING ELEVATION UTILITY POLE LIGHT POLE SIGN POST CATCH BASIN MISCELLANEOUS SYMBOL CULVERT SWAMP/MARSH MANHOLE HYDRANT TREE PALM SHRUB PIPELINE EDGE OF WATER SWAMPLINE OBSCURED CONTOUR DEPRESSION CONTOUR FENCE CHAINRAIL WALL STRUCTURE TREE LINE SHRUB LINE (THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT) W.E. WATER ELEVATION * 120.1 SPOT ELEVATION * 120.1 OBSCURED SPOT MISC MISCELLANEOUS</p> |
|---------------------------------|---|--|---|---|-----|------|----------|----------|----|----------|----|------------------|---|
| No. | DATE | APPROVED | REVISION | | | | | | | | | | |
| 01 | 08/07/13 | JW | ORIGINAL RELEASE | | | | | | | | | | |