

Letter of Transmittal

*Out in Permitting File
JT*



Neel-Schaffer, Inc.
2301 Lucien Way, Suite 300
Maitland, Florida 32751
Phone: (407) 647-6623
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TO Ms. Caroline Shine

Air Resources Program Administrator

Date August 18, 2009

Florida Department of Environmental Protection (FDEP)

Project Name 00.07499.000

Central Florida District

Application for Renewal of FDEP Solid Waste Operations Permit

3319 Maguire Boulevard, Suite 232

N-S Proj. No.

Orlando, Florida 32803-3767

Client Proj. No. Cells 9-10 Class I Landfill

WE ARE SENDING YOU THE FOLLOWING:

Submittal No.		Attached	Separately via:	
<input type="checkbox"/>	Shop Drawings	<input type="checkbox"/>	<input type="checkbox"/>	Specifications
<input type="checkbox"/>	Copy of Letter	<input type="checkbox"/>	<input type="checkbox"/>	Other: _____
<input type="checkbox"/>	Plans	These are transmitted as checked below: <input type="checkbox"/> As Requested <input type="checkbox"/> For Approval/Execution <input type="checkbox"/> For Review & Comment <input type="checkbox"/> For Use/Information		
<input type="checkbox"/>	Change Order			
<input type="checkbox"/>	Original			
<input type="checkbox"/>	Photocopy			
<input type="checkbox"/>	Print			
<input type="checkbox"/>	Reproducible			

No.	Type	Date	Description

REMARKS:

ATTACHED IS A COPY OF THE APPLICATION RENEWAL OF FDEP SOLID WASTE OPERATIONS CELLS 9-10 CLASS I LANDFILL, ORANGE COUNTY, FLORIDA

Copy: _____

NEEL-SCHAFFER, INC.

By: Letty Soto

If enclosures are not as noted, please notify us at once.

**Application for Renewal of
FDEP Solid Waste Operations Permit
Cells 9-10 Class I Landfill**

**Solid Waste Management Facility
Orange County, Florida**

Prepared for:



**Solid Waste Division
Orange County, Florida**

Prepared By:



2301 Lucien Way, Suite 300
Maitland, Florida 32751
Phone: (407) 647-6623 Fax: (407) 539-0575
00.07499.000

Best Available Copy



UTILITIES DEPARTMENT • SOLID WASTE DIVISION

James W. Becker, Manager

9150 Curry Ford Road
Orlando, Florida 32825
Telephone 407-254-9668
Fax: 407-254-9653
Email: Jim.Becker@ocfl.net

August 10, 2009

RECEIVED
AUG 18 2009
DEP Central Dist.

F. Thomas Lubozynski, P.E.
Waste Program Administrator
Florida Department of Environmental Protection (FDEP)
Central Florida District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Subject: FDEP Solid Waste Management Facility Permit Application
Cells 9-10 Class I Solid Waste Landfill Operations Permit

Renewal

Orange County Solid Waste Management Facility (OCSWMF)
Orange County, Florida

Dear Mr. Lubozynski:

Orange County Solid Waste Division (the "County") hereby provides four (4) copies of the FDEP operations permit renewal application for Cell 9 Class I solid waste landfill at the OCSWMF. The existing operations permit is due to expire on July 26, 2011. This application is prepared in accordance with the pre-application meeting held with FDEP on May 27, 2009.

This permit application is for early renewal of Cell 9 Operations Permit in order to extend the solid waste disposal operations into Cell 10 upon certification of completion of construction of Cell 10 as permitted by FDEP Permit No. SC48-0128169-022.

Cell 9 covering approximately 65 acres (Bays 1 through 7) started operations in January 2005. Cell 10 covers approximately 82 acres (Bays 8-16) directly south and adjacent to Cell 9. This operation permit application is for Cells 9-10 with a total combined disposal area of 147 acres. Cell 10 is a continuation and the second phase of the Cells 9-12 Southern Expansion Site (SES) development plan submitted to FDEP in November 2000 as part of the SES conceptual and Cell 9 construction permitting.

The construction of Cell 10 is contracted to be substantially completed in two (2) stages of construction to allow the County the use the first three (3) bays in Cell 10 while the second stage is being constructed. It is requested that the Cells 9-10 Operations Permit be issued so that disposal operations in Bays 8, 9 and 10 can commence after submittal and FDEP approval of partial certification of completion of Cell 10 construction covering the completed bays.

F. Thomas Lubozynski, P.E.
FDEP Waste Program Administrator
Orange County Solid Waste Management Facility Permit Application
Cells 9-10 Class I Solid Waste Landfill Operations Permit
August 10, 2009
Page Two

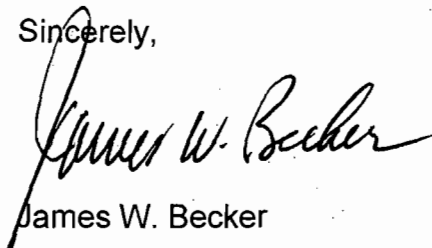
In accordance with the pre-application meeting with FDEP, the Certification of Construction Completion documents for Stage 2 (Bays 11 through 16) will be submitted by the Engineer-of-Record with a letter for minor modification to the Cells 9-10 Operation Permit to commence disposal in the certified bays.

The application, engineering report and appendices are structured according to the Chapter 62-701 (900) checklist format. Orange County Check No. 776301 dated June 25, 2009 in the amount of \$10,000.00 is submitted to the Department along with this application.

Notice of Application for a permit to renew operations of an existing solid waste disposal facility will be published in a local newspaper of general circulation, upon receipt of notification from FDEP to publish the Notice of Application.

If you have any questions or need additional information, please advise.

Sincerely,



James W. Becker

Enclosures: Permit Application Text Bound with Letter
Orange County Check- Permit Application Fee

c: Dan Morrical, P.E., Chief Engineer, Orange County Utilities-Solid Waste Division
James Flynt, P.E. Sr. Engineer, Orange County Utilities-Solid Waste Division
Ron S. Beladi, P.E., CH2M/WCG- Joint Venture
Bo. Bruner, P.E., CH2M/WCG- Joint Venture

Table of Contents



Contents

Section	Page
1.0 FAC 62-701 Permit Application Checklist.....	1-1
1.1 Executive Summary	1-1
1.1.1 Background and Purpose.....	1-1
1.1.2 Existing Information and reference Documentation	1-1
1.2 Checklist (FDEP Form 17-701.900(1))	1-2
1.2.1 Part A - General Information and Part B - Disposal Facility General Information	1-2
1.2.2 Part C - Volume Reduction Facility General Information.....	1-2
1.2.3 Part D - Prohibitions (62-701.310, FAC)	1-2
1.2.4 Part E - Solid Waste Management Facility Permit Requirements (62-701.320, FAC)	1-2
1.2.5 Part F Landfill Permit General Requirements (62-701.340, FAC)	1-2
1.2.6 Part G-General Criteria For Landfill	1-2
1.2.7 Part H- Landfill Construction Requirements (62-701.400,FAC).....	1-3
1.2.8 Parts I and J - Hydrogeological and Geotechnical Investigation Requirements (62-701.410, FAC) (62-701.420, FAC).....	1-3
1.2.9 Part K - Vertical Expansion of Landfills (62-701.430, FAC)	1-3
1.2.10 Part L - Landfill Operation Requirements (62-701.500, FAC).....	1-3
1.2.11 Part M - Water Quality and Leachate Handling Requirements (62-701.510, FAC)	1-3
1.2.12 Part N - Special Waste Handling Requirements (62-701.520, FAC).....	1-3
1.2.13 Part O Gas Management System Requirements (62-701.520, FAC).....	1-3
1.2.14 Part P - Landfill Final Closure Requirements (62-701.600, FAC)	1-4
Part Q- Closure Procedures (62-701.610, FAC)	
Part R - Long-Term Care Requirements (62-701.620, FAC)	
1.2.15 Part S - Financial Responsibility Requirements (62-701.630, FAC).....	1-4
1.2.16 Part T - Certification by Applicant and Engineer or Public Officer.....	1-4
2.0 Part D-Prohibitions ((62-701.300, FAC)and Part E Solid Waste Management Facility Permit General Requirements (62-701.320, FAC).....	2-1
2.1 Prohibitions ((62-701.300, FAC)	2-1
2.2 Permit Applications Copies (62-701.320(5)(a), FAC)	2-1
2.3 Certification (62-701.320(6), FAC).....	2-1
2.4 Transmittal Letter (62-701.320(7)(b), FAC)	2-1
2.5 FDEP Form (62-701.900(1), FAC)	2-1
2.6 Permit Application Fee.....	2-1
2.7 Engineering Report (62-701.320(7)(d), FAC)	2-2
2.8 Operation Plan (62-701.320(7)(e), FAC)	2-2
2.9 Contingency Plan (62-701.320(7)(e)2, FAC).....	2-2

Contents, Continued

Section	Page
2.10 Draw ings for the Solid Waste Management Facilities	2-2
2.11 Proof of Property Ownership (62-701.320(7)(g), FAC)	2-2
2.12 Recycling Goal Achievement (62-701.320(7)(h), FAC).....	2-2
2.13 History of FDEP Enforcement Activities (62-701.320(7)(i), FAC).....	2-3
2.14 Proof of Publication of Landfill Permit Applications (62-702.320(8), FAC).....	2-3
2.15 Airport Safety Requirements (62-701.320(12), FAC)	2-3
2.16 Operator Training Requirements (62-701.320(15), FAC)	2-4
3.0 Part F- Landfill Permit General Requirements (62-701.330, FAC)	
Part G - General Criteria for Landfills (62-701.340, FAC).....	3-1
3.1 Zoning and Land Use	3-1
3.1.1 Vicinity Map	3-1
3.1.2 Existing Land Use and Zoning.....	3-1
3.2 Airport Location (62-701.320(2), FAC)	3-2
3.3 Plot Plan and Cross Sections (62-701.320, FAC)	3-2
3.4 Topographical Information and Survey (62-701.330(4)(d), FAC).....	3-2
3.5 A Report Describing the Landfill (62-701.330(4)(e), FAC)	3-2
3.5.1 Current and Projected Population of Area Served and Type and Quantity of Waste	3-2
3.5.2 Anticipated Site Life	3-3
3.5.3 Cell Closure Phasing	3-7
3.5.4 Source and Type of Cover Material.....	3-8
3.6 Water Quality Laboratory Requirements (62-701.330(4)(h), FAC)	3-8
3.7 Closure and Long-Term Care Financial Responsibility (62-701.340(4)(i), FAC).....	3-8
3.8 General Criteria for Landfills (62-701.340, FAC)	3-8
4.0 Part H - Landfill Construction Requirements (62-701.400, FAC).....	4-1
4.1 Phased Construction and Closure of Landfill Units (62-701.400(3), FAC)	4-3
4.2 Landfill Liner Requirements (62-701.400(3), FAC).....	4-1
4.3 Leachate Collection and Removal System (LCRS) (62-701.400(4), FAC)	4-1
4.4 Leachate Recirculation (62-701.400(5), FAC).....	4-1
4.5 Leachate Storage Tanks and Surface Impoundments (62-701.400(6, FAC)	4-2
4.5.1 Leachate Surface Impoundment (62-701.400(6)(b), FAC)	4-2
4.5.2 Above Ground Leachate Storage Tank (62-701.400(6)(c) FAC).....	4-2
4.5.3 Underground Leachate Storage Tank	4-2
4.6 Liner Construction Quality Assurance (CQA) (62-701.400(7) FAC).....	4-2
4.7 Soil Liner CQA (62-701.400(8), FAC).....	4-2

Contents, Continued

Section	Page
4.8 Surface Water Management System (62-701.400(9), FAC).....	4-2
4.9 Gas Control System (62-701.400(10), FAC).....	4-3
4.10 Landfill Gas Recovery Facilities (62-701.400(11), FAC).....	4-3
5.0 Parts I and J - Hydrogeological and Geotechnical Investigation Requirements (62-701.410, FAC) (62-701.420, FAC).....	5-1
6.0 Part K - Vertical Expansion of Landfills (62-701.430,FAC).....	6-1
7.0 Part L - Landfill Operation Plan (62-701.500, FAC)	7-1
7.1 Description and Operation of Cell 9 leachate Collection and Removal System .	7-1
7.2 Description of Above- Ground Storage Tanks.....	7-2
7.3 Operational Procedures for Above Ground Leachate Storage Tanks	7-2
8.0 Part M - Water Quality and Leachate Monitoring Requirements (62-701.510, FAC)	8-1
9.0 Part N - Special Waste Handling Requirements (62-701.520, FAC).....	9-1
10.0 Part O- Gas Management System Requirements (62-701.530, FAC)	10-1
10.1 Interim Landfill Gas Management System.....	10-1
10.2 Permanent Landfill Gas Management System.....	10-1
11.0 Part P- Landfill Final Closure Requirements (62-701.600, FAC) Part Q- Closure Requirements (62-701.610, FAC) Part- R Long-Term Care Requirements (62-701.620, FAC)	11-1
11.1 Closure Schedule Requirements (62-701.600(2), FAC)	11-1
11.2 Closure Permit General Requirements (62-701.600(3), FAC).....	11-1
11.3 Closure Report Requirements (62-701.600(4), FAC)	11-1
11.4 Closure Design Requirements (62-701.600(5), FAC)	11-1
11.5 Closure Operation Plan (62-701.600(6), FAC)	11-2
11.6 Temporary Closure (62-701.600(7), FAC)	11-2
11.7 Closure Procedures (62-701.610, FAC).....	11-2
11.8 Long-Term Care Requirements (62-701.620, FAC).....	11-2
12.0 Part S - Financial Responsibility Requirements (62-701.630, FAC).....	12-1

Contents, Continued

EXHIBITS

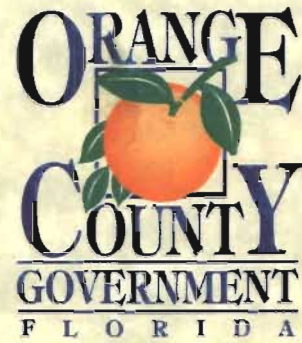
- A. FDEP Operations Permit and Environmental Resource Permit
- B. Updated Operations and Maintenance Plan for Cells 9-10 and Updated Filling Sequence
- C. Vicinity Maps, Zoning and Property Ownership
- D. FDEP Acceptance of Cells 9-12 Financial Responsibility Cost Estimates
- E. Well Inventory
- F. Groundwater Monitoring wells for Southern Expansion Site
- G. Computer Disk- Electronic file of the Permit Application

Acronyms

BCC	Beltway Commerce Center
BEBR	Bureau of Economic and Business Research
CDN	Composite Drainage Net
CQA	Construction Quality Assurance
CY	Cubic Yards
DN	Drainage Net
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
HDPE	High Density Polyethylene
LCP	Local Control Panel
LCRS	Leachate Collection and Removal System
LLDPE	Linear Low Density Polyethylene
LSH	High Level Switch
LSHA	High High Level Switch
LSSL	Low Low Level Switch
OCSWMF	Orange County Solid Waste Management Facility
OCUL	Orange County Utilities Laboratories
PD	Planned Development
PLC	Programmable Logic Controller
RMPF	Recovered Materials Processing Facility
SES	Southern Expansion Site
WUA	Western Upland Area

Section 1

FAC 62-701 Permit Application and Checklist



FAC 62-701 Permit Application Checklist

1.1 Executive Summary

1.1.1 Background and Purpose

This permit application is for renewal of Cell 9 operation permit and to extend the solid waste disposal operations into Cell 10 upon certification of completion of construction of Cell 10 as permitted by FDEP permit application No. SC48-0128169-022. Cell 9 covering approximately 65-acres (bays 1 through 7) started operations in January 2005. Cell 10 covers approximately 82-acres (bays 8-16) is located directly south and adjacent to Cell 9 for a total combined Cells 9-10 disposal area of 147 acres. Cells 9-10 Operations Permit requested would be for disposal operations in bays 1 through 16.

The on-going construction of Cell 10 is contracted by the County to be completed in two (2) stages to allow the disposal operations of Cell 9 to be extended into Stage 1 portion (bays 8, 9 and 10) while Stage 2 is being constructed. The disposal operation of Cell 10 as an expansion of Cell 9 Class I solid waste disposal area is requested to be permitted in two (2) stages as construction for each stage contiguous with the current permitted Cell 9 disposal area is completed, and the completion of each stage is certified by FDEP.

The plan for operation of Cell 10 is a continuation of Cell 9 stair-step operation configuration expanding into the new disposal areas. The last three (3) lifts of Cell 9 cannot be filled until Cell 10 has reached the heights to enable construction of an access road to those upper lifts and eventually making Cells 9-10 into one contiguous disposal area.

Current Cell 9 operations will reach elevations where it will not be feasible to access the top without first building the steps in Cell 10. Therefore, in order to access the permitted lifts in Cell 9, the Stage 1 portion of Cell 10 must be permitted for operations.

The operation permit for bays 11 through 16 (Stage 2) is requested to be issued after submittal and FDEP approval of certification of Stage 2 completion of construction.

Construction of Cell 10 was previously permitted by FDEP (SC48-0128169-022) to be a combination of double composite/double geomembrane lined disposal area, a similar design to Cell 9, with leachate collection and leachate detection systems, wet detention stormwater management system, and pipeline "trunk" systems for leachate recirculation and landfill gas collection piping and transmission system to the proposed site of a Blower/Flare Station. Similar to the current Cell 9 operations, pumps will remove leachate and water from primary and secondary leachate sumps from each of the nine bays (8 through 16), and pump it to the existing leachate storage tanks. Leachate is transmitted from the storage tank facility through a master pump station and force main to the Orange County Eastern Water Reclamation Facility for treatment and disposal.

Horizontal Landfill gas (LFG) collectors are proposed for each lift similar to those which were permitted for Cell 9. These LFG collectors are planned to be built as part of the operations and will be connected to the perimeter LFG collection piping previously permitted as part of the Cell 9 Construction and Operations Permits, and the Cell 10 Construction Permit.

In accordance with the pre-application meeting with FDEP on May 27, 2009, the Cells 9-10 Operations Permit will be issued by FDEP with the specific condition requiring documents for certification of completion of construction for each stage be submitted with a letter request to modify the Operations Permit to commence solid waste disposal operations in the certified bays.

Cell 9 has been in operation since January 23, 2005. All of the support and ancillary facilities proposed in the 2000 FDEP permit application for construction of the Southern Expansion Site (SES) Project have been implemented, including the paved access roads, leachate management; stormwater management and operations support facilities. These improvements were constructed without significant deviation from the permitted plans.

No new construction or closure is proposed by this permit application other than those proposed herein to be constructed as part of the normal landfill operations. LFG horizontal collectors and manifold piping and connection to the primary LFG piping is included in this application to be constructed as part of the normal landfill operations.

In accordance with the pre-application meeting with FDEP on May 27, 2009, the proposed LFG utilization piping to OUC will be permitted as a modification to the Cells 9-10 operation permit under a separate permit application. All other primary LFG collection piping and flare station have been permitted as part of Cell 9 construction & operations and Cell 10 construction permits.

1.1.2 Existing Information and Reference Documentation

The source information referenced in this application for renewal of the Cell 9 operations permit is contained in the November 2000 construction/operations permit application (referred to as "2000 permit application"), submitted to the Central Florida District of FDEP in November 2000, the 2006 Cell 9 operations permit renewal application approved by the Department in May 2006, and the Cell 10 Expansion Construction permit approved by the Department in February 2008. The Cell 10 Construction permit submittal consisted of three volumes as follows:

Volume I of III	FDEP Solid Waste Permit Application for Construction of Cell 10 Class I Landfill Expansion on the Southern Expansion Site, December 2007
Volume II of III	FDEP Permit Application Drawings for Construction of Cell 10 Class I Landfill Expansion on the Southern Expansion Site, December 2007
Volume III of III	FDEP Solid Waste Permit Application for Construction of Cell 10 Class I Landfill Expansion on the Southern Expansion Site- <u>Report of Geotechnical Engineering Investigation</u> , December 2007

Volumes IV, V , VI and VII of the December 2000 Submittal as listed below were used as supporting information for the Cell 10 Construction permit application.

Volume IV of VII	FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site- <u>Hydrogeological and Geotechnical Investigation Requirements</u>
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Volume V of VII	FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site- <u>Water Quality Monitoring Plan</u> Current Information for the Operations Permit Renewal is contained in the Monitoring Plan Implementation System (MPIS) that is attached to the Current SES Operations Permit, provided in Exhibit A.
Volume VI of VII	FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site- <u>Groundwater Modeling Report</u>
Volume VII of VII	FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site- <u>Engineering Report for Surface Water Management System</u>
Volume I of II	Environmental Resource Permit Application for Construction of Cell 10 Class I Landfill Expansion on the Southern Expansion Site, December 2007
Volume II of II	Environmental Resource Permit Application for Construction of Cell 10 Class I Landfill Expansion on the Southern Expansion Site, Drawings, December 2007

These nine (9) reports on file with the Department are referenced throughout this Cell 9-10 operations permit renewal application.

1.2 Checklist (FDEP Form 17-701.900(1))

1.2.1 Part A - General Information and Part B - Disposal Facility General Information

The information for Parts A and B of this permit application have been included in the Permit Application Form (FDEP Form 17-701.900(1)) included at the end of this section.

1.2.2 Part C –Non Disposal Facility General Information

Part C of the Permit Application Form does not apply and has been noted as "Not Applicable" on the application.

1.2.3 Part D- Prohibitions

The information for Part D is included in Section 2.0 of the report.

1.2.4 Part E - Solid Waste Management Facility Permit Requirements (62-701.320, FAC)

The information for Part E is included in Section 2.0 of this report.

1.2.5 Part F - Landfill Permit Requirements (62-701.330, FAC)

The information for Part F is included in Section 3.0 of this report.

1.2.6 Part G - General Criteria for Landfills (62-701.340, FAC)

The information for Part G has not changed from the information previously submitted as part of the 2000 permit application for the SES and the December 2007 submittal for Cell 10 Expansion. Items in Part G have been marked as "No Change" on the permit application.

1.2.7 Part H - Landfill Construction Requirements (62-701.400, FAC)

No new construction activities are proposed under this operations permit application. Landfill Construction Requirements are discussed in the Cell 10 Construction permit application (Volume I of III are "Not Applicable" to operation permit renewal applications. Items for Part H have been marked "NA "on the permit application.

1.2.8 Parts I and J - Hydrogeological and Geotechnical Investigation Requirements (62-701.410, FAC) (62-701.420, FAC)

The information for Part I & J is included in Section 5.0. The information previously submitted to the Department for Parts I and J is included in Volume IV of the 2000 application report has not changed and has been designated on the application as "No Change." The current water quality monitoring requirements are in the Monitoring Plan Implementation Schedule which is provided in Exhibit A.

1.2.9 Part K - Vertical Expansion of Landfills (62-701.430, FAC)

The information for Part K is included in Section 6.0. Part K does not apply and has been noted as "Not Applicable" on the Permit Application Form.

1.2.10 Part L - Landfill Operation Requirements (62-701.500, FAC)

The information for Part L is included in Section 7.0. An updated Operations Plan is included in Exhibit B.

1.2.11 Part M - Water Quality and Leachate Handling Requirements (62-701.510, FAC)

The information for Part M is included in Section 8.0. The leachate handling procedures have had or will have minor changes since the 2006 permit as a result of construction modification under the current Cell 10 expansion project. Modifications from the 2006 operation permit application are noted and unchanged items have been designated on the application as "No Change."

1.2.12 Part N - Special Waste Handling Requirements (62-701.520, FAC)

The information for Part N is included in Section 9.0. Part N does not apply and has been noted as "Not Applicable" on the Permit Application Form.

1.2.13. Part O – Gas Management System Requirements (62-701.520, FAC)

The information for the Landfill Gas Management System is provided in Section 10.0.

1.2.14 Part P - Landfill Final Closure Requirements (62-701.600, FAC); Part Q - Closure Procedures (62-701.610, FAC); and Part R - Long-Term Care Requirements (62-701.620, FAC)

The information for Part P, Part Q and Part R has not changed from the 2000 permit application. This application is for integration of Cell 10 operations into the Cell 9 Operations Permit and for early renewal of Cells 9-10 Operations Permit. It does not include any closure activities. Therefore, Parts P, Q and R have been noted as "No Change" on the permit application. Partial closure of Cell 9 will be accomplished under a future separate permit application or modification to be submitted at a later date.

1.2.15 Part S - Financial Responsibility Requirements (62-701.630, FAC)

The information for Part S is included in Section 12.0 of this report.

1.2.16 Part T - Certification by Applicant and Engineer or Public Officer

The certification is provided on the permit application form 62-701-900 (1) attached to this document.

DEP Form # 62-701.900(1)
Form Title Solid Waste Management Facility Permit
Effective Date 05-27-01

DEP Application No.

(Filed by DEP)



Florida Department of Environmental Protection

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR A PERMIT TO CONSTRUCT,
OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

APPLICATION INSTRUCTIONS AND FORMS

West District
Environmental Center
FL 32501-6794
595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Best Available Copy

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department's District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills - Submit parts A,B, D through T
- B. Asbestos Monofills - Submit parts A,B,D,E,F,G,J,L,N, P through S, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, D through T
- D. Non-Disposal Facilities - Submit parts A,C,D,E,J,N,S and T

NOTE: Portions of some parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A,B,C and D type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills - Submit parts A,B,M, O through T
- B. Asbestos Monofills - Submit parts A,B,N, P through T
- C. Industrial Solid Waste Facilities - Submit parts A,B, M through T
- D. Non-Disposal Facilities - Submit parts A,C,N,S and T

NOTE: Portions of some parts may not be applicable.

Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the original permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S	-	Submitted
LOCATION	-	Physical location of information in application
N/A	-	Not Applicable
N/C	-	No Substantial Change

VI. LISTING OF APPLICATION PARTS

PART A: GENERAL INFORMATION

PART B: DISPOSAL FACILITY GENERAL INFORMATION

PART C: NON-DISPOSAL FACILITY GENERAL INFORMATION

PART D: PROHIBITIONS

PART E: SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL

PART F: LANDFILL PERMIT REQUIREMENTS

PART G: GENERAL CRITERIA FOR LANDFILLS

PART H: LANDFILL CONSTRUCTION REQUIREMENTS

PART I: HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS

PART J: GEOTECHNICAL INVESTIGATION REQUIREMENTS

PART K: VERTICAL EXPANSION OF LANDFILLS

PART L: LANDFILL OPERATION REQUIREMENTS

PART M: WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS

PART N: SPECIAL WASTE HANDLING REQUIREMENTS

PART O: GAS MANAGEMENT SYSTEM REQUIREMENTS

PART P: LANDFILL CLOSURE REQUIREMENTS

PART Q: CLOSURE PROCEDURES

PART R: LONG TERM CARE REQUIREMENTS

PART S: FINANCIAL RESPONSIBILITY REQUIREMENTS

PART T: CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

Best Available Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

GENERAL INFORMATION

Type of facility (check all that apply):

Disposal

- | | |
|--|---|
| <input checked="" type="checkbox"/> Class I Landfill | <input type="checkbox"/> Ash Monofill |
| <input type="checkbox"/> Class II Landfill | <input type="checkbox"/> Asbestos Monofill |
| <input type="checkbox"/> Class III Landfill | <input type="checkbox"/> Industrial Solid Waste |
| <input type="checkbox"/> Other Describe: _____ | |

Non-Disposal **NOT APPLICABLE**

- | |
|--|
| <input type="checkbox"/> Incinerator For Non-biomedical Waste |
| <input type="checkbox"/> Waste to Energy Without Power Plant Certification |
| <input type="checkbox"/> Other Describe: _____ |

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC;
Land Clearing Disposal Facilities should notify on Form 62-701.900(3), FAC;
Compost Facilities should apply on Form 62-701.900(10), FAC; and
C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

Type of application:

- | |
|---|
| <input type="checkbox"/> Construction |
| <input checked="" type="checkbox"/> Operation |
| <input type="checkbox"/> Construction/Operation |
| <input type="checkbox"/> Closure |

Classification of application:

- | | |
|---|--|
| <input type="checkbox"/> New | <input checked="" type="checkbox"/> Substantial Modification |
| <input checked="" type="checkbox"/> Renewal | <input type="checkbox"/> Intermediate Modification |
| | <input type="checkbox"/> Minor Modification |

Facility name: Orange County Solid Waste Management Facility (OCSWMF)

DEP ID number: 30-48-C02063

County: Orange

Facility location (main entrance): at the terminus of Young Pine Road, 3 miles SE of Curry Ford and Dean Road Intersection

Location coordinates:

Section: 14, 15, 16 Township: 23 South Range: 31 East

Latitude: 28° 28' 54" Longitude: 81° 11' 30"

8. Applicant name (operating authority): Orange County Utilities Solid Waste Division
Mailing address: 5901 Young Pine Road, Orlando, Florida 32829
Street or P.O. Box City State Zip
Contact person: Mr. James W. Becker Telephone: (407) 836-6600
Title: Manager, Solid Waste Division E-Mail address (if available) Jim.Becker@ocfl.net
9. Authorized agent/Consultant: CH2M/WCG Joint Venture
Mailing address: 2301 Lucien Way, Suite 300, Maitland, Florida 32751
Street or P.O. Box City State Zip
Contact person: Mehran (Ron) S. Beladi, P.E. Telephone: (407) 647-6623
Title: Sr. Engineer Manager
Ron.Beladi@neel-schaffer.com E-Mail address (if available)
10. Landowner (if different than applicant): N/A
Mailing address: N/A
Street or P.O. Box City State Zip
Contact person: N/A Telephone: () N/A
11. Cities, towns and areas to be served: Incorporated and unincorporated Orange County
12. Population to be served:
Five-Year
Current: 1,154,200 (BEBR 2010) Projection: 1,282,200 (BEBR, 2015)
13. Date site will be ready to be inspected for completion: N/A
14. Expected life of the facility: The disposal capacity remaining in Cell 9 as of May 2009, and the new disposal capacity from Cell 10 expansions at the time of completion of construction will total approximately 13.3 million cubic yards which is projected to provide sufficient disposal capacity for Orange County solid waste disposal through 2014.
15. Estimated costs:
Total Construction: \$23,650,000 Closing Costs: N/A
16. Anticipated construction starting and completion dates: overall construction period for Cell 10 is contracted to start April 2009 and be completed May 2010. The contract requires the construction be completed in two stages to allow the County to operate the Stage 1 (first three bays) while the construction of Stage 2 is being completed. The anticipated construction completion date for each stage is as follows:
Stage I Substantial Completion (Bays 8, 9 and 10 covering 29 Ac): November 2009
Stage 2 Substantial Completion (Bays 11-16 covering 53 Ac): March 2010
17. Expected volume or weight of waste to be received:
N/A yds³/day Approx. 2,000 tons/day N/A gallons/day

B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:

This permit application is for renewal of Cell 9 operation permit and inclusion of operation of Cell 10 as a Class I solid waste disposal area contiguous with the current permitted Cell 9 disposal area. Cell 9 covering approximately 65 acres (bays 1 through 7) started operations in January 23, 2005. Cell 10 covers approximately 82 acres (bays 8-16) directly south and adjacent to Cell 9. The disposal area in the new Cells 9-10 Operation Permit is requested to be 147 acres covering bays 1 through 16.

Construction of Cell 10 was previously permitted by FDEP (SC48-0128169-022) to be a combination of double composite/double geomembrane lined disposal area, similar bottom liner system design to Cell 9, with leachate collection and leachate detection systems, wet detention stormwater management system, and pipeline "trunk" systems for leachate recirculation and landfill gas collection piping and transmission system to the proposed site of a Blower/Flare Station. Similar to the current Cell 9 operations, pumps will remove leachate and water from primary and secondary leachate sumps from each of the nine bays (8 through 16), and pump it either to the stormwater management system (water), or to the existing leachate storage tanks (leachate) after the bay is operational. Leachate is transmitted from the storage tank facility through a master pump station and force main to the Orange County Eastern Water Reclamation Facility for treatment and disposal. In addition, the Cell 10 Construction Permit included a leachate force main from the leachate storage tanks back to Cells 9-10 for a horizontal leachate recirculation line system to be installed and operated as part of operations of Cells 9-10.

The operation sequence plan for Cell 10 is a continuation of Cell 9 stair-step operation configuration expanding into the new disposal areas. The last three lifts of Cell 9 cannot be filled until Cell 10 has reached the heights to enable construction of an access road to those lifts and eventually making Cells 9-10 into one contiguous disposal area. Therefore, it is requested this permit renewal application for Cell 9 Operations Permit to incorporate the solid waste disposal operations of Cell 10 into the Cells 9-10 Operations Permit.

Horizontal Landfill Gas (LFG) collectors are proposed for each lift similar to Cell 9. These LFG collectors are going to be built as part of the operations and will be connected to the perimeter LFG collection piping previously permitted as part of the Construction/Operations Permits for Cell 9 and Construction Permit for Cell 10. In addition, a horizontal leachate recirculation line system for Cells 9-10 is planned to be installed for each lift as part of the operations.

Current Cell 9 operations will reach elevations where it will not be feasible to access the top without first building the steps in Cell 10. Therefore, in order to continue to accept Class I solid waste, a portion of Cell 10 must be open for operations by November 2009. The Construction of Cell 10 is contracted to be substantially completed in two (2) stages to allow the County the use the first three bays while the second stage is being constructed.

It is requested the Cells 9-10 Operations Permit be issued so that disposal operations in Cell 10 Bays 8,9 and 10 can commence after FDEP Certification of Completion of Construction for Stage 1. The Cells 9-10 Operations Permit will be requested to be modified, with a letter modification, as part of the Certification of Completion of Construction for Bays 11 through 16.

Facility site supervisor: Mr. James W. Becker

Title: Manager, OC Solid Waste Division Telephone: (407) 836-6600; E-Mail jim.becker@ocfl.net

Please send electronic copies of all correspondence to:

Mr. Dan Morrical, Chief Engineer: Dan.Morrical@ocfl.net; and
Mr. James Flynt, Senior Engineer James.flynt@ocfl.net

3. Disposal area: Total 147 acres.(Cells 9-10); Used 65 acres; Available 82 acres.

4. Weighing scales used: Yes No

5. Security to prevent unauthorized use: Yes No

6. Charge for waste received: \$32.65 (Residential); \$35.10 (Commercial) \$/Ton

7. Surrounding land use, zoning:

Residential

Industrial

Agricultural

None

Commercial

Other Describe:

8. Types of waste received:

Residential

C & D debris

Commercial

Shredded/cut tires

Incinerator/WTE ash

Yard trash

Treated biomedical

Septic tank

Water treatment sludge

Industrial

Air treatment sludge

Industrial sludge

Agricultural

Domestic sludge

Asbestos

Other Describe:

9. Salvaging permitted: Yes No

10. Attendant: Yes No Trained operator: Yes No

11. Spotters: Yes No Number of spotters used: One (1)

12. Site located in: Floodplain Wetlands Other Upland

13. Property recorded as a Disposal Site in County Land Records: Yes No

14. Days of operation: Every day of the year except Christmas day (364 days per year)

15. Hours of operation: 8:00 to 5:00 p.m. (public hours); See Exhibit B, 1.2 for franchise haulers and commercial charge accounts

16. Days Working Face covered: Daily

17. Elevation of water table: approx 80.5 Ft. (NGVD 1929)

18. Number of monitoring wells: 118 monitoring wells in MPIS for OCLF, included in SC48-0128169-009 and SC48-0128169-010. The MPIS includes wells for Cell 9 and Cell 10 construction on the Southern Expansion Site.

19. Number of surface monitoring points: 8 locations listed in MPIS

20. Gas controls used: Yes (SES Cell 9) No

Type controls: Active Passive

Gas flaring: Yes No Gas recovery: Yes No

LFG horizontal collectors permitted as part of operation permit for Cell 9 and requested for Cell 10. LFG collection piping was permitted for construction as part of Cell 9 and Cell 10 permit applications. Planned piping for LFG treatment and utilization will be permitted under a separate Solid Waste Permit Modification Application.

21. Landfill unit liner type:

- | | |
|---|---|
| <input type="checkbox"/> Natural soils | <input checked="" type="checkbox"/> Double geomembrane-Above seasonal HGW table |
| <input type="checkbox"/> Single clay liner | <input checked="" type="checkbox"/> Geomembrane& Composite-Below seasonal HGW table |
| <input type="checkbox"/> Single geomembrane | <input type="checkbox"/> Double composite |
| <input type="checkbox"/> Single composite | <input type="checkbox"/> None |
| <input type="checkbox"/> Slurry wall | |
| <input type="checkbox"/> Other Describe: | |

22. Leachate collection method:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Collection pipes | <input checked="" type="checkbox"/> Sand layer |
| <input checked="" type="checkbox"/> Geonets | <input type="checkbox"/> Gravel layer |
| <input type="checkbox"/> Well points | <input type="checkbox"/> Interceptor trench |
| <input type="checkbox"/> Perimeter ditch | <input type="checkbox"/> None |
| <input type="checkbox"/> Other Describe: | |

23. Leachate storage method:

- Tanks
 Surface impoundments
 Other Describe:

24. Leachate treatment method:

- | | |
|---|---|
| <input type="checkbox"/> Oxidation | <input type="checkbox"/> Chemical treatment |
| <input type="checkbox"/> Secondary | <input type="checkbox"/> Settling |
| <input type="checkbox"/> Advanced | |
| <input type="checkbox"/> None | |
| <input checked="" type="checkbox"/> Other <u>Transmitted to offsite WWTP by a dedicated transmission main or by tanker truck as back-up</u> | |

25. Leachate disposal method:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Recirculated (proposed) | <input checked="" type="checkbox"/> Pumped to WWTP |
| <input type="checkbox"/> Transported to WWTP | <input type="checkbox"/> Discharged to surface water |
| <input type="checkbox"/> Injection well | <input type="checkbox"/> Percolation ponds |
| <input type="checkbox"/> Evaporation | |
| <input type="checkbox"/> Other | |

26. For leachate discharged to surface waters:

Name and Class of receiving water: N/A

27. Storm Water: Collected: Yes No

Type of treatment: Wet Detention

Name and Class of receiving water (Cells 9-10) Ponds 5 and 6 discharge to Landfill Outfall Ditch to Little Econlockhatchee River, Class III; Ponds 7 & 8 are permitted to discharge to onsite wetlands.

28. Environmental Resources Permit (ERP) number or status: ERP 48-077603-002-EI (Cell 9 Construction), ERP 48-01777603-006 (Cell 10 Construction) and ERP48-177603-001(Conceptual Cells 9-12 for SES-in force)

C. NON-DISPOSAL FACILITY GENERAL INFORMATION

"NOT APPLICABLE"

1. Provide brief description of the non-disposal facility design and operations planned under this application:

2. Facility site supervisor: _____

Title: _____ Telephone: (____) _____

address (if available)

E-Mail

3. Site area: Facility _____ acres; Property _____ acres

4. Security to prevent unauthorized use: [] Yes [] No

5. Site located in: [] Floodplain [] Wetlands [] Other _____

6. Days of operation: _____

7. Hours of operation: _____

8. Number of operating staff: _____

9. Expected useful life: _____ Years

10. Weighing scales used: [] Yes [] No

11. Normal processing rate: _____ yd³/day _____ tons/day _____ gal/day

12. Maximum processing rate: _____ yd³/day _____ tons/day _____ gal/day

13. Charge for waste received: _____

14. Storm Water Collected: [] Yes [] No

Type of treatment: _____

Name and Class of receiving water: _____

15. Environmental Resources Permit (ERP) number or status: _____

16. Final residue produced:

_____ % of normal processing rate

_____ % of maximum processing rate

_____ Tons/day

_____ Tons/day

Disposed of at:

Facility name: _____ County: _____

17. Estimated operating costs: \$ _____

Total cost/ton: \$ _____ Net cost/ton: \$ _____

18. Provide a site plan, at a scale not greater than 200 feet to the inch, which shows the facility location and identifies the proposed waste and final residue storage areas, total acreage of the site, and any other features which are relevant to the prohibitions or location restrictions in Rule 62-701.300, FAC, such as water bodies or wetlands on or within 200 feet of the site, and potable water wells on or within 500 feet of the site.

19. Provide a description of how the waste and final residue will be managed to not be expected to cause violations of the Department's ground water, surface water or air standards or criteria
20. Provide an estimate of the maximum amount of waste and final residue that will be store on-site.
21. Provide a detailed description of the technology use at the facility and the functions of all processing equipment that will be utilized. The descriptions shall explain the flow of waste and residue through all the proposed unit operations and shall include: (1) regular facility operations as they are expected to occur; (2) procedures for start up operations, and scheduled and unscheduled shut down operations; (3) potential safety hazards and control methods, including fire detection and control; (4) a description of any expected air emissions and wastewater discharges from the facility which may be potential pollution sources; (5) a description and usage rate of any chemical or biological additives that will be used in the process; and (6) process flow diagrams for the facility operations.
22. Provide a description of the loading, unloading and processing areas.
23. Provide a description of the leachate control system that will be used to prevent discharge of leachate to the environment and mixing of leachate with stormwater. Note: Ground water monitoring may be required for the facility depending on the method of leachate control used.
24. Provide an operation plan for the facility which includes: (1) a description of general facility operations, the number of personnel responsible for the operations including their respective job descriptions, and the types of equipment that will be used at the facility; (2) procedures to ensure any unauthorized wastes received at the site will be properly managed; (3) a contingency plan to cover operation interruptions and emergencies such as fires, explosions, or natural disasters; (4) procedures to ensure operational records needed for the facility will be adequately prepared and maintained; and (5) procedures to ensure that the wastes and final residue will be managed to not be expected to cause pollution.
25. Provide a closure plan that describes the procedures that will be implemented when the facility closes including: (1) estimated time to complete closure; (2) procedures for removing and properly managing or disposing of all wastes and final residues; (3) notification of the Department upon ceasing operations and completion of final closure.

D. PROHIBITIONS (62-701.300, FAC)		"OMP"-Operation & Maintenance Plan in Exhibit B	
<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
<u>X</u>	<u>SEC. 2.1</u>	___	___
			1.
			Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)
		<u>X</u>	___
			2.
			If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12) through (16), FAC, then document this qualification(s).
<u>X</u>	<u>Sec. 201</u>	___	___
			3.
			Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 & 14 OMP</u>	___	___
			4.
			Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 and 14 OMP</u>	___	___
			5.
			Provide documentation that the facility will be in compliance with the PCB disposal restrictions ; (62-701.300(5), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 and 14 OMP</u>	___	___
			6.
			Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)
		<u>X</u>	___
			7.
			Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 and 14 OMP</u>	___	___
			8.
			Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC)
		<u>X</u>	___
			9.
			Provide documentation that the facility will be in compliance with the special waste for waste-to-energy facilities restrictions; (62-701.300(9), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 and 14 OMP</u>	___	___
			10.
			Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)
<u>X</u>	<u>Exh B</u> <u>Sec 4 and 14 OMP</u>	___	___
			11.
			Provide documentation that the facility will be in compliance with the used oil restrictions; (62-701.300(11), FAC)

E. SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL (62-701.320, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<u>X</u>	<u>SEC. 2.2</u>	___	___	1. Four copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a), FAC)
<u>X</u>	<u>SEC. 2.3</u>	___	___	2. Engineering and/or professional certification (signature, date and seal) provided on the applications and all engineering plans, reports and supporting information for the application; (62-701.320(6), FAC)
<u>X</u>	<u>SEC. 2.4</u>	___	___	3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)
<u>X</u>	<u>SEC. 2.5</u>	___	___	4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)
<u>X</u>	<u>SEC. 2.6</u>	___	___	5. Permit fee specified in Rule 62-701.315, FAC in check or money order, payable to the Department; (62-701.320(7)(c), FAC)
<u>X</u>	<u>SEC. 2.7</u>	___	___	6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 1/2 inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d), FAC)
<u>X</u>	<u>SEC. 2.8</u>	___	___	7. Operation Plan and Closure Plan; (62-701.320(7)(e)1, FAC)
<u>X</u>	<u>SEC. 2.9</u>	___	___	8. Contingency Plan; (62-701.320(7)(e)2, FAC)
				9. Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD 1929) showing; (62-702.320(7)(f), FAC)
<u>X</u>	<u>Exh C</u>	___	___	a. A regional map or plan with the project location;
<u>X</u>	<u>Exh C</u>	___	___	b. A vicinity map or aerial photograph no more than 1 year old;
			<u>X</u>	c. A site plan showing all property boundaries certified by a registered Florida land surveyor;
<u>X</u>	<u>SEC. 2.10</u>	___	___	d. Other necessary details to support the engineering report.

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	PART E CONTINUED
			<u>X</u>	10. Documentation that the applicant either owns the property or has legal authority from the property owner to use the site; (62-701.320(7)(g), FAC)
<u>X</u>	<u>SEC. 2.12</u>			11. For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of the waste reduction and recycling goals contained in Section 403.706, FS; (62-01.320(7)(h), FAC)
<u>X</u>	<u>SEC. 2.13</u>			12. Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules, orders or permit conditions relating to the operation of any solid waste management facility in this state; (62-701.320(7)(i), FAC)
<u>X</u>	<u>SEC. 2.14</u>			13. Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-702.320(8), FAC)
	<u>SEC. 2.15</u>		<u>X</u>	14. Provide a description of how the requirements for airport safety will be achieved including proof of required notices if applicable. If exempt, explain how the exemption applies; (62-701.320(13), FAC)
<u>X</u>	<u>Exh B</u>			15. Explain how the operator training requirements will be satisfied for the facility; (62-701.320(15), FAC)

F. LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<u>X</u>	<u>SEC 3.1& Exh.C</u>			1. Vicinity map or aerial photograph no more than 1 year old and of appropriate scale showing land use and local zoning within one mile of the landfill and of sufficient scale to show all homes or other structures, water bodies, and roads other significant features of the vicinity. All significant features shall be labeled; (62-701.330(3)(a), FAC)
<u>X</u>	<u>Exh. C</u>			2. Vicinity map or aerial photograph no more than 1 year old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(b), FAC)
<u>X</u>	<u>SEC 3.3</u>			3. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(c), FAC)
<u>X</u>	<u>SEC 3.3</u>			a. Dimensions;
<u>X</u>	<u>Exhibit F</u>			b. Locations of proposed and existing water quality monitoring wells;

_____ X _____
X SEC 3.3 _____
X SEC 3.3 _____
X SEC 3.3 _____
_____ X _____

X SEC 3.3 _____
X SEC 3.3 _____
X SEC 3.3 _____
X SEC 3.3 _____
X Exh B, Sec 7 _____
Fill Sequence Plan _____
_____ X _____
_____ X _____
_____ X _____

X SEC. 3.5 _____
_____ X _____
X SEC. 3.5 _____
X SEC. 3.5 _____ X _____
X SEC.3.6 _____
X SEC. 3.7 & SEC.12 _____

- c. Locations of soil borings;
 - d. Proposed plan of trenching or disposal areas;
 - e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;
 - f. Any previously filled waste disposal areas;
 - g. Fencing or other measures to restrict access.
4. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing;
(62-701.330(3)(d), FAC):
- a. Proposed fill areas;
 - b. Borrow areas;
 - c. Access roads;
 - d. Grades required for drainage;
 - e. Cross sections of lifts;
 - f. Special drainage devices if necessary;
 - g. Fencing;
 - h. Equipment facilities.
5. A report on the landfill describing the following;
(62-701.330(3)(e), FAC)
- a. The current and projected population and area to be served by the proposed site;
 - b. The anticipated type, annual quantity, and source of solid waste, expressed in tons;
 - c. The anticipated facility life;
 - d. The source and type of cover material used for the landfill.
6. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160, FAC;
(62-701.330(3)(h), FAC)
7. Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill;
(62-701.330(3)(i), FAC)

G. GENERAL CRITERIA FOR LANDFILLS (62-701.340, FAC)

- | | | | | | |
|---------------|---------------|---------------|----------|--|---|
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | | 1. Describe (and show on a Federal Insurance Administration flood map, if available) how the landfill or solid waste disposal unit shall not be located in the 100-year floodplain where it will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain unless compensating storage is provided, or result in a washout of solid waste; (62-701.340(4)(b), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | | 2. Describe how the minimum horizontal separation between waste deposits in the landfill and the landfill property boundary shall be 100 feet, measured from the toe of the proposed final cover slope; (62-701.340(4)(c), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | | 3. Describe what methods shall be taken to screen the landfill from public view where such screening can practically be provided; (62-701.340(4)(d), FAC) |

H. LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400, FAC)

- | <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> | | |
|----------|-----------------|---------------|---------------|--|--|
| <u>X</u> | <u>SEC. 4.1</u> | <u> </u> | <u> </u> | | 1. Describe how the landfill shall be designed so that solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill; (62-701.400(2), FAC) |
| | | | | | 2. Landfill liner requirements; (62-701.400(3), FAC) |
| | | | | | a. General construction requirements; (62-701.400(3)(a), FAC): |
| <u>X</u> | <u>SEC. 4.2</u> | <u> </u> | <u> </u> | | (1) Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure; |
| | | | <u>X</u> | | (2) Document foundation is adequate to prevent liner failure; |
| | | | <u>X</u> | | (3) Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water; |
| | | | <u>X</u> | | (4) Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table; |
| | | | <u>X</u> | | (5) Installed to cover all surrounding earth which could come into contact with the waste or leachate. |

b. Composite liners; (62-701.400(3)(b), FAC)

<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>

- (1) Upper geomembrane thickness and properties;
- (2) Design leachate head for primary LCRS including leachate recirculation if appropriate;
- (3) Design thickness in accordance with Table A and number of lifts planned for lower soil component.

c. Double liners; (62-701.400(3)(c), FAC)

<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>

- (1) Upper and lower geomembrane thicknesses and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ($k \geq 10$ cm/sec, head on lower liner < 1 inch, head not to exceed thickness of drainage layer);

d. Standards for geosynthetic components; (62-701.400(3)(d), FAC)

<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>
<u> </u>	<u> </u>	<u> X </u>	<u> </u>

- (1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
- (2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
- (3) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.
- (5) HDPE geomembranes, if used, meet the specifications in GRI GM13;
- (6) PVC geomembranes, if used, meet the specifications in PGI 1197;

- | | | | | | |
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<u> </u> | | |
| | | <u> </u>
<u> </u> | | (7) Interface shear strength testing results of the actual components which will be used in the liner system; | |
| | | <u> </u>
<u> </u> | | (8) Transmissivity testing results of geonets if they are used in the liner system; | |
| | | <u> </u>
<u> </u> | | (9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system; | |
| e. Geosynthetic specification requirements;
(62-701.400(3)(e), FAC) | | | | | |
| <u> </u> | | <u> </u>
<u> </u> | | (1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program; | |
| <u> </u> | | <u> </u>
<u> </u> | | (2) Material specifications for geomembranes, geocomposites, geotextiles, geogrids, and geonets; | |
| <u> </u> | | <u> </u>
<u> </u> | | (3) Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and nondestructive seam testing, seam testing location, frequency, procedure, sample size and geomembrane repairs; | |
| <u> </u> | | <u> </u>
<u> </u> | | (4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembrane and procedures for lining system acceptance; | |
| <u> </u> | | <u> </u>
<u> </u> | | (5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials; | |
| <u> </u> | | <u> </u>
<u> </u> | | (6) Geonet and geocomposite specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials; | |
| <u> </u> | | <u> </u>
<u> </u> | | (7) Geosynthetic clay liner specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil material and any overlying materials; | |

f. Standards for soil components
(62-710.400 (3) (f), FAC) :

_____	<u> X </u>	(1) Description of construction procedures including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers;
_____	<u> X </u>	(2) Demonstration of compatibility of the soil component with actual or simulated leachate in accordance with EPA Test Method 9100 or an equivalent test method;
_____	<u> X </u>	(3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners;
_____	<u> X </u>	(4) Specifications for soil component of liner including at a minimum:
_____	<u> X </u>	(a) Allowable particle size distribution, Atterberg limits, shrinkage limit;
_____	<u> X </u>	(b) Placement moisture and dry density criteria;
_____	<u> X </u>	(c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;
_____	<u> X </u>	(d) Minimum thickness of soil liner;
_____	<u> X </u>	(e) Lift thickness;
_____	<u> X </u>	(f) Surface preparation (scarification);
_____	<u> X </u>	(g) Type and percentage of clay mineral within the soil component;
_____	<u> X </u>	(5) Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field.

3. Leachate collection and removal system (LCRS);
(62-701.400 (4), FAC)

a. The primary and secondary LCRS requirements;
(62-701.400 (4) (a), FAC)

_____	<u> X </u>	(1) Constructed of materials chemically resistant to the waste and leachate;
_____	<u> X </u>	(2) Have sufficient mechanical properties to prevent collapse under pressure;

- | | | | | | |
|--|--|----------|--|-----|---|
| | | <u>X</u> | | | (3) Have granular material or synthetic geotextile to prevent clogging; |
| | | <u>X</u> | | | (4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas; |
| | | | | b. | Primary LCRS requirements;
(62-701.400(4)(b), FAC) |
| | | <u>X</u> | | (1) | Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec; |
| | | <u>X</u> | | (2) | Total thickness of 24 inches of material chemically resistant to the waste and leachate; |
| | | <u>X</u> | | (3) | Bottom slope design to accommodate for predicted settlement; |
| | | <u>X</u> | | (4) | Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load and protection of geomembrane liner. |

4. Leachate recirculation; (62-701.400(5), FAC)

- | | | | | | |
|----------|------------------|----------|----------|----------|---|
| <u>X</u> | <u>SECT. 4.4</u> | | | | a. Describe general procedures for recirculating leachate; |
| <u>X</u> | <u>SECT. 4.4</u> | | | | b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water; |
| <u>X</u> | <u>SECT. 4.4</u> | | | | c. Describe procedures for preventing perched water conditions and gas buildup; |
| | | | <u>X</u> | | d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the liner; |
| | | | | <u>X</u> | e. Describe methods of gas management in accordance with Rule 62-701.530, FAC; |
| | | <u>X</u> | | | f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover and provide documentation that irrigation does not contribute significantly to leachate generation. |

5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6), FAC)

a. Surface impoundment requirements;
(62-701.400 (6) (b), FAC)

- | | | | | |
|-------|-------|--------------|-------|--|
| _____ | _____ | <u> X </u> | _____ | |
| | | | | (1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water; |
| | | | | (2) Designed in segments to allow for inspection and repair as needed without interruption of service; |
| | | | | (3) General design requirements; |
| | | | | (a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane; |
| | | | | (b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec; |
| | | | | (c) Lower geomembrane placed on subbase ≥ 6 inches thick with $k \leq 1 \times 10^{-5}$ cm/sec or on an approved geosynthetic clay liner with $k \leq 1 \times 10^{-7}$ cm/sec; |
| | | | | (d) Design calculation to predict potential leakage through the upper liner; |
| | | | | (e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations; |
| | | | | (4) Description of procedures to prevent uplift, if applicable; |
| | | | | (5) Design calculations to demonstrate minimum two feet of freeboard will be maintained; |
| | | | | (6) Procedures for controlling disease vectors and off-site odors. |

b. Above-ground leachate storage tanks;
(62-701.400 (6) (c), FAC)

- | | | | | |
|-------|-------|--------------|-------|--|
| _____ | _____ | <u> X </u> | _____ | |
| | | | | (1) Describe tank materials of construction and ensure foundation is sufficient to support tank; |
| | | | | (2) Describe procedures for cathodic protection if needed for the tank; |

_____ X _____

(3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored;

_____ X _____

(4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction;

_____ X _____

(5) Describe design to remove and dispose of stormwater from the secondary containment system;

_____ X _____

(6) Describe an overflow prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overflowing;

(7) Inspections, corrective action and reporting requirements;

X Exhibit B
 And Sec 7.0 _____

(a) Overflow prevention system weekly;

X Exhibit B
 And Sec 7.0 _____

(b) Exposed tank exteriors weekly;

X Exhibit B
 And Sec. 7.0 _____

(c) Tank interiors when tank is drained or at least every three years;

X Exhibit B
 And Sec. 7.0 _____

(d) Procedures for immediate corrective action if failures detected;

X Exhibit B
 And Sec. 7.0 _____

(e) Inspection reports available for department review.

c. Underground leachate storage tanks;
(62-701.400(6)(d), FAC)

_____ X _____

(1) Describe materials of construction;

_____ X _____

(2) A double-walled tank design system to be used with the following requirements;

_____ X _____

(a) Interstitial space monitoring at least weekly;

_____ X _____

(b) Corrosion protection provided for primary tank interior and external surface of outer shell;

_____ X _____

(c) Interior tank coatings compatible with stored leachate;

_____ X _____

(d) Cathodic protection inspected weekly and repaired as needed;

- (3) Describe an overflow prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overflowing and provide for weekly inspections;
- (4) Inspection reports available for department review.
- d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e), FAC)
- 6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC)
 - a. Provide CQA Plan including:
 - (1) Specifications and construction requirements for liner system;
 - (2) Detailed description of quality control testing procedures and frequencies;
 - (3) Identification of supervising professional engineer;
 - (4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project;
 - (5) State qualifications of CQA professional engineer and support personnel;
 - (6) Description of CQA reporting forms and documents;
 - b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;
- 7. Soil Liner CQA (62-701.400(8) FAC)
 - a. Documentation that an adequate borrow source has been located with test results or description of the field exploration and laboratory testing program to define a suitable borrow source;
 - b. Description of field test section construction and test methods to be implemented prior to liner installation;
 - c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation.
- 8. Surface water management systems; (62-701.400(9), FAC)

BEST AVAILABLE COPY

X Exhibit A _____

- a. Provide a copy of a Department permit for stormwater control or documentation that no such permit is required;
- b. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off;
- c. Details of stormwater control design including retention ponds, detention ponds, and drainage ways;

X

X

9. Gas control systems; (62-701.400(10), FAC)

X SECT. 4.9
And Sec. 10.0 _____

- a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC;

X

10. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(11), FAC)

I. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(1), FAC)

LOCATION N/A N/C

1. Submit a hydrogeological investigation and site report including at least the following information:

X

a. Regional and site specific geology and hydrogeology;

X

b. Direction and rate of ground water and surface water flow including seasonal variations;

X

c. Background quality of ground water and surface water;

X

d. Any on-site hydraulic connections between aquifers;

X

e. Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aquifers below the landfill site that may be affected by the landfill;

X

f. Description of topography, soil types and surface water drainage systems;

X

g. Inventory of all public and private water wells within a one-mile radius of the landfill including, where available, well top of casing

and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique and static water level;

_____ X

h. Identify and locate any existing contaminated areas on the site;

_____ X

i. Include a map showing the locations of all potable wells within 500 feet, and all community water supply wells within 1000 feet, of the waste storage and disposal areas;

_____ X

2. Report signed, sealed and dated by PE or PG.

J. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
			<u>X</u>	1. Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:
			<u>X</u>	a. Description of subsurface conditions including soil stratigraphy and ground water table conditions;
			<u>X</u>	b. Investigate for the presence of muck, previously filled areas, soft ground, lineaments and sink holes;
			<u>X</u>	c. Estimates of average and maximum high water table across the site;
			<u>X</u>	d. Foundation analysis including:
			<u>X</u>	(1) Foundation bearing capacity analysis;
			<u>X</u>	(2) Total and differential subgrade settlement analysis;
			<u>X</u>	(3) Slope stability analysis;
			<u>X</u>	e. Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;
			<u>X</u>	f. An evaluation of fault areas, seismic impact zones, and unstable areas as described in 40 CFR 258.13, 40 CFR 258.14 and 40 CFR 258.15.
			<u>X</u>	2. Report signed, sealed and dated by PE or PG.

K. VERTICAL EXPANSION OF LANDFILLS (62-701.430, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
		<u>X</u>		1. Describe how the vertical expansion shall not cause or contribute to leachate leakage from the existing landfill or adversely affect the closure design of the existing landfill;
		<u>X</u>		2. Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c), FAC;
		<u>X</u>		3. Provide foundation and settlement analysis for the vertical expansion;

- | | | | | | |
|---------------|---------------|----------|---------------|--|---|
| <u> </u> | <u> </u> | <u>X</u> | <u> </u> | | 4. Provide total settlement calculations demonstrating that the final elevations of the lining system, that gravity drainage, and that no other component of the design will be adversely affected; |
| <u> </u> | <u> </u> | <u>X</u> | <u> </u> | | 5. Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability; |
| <u> </u> | <u> </u> | <u>X</u> | <u> </u> | | 6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion; |
| <u> </u> | <u> </u> | <u>X</u> | <u> </u> | | 7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion. |

L. LANDFILL OPERATION REQUIREMENTS (62-701.500, FAC)

S LOCATION N/A N/C

- | | | | | | |
|----------|-----------------------------------|--|--|--|---|
| <u>X</u> | <u>SECT. 7.0 and Exh B Atch A</u> | | | | 1. Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1), FAC) |
| | | | | | 2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC) |
| <u>X</u> | <u>Exhibit B</u> | | | | a. Designating responsible operating and maintenance personnel; |
| <u>X</u> | <u>Exhibit B</u> | | | | b. Contingency operations for emergencies; |
| <u>X</u> | <u>Exhibit B</u> | | | | c. Controlling types of waste received at the landfill; |
| <u>X</u> | <u>Exhibit B</u> | | | | d. Weighing incoming waste; |
| <u>X</u> | <u>Exhibit B</u> | | | | e. Vehicle traffic control and unloading; |
| <u>X</u> | <u>Exhibit B</u> | | | | f. Method and sequence of filling waste; |
| <u>X</u> | <u>Exhibit B</u> | | | | g. Waste compaction and application of cover; |
| <u>X</u> | <u>Exhibit B & Sect. 7.0</u> | | | | h. Operations of gas, leachate, and stormwater controls; |
| <u>X</u> | <u>Exh A (MPIS)</u> | | | | i. Water quality monitoring. |
| <u>X</u> | <u>Exhibit B Sect. 7.0</u> | | | | j. Maintaining and cleaning the leachate collection system; |
| <u>X</u> | <u>Exhibit B</u> | | | | 3. Provide a description of the landfill operation record to be used at the landfill; details as to location of where various operational records will be kept (i.e. FDEP permit, engineering drawings, water quality records, etc.) (62-701.500(3), FAC) |

- | | | | |
|--------------|---------------------------------|-----|--|
| <u> X </u> | <u> Exhibit B </u> | 4. | Describe the waste records that will be compiled monthly and provided to the Department quarterly; (62-701.500(4), FAC) |
| <u> X </u> | <u> Exhibit B </u> | 5. | Describe methods of access control; (62-701.500(5), FAC) |
| <u> X </u> | <u> Exhibit B </u> | 6. | Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized wastes at the landfill; (62-701.500(6), FAC) |
| | | 7. | Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7), FAC) |
| <u> X </u> | <u> Exhibit B </u> | a. | Waste layer thickness and compaction frequencies; |
| <u> X </u> | <u> Exhibit B </u> | b. | Special considerations for first layer of waste placed above liner and leachate collection system; |
| <u> X </u> | <u> Exhibit B </u> | c. | Slopes of cell working face and side grades above land surface, planned lift depths during operation; |
| <u> X </u> | <u> Exhibit B </u> | d. | Maximum width of working face; |
| | | e. | Description of type of initial cover to be used at the facility that controls: |
| <u> X </u> | <u> Exhibit B </u> | (1) | Disease vector breeding/animal attraction |
| <u> X </u> | <u> Exhibit B </u> | (2) | Fires |
| <u> X </u> | <u> Exhibit B </u> | (3) | Odors |
| <u> X </u> | <u> Exhibit B </u> | (4) | Blowing litter |
| <u> X </u> | <u> Exhibit B </u> | (5) | Moisture infiltration |
| <u> X </u> | <u> Exhibit B </u> | f. | Procedures for applying initial cover including minimum cover frequencies; |
| <u> X </u> | <u> Exhibit B </u> | g. | Procedures for applying intermediate cover; |
| <u> X </u> | <u> Exhibit B </u> | h. | Time frames for applying final cover; |
| <u> X </u> | <u> Exhibit B </u> | i. | Procedures for controlling scavenging and salvaging. |
| <u> X </u> | <u> Exhibit B </u> | j. | Description of litter policing methods; |
| <u> X </u> | <u> Exhibit B </u> | k. | Erosion control procedures. |
| | | 8. | Describe operational procedures for leachate management including; (62-701.500(8), FAC) |
| <u> X </u> | <u> Exh. B & SEC 7.0 </u> | a. | Leachate level monitoring, sampling, analysis and data results submitted to the Department; |

- | | |
|--|--|
| <u>X</u> <u>Exh.B & SEC 7.0</u> _____ | b. Operation and maintenance of leachate collection and removal system, and treatment as required; |
| <u>X</u> <u>Exhibit B</u> _____ | c. Procedures for managing leachate if it becomes regulated as a hazardous waste; |
| <u>X</u> <u>Exhibit B</u> _____ | d. Agreements for off-site discharge and treatment of leachate; |
| <u>X</u> <u>Exhibit B</u> _____ | e. Contingency plan for managing leachate during emergencies or equipment problems; |
| <u>X</u> <u>Exhibit B</u> _____ | f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record; |
| <u>X</u> <u>Exhibit B</u> _____ | g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record; |
| <u>X</u> <u>Exhibit B</u> _____ | h. Procedures for water pressure cleaning or video inspecting leachate collection systems. |
| <u>X</u> <u>Exhibit B & Section 10.0</u> _____ | 9. Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9), FAC) |
| <u>X</u> <u>Exhibit B</u> _____ | 10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9); (62-701.500(10), FAC) |
| <u>X</u> <u>Exhibit B</u> _____ | 11. Equipment and operation feature requirements; (62-701.500(11), FAC) |
| <u>X</u> <u>Exhibit B</u> _____ | a. Sufficient equipment for excavating, spreading, compacting and covering waste; |
| <u>X</u> <u>Exhibit B</u> _____ | b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown; |
| <u>X</u> <u>Exhibit B</u> _____ | c. Communications equipment; |
| <u>X</u> <u>Exhibit B</u> _____ | d. Dust control methods; |
| <u>X</u> <u>Exhibit B</u> _____ | e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies; |
| <u>X</u> <u>Exhibit B</u> _____ | f. Litter control devices; |
| <u>X</u> <u>Exhibit B</u> _____ | g. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions. |

- X Exhibit B 12. Provide a description of all-weather access road, inside perimeter road and other roads necessary for access which shall be provided at the landfill; (62-701.500(12), FAC)
- X Exhibit B 13. Additional record keeping and reporting requirements; (62-701.500(13), FAC)
 - a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
 - b. Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
 - c. Maintain annual estimates of the remaining life of constructed landfills and of other permitted areas not yet constructed and submit this estimate annually to the Department;
 - d. Procedures for archiving and retrieving records which are more than five year old.

M. WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS (62-701.510, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
			X	1. Water quality and leachate monitoring plan shall be submitted describing the proposed ground water, surface water and leachate monitoring systems and shall meet at least the following requirements;
			X	a. Based on the information obtained in the hydrogeological investigation and signed, dated and sealed by the PG or PE who prepared it; (62-701.510(2)(a), FAC)
			X	b. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b), FAC)
			X	c. Ground water monitoring requirements; (62-701.510(3), FAC)
			X	(1) Detection wells located downgradient from and within 50 feet of disposal units;
			X	(2) Downgradient compliance wells as required;
			X	(3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
			X	(4) Location information for each monitoring well;

_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
<u>X</u>	<u>Exhibit A</u>	_____	_____
<u>X</u>	<u>Exhibit A</u>	_____	_____
<u>X</u>	<u>Exhibit A</u>	_____	_____
_____	_____	_____	<u>X</u>
<u>X</u>	<u>Exhibit A</u>	_____	_____
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>

- (5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells unless site specific conditions justify alternate well spacings;
 - (6) Well screen locations properly selected;
 - (7) Procedures for properly abandoning monitoring wells;
 - (8) Detailed description of detection sensors if proposed.
- d. Surface water monitoring requirements; (62-701.510(4), FAC)
- (1) Location of and justification for all proposed surface water monitoring points;
 - (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;
- e. Leachate sampling locations proposed; (62-701.510(5), FAC)
- f. Initial and routine sampling frequency and requirements; (62-701.510(6), FAC)
- (1) Initial background ground water and surface water sampling and analysis requirements;
 - (2) Routine leachate sampling and analysis requirements;
 - (3) Routine monitoring well sampling and analysis requirements;
 - (4) Routine surface water sampling and analysis requirements.
- g. Describe procedures for implementing evaluation monitoring, prevention measures and corrective action as required; (62-701.510(7), FAC)
- h. Water quality monitoring report requirements; (62-701.510(9), FAC)
- (1) Semi-annual report requirements;
 - (2) Bi-annual report requirements signed, dated and sealed by PG or PE.

N. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
___	_____	<u>X</u>	___	1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC)
___	_____	<u>X</u>	___	2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC)
___	_____	<u>X</u>	___	3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC)
___	_____	<u>X</u>	___	4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC)
___	_____	<u>X</u>	___	5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

O. GAS MANAGEMENT SYSTEM REQUIREMENTS (62-701.530, FAC)

				1. Provide the design for gas management systems that will (62-701.530(1), FAC):
<u>X</u>	<u>SECT. 10.1</u>			a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% of the LEL at the property boundary;
<u>X</u>	<u>SECT. 10.1</u>			b. Be designed for site-specific conditions;
<u>X</u>	<u>SECT. 10.1</u>			c. Be designed to reduce gas pressure in the interior of the landfill;
<u>X</u>	<u>SECT. 10.1</u>			d. Be designed to not interfere with the liner, leachate control system or final cover.
___	_____		<u>X</u>	2. Provide documentation that will describe locations, construction details and procedures for monitoring gas at ambient monitoring points and with soil monitoring probes; (62-701.530(2), FAC):
___	_____		<u>X</u>	3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC):
				4. Landfill gas recovery facilities; (62-701.530(5), FAC):
<u>X</u>	<u>SECT. 10.2</u>			a. Information required in Rules 62-701.320(7) and 62-701.330(3), FAC supplied;
<u>X</u>	<u>SECT. 10.2</u>			b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
<u>X</u>	<u>SECT. 10.2</u>			c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;

rates and description of condensate disposal methods provided;

X SECT. 10.2 _____

d. Description of procedures for condensate sampling, analyzing and data reporting provided;

_____ X _____

e. Closure plan provided describing methods to control gas after recovery facility ceases operation and any other requirements contained in Rule 62-701.400(10), FAC;

_____ X _____

f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.

P. LANDFILL FINAL CLOSURE REQUIREMENTS (62-701.600, FAC)

1. Closure schedule requirements; (62-701.600(2), FAC)

_____ X _____

a. Documentation that a written notice including a schedule for closure will be provided to the Department at least one year prior to final receipt of wastes;

_____ _____ X _____

b. Notice to user requirements within 120 days of final receipt of wastes;

_____ _____ X _____

c. Notice to public requirements within 10 days of final receipt of wastes.

2. Closure permit general requirements; (62-701.600(3), FAC)

_____ _____ X _____

a. Application submitted to Department at least 90 days prior to final receipt of wastes;

b. Closure plan shall include the following:

_____ _____ _____ X _____

(1) Closure report;

_____ _____ _____ X _____

(2) Closure design plan;

_____ _____ _____ X _____

(3) Closure operation plan;

_____ _____ _____ X _____

(4) Closure procedures;

_____ _____ _____ _____ _____

(5) Plan for long term care;

X SEC. 11.2
& SEC. 12 _____

(6) A demonstration that proof of financial responsibility for long term care will be provided.

3. Closure report requirements; (62-701.600(4), FAC)

a. General information requirements;

X SECT. 11.3 _____

(1) Identification of landfill;

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	<u>PART P CONTINUED</u>
_____	_____	_____	<u>X</u>	(2) Location, description and vicinity map;
_____	_____	_____	<u>X</u>	(3) Total acres of disposal areas and landfill property;
_____	_____	_____	<u>X</u>	(4) Legal property description;
_____	_____	_____	<u>X</u>	(5) History of landfill;
_____	_____	_____	<u>X</u>	(6) Identification of types of waste disposed of at the landfill.
_____	_____	_____	<u>X</u>	b. Geotechnical investigation report and water quality monitoring plan required by Rule 62-701.330 (3), FAC;
_____	_____	_____	<u>X</u>	c. Land use information report indicating: identification of adjacent landowners; zoning; present land uses; and roads, highways right-of-way, or easements.
_____	_____	_____	<u>X</u>	d. Report on actual or potential gas migration at landfills containing degradable wastes which would allow migration of gas off the landfill property;
_____	_____	_____	<u>X</u>	e. Report assessing the effectiveness of the landfill design and operation including results of geotechnical investigations, surface water and storm water management, gas migration and concentrations, condition of existing cover, and nature of waste disposed of at the landfill;
				4. Closure design requirements to be included in the closure design plan: (62-701.600 (5), FAC)
_____	_____	_____	<u>X</u>	a. Plan sheet showing phases of site closing;
_____	_____	_____	<u>X</u>	b. Drawings showing existing topography and proposed final grades;
_____	_____	_____	<u>X</u>	c. Provisions to close units when they reach approved design dimensions;
_____	_____	_____	<u>X</u>	d. Final elevations before settlement;
_____	_____	_____	<u>X</u>	e. Side slope design including benches, terraces, down slope drainage ways, energy dissipators and discussion of expected precipitation effects;
_____	_____	_____	<u>X</u>	f. Final cover installation plans including: (1) CQA plan for installing and testing final cover;

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	<u>PART P CONTINUED</u>
_____	_____	_____	<u>X</u>	(2) Schedule for installing final cover after final receipt of waste;
_____	_____	_____	<u>X</u>	(3) Description of drought-resistant species to be used in the vegetative cover;
_____	_____	_____	<u>X</u>	(4) Top gradient design to maximize runoff and minimize erosion;
_____	_____	_____	<u>X</u>	(5) Provisions for cover material to be used for final cover maintenance.
				g. Final cover design requirements:
_____	_____	_____	<u>X</u>	(1) Protective soil layer design;
_____	_____	_____	<u>X</u>	(2) Barrier soil layer design;
_____	_____	_____	<u>X</u>	(3) Erosion control vegetation;
_____	_____	_____	<u>X</u>	(4) Geomembrane barrier layer design;
_____	_____	<u>X</u>	_____	(5) Geosynthetic clay liner design if used;
_____	_____	<u>X</u>	_____	(6) Stability analysis of the cover system and the disposed waste.
_____	_____	_____	<u>X</u>	h. Proposed method of stormwater control;
_____	_____	_____	<u>X</u>	i. Proposed method of access control;
_____	_____	_____	<u>X</u>	j. Description of proposed final use of the closed landfill, if any;
_____	_____	_____	<u>X</u>	k. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC.
				5. Closure operation plan shall include: (62-701.600(6), FAC)
_____	_____	_____	<u>X</u>	a. Detailed description of actions which will be taken to close the landfill;
_____	_____	_____	<u>X</u>	b. Time schedule for completion of closing and long term care;
<u>X</u>	<u>SECT. 12.0</u>	_____	_____	c. Describe proposed method for demonstrating financial responsibility;
_____	_____	_____	<u>X</u>	d. Indicate any additional equipment and personnel needed to complete closure.

S LOCATION N/A N/C

PART P CONTINUED

- | | | | | |
|----------|----------------------------------|-------------|-------------|---|
| <u>X</u> | <u>SEC. 11.5</u> | <u> </u> | <u>X</u> | e. Development and implementation of the water quality monitoring plan required in Rule 62-701.510, FAC. |
| <u>X</u> | <u>SEC. 11.5 & SEC. 10.0</u> | <u> </u> | <u> </u> | f. Development and implementation of gas management system required in Rule 62-701.530, FAC. |
| <u>X</u> | <u>SEC. 11.6</u> | <u> </u> | <u> </u> | g. Justification and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(7), FAC) |

Q. CLOSURE PROCEDURES (62-701.610, FAC)

S LOCATION N/A N/C

- | | | | | |
|-------------|------------------|-------------|-------------|--|
| <u>X</u> | <u>SECT.11.7</u> | <u> </u> | <u> </u> | 1. Survey monuments; (62-701.610(2), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 2. Final survey report; (62-701.610(3), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 3. Certification of closure construction completion; (62-701.610(4), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 4. Declaration to the public; (62-701.610(5), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 5. Official date of closing; (62-701.610(6), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 6. Use of closed landfill areas; (62-701.610(7), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 7. Relocation of wastes; (62-701.610(8), FAC) |

R. LONG TERM CARE REQUIREMENTS (62-701.620, FAC)

- | | | | | |
|-------------|------------------|-------------|-------------|--|
| <u>X</u> | <u>SEC. 11.8</u> | <u> </u> | <u> </u> | 1. Maintaining the gas collection and monitoring system; (62-701.620(5), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 2. Right of property access requirements; (62-701.620(6), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 3. Successors of interest requirements; (62-701.620(7), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 4. Requirements for replacement of monitoring devices; (62-701.620(9), FAC) |
| <u> </u> | <u> </u> | <u> </u> | <u>X</u> | 5. Completion of long term care signed and sealed by professional engineer (62-701.620(10), FAC). |

S. FINANCIAL RESPONSIBILITY REQUIREMENTS (62-701.630, FAC)

- | | | | | |
|----------|------------------|-------------|-------------|---|
| <u>X</u> | <u>SEC. 12.0</u> | <u> </u> | <u> </u> | 1. Provide cost estimates for closing, long term care, and corrective action costs estimated by a PE for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3)&(7), FAC). |
|----------|------------------|-------------|-------------|---|

- X SEC. 12.0 _____ 2. Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4)&(8), FAC).
- X SEC. 12.0 _____ 3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms; (62-701.630(5), (6), &(9), FAC).

T. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of Orange County Solid Waste Division is aware that statements made in this form and attached information are an application for Cells 9-10 Solid Waste Operations Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

James W. Becker
Signature of Applicant or Agent

5901 Young Pine Road
Mailing Address

James W. Becker, Solid Waste Div. Manager
Name and Title (please type)

Orlando, Florida 32829
City, State, Zip Code

E-Mail address (if available) Jim.becker@ocfl.net

Copies to: Dan.morrical@ocfl.net
James.flynt@ocfl.net

Telephone Number: (407) 836-6600

Date: August 15, 2009

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this solid waste management facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Mehran (Ron) S. Beladi
Signature

2301 Lucien Way, Suite 300
Mailing Address

Mehran (Ron) S. Beladi, P.E., Sr. Eng. Manager
Name and Title (please type)

Maitland, Florida 32751
City, State, Zip Code

Ron.Beladi@neel-schaffer.com
E-Mail address (if available)

Telephone Number: (407) 647-6623

41819

Date: August 15, 2009

Florida Registration Number
(Please affix seal)

Section 2

Part D - Prohibitions (62-701.300, FAC)

***Part E - Solid Waste Management Facility Permit
General Requirements (62-701.320, FAC)***



Part D – Prohibitions (62-701.300, FAC) and Part E - Solid Waste Management Facility Permit General Requirements (62-701.320, FAC)

2.1 Prohibitions

Orange County does not seek any exemptions to the prohibitions of 62-701.300. The Orange County Solid Waste Management Facility has approvals from local, state and federal regulatory agencies. Orange County does not permit burning on the site without written permission from the division of forestry and other regulatory agencies. The County has an extensive screening program and uses trained spotters and operators at the working face to examine the waste for prohibited materials. No "special waste" is accepted nor will be accepted at the Cells 9-10 Class I Landfill.

2.2 Permit Applications Copies (62-701.320(5)(a), FAC)

Four (4) copies of the completed operation permit application report, including all supporting data, are submitted herewith.

2.3 Certification (62-701.320(6), FAC)

Appropriate professional certifications are provided on all applicable submittals herewith.

2.4 Transmittal Letter (62-701.320(7)(b), FAC)

A transmittal letter to FDEP is submitted herewith.

2.5 FDEP Form (62-701.900(1), FAC)

A completed, dated, signed, and sealed application form is included at the end of Section 1.0 of this report.

2.6 Permit Application Fee

A check in the amount of \$10,000.00 for the permit application fee is submitted herewith.

2.7 Engineering Report (62-701.320(7)(d), FAC)

The Engineering Report is contained in this bound volume, submitted herewith. The report references existing information where needed and includes information that has changed since the original information was submitted.

2.8 Operation Plan (62-701.320(7)(e), FAC)

The operation plan has been revised for changes since the 2006 Cell 9 operations permit renewal submittal. The updated operation plan for Cells 9-10 is provided herein as Exhibit B.

2.9 Contingency Plan (62-701.320(7)(e)2, FAC)

The contingency plan is provided as part of the operations plan included in Exhibit B.

2.10 Drawings for the Solid Waste Management Facilities

The Record Drawings for Cell-9 and the construction drawings for Cell 10 were previously submitted and are on file with the Department. An updated regional map, a vicinity map with information less than one (1) year old is provided in Exhibit C. The construction as-build drawings for Cell 10 will be submitted to the Department as part of Stage 1 and 2 Certifications of Completion of Construction.

2.11 Proof of Property Ownership (62-701.320(7)(g), FAC)

Orange County currently owns approximately 5,000 acres of land in eastern Orange County that has been designated by the County for solid waste management activities. The County is currently using approximately 1,500 acres, referred to as the 1,500-acre Existing Landfill Site, for Class III solid waste landfill activities and other solid waste management operations. The northern portion of the Fisch Parcel has been developed as an administration and maintenance facility.

Cells 9-12 are located on the 3,500 acre Southern Expansion Site (SES.) The purpose of this permit application is to continue operation of the Cells 9-10 Class I solid waste landfill in the SES. Proof of property ownership for the landfill properties were previously submitted in Volume 1 of the 2000 permit application.

2.12 Recycling Goal Achievement (62-701.320(7)(h), FAC)

Orange County has an active solid waste recycling program and promotes solid waste recycling within the County to continually improve the program. A private vendor under long-term contract has constructed a single source recycling center at the Landfill. Achievement of recycling goals is no longer mandated by the State of Florida.

2.13 History of FDEP Enforcement Activities (62-701.320(7)(i), FAC)

The only Department enforcement activity since the Cell 9 operation permit was issued on January 23, 2006 regarding the Title V Air Permit requirement for Cell 9 LFG control system. The matter was resolved by providing details and clarifications of previously permitted landfill gas collection system and incorporating the new information in the Cell 9 operation permit.

2.14 Proof of Publication of Landfill Permit Applications (62-702.320(8), FAC)

The proof of publication in a newspaper of general circulation of notice of application for a permit to operate a solid waste management facility will be provided to the Department upon receipt of notification from the Department to publish the Notice of Application.

2.15 Airport Safety Requirements (62-701.320(12), FAC)

Cells 9-12 disposal areas in the SES are within five (5) miles of Orlando International Airport. The proposed landfill location and height was approved by FAA previously. Copies of FAA approval and related correspondence were previously submitted as part of Volume 1 of the 2006 Cell 9 Operations Permit Renewal submittal and are on file with the Department.

Section 3

***Part F - Landfill Permit Requirements
(62-701.330, FAC)***

***Part G - General Criteria for Landfills
(62-701.340, FAC)***



SECTION 3.0

Part F - Landfill Permit Requirements (62-701.330, FAC) and Part G General Criteria for Landfills (62-701.340, FAC)

Between 1988 and 1992, Orange County acquired approximately 3,500 acres adjacent to its existing landfill site to meet projected waste disposal needs. Of the 3,500 acres acquired, the County specifically purchased approximately 3,000 acres south of Young Pine Road to support the expanding landfill activities. The County constructed Cell 9 covering 65 acres on the Western Upland Area (WUA) of the South Expansion Site (SES) in 2003 and 2004 to ensure continuous Class 1 disposal capacity. Cell 10 covering 82 acres directly south and adjacent to Cell 9 was permitted by FDEP and is currently under construction. The Construction is contracted to be substantially completed in two stages approximately in November 2009 and May 2010. This application is for extension of the Cell 9 solid waste disposal operations into Cell 10 after certification of completion of construction of each stage by FDEP.

3.1 Zoning and Land Use (62-701.330 (4)(a), FAC)

3.1.1 Vicinity Map

Exhibit C includes a vicinity map that shows the area covering one (1) mile from Cells 9-10 and the OCSWMF. Minimal development is located to the south with the exception of the southeast corner of the SES. Industrial Corporate Park (ICP) is located approximately one-half mile east of the OCSWMF and south of the Beachline Expressway (SR-528.) The SES properties are buffered by the Beachline Expressway to the south and the Southern Beltway (S.R. 417) to the west. The Orlando International Airport is located southwest of the landfill. Several developments consisting of single family homes and multifamily communities have been constructed along Young Pine Road during the early part of this decade.

3.1.2 Existing Land Use and Zoning

Figures C-1 through C-4 in Exhibit C show the land parcels within a one-mile radius of the landfill property boundary.

The property owners within each section, township, and range within one mile of the boundary of the existing landfill and SES are identified. The one (1) mile vicinity map contains multiple residential subdivisions that have been rezoned and developed since 2000.

The list of landowners was developed using the Orange County Tax Assessor's computer database for September 2008 and the Tax Assessor's maps, and included in Exhibit C. Note that the map designation for residential Planned Urban Development (PUD) shows only the development as a single PUD parcel. PUD parcels are also shown as one property, even though there are multiple landowners. Land Use and Zoning information was obtained from the Orange County Planning Department's County Zoning District Map.

In 2008, the majority of the properties located within one (1) mile of the OCSWMF and SES were zoned Agricultural and Planned Development. Many of the planned developments along Young Pine Road (northwest and north of the OCSWMF) have been constructed. Property to the east continues to be owned by the Orlando Utilities Commission and the City of Orlando. Properties located south of the SES remain classified as rural land use and agricultural zoning.

The most populated residential areas exist along Young Pine Road south of Curry Ford Road. These properties located to the west of the OCSWMF are designated Residential. Based on the information available on the September 2008 property appraiser's database and the County zoning map, minimal additional residential construction is planned for the next five (5) years in the immediate vicinity east, south and west of the SES.

3.2 Airport Location (62-701.330 (3)(b), FAC)

The proposed landfill is more than 10,000 feet but less than 5 miles from the Orlando International Airport Runway No. 4 as shown in Attachment 2 of the addendum to the November 2000 SES submittal.

FAA notification for the proposed Cell 10 disposal area was provided as noted in Section 2.15. Copies of the notification letters and response are included in Attachment 2 of the December 2000 submittal and Addendum No. 1 to the November 2000 submittal, on file with the Department. A location map included in Exhibit C to this Application shows the location of the OIA fourth runway and its distance from the OCSWMF. Five and ten mile distances are also indicated on this exhibit.

3.3 Plot Plan and Cross Sections (62-701.330 (3)(c), FAC)

The construction plans and details for Cell 10 were submitted to FDEP in Volume II of III as part of the Cell 10 Construction Permit Application. The plans included information regarding landfill base grading, liner system and cross sections. The plans also show associated leachate, gas management and stormwater management facilities.

The plot plan showing locations of proposed groundwater monitoring wells was previously presented in Volume III of the Cell 10 Construction Permit Application. Monitoring wells permitted to be added to the groundwater monitoring well system as part of Cell 10 operations include well clusters 495 and 500 at the southeast edge of Cell 10. Well cluster 500 was developed as part of Cell 9 and the required information was submitted to FDEP at that time. Well cluster 495 were recently constructed, developed and analyzed. The development report for well cluster 495, survey of the wellhead locations and elevations, as well as water analyses results were submitted to FDEP under separate cover. A copy of the submittal is included in Exhibit F.

3.4 Topographical Information and Survey (62-701.330(3)(d), FAC)

The topographic survey map for Cells 9-10, with a scale not greater than 200 feet to an inch showing proposed fill areas, borrow areas, and access roads, were submitted as part of Volume II of the Cell 10 Construction Permit Application (Drawings C-2 through C-17.)

Waste filling and cover grades required for proper drainage are depicted on Sheets C- 25 through C-35 of the same submittal on file with the Department.

3.5 Report Describing the Landfill (62-701.330(4)(e), FAC)

3.5.1 Current and Projected Population of Area Served and Type and Quantity of Waste Projections

The projections for the generation of Class I waste to be disposed at the OCSWMP through the year 2040 are based on existing solid waste tonnage reports and population projections available from the Bureau of Economic and Business Research (BEBR). Waste tonnage projections for Class I waste are based on a Bureau of Business Research (BEBR) medium population growth scenario (Medium Population Analysis). Medium population growth Class I disposal quantity projections were based on the following assumptions:

- Class I solid waste disposal tonnage will increase in direct proportion to population rate of growth (i.e., the per capita disposal rate will remain constant)
- The base quantity for future Class I solid waste disposal projections is the average annual Class I disposal rate for the past 3 years and inflating by the projected growth rate. Subsequent year projections are calculated by increasing the previous year's data by the growth year for that year.

At the end of 2008, the County accepted approximately 742,403 tons of Class I solid waste for disposal in Cell 9, a 6.8% increase from 2007 Class I solid waste quantities. The updated long-term tonnage projections were reported to FDEP as part of the FY 2008 Financial Responsibility Cost Estimate Report.

3.5.2 Anticipated Site Life

Phased Development Plan for Class I Landfill Cells

A development plan for constructing and closing Class I solid waste landfill cells 9-12 was presented in the Volume I of the 2000 permit application. The development plan for Cell 10 has been adjusted by about one year due to the unexpected efforts by the County to clear the site of Unexploded Ordnance (UXO) from the previous use of this site during WWII by the US Military.

The disposal capacity remaining in Cell 9 as of May 2009, and the added disposal capacity from Cell 10 expansion will total approximately 13.3 million cubic yards (or an estimated 10.3 million tons.) This permitted capacity, once completion of construction is certified, will provide sufficient Class I solid waste disposal capacity for Orange County's projected solid waste for approximately 10-12 years. The projected solid waste capacity utilization for Cells 9-10 is presented in Table-2 of the FY 2008 Financial Responsibility Cost Estimate Report on file with the Department.

Typical Cell Cross Sections

In accordance with previously submitted documents as part of the 2000 permit application, the cross sections for the Cell 9 and Cell 10 Class I landfill were developed based on site geometry and the following criteria:

- Maximum cell side slope of 4:1 at closure
- Minimum cell top width of 200 feet at closure
- Waste placed in 20 foot lifts
- Setback for drainage swales construction every 20 vertical feet

3.5.3 Cell Closure Phasing

Closure schedules are typically estimated based on solid waste volumes, decomposition of the waste and other variables in operations. The closure phasing will be based on achieving final permitted elevations, and decomposition and settlement of the solid waste mound prior to installation of final cover. This allows the full use of permitted capacity and reduces differential settlements of the partially closed waste mound.

The operation sequence plan for Cells 9-10 is a continuation of Cell 9 stair-step operation configuration expanding into the new disposal areas. The last three (3) lifts of Cell 9 can't be filled until Cell 10 has reached the heights to enable construction of an access road to those lifts and eventually making Cells 9-10 into one contiguous disposal area. Therefore, sequential closure of Cells 9-10 side slopes would need to be scheduled for at least after the last three lifts in Cell 9 are filled to final permitted elevations and the decomposition of the waste mound has been stabilized.

The County will submit a sequential closure construction plan under a separate permit application when the final permitted lifts and final elevations have been achieved.

3.5.4 Source and Type of Cover Material

Tarps are used as initial daily cover at the working face. Sand, silty sand, and clayey sand excavated from the onsite borrow pits and stormwater ponds will be used as cover material. Borrow areas and stormwater ponds are shown on drawings on file with the Department submitted in the November 2000 submittal.

Development of borrow sources will be consistent with the borrow plan presented in the November 2000 submittal, although the timing or extent of borrow used for each phase will vary depending on the operational needs and construction activities on site. The cover for Cells 9-10 will come from the excavation of stormwater ponds on the WUA, material from the permitted borrow pits on the WUA, or from the permitted borrow pits on the Eastern Upland Area (EUA). The schedule for development of the WUA will also be dependent on the Unexploded Ordnance (UXO) clearance of by the USACOE.

The County will closely monitor the use and availability of cover material to insure that adequate material is always available. If at any time during the life of Cells 9-12 it appears that an adequate supply of material is not available onsite for cover and construction, future Cell development and other construction activities will be performed using off site soils.

3.6 Water Quality Laboratory Requirements (62-701.330(4)(h), FAC)

Surface and groundwater quality testing for the landfill is currently conducted by a qualified laboratory under contract with the Orange County Utilities Laboratory (OCUL) in accordance with F.A.C. 62-160. Samples are collected by contractors under the supervision

of the Environmental Compliance Section of the Orange County Solid Waste Division. The current Laboratory Certification No. E53398 was approved by the State of Florida Department of Health, Bureau of Laboratories.

3.7 Closure and Long-Term Care Financial Responsibility (62-701.340(4)(i), FAC)

Orange County has used and plans to continue using the Corporate Guarantee mechanism to demonstrate financial responsibility for closure and long-term care of the County-owned disposal facilities. The County maintains an escrow fund to pay for closing costs of the disposal areas. Long-term care costs are paid for through a combination of escrow account withdrawals and annual operating funds. Section 12 of this report includes information regarding OCSWMF closure and long-term care financial responsibility.

3.8 Part G - General Criteria for Landfills (62-701.340, FAC)

3.8.1 100-Year Flood Plain (62-701.340, FAC)

The site of Cells 10 disposal unit is mostly in areas designated as Zone C and partially in areas designated as Zone A on the Federal Emergency Management Agency (FEMA) flood insurance map. Zone C is defined as area of minimal flooding and above the 100-year flood stage. Zone A is defined as area of 100-year flood with base flood elevations and flood hazard factors not determined. A copy of the FEMA map was included as Figure I-3-2 of the November 2000 submittal.

3.8.2 Horizontal Separation of Waste Cells from Property Line (62-701.340(4)(c), FAC)

As shown on drawings submitted as part of the FDEP Construction Permit Application for Cell 10 (drawings C-2, C-4 and C-6, Volume II of III) Pond 7 lies between Cell 10 foot-print and the west property line. Pond 7 has a width of approximately 400 feet on its north end narrows to about 120 feet along its southern edge. Distance to the western property line increases as cell development moves southward.

3.8.3 Visual Screening (62-701.340(4)(d), FAC)

Cells 9-10 are bordered by Young Pine Road to the north, and by stormwater ponds and wetlands to the east and west. A minimum of 150 feet of buffer zone is kept between the Cells 9 and Young Pine Road. To enhance visual screening, as part Cell 9 construction, the existing trees along Young Pine Road and the west buffer zone were supplemented with planting additional pine and live oak trees. Cell 10 is on the interior of the SES directly south of Cell 9. It is buffered by forest, preserved wetlands, vegetation and Cell 9.

Section 4

Part H - Landfill Construction Requirements (62-701.400, FAC)



Part H - Landfill Construction Requirements (62-701.400, FAC)

4.1 Phased Construction and Closure of Landfill Units (62-701.400(3), FAC)

Cell 10 is currently under construction. The remainder of the planned disposal areas in the SES will be constructed in two future cells, Cells 11 and 12, each covering approximately 70-acres and contiguous with Cells 9-10. The approximate schedule for cell construction is presented in Volume I of 2000 permit application and will depend on the need. As solid waste disposal in Cells 9-10 progresses, the County will initiate permitting for construction of Cell 11. It is likely that the disposal operations in the top tiers of Cell 10 will require access from Cell 11 due to the stair-step method of operation. Hence, the County's initiative for permitting for Cell 11 may be started well in advance of exhausting all the capacities in Cells 9-10.

Closure planning will be initiated once Cells 9-10 are operational. Active LFG collection system will continue to be installed as part of the operation. Interim stormwater letdown structures will be installed as part of operation to minimize side slope erosion. The schedule for closure design and permitting will be decided based on solid waste volumes, decomposition of the waste and other variables. The actual sequential closure construction will be based on achieving final permitted elevations, and decomposition and settlement of the solid waste mound prior to installation of final cover. The County will obtain a permit from FDEP for construction of sequential closure of Cells 9-10.

4.2 Landfill Liner Requirements (62-701.400(3), FAC)

4.2.1 General Construction Requirements

Landfill liner requirements are not applicable for this operations permit application. The checklist items pertaining to construction have been designated as "Not Applicable" on the application form. The Cell 9 bottom liner system was constructed as permitted, and Cell 10 construction is proceeding under permit No. SC48-0128169-022.

4.3 Leachate Collection and Removal System (LCRS) (62-701.400(4), FAC)

4.3.1 Leachate Handling System for SES

The leachate collection and removal system for Cell 9 was constructed in substantial conformance with the approved permit and permit drawings. Construction phase portions of the application have been marked "Not Applicable." The Cell 10 leachate collection and removal system is the same design as the Cell 9 system. There is no significant change in

operation of the leachate collection and transmission system. An overview of the operation of the installed leachate removal system is provided in Section 7.0.

4.4 Leachate Recirculation (62-701.400(5), FAC)

Orange County is planning to implement the option for leachate recirculation by construction of a delivery pipe to the horizontal gas collectors. The horizontal gas collectors will continue to be constructed near the top of lifts as filling progresses. Leachate recirculation pumps and valves will be installed inside of the leachate storage tank secondary containment area, and a dedicated leachate recirculation force main, permitted as part of Cell 10 construction permit, will transmit leachate from the leachate storage tank back to the Cells 9-10.

A system of pipes, valves and horizontal injection trenches as described in Section 7.0 may be used to re-circulate the collected leachate back into the disposal area. The leachate recirculation pumping system modifications are under construction and will be certified as part of Cell 10 construction completion certification.

The leachate collection system has been designed to accommodate the recirculated leachate volumes. Initial and intermediate cover will be permeable to the extent necessary to prevent perched water conditions and gas buildup. Leachate will not be recirculated during wet weather conditions and temporary berms will be used as one option to control leachate runoff. The current Cell 9 active LFG management system will be extended into Cell 10 to continue control of odors and migration of methane.

4.5 Leachate Storage Tanks and Surface Impoundments (62-701.400(6), FAC)

4.5.1 Leachate Surface Impoundment (62-701.400(6)(b), FAC)

This section is not applicable. Leachate surface impoundments are not used.

4.5.2 Above Ground Leachate Storage Tank (62-701.400(6)(c) FAC)

Construction requirements for above ground leachate storage tanks are "Not Applicable" to this operation permit application. Two ½ million-gallon ground storage tanks made of glass- fused steel panels have been constructed to temporarily store leachate pumped from SES Cells 9-12 disposal areas. Details of the construction materials, corrosion protection and operation are provided in Section 7.0 and the Exhibit B Operations Plan. Minor modification of the tanks for the leachate recirculation system was permitted as part of Cell 10 Construction Permit application.

4.5.3 Underground Leachate Storage Tank

This section is "Not applicable" to an operations permit application

4.6 Liner System Construction Quality Assurance (CQA) (62-701.400(7), FAC)

This section is not applicable to the Cells 9-10 operations permit application.

4.7 Soil Liner CQA (62-701.400(8), FAC)

This section is not applicable to this permit application.

4.8 Surface Water Management System (62-701.400(9), FAC)

The overall management and storage of surface waters in the SES for Cells 9-12 was presented in Volume VII of the 2000 permit application as was permitted by the Conceptual Environmental Resource Permit (ERP) (Permit No. ERP48-0177603-EI) by the Submerged Lands and Environmental Resource Section of FDEP. The portion related to the Cell 10 was permitted as part of a construction ERP (Permit No. ERP48-0177603-006). This included completion of excavation of ponds 7 and 8 and installation of stormwater discharge structures as approved by the Conceptual ERP. The construction ERP requires notification to FDEP by the County at completion of construction for inspection of the post-construction stormwater facilities and approval of certification of completion of construction in accordance with the permit documents.

The surface water management system for the proposed landfill cells in SES was shown in drawings C-25 through C-30 in Volume II of the Cell 10 Construction Permit Application. The stormwater run-off will be collected on the landfill final cover by a series of terraces and side swales with downdrain pipes that drain to the primary stormwater system. The primary stormwater manholes and the discharge structures for the future downdrains are permitted for construction as part of Cell 10 construction permit.

Interim secondary stormwater run-off control structures will be placed on the intermediate covered side slopes in Cell 10 similar to Cell 9 in order to control erosion, keep the clean stormwater run-off from the open face of the disposal area and reduce leachate. The construction details for the interim run-off control structures were previously permitted as part of Cell 9 operation permit and are also included in Section 7.0 of Exhibit B to this permit application.

4.9 Gas Control System (62-701.400(10), FAC)

The plans for LFG collection piping, perimeter piping for transmittal of the on-site flare station along with the condensate removal system were permitted as part of the Cells 9 Construction and Operation Permit, and Cell 10 Construction Permit. The horizontal collector system will continue to be constructed as part of the operation as detailed in this application to remove LFG during the operation of Cell 9-10. The horizontal LFG collector system installed in each lift in accordance with the Cell 9 Operation Permit is requested to be extended to Cells 9-10. The County plans to extend the horizontal LFG collector system for Cell 10 as the unit is filled. The extension of perimeter piping for collection and transmission of the LFG to the flare unit along with extension of the condensate removal system was permitted by FDEP as part of Cell 10 Construction Permit. The plans for a typical horizontal landfill gas collector in Cells 9-10 is the same as that which was previously permitted for Cell 9 and is included in Section 7.0 of Exhibit B attached to this permit application.

The County plans to have a permanent Blower & Flare Station constructed. The Station will be capable of handling the LFG predicted to be generated from Cells 9-10 in compliance

with the Title-V Air Emissions Permit. Based on the result of our pre-application meeting with FDEP, it was decided by the Department that the construction of the permanent Blower/Flare station should be permitted through submittal of an Application for Title-V Air Construction Permit.

4.10 Landfill Gas Recovery Facilities (62-701.400(11), FAC)

Landfill gas recovery and utilization facilities for gas generated as a result of solid waste disposal in Cells 9-12 are planned. The County has entered into an agreement to sell the LFG to the Orlando Utilities Commission (OUC) for use as fuel in generation of power in an off-site location.

Based on the result of our pre-application meeting with FDEP, it was decided by the Department that the construction and operation of the LFG pipeline to transmit the collected and treated LFG from SES to OUC's CHSEC be permitted through an Intermediate Modification of Cells 9-10 Solid Waste Operation Permit.

The County will prepare an application to modify the operations permit when the OUC pipeline plans are finalized. The current Title-V Air Emissions Operation Permit will also be modified by the County to include LFG emissions for Cells 9-10.

Section 5

***Part I and J - Hydrogeological and Geotechnical
Investigation Requirements
(62-701.410 FAC)
(62-701.420, FAC)***



SECTION 5.0

Parts I and J - Hydrogeological and Geotechnical Investigation Requirements (62-701.410, FAC) (62-701.420, FAC)

This information for this Section was presented in Volume IV of the 2000 permit application. Additional geotechnical borings and monitoring well evaluation was performed for the Cell 10 expansion and was included as Volume III of III of the December 2007 permit application for Cell 10 Construction on file with the Department.

Due to the larger foot-print of Cell 10 compared to the prior Year 2000 development plan, an additional well cluster (495) is required to be installed for Cell 10 that would have not been installed until Cell 11 construction.

The well development documents, elevations and water analyses for these wells were provided to FDEP under separate cover. A copy of the submittal is included in Exhibit F.

Since the wells were already in the approved year 2000 permit application for development of SES and are not requested to be changed, this permit application has been marked "No Change."

Section 6

***Part K - Vertical Expansion of Landfills
(62-701.430, FAC)***



SECTION 6.0

Part K - Vertical Expansion of Landfills (62-701.430, FAC)

This part is not applicable for this permit application. The permit application has been marked "No Applicable."

Section 7

Part L - Landfill Operation Requirements (62-701.500, FAC)



SECTION 7.0

Part L - Landfill Operation Requirements (62-701.500, FAC)

The bulk of information for this Section was updated and presented in the April 2006 application for renewal of Cell 9 Operation Permit. The Landfill Operations and Maintenance Plan (O&M Plan) for the original 1500-acre landfill and the SES Cell 9 remains the same with only minor changes as a result of expansion of the operations onto Cells 9-10.

The O&M Plan previously submitted is updated for Cells 9-10 Operation Permit Application and included as Exhibit B. The updated O&M Plan includes information on the new leachate recirculation system, minor operational changes to SES leachate system, and the Cells 9-10 LFG management system.

A brief description of leachate collection and removal systems, leachate recirculation and the leachate storage tank systems are provided in this Section.

7.1 Description and Operation of Cell 9-10 Leachate Collection and Removal System

Cells 9-10 are subdivided into operation bays with each bay containing a primary and a secondary leachate collection pump. Cell 9 consists of seven bays (1 through 7), and Cell 10 consists of nine bays (Bays 8 through 16.) Leachate collected in each bay is pumped to the leachate storage tanks. An integral level control device controls the start and stop of the pumps. Pumps automatically start when the leachate has reached a predetermined level in the bay and it stops when the leachate level falls below a predetermined level.

Leachate is pumped through a 4-inch diameter transmission main to two leachate storage tanks (glass-lined steel Tanks A and B) with ½ million gallon capacity each. The main headers for the primary and secondary leachate lines allow enough space for pigging should the pipeline need cleaning in the future. Clean outs are located at approximately 200-300 feet spacing along each line.

The leachate storage tanks are located along the main entrance road east of Cells 9-10 and are sized with sufficient capacity to handle leachate from Cells 9-12. The leachate from the storage tanks is pumped into the master leachate pump station, where it is transmitted to the Orange County Utilities Eastern Water Reclamation Facility (OCEWRF) for treatment and disposal.

Prevention of Clogging

Leachate collection pipes are backfilled with imported natural river gravel with a maximum size of 3/4 inch or less and less than 5 percent passing the 3/8 inch sieve, which, in turn, are wrapped with filtration geotextile to prevent clogging of the leachate collection system by infiltration of fine particles from the waste. In addition, the leachate collection pipes are covered with a layer of Composite Drainage Net (CDN) and 24 inches of drainage sand.

Cleaning of Leachate Collection Pipes

The Leachate Collection System (LCS) for Cells 9-10 was designed and permitted with cleanout pipes for cleaning the collection system. The LCS in Cell 9 (for bays 1 through 7) are planned to be cleaned and videotaped as part of Cell 10 construction contract by a specialty subcontractor who has experience with this type of work. New Cell 10 leachate collection and secondary leak detection pipes will be cleaned and videotaped after installation as part of Cell 10 construction.

The Cell 9 LCS pipes are required by FDEP to be cleaned every five (5) years or at the time of application for permit renewal. The cleaning report and videotaping for Cell 9 LCS will be submitted to FDEP, along with videotape of bays 8, 9 and 10 of Cell 10 leachate collection and leak detection pipes as part of the documents for Stage 1 Certification of Completion of Construction. This allows Cells 9-10 bays 1 through 10 be permitted for solid waste disposal operation as part of Stage 1.

Videotape of bays 11-16 of Cells 9-10 will be submitted as part of Stage 2 Certification of Completion of Construction.

7.2 Description of Above-Ground Leachate Tanks

As part of Cell 9 construction, two ½ million gallon capacity glass fused steel tanks were built to provide for on-site leachate storage for Cells 9-12. Tanks A and B have a secondary containment area. In the event one or both tanks are damaged, the secondary containment area can hold 110 percent of the combined tank volumes.

As part of the normal operation of the system, leachate from tanks A and B flow by gravity to the master pump station for transmission to the Eastern Water Reclamation Facility (ERWF) for treatment and disposal. Leachate from the tanks can also be pumped to a tanker-truck loading area just north of the secondary containment area. Controls for the master pump station are being upgraded to better instrumentation and control technology as part of the Cell 10 construction project.

7.3 Operational Procedures for Above-Ground Leachate Storage Tanks

Level control devices installed in the storage tanks also control the operation of leachate pump:

- When the leachate storage tank is full the high-level control device (LSH) in the tank sends a signal that disables the leachate pumps in the bays.
- When the level in the leachate storage tank falls to a predetermined level (e.g., 3 feet below the high level setting), the medium level control device (LSM) sends a signal that enables the leachate pumps. The interval between the LSH and LSM will be determined based on the frequency of pump starts.
- New high level and low level transducers and transmitters for operation of the leachate recirculation system will be added to each of the tanks as part of Cell 10 construction.

Transfer Pump

Normally, leachate flows by gravity from the leachate storage tanks to the master pump station. For high flow conditions, one leachate transfer pump is provided for pumping of leachate from the storage tanks. The local control panel located near the leachate storage tanks controls the operation of the leachate transfer pump. The panel has:

- A switch for manual or automatic operation
- An elapsed time meter (to record running time)
- An alarm light on top of the panel to indicate failure of the pump.
- ON/OFF indication lights to indicate status of the pump

Level control devices are installed in the storage tanks to control the operation of the transfer pump:

- When the storage tank is almost empty a low-low level control device (LSLL) sends a signal that "disables" the transfer pump.
- When the leachate level in the storage tank rises to a predetermined level (e.g., 3 feet above the above the LSLL), a low level control device (LSL) sends a signal that "enables" the transfer pump. The interval between the LSLL and the LSL will be determined based on the frequency of pump starts.

The above operations are controlled through a Programmable Logic Controller installed in the local control panel and remote input/output (I/O) points located in each local control panel for leachate pumps.

Sump Pumps for Removal and Disposal of Stormwater from Secondary Containment System

The secondary containment area is equipped with two sump pumps. The local control panel located near the leachate storage tanks has a switch for manual operation for each sump pump and ON/OFF Indication lights that indicate the status of each pump. A low-level switch in the sump will automatically stop the operation of the pumps. When there is liquid in the containment area, a technician will check the water in the containment area to determine if it is rainwater or leachate. If it is rainwater, it will be discharged to Pond 6 by starting the sump pumps. If it is leachate, it will be pumped to the master pump station by the transfer pump. The determination of whether the water in the containment area is rainwater or leachate will be based on visual examination first. Specific conductance will be measured if visual examination is not conclusive.

Overfill Prevention System

A high-high level switch is installed on each storage tank. A LSHH inside the tank will set off an alarm before a spill occurs. A common local audible alarm is provided on control panel.

Inspections, Corrective Action and Reporting Requirements

Orange County inspects the exposed exterior of the leachate storage tanks weekly for leaks, and maintenance deficiencies. Orange County will inspect the interior of the tanks whenever the tank is drained or, at a minimum, every three (3) years. If the inspection reveals a tank or equipment deficiency, leak, or any other deficiency which could result in failure of the tank to contain the leachate, remedial measures will be taken immediately to

eliminate the leak and correct the deficiency. Inspection reports will be maintained and made available to the Department upon request for the lifetime of the liquid storage system.

As part of the Cell 10 construction project, which includes minor modification of the tanks for leachate recirculation, the tanks will be drained and inspected by representatives of the tank manufacturer. Only one tank will be removed from service at a time. The identified deficiencies to the metal, glass fused surfaces and piping will be repaired by the manufacturer's representative.

7.4 Leachate Recirculation System

This section describes the components and the proposed operation of the leachate recirculation system. The recirculation pumps, recirculation header and header tees for cell 9 -10 will be installed as part of the Cell 10 construction project. This will allow the County to have the capability to re-circulate leachate back to the disposal area if the County determines that it would improve the disposal operation during dry periods. The leachate recirculation system is not intended to lock in the Cells 9-10 Operations Permit with any mandatory leachate recirculation operations.

7.4.1 System Description

The leachate recirculation system will consist of the following components:

1. **Storage tanks** -The two (2) existing leachate storage tanks, with ½ million gallon capacity each, will serve as the source of leachate for the recirculation process.
2. **Recirculation pumps** -Two in-line submersible pumps, one duty and one standby, permitted to be located in the leachate storage tank containment area (see Volume II, Sheets M-12 and M-13, Cell 10 Construction Permit Application) may be used to transfer leachate back to the landfill cells. The discharge pipe from each pump will be equipped with a check valve and a pinch valve. The pumps will meet the hydraulic head requirements for pumping to the highest horizontal injection trenches (HITs) in the southernmost part of Cell 12. Due to the differences in injection elevations and distances from the pumps, the total dynamic head of the pump and the flow rate will vary for different HITs. The maximum flow rate of approximately 150 gpm will occur when pumping to the bottom layer of the HITs in the north end of Cell 9; and the minimum flow rate of approximately 90 gpm will occur when pumping to the top layer of HITs in the south end of Cell 12. The average flow rate of all HITs will be approximately 120 gpm, which is the design recirculation flow rate and is twice the estimated average leachate production rate with recirculation. A flow meter will be installed on the discharge of the pumps to monitor the volume of leachate being injected.
3. **Recirculation common header** -A 4" SDR 11 HDPE pipe will be installed along the west side of the Cells 9 -10 to convey the leachate to the cells. Fittings will be installed at 40 ft spacing on the common header and capped for future connections to layer header pipes. To avoid interference with the leachate collection and gas collection pipes, the common header is permitted by FDEP to be routed along the east side of Pond 6 and the north side of Cell 9 to the west side of Cells 9-10. The common header will be capped at the south end of Cell 10 and in the future may be

extended to the south end of Cell 12 for the future recirculation need of Cell 11 and Cell 12.

HDPE layer headers, lateral pipes and horizontal injection trenches may be constructed to apply the leachate back to the waste mound. The west and east ends of the trenches will both be plugged with bentonite and the pipes on the west side will not be perforated within 50 ft of the slope to minimize the potential leachate migration of the side slopes. The horizontal injection trenches will be aligned in parallel with and offset from the gas collection pipes on the same layer of lift and the immediate lift layer below to avoid flooding the gas collection pipes.

7.4.2 General Operation Procedures for Leachate Recirculation

1. The injections be performed on one layer header at a time. The first step in performing the injection is to open the selected layer header valve and close the other layer valves. Open the lateral valves downstream of the layer valve.
2. Position operators at the valves, including the layer valve and the lateral valves, and the recirculation pump. The operators are to be equipped with two-way radios for communication during the pumping process. Once the operator at the layer valve has confirmed that the valve settings are correct, he will notify the operator at the pump to activate the pump and confirm that flow is going through the correct valves.
3. The operator at the pump will record the flow meter reading prior to pumping and at the completion of pumping so the volume of leachate pumped into the HITs can be calculated.
4. Pumping will stop after approximately 8 hours to ensure an optimal injection rate. At that time the pump operator will shut down the pump and notify the valve operator to close the layer valve and the lateral valves. The process will start over for another pair of HITs.
5. The optimal injection rate may initially be set at approximately 4,600 gpd/acre and may be adjusted according to changed conditions and with consideration of the leachate production rate, rainfall data, leachate level measurement in each bay, and operation procedures. If the injection rate is changed, the pumping time for each rotation will change accordingly.

Section 8

Part M - Water Quality & Leachate Monitoring Requirements (62-701.510, FAC)



SECTION 8.0

Part M - Water Quality and Leachate Monitoring Requirements

(62-701.510, FAC)

No change to the current water quality and leachate monitoring requirements is proposed in this application. The permit application has been marked "No Change."

Well cluster 495 (shallow and intermediate wells) was developed in the southeast corner of Cell 10 in accordance with the construction permit requirement. The well development report, as-build elevations and water analyses were provided to FDEP under separate cover. A copy of the submittal is included in Exhibit F of this application.

The County submits semiannual and annual reports as required by the MPIS and the conditions of the current operations permit.

Section 9

***Part N - Special Waste Handling Requirements
(62-701.520, FAC)***



SECTION 9.0

Part N - Special Waste Handling Requirements (62-701.520, FAC)

This section is not applicable. The permit application has been marked "Not Applicable."

Section 10

Part O - Gas Management System Requirements (62-701.530, FAC)



Part O-Gas Management System Requirements (62-701.530, FAC)

10.1 Interim Landfill Gas Management System

In accordance with the good neighbor policy of the OCSWMF, the County designed, permitted and implemented a gas control system to control odors prior to the initial five (5) years of solid waste filling in Cell 9. In 2007, as part of the Title-V Air Operation Permit requirement, the County included the emissions from Cell 9 operations in the Annual Operating Reports.

The permitting and construction of Cell 9 included installation of a 24-inch diameter LFG perimeter header pipe along the north, east and west edges of Cell 9 for the future transmission of LFG to a landfill gas recovery or flare station. The County has installed horizontal landfill gas collectors and connected to the header pipe in accordance with the permitted plans. An interim skid-mounted flare station with an 8-inch diameter flare is currently set-up at the site of the planned permanent LFG blower/treatment/flare station and connected to the header pipe. Operation of this system was permitted as part of Cell 9 Operation Permit and has been reported in the annual Title-V status report beginning in 2007.

The County plans to continue with the installation of horizontal LFG collectors, valves and piping as Cells 9-10 filling continues in accordance with the plans included in the O&M Plan in Exhibit B.

10.2 Permanent Landfill Gas Management System

The planning for the permanent management of LFG from Cells 9-12 has been completed. The County has entered into an agreement with OUC for the utilization of the collected LFG as fuel in the Curtis H. Stanton Energy Center (CHSEC.) The LFG is planned to be treated and transmitted to the CHSEC through a dedicated LFG pipeline. As part of this plan, a permanent flare will also be constructed on site as a back-up to the utilization system to burn the collected LFG during the times the power plant is shut down for maintenance. This allows the County to fully comply with the requirement of the FDEP Title-V Air Operation Permit.

The permanent LFG collection system on the landfill unit will consist of the horizontal collectors that are installed during filling and permanent vertical wells at the time of sequential closure. The permanent collection system will be standard design and similar to the Cell 7B/8 LFG collection system and include well lateral piping, LFG headers and condensate removal system. The condensate removal system will tie into the Cells 9-12 primary leachate collection system.

Odor Control

Odor control will be accomplished initially by the system currently permitted and in place. The odor control system will be permanent with the construction and operation of the planned permanent blower/treatment/flare station.

Description of Routine Gas Monitoring System

The SES landfill gas monitoring plan was presented in Exhibit F of Volume I of the FDEP Permit application for Construction of the Cell 10. Currently, all monitoring points on the original 1500-acre landfill and the SES are sampled quarterly, and the results reported to the Department.

No change is proposed to the OCSWMF routine LFG monitoring program.

Section 11

***Part P - Landfill Final Closure Requirements
(62-701.600, FAC)***

***Part Q - Closure Procedures
(62-701.610, FAC)***

***Part R - Long-Term Care Requirements
(62-701.620, FAC)***



SECTION 11.0

Part P Landfill Final Closure Requirements (62-701.600, FAC), Part Q Closure Procedures (62-701.610, FAC) and Part R-Long Term Care Requirements

11.1 Closure Schedule Requirements (62-701.600(2), FAC)

Closure Schedule requirements were discussed in Volume 2 of the 2000 permit application. There are no changes proposed to the information previously submitted. The appropriate timing for closure of each landfill is planned in the Annual Financial Assurance Report.

11.2 Closure Permit General Requirements (62-701.600(3), FAC)

Closure permit general requirements were discussed in Volume 2 of the 2000 permit application. There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

11.3 Closure Report Requirements (62-701.600(4), FAC)

Closure Report Requirements were discussed in Volume 2 of the 2000 permit application. There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

11.4 Closure Design Requirements (62-701.600(5), FAC)

There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

11.5 Closure Operation Plan (62-701.600(6), FAC)

There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

11.6 Temporary Closure (62-701.600(7), FAC)

This section is not applicable. The permit application has been marked "Not Applicable."

11.7 Closure Procedures (62-701.610, FAC)

There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

11.8 Long-Term Care Requirements (62-701.620, FAC)

There are no changes proposed to the information previously submitted. The permit application has been marked "No Change."

Section 12

Part S - Financial Responsibility Requirements (62-701.630, FAC)



SECTION 12.0

Part S - Financial Responsibility Requirements (62-701.630, FAC)

The Financial Responsibility Cost Estimate Report for the period ending September 30, 2008 was submitted to FDEP in October 2008 and is on-file with the Department.

A copy of the response letter from FDEP dated April 6, 2009 accepting the cost estimates for Closure and Long-term Care of Cells 9-12 is included in Exhibit D.

The Financial Responsibility Cost Estimate Report will be updated and submitted on an annual basis as required by FDEP.

Exhibit A

FDEP Cell 9 Operation Permit

FDEP Environmental Resource Permit

FDEP Cell 10 Construction Permit





Jeb Bush
Governor

Department of Environmental Protection

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

Colleen Castille
Secretary

NOTICE OF PERMIT

By E-Mail
Jim.Becker@ocfl.net

In the matter of an
Application for Permit
by:
Mr. James W. Becker
Orange County Utilities Solid Waste Division
5901 Young Pine Road
Orlando, FL 32829

OCD-SW-06-0455

Orange County – SW
Orange County Solid Waste Management Facility,
Cell 9 – Class I
Permit Application No. SO48-0128169-018

Dear Mr. Becker:

Enclosed is Permit Number SO48-0128169-018 to operate the Orange County Solid Waste Management Facility, Cell 9 – Class I, in Orange County, FL., issued under Section(s) 403.061(14) and 403.707, of the Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit under section 120.68 of the Florida Statutes, by the filing of a Notice of Appeal under rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

F. Thomas Lubozynski for

Vivian F. Garfein
Director, Central District
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803
407/894-7555

Date: September 26, 2006

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

E. Williams

Sept. 26, 2006

Clerk

Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on September 26, 2006 to the listed persons.

E. Williams

Clerk

VFG/gc/ew

Enclosure

Copies furnished to:

Richard Tedder, P.E. – DEP – Tallahassee

Fred Wick – DEP – Tallahassee

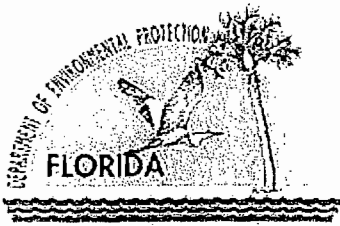
Mehran (Ron) Beladi, P.E. – CH2M/WCG Joint Venture rbeladi@neel-schaffer.com

Dan Morriscal, P.E. – Orange County Utilities Solid Waste Division Dan.Morriscal@ocfl.net

James Flynt, P.E. - Orange County Utilities Solid Waste Division – James.Flynt@ocfl.net

Orange County Environmental Protection Dept. – lori.cunniff@ocfl.net

Len Kozlov, P.E. – Air Resource Management – DEP – Central District



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen Castille
Secretary

Permittee:
Orange County Utilities Department
Solid Waste Division
5901 Young Pine Road
Orlando, FL 32824

WACS Facility: 21847
Permit Numbers: SO48-0128169-018
Expiration Date: 7/26/2011
County: Orange
Section 21, 22, 27, 28/Township 23
South, Range 31 East
Latitude 28° 22' 52" North
Longitude: 81° 11' 30" West
Project: Orange County Solid Waste
Management Facility, Cell 9 – Class I

Attention: Mr. James W. Becker

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-4, 62-701 and 62-711. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

- To operate the Orange County Solid Waste Management Facility, Cell 9, Class I. The present service area for the landfill is the incorporated and unincorporated areas of Orange County.
- The Southern Expansion Site is approximately 3,257 acres and lies south of Young Pine Road. The total area of this project, Cells 9 - 12 in the Southern Expansion Site, is 484 acres. Cell 9 is located immediately south of Young Pine Road. The County will construct Cells 10, 11 and 12 southward, making infrastructure improvements as needed to serve the new cells.
- The landfill accepts the following waste types: residential and commercial Class I, Class III, construction and demolition debris (C&D), yard waste, dewatered wastewater treatment sludge, packaged asbestos, waste tires, household hazardous waste, and other residential and commercial refuse including appliances.
- The double-lined Cell 9 is permitted to accept only Class I, and if necessary Class III wastes, and has an actual disposal area of 65 acres. Cell 9 has a leachate collection and removal system with two above-ground leachate storage tanks to temporarily store leachate.
- A gas management system will be implemented to control odors and prevent migration of methane.
- Other operations at the County landfill included in this permit are waste tire processing, household hazardous waste collection, white goods storage, and asbestos disposal. Other operations at the County landfill not included in this permit are the administration area, scalehouse, yard waste composting, small vehicle waste drop-off, and materials recovery facility.
- The project incorporates a ground water and surface water monitoring plan.

LOCATION: The landfill is located on 12100 Young Pine Road, 3 miles southeast of the Curry Ford Road/Dean Road intersection, Orlando in Orange County, Florida.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes (F.S.). The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup and auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of this permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code (F.A.C.), as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring information) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

1. Plans and Specifications: Drawings, plans, documents and specifications submitted by the permittee, not attached hereto, but on file at the Central District office, are made a part of this permit. The documents are listed in Appendix A.
2. Inspection Requirements: A copy of the permit, with a complete copy of the permit application and engineering drawings shall be kept on file at the landfill for inspection and review upon request.
3. Other Permits: This permit does not relieve the permittee from complying with any other appropriate stormwater, ERP, Title V/NSPS or other permit requirements.
4. Signs: Signs indicating the name of the operating authority, traffic flow, hours of operation, charges for disposal and the types of wastes accepted shall be placed at all entrances to the site, Rule 62-701.500(11)(g), F.A.C.
5. Site Access: Access to the site shall be restricted by an effective barrier designed to prevent unauthorized entry and dumping, Rule 62-701.500(5), F.A.C.
6. Litter, Dust & Fire Protection: The landfill shall have litter control devices, dust controls, fire protection and fire-fighting facilities, Rule 62-701.500(11)(d), (e) and (f), F.A.C. Litter is to be picked up and litter control devices cleaned. All collected litter shall be placed in the appropriate active cell for disposal.
7. Safety Devices: Safety devices shall be provided on equipment to shield and protect the operators from potential hazards during operation.
8. Effluent Discharge: There shall be no discharge of liquid effluents or contaminated runoff to surface or ground water without prior approval from the Department.
9. Surface Water Management: All surface water runoff from the site shall be collected and treated, as designed and permitted, to meet the requirements of Chapters 373 and 403, Florida Statutes (F.S.) prior to discharge off-site. The surface water management system shall prevent surface water flow into waste filled areas.
10. Stormwater-Leachate Contamination: Stormwater that comes into contact with leachate shall be treated as leachate. Any leachate emanating from the landfill shall be collected and treated as necessary to meet the requirements of Rules 62-302, 62-4, and 62-520, F.A.C. prior to discharge off-site, unless the leachate is transmitted to a permitted treatment facility.
11. Stormwater Management System Maintenance: The stormwater management system shall be maintained and visually inspected regularly, and shall be cleaned and maintained as necessary to allow for treatment and conveyance of stormwater according to the permitted engineering design.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

12. Zone of Discharge: The zone of discharge for the facility shall be a three dimensional volume, defined in the vertical plane as extending from the top of the ground to the bottom of the screen of the deep surficial monitoring wells, and defined in the horizontal plane as extending 100 feet from the footprint of the waste disposal area or to the property boundary, whichever is less. Class G-II water quality standards must be met at the zone of discharge boundary in accordance with Rule 62-522.410, F.A.C.
13. Monitoring Plan Implementation Schedule: The Monitoring Plan Implementation Schedule attached as Exhibit I, is made a part of this permit.
14. Improper Operations: When the Department, after investigation, has good reason (such as complaints, questionable maintenance of equipment, improper operations, etc.) to believe that any applicable standard contained in Chapter 62-701, F.A.C. or in this permit is being violated, it may require the landfill owner or operator to identify the nature of the problem and to submit a report to the Department on the results of the investigation and corrective action taken to prevent its recurrence.
15. Equipment Breakdown: In the event of equipment malfunction, destruction, breakdown or other problems resulting in the permittee being temporarily unable to comply with any of the conditions of this permit, the permittee shall immediately notify the Department. The notification shall address the cause of the problem, corrective action, and what steps are being taken to prevent a recurrence, as required by Rule 62-4.130, F.A.C.
16. Operation of Pollution Control Devices: The leachate and stormwater control systems shall be properly operated, monitored, and maintained (Rule 62-701.500, F.A.C.).
17. Leachate Collection and Transmission System: The leachate collection and transmission system shall collect and convey leachate so that the liner leachate depth shall not exceed one foot under normal operation conditions. A record shall be kept of the amount of leachate collected, the date and the identity of the wastewater treatment facility where the leachate was disposed. Leachate collection systems shall be water pressure cleaned or inspected by video recording at the time of permit renewal, or more frequently if necessary. Results of the collection system cleanings or inspections shall be available to the Department upon request.
18. Leachate Quantity: Quantities of leachate collected by the leachate collection and removal system are to be recorded in gallons per day from the leachate force main flow meter. Operators shall record daily flow amounts, Rule 62-701.500(8)(f), F.A.C. Data shall be compiled monthly and submitted to the Department quarterly (due no later than the 20th of January, April, July, and October).
19. Leachate Storage Tanks: The integrity of the leachate storage tanks shall be checked weekly so that no leachate releases to soil will occur. The storage tanks shall be maintained and operated in accordance with Rule 62-701.400(6), F.A.C.
20. Precipitation Records: A recording rain gauge shall be operated and maintained to record precipitation at the landfill. Precipitation records shall be maintained and used by the permittee to compare with leachate generation rates, Rule 62-701.500(8)(g), F.A.C.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

21. Control of Nuisance Conditions: The operating authority shall be responsible for the control of odors and fugitive particulates arising from this operation. Such controls shall prevent the creation of nuisance conditions that may arise from adverse odors and fugitive particulates, and their effect on adjacent or nearby properties and users. The permittee shall immediately investigate any complaints received from the general public and, where warranted, take corrective actions to abate the adverse odor or nuisance condition. The permittee will prepare a written report on each complaint and any corrective actions. A copy of the report will be forwarded to the Department within 10 days of its preparation.
22. Liner Edge Staking: The edge of the liner must be clearly and permanently marked or outlined by staking or other means so that solid waste is deposited at least 10 feet back from the edge of the liner.
23. Solid Waste Burning: Burning of solid waste is prohibited except as provided by Rule 62-701.300(3), F.A.C. Any fires at the landfill must be reported to the Department within 24 hours. Also, within 5 days a letter must be sent to the Department explaining the cause, remedial action and measures taken to prevent a recurrence.
24. Waste Tire Site Operation: Waste tires shall be received, stored and processed in accordance with the Waste Tire Rule, Chapter 62-711, F.A.C.
25. Asbestos Disposal: Asbestos disposal shall meet the requirements of 40 CFR Part 61.154. After placement of the asbestos, landfill personnel shall immediately place a minimum of six (6) inches of cover soil over the asbestos. Records shall be kept for all asbestos containing materials received at the landfill.
26. Household Hazardous Waste Transfer Facility: The household hazardous waste transfer facility consists of a hazardous waste storage building, a battery storage building and a waste oil storage tank which are intended to minimize the quantities of these materials disposed of in the landfill. The household hazardous waste transfer facility shall operate in accordance with the Hazardous Waste Rule, Chapter 62-730, F.A.C.; Section 403.7225, F.S., related to local hazardous waste management assessment; Section 403.7234, F.S., concerning conditionally exempt generator notification and verification; and Section 403.7264, F.S., dealing with Amnesty Days. The hazardous waste collection program may allow the private contractor to collect wastes from conditionally exempt generators (those generating 100 kg or less of hazardous waste per month).
27. Hazardous Wastes: Any incidental hazardous wastes received in connection with operation of this landfill must be disposed of in accordance with Rule 62-730, F.A.C.
28. Gas Monitoring: The permittee shall comply with the gas monitoring requirements of Rule 62-701.530(2), F.A.C. Monitoring for methane gas at the property boundary and within structures on the property shall be performed quarterly to determine the effectiveness of the gas migration controls. The gas monitoring results shall be reported as percent of the lower explosive limit (LEL), calibrated to methane, and shall be submitted to the Department within 30 days of receipt of data. If the gas monitoring results show that combustible gas concentrations exceed 25% of the LEL noted above, the permittee shall implement a Gas Remediation Plan as required in Rule 62-701.530(3)(a), F.A.C.
29. Landfill Elevation: The final (maximum) elevation of the Orange County Solid Waste Management Facility, Cell 9 – Class I, shall be 244 feet NGVD.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

30. Waste Compaction and Working Face: All solid waste shall be spread in layers of approximately two (2) feet in thickness and compacted to approximately one (1) foot in thickness or as thin a layer as practical before the next layer is applied, Rule 62-701.500(7)(a), F.A.C. All compacted solid waste shall be formed into cells with the working face and the side grades above land surface at a slope no greater than three feet horizontal to one foot vertical rise, Rule 62-701.500(7)(c), F.A.C. The working face shall be only large enough to efficiently accommodate vehicles discharging waste and to minimize the exposed area and the use of unnecessary cover material, Rule 62-701.500(7)(d), F.A.C.
31. Initial Cover and Intermediate Cover: Initial cover shall be applied at the end of each working day except the working face which may be covered with temporary cover if solid waste will be placed on it within 18 hours. An intermediate cover of one (1) foot of compacted earth in addition to the six (6) inch initial cover shall be applied within seven (7) days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion. All or part of the intermediate cover may be removed prior to placing additional waste or installing final cover, Rule 62-701.500(7)(f), F.A.C.
32. Final Cover: In descending order, the cover system shall consist of 6 inches of topsoil, 18 inches of granular fill, one layer of textured 40-mil linear low density polyethylene geomembrane (LLDPE), and 12 inches of granular fill to protect the geomembrane from the underlying solid waste. The one (1) foot of compacted earth installed as part of the intermediate cover requirement may be used in lieu of the 12-inch leveling course beneath the liner.
33. Final Cover Surface Gradient: The top gradient of the final cover surface will have a gradient of 4 percent and shall take into consideration the effects of expected subsidence caused by settling and decomposition of the fill material to minimize ponding and erosion.
34. Stormwater Drainage: Stormwater drainage shall consist of benched terraces every 20 vertical feet starting at the toe of the landfill. Sheet flow across the side slopes will be collected in the lower terraces. These terraces will bring the stormwater to a series of downdrain structures and will eventually discharge to the stormwater ponds.
35. Routine Maintenance: Cracks or eroded sections in the surface of any filled and covered area shall be properly repaired. A regular maintenance program shall be followed to eliminate pockets or depressions that may develop as refuse settles. The slopes and drainage structures shall be inspected at least monthly and after major storm events for evidence of settling, erosion, washout or siltation.
36. Top Soil Erosion Control: To control top soil erosion, grass cover must be established, and sod or mulch placed and maintained on completed terraces, side slopes, and final covered areas.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

37. Operator Training Compliance: The Orange County Solid Waste Management Facility, Cell 9 – Class I, shall comply with Rule 62-701.320(15), F.A.C. – Operator Training.
38. Solid Waste Disposal Rate: The current average solid waste disposal rate for this source is 2,000 tons per day as stated in the application. Actual operating rates may vary depending upon business conditions.
39. Operation Plan: An operation plan that meets the requirements of Rule 62-701.500(2), F.A.C., shall be kept at the landfill. All operators and spotters shall be trained and knowledgeable about the plan.
40. Delineation of Limits of Waste: The limits of waste within the permitted footprint of the disposal area shall be delineated with permanent monuments or markers. The location of monuments or markers shall be established by a Professional Surveyor and Mapper, licensed in Florida. The monuments or markers shall be of sufficient number to clearly define the limits of waste disposal, and shall be visible and easily identifiable to operation personnel and regulatory inspectors.
41. Waste Reports: A waste report shall be submitted to the Department quarterly, (Rule 62-701.500(4)(b), F.A.C.). Waste reports shall include the quantity of each of the following:

Household waste	Yard Trash
Agricultural waste	Industrial waste
Commercial waste	Ash residue
Incinerator by-pass waste	Sewage sludge
Construction and demolition debris	Water/air treatment sludges
Industrial sludge	Waste tires
Treated biomedical waste	

All submittals in response to this specific condition shall be submitted to: Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, with a copy to: Department of Environmental Protection, Central District, Solid Waste Section, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The reports shall be submitted no later than the 20th of January, April, July, and October.

42. Operation Permit Renewal: An operation permit renewal must be submitted at least 60 days prior to the expiration date of this permit, Rule 62-4.090, F.A.C.
43. Closure Permit Requirements: At least 90 days prior to the date when wastes will no longer be accepted, the owner or operator shall submit a closure permit application to the Department, Rule 62-701.600(3), F.A.C.
44. Record Keeping: The permittee shall comply with the record keeping requirements for the Class I landfill, Rule 62-701.500(13), F.A.C.
45. Substantial Changes or Revisions: The Department shall be notified and approval obtained prior to executing any substantial changes or revisions to the operation authorized by this permit.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

Attention: Mr. James W. Becker:

SPECIFIC CONDITIONS:

46. Prevention of Significant Deterioration (PSD) Requirements: The landfill owner or operator is not required to obtain any air construction permit unless landfill construction or any modification is subject to the prevention of significant deterioration (PSD) requirements of Chapter 62-212, F.A.C. A landfill for which construction or modification is subject to PSD requirements must make application to the Bureau of Air Regulation, Mail Station 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, for an air construction permit and must obtain such permit prior to beginning any construction or modification.
47. Title V Permit Requirements: The landfill owner or operator is not required to obtain any air operating permit unless the landfill is required to obtain a Title V air operating permit (Title V permit) pursuant to Section 403.0872, F.S. A landfill is required to obtain a Title V permit if the landfill (or the total facility, if the landfill is contiguous or part of a larger facility) has the potential to emit 10 TPY of any hazardous air pollutant, 25 TPY of any combination of hazardous air pollutants or 100 TPY of any other regulated air pollutant. A landfill is also required to obtain a Title V permit if the maximum design capacity as defined in 40 CFR 60, Subpart WWW, is equal or greater than 2.5 million Megagrams or 2.5 million cubic meters. Title V permits must be applied for in accordance with the timing and content requirements of Rule 62-204.800, F.A.C. and Chapter 62-213, F.A.C. Title V applications shall be submitted to the District Air Program Administrator.
48. 40 CFR 60 Requirements: The permittee shall comply with the requirements of 40 CFR 60, Subparts WWW and Cc, as adopted by reference at Rule 62-204.800, F.A.C. The permittee shall submit to the Division of Air Resources Management, Department of Environmental Protection, Mail Station 5500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 any amended design capacity report and any Non-Methane Organic Compound (NMOC) emission rate report, as applicable, pursuant to 40 CFR 60.757(a)(3) and (b).
49. Financial Responsibility: The permittee shall maintain compliance with the financial assurance requirements of Rule 62-701.630, F.A.C., by submitting all required updated supporting documentation in accordance with Rule 62-701.630 and 40 CFR Part 264, Subpart H, as adopted by reference in Rule 62-701.630, F.A.C. All submittals in response to this specific condition shall be submitted to the Financial Coordinator, Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, with a copy to: Department of Environmental Protection, Central District, Solid Waste Section, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767.
50. Annual Cost Estimates and Financial Instrument Adjustments: The permittee shall, in addition to annually adjusting the closure and long-term care cost estimates, adjust the financial assurance mechanism to reflect an increase in cost estimates. Cost estimate adjustments shall be in accordance with Rule 62-701.630(4), F.A.C. Instrument adjustments shall be in accordance with Rule 62-701.630, F.A.C. and 40 CFR Part 264, Subpart H as adopted by reference in Rule 62-701.630, F.A.C. Documentation of financial mechanism increases shall be submitted to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, Twin Towers Office Building, 2600 Blair Stone Road, MS-4565, Tallahassee, Florida 32399-2400. All estimate update submittals shall be sent to: Department of Environmental Protection, Central District, Solid Waste Section, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767.

Appendix A

1. FDEP Solid Waste Operations Permit Application for Cell 9 Class I Landfill dated April 2006, Prepared by: CH2M/WCG, Orlando, Florida. Received and stamped April 28, 2006, Central District – DEP.
2. Request For Additional Information from Central District – DEP dated may 10, 2006.
3. Response To Request For Additional Information from Orange County Utilities Solid Waste Division dated June 6, 2006. Received and stamped June 6, 2006, Central District – DEP.

DEPC

Form 2-13-FM-0008

Media Insert

Box Number: DEPC - PILOT #1

File Number: 950113 AV 8-9-96

→ Colored Map

→ Disk

→ Photo

→ VHS Tape

→

Notes:

PERMITTEE:
Orange County Utilities Department
Solid Waste Division

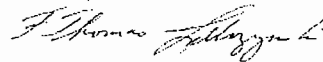
Attention: Mr. James W. Becker:

WACS Facility: 21847
Permit Number:
SO48-0128169-018
Expiration Date: 7/26/2011

SPECIFIC CONDITIONS:

ISSUED: September 26, 2006

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION




F. Thomas Lubozynski for

Vivian F. Garfein
Director, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Sept. 26, 2006

Clerk

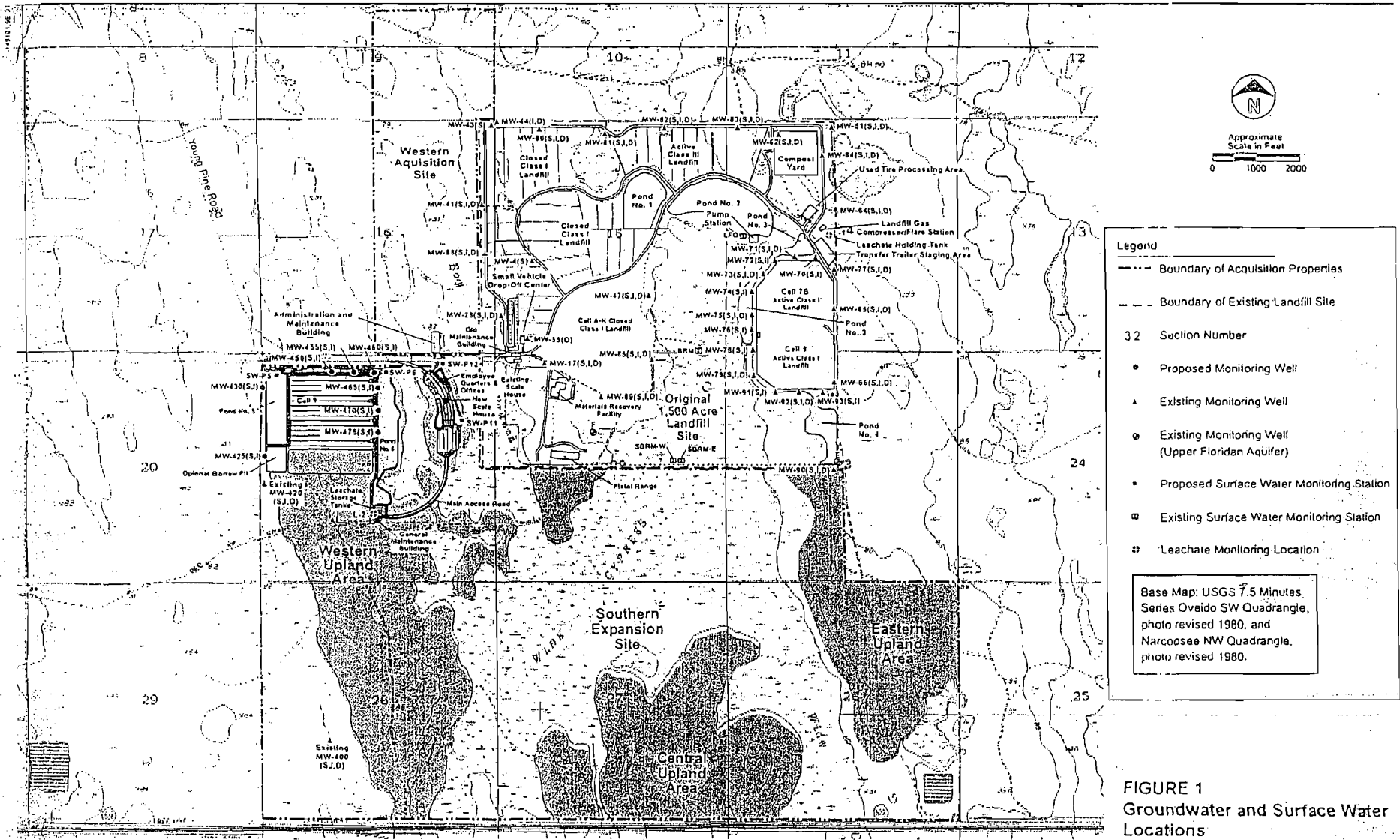
Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on September 26, 2006 to the listed persons.



Clerk



Legend

- Boundary of Acquisition Properties
- - - Boundary of Existing Landfill Site
- 32 Section Number
- Proposed Monitoring Well
- ▲ Existing Monitoring Well
- ⊙ Existing Monitoring Well (Upper Floridan Aquifer)
- Proposed Surface Water Monitoring Station
- ⊞ Existing Surface Water Monitoring Station
- ⊞ Leachate Monitoring Location

Base Map: USGS 7.5 Minutes, Series Oveido SW Quadrangle, photo revised 1980, and Narcoossee NW Quadrangle, photo revised 1980.

FIGURE 1
Groundwater and Surface Water
Locations
 Orange County Solid Waste Management Facility

ATTACHMENT B

EXHIBIT I
ORANGE COUNTY LANDFILL
WACS_FACILITY: 21847
MONITORING PLAN IMPLEMENTATION SCHEDULE
(REVISED 4/1/2008)

GENERAL

1. The permittee must initiate implementation of this Monitoring Plan within ninety (90) days from the date of permit issuance. [62-701.510(1)(b)&(c), 62-522.600(5), Florida Administrative Code (F.A.C.)]
2. The field testing, sample collection and preservation and laboratory testing, including quality control procedures, shall be in accordance with Chapter 62-160 Florida Administrative Code (F.A.C.). Approved methods as published by the Department or as published in Standard Methods, ASTM, or EPA Methods shall be used. [62-701.510(2)(b), F.A.C.]
3. The organization collecting samples at this site must use the Field and Laboratory Standard Operating Procedures (DEP-SOP-001/01) in Chapter 62-160, F.A.C. Sampling personnel must have a copy of the SOP for purging and sampling in the field when sampling and must be knowledgeable of its contents, procedures, and forms. The laboratory designated to conduct the chemical analyses must be certified by the Florida Department of Health Environmental Laboratory Certification Program (DoH ELCP). This Certification must be for the test method and analyte(s) that are reported. [62-160.210(1), 62-160.320(1), F.A.C.]

NOTE: DEP-SOP-001/01 can be accessed at: <http://www.dep.state.fl.us/labs/qa/sops.htm>

4. If, at any time, analyses detect parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., in the detection wells or at the edge of the Zone of Discharge, the Permittee, to confirm the data, shall resample the wells within thirty (30) days of receipt of the sampling data. Should the permittee choose not to resample, the Department will consider the water quality analysis as representative of current ground water conditions at the facility. The permittee must notify the Department within 14 days of receipt of the sampling data whether the original data will be accepted as representative of current ground water conditions or whether resampling will be accomplished to confirm the data. [62-701.510(7)(a), F.A.C.]

If the resampling event detects parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the Permittee shall notify the Department in writing within 14 days of receipt of the sampling data. Confirmed data must be submitted to the Department within 60 days from completion of lab analyses. Use "CONF" (for confirmation data) in the report type column. [62-701.510(7)(a), F.A.C.]

Upon notification by the Department, the permittee shall initiate evaluation monitoring in accordance with Rule 62-701.510(7) F.A.C. [62-701.730(4)(b), 62-701.510(7)(a), F.A.C.]

GROUND WATER QUALITY MONITORING

5. The one hundred and eighteen (118) ground water monitoring wells designated for water quality testing and water level measurements are listed on **Attachment A** and are shown on **Attachments B1 & B2**. [62-701.510(3)(d)2 & 3, F.A.C.]

NOTE: Unless otherwise approved by the Department, wells with high turbidities must be remediated or reinstalled to reduce the turbidity value to less than 20 NTU prior to sample collection. Should any ground water sample exhibit dissolved oxygen concentrations greater than 20% of oxygen saturation at the field measured temperature, the sampled well must be repurged then resampled as soon as an acceptable dissolved oxygen value has been attained unless it can be demonstrated that in situ ground water contains higher levels of dissolved oxygen. All water quality analyses will be performed on unfiltered samples unless approved by the Department.

6. Initial samples collected from the nine (9) ground water monitoring wells MW-420I, MW-480S, MW-480I, MW-485S, MW-485I, MW-490S, MW-490I, MW-495S, and MW-495I shall be collected at least 60 days before any waste is deposited in Cell 10. The samples shall be analyzed for the list of Initial Ground Water Monitoring on **Attachment C**. [62-701.510(6)(b)2, F.A.C.]
7. Semi-annual samples from the one hundred and eighteen (118) ground water monitoring wells shall be collected in May and November. The samples shall be analyzed for the list of Semi-Annual Ground Water Parameters on **Attachment D**. [62-701.510(6)(d), F.A.C.]

Please confer with your consultant and analytical laboratory prior to sampling to ensure the analytical method is capable of achieving detection limits at or below the Ground Water Cleanup Target Levels (GCTLs) in Chapter 62-777, F.A.C. GCTLs are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated.

8. Ground water levels in all wells, whether sampled or not, and all piezometers must be measured to the nearest 0.01 foot and reported semiannually unless required more frequently by permit condition. All water level measurements must be made within a one-day period. These measurements must be referenced to the National Geodetic Vertical Datum of 1929 (NGVD). **NOTE:** Chapter 62-701, F.A.C, effective 05/27/01, requires the use of NGVD 1929. The term "NGVD 1929" in the MPIS means any datum acceptable by the current version of 62-701, F.A.C. [62-701.510(9)(a)8, F.A.C.]

SURFACE WATER MONITORING

9. The eight (8) surface water sites included in this monitoring plan are LFO, BRM, SBRME, SBRMW, SW-P5, SW-P6, SW-P11 and SW-P12. They are listed on **Attachment A** and shown on **Attachments B1**. [62-701.510(4)(c), F.A.C.]
10. Semi-annual samples from the eight (8) surface water monitoring sites shall be collected in May and November. The samples shall be analyzed for the list of Semi-Annual Surface Water Parameters on **Attachment E**. [62-701.510(6)(e), F.A.C.]

Please confer with your consultant and analytical laboratory prior to sampling to ensure the analytical method is capable of achieving detection limits at or below the Surface Water Cleanup Target Levels (SCTLs) in Chapter 62-777, F.A.C. SCTLs are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated.
11. Surface water elevations at sampling locations and must be measured to the nearest 0.01 foot on the same day as ground water levels in the wells and piezometers and reported semiannually unless required more frequently by permit condition. All water level measurements must be made within a one-day period. These measurements must be referenced to NGVD 1929. [62-701.510(9)(a)8, F.A.C.]

LEACHATE QUALITY MONITORING

12. The two (2) sites designated for leachate quality testing are L-1 and L-2. The sites are listed on **Attachment A** and shown on **Attachment B1**. [62-701.510(5), F.A.C.]
13. Samples from the leachate monitoring site shall be collected annually in November. The samples shall be analyzed for the list of Annual Leachate Parameters on **Attachment F**. If the annual analysis indicates that a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level listed therein, the permittee shall initiate monthly sampling and analysis and shall notify the Department in writing. If in any three consecutive months no listed contaminant is found to exceed the regulatory level, the permittee may discontinue the monthly sampling and analysis and return to a routine sampling schedule. [62-701.510(6)(c), F.A.C.]

MONITORING WELL REQUIREMENTS

14. Installation of new monitoring wells MW-495S, and MW-495I shall commence within ninety (90) days from the date of permit issuance. [62-701.510(1)(b) & (c), 62-520.600(5), F.A.C.]
15. If a monitoring well becomes damaged or inoperable, the Permittee shall notify the Department in writing within seven (7) days. The written report shall describe what problem has occurred and the remedial measures that have been taken to prevent a recurrence. The Department can require the replacement of inoperable monitoring wells. [62-4.070(3), F.A.C.]

16. New or replacement monitoring well design or placement must be approved by the Department. Proposed well construction details based on site-specific borings must be submitted with all supporting data (grain size distribution analyses, in-situ hydraulic conductivity testing, depth to water, etc.) for Department approval prior to well installation. Use of hollow stem auger equipment is recommended. Other drilling methods must be approved by the Department prior to well installation. [62-522.600(3), F.A.C.]
17. All wells shall be clearly and permanently labeled and the well site maintained so that the well is visible at all times. Protective barriers must be installed at all wells that may be subject to damage by heavy equipment or traffic. [62-701.510(3)(d)2, F.A.C.]
18. An abandonment plan for abandoning any well that is unsuitable for ground water monitoring must be approved by the Department prior to abandonment. [62-701.510(3)(d)5, F.A.C.]

REPORTING REQUIREMENTS

FIELD ACTIVITES

19. The Department must be notified in writing, hard copy or e-mail, at least fourteen (14) days prior to the installation and/or sampling of any monitoring well(s). [62-701.510(9)(a), F.A.C.]

MONITORING WELL COMPLETION

20. One (1) paper copy and one (1) electronic copy of **Attachment G**, Monitoring Well Completion Report Form (as modified by the Central District) and required Attachments (construction diagram and lithologic log), must be submitted to the Department within thirty (30) days after installation of new monitoring wells MW-495S, and MW-495I. In addition, as built well construction diagrams and soil boring logs that cover the entire depth of the monitoring well(s) must be submitted to the Department. [62-701.510(3)(d)1, 62-532.410, F.A.C.]

SURVEYING

21. One (1) paper copy and one (1) electronic copy of a drawing must be submitted within thirty (30) days following monitoring well installation showing the location of all monitoring wells (active and abandoned), water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to NGVD 1929 with an accuracy of 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, with an accuracy of 15 feet, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. [62-701.510(1)(c)&(3)(d)1, F.A.C.]

- 22 If a monitoring well is being replaced or new wells are being added to an existing ground water monitoring plan, only the new wells needs to be surveyed as long as all other monitoring wells in the MPIS have been surveyed and certified by a Florida Licensed Surveyor and Mapper and there is no reason to believe that the elevations have changed. This location and elevation determinations and the certification must be provided with the Monitoring Well Completion Form for the new well,

DEPTH MEASUREMENTS

- 23 A total depth measurement must be made on all wells at time of permit renewal. This measurement is to be reported on one (1) paper copy and one (1) electronic copy as total apparent depth below ground surface and should be compared to the original total depth of the well. [62-701.510(1)(c), F.A.C.]

INITIAL, ANNUAL AND SEMI-ANNUAL SAMPLING

24. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of lab analyses. The report must include the following:
- a. Cover letter.
 - b. Summary of exceedance and recommendation.
 - c. Ground water contour maps
 - d. Chain of custody.
 - e. Water levels-water elevation table.
 - f. Lab quality control report.
 - g. **Attachment H**, Ground Water Monitoring Report Certification.
 - h. **Attachment I**, Water Sampling Log (for Ground Water).
 - i. **Attachment I**, Water Sampling Log (applicable information for Surface Water).

One (1) paper copy and one (1) electronic copy of the monitoring report shall be submitted. The electronic copy must be on a compact disc (CD) that is readable by Microsoft Office. The CD should contain the following:

A copy of the monitoring report

A copy of the electronic data in Excel tab delimited format

A copy of the electronic data in PDF format to insure the integrity of the data

The required electronic data is listed on

ftp://ftp.dep.state.fl.us/pub/labs/labs/validator/validator_fields.pdf.

To decrease the need for resubmittal you may evaluate data prior to submittal at <http://www.floridadep.org/labs/software/index.htm>.

A sample text file may be viewed at

<http://www.floridadep.org/labs/software/docs/sampleddata.txt>

Interpretative documents such as exceedance recommendations and/or contour maps must be signed and sealed by a professional licensed in state of Florida whose expertise is related to the document.

[62-701.510(9)(a), 62-160.800(1)9, &62-4.070(3), F.A.C.]

WATER ELEVATIONS

25. Water levels in all monitoring wells, whether sampled or not, all piezometers and all surface water sites must be measured to the nearest 0.01 foot and reported semi-annually unless required more frequently by permit condition. All water level measurements must be made within a one-day period. These measurements should be reported in a table that includes well or surface water point name, date water level measured, measuring point elevation referenced to NGVD 1929, depth to water and calculated water level elevation referenced to NGVD 1929. [62-701.510(9)(a)8, F.A.C.]

GROUND WATER CONTOUR MAPS

26. Ground water elevation contour maps for each monitored aquifer zone must be submitted semi-annually to the Department. Ground water elevation contour map(s) should include monitoring well and piezometer locations, ground water elevation at each monitoring well or piezometer location referenced to NGVD 1929, a bar scale, north arrow, ground water contour interval, date of measurement and ground water flow direction. The map(s) must incorporate adjacent and on-site surface water elevations where appropriate. These maps shall be signed and sealed pursuant to Florida Statutes (F.S.) Chapters 471 and 492 which require that documents requiring the practice of professional engineering or professional geology, as described in Chapter 471 or 492, F.S., be signed and sealed by the professional(s) who prepared or approved them. This certification must be made by a licensed professional who is able to demonstrate competence in this subject area. [62-701.510(9)(a)9, F.A.C.]

BIENNIAL

27. One (1) paper and one (1) electronic copy of a technical report shall be submitted to the Department every two years, and shall be updated at the time of permit renewal. The first report is due 30 days after the submittal of the monitoring data for the fourth ground water sampling event of the two year period. Subsequent reports are due 30 days after the submittal of the fourth sampling event following the previous biennial report. The report shall summarize and interpret the water quality data and water level measurements collected during the past four years. The report shall contain, at a minimum, the following:
- a. Tabular and graphical displays of any data that shows that a monitoring parameter has been detected, including hydrographs for all monitoring wells.
 - b. Trend analyses of any monitoring parameters detected.
 - c. Comparisons among shallow, middle, and deep zone wells.

- d. Comparison between upgradient and down gradient wells.
 - e. Correlation between related parameters such as total dissolved solids and specific conductance.
 - f. Discussion of erratic and/or poorly correlated data.
 - g. An interpretation of the ground water contour maps, including an evaluation of ground water flow rates.
 - h. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.
28. This report must be signed and sealed pursuant to Florida Statutes (F.S.) Chapters 471 and 492 which require that documents requiring the practice of professional engineering or professional geology, as described in Chapter 471 or 492, F.S., be signed and sealed by the professional(s) who prepared or approved them. This certification must be made by a licensed professional who is able to demonstrate competence in the subject area(s) addressed within the sealed document. [62-701.510(9)(b), F.A.C.]

List of Attachments

Attachment A – Monitoring Well, Surface Water, and Leachate Sampling Point List

Attachments B1 & B2 – Monitoring Location Maps

Attachment C - Initial Ground Water Monitoring Parameters

Attachment D - Semi-annual Ground Water Monitoring Parameters

Attachment E - Semi-annual Surface Water Monitoring Parameters

Attachment F – Annual Leachate Monitoring Parameters

Attachment G - Monitoring Well Completion Report Form

Attachment H - Ground Water Monitoring Report Certification Form

Attachment I – Water Sampling Log

ATTACHMENT A
ORANGE COUNTY LANDFILL
WACS_FACILITY: 21847

Monitoring Well, Surface Water, and Leachate Sampling Point List

	Monitoring Site Number	WACS Well	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
Ground Water						
1.	MW-4S	13098	DE	UPPER SURFICIAL	G-II	SEMGW
2.	MW-17S	14103	DE	UPPER SURFICIAL	G-II	SEMGW
3.	MW-17I	14104	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
4.	MW-17D	14105	DE	DEEP SURFICIAL	G-II	SEMGW
5.	MW-26S	14106	DE	UPPER SURFICIAL	G-II	SEMGW
6.	MW-26I	14107	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
7.	MW-26D	14108	DE	DEEP SURFICIAL	G-II	SEMGW
8.	MW-41S	14109	BG	UPPER SURFICIAL	G-II	SEMGW
9.	MW-41I	14110	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
10.	MW-41D	14111	CO	DEEP SURFICIAL	G-II	SEMGW
11.	MW-43	14112	BG	UPPER SURFICIAL	G-II	SEMGW
12.	MW-44I	14113	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
13.	MW-44D	14114	CO	DEEP SURFICIAL	G-II	SEMGW
14.	MW-47S	14115	DE	UPPER SURFICIAL	G-II	SEMGW
15.	MW-47I	14116	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
16.	MW-47D	14117	BG	DEEP SURFICIAL	G-II	SEMGW
17.	MW-51S	14118	BG	UPPER SURFICIAL	G-II	SEMGW
18.	MW-51I	13787	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
19.	MW-51D	13788	CO	DEEP SURFICIAL	G-II	SEMGW
20.	MW-55D	13789	DE	DEEP SURFICIAL	G-II	SEMGW
21.	MW-62S	13795	BG	UPPER SURFICIAL	G-II	SEMGW
22.	MW-62I	13990	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
23.	MW-62D	14246	DE	DEEP SURFICIAL	G-II	SEMGW
24.	MW-64S	13992	BG	UPPER SURFICIAL	G-II	SEMGW
25.	MW-64I	13993	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
26.	MW-64D	13994	CO	DEEP SURFICIAL	G-II	SEMGW
27.	MW-65S	13995	BG	UPPER SURFICIAL	G-II	SEMGW
28.	MW-65I	13996	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
29.	MW-65D	13997	CO	DEEP SURFICIAL	G-II	SEMGW
30.	MW-66S	13998	BG	UPPER SURFICIAL	G-II	SEMGW
31.	MW-66I	13999	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
32.	MW-66D	14000	BG	DEEP SURFICIAL	G-II	SEMGW
33.	MW-70S	14039	DE	UPPER SURFICIAL	G-II	SEMGW
34.	MW-70I	14040	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
35.	MW-71S	14041	DE	UPPER SURFICIAL	G-II	SEMGW
36.	MW-71I	14042	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
37.	MW-71D	14119	DE	DEEP SURFICIAL	G-II	SEMGW
38.	MW-72S	14043	DE	UPPER SURFICIAL	G-II	SEMGW
39.	MW-72I	14044	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
40.	MW-73S	14045	DE	UPPER SURFICIAL	G-II	SEMGW
41.	MW-73I	14046	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
42.	MW-73D	14120	DE	DEEP SURFICIAL	G-II	SEMGW
43.	MW-74S	14047	DE	UPPER SURFICIAL	G-II	SEMGW
44.	MW-74I	14048	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW

ATTACHMENT A
 ORANGE COUNTY LANDFILL
 WACS_FACILITY: 21847

Monitoring Well, Surface Water, and Leachate Sampling Point List

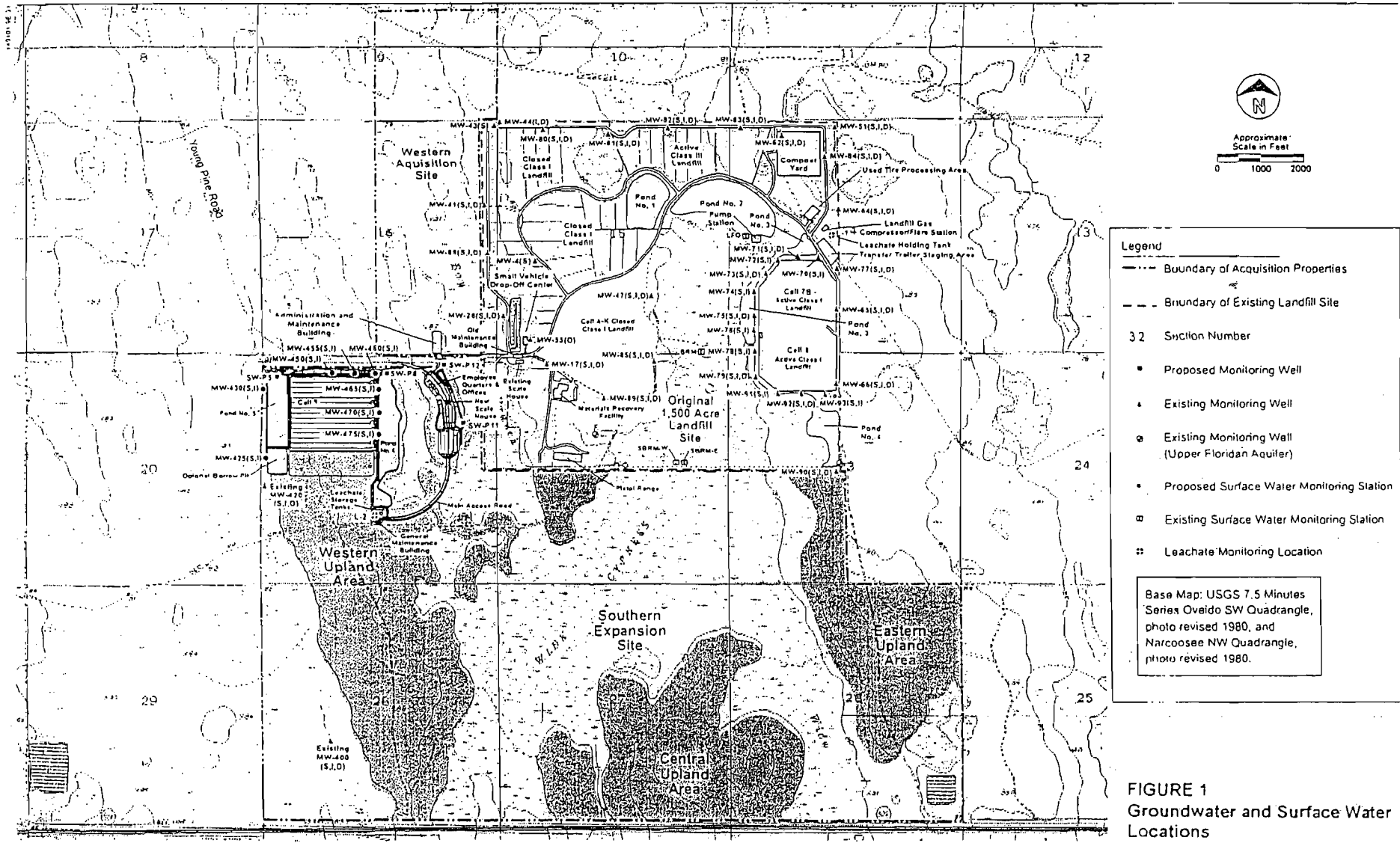
	Monitoring Site Number	WACS Well	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
45.	MW-75S	14049	DE	UPPER SURFICIAL	G-II	SEMGW
46.	MW-75I	14050	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
47.	MW-75D	14121	DE	DEEP SURFICIAL	G-II	SEMGW
48.	MW-76S	14051	DE	UPPER SURFICIAL	G-II	SEMGW
49.	MW-76I	14052	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
50.	MW-77S	14053	BG	UPPER SURFICIAL	G-II	SEMGW
51.	MW-77I	14054	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
52.	MW-77D	14122	CO	DEEP SURFICIAL	G-II	SEMGW
53.	MW-78S	14187	DE	UPPER SURFICIAL	G-II	SEMGW
54.	MW-78I	14188	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
55.	MW-79S	14189	DE	UPPER SURFICIAL	G-II	SEMGW
56.	MW-79I	14190	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
57.	MW-79D	14191	BG	DEEP SURFICIAL	G-II	SEMGW
58.	MW-80S	14123	BG	UPPER SURFICIAL	G-II	SEMGW
59.	MW-80I	14124	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
60.	MW-80D	14125	CO	DEEP SURFICIAL	G-II	SEMGW
61.	MW-81S	14126	BG	UPPER SURFICIAL	G-II	SEMGW
62.	MW-81I	14127	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
63.	MW-81D	14128	CO	DEEP SURFICIAL	G-II	SEMGW
64.	MW-82S	14129	BG	UPPER SURFICIAL	G-II	SEMGW
65.	MW-82I	14130	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
66.	MW-82D	14131	CO	DEEP SURFICIAL	G-II	SEMGW
67.	MW-83S	14132	BG	UPPER SURFICIAL	G-II	SEMGW
68.	MW-83I	14133	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
69.	MW-83D	14134	CO	DEEP SURFICIAL	G-II	SEMGW
70.	MW-84S	14135	BG	UPPER SURFICIAL	G-II	SEMGW
71.	MW-84I	14136	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
72.	MW-84D	14137	DE	DEEP SURFICIAL	G-II	SEMGW
73.	MW-85S	14138	DE	UPPER SURFICIAL	G-II	SEMGW
74.	MW-85I	14139	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
75.	MW-85D	14140	DE	DEEP SURFICIAL	G-II	SEMGW
76.	MW-88S	14141	CO	UPPER SURFICIAL	G-II	SEMGW
77.	MW-88I	14142	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
78.	MW-88D	14143	CO	DEEP SURFICIAL	G-II	SEMGW
79.	MW-89S	14144	DE	UPPER SURFICIAL	G-II	SEMGW
80.	MW-89I	14145	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
81.	MW-89D	14146	DE	DEEP SURFICIAL	G-II	SEMGW
82.	MW-90S	14148	BG	UPPER SURFICIAL	G-II	SEMGW
83.	MW-90I	14149	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
84.	MW-90D	14150	BG	DEEP SURFICIAL	G-II	SEMGW
85.	MW-91S	14192	DE	UPPER SURFICIAL	G-II	SEMGW
86.	MW-91I	14193	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
87.	MW-92S	14194	DE	UPPER SURFICIAL	G-II	SEMGW
88.	MW-92I	14195	DE	INTERMEDIATE SURFICIAL	G-II	SEMGW
89.	MW-92D	14196	DE	DEEP SURFICIAL	G-II	SEMGW

ATTACHMENT A
ORANGE COUNTY LANDFILL
WACS_FACILITY: 21847

Monitoring Well, Surface Water, and Leachate Sampling Point List

	Monitoring Site Number	WACS Well	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
90.	MW-93S	14197	BG	UPPER SURFICIAL	G-II	SEMGW
91.	MW-93I	14198	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
92.	MW-425S	19440	CO	UPPER SURFICIAL	G-II	SEMGW
93.	MW-425I	19441	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
94.	MW-430S	19442	CO	UPPER SURFICIAL	G-II	SEMGW
95.	MW-430I	19443	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
96.	MW-450S	19444	CO	UPPER SURFICIAL	G-II	SEMGW
97.	MW-450I	19445	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
98.	MW-455S	19446	CO	UPPER SURFICIAL	G-II	SEMGW
99.	MW-455I	19447	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
100.	MW-460S	19448	CO	UPPER SURFICIAL	G-II	SEMGW
101.	MW-460I	19449	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
102.	MW-465S	19450	CO	UPPER SURFICIAL	G-II	SEMGW
103.	MW-465I	19451	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
104.	MW-470S	19452	CO	UPPER SURFICIAL	G-II	SEMGW
105.	MW-470I	19453	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
106.	MW-475S	19454	CO	UPPER SURFICIAL	G-II	SEMGW
107.	MW-475I	19455	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
108.	MW-E	13797	CO	FLORIDAN	G-II	SEMGW
109.	MW-F	13798	CO	FLORIDAN	G-II	SEMGW
110.	MW-420I	22891	BG	INTERMEDIATE SURFICIAL	G-II	SEMGW
111.	MW-480S	22892	CO	UPPER SURFICIAL	G-II	SEMGW
112.	MW-480I	22893	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
113.	MW-485S	22894	CO	UPPER SURFICIAL	G-II	SEMGW
114.	MW-485I	22895	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
115.	MW-490S	22896	CO	UPPER SURFICIAL	G-II	SEMGW
116.	MW-490I	22897	CO	INTERMEDIATE SURFICIAL	G-II	SEMGW
117.	MW-495S	22898	CO	UPPER SURFICIAL	G-II	NTGW/SEMGW
118.	MW-495I	22899	CO	INTERMEDIATE SURFICIAL	G-II	NTGW/SEMGW
SURFACE WATER						
1.	LFO	13548	IM	BORROW PIT OUTFALL TO SWAMP	SW-IIIIF	SEMSW
2.	BRM	13214	IM	MID BERM	SW-IIIIF	SEMSW
3.	SBRME	14147	CO	SOUTH BERM EAST	SW-IIIIF	SEMSW
4.	SBRMW	13654	CO	SOUTH BERM WEST	SW-IIIIF	SEMSW
5.	SW-P5	19456	CO	BORROW PIT OUTFALL TO SWAMP	SW-IIIIF	SEMSW
6.	SW-P6	19457	CO	MID BERM	SW-IIIIF	SEMSW
7.	SW-P11	19458	CO	SOUTH BERM EAST	SW-IIIIF	SEMSW
8.	SW-P12	19459	CO	SOUTH BERM WEST	SW-IIIIF	SEMSW
LEACHATE						
1.	L-1	14201	CO	CELLS 7B/8 HOLDING TANK	LC	ANNLC
2.	L-2	19460	CO	LIFT STATION AT HOLDING TANK	LC	ANNLC

Well Type Codes (BG) Background (CO) Compliance (DE) Detection (PZ) Piezometer (AS) Assessment



Legend

- Boundary of Acquisition Properties
- - - Boundary of Existing Landfill Site
- 32 Section Number
- Proposed Monitoring Well
- ▲ Existing Monitoring Well
- ⊙ Existing Monitoring Well (Upper Floridan Aquifer)
- Proposed Surface Water Monitoring Station
- ⊞ Existing Surface Water Monitoring Station
- ⊞ Leachate Monitoring Location

Base Map: USGS 7.5 Minutes Series Oveido SW Quadrangle, photo revised 1980, and Narcoosee NW Quadrangle, photo revised 1980.

FIGURE 1
Groundwater and Surface Water Locations

Orange County Solid Waste Management Facility

ATTACHMENT B

ATTACHMENT B2

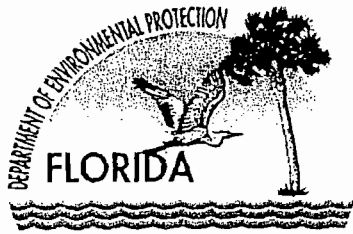
ORANGE COUNTY LANDFILL



4/1/2008

Exhibit A-2

**FDEP Environmental Resource Permit
Permit No. ERP48-177603-002-EI and
Permit No. ERP48-177603-006-EI**



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

NOTICE OF PERMIT

In the Matter of an
Application for Permit by:
Orange County Board of County Commissioners (OCBCC)
Orange County Utilities Solid Waste Department
9150 Curry Ford Road
Orlando, Florida 32825

Attention: James W. Becker, Manager

Orange County - ERP
Orange County Landfill Cell 10 Construction
File No. 48-0177603-006

Dear Mr. Becker;

Enclosed is Permit Number ERP48-0177603-006-EI to construct the next phase expansion, Cell 10, of the Class I disposal area located on landfill property. This project is located in Orange County, within Sections 21, 22, 23, 26, 27, and 28 of Township 23 South, Range 31 East. This permit is issued pursuant to Section 373.118, 373.413, 373.416, and 373.426, *Florida Statutes* (F.S.) and Rules 40C-4, 40C-40, 40C-41, 40C-42, 62-312, and 62-343, *Florida Administrative Code* (F.A.C.).

Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing this application.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9:110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this notice is filed with the Clerk of the Department.

Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.

If there are any questions, please contact Debra Laisure, P.E., of the Submerged Lands and Environmental Resource Program by telephone (407-893-7874), fax (407-893-3075), or email (Debra.Laisure@dep.state.fl.us).

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



David Herbster
Submerged Lands and Environmental Resources
Program

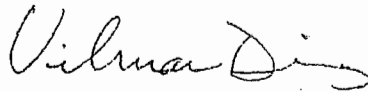
Date: July 15, 2008

DH/dl

Enclosure: Permit No. ERP48-0177603-006-EI

Copies furnished to: David Dewey, SJRWMD (Altamonte Springs)(email)
Mehran S. (Ron) Beladi, P.E., CH2M/WCG Joint Venture

FILING AND ACKNOWLEDGEMENT: FILED on this date,
pursuant to Section 120.52, F. S., with the designated Department Clerk,
receipt of which is hereby acknowledged.



Clerk

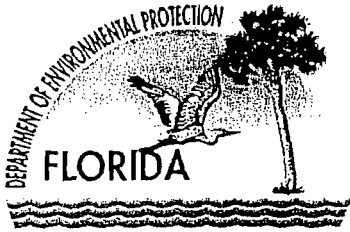
July 15, 2008

Date

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of

business on July 15, 2008, to the listed persons by Vilma Dis.



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PROJECT INFORMATION:

Permit Number: ERP48-0177603-006-EI
Expiration Date: July 15, 2013
County: Orange
Latitude: 28° 28' 18.74"N
Longitude: 81° 13' 23.38"W
Sections 21, 22, 23, 26, 27, and 28/Township 23 South/Range 31 East
Project: Orange County Landfill Cell 10 Construction

PERMITTEE:

OCBCC - Orange County Utilities Solid Waste Department
9150 Curry Ford Road
Orlando, Florida 32825

Attention: James W. Becker, Manager

Orange County - ERP
DEP File Number: 48-0177603-006

Dear Mr. Becker;

This permit is issued under the provisions of Part IV of Chapter 373, *Florida Statutes* (F.S.) and Chapters 62.4, 62-302, 62-312, 62-330, 62-343, 62-101.040, 40C-4, 40C-40, 40C-41, and 40C-42, F.A.C. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construct and Operate: the next phase expansion, Cell 10, of the Class I disposal area at the existing Orange County landfill. Expansion of the landfill will include construction of an additional 82 acres of Class I solid waste disposal area along with Ponds 7 and 8, access roads and ancillary operational facilities for a total of 195 acres of development. Stormwater runoff from the proposed development will be captured and conveyed to two new wet detention ponds, Ponds 7 and 8, for treatment and attenuation. The ponds will have the following characteristics:

Pond I.D.	Bottom Elevation	Top Elevation	Control Elevation	Side Slopes
7	74	86	82.4	3:1 (H:V)
8	74	86	82.2	3:1 (H:V)

Wetlands impacts for this portion of the landfill were mitigated for when the conceptual permit, ERP48-0177603-001-EI, was issued.

The 35 accompanying figures are attached to, and become a part of, this permit.

Permittee: OCBCC
Attention: James W. Becker

Permit Number: ERP48-0177603-006-EI
Expiration Date: July 15, 2013

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violations of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any conditions or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

Permittee: OCBCC
Attention: James W. Becker

Permit Number: ERP48-0177603-006-EI
Expiration Date: July 15, 2013

GENERAL CONDITIONS:

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards.
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Permittee: OCBCC
Attention: James W. Becker

Permit Number: ERP48-0177603-006-EI
Expiration Date: July 15, 2013

SPECIFIC CONDITIONS:

PERMIT ALTERATIONS

1. All construction, operation, and maintenance shall be as set forth in the plans, specifications and performance criteria contained in the Department's files and approved by this permit. Any alteration or modification to the stormwater system as permitted requires prior approval from the Department.
2. At least 48 hours prior to the commencement of construction activities authorized by this permit, the permittee shall submit to the Department a notice of commencement indicating the start time.
3. If any other regulatory agency should require revisions or modifications to the permitted project, the Department is to be notified of the revisions so that a determination can be made whether a permit modification is required.
4. Permittee must obtain a permit from the Department prior to beginning construction of subsequent phases or any other work associated with this project not specifically authorized by this permit.

SITE INSPECTION BY DEP STAFF

5. Department-authorized staff, upon proper identification, will have permission to enter, inspect, and observe the system to insure conformity with the plans and specifications approved by the permit. The plans are on file in the Central District Office of the Department of Environmental Protection.

WATER QUALITY

6. Turbidity must be controlled to prevent violations of water quality pursuant to Rule 62-302.530(69), Florida Administrative Code. Turbidity shall not exceed 29 Nephelometric Turbidity Units above natural background conditions. Turbidity barriers shall be correctly installed at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the proposed work. It is understood that "receiving waterbody" shall not be construed to mean the permittee's settling pond, dredge lake, or other parts of the permittee's closed water system. Turbidity barriers shall remain in place at all locations until construction is completed, soils are stabilized, and vegetation has been established.

Upon final completion of the project and upon reasonable assurance that the project is no longer a potential turbidity source, the permittee will be responsible for the removal of the barriers.

INSPECTION REPORTS

7. Inspection reports for retention, underdrain, wet detention, swales, and wetland stormwater management systems shall be submitted to the Department two years after completion of construction and every two years thereafter on the enclosed form.
8. Copies of all turbidity monitoring reports shall be provided to the Department on a monthly basis. Reports shall be submitted to the letterhead address.

SPECIFIC CONDITIONS:

CONSTRUCTION DETAILS

9. The permittee shall require the contractor to review and to maintain in good condition at the construction site a copy of this permit complete with all conditions, attachments, exhibits, and permit modifications issued for this permit. The complete permit copy must be available for review upon request by Department representatives.
10. Before any offsite discharge from the stormwater management system occurs, the retention and detention storage must be excavated to rough grade prior to building construction or placement of impervious surface within the area served by those systems.
11. Adequate measures must be taken to prevent siltation of these treatment systems and control structures during construction or siltation must be removed prior to final grading and stabilization.

EROSION CONTROL MEASURES

12. Prior to and during construction, the permittee shall correctly implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (FDEP 1988), which are hereby incorporated by reference, unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan.

If site specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the specification in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (FDEP 1988). The permittee shall correct any erosion or shoaling that causes adverse impacts to the water courses.

13. The following measures shall be taken to minimize erosion:
 - A. Swales and dry ponds: sodding of all side slopes; seeding and mulching of flat-lying bottom areas;
 - B. Berms and other disturbed flat-lying areas: seed and mulch.

Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.

14. All wetland areas or water bodies, which are outside of the specific limits of construction authorized by this permit, must be protected from erosion, siltation, scouring or excess turbidity and dewatering.

SPECIFIC CONDITIONS:

SUBMITTAL OF AS-BUILT PLANS

15. Within 30 days after completion of construction of the surface water management system, the permittee shall submit the enclosed form and two sets of record drawings of the project, as actually constructed, thereby notifying the Department that the facilities are ready for final inspection and approval. The permit will be converted from a construction permit to an operation permit once the project is determined to be in compliance with the permitted plans and with conditions provided in Rule 40C-42.028, F.A.C.
16. The location of at least one bench mark (and its corresponding elevation) per stormwater pond should be placed in the vicinity of each outfall structure and will be clearly shown on the as-built plans provided to the Department.

MAINTENANCE ACTIVITIES

17. The following maintenance activities shall be performed as needed on
 - A. All permitted systems:
 1. Removal of trash and debris;
 2. Inspection of inlets and outlets;
 3. Removal of sediments when the storage volume or conveyance capacity of the stormwater management system is below design levels; and
 4. Stabilization and restoration of eroded areas.
 - B. Retention, swale, and underdrain systems:
 1. Mowing and removal of grass clippings;
 2. Aeration, tilling, or replacement of topsoil; and
 3. Re-establishment of vegetation on disturbed surfaces.
 - C. Wet detention systems:
 1. Replanting of natural vegetation within the littoral zone; and
 2. Control of nuisance and exotic vegetation.
18. If the system is not functioning as designed and permitted, operational maintenance must be performed immediately to restore the system. If operational maintenance measures are insufficient to enable the system to meet the design and performance standards of this chapter, the permittee must either replace the system or construct an alternative design. A permit modification must be obtained from the Department prior to constructing such an alternate design pursuant to section 40C-4.331, F.A.C.

Permittee: OCBCC
Attention: James W. Becker

Permit Number: ERP48-0177603-006-EJ
Expiration Date: July 15, 2013

SPECIFIC CONDITIONS:

DEWATERING

19. If dewatering is to occur during any phase of construction or thereafter and discharge is to on-site or off-site surface waters of the State, either directly or via a stormwater management system, a generic permit in accordance with Rule 62-621.300, F.A.C., will be required prior to any dewatering.
20. If dewatering is to occur during any phase of construction or thereafter and the surface water pump(s), wells or facilities are capable of withdrawing 1,000,000 gallons of water per day or more, or an average of 100,000 gallons per day for more than a year and discharge is to be off-site, a consumptive use permit in accordance with Rule 40C-2, F.A.C., will be required prior to any dewatering.
21. A plan for routing of discharge water must be submitted to the DEP Central district Office for approval prior to commencement of dewatering.

EARTH WORK

22. If during the progress of this project prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures are encountered at any time within the project site area, work should cease in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at 850/245-6333, or (800) 847-7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.
23. In the event that any unmarked human remains are encountered anywhere on the subject property, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes. The permittee, or other designee, should contact the authority cited in this Section. Thereafter, project activities should not resume without verbal and/or written authorization from the designated official.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



David Herbster
Submerged Lands and Environmental Resources
Program

Date of Issue: July 15, 2008



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

NOTICE OF PERMIT MODIFICATION

Orange County Utilities Department
Solid Waste Division
9150 Curry Ford Road
Orlando, Florida 32825

Attn: James W. Becker
Manager

Orange County - ERP
File Number 48-0177603-004
Orange County Landfill Cell-9
Extension of Permit Number ERP48-0177603-002-EI

Dear Mr. Becker:

Pursuant to the request for a permit modification received by the Department on February 28, 2007, the permit is changed as follows:

The expiration date is changed to: October 10, 2012.

All other conditions remain the same.

This letter must be attached to your permit and becomes a part of that permit.

Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing this application.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-

3000; and by filing a copy of the notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this notice is filed with the Clerk of the Department.

Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.

If you have any questions, please contact Debra Laisure of the Submerged Lands and Environmental Resource Program by telephone (407/893-7874), fax (407/893-3075), or internet (Debra.Laisure@dep.state.fl.us).

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



David Herbster
Program Administrator
Submerged Lands and Environmental
Resources
Program

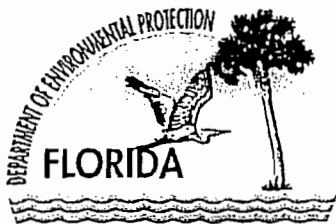
Date: April 19, 2007

DH/dl/co

cc: David Dewey, P.E., SJRWMD (Orlando)(email)

Exhibit A-3

**FDEP Cell 10 Construction Permit
Permit No. SC48-0128169-022**



Florida Department of Environmental Protection

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

NOTICE OF PERMIT

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

By E-Mail
Jim.Becker@ocfl.net

Mr. James Becker
Orange County Utilities Solid Waste Division
9150 Curry Ford Road
Orlando, FL 32825

OCD-SW-08-0258

Orange County – SW
Orange County Solid Waste Management Facility,
Cell 10, Class I – Construct
Permit Application No. SC48-0128169-022

Dear Mr. Becker:

Enclosed is Permit Number SC48-0128169-022, to construct the Orange County Solid Waste Management Facility, Cell 10, Class I, in Orange County, Florida, issued under Section(s) 403.061(14) and 403.707, of the Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit under section 120.68 of the Florida Statutes, by the filing of a Notice of Appeal under rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

F. Thomas Lubozynski for

Vivian F. Garfein
Director, Central District
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803
407/894-7555

Date: June 20, 2008

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

E. Williams

June 20, 2008

Clerk

Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were sent before the close of business on June 20, 2008 to the listed persons.

E. Williams

Clerk

VFG/gc/ew

Enclosures

1. Permit No.SC48-0128169-022
2. Appendix A – List of Documents Incorporated into Permit
3. Appendix B – Time Sensitive Specific Conditions
4. Exhibit I - Monitoring Plan Implementation Schedule (MPIS)

Copies furnished to:

Richard Tedder, P.E. – DEP – Tallahassee

Fred Wick – DEP – Tallahassee

Frank Hornbrook – DEP – Tallahassee

Mehran (Ron) Beladi, P.E. – rbeladi@neel-schaffer.com

Dan Morrical, P.E. – Orange County Utilities Solid Waste Division Dan.Morrical@ocfl.net

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Orange County Environmental Protection Dept. david.bromfield@ocfl.net

James Bradner, P.E. – Air Resource Management – DEP – Central District

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Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Permittee:
Orange County Utilities Department
Solid Waste Division
9150 Young Pine Road
Orlando, FL 32825

Attention: Mr. James W. Becker

WACS Facility: 21847
Permit Number: SC48-0128169-022
Expiration Date: 4/14/2013
County: Orange
Section 21, 22, 27, 28/Township 23 South/ Range 31 East
Latitude 28° 28' 52" North, Longitude: 81° 11' 30" West
Project: Orange County Solid Waste Management Facility-
Cell 10, Class: I - Construct

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

- To construct the Orange County Solid Waste Management Facility, Cell 10, Class I. The present service area for the landfill is the incorporated and unincorporated areas of Orange County.
- The Southern Expansion Site is approximately 3,257 acres and lies south of Young Pine Road. The total area of this project, Cells 9 - 12 in the Southern Expansion Site, is 484 acres. Cell 9 is in operation. The County will construct Cells 10, 11 and 12 southward, making infrastructure improvements as needed to serve the new cells. This construction permit is for the construction of Cell 10 covering approximately 82.1 acres directly south of and contiguous with the existing permitted Cell 9.
- The double-lined Cell 10 bottom liner system has a leachate collection and removal system. The collected leachate is proposed to manifold into a leachate force main. The leachate will go to an existing on-site leachate storage tank. The collected leachate is transmitted to an Orange County owned Water Reclamation Facility.
- The construction of Cell 10 will also include extension of access roads, excavation of new stormwater ponds and control structures, underground landfill gas transmission header pipes for future connections and excavation and storage of fill material for use as cover during operations.
- Cell 10 shall not receive any solid waste until the leachate collection system is in place and functional and Specific Conditions 9, 16, 19, 20, 22, and 27 are satisfied.
- The project incorporates a ground water and surface water monitoring plan.

LOCATION: The landfill is located on 12100 Young Pine Road, 3 miles southeast of the Curry Ford Road/Dean Road intersection, Orlando in Orange County, Florida.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes (F.S.). The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup and auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of this permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code (F.A.C.), as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring information) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

PERMITTEE:
Orange County Utilities Department
Solid Waste Division
Attention: Mr. James W. Becker

WACS Facility: 21847
Permit Number: SC48-0128169-022
Expiration Date: 4/14/2013

SPECIFIC CONDITIONS:

Note that time sensitive specific conditions are summarized in Appendix B of this permit.

1. Plans and Specifications: Drawings, plans, documents and specifications submitted by the permittee, not attached hereto, but on file at the Central District office, are made a part of this permit. The documents are listed in Appendix A.
2. Document Requirements: A copy of the permit, with a complete copy of the permit application and engineering drawings shall be kept on file at the landfill office for inspection and review upon request.
3. Other Permits: This permit does not relieve the permittee from complying with any other appropriate stormwater, ERP, or other permit requirements, nor does it relieve the permittee from compliance with any applicable air requirements of Title V, county ordinance or local programs.
4. reserved.
5. reserved.
6. Effluent Discharge: There shall be no discharge of liquid effluents or contaminated runoff to surface or ground water without prior approval from the Department.
7. Surface Water Management: All surface water runoff from the site shall be collected and treated, as designed and permitted, to meet the requirements of Chapters 373 and 403, Florida Statutes (F.S.) prior to discharge off-site. The surface water management system shall prevent surface water flow into waste filled areas.
8. Zone of Discharge: The zone of discharge for the facility shall be a three dimensional volume, defined in the vertical plane as extending from the top of the ground to the bottom of the screen of the deep surficial monitoring wells, and defined in the horizontal plane as extending 100 feet from the footprint of the waste disposal area or to the property boundary, whichever is less. Class G-II water quality standards must be met at the zone of discharge boundary in accordance with Rule 62-522.410, F.A.C.
9. Monitoring Plan Implementation Schedule: The Monitoring Plan Implementation Schedule attached as Exhibit I, is made a part of this permit. All wells shall be in place and sampled prior to placement of waste in the newly constructed cell.
10. Construction Quality Assurance: The Construction Quality Assurance (CQA) Plan submitted with the permit application received December 24, 2007 (Reference No. 1 – Appendix A), shall be followed for installing and testing the liner system and related components. The CQA engineer or the engineer's designee shall be on-site at all times during construction of the liner systems to monitor the construction activities including the preparation of the sub-grade, placement of the GCL, primary and secondary liners, and the placement of the soil drainage layer over the primary liner to ensure the underlying geo-synthetics are not damaged during construction.

PERMITTEE:

Orange County Utilities Department
Solid Waste Division
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WACS Facility: 21847
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SPECIFIC CONDITIONS:

11. Base: Prior to the liner installation, the base shall be prepared to provide a firm unyielding foundation. The base shall not contain rocks, roots, debris, shells, or other materials that could penetrate the liner material.
12. Sub-base: A geosynthetic clay liner (GCL) of 5×10^{-9} cm/s maximum hydraulic conductivity, shall be placed over the base. Prior to installation, the GCL shall be protected from dirt, water, ultraviolet light exposure, and other sources of damage.
13. Liner: The landfill cell shall be lined with a double liner system in areas above the seasonal high groundwater table and the cell will be lined with composite double liner system in area below the seasonal high groundwater table. The double liner system will consist of the following elements from top to bottom: drainage layer with primary leachate collection system; primary geomembrane liner consisting of 60-mil thick high density polyethylene (HDPE) geomembrane, leak detection and secondary leachate collection system, a secondary geomembrane liner consisting of 60-mil thick HDPE geomembrane and a sub-base consisting of a layer of geosynthetic clay liner (GCL) with a maximum hydraulic conductivity of 5×10^{-9} cm/sec. In the composite double liner system, one additional layer of GCL will be installed below the primary geomembrane liner.
14. GCL Installation Limitation: The number of geosynthetic clay liner (GCL) panels that may be deployed in any one day shall be limited to the number that can be placed in a dry condition and covered by the HDPE while still dry. No installation or seaming under wet conditions shall be allowed. The CQA plan requires the owner's inspector to inspect the sub-grade each day prior to placing the GCL.
15. Geomembrane Testing: Non-destructive air pressure tests and/or vacuum tests shall be conducted by the installer under the direction of the CQA engineer or his designee to test 100 percent of the field seams of the geomembrane. Destructive tests of the geomembrane field seams shall be in accordance with the approved CQA Plan and at a frequency no less than one destructive test sample every 500 linear feet of field seam.
16. Liner Installation – Summary Report: A professional engineer licensed to practice in Florida shall supervise and evaluate the liner installation quality assurance/quality control program to ensure that the liner meets design specifications. Upon completion, the engineer shall submit a summary report to the Department as to the complete conformity to the approved plans and specifications. This summary report shall include a documented control program of the liner installation, liner inspections and the quality assurance/quality control testing procedures and laboratory analyses. This report shall be included with the certification required in Specific Condition 19 of this permit.
17. Liner Installation: Installation of the liner shall be performed by an experienced installer who has installed similar type materials. The permittee shall notify the Department at least 10 days prior to the commencement of liner installation work in the cell.
18. Construction Permit Renewal: The construction shall reasonably conform to the plans and supporting documents submitted as part of the application. If construction cannot be completed before the expiration of the permit, the permittee must notify the Department, in writing, at least 60 days prior to the expiration of the construction permit and request a renewal of the construction permit.

PERMITTEE:

Orange County Utilities Department
Solid Waste Division
Attention: Mr. James W. Becker

WACS Facility: 21847
Permit Number: SC48-0128169-022
Expiration Date: 4/14/2013

SPECIFIC CONDITIONS:

19. Certification: After all significant initial construction has been completed, and prior to acceptance of any solid waste, the Engineer of Record shall complete a Certificate of Construction Completion, DEP Form 62-701.900(2), then contact the Department to arrange for Department representatives to inspect the facility in the company of the permittee, the engineer and the proposed on-site facility operator.
20. Solid Waste Disposal: Cell 10 shall not receive any solid waste until the leachate collection system is in place and functional and Specific Conditions 9, 16, 19, 22, and 27 are satisfied.
21. Liner Edge Staking: The edge of the liner must be clearly and permanently outlined by permanent monuments or markers, so that solid waste is deposited at least 10 feet inside the edge of the liner. The location of monuments or markers shall be established by a Professional Surveyor and Mapper, licensed in Florida. The monuments or markers shall be of sufficient number to clearly define the liner edge, and shall be visible and easily identifiable to operation personnel and regulator inspectors.
22. Operation Permit: To obtain a permit to operate Specific Condition No. 20 has to be satisfied and an Application For A Permit To Operate A Solid Waste Management Facility, DEP Form # 62-701.900(1) with supporting documents and a fee of \$10,000.00 needs to be submitted to the Department.
23. Substantial Changes or Revisions: The Department shall be notified and approval obtained prior to executing any substantial changes or revisions to the construction authorized by this permit.
24. Air Program Requirements: The facility has a Title V Air Permit No 0950113-004-AV. The facility will comply with its air permit and all applicable air requirements.
25. reserved.
26. reserved.
27. Financial Responsibility: The permittee shall maintain financial assurance in accordance with the requirements of Rule 62-701.630, F.A.C. Proof that the financial mechanisms are established and funded in accordance with Rule 62-701.630 and 40 CFR Part 264, Subpart H, as adopted by reference in Rule 62-701.630, F.A.C., shall be submitted to the Department sixty (60) days prior to the acceptance of any solid waste at the facility. All submittals in response to this specific condition shall be sent to: Department of Environmental Protection, Financial Coordinator, Solid Waste Section, 2600 Blair Stone Road, MS-4565, Tallahassee, Florida 32399-2400, with a copy to: Department of Environmental Protection, Central District, Solid Waste Section, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. No waste can be received until the Department has approved the financial assurance mechanism.
28. Annual Cost Estimates and Financial Instrument Adjustments: The permittee shall, in addition to annually adjusting the closure and long-term care cost estimates, adjust the financial assurance mechanism to reflect an increase in cost estimates. Cost estimate adjustments shall be in accordance with Rule 62-701.630(4), F.A.C. Instrument adjustments shall be in accordance with Rule 62-701.630, F.A.C. and 40 CFR Part 264,

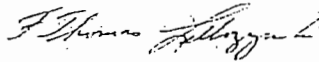
PERMITTEE:
Orange County Utilities Department
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Attention: Mr. James W. Becker

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Expiration Date: 4/14/2013

Subpart H as adopted by reference in Rule 62-701.630, F.A.C. Documentation of financial mechanism increases shall be submitted to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, Twin Towers Office Building, 2600 Blair Stone Road, MS-4565, Tallahassee, Florida 32399-2400. All estimate update submittals shall be sent to: Department of Environmental Protection, Central District, Solid Waste Section, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767.

ISSUED: June 20, 2008

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



F. Thomas Lubozynski for

Vivian F. Garfein
Director, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.




June 20, 2008

Clerk

Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were sent before the close of business on June 20, 2008 to the listed persons.



Clerk

Copies furnished to:
Richard Tedder, P.E. – DEP – Tallahassee
Fred Wick – DEP – Tallahassee
Frank Hornbrook – DEP – Tallahassee
Mehran (Ron) Beladi, P.E. – CH2M/Neel-Schaffer, Joint Venture rbaladi@neel-schaffer.com
Dan Morrival, P.E. – Orange County Utilities Solid Waste Division Dan.morrival@ocfl.net
James Flynt, P.E. – Orange County Utilities Solid Waste Division James.Flynt@ocfl.net
Orange County Environmental Protection Dept. lori.cunniff@ocfl.net
James Bradner, P.E. – Air Resource Management – DEP – Central District

Appendix A
List of Documents Incorporated into the Permit

1. Solid Waste Management Facility Permit Application for Construction of Cell 10, Class I Landfill Expansion on the Southern Expansion Site, Solid Waste Management Facility, Orange County, Florida, Volume I, II and III of III, Prepared by CH₂M/WCG, Maitland, Florida 32751 dated December 2007. Received and stamped December 24, 2007, Central District – DEP.
2. Request For Additional Information from Central District – DEP dated January 22, 2007.
3. Response To Request For Additional Information from CH₂M/WCG, Maitland Florida 32751 dated February 18, 2008. Received and stamped February 19, 2008, DEP – Central District.
4. Volume I of VII FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Prepared by CH₂M/G&R, Orlando, Florida dated November 2000. Received and stamped October 31, 2000, DEP – Central District.
5. Volume II of VII FDEP Permit Application Drawings for class I Landfill Expansion Southern Expansion Site (Included detailed Drawings for Cell 9, and Conceptual Drawings for Cells 10, 11 and 12), Prepared by CH₂M/G&R, dated 10/30/2000. Received and stamped October 31, 2000, DEP – Central District.
6. Volume III of VII FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Operations and Maintenance Plan, Prepared by CH₂M/G&R, Orlando, Florida dated November 2000. Received and stamped October 31, 2000, DEP – Central District.
7. Volume IV of VII FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Hydro-geological and Geotechnical Investigation Requirements, Prepared by CH₂M/G&R, Orlando, Florida.
8. Volume V of VII, FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Water Quality and Leachate Monitoring Plan, Prepared by CH₂M/G&R, Orlando, Florida.
9. Volume VI of VII FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Groundwater Modeling, Prepared by CH₂M/G&R, Orlando, Florida.
10. Volume VII of VII FDEP Solid Waste Permit Application for Class I Landfill Expansion on the Southern Expansion Site, Engineering Report for Surface Water Management System, Prepared by CH₂M/G&R, Orlando, Florida.

Exhibit B

***Updated Operations and Maintenance Plan
For Cells 9-10 and Updated Filling Sequence***



Contents

Section	Page
1	General Information..... 1-1
1.1	Background..... 1-1
1.2	Normal Operating Hours 1-1
1.3	Holiday Schedule 1-1
2	Contingency Operations..... 2-1
2.1	Fire 2-1
2.2	Wet Weather Operations..... 2-1
2.3	Equipment Breakdown 2-2
2.4	Severe Weather Conditions 2-2
3	Designation of Responsible Persons..... 3-1
3.1	Designation of Responsible Persons 3-1
4	Waste Control 4-1
4.1	Load-Checking Program Purpose 4-1
4.2	Personnel Training..... 4-1
4.3	Inspection Procedures 4-1
4.3.1	Inspection Frequency 4-1
4.3.2	Inspection Site Location 4-2
4.3.3	Inspection Procedures 4-2
4.3.4	Waste Inspection List 4-2
4.4	Spotters 4-4
4.5	Procedures for Prohibited Waste Discovery 4-4
5	Scalehouse 5-1
5.1	Description..... 5-1
5.2	Operating Procedures..... 5-1
6	Vehicle Control 6-1
6.1	Transfer Trailer Staging Area 6-1
6.2	Small Vehicle Drop-Off 6-1
6.3	Commercial Haulers..... 6-1

Section	Page
7	Method and Sequence of Filling..... 7-1
7.1	Fill Sequence 7-1
7.2	Initial Waste Placement..... 7-1
8	Waste Compaction and Initial Cover 8-1
9	Gas, Leachate, and Stormwater Controls..... 9-1
9.1	Purpose/Description..... 9-1
9.2	Leachate Collection System 9-1
9.2.1	Purpose/Description..... 9-1
9.2.2	Leachate Recirculation System..... 9-2
9.2.3	Leachate and Wastewater Transmission Systems..... 9-2
9.2.4	Leachate and Wastewater Flow 9-4
9.2.5	Leachate Collection System Pump Operating Procedures 9-5
9.2.6	Cells 9-12 Leachate Storage Tanks..... 9-5
9.2.7	Master Repump Station 9-6
9.2.8	Wash Facility 9-7
9.2.9	Contingency Operations 9-7
9.2.10	Maintenance..... 9-7
9.3	Stormwater Control 9-7
10	Water Quality Monitoring..... 10-1
11	Operating Record..... 11-1
11.1	Location..... 11-1
11.2	Training Verification 11-1
12	Waste Records..... 12-1
12.1	Location..... 12-1
12.2	Records 12-1
13	Access Control 13-1
14	Waste Monitoring 14-1
14.1	Load Checking Program Purpose..... 14-1
14.2	Hazardous Waste Handling..... 14-1
14.2.1	Categories/Classes of Hazardous Waste 14-1
14.2.2	Waste Inspection List 14-1
14.2.3	Proper Management of Waste..... 14-1
14.3	Inspection Records..... 14-1
14.4	Training 14-2

Section	Page
15 Waste Handling	15-1
15.1 Waste Compaction.....	15-1
15.2 Leachate Collection.....	15-1
15.3 Off-Site Leachate Disposal.....	15-1
15.4 On-Site Leachate Treatment.....	15-1
15.5 Leachate Management Contingency Plan.....	15-1
15.6 Leachate Records.....	15-1
15.7 Recording Rain Gauge.....	15-1
16 Gas Monitoring	16-1
16.1 Gas Monitoring.....	16-1
17 Stormwater System Management	17-1
17.1 Operation and Maintenance Activities.....	17-1
17.2 General Surface Water Management System Maintenance Procedures and Pollution Prevention.....	17-2
18 Equipment and Operation Features	18-1
18.1 Equipment for Waste Handling.....	18-1
18.2 Communication Equipment.....	18-1
18.3 Shelter, Sanitary Facilities and First Aid.....	18-1
18.4 Dust Control.....	18-1
18.5 Fire Protection.....	18-1
18.6 Litter Control.....	18-2
18.7 Signs.....	18-2
19 Roads	19-1
19.1 Access Road.....	19-1
19.2 Perimeter Roads.....	19-1
19.5 Dust Control.....	19-1
20 Additional Records	20-1
20.1 Record Keeping.....	20-1
Attachment A:	Employee Training and Certifications List Orange County Solid Waste Division

SECTION 1

General Information

This Operations Plan has been prepared to meet the requirements of 62-701.500, FAC, as well as to provide a working plan and training document for the overall operation of Cells 9-12 in the Southern Expansion Site. This document originally submitted to FDEP as part of Cell 9 operation permit application has been updated to include the operation of Cells 9-10.

1.1 Background

Orange County owns and operates the Orange County Solid Waste Management Facility (OCSWMF.) The Orange County Utilities (OCU) Solid Waste Division is responsible for operation and maintenance of the OCSWMF. The Facility covers the 1500-acre original landfill plus the 3500 acre SES and other properties covering a total of 5000 acres. It includes Class I and Class III solid waste landfills, a citizen drop-off area, yard waste mulching area, waste recycling facilities, borrow pits, maintenance areas and other ancillary facilities. The County receives and processes over 1.1 million tons of solid waste per year at this facility making it the largest municipally owned and operated solid waste management facility in the State of Florida.

1.2 Normal Operating Hours

The OCSWMF hours of operation are as follows:

- Franchise haulers and commercial charge accounts
 - 4:00 a.m. to 7:00 p.m. Monday and Tuesday
 - 4:00 a.m. to 6:00 p.m. Wednesday through Friday
 - 6:30 a.m. to 6:00 p.m. Saturday
 - 7:30 a.m. to 5:00 p.m. Sunday.
- General public: 8:00 a.m. to 5:00 p.m. Monday through Sunday.

1.3 Holiday Schedule

The facility is open for operations 364 days a year. The facility is closed on December 25th of each year for Christmas Day.

SECTION 2

Contingency Operations

2.1 Fire

In the event of fire in a waste transport vehicle, the load is dumped away from the working face area in an area designated by the Utilities Supervisor, or other authorized personnel. Landfill equipment is then used to smother the fire with stockpiled cover material. When the fire is extinguished, the waste is loaded into a dump truck and transported to the working face. An investigation is conducted under the direction of the Landfill Supervisor to determine the cause of the fire. Results of the investigation are recorded.

If fire is discovered on the working face, the Landfill Operations Supervisor is notified immediately. Landfill equipment is then used to smother the fire with borrow soil and water. An attempt is made to determine the cause of the fire. Efforts taken and results of the investigation are recorded.

In the case of equipment fires, the Landfill Supervisor notifies the Orange County Fire Department. The Fire Marshall conducts an investigation to determine the cause of the fire. The Fire Marshall's report is attached to the Landfill Supervisor investigation report describing the event. The daily checklist is updated on the date of occurrence. Steps are taken, based on the Fire Marshall's report, to reduce the potential for similar occurrences.

ALL FIRES OCCURRING AT THE LANDFILL MUST BE REPORTED TO FDEP WITHIN 24 HOURS, AND WITHIN 5 DAYS IN WRITING EXPLAINING THE CAUSE, REMEDIAL ACTION AND MEASURES TAKEN TO PREVENT RECURRENCE IN ACCORDANCE WITH THE FDEP SOLID WASTE OPERATION PERMIT SPECIFIC CONDITION NO. 23.

Orange County does not permit burning in the OCSWMF by contractors without written permission from the Division of Forestry and other regulatory agencies.

2.2 Wet Weather Operations

Preparation of the wet weather area is carried out during normal operations. Preparations include an all-weather surface (mulch, bark chips, shingles, mixed bark chips and shingles), stockpiles of daily cover, and the development of temporary diversion berms to prevent excessive run-on to the area. Wet weather filling will take place over previously filled bays in Cells 9-10 areas.

2.3 Equipment Breakdown

The landfill has sufficient extra equipment to operate in accordance with permit requirements. If additional equipment is required it is rented or leased. In the event that equipment malfunction, destruction, breakdown or other problems cause the landfill to be

temporarily unable to comply with permit conditions, the Department is immediately notified of the cause and the steps being taken to correct the problem and prevent reoccurrence in accordance with 62-701 FAC.

2.4 Severe Weather Conditions

Solid Waste Management Facilities may be temporarily closed at the Solid Waste Division Manager's discretion when severe weather conditions prohibit access to the solid waste disposal areas. Borrow soil material is used to create diversion berms as needed on a temporary basis and the working face is closed to minimize leachate generation.

Designation of Responsible Persons

3.1 Designation of Responsible Persons

The facility is owned by the Orange County Board of County Commissioners, and is operated by the County's Utilities Department, Solid Waste Division. The designated responsible person for the Orange County Landfill is Mr. James W. Becker. All correspondence and inquires concerning the management and operation of the Solid Waste Management Facility should be submitted to the attention of Mr. James W. Becker to the following address.

Mr. James W. Becker,
Solid Waste Division Manager
Orange County Utilities Department
5901 Young Pine Road
Orlando, Florida 32829
(407) 836-6600

Other designated responsible persons, titles, addresses and contact information are listed below:

Mr. Mark Cooley
Landfill Operations Supervisor

Mr. Larry Gast
Solid Waste Division Section Manager

Mr. Dan Morrival, P.E.
Chief Engineer

Mr. Jim W. Flynt, P.E.
Senior Engineer

Mr. Oscar Ramos
Environmental Coordinator

The address for all above:

Solid Waste Division
Orange County Utilities Department
5901 Young Pine Road
Orlando, Florida 32829
(407) 836-6600.

Waste Control

4.1 Load-Checking Program Purpose

Through the Resource Conservation and Recovery Act of 1976 (RCRA), the EPA established a system for controlling hazardous waste from "cradle-to-grave," meaning from the point of generation through transport, treatment, storage, and final disposal. Chapter 62-701.500(6), FAC governs the monitoring of solid waste for hazardous constituents in the State of Florida. This rule establishes the requirement for the implementation of load-checking programs for sanitary solid waste management facilities to detect and discourage attempts to dispose of unauthorized waste. Orange County has developed this load-checking program to comply with this requirement. This program encompasses several measures to deter the disposal of hazardous waste at the site:

- Random load inspections;
- Inspections of suspicious loads; and
- Personnel training on how to recognize hazardous materials and procedures to take if found.

In accordance with 62-701-500 (6) (a) 2 F.A.C., if unauthorized materials are detected in a load, appropriate steps are taken to have the unauthorized materials removed and disposed of properly. In accordance with 62-701-500 (6)(b)1 F.A.C., if the hazardous material detected is a regulated hazardous waste, the County promptly notifies FDEP, the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the County shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility. Subsequent shipments from sources found or suspected to be previously responsible for shipping regulated hazardous waste shall be flagged and subject to precautionary measures prior to accepting the wastes.

4.2 Personnel Training

All personnel involved with the load-checking program are required to receive training. This training focuses on the identification of unauthorized waste, the potential sources of regulated hazardous waste, and the associated safety protocols. This training can be integrated with other technical training required for the operation of the site.

4.3 Inspection Procedures

4.3.1 Inspection Frequency

In accordance with FDEP regulations, six (6) random loads of solid waste from commercial generators are inspected weekly. These include three (3) at the Class I landfill working face and three (3) at the Class III landfill working face. The random inspection form attached to this section is filed out for each inspection event.

4.3.2 Inspection Site Location

The load-checking location for the landfill varies and depends on the location of the landfill working face operations on any given day. Additionally, If suspect waste is identified at the scalehouse, the Weighmaster notifies an Environmental Specialist and the delivery truck is segregated from other traffic and the waste is examined.

Inspections of the incoming waste at the transfer stations occur at the tipping floor as waste being pushed into the loading pits at both the McLeod and Porter Transfer Stations prior to delivery to the landfill.

4.3.3 Inspection Procedures

The following are the inspection procedures for the Load-Checking Program:

- The on-duty spotter is prior to initiation of inspection.
- Inspection personnel use the appropriate personal protective equipment.
- Inspection personnel use the buddy system. Only authorized personnel are permitted in the inspection area. For example, the driver must stand outside the designated inspection area after operations have begun.
- The inspector requests the driver of the truck to spread the the truck's contents. Inspection personnel must stand clear of the truck during dumping procedures.
- Hand tools are used to break down the loads for inspections, and occasionally, a dozer or compactor is used to carefully spread out the material.
- At the conclusion of the inspection, all operations records are updated and placed in the appropriate file.

4.3.4 Waste Inspection List

Orange County has developed a list of waste prohibited at the Class I and Class III disposal area at the OCSWMF in accordance with 62-701-300 FAC.

The following partial list of wastes is prohibited from disposal at the Class I disposal area. If any of these waste types are observed in the waste, the hauler should be stopped or identified and a landfill supervisor be notified to take appropriate action.

Table 4-1
Class I Disposal Area Solid Waste List

Prohibited Waste (Partial List) F.A.C Chapter 62-701.340(3)c

1. Asbestos (Asbestos must be delivered to the asbestos disposal area.)
2. Batteries (lead Acid, NiCad)
3. Biohazardous Waste
4. Compressed Gas Cylinders (LP tanks, oxygen, acetylene, etc.)
5. Fluorescent Bulbs
6. Free or containerized liquids (except household waste, i.e. drinks)
7. Household Hazardous Waste or Commercial Chemicals
8. Oil

9. PCBs (Polychlorinated Biphenyl, i.e. transformers, ballast, capacitors, regulators, switches, etc.)
10. White Goods (appliances, i.e. stoves, refrigerators, washing machines, dryers, AC units, TV and Computer screens, etc.)
11. Whole Waste Tires (County requires tires be delivered to the waste tire storage area.)
12. Yard Waste (Yard waste & land clearing debris must be delivered to the yard waste composting area.)

Accepted Waste at the Class I Disposal Area

1. Putrescible Garbage (household garbage such as kitchen and food waste, etc.)
2. Empty drums/containers (20 gallons or larger containers shall have one end removed or cut open; or have a series of 6-punched holes around the bottom to ensure it is empty and free of residue.)

4.4 Spotters

In accordance with 62-701.320 (15), the owner or operator of a landfill is required to have trained spotters. At least one trained spotter will be located at any active face of the landfill. As a back-up to the spotter, dozer or compactor operators will act as a spotter as well if they have been properly trained as spotters. Trained spotters must pass an eight-hour training course and receive an additional four hours of course training every three years thereafter.

The majority of training for Orange County Solid Waste Management Facility Operation staff (operators and spotters), is conducted at offsite classes such as the TREEO Center and special seminars sponsored by solid waste organizations. Certifications are provided to the trainees at the conclusion of course testing. Any in-house training is conducted by qualified vendors that have received course content approval from the Department.

Spotters are stationed where they can inspect shipment of waste for unauthorized waste.

4.5 Procedures for Prohibited Waste Discovery

If the generator of the regulated hazardous waste or other un-permitted material cannot be identified, landfill staff will contact the hauler and it becomes the hauler's responsibility to remove the waste. Hazardous waste or un-permitted materials may be temporarily stored at the site according to current permit conditions and established standard operating procedures.

Unacceptable waste identified as hazardous or un-permitted waste is refused. After determining from the truck driver where he picked up the load, the generator is notified, confirmation is made that he is the generator, rules and regulations are explained, and a specified time frame is given for the material to be retrieved. If the generator does not pick up the material, the hauler is responsible.

Waste that is unidentifiable is considered unacceptable waste. The inspector refuses the waste pending results of analysis undertaken by the hauler or generator. If the waste is found to be non-hazardous and is permitted for disposal at the landfill, it is accepted. If the waste is not of a type permitted for disposal at the landfill, it is rejected.

CODE (F. A. C.) TO COLLECT INFORMATION AT RANDOM ON TRUCKS COMING INTO THE LANDFILL

PLEASE ANSWER THE FOLLOWING QUESTIONS.

DATE: _____

TIME: _____

CLASS I: _____ CLASS III: _____

HAULING COMPANY: _____

DRIVERS NAME: _____

COMMERCIAL WASTE: _____ OR RESIDENTIAL WASTE: _____

TELEPHONE NUMBER: _____

WHERE DID THIS WASTE COME FROM? (I.E. ORLANDO, OVIEDO, APOPKA,
ETC... _____

WHAT STREET? _____

TRUCK ID NO. _____ PLATE NO. _____

HAZARDOUS WASTE (SUBTITLE C) FOUND? CIRCLE ONE YES OR NO

IF YES PROVIDE NOTES / DETAILS: _____

INSPECTED BY: _____

Scalehouse

5.1 Description

The scalehouse for the Southern Expansion Site is equipped with three truck scales and a scale management system software package. The system tracks the types of waste disposed at the site, the tonnages, the customer, and the source of the waste. The scale facility includes two inbound and one outbound scales and has room for an additional outbound scale. The waste-hauling vehicles entering the site must pass through the in-bound scales. The scalehouse computer system tracks the type of waste, the customer code, and the driver identification. The vehicle is then directed to the active Class I disposal area within the site. The outbound scale is used for weighing the empty vehicles which are not part of the computer database to determine the tipping fee.

The computer and tracking system at the original 1500-acre Landfill Scalehouse was upgraded in 2005 and is the same as the computer and tracking system for the SES Scalehouse. The computer systems at both landfill scale houses are linked with the scale houses at the McLeod and Porter Transfer Stations.

5.2 Operating Procedures

All vehicles must enter the site through the entrance road. Vehicles are required to stop at the scalehouse for weighing and instructions for specific disposal area location directions.

The landfill accepts the following waste types: residential and commercial Class I, Class III, construction and demolition debris (C&D), yard waste, dewatered wastewater treatment sludge, packaged asbestos, special waste tires, household hazardous waste, and other residential and commercial refuse including appliances. However, Cells 9 -10 disposal areas only accept Class I solid waste. Class III solid waste and yard waste are currently directed to the other existing scale house for possessing and direction to proper disposal location.

Because most of the disposal vehicles entering the landfill site use the facility on a regular basis, information on these customers/ vehicles is on file in the computer system, including assigned vehicle designation numbers, tare weights, and places of origin. Vehicles for which this information exists in the computer system need only be weighed in, the data input into the computer system, and the material type recorded. Vehicles that are not in the computer files must be weighed upon entering and leaving the landfill site. The vehicle designation number, customer name and place of origin are recorded in the system for future use.

The Weighmaster directs the vehicle to the appropriate solid waste management facility. Signs are clearly posted throughout the site identifying the disposal areas.

In addition to weighing vehicles, the Weighmaster is responsible for questioning the drivers about the types of transported materials and their origin.

- **Acceptable Material:** The driver is directed to the proper location for disposal on site.

- **Unacceptable Material** If the Weighmaster determines that unacceptable material is being transported, the driver of the vehicle is directed to transport the material to an appropriate off-site disposal facility.

The landfill has various disposal areas that are equipped to handle certain types of waste that require special handling prior to disposal or recycling. These wastes are asbestos, sludge, household hazardous waste, oil and paint, batteries, tires and white goods. These waste types are directed to the original 1500-acre Landfill Scalehouse for processing and direction to the proper disposal locations.

SECTION 6

Vehicle Control

All vehicles entering the landfill must pass through one of two scale houses, one serving the facilities on the existing 1,500-acre site and one serving Cells 9-12. After being processed at the scalehouse, the vehicles are directed to the appropriate disposal area of the landfill. Once at the working face, the landfill spotter directs the vehicles to the appropriate area for unloading. Additional information regarding scalehouse operations are provided in Section 5.

6.1 Transfer Trailer Staging Area

The transfer trailer staging area for Cells 9-12 is located immediately south of the SES Scalehouse. This area, which also includes a tire repair shop and a truck wash area, is used to hold full and empty trailers. Full trailers are hauled from McLeod and Porter Transfer Stations and stored in this area until they are unloaded at the working face. The staging area is also used to store empty transfer trailers until they can be hauled back to the transfer stations for reloading.

Transfer trailers from McLeod and Porter Transfer Stations are hauled to the staging area where the full trailers are disconnected from the tractors and parked. An empty trailer is then attached to the tractor and returned to the transfer stations for another load. Full trailers at the staging area are hitched to yard-dog trucks and delivered to the Class I disposal area to be unloaded.

6.2 Small Vehicle Drop-Off

While the Small Vehicle Drop-Off Facility is not part of the Cells 9-12 disposal operations, it is an integral part of the vehicle control program which seeks to reduce the number of vehicles at the active face. All non-commercial haulers are directed to this facility adjacent to the Cells A-K landfill area. The haulers place waste in roll-off containers. When full the containers are transported to the active face with County equipment.

6.3 Commercial Haulers

Commercial haulers make up the balance of disposal vehicles using the landfill. These haulers are directed to the current location of the active face by the scale house and signs. Waste is unloaded at the toe of the active face for inspection and/or spreading by the landfill equipment.

Method and Sequence of Filling

7.1 Fill Sequence

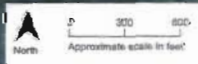
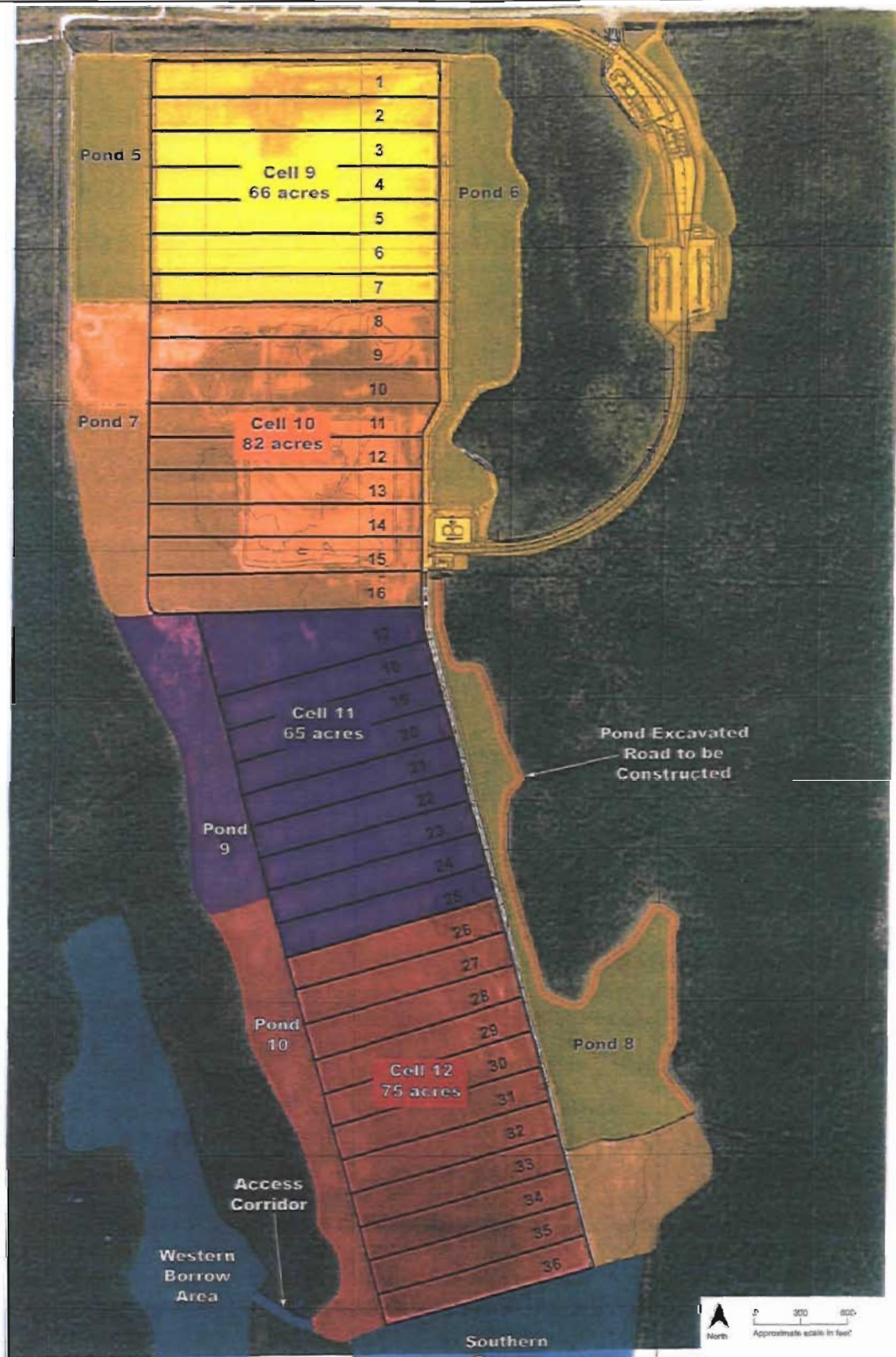
The Sequencing Plan was prepared jointly by Orange County Solid Waste Division staff and CH2M/Neel-Schaffer Joint Venture, Inc. Copies of the Sequencing Plan drawings are located in the Solid Waste Division Library. The Cells 9-10 Sequencing Plan is included at the end of this section. This is consistent with the operation sequence and grading plan for Cells 9-12 submitted to FDEP in the 2000 permit application on file with the Department.

7.2 Initial Waste Placement

Initial waste placement in Cell 10 will be started from the east edge of Bays 8 and 9. The berm between Bay 7 and 8 will be removed as part of operations and the portion of Bay 7 in Cell 9 that had not received any waste will also be floored at this time. Bays 8 and 9 are designed with no divider berm and both bays will be floored at the same time. The initial waste placement will be monitored to ensure sharp objects are not present and removed in order to protect the liner. During the flooring of the bays, the solid waste is placed in initial lifts of approximately 10-foot depth with minimum compaction to avoid damaging the liner. The subsequent lifts are 20-foot high.

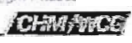
Access to the active face is from the east access road. Temporary crossings are constructed over the swale between the access road and liner anchor trench platform.

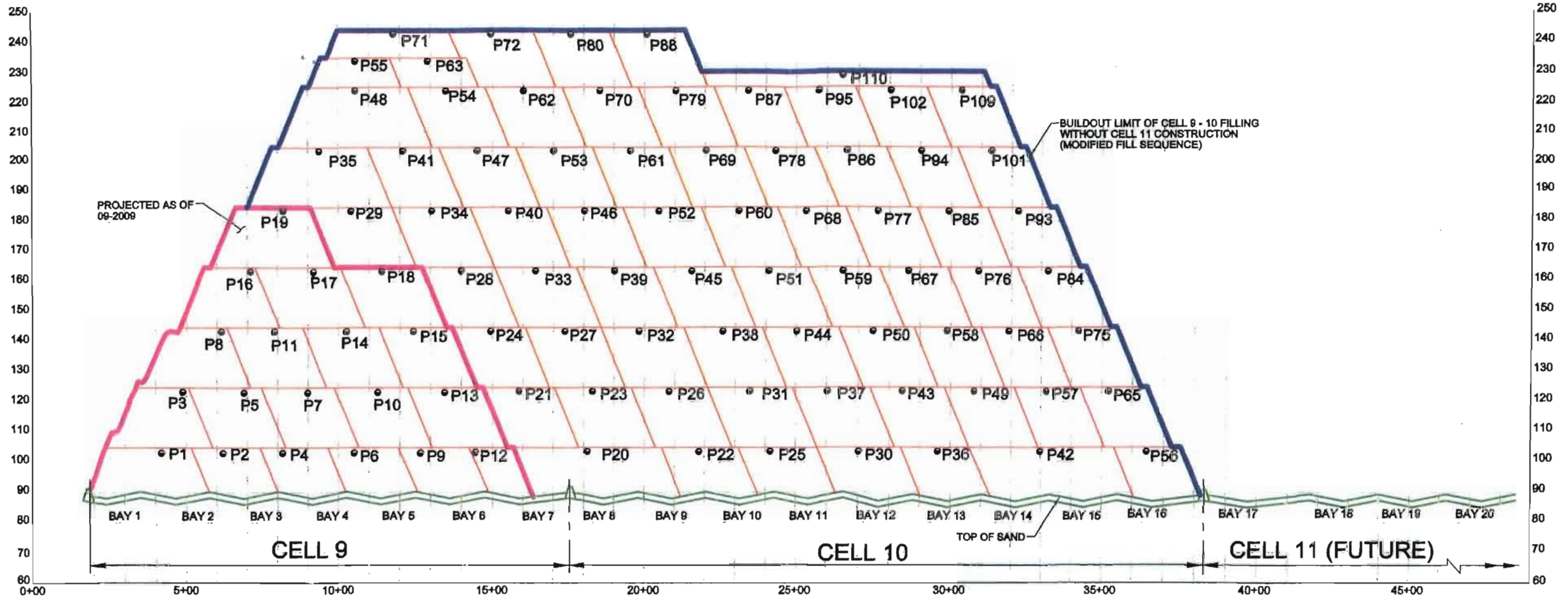
Placement of the initial lift proceeds from east to west. Once the initial lift is completed an access road is built on top of the lift and subsequent lifts will typically proceed from west to east.



- LEGEND**
- Completed/During Cell 9 Construction
 - Proposed Cell 10 Construction Phase
 - Proposed Cell 11 Construction Phase
 - Proposed Cell 12 Construction Phase
 - Future Borrow Areas

Proposed Cells 10 - 12 Construction Phases:
Grange County Landfill





CELL 9-12 ESTIMATED VOLUME OF LIFTS (C.YD.)

LIFT #	EXIST	LIFT #	VOLUME	LIFT #	VOLUME	LIFT #	VOLUME
LIFT # 1	EXIST	LIFT # 26	286,511	LIFT # 51	183,356	LIFT # 79	89,446
LIFT # 2	EXIST	LIFT # 27	245,550	LIFT # 52	180,785	LIFT # 80	60,410
LIFT # 3	EXIST	LIFT # 28	193,057	LIFT # 53	125,239	LIFT # 84	166,607
LIFT # 4	EXIST	LIFT # 29	170,725	LIFT # 54	90,783	LIFT # 85	149,014
LIFT # 5	EXIST	LIFT # 30	289,274	LIFT # 55	29,395	LIFT # 86	124,554
LIFT # 6	EXIST	LIFT # 31	286,575	LIFT # 56	243,810	LIFT # 87	85,416
LIFT # 7	EXIST	LIFT # 32	229,617	LIFT # 57	259,100	LIFT # 88	50,246
LIFT # 8	EXIST	LIFT # 33	208,191	LIFT # 58	240,455	LIFT # 89	135,952
LIFT # 9	EXIST	LIFT # 34	153,506	LIFT # 59	182,239	LIFT # 94	112,148
LIFT # 10	EXIST	LIFT # 35	193,252	LIFT # 60	153,350	LIFT # 95	81,070
LIFT # 11	EXIST	LIFT # 36	264,236	LIFT # 61	149,724	LIFT # 101	102,820
LIFT # 12	EXIST	LIFT # 37	261,586	LIFT # 62	90,522	LIFT # 102	75,306
LIFT # 13	EXIST	LIFT # 38	271,528	LIFT # 63	29,133	LIFT # 109	69,268
LIFT # 14	EXIST	LIFT # 39	194,852	LIFT # 65	223,598	LIFT # 110	30,595
LIFT # 15	EXIST	LIFT # 40	170,985	LIFT # 66	222,601		
LIFT # 16	EXIST	LIFT # 41	116,199	LIFT # 67	200,451		
LIFT # 17	EXIST	LIFT # 42	809,410	LIFT # 68	147,953		
LIFT # 18	EXIST	LIFT # 43	234,227	LIFT # 69	122,115		
LIFT # 19	EXIST	LIFT # 44	227,682	LIFT # 70	107,782		
LIFT # 20	594,169	LIFT # 45	230,680	LIFT # 71	24,635		
LIFT # 21	263,976	LIFT # 46	160,061	LIFT # 72	49,548		
LIFT # 22	317,278	LIFT # 47	131,864	LIFT # 75	195,417		
LIFT # 23	282,912	LIFT # 48	146,888	LIFT # 76	185,815		
LIFT # 24	229,291	LIFT # 49	280,572	LIFT # 77	160,468		
LIFT # 25	304,293	LIFT # 50	201,143	LIFT # 78	115,560		

HORIZONTAL LFG COLLECTORS

LFG	ELEV.	LFG	ELEV.	LFG	ELEV.	LFG	ELEV.
P1	103.5	P25	103.5	P49	123.5	P76	163.5
P2	103.5	P26	123.5	P50	143.5	P77	183.5
P3	123.5	P27	143.5	P51	163.5	P78	203.5
P4	103.5	P28	163.5	P52	183.5	P79	223.5
P5	123.5	P29	183.5	P53	203.5	P80	243.5
P6	103.5	P30	103.5	P54	223.5	P84	183.5
P7	123.5	P31	123.5	P55	233.5	P85	183.5
P8	143.5	P32	143.5	P56	103.5	P86	203.5
P9	103.5	P33	163.5	P57	123.5	P87	223.5
P10	123.5	P34	183.5	P58	143.5	P88	243.5
P11	143.5	P35	203.5	P59	163.5	P93	183.5
P12	103.5	P36	103.5	P60	183.5	P94	203.5
P13	123.5	P37	123.5	P61	203.5	P95	223.5
P14	143.5	P38	143.5	P62	223.5	P101	203.5
P15	163.5	P39	163.5	P63	233.5	P102	223.5
P16	143.5	P40	183.5	P65	123.5	P109	223.5
P17	163.5	P41	203.5	P66	143.5	P110	228.5
P18	163.5	P42	103.5	P67	163.5		
P19	183.5	P43	123.5	P68	183.5		
P20	103.5	P44	143.5	P69	203.5		
P21	123.5	P45	163.5	P70	223.5		
P22	103.5	P46	183.5	P71	243.5		
P23	123.5	P47	203.5	P72	243.5		
P24	143.5	P48	223.5	P75	143.5		

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<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING. 0 = 1' IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.</p>	<p align="center">REUSE OF DOCUMENTS</p> <p>THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL WCG JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL WCG JOINT VENTURE.</p> <p align="center">NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>DESIGNED</td><td>DATE</td></tr> <tr><td>DRAWN</td><td>DATE</td></tr> <tr><td>CHECKED</td><td>DATE</td></tr> <tr><td>APPROVED</td><td>DATE</td></tr> </table>	DESIGNED	DATE	DRAWN	DATE	CHECKED	DATE	APPROVED	DATE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>NO.</td><td>BY</td><td>REVISIONS</td><td>DATE</td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	NO.	BY	REVISIONS	DATE					<p align="center">CH2M HILL WCG</p> <p align="center">225 EAST ROBINSON STREET, SUITE 505 ORLANDO, FLORIDA 32801</p>	<p align="center">ORANGE COUNTY LANDFILL CELL 9 - 10 OPERATION PERMIT</p> <p align="center">CELL 9 - 10 SEQUENCING PLANS</p>	<p>SHEET</p> <p>DWG. NO.</p> <p>SCALE:</p> <p>PROJ. NO. 00.07499.000</p>
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Waste Compaction and Initial Cover

8.1 Waste Compaction

Typically, the cell development will progress in a push-up procedure to maximize the compacted density. Solid waste is unloaded at the base of the active face and spread by bulldozers in approximately two-foot layers. Steel-footed compactors make three to five passes over the waste to compact it to a one-foot thickness prior to the application of additional waste. At least one (1) trained spotter will be at each active face at all times during the operation of the landfill. Training documentation is attached as Appendix A.

8.2 Application of Cover

Initial cover is applied to the active face on a daily basis. The cover may be conventional soil or a reusable tarp. The primary initial cover used is the reusable tarp (currently the Tarp-O-Matic) which is an acceptable alternative initial cover pursuant to 62-701.500 (7) (e), FAC. This cover provides protection against vectors, fires, odors, blowing litter, and moisture infiltration. When conditions do not warrant the application of the alternative cover, cover soil is placed over the compacted waste.

Cover soil is currently obtained from on-site Eastern Borrow Pits in the Eastern Upland Area of the SES. The active Eastern Borrow pits and permitted future borrow pits in the Western Upland Area adjacent to the Cells 11-12 footprint will be a source of cover soil for Cells 9-12. Two (2) additional surface water management ponds in the SES immediately adjacent to the Cells 11-12, approved as part of Conceptual ERP, will be excavated as part of future construction projects and the fill will be used for construction and stockpiled for cover material. Cover soil from Eastern Borrow pit and surplus from construction activities may be transported to an area close to the active face and stockpiled for use as needed.

Intermediate cover is applied over waste that will not receive additional waste for a period of six (6) months. Soil will be added to the intermediate cover area to provide at least an 18-inch thickness of soil cover. Intermediate cover is hauled from an onsite borrow area to the area to be covered. The cover soil is spread to a uniform thickness and compacted to a minimum thickness of 18 inches. Surface treatment for erosion control protection may include grassing or the application of shredded yard waste.

SECTION 9

Gas, Leachate, and Stormwater Controls

The landfill gas (LFG) collection system and flare/control system for Cells 9-12 will be constructed in multiple phases. The first phase of the LFG system was placement of active horizontal gas collectors. The second phase consisted of connecting the horizontal collectors to a temporary flare station to control odors. The next phase will be permitting and construction of a permanent blower/flare station. A landfill gas treatment facility and transmission piping is planned to transmit the LFG from Cells 9-12 to OUC for use as fuel in the Curtis H. Stanton Energy Center (CHSEC) to generate power.

9.1 Purpose/Description

The existing landfill gas system consisting of horizontal gas wells connected to a temporary flare is used to control odor. The County plans to continue installing horizontal LFG collectors during the filling of Cells 9-10 as indicated in Section 7.0. The horizontal LFG collectors typically have a LandTec manufactured wellhead equipped with a control valve. The LFG collectors are connected to the existing permitted perimeter LFG header pipe and subsequently to the blower and flare station.

The permanent system includes the collection system piping network, perimeter manifold piping, a condensate collection and disposal system, horizontal gas collectors, and a blower/flare station. Vertical LFG wells may be added at sequential or final closures.

The energy recovery and gas utilization system is under design and anticipated to be completed by mid-2010. The proposed system consists of primary and secondary air compressor station to dry and pressurize the LFG for transmission through a high pressure transmission main to a LFG receiving station at the CHSEC. Once received, the LFG is planned to be fed to steam generation boilers used for electrical generation.

9.2 Leachate Collection System

The leachate collection system for Cells 9-10 consists of geonets, leachate collection pipes, primary and secondary leachate collection pumps, leachate holding tanks, a leachate transfer pump station, a master pump station, and force main piping.

9.2.1 Purpose/Description

Cells 9-10 were permitted with a bottom liner and leachate collection system, in accordance with FDEP Rules and Regulations. The liner system has a primary liner and a secondary liner. The leachate flows by gravity to dedicated leachate collection pumps on the east side of each bay. Separate sumps are provided for the primary collection system and the secondary (leak detection) system. Each sump contains either a primary or a secondary (leak detection) pump that discharges into separate primary or secondary leachate headers. The header pipe transports leachate to a metering station adjacent to the storage tanks (See Detail 2, Drawings M-2.11 of Volume II of 2000 permit application). Primary and secondary leachate flows are metered independently before discharge into either of the 500,000-gallon storage tanks.

From the storage tanks leachate flows by gravity or can be pumped to the master pump station, or loaded onto trucks. The master pump station is connected to the Conway Force Main by a force main running along the south and west side of Young Pine Road. The Conway Force Main connects to the Eastern Region Water Reclamation Facility (ERWRF). The master pump station is located at the entrance road to SES near the Employee Breakroom. The leachate storage tank facility also has the capability of loading tanker-trucks.

Leachate from Cell 7B/8 leachate tank and wastewater from the Administration Building, SES Scalehouse and the Employee Breakroom, and other support facilities are also discharged to the master pump station. Leachate sampling and flow measurements can occur at the Cell 7B/8 storage tank and at the Cells 9-12 storage tanks. An additional sampling point and flow meter is located downstream of the master pump station to measure total wastewater flow pumped offsite to the Conway Force Main.

9.2.2 Leachate Recirculation System

This section describes the components and the proposed operation of the leachate recirculation system. The recirculation pumps, recirculation header and header tees for Cells 9-10 are being installed as part of the Cell 10 construction project.

9.2.2.1 System Description

The leachate recirculation system will consist of the following components:

1. **Storage tanks** -The two (2) existing leachate storage tanks, with ½ million gallon capacity each, will serve as the source of leachate for the recirculation process.
2. **Recirculation pumps** -Two in-line submersible pumps, one duty and one standby, permitted to be located in the leachate storage tank containment area (see Volume II, Sheets M-12 and M-13, Cell 10 Construction Permit Application) may be used to transfer leachate back to the landfill cells. The discharge pipe from each pump will be equipped with a check valve and a pinch valve. The pumps will meet the hydraulic head requirements for pumping to the highest horizontal injection trenches (HITs) in the southernmost part of Cell 12. Due to the differences in injection elevations and distances from the pumps, the total dynamic head of the pump and the flow rate will vary for different HITs. The maximum flow rate of approximately 150 gpm will occur when pumping to the bottom layer of the HITs in the north end of Cell 9; and the minimum flow rate of approximately 90 gpm will occur when pumping to the top layer of HITs in the south end of Cell 12. The average flow rate of all HITs will be approximately 120 gpm, which is the design recirculation flow rate and is twice the estimated average leachate production rate with recirculation. A flow meter will be installed on the discharge of the pumps to monitor the volume of leachate being injected.
3. **Recirculation common header** -A 4" SDR 11 HDPE pipe will be installed along the west side of the Cells 9 -10 to convey the leachate to the cells. Fittings will be installed at 40 ft spacing on the common header and capped for future connections to layer header pipes. To avoid interference with the leachate collection and gas collection pipes, the common header is permitted by FDEP to be routed along the

east side of Pond 6 and the north side of Cell 9 to the west side of Cells 9-10. The common header will be capped at the south end of Cell 10 and in the future may be extended to the south end of Cell 12 for the future recirculation need of Cell 11 and Cell 12.

HDPE layer headers, lateral pipes and horizontal injection trenches may be constructed to apply the leachate back to the waste mound. The west and east ends of the trenches will both be plugged with bentonite and the pipes on the west side will not be perforated within 50-ft of the slope to minimize the potential leachate migration of the side slopes. The horizontal injection trenches will be aligned in parallel with and offset from the gas collection pipes on the same layer of lift and the immediate lift layer below to avoid flooding the gas collection pipes.

9.2.2.2 General Operation Procedures for Leachate Recirculation

1. It is recommended that the injections be performed on one layer header at a time. The first step in performing the injection is to open the selected layer header valve and close the other layer valves. Open the lateral valves downstream of the layer valve.
2. Position operators at the valves, including the layer valve and the lateral valves, and the recirculation pump. The operators are to be equipped with two-way radios for communication during the pumping process. Once the operator at the layer valve has confirmed that the valve settings are correct, he will notify the operator at the pump to activate the pump and confirm that flow is going through the correct valves.
3. The operator at the pump will record the flow meter reading prior to pumping and at the completion of pumping so the volume of leachate pumped into the HITs can be calculated.
4. Pumping will stop after approximately 8 hours to ensure an optimal injection rate. At that time the pump operator will shut down the pump and notify the valve operator to close the layer valve and the lateral valves. The process will start over for another pair of HITs.
5. The optimal injection rate is initially set at 4,600 gallons/acre/day and will be adjusted with consideration of the leachate production rate, rainfall data, leachate level measurement in each bay, and operation procedures. If the injection rate is changed, the pumping time for each rotation will change accordingly.

9.2.3 Leachate and Wastewater Transmission Systems

The on-site leachate transmission system consists of two components: a six-inch diameter force main from the Cells 9-12 leachate storage tanks to the master pump station and an eight-inch diameter force main station connecting the master pump station to the Orange County Utilities' 36-inch diameter Conway Force Main. The on-site and off-site route of the transmission mains are shown on Sheet G-4.1 in the 2000 construction/operation permit drawings.

Support facilities along the access road between Cells 9-12 and Young Pine Road including the general maintenance building, truck wash rack, and tire repair shop discharge their wastewater via pump stations into the force main upstream of the master pump station. Wastewater from the existing administration building and the Cell 7B/8 leachate storage tanks discharge into interceptor manholes just upstream of the master pump station. Wastewater from the SES Scalehouse and the Employee Breakroom discharges wastewater by gravity into an interceptor manhole just upstream of the master pump station. The manhole discharges by gravity into the master pump station

9.2.4 Leachate and Wastewater Flow

Leachate flows for Cells 9-12 will vary with the amount of open cell, the type of cover and the amount of precipitation. Hydrological Evaluation of Landfill Performance (HELP) model results indicate flows could be as high as 165,000 gpd on a peak daily basis and 45,000 gpd on an annual average basis for Cells 9-12 as filling progresses. Each of the bays for Cells 9-12 are planned to be between 10 to 12 acres each with individual leachate collection pipes, leachate pumps and controls in each bay. The water accumulated in each bay, if has not come in contact with solid waste or leachate from other bays, can be segregated and be pumped to the ponds as stormwater.

Cell 7B/8 located on the east portion of the original 1,500-acre landfill stopped receiving solid waste in 2006 and final closure construction was completed in 2008. The leachate flow from Cell 7B/8 can be expected to decrease in the near future.

Total leachate flow was estimated in the *Leachate Management Plan*, CH2M/Neel-Schaffer Joint Venture, May 2000. The peak year, average daily combined leachate flow from all disposal units was calculated to be about 100,000 gallons/day or 70 gpm. Peak month, average daily flow was estimated to be 1.4 times the annual average daily flow rate.

Wastewater from the Administration building is pumped to the master pump station by a new force main routed under Young Pine Road. Wastewater from the scale house, employee break room, general maintenance building and truck wash station is also pumped or drained by gravity to the master pump station.

9.2.5 Leachate Collection System Pump Operating Procedures

Collected leachate enters the leachate sumps on the east side of each landfill bay. Separate submersible pumps pump the leachate from the primary and secondary leachate collection systems to the leachate storage tanks via two four-inch HDPE force mains. The primary and secondary leachate collection sumps are two feet deep with 10 by 12-foot bottom area. Each sump has an 18-inch diameter, 8-foot long HDPE pipe pump housing located at the toe of the liner. Specific information for the supplied pump operation and maintenance is included in the pump O&M manuals, and a copy is kept by Orange County maintenance staff.

Prior to operation of a landfill bay, stormwater will be pumped directly to a stormwater pond from the primary leachate collection pump. When a bay is being prepared for accepting solid waste, the connection to the stormwater piping is removed and a connection to the leachate storage tank force main is added. The stormwater to leachate connection modification will be made through a change to the piping system and not through valves.

Leachate collected in the Cells 9-12 active bays will be pumped to the leachate storage tanks. An integral level-control device operates the primary and secondary leachate collection pumps. Pumps will automatically start when the leachate reaches a preset level in the pump housing and stop when the leachate level is lower than a preset level.

Level control devices installed in the leachate storage tanks also control the operation of leachate collection pumps:

- When the storage tank is full the high-level control device (LSH) in the tank sends a signal that disables the leachate collection pumps.
- When the leachate level in the storage tank falls to a predetermined level (e.g., 3 feet below the high level setting), the medium level control device (LSM) sends a signal that enables the leachate collection pumps. The interval between the LSH and LSM will be determined based on the leachate flows and frequency of pump starts.

9.2.6 Cells 9-12 Leachate Storage Tanks

There are two separate tanks for storage of leachate from Cells 9-12. So if one tank is not operational, leachate can still be stored in the other tank and transmitted to the master pump station. A high, high-level switch (LSHH) is installed on each storage tank. The LSHH inside the tank will set off an alarm before a spill occurs. A common local audible alarm is provided on control panel LCP-B. A site plan for the leachate storage tanks was provided on Sheet M-2.9 in the 2000 permit application on file with the Department.

Storage Tank Sump Pumps

A secondary containment wall is located around the leachate holding tanks in case of leakage from the tanks or overflow from the tanks. The containment area is equipped with two sump pumps to remove stormwater or leachate. A local control panel located near the leachate storage tank has a switch for manual operation for each sump pump and ON/OFF indication lights that indicate the status of each pump. A low-level switch in the sump automatically stops the operation of the pump. When there is liquid in the containment area, a technician checks the water in the containment area to determine if it is rainwater or leachate. If it is rainwater, it will be discharged, pumped to a nearby stormwater pond. If it is leachate, it will be pumped back to the master pump station. The determination of whether the water in the containment area is rainwater or leachate will be based on visual examination. Specific conductance is measured if visual examination is not conclusive. A specific conductance of 500 $\mu\text{gmhos}/\text{cm}$ is indicative of possible presence of leachate constituents.

Transfer Pump

The local control panel located near the leachate storage tanks controls the operation of the leachate transfer pump. The panel has:

- A switch for manual or automatic operation
- An elapsed time meter (to record running time for each pump)
- An alarm light on top of the panel to indicate of failure of pump(s)
- ON/OFF lights to indicate status of the pump

Level control devices are installed in the Storage Tanks to control the operation of transfer pump:

- When the storage tank is almost empty a low, low-level control device (LSLL) sends a signal that disables the transfer pump.
- When the leachate level in the storage tank rises to a predetermined level (e.g., 3 feet above the above the LSLL), a low-level control device (LSL) sends a signal that “enables” the transfer pumps. The interval between the LSLL and the LSL is determined based on the frequency of pump starts.

The normal operation for leachate flow from the storage tanks to the master pump station is by gravity. Pumping operations are controlled through a Programmable Logic Controller installed in a local control panel and remote input/output points located in each local control panel for leachate pumps.

9.2.7 Master Pump Station

The location of the master pump station is shown on Sheet C-3.8 in the 2000 permit drawings on file with the Department. The purpose of this pump station is to pump the combined leachate from Cells 9-12 and Cell 7B/8, as well as, wastewater from the Administration Building, Employee Breakroom, SES scalehouse, and other on-site ancillary facilities to the Orange County Utilities' 36-inch diameter Conway Force Main. The master pump station pumps the combined leachate and wastewater flows through an eight-inch diameter force main to the Conway Force Main located about a mile north of the landfill on Young Pine Road. Controls for the operation of the master pump station are scheduled to be upgraded as part of the Cell 10 construction project.

9.2.8 Wash Facility

A truck wash facility is located at the transfer trailer staging area. Wash water from this facility is equalized in a large wetwell with flow going through an oil/water separator before it is pumped to the master pump station.

9.2.8 Contingency Operations

A worst case scenario for leachate generation could be when a major storm event occurs just after solid waste disposal operations begin in a new bay. The stormwater in the unused portion of the bay can get mixed with leachate requiring the combined water to be treated as leachate. Under this condition the auxiliary sumps can be used with portable diesel pumps to transmit the leachate to the tanks through a separate 8-inch diameter force main.

Emergency generators are located at the leachate transfer pump station and the master pump station. These generators are capable of operating the pump stations and some of the support facilities during power outages. The control panel for the primary and secondary leachate collection pumps is equipped with receptacles for additional portable generators. The pumps will be operated individually, as necessary, when power is out.

9.2.9 Maintenance

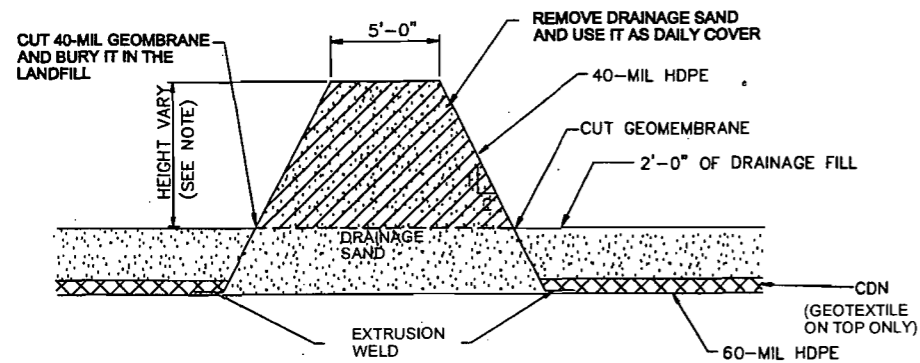
Leachate collection line cleaning is performed to help prevent the buildup of sediment or biological clogging reducing or preventing the flow of leachate from the landfill bays. The

leachate collection lines are designed with cleanouts to allow for normal cleaning operations and/or removal of an obstruction. All pipe sizes are at least six (6) inches in diameter without sharp turns.

The cleaning of the leachate collection pipes should be completed in the same manner as a grouter cleans out a sewer line. The landfill operator responsible for cleaning the pipes should be aware that the majority of the leachate collection piping is perforated. Therefore, hydraulic pressure will not build up in the line unless the system is completely clogged.

9.3 Stormwater Control

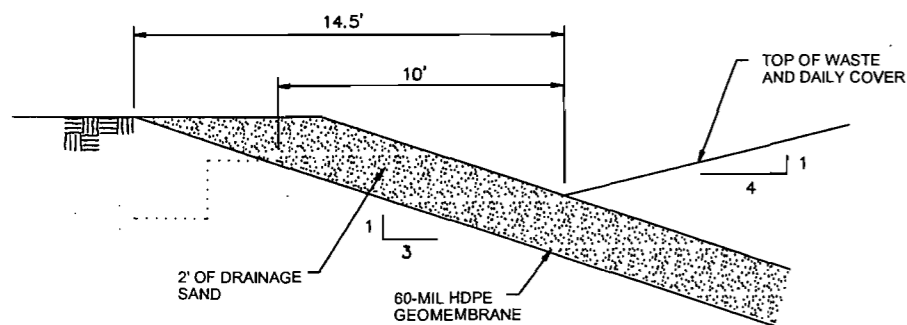
Wet detention stormwater treatment for Cells 9-12 is provided by six stormwater ponds. The construction for Cell 9 included excavation of two ponds adjacent to Cell 9 and proposed Cell 10. Pond 5 is located on the west side of Cell 9 and Pond 6 is located on the east side of Cell 9. Excavation of Ponds 7 and 8 will be completed as part of Cell 10 construction. Ponds 9 and 10 are planned to be developed as part of Cells 11-12 construction.



NOTE: THE HEIGHT WILL VARY FROM EL. 93.00 AT WEST END TO EL. 88.00 AT EAST END OF CELL

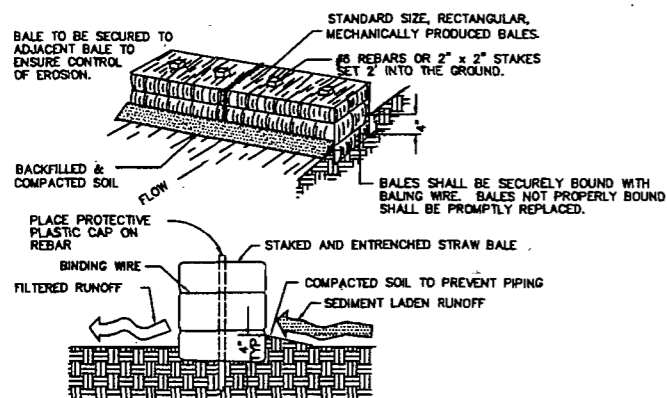
REMOVAL OF INTERMEDIATE BERM
NTS

100



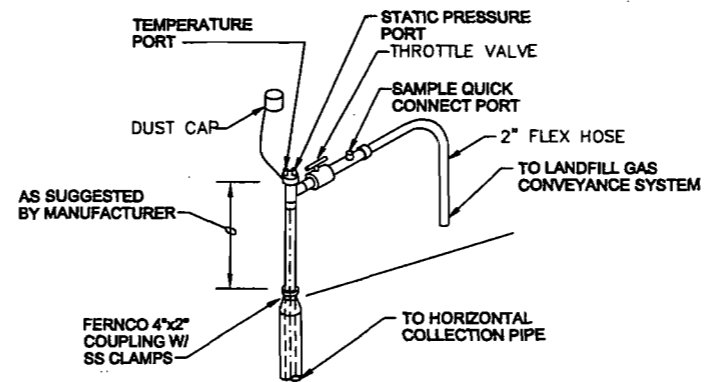
TYPICAL SECTION OF PERIMETER SWALE

101

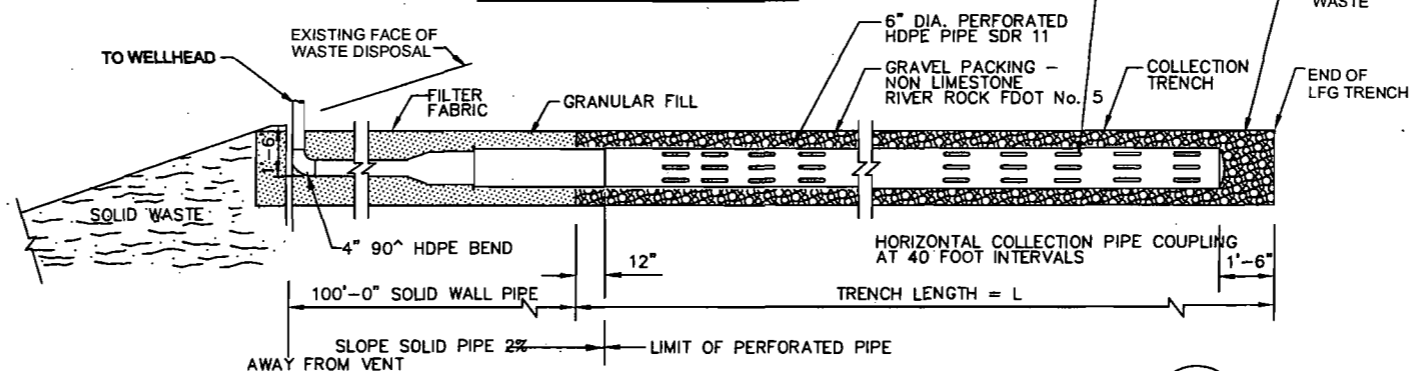


STAKED HAYBALE
NTS

102

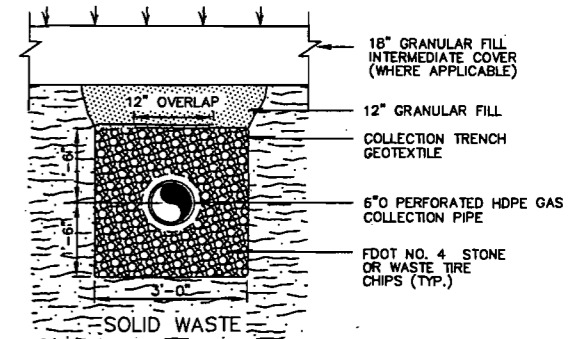


WELLHEAD DETAIL



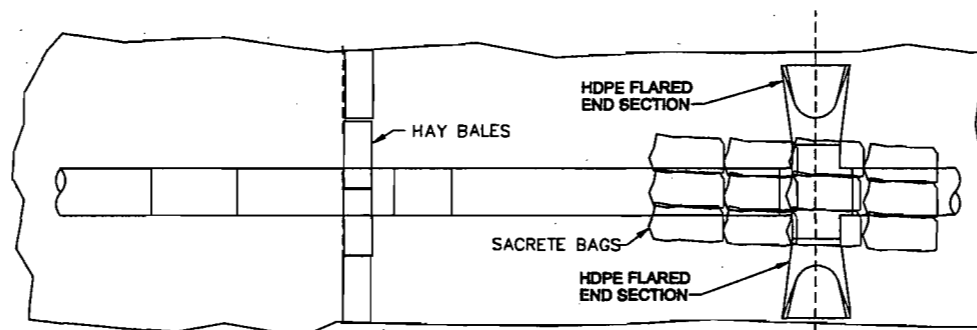
HORIZONTAL LANDFILL GAS VENT DETAIL

103

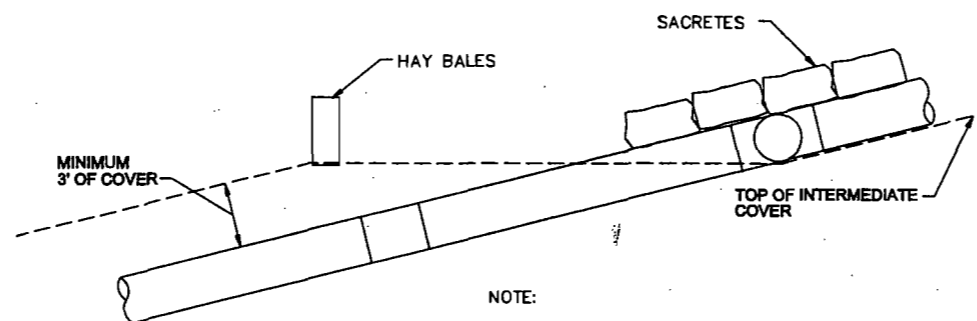


LFG COLLECTION TRENCH DETAIL

105



PLAN

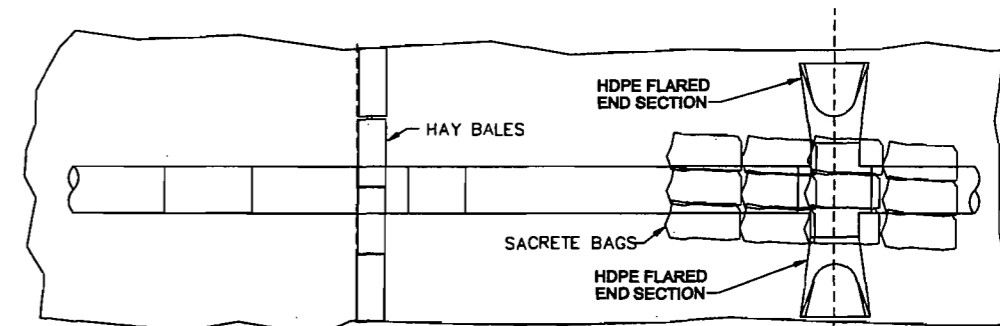


SECTION

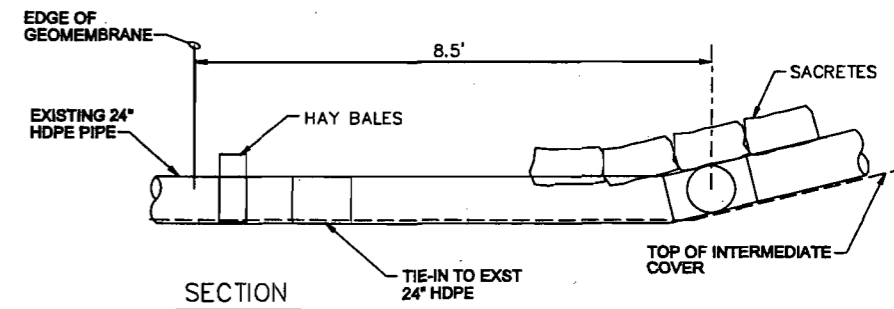
NOTE:
1. LETDOWN PIPES SHALL BE CORRUGATED HDPE PIPES, 24" IN DIAMETER FROM FIRST BENCH DOWN AND 18" IN DIAMETER FROM FIRST BENCH UP.

TEMPORARY STORMWATER LETDOWN STRUCTURE
NTS

104



PLAN



SECTION

FLARED END SECTIONS AT FIRST BENCH
NTS

106

FIGURE 2

VERIFY SCALE	REUSE OF DOCUMENTS	DESIGNED	K.C.	DATE			ORANGE COUNTY LANDFILL EXPANSION	SHEET X OF X	
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M-HILL/GLACE & RADCLIFFE JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M-HILL/GLACE & RADCLIFFE JOINT VENTURE.	DRAWN	L.G.	DATE				CELLS 9-10 LANDFILL GAS SYSTEM INSTALLATION AND OPERATION SECTIONS AND DETAILS	DWG. NO.
		CHECKED	B.B.	DATE					SCALE
		APPROVED	B.B.	DATE					PROJ. NO.
	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.	NO.	BY	REVISIONS	DATE	CADD FILE NAME			

EB0000072

225 EAST ROBINSON STREET, SUITE 505
ORLANDO, FLORIDA 32801

SECTION 10

Water Quality Monitoring

Water quality and leachate monitoring procedures are discussed in Volume V, *Water Quality and Leachate Monitoring Plan* of the 2000 permit application.

The FDEP-accepted water quality monitoring program, updated Monitoring Plan Implementation Schedule (MPIS) and specific permit conditions were incorporated into the Cell 9 Operations and Cell 10 Construction Permits. The updated MPIS is on file at the Solid Waste Administration.

SECTION 11

Operating Record

11.1 Location

All records, reports, permits, analytical results, etc. will be maintained at the Landfill Administration Building. New record files for the Southern Expansion Site and Cells 9-12 construction and operations will be maintained independent of the original 1500-acre landfill operation files.

11.2 Training Verification

Trained landfill operators meeting the requirements of the FDEP Rule 62-701.320(14), F.A.C. include, at a minimum, a Utilities Supervisor and three Operation Specialists. To maintain the position of "trained operator," at least 16 hours of continuing educational training in an FDEP-approved training course must be completed every three years. Failure to meet the continuing training requirement will result in the loss of trained operator status.

Verification of the training is located in Attachment A to this Operations Plan.

Waste Records

12.1 Location

The landfill waste records are maintained at the Solid Waste Division Administration Building located on Young Pine Road.

12.2 Records

Records will be maintained to identify the quantity and type of wastes entering the landfill. These records will be compiled monthly and submitted to FDEP quarterly.

SECTION 13

Access Control

Natural and physical barriers provide access control for Cells 9-12. Physical barriers consist of gates and fencing along Young Pine Road, the west property boundary, and the Beeline Expressway. Wetland areas provide physical barriers in addition to the fencing.

The scale house attendant directs users to the active face. In order to minimize disposal in unauthorized areas, signs are posted to direct traffic to proper disposal location, and the Class I active face. Disposal activities will be observed by trained spotters as required.

Waste Monitoring

14.1 Load Checking Program Purpose

Refer to Section 4 Waste Control for a description of the Load-Checking Program.

14.2 Hazardous Waste Handling

14.2.1 Categories/Classes of Hazardous Waste

Hazardous wastes are by-products of industry, commercial activity, or household disposal, and can take the form of solids, liquids, or gases. Hazardous wastes are generated by specific processes, or may fall into at least one of the following EPA hazard categories:

- Ignitability – Solids, liquids, or gases which ignite above a given temperature
- Corrosiveness – Having pH of 2 or below, equal to, or above 12.5
- Reactivity – Explosive, or violently reacting with air or water
- Toxicity – Poisonous to organisms

If it is determined to consider accepting a specific waste and the source of a suspect waste cannot be determined, it is analyzed so that it can be classified based on the EPA hazard categories. Testing is conducted by a certified laboratory. Ignitability, corrosiveness, and reactivity are analyzed using standard laboratory test protocol for those qualities. Samples examined for toxicity are analyzed using the EPA toxicity characteristic leaching procedure (TCLP). TCLP evaluates the potential for toxic constituents in a waste to leach and contaminate the groundwater. There are currently 40 parameters on the EPA TCLP list. TCLP includes procedures for the analysis of volatile organics, herbicides, pesticides, heavy metals, and other organics of concern to the environment or health. Additionally, any unknown suspect liquid waste must be tested for halogenated organic compounds (HOC) and polychlorinated biphenyls (PCBs) in conjunction with the EPA hazard categories.

14.2.2 Waste Inspection List

Refer to Section 4.3.4 for the Waste Inspection List

14.2.3 Proper Management of Waste

Refer to Section 4.5 Procedures for Prohibited Waste Discovery for a description of proper waste management procedures.

14.3 Inspection Records

Information resulting from each Random Load Checking Inspection is recorded on a Random Load Checking Form. These records are retained as part of the facility's operating record. The records are maintained for possible regulatory inspections. The results of analysis of suspect waste are included as part of these records. The information included on this form includes:

- Date, time and location of inspection taking place

- Name(s) of the hauling firm(s)
- Name(s) of the driver of the vehicle(s)
- Source and location of the waste as stated by the driver
- Company name and phone number
- Vehicle I.D. Number, and license plate number
- Observations made by the inspector during detailed inspection
- Signature of inspector

14.4 Training

Employee training is a vital element of the program. Current landfill standard operating procedures require personnel training in defensive driving. Landfill personnel are required to attend additional training for Hazwaste Certification. Training focuses on the identification of unauthorized waste, the potential sources of regulated hazardous waste, and the associated safety protocols. Annual training is required to maintain staff competency. This training can be integrated with other technical training required for the operation of the site. All personnel involved with the load checking are included in this training program.

Waste Handling

15.1 Waste Compaction

Refer to Section 8.1 for a description of waste compaction procedures.

15.2 Leachate Collection

Refer to Section 9.2 for a description of the leachate collection system.

15.3 Off-Site Leachate Disposal

Leachate from Cells 9-12 is pumped to the Orange County's ERWRF along with the leachate from Cell 7B/8. The leachate management system is described in Section 9.2.

15.4 On-Site Leachate Treatment

On-site leachate treatment is not proposed at this time. Leachate recirculation operations are projected to start after FDEP approval of Cell 10 certification of completion of construction. Leachate recirculation has been shown to lower leachate strength in field studies. Lower strength leachate can reduce wastewater surcharges paid for offsite treatment of "high" strength wastes. Aeration of the Cell 7B/8 leachate is also performed to help reduce surcharges.

15.5 Leachate Management Contingency Plan

Contingency operations for the leachate management system are described in Section 9.2.8.

15.6 Leachate Records

Four (4) leachate flow meters are maintained at the leachate storage tank. The flow meters measure primary leachate collection system flow, secondary leachate collection system flow from the diesel pumps and discharge from the leachate tanks. Records are also maintained for leachate from Cell 7B/8 using the existing flow meter at the Cell 7B/8 storage tank. A wastewater flow meter is maintained downstream of the master pump station to measure the combined flow and wastewater pumped to the Conway Force Main. The leachate flow is recorded daily.

15.7 Recording Rain Gauge

A recording rain gauge is located at the Administration Building and on closed Cell 7B/8. Daily precipitation records will be compared to leachate generation rates.

Gas Monitoring

16.1 Gas Monitoring

The landfill gas monitoring program to check for gas possible migration at the property line and in buildings is described in Volume 5 *Water Quality and Leachate Monitoring Plan*. The FDEP-accepted monitoring program was incorporated by reference into the O&M Plan with the issuance of the Cell 9 Operations Permit. Gas monitoring requirements are listed in the Cell 9 Operation Permit and are not expected to change for Cells 9-10 Operations Permit.

The County will submit a gas remediation plan to FDEP within seven days of an event where gas concentrations exceed 25 percent LEL at on-site buildings or 100 percent LEL at the property boundary. Immediate steps will be taken if these concentration levels are discovered at any time. The schedule for implementing the remediation plan will occur within 60 days of FDEP approval of the proposed plan.

Stormwater System Management

17.1 Operation and Maintenance Activities

Refer to Volume VII *Engineering Report for Surface Water Management System* of the 2000 Construction/Operations Permit application for detailed discussion regarding the operation and maintenance of the surface water management system. The O&M Plan is updated to include routine O&M procedures for this system as additional stormwater management ponds are constructed to support Class I Landfill cells.

Major components of the Pond 5, Pond 6, Pond 7 and Pond 8 stormwater management system that require inspection and maintenance include:

- Internal ditches leading to the Ponds, including ditches along the east and west perimeter of the Cells 9-10 disposal area
- Interconnect culverts between ditches and ponds
- Control structures from Ponds 5 and 6 to the Landfill Outfall Ditch
- Control structures from Ponds 7 and 8 to the adjacent wetlands
- Step terraces, letdown pipes and terminal structures on the Cells 9-10 disposal area

Wet detention stormwater treatment is provided by Ponds 5, 6, 7 and 8. Berms surrounding the ponds and pond slopes are routinely mowed and inspected. Routine maintenance for ditches and culverts is described below in Section 17.2.

Maintenance of the control structures for Ponds 5 and 6 at the north end of the SES consist of periodic inspections for structural integrity of the concrete structures, and removal of any windblown debris and vegetation at the structures. Inspections are performed routinely by the maintenance crew. Maintenance to the control structures at the west edge of Pond 7 and the east edge of Pond 8 will be included in the routine maintenance program and will consist of structural integrity inspections and removal of debris or vegetation at the control structures, and mowing the ponds side slopes.

Letdown systems on the side slope of the disposal area are checked visually for leaks and functionality on a routine basis. Any erosion damage or structure damage will be temporarily repaired temporary at the time of discovery followed by permanent repairs by outside contractors, if warranted.

17.2 General Surface Water Management System Maintenance Procedures and Pollution Prevention

17.2.1 General Maintenance Procedures

The Surface Water Management System is designed to control surface water runoff from solid waste management areas. The required operational procedures are limited to periodic

inspection of the system components to detect excessive siltation, structural damage from landfill vehicles or normal landfill activities, and erosion caused by severe rainfall events.

The following procedures are performed at the landfill to minimize maintenance requirements and ensure efficient performance of the surface water management system.

- No excavated material is stockpiled in such a manner as to direct sediment-laden runoff outside the project site limits or into any adjacent Surface Water collection facility.
- Surface Water collection facilities are protected from sediment-laden runoff until construction operations that may contribute sediment to the structure are complete.
- Permanent erosion control features (e.g., inlet structures, storm sewer piping, grout-filled fabric formed revetment, pavement, sod areas, etc.) damaged by such removal are repaired promptly.
- After vegetation has been established, all swales, channels, and detention ponds are mowed regularly.
- Stormwater conveyance facilities are inspected periodically so that silt and debris accumulating in swales, pipes, inlets, and outfall structures are detected and removed.
- Additional cover soil will be added, as needed, to erosion areas and grads restored.
- Waste disposal is inspected to ensure areas are properly graded to promote curtailment of surface water runoff, and prevent leachate from entering the surface water system.
- Additional erosion control measures are implemented when field conditions warrant.
- Natural vegetation is replanted in the littoral zone of the wet detention system when need and exotic vegetation will be controlled.
- Swales are maintained according to best management practices. Vegetation will be replaced on disturbed surfaces.

17.2.2 Erosion Control

Erosion control is accomplished using standard FDOT erosion control techniques such as fabric fence, hay bales, and/or turbidity barriers. Best management practices used for permanent erosion control in landfill side slopes where intermediate cover has been installed include terraces, diversion berms, temporary letdown structures, energy dissipaters and placement of sod on the side slopes. Closed side slopes will be permitted with more permanent erosion control features.

Fabric-formed concrete channel lining is used in closed areas where erosive velocities may be encountered. Periodic maintenance of swales, channels and ponds is required for removal of sediments throughout the life of the landfill. Corrective measures to repair erosion will be implemented within the permit time limit requirement, if the extent of the work can be accomplished in house within that time period. If repairs are more extensive or materials, labor and other resources are not immediately available, the Department shall be notified and correction schedule for repairs shall be provided to the Department.

Equipment and Operation Features

18.1 Equipment for Waste Handling

Class I operational equipment for the landfill includes two bulldozers for spreading waste and two compactors for waste compaction. This quantity of equipment provides an adequate reserve for inoperable equipment during normal operating periods. During an abnormal operating period as in the periods of extended equipment downtime, the County may elect to rent or lease additional equipment.

The landfill uses a Tarp-O-Matic machine to apply a reusable initial cover to the waste at the end of each day. See Section 8 Application of Cover for more detail regarding the placement of cover.

18.2 Communication Equipment

Landfill personnel with operational duties are supplied with radios, or cellular phones as needed. The telecommunications system is a countywide network.

18.3 Shelter, Sanitary Facilities and First Aid

Shelter and sanitary facilities are provided at the administration building, general maintenance building, scalehouse and other on-site buildings. Site safety is maintained and achieved through the provision of appropriate devices and personnel training. Well-supplied first-aid kits and fire extinguishers are housed in every building at every facility at the landfill. First aid training is made available to operations personnel.

18.4 Dust Control

Dust control for on-site roads is provided by water wagons. Area access roads are constructed with stabilized material to minimize dust generation. Final cover provides additional control. Intermediate cover may receive mulched yard trash to minimize dust.

18.5 Fire Protection

Refer to Section 2.1.1 for a description of contingency operations dealing with fires.

18.6 Litter Control

The County's grounds crew personnel and temporary labor patrol and maintain the landfill and the right-of-way along Young Pine Road for litter. Patrolled areas are as follows:

- Along Young Pine Road from the Scalehouse to intersection with Curry Ford Road
- Along the paved onsite access roads in the SES and the original 1500-acre Landfill
- At and around the Administration Building driveways and Young Pine Road intersection

- At and around the maintenance & equipment repair facilities
- In the transfer trailer staging area
- At and around both scalehouse facilities
- In the vicinity of the landfill working area

Temporary labor is hired to pick up litter on an as-needed basis. Litter control fences are used along the perimeter of the working face and cleaned regularly.

All litter collected from the landfill and surrounding areas is disposed of at the landfill in the appropriate disposal area.

Roads

19.1 Access Road

The access road to the scalehouse and landfill provides an all-weather access to the disposal facility. This paved road is constructed to general highway standards and is designed to provide access during high-water conditions.

19.2 Perimeter Roads

Interior roads around the perimeter of the landfill cells are typically improved roads suitable for heavy traffic. The east perimeter road has a 24-foot asphalt surface with a 14-foot shoulder to the west for track equipment. The west and north perimeter roads are 16 feet wide with an asphalt surface.

19.5 Dust Control

Dust control on on-site roads is maintained with the use of water wagons. Area access roads are constructed with stabilized material to minimize dust generation. Final cover provides additional control. Intermediate cover may receive mulched yard trash to minimize dust.

Additional Records

20.1 Record Keeping

Records used to develop this application and subsequent permit applications will be kept for the life of the landfill, plus the long-term care period, which is projected to end between 2054 and 2065 depending on the annual tonnage of solid waste received. Background water quality (ground and surface) data will also be maintained for the life of the landfill plus the long-term care period. Monitoring data, calibration logs, certification documents, and maintenance records will be maintained for a rolling ten-year period. Remaining life estimates for the constructed and permitted, but not constructed areas of the landfill will be maintained and submitted to the Department on an annual basis.

All of these records will be maintained in the filing system at the Solid Waste Division Administration Building in the OCSWMF.

Attachment A

List of Employee Training and Certifications Orange County Solid Waste Division

LANDFILL OPERATORS CERTIFICATION

INITIAL OPERATOR SCHOOL.....Within every 3-yrs.maintain 16-hrs continuing hours 62-701.730

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2010-2011 BECKER / GAST / BEEBE -LANDFILL OPERATOR								
GAST, LARRY J. UTILITIES SECTION MANAGER	11/20/1992 -before OC -Trvl pwpk in file	SWANA-Manager of Landfill Operations (MOLO) [SWANA] Training in the Production & Utilization of Compost in Florida 10/2/04 Landfill Gas and Leachate Systems (TREEO) 8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities (Kohl Consult)	09/13/2002 #160	11/20/2001	11/19/2004		16	
			10/27/2004 #363					
			11/14/2007 #49	11/20/2004	11/19/2007		8	
			11/3/2007 #203	11/20/2007	11/19/2010	16	8}16-complete	16
2010-2011 BECKER / GAST / BEEBE -LANDFILL OPERATOR								
BECKER, JAMES MANAGER	2/15/2002 -Trvl pwpk in file	MOLO- <u>initial</u> -TREEO-Gainesville -Management of Special Waste for SWM Facilities Operators (TREEO) -Wet Weather Operations (TREEO) -Spotter Training for Solid Waste Facilities (TREEO) SWANA-FL 2005 Spring Conference (SWANA/TREEO) SWANA (2005) Executive Managers Workshop (SWANA-TREEO) no certif. Four Hour Spotter Refresher for Class I, II, and III Landfills (#156) [kohl consult] Fires at Landfills and Other Solid Waste Management Facilities [Kohl] Improving Landfill Operations: Density, Specific Weight and Maximizing Airspace Utilization #476 [Kohl Const]	2/15/2002 #160	2/15/2002	2/14/2005		4	
			10/20/2004 #050098					
			10/20/2004 #050096	2/15/2005	2/14/2008		8/16-complete	
			10/22/2004 #050092					
			04/11-13/2005 #374					
			01/31/2006- N/A	2/15/2008	2/14/2011		16	4 N/A 4 4 4-18 complete
			2/2/2008 #156					
			2/12/2008 #484					
			2/12/2008 #476					

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2010-2011 BECKER / GAST / BEEBE -LANDFILL OPERATOR								
BEEBE, MICHAEL UTILITIES SUPERVISOR	11/16/1990	8-Hour Initial Training for Spotters at Class I,II,III Landfills,Waste Processing Facilities,and C&D Sites (Kohl/TREEO) Introduction to Electrical Maintenance (TREEO/Gainesville) Landfill Compaction Training School-8 hours SWANA-Wastecon 2004 [9/21-23/04] Landfill Compaction Training School (Caterpillar/Ringhaver) 2-Hour Landfill Spotter Refresher Training (TREEO) SWANA-WasteCon 2006 [9/19-21/06] SWANA-WasteCon 2007 [10/16-18/07]	2/7/2002 #203	11/16/1999	11/15/2002		8	
			8/6-8/8/2002 #212				16	
			11/14/2002 #229				8/32-complete	
			9/19-9/23/2004 #354	11/16/2002	11/15/2005		6	
			11/08/2005 #229				8	
			11/15/2005 #148				2 /16 complete	
			9/16-21/2007 #448	11/16/2005	11/15/2008	16	6	
			10/14-18/2007 #455				10-16 complete	
				11/16/2008	11/15/2011	16		16

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	GEU'S Received	HRS LEFT
2 0 1 0 - LANDFILL OPERATIONS -LANDFILL OPERATOR								
YANDOW, PATRICK OPERATIONS SPECIALIST	05/19/1995	Four Hour Spotter Orientation for Supervisors (SWD/Chris Kohl)	6/15/1999 #155	05/19/1998	05/18/2001	15	4	
		Fires at Landfills (Chris Kohl-Semin Co.)	02/08/2001 #110				2	
		When It Rains It Pours and We Stay Open(Chris Kohl-Semin. Co.)	02/08/2001 #64				2	
		Landfill Operating Issues for Class I,II, and III Sites (SWD/Chris Kohl)	02/23/2001 #194				8/16 Complete	
		Landfill Compaction Training School (Ringhaver/Orlando)	11/8/2001 #124	5/19/2001	5/18/2004	16		
		Landfill Compaction Training School-8 hours	11/14/2002 #229				5	
		OSHA HazWoper 8 Hour Refresher Training (FDEP)	5/9/2003 #266				8	4/17-Complete
		Management of Leachate, Gas, Stormwater and Odor at Class I, II, & III Landfills (TREEO)	10/21/2004 #050099	5/19/2004	5/18/2007		8	
		Landfill Compaction Training School (Caterpillar/Ringhaver)	11/08/2005 #229				8/16 complete	
		Fires at Landfills and Other Solid Waste Management Facilities [Kohl]	2/12/2008 #484	5/19/2007	5/18/2010	16	4	
Improving Landfill Operations: Density, Specific Weight and Maximizing Airspace Utilization #476 [Kohl Const]	2/12/2008 #476				4		8	

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2 0 1 0 - LANDFILL OPERATIONS -LANDFILL OPERATOR								
ROWLAND, JAMES E.O. IV	11/17/1995	Landfill Operations and Waste Screening for Class I,II,III Sites(T)	4/20/1999 #111	11/17/1998	11/16/2001	15	4	
		4-hr Spotter Orientation for Class I,II III Sites (Kohl)	10/12/1999 #155				8	
		Landfill Operating Issues for Class I,II, and III Sites (SWD/Chris Kohl)	02/23/2001 #124				5/25 Complete	
		Landfill Compaction Training School (Ringhaver/Orlando)	11/8/2001 #194					
		8-Hour Initial Training for Spotters at Class I,II,III Landfills,Waste Processing Facilities,and C&D Sites (Kohl/TREEO)	2/7/2002 #203	11/17/2001	11/16/2004	16	8	
		Excavation and Trenching: Competent Person Training (TREEO)	6/27/2003 #100				8/16 complete	
		Landfill Compaction Training School (Caterpillar/Ringhaver)	11/08/2005 #229	11/17/2004	11/16/2007		8	
		Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities (Kohl Consult)	11/03/2007 #203				8}16complete	
		Fires at Landfills and Other Solid Waste Management Facilities [Kohl]	2/12/2008 #484	11/17/2007	11/16/2010	16	4	
		Improving Landfill Operations: Density, Specific Weight & Maxim-izing Airspace Utilization #476 [Kohl]	2/12/2008 #476				4	8

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
- 2 0 1 0 - LANDFILL OPERATIONS -LANDFILL OPERATOR								
VIERA, JOSSIE OPERATIONS SPECIALIST	11/17/1995	Mgmt of Leachate, Storm Water, Gas and Odor at Class I Landfills (SWD/Chris Kohl)	8/16/1999 #125	11/17/1998	11/16/2001	15	8	
		Four Hour Spotter Orientation for Class I, II, III Landfills (SWD/Chris Kohl)	10/12/2000 #119				4	
		Landfill Operating Issues for Class I, II, and III Sites (SWD/Chris Kohl)	02/23/2001				8/20 Complete	
		Landfill Compaction Training School-8 hours (CAT/Ringhvr)	11/14/2002 #229	11/17/2001	11/16/2004	16		
		Excavation and Trenching: Competent Person Training (TREEO)	6/27/2003 #100				8	8/16 complete
Landfill Compaction Training School (Caterpillar/Ringhaver)	11/08/2005 #229	11/17/2004	11/16/2007		8			
Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities (Kohl Consult)	11/03/2007 #203				8/16 complete			
				11/17/2007	11/16/2010	16		16

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
- 2 0 1 0 - LANDFILL OPERATIONS -LANDFILL OPERATOR								
RODRIGUEZ, ANGEL E.O. IV	11/20/1998	Four Hour Spotter Orientation for Supervisors (SWD/Chris Kohl) Landfill Compaction Training (Caterpillar/Ringhaver) Landfill Gas & Leachate Systems (SWANA/TREEO-Tampa)	6/15/1999 #155	11/20/1998	11/19/2001	15	4	
			10/12/2000 #124				5	
			10/31/2001 #049				8	
							17Complete	
-Trvl ppwk in file		Landfill Compaction Training School-8 hours(CAT/Ringhvr) Excavation and Trenching: Competent Person Training(TREEO)	11/14/2002 #229	11/20/2001	11/19/2004	16	8	
			6/27/2003 #100				8-16complete	
				11/20/2004	11/19/2007			
		Landfill Compaction Training School (Caterpillar/Ringhaver) 8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities (Kohl Consult)	11/08/2005 #229				8	
			11/03/2007 #203				8}16complete	
				11/20/2007	11/19/2010	16		16

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT							
2 0 1 1 - LANDFILL OPERATIONS -LANDFILL OPERATOR															
SCHNAUDIGEL, ALEX E.O. IV	11/7/2002	24-hour Initial Training for Landfill Operators (with Exam) (Kohl Constl) -OSHA HazWoper 8 Hour Refresher Training (FDEP) -Heavy Equipment Operator Training (Fleet Solutions-SWANA-Roaddeo) SWANA-FL Chapter Annual Road-e-o Safety Training (SWANA/TREEO) -Health and Safety for Solid Waste Workers (TREEO)	11/7/2002 #195	11/7/2002	11/6/2005		4								
			5/9/2003 #266												
			4/16/2004 #295												
			5/6-5/8/2005 #396												
			09/16/2005 #060040												
			3/24/2006 #396						11/7/2005	11/6/2008		2			
			5/12/2007 #396									2			
			2/2/2008 #156									4			
			2/12/2008 #484									4			
			2/12/2008 #476									4-16 complete			
				11/7/2008	11/6/2011	16		16							
TAYLOR, SERINA OPERATIONS SPECIALIST	11/7/2002	24-hour Initial Training for Landfill Operators (with Exam) (Kohl Constl) -OSHA HazWoper 8 Hour Refresher Training (FDEP) -Heavy Equipment Operator Training (SWANA-Roaddeo) -Health and Safety for Solid Waste Workers (TREEO)	11/7/2002 #195	11/7/2002	11/6/2005		4								
			5/9/2003 #266												
			4/16/2004 #295												
			09/16/2005 #060040												
			2/2/2008 #203						11/7/2005	11/6/2008	16	8			
			2/12/2008 #484									4			
			2/12/2008 #476									4-16complete			
												11/7/2008	11/6/2011		16

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2 0 1 1 - LANDFILL OPERATIONS -LANDFILL OPERATOR								
COOLEY, MARK UTILITIES SUPERVISOR	11/19/1993 -Trvl ppwk in file	Landfill Operating Issues for Class I,II, and III Sites (SWD/Chris Kohl)	02/23/2001 #194	11/19/1999	11/18/2002	15	8	
		Landfill Compaction Training School (Ringhaver/Orlando)	11/8/2001 #124				5	
		8-Hour Initial Training for Spotters at Class I,II,II Landfills,Waste Processing Facilities,and C&D Sites (Kohl/TREEO)	2/7/2002 #203				8/21 complete	
		-OSHA HazWoper 8 Hour Refresher Training (FDEP)	5/9/2003 #266	11/19/2002	11/18/2005	4		
		-Heavy Equipment Operator Training (SWANA-Rodeo)	4/16/2004 #295				4	
		-Training in the Production and Utilization ofCompost inFlorida 10/27/04	10/24/2004 #363				2	
		-Health and Safety for Solid Waste Workers (TREEO)	09/16/2005 #060040				8/18 complete	
		8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities (Kohl Consult)	11/03/2007 #203	11/19/2005	11/18/2008	8		
		Fires at Landfills and Other Solid Waste Management Facilities [Kohl]	2/12/2008 #484				4	
		Improving Landfill Operations: Density, Specific Weight & Maximizing Airspace Utilization #476 [Kohl]	2/12/2008 #476				4-16 complete	
				11/19/2008	11/18/2011	16		16

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2 0 1 0 - Environmental/Engineering -LANDFILL OPERATOR								
MORRICAL, DAN CHIEF ENGINEER	5/15/1998	-Four Hour Spotter Orientation for Supervisors (SWD/Chris Kohl) -2000 FDEP HHW&CESQG (FDEP-Tampa) -Landfill Operating Issues for Class I,II, and III Sites (SWD/Chris Kohl) SWANA-FL 2001 Spring conf	6/15/1999 #155 5/4/2000 #166 02/23/2001 #194 3/29-31/2001	05/15/1998	05/14/2001	15	4 5 8 6/23 Complete	
		-SWANA-FL 2002 Spring Tri-State Conference (SWANA/7.5hr ttl) -Hazardous Materials Chemistry for the Non-Chemist (TREEO) -Laws and Rules for Florida Engineers (TREEO)	4/10/2002 #220 4/05/2004 #286 4/26/2004 #277	5/15/2001	5/14/2004	16	6 8 4-16 complete	
	-Trvl ppwk in file	8 Hour HAZWOPER Refresher (Compliance Solutions) -Training in the Production and Utilization of Compost in Florida 10/27/04 -SWANA-FL 2005 Spring Conference (SWANA/TREEO) -Florida Landfill Gas to Energy Symposium (FL Engery Off.) -FDEP 8 Hour HazWoper OSHA Refresher [Brown] -SWANA -Landfill Gas Symposium 29th Annual[3/27-30/06](SWANA) -FDEP 8 Hour HazWoper OSHA Refresher [Brown] -FDEP 8 Hour HazWoper OSHA Refresher [Brown]	5/27/2004 #359 10/27/2004 #363 4/11-13/2005 #374 05/04/2005 #377 05/06/2005 #228 3/27-30/2006 #428 3/31/2006 #361 4/6/2007 #228	5/15/2004	5/14/2007	16	4 2 6 5 4 15 4 4-44 complete	
		Hazardous Materials Incident & Waste Training 8Hr Refresher(265.16 [Kenton Brown,CHM])	5/2/2008 #228	5/15/2007	5/14/2010	16	4	12

EMPLOYEE	INITIAL DATE	CLASSES THIS PERIOD	Class Date Course #	START DATE	DATE EXPIRES	REQ'D HRS	CEU'S Received	HRS LEFT
2 0 1 1 - 2 0 1 2 - Environmental/Engineering -LANDFILL OPERATOR								
RAMOS, OSCAR ENVIRONMENTAL COORDINATOR	11/7/2002	24-hour Initial Training for Landfill Operators (with Exam) (Kohl Conslt)	11/7/2002 #195				initial	
	-Trvl ppwk in file	-FDEP-8-Hour HazWoper OSHA Refresher (SQG/FDEP)	5/5-5/9/2003 #266	11/07/2002	11/6/2005		4	
		-FDEP HHW & Conditionally Exempt SQG [12/2004]	12/07/2004 #360				5	
		-SWANA-FL 2005 Spring Conference (SWANA/TREEO)	4/11-13/2005 #374				6	
		-FDEP Hazardous Materials Incident & Waste Training -8 Hr Refresher	10/07/2005 #361				4-19-complete	
	-Trvl ppwk in file	-2006 HHW and SQG Program Workshop (FDEP-Sarasota)	5/01-3/2006 #434	11/07/2005	11/06/2008	16	5	
		FDEP 8 Hour HazWoper OSHA Refresher [Brown]	9/29/2006 #228				4	
	-Trvl ppwk in file	FDEP DOT 4-Hour Awareness Training [DEP-SQG][5/503,12/04]	5/30/2008 #267				2	
	-Trvl ppwk in file	North American Hazardous Materials Management Association Conference 2008- FL Chapter [FDEP/NAHMMA]	5/31/2008 #489				4	
		FDEP 8 Hour HazWoper OSHA Refresher [Brown]	10/24/2008 #228				N/A	
	Four Hour Spotter-Refresher for Class I, II, and III Landfills(#156) [Kohl]	11/5/2008 #156				4-19-complete		
				11/06/2008	11/07/2011	16		16
JAY, JEFF O. SR. ENVIRONMENTAL SPECIALIST	2/24/2006	24-Hour Initial Training course for Landfill Operators (Class I, II, II and C&D Sites) [Kohl Consult.]	2/22-24/2006 #195				initial	
	before OC	Bioreactor Landfill Workshop 2006 (FCSHWM)	5/26/2006 #430	2/24/2006	2/23/2009	16	7	
		FDEP 8 Hour HazWoper OSHA Refresher [Brown]	2/9/2007 #228				4	
	Hazardous Materials Chemistry for the Non-Chemist [TREEO]	4/11/2007 #286				8-19-complete		
				2/24/2009	2/23/2012			16

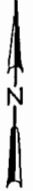
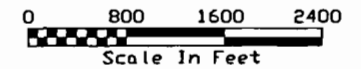
Exhibit C

Vicinity Maps, Zoning and Property Ownership



RNG 31 E

PD



LEGEND:

- MATCH LINE
- PROPERTY LINE
- ONE MILE PERIMETER LINE
- PROPERTY LINE
- 12 SECTION LINE AND NUMBER
(All Sections are in TWP 23 S R10G 31 E)
- (50) PROPERTY OWNER NUMBER
- A-2 ZONING DESIGNATION CODE
- (9) WELL NUMBER

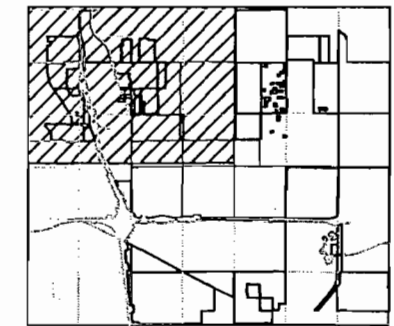
ZONING DESIGNATIONS:

- A-2 AGRICULTURAL
- PD PLANNED DEVELOPMENT
- R-2 RESIDENTIAL, TWO FAMILY
- I-1/I-5 INDUSTRIAL
- MUN MUNICIPALITY
- NCZ NO CITY ZONING

ZONING:
ORANGE CO. PROPERTY APPRAISERS DATA BASE
APRIL 2009

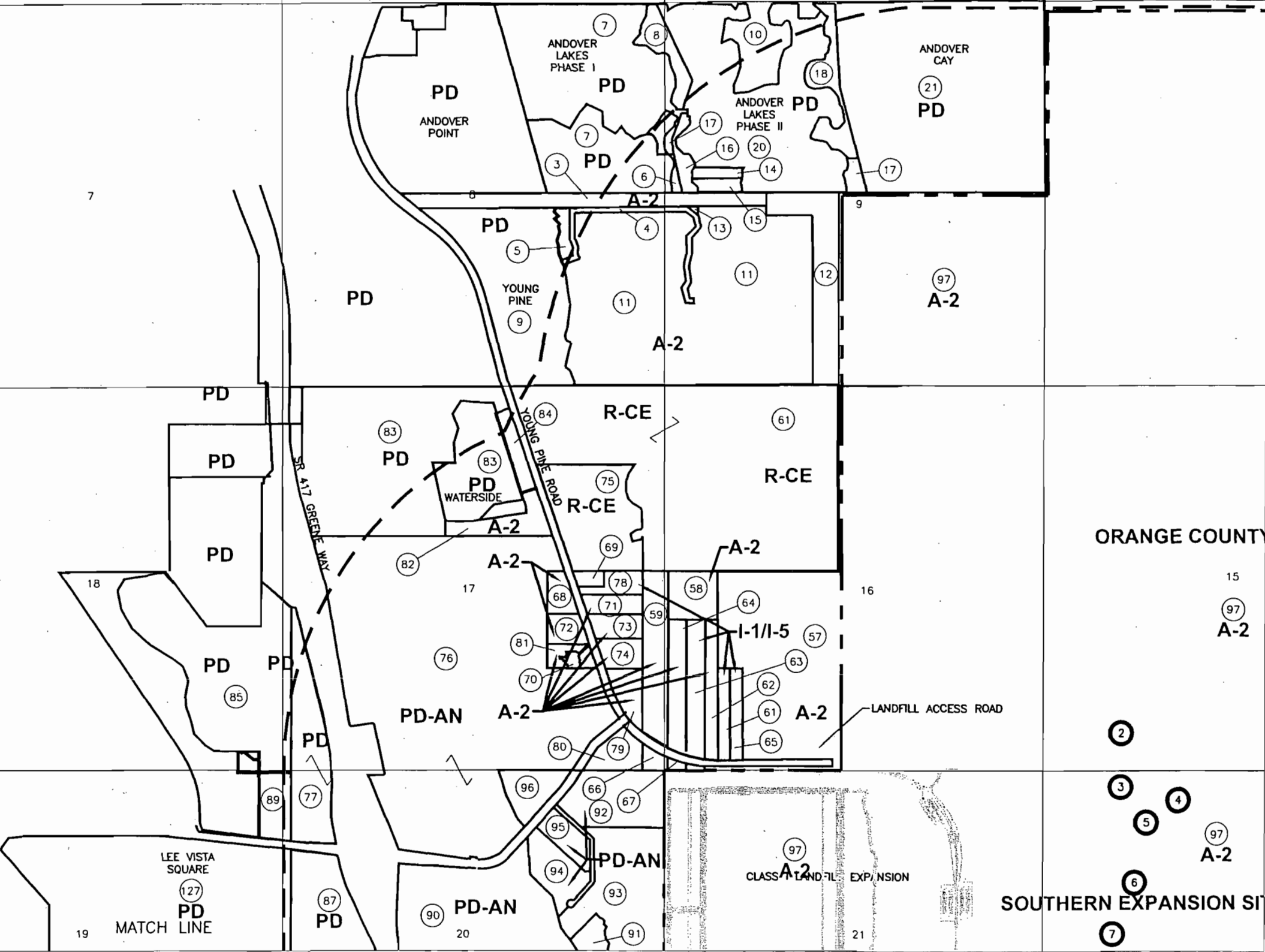
ORANGE COUNTY

SOUTHERN EXPANSION SITE



KEY PLAN
SCALE: (N.T.S.)

D:\007499.000_CELLD OPERATIONS PERMIT APPLICATION\Drawings\VC-1_2009.dwg



VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REUSE OF DOCUMENTS
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M-HILL/VCG JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M-HILL/VCG JOINT VENTURE.
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.

NO.	BY	REVISIONS	DATE	CADD FILE NAME
DESIGNED	MEM	DATE	07/07	
DRAWN	MEM	DATE	07/07	
CHECKED	JML	DATE	07/07	
APPROVED	MSB	DATE	07/07	
				C-1_2009.dwg

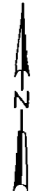
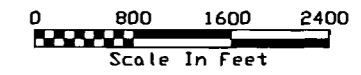


ORANGE COUNTY LANDFILL CELL 10 EXPANSION
NORTHWEST QUADRANT VICINITY MAP
ONE MILE PERIMETER

SHEET - OF -
DWG NO. C-1
SCALE: 1:800
PROJ. NO. 00.07499.000
NO.

MATCH LINE

RNG 31 E RNG 32 E



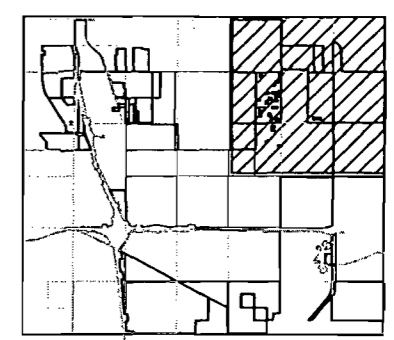
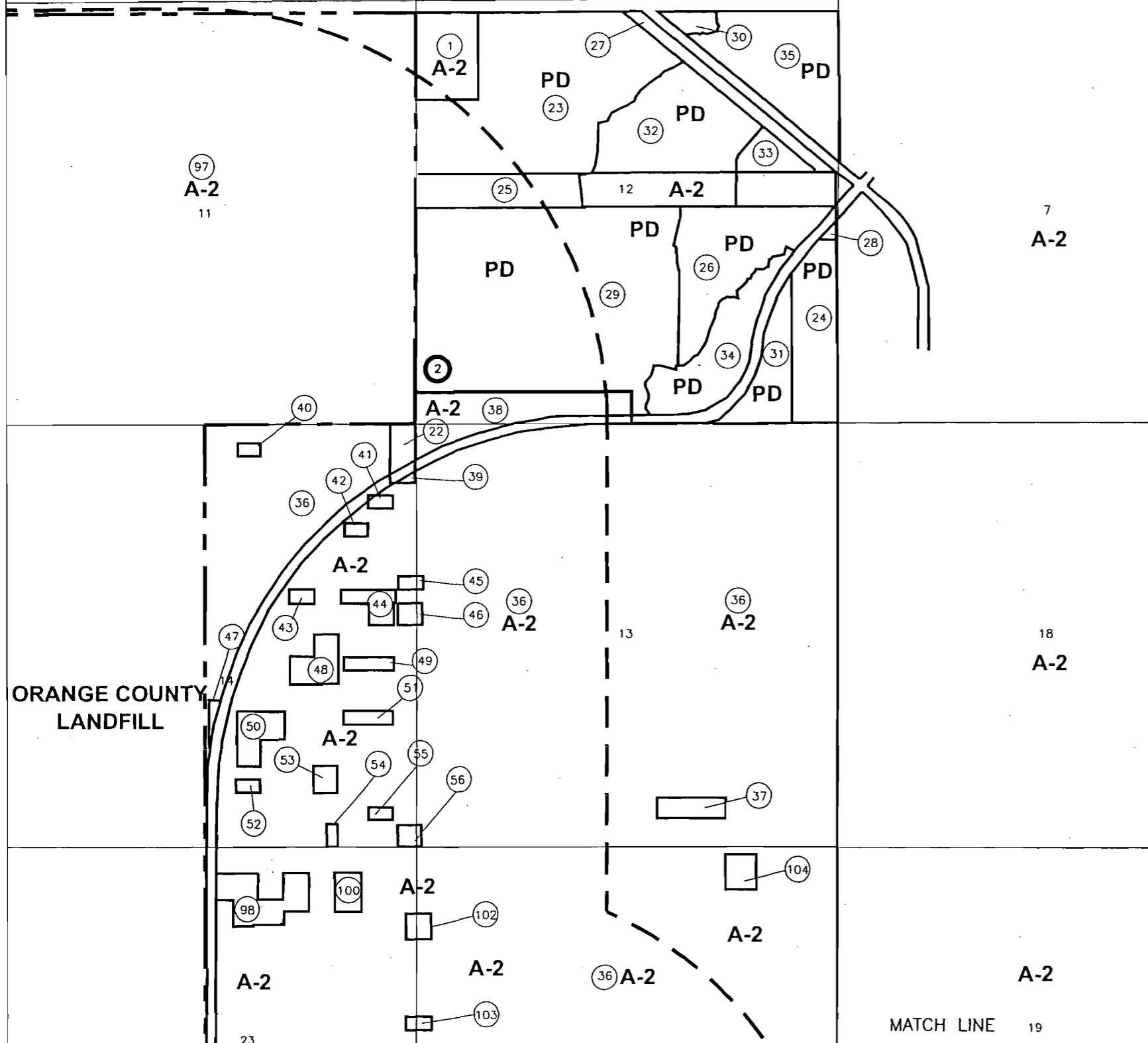
LEGEND:

- MATCH LINE
- PROPERTY LINE
- ONE MILE PERIMETER LINE
- PROPERTY LINE
- 12 SECTION LINE AND NUMBER
(All Sections Are In TWP 23 S RNG 31 E)
- 50 PROPERTY OWNER NUMBER
- A-2 ZONING DESIGNATION CODE
- 9 WELL NUMBER

ZONING DESIGNATIONS:

- A-2** AGRICULTURAL
- PD** PLANNED DEVELOPMENT
- R-2** RESIDENTIAL, TWO FAMILY
- I-1/I-5** INDUSTRIAL
- MUN** MUNICIPALITY
- NCZ** NO CITY ZONING

ZONING:
ORANGE CO. PROPERTY APPRAISERS DATA BASE
APRIL 2009



KEY PLAN
SCALE: (N.T.S.)

D:\0007499000_CELLOID_OPERATIONS_PERMIT_APPLICATION\Drawings\C-2_2009.dwg

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

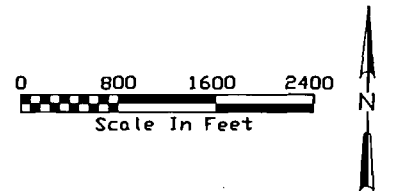
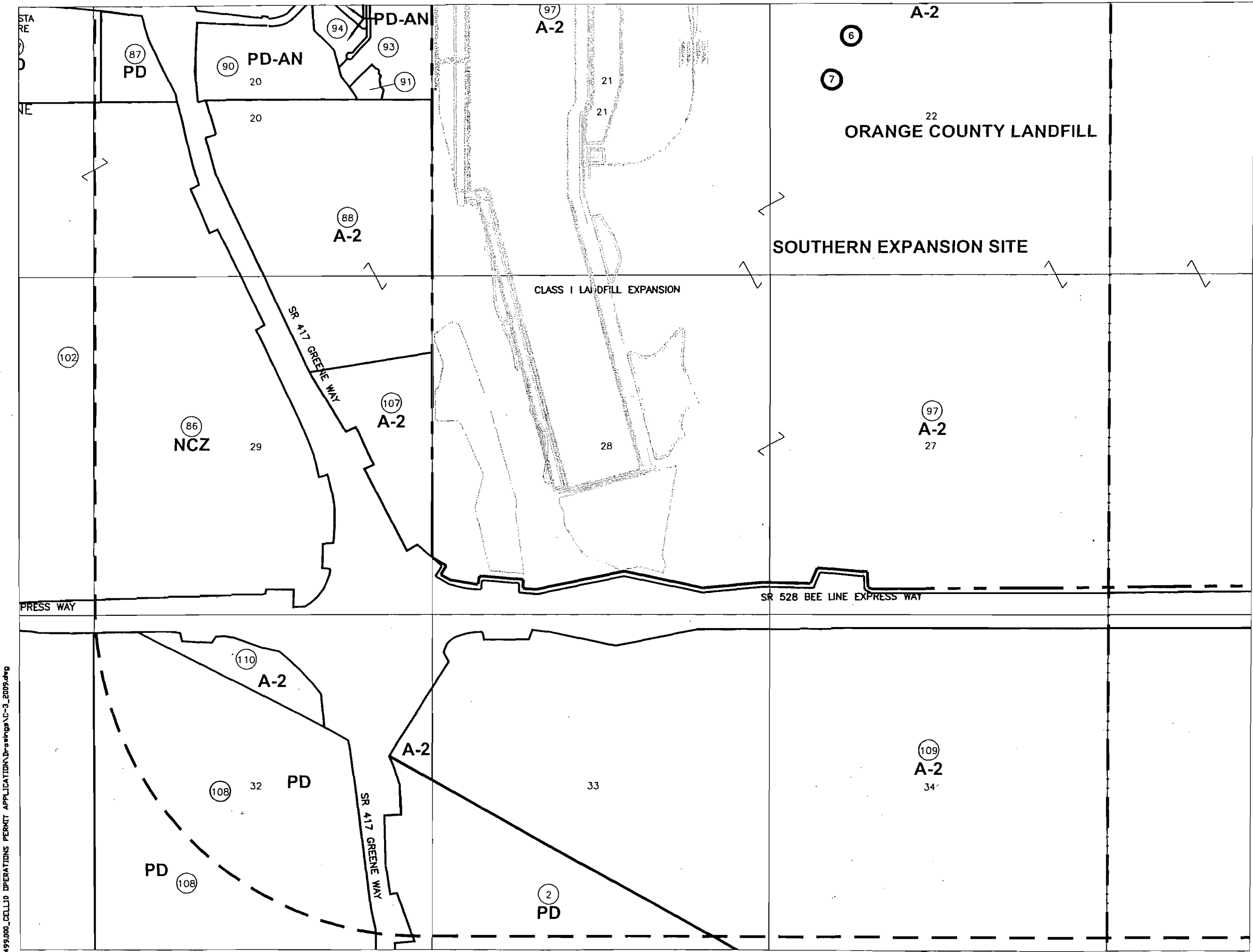
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NO.	BY	REVISIONS	DATE	CADD FILE NAME
				C-3_2009.dwg



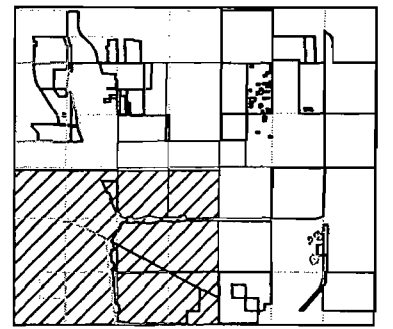
ORANGE COUNTY LANDFILL CELL 10 EXPANSION		SHEET -- OF --
NORTHEAST QUADRANT VICINITY MAP ONE MILE PERIMETER		DWG NO. C-2
		SCALE: 1:800
		PROJ. NO. 00.07499.000



- LEGEND:**
- MATCH LINE
 - - - - - PROPERTY LINE
 - - - - - ONE MILE PERIMETER LINE
 - PROPERTY LINE
 - 12 SECTION LINE AND NUMBER
(All Sections Are In TWP 23 S RANG 31 E)
 - (50) PROPERTY OWNER NUMBER
 - A-2 ZONING DESIGNATION CODE
 - (9) WELL NUMBER

- ZONING DESIGNATIONS:**
- A-2 AGRICULTURAL
 - PD PLANNED DEVELOPMENT
 - R-2 RESIDENTIAL, TWO FAMILY
 - I-1/I-5 INDUSTRIAL
 - MUN MUNICIPALITY
 - NCZ NO CITY ZONING

ZONING:
 ORANGE CO. PROPERTY APPRAISERS DATA BASE
 APRIL 2009



KEY PLAN
 SCALE: (N.T.S.)

D:\007499.000_CELLO OPERATIONS PERMIT APPLICATION\Drawings\10-3_2009.dwg

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REUSE OF DOCUMENTS
 THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M-HILL/VCGI JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M-HILL/VCGI JOINT VENTURE.

NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.

NO.	BY	REVISIONS	DATE	CADD FILE NAME
				C-3_2009.dwg

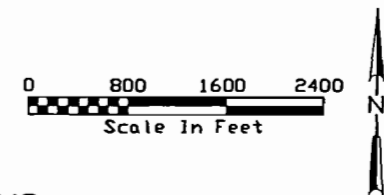
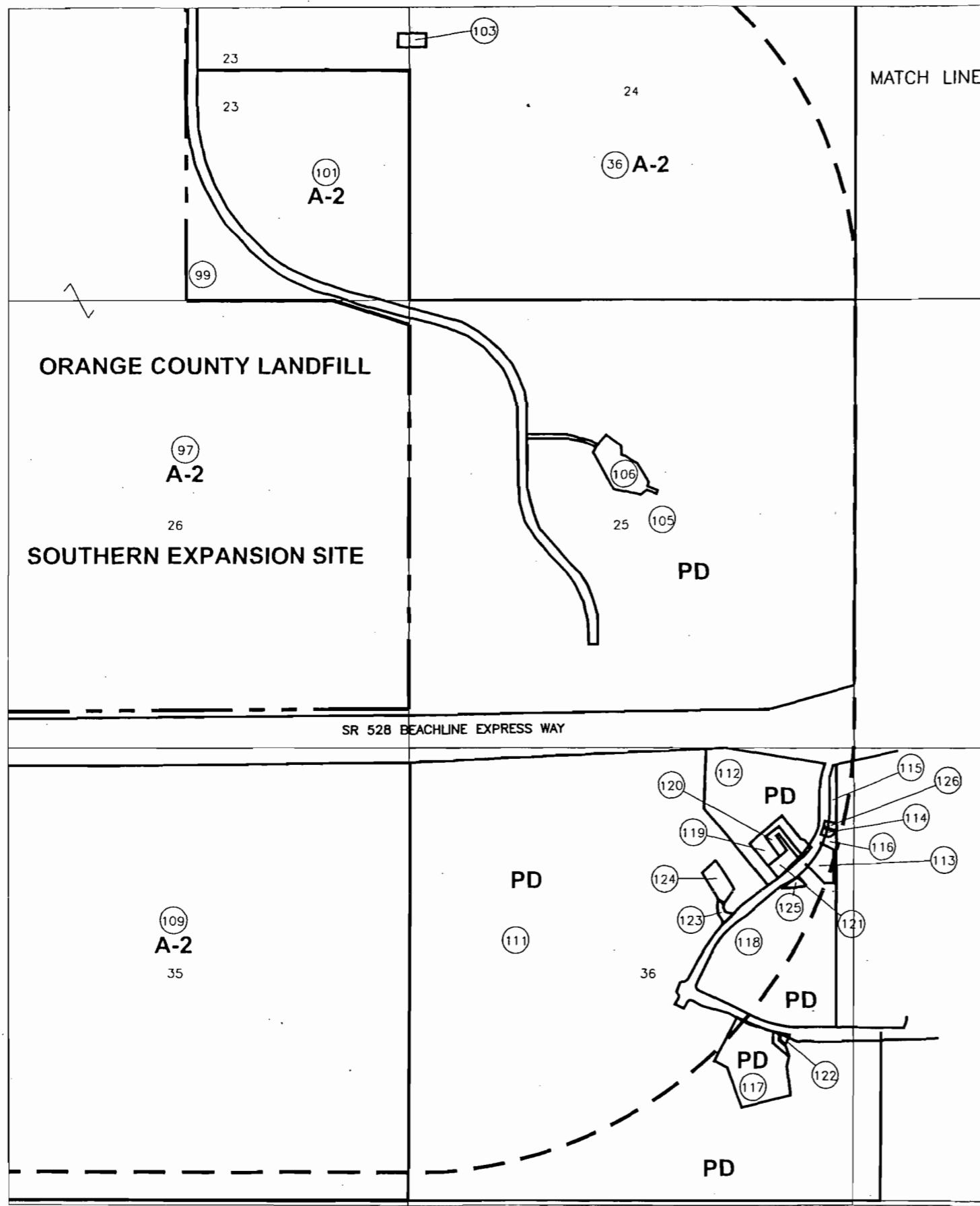
DESIGNED	MEM	DATE	07/07
DRAWN	MEM	DATE	07/07
CHECKED	JML	DATE	07/07
APPROVED	MSB	DATE	07/07



ORANGE COUNTY LANDFILL CELL 10 EXPANSION

SOUTHWEST QUADRANT
 VICINITY MAP
 ONE MILE PERIMETER

SHEET - OF -	
DWG NO.	C-3
SCALE	1:800
PROJ. NO.	00.07499.000



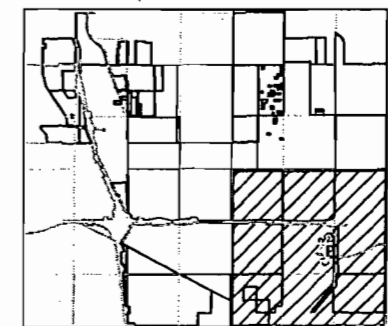
LEGEND:

- MATCH LINE
- - - - - PROPERTY LINE
- - - - - ONE MILE PERIMETER LINE
- _____ PROPERTY LINE
- _____ 12 SECTION LINE AND NUMBER
(All Sections Are In TWP 23 S RNG 31 E)
- ⊙ 50 PROPERTY OWNER NUMBER
- A-2 ZONING DESIGNATION CODE
- ⊙ 9 WELL NUMBER

ZONING DESIGNATIONS:

- A-2 AGRICULTURAL
- PD PLANNED DEVELOPMENT
- R-2 RESIDENTIAL, TWO FAMILY
- I-1/I-5 INDUSTRIAL
- MUN MUNICIPALITY
- NCZ NO CITY ZONING

ZONING:
ORANGE CO. PROPERTY APPRAISERS DATA BASE
APRIL 2009



KEY PLAN
SCALE: (N.T.S.)

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NO.	BY	REVISIONS	DATE	CADD FILE NAME
				C-4_2009.dwg

DESIGNED	MEM	DATE	07/07
DRAWN	MEM	DATE	07/07
CHECKED	JML	DATE	07/07
APPROVED	MSB	DATE	07/07



ORANGE COUNTY LANDFILL CELL 10 EXPANSION		SHEET - OF -
SOUTHEAST QUADRANT VICINITY MAP ONE MILE PERIMETER		DWG NO. C-4
		SCALE: 1:800
		PROJ. NO. 00.07499.000

TABLE 1

List of Property Owners, Land Use & Zoning for Properties Within a One-mile Radius of the Orange County Solid Waste Management Facility								
Map ID#	Parcel ED	Property Owner	Owner Address				Land Use	Zoned
			Address	City	State	Zip		
1	02-23-31-0000-00-002	Orange County BCC c/o Real Estate Mgmt Dept.	P.O.Box 1393	Orlando	FL	32802	Utilities	A-2
2	04-24-31-0000-00-001	Moss Park Properties LTD c/o Sunil M Kakkar	311 W. Oak St.	Kissimmee	FL	34741	Grazing Land	PD
3	08-23-31-0000-00-010	Orange County BCC c/o Real Estate Mgmt Dept.	PO BOX 13193	Orlando	FL	32802	Utilities	A-2
4	08-23-31-0000-00-012	Central Florida YMCA Foundation Inc.	433 Mills Ave.	Orlando	FL	32803	Right-of-Way	A-2
5	08-23-31-0000-00-013	Central Florida YMCA Foundation Inc.	433 Mills Ave.	Orlando	FL	32803	Non-Agricultural Acreage	A-2
6	08-23-31-0174-00-003	Lake Underhill Joint Venture	1700 S. Bumby Ave	Orlando	FL	32806	Vacant Home Owners Association	PD
7*	08-23-31-0166	Andover Lakes, 310 parcels	1801 Cook Ave.	Orlando	FL	32806	Single Family	PD
8	08-23-31-0166-00-005	Andover Lakes HOA c/o Sentry Mngt Inc.	1801 Cook Ave.	Orlando	FL	32806	Vacant Home Owners Association	PD
9*	08-23-31-3745	Young Pine, 185 Parcels	1330 Palmetto Ave.	Winter Park	FL	32789	Single Family	PD
10	09-23-31-0000-00-001	School Board of Orange County Florida	445 W Amelia St.	Orlando	FL	32801	School	PD
11	09-23-31-0000-00-002	Central Florida YMCA Foundation Inc.	433 N. Mills Ave	Orlando	FL	32803	Non-Agricultural Acreage	A-2
12	09-23-31-0000-00-004	Central Florida YMCA Foundation Inc.	433 N. Mills Ave	Orlando	FL	32803	Non-Agricultural Acreage	A-2
13	09-23-31-0000-00-011	Central Florida YMCA Foundation Inc.	433 N. Mills Ave	Orlando	FL	32803	Waste Land	A-2
14	09-23-31-0167-00-001	Orange County BCC c/o Real Estate Mgmt Dept.	PO BOX 13193	Orlando	FL	32802	Stormwater/Retention/Drainage	PD
15	09-23-31-0167-00-002	Andover Lakes Phase 2 HOA c/o Sentry Mngt Inc.	2180 W. State Road 434 Suite 5000	Longwood	FL	32779	Vacant Home Owners Association	PD
16	09-23-31-0167-00-003	Andover Lakes Phase 2 HOA c/o Sentry Mngt Inc.	2180 W. State Road 434 Suite 5000	Longwood	FL	32779	Vacant Home Owners Association	PD
17	08-23-31-0167-00-003	Andover Lakes HOA c/o Sentry Mngt Inc.	1801 Cook Ave.	Orlando	FL	32806	Vacant Home Owners Association	PD
18	09-23-31-0169-00-005	Andover Lakes Phase 2 HOA c/o Sentry Mngt Inc.	2180 W State Rd. 434 Ste. 5000	Longwood	FL	32779	Vacant Home Owners Association	PD
19	09-23-31-0169-00-009	Andover Lakes Phase 2 HOA c/o Sentry Mngt Inc.	2180 W State Rd. 434 Ste. 5000	Longwood	FL	32779	Vacant Home Owners Association	PD
20*	09-23-31-0169	Andover Lakes Phase II, 264 parcels	2180 W State Rd. 434 Ste. 5000	Longwood	FL	32779	Single Family	PD
21*	09-23-31-0206	Andover Cay, 317 parcels	101 Park Place Blvd. Ste 2	Kissimmee	FL	34741	Single Family	PD
22	14-23-31-0000-00-010	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Stormwater/Retention/Drainage	A-2
23	12-23-31-0000-00-001	Alafaya Property LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
24	12-23-31-0000-00-002	Redditt Joan 30% Int & Redditt Linda Lee 17.5% Int	2647 Bass Lake Blvd.	Orlando	FL	32806	Grazing Land	PD
25	12-23-31-0000-00-004	City Of Orlando & Orlando Utilities Comm	PO BOX 3193	Orlando	FL	32802	Municipal	A-2
26	12-23-31-0000-00-005	Alafaya MF Tract 8 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
27	12-23-31-0000-00-006	City Of Orlando & Orlando Utilities Comm	P.O.BOX 3139	Orlando	FL	32802	Municipal	PD
28	12-23-31-0000-00-007	Alafaya TH Tract 9 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Non-Agricultural Acreage	PD
29	12-23-31-0000-00-008	Alafaya SF Properties LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
30	12-23-31-0000-00-009	Alafaya SF Tract 6 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Non-Agricultural Acreage	PD
31	12-23-31-0000-00-010	Alafaya c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
32	12-23-31-0000-00-011	Alafaya TH Tract 4 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
33	12-23-31-0000-00-012	Alafaya TH Tract 7 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
34	12-23-31-0000-00-013	Alafaya TH Tract 9 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Grazing Land	PD
35	12-23-31-0000-00-014	Alafaya SF Tract 6 LLC c/o Parks DeFillipp and Association Inc.	203 Lookout Pl. Ste A	Maitland	FL	32751	Non-Agricultural Acreage	PD
36	13-23-31-0000-00-001	City Of Orlando & Orlando Utilities Comm	P.O.Box 3193	Orlando	FL	32802	Municipal	A-2
37	13-23-31-0000-00-003	Florida Municipal Power Agency	8553 Commodity Cir.	Orlando	FL	32819	Municipal	A-2
38	13-23-31-0000-00-004	City Of Orlando & Orlando Utilities Comm	P.O.Box 3193	Orlando	FL	32802	Municipal	A-2
39	14-23-31-0000-00-003	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
40	14-23-31-0000-00-009	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
41	14-23-31-0000-00-011	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
42	14-23-31-0000-00-012	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
43	14-23-31-0000-00-013	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
44	14-23-31-0000-00-014	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2

TABLE 1

List of Property Owners, Land Use & Zoning for Properties Within a One-mile Radius of the Orange County Solid Waste Management Facility								
Map ID#	Parcel ED	Property Owner	Owner Address				Land Use	Zoned
			Address	City	State	Zip		
45	14-23-31-0000-00-015	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
46	14-23-31-0000-00-016	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
47	14-23-31-0000-00-017	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
48	14-23-31-0000-00-018	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
49	14-23-31-0000-00-019	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
50	14-23-31-0000-00-020	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
51	14-23-31-0000-00-021	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
52	14-23-31-0000-00-022	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
53	14-23-31-0000-00-023	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
54	14-23-31-0000-00-024	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
55	14-23-31-0000-00-025	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
56	14-23-31-0000-00-026	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
57	16-23-31-0000-00-002	BCC East LLC	1350 E Newport Center Dr Ste 206	Deerfield Beach	FL	33442	Non-Agricultural Acreage	A-2
58	16-23-31-0000-00-003	Bledsoe John B	5223 Young Pine Road	Orlando	FL	32829	Manufactured Home	A-2
59	16-23-31-0000-00-004	Weber Charles G	14116 Lindrick Ct.	Orlando	FL	32826	Non-Agricultural Acreage	A-2
60	16-23-31-0000-00-005	UDDO Development c/o Eleonor M Uddo	386 Washington St.	Wellesley	MA	2481	Vacant Residential	R-CE
61	16-23-31-0000-00-006	Harold Smith	5749 Young Pine Road	Orlando	FL	32829	Open Storage	I-1/I-5
62	16-23-31-0000-00-007	Huan Chung Chow	9779 Wild Oak Drive	Windermere	FL	34786	Non-Agricultural Acreage	A-2
63	16-23-31-0000-00-008	F & M Management LLC	14127 Bella Ln.	Orlando	FL	32832	Open Storage	I-1/I-5
64	16-23-31-0000-00-009	Martin Michael R. & Martin Mary H	5729 Young Pine Rd.	Orlando	FL	32829	Single Family	A-2
65	16-23-31-0000-00-010	Smith Harold E. & Smith Ruth R.	5749 Young Pine Road	Orlando	FL	32829	Vacant Industrial	I-1/I-5
66	16-23-31-0000-00-013	Weber Charles G	8981 Levalley Ct.	Orlando	FL	32819	Non-Agricultural Acreage	A-2
67	16-23-31-0000-00-014	Martin Michael R. & Martin Mary H	5729 Young Pine Rd.	Orlando	FL	32829	Non-Agricultural Acreage	A-2
68	17-23-31-0000-00-001	Rivera Miguel R & Rivera Dorothy J	523 Granite Cir.	Chuluota	FL	32766	Manufactured Home	A-2
69	17-23-31-0000-00-003	Kitchen Charles B & Kitchen Tricia D	5225 Young Pine Road	Orlando	FL	32829	Single Family	I-1/I-5
70	17-23-31-0000-00-004	Anderson Leo M & Anderson Vicki L	5360 Young Pine Road	Orlando	FL	32829	Single Family	A-2
71	17-23-31-0000-00-005	Buchanan Charles P	5311 Young Pine Rd.	Orlando	FL	32829	Single Family	A-2
72	17-23-31-0000-00-006	Dee Nicole	5340 Young Pine Road	Orlando	FL	32829	Single Family	A-2
73	17-23-31-0000-00-007	Satterfield Malcolm Jr.	16104 Arrowhead TRL	Clermont	FL	34711	Single Family	A-2
74	17-23-31-0000-00-008	Acorn Land Inc.	5361 Young Pine Road	Orlando	FL	32829	Non-Agricultural Acreage	A-2
75	17-23-31-0000-00-011	UDDO Development c/o Eleonor M Uddo	386 Washington St.	Wellesley	MA	2481	Non-Agricultural Acreage	R-CE
76	17-23-31-0000-00-012	Beltway Commerce Center CD 93 Ltd	1350 E Newport Center Dr Ste 206	Deerfield Beach	FL	33442	Grazing Land	PD-AN
77	17-23-31-0000-00-015	Beltway Commerce Center CD 93 Ltd	1350 E. Newport Center Dr. Ste 206	Deerfield Beach	FL	33442	Conservation/Wetland	PD
78	17-23-31-0000-00-016	Kitchen Charles B & Kitchen Tricia D	5225 Young Pine Road	Orlando	FL	32829	Manufactured Home	I-1/I-5
79	17-23-31-0000-00-017	Beltway Commerce Center CD 93 Ltd	1350 E. Newport Center Dr. Ste 206	Deerfield Beach	FL	33442	Non-Agricultural Acreage	A-2
80	17-23-31-0000-00-022	Beltway Commerce Center CD 93 Ltd	1350 E. Newport Center Dr. Ste 206	Deerfield Beach	FL	33442	Non-Agricultural Acreage	A-2
81	17-23-31-0000-00-023	Anderson Leo M & Anderson Vicki L	5360 Young Pine Road	Orlando	FL	32829	Single Family	A-2
82	17-23-31-0000-00-078	Buchanan H C TR c/o Patsy Hamlett	1200 Wilkinson St.	Orlando	FL	32803	Non-Agricultural Acreage	A-2
83*	17-23-31-2230	Waterside - 200 Parcels	2180 W. State Road 434 Suite 5000	Longwood	FL	32779	Single Family	PD
84*	17-23-31-2233	Hibiscus Bay - 38 Parcels	2180 W. State Road 434 Suite 5000	Longwood	FL	32779	Single Family	PD
85*	18-23-31-1776	Crown Tree Lakes Tracts 2 & 3 -230 Parcels	2180 W. State Road 434 Suite 5000	Longwood	FL	32779	Townhouse	PD
86	19-23-31-0000-00-001	Mockingbird Orlando LLC	130 S. Orange Ave Suite 202	Orlando	FL	32801	Grazing Land	NCZ
87	20-23-31-0000-00-003	Beltway Commerce Center CD 93 Ltd	1350 E Newport Center Dr Ste 206	Deerfield Beach	FL	33442	Conservation/Wetland	PD
88	20-23-31-0000-00-005	Brunetti John J TR	1655 Route 9	Old Bridge	NJ	8857	Grazing Land	A-2

TABLE 1

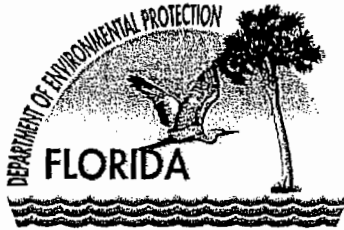
List of Property Owners, Land Use & Zoning for Properties Within a One-mile Radius of the Orange County Solid Waste Management Facility								
Map ID#	Parcel ED	Property Owner	Owner Address				Land Use	Zoned
			Address	City	State	Zip		
89	20-23-31-0000-00-006	Crown Tree Assn, Inc.	15340 Jog Road Ste 200	Delray Beach	FL	33446	Waste Land	PD
90	20-23-31-0000-00-008	Beltway Commerce Center CD 93 Ltd	1350 E Newport Center Dr Ste 206	Deerfield Beach	FL	33442	Grazing Land	PD-AN
91	20-23-31-1763-00-001	Beltway Commerce Center CD 93 Ltd	1350 E Newport Center Dr Ste 206	Deerfield Beach	FL	33442	Submerged	PD-AN
92	20-23-31-1763-01-000	PrologisDevelopment Services Inc. c/o Prologis	4545 Airport Way	Denver	CO	80239	Non-Agricultural Acreage	PD-AN
93	20-23-31-1763-02-000	Prologis Logistic Services Inc. c/o Prologis	4545 Airport Way	Denver	CO	80239	Non-Agricultural Acreage	PD-AN
94	20-23-31-1763-03-000	Prologis-Exchange Beltway Bldg 100 FL LLC c/o Prologis	4545 Airport Way	Denver	CO	80239	Non-Agricultural Acreage	PD-AN
95	20-23-31-1763-03-001	Prologis-Exchange Beltway Bldg 100 FL LLC c/o Prologis	4545 Airport Way	Denver	CO	80239	Non-Agricultural Acreage	PD-AN
96	20-23-31-4401-00-001	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Stormwater/Retention/Drainage	PD-AN
97	22-23-31-0000-00-001	Orange County BCC c/o Real Estate Mgmt Dept.	PO Box 1393	Orlando	FL	32802	County	A-2
98	23-23-31-0000-00-001	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
99	23-23-31-0000-00-006	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Stormwater/Retention/Drainage	A-2
100	23-23-31-0000-00-008	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
101	23-23-31-0000-00-014	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Municipal	A-2
102	23-23-31-0000-00-032	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Stormwater/Retention/Drainage	A-2
103	23-23-31-0000-00-034	City of Orlando	400 S. Orange Ave.	Orlando	FL	32801	Stormwater/Retention/Drainage	A-2
104	24-23-31-0000-00-002	Florida Municipal Power Agency	8553 Commodity Cir.	Orlando	FL	32819	Municipal	A-2
105	25-23-31-0000-00-001	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Non-Agricultural Acreage	PD
106	25-23-31-0000-00-002	International Corporate Park LLC	15065 McGregor Blvd Ste 108	Fort Myers	FL	33908	Stormwater/Retention/Drainage	PD
107	29-23-31-0000-00-002	Orlando/Orange County Expy Authority	525 S. Magnolia Ave	Orlando	FL	32801	State	A-2
108	32-23-31-0000-00-001	Colonial Properties Services Inc.	2101 6th Ave N. Tte 750	Birmingham	AL	35203	Grazing Land	PD
109	32-23-31-0000-00-002	Carlsbad Orlando LLC	125 NE 1st Ave Ste 1	Ocala	FL	34470	Grazing Land	A-2
110	32-23-31-0000-00-003	Orlando/Orange County Expy Authority	525 S. Magnolia Ave.	Orlando	FL	32801	State	A-2
111	36-23-31-0000-00-002	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Grazing Land	PD
112	36-23-31-0000-00-003	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Grazing Land	PD
113	36-23-31-0000-00-004	Orlando/Orange County Expy Authority	525 S. Magnolia Ave	Orlando	FL	32801	Stormwater/Retention/Drainage	PD
114	36-23-31-0000-00-005	Orange County BCC c/o Real Estate Mgmt Dept.	PO Box 1393	Orlando	FL	32802	Utilities	PD
115	36-23-31-0000-00-006	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Non-Agricultural Acreage	PD
116	36-23-31-0000-00-007	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Waste Land	PD
117	36-23-31-3849-00-020	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Grazing Land	PD
118	36-23-31-3849-00-030	Suburban Land Reserve Inc.	PO Box 51196	Salt Lake City	UT	84151	Non-Agricultural Acreage	PD
119	36-23-31-3849-00-040	International Corporate Park LLC	15065 McGregor Blvd Ste 108	Fort Myers	FL	33908	Grazing Land	PD
120	36-23-31-3849-00-050	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Office Buildings	PD
121	36-23-31-3849-00-060	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Parking/Service Garage	PD
122	36-23-31-3849-06-000	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Vacant Commercial Association	PD
123	36-23-31-3849-07-000	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Vacant Commercial Association	PD
124	36-23-31-3849-08-000	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Vacant Commercial Association	PD
125	36-23-31-3849-09-000	Suburban Land Reserve Inc. c/o Tax Division	PO Box 51196	Salt Lake City	UT	84151	Vacant Commercial Association	PD
126	36-23-31-3849-10-000	Orange County BCC c/o Real Estate Mgmt Dept.	PO Box 1393	Orlando	FL	32802	Utilities	PD

*Individual property owners information will be provided upon request

Exhibit D

***FDEP Acceptance of Cells 9-12
Financial Responsibility Closure Cost Estimates***





Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road MS 4565
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

April 6, 2009

Mr. Paul Wunderlich
Director of Finance and Accounting
Orange County
201 South Rosalind Avenue
Orlando, Florida 32802-0038

Re: WACS 21847 - Orange County Landfill

Dear Mr. Wunderlich:

I reviewed the documentation submitted to demonstrate financial assurance for the above referenced facility and find it is in order. The fiscal year end 2008 financial test demonstrates adequate financial assurance to cover the Department approved closing and long-term care cost estimates, dated September 30, 2008, for the Class I landfill Cells 9-12, A-K, 7B, 8, the Class III landfill Cells 1-2, and the waste tire facility. Therefore, Orange County Landfill is in compliance with the financial assurance requirements of Rule 62-701.630, Florida Administrative Code, at this time.

If you have any questions, please contact me at (850) 245-8745.

Sincerely,

Frank Hornbrook
Environmental Specialist
Solid Waste Section

cc: Fred Wick, DEP/TLH
Tom Lubozynski, DEP/ORL
James Flynt, Orange County

"More Protection, Less Process"

[HTTP://WWW.DEP.STATE.FL.US/WASTE/CATEGORIES/SWFR](http://www.dep.state.fl.us/waste/categories/swfr)

Printed on Recycled Paper

Exhibit E

Well Inventory



Public and Private Well Inventory

Well data bases for the St. Johns Water Management District, and the South Florida Water Management District were checked to update the Year 2006 well inventory submitted with the 2006 Cell 9 operations permit renewal. Information on wells 2-inch in diameter was requested by Section, Township and Range, and by Latitude and Longitude within a one-mile radius of the property boundaries of the Orange County Solid Waste Management Facility (OCSWMF.)

No new wells were listed for the search area in either the SJRWMD or the SFWMD 2008 databases. The existing public and private wells were previously listed in Table IV -6.0-1 in Volume IV of VII of the December 2000 application. Well Locations were depicted on Figure IV-6.0-1 in Volume IV of the 2000 submittal for the South Expansion Site (SES).

A search of the United States Geological Survey Data Base indicates three (3) wells within approximately the one mile radius. The wells match well Nos. 2, 19, and 15 from the well map included in the 2000 permit application.

Well 19 is located at the Eastern Water Reclamation Facility just outside of the one mile radius, and Well 15 is located on International Corporate Park property south of the Beachline Expressway. Information on each well from the USGS database is provided in this Attachment.

Table 1 is a updated listing of the wells shown on Figure IV-6.0-1. This figure is provided for reference. No new wells were located within a one-mile radius of the OCSWMF.

Table E-1
Updated Well Inventory
One Mile Radius from Orange County Solid Waste Management Facility
April 2009

Map. ID No.	Street Address	Parcel ID	Owner Name	Potable	Irrigation
57	5801 Young Pine Road	16-23-31-0000-00-002	BCC East LLC	None	None
58	5223 Young Pine Road	16-23-31-0000-00-003	John Bledsoe	Yes	Yes
59	Young Pine Road	16-23-31-0000-00-004	Charles Weber	None	None
60	4601 Young Pine Road	16-23-31-0000-00-005	UDDO Development	None	None
61	5749 Young Pine Road	16-23-31-0000-00-006	Harold & Ruth Smith	No	Yes
62	5737 Young Pine Road	16-23-31-0000-00-007	Huan Chung Chow	None	None
63	5721 Young Pine Road	16-23-31-0000-00-008	F & M Management LLC	Yes	Yes
64	5729 Young Pine Road	16-23-31-0000-00-009	Michael & Mary Martin	Yes	Yes
65	5753 Young Pine Road	16-23-31-0000-00-010	Harold & Ruth Smith	None	None
66	Young Pine Road	16-23-31-0000-00-013	Charles Weber	None	None
67	5729 Young Pine Road	16-23-31-0000-00-014	Martin Michael R. & Martin Mary H	None	None
68	5304 Young Pine Road	17-23-31-0000-00-001	Miguel Rivera	Yes	Yes
69	5225 Young Pine Road	17-23-31-0000-00-003	Charles & Tricia Kitchen	No	Yes
70	5360 Young Pine Road	17-23-31-0000-00-004	Leo & Vicki Anderson	Yes	Yes
71	5311 Young Pine Road	17-23-31-0000-00-005	Charles Buchanan	No	Yes
72	5340 Young Pine Road	17-23-31-0000-00-006	Nicole Dee	None	None
73	5339 Young Pine Road	17-23-31-0000-00-007	Malcolm Satterfield Jr.	Yes	Yes
74	5361 Young Pine Road	17-23-31-0000-00-008	Acorn Land, Inc.	No	Yes
75	5009 Young Pine Road	17-23-31-0000-00-011	UDDO Development	None	None
76	Young Pine Road	17-23-31-0000-00-012	Beltway Commerce Center CD 93 LTD	None	None
78	5227 Young Pine Road	17-23-31-0000-00-016	Charles & Tricia Kitchen	None	None
79	Young Pine Road	17-23-31-0000-00-017	Beltway Commerce Center CD 93 LTD	None	None
80	Lee Vista Blvd.	17-23-31-0000-00-022	Beltway Commerce Center CD 93 LTD	None	None
81	Young Pine Road	17-23-31-0000-00-023	Leo & Vicki Anderson	Yes	Yes
82	5010 Young Pine Road	17-23-31-0000-00-078	H.C. Buchanan	None	None

Map ID numbers are shown on the Properties Location Map included in the Land Use and Zoning Exhibit (Exhibit C)

TABLE E-2

List of On-site Wells- Orange County Solid Waste Management Facility									
WELL NO.	PERMIT ID	STATION ID	STATION NAME	PERMIT PROJECT NAME	STATUS	DIAMETER (IN)	TOTAL DEPTH (IN)	CASING DEPTH (IN)	WATER SOURCE
1	7706	12677	LS1	Les Springs Golf Course	Active	10	0	0	Florida Aquifer
2	3354	20115	Sheriff's Range	Orange County Landfill	Inactive	4	0	0	Florida Aquifer
3	3354	20114	Breakroom	Orange County Landfill	Active	4	0	0	Florida Aquifer
4	3354	20113	Household Hazardous Waste	Orange County Landfill	Active	2	0	0	Florida Aquifer
5	3354	20112	Recycling Facility Well 3	Orange County Landfill	Active	6	220	180	Florida Aquifer
6	3354	20111	Vehicle Facility	Orange County Landfill	Inactive	2	0	0	Florida Aquifer
7	3354	20110	Scalehouse Well 1	Orange County Landfill	Active	6	460	239	Florida Aquifer

Note: Data provided by the SJRWMD

USGS WELL DATA

Three wells were found by using the USGS website. The coordinates used were a close approximation to the one mile radius:

West Longitude: 81°15'00"
East Longitude: 81°09'30"
North Latitude: 28°31'30" and,
South Latitude: 28°26'30"

**USGS 282624081090401
COCOA 19 NR BITHLO**

Site Description

LOCATION

Latitude 28°26'24", Longitude 81°09'04" NAD27,
Orange County, Florida

SITE TYPE:

Ground Water

DESCRIPTION

The depth of the well is 600 feet below land surface.
Altitude of land surface datum 71.0 feet above sea level NGVD29.

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
<u>Water Quality Samples</u>	1986-07-29	2002-08-05	24
<u>Ground-water levels</u>	1988-06-02	2000-04-27	8

OPERATION:

Record for this site is maintained by the USGS Florida - Altamonte Springs
Office Water Science Center

CONTACT INFORMATION

Email questions about this site to [Florida NWISWeb Data Inquiries](#)

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OPERATION:

Record for this site is maintained by the USGS Florida - Altamonte Springs
Office Water Science Center

CONTACT INFORMATION

Email questions about this site to [Florida NWISWeb Data Inquiries](#)

Best Available Copy



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
 Ground Water

Geographic Area:
 Florida

GO

News: [Recent changes](#)

Ground-water levels for Florida

[Click Here for information on data reliability](#)

Search Results -- 1 sites found

Search Criteria

site_no list = • 282624081090401
Minimum number of levels = 1

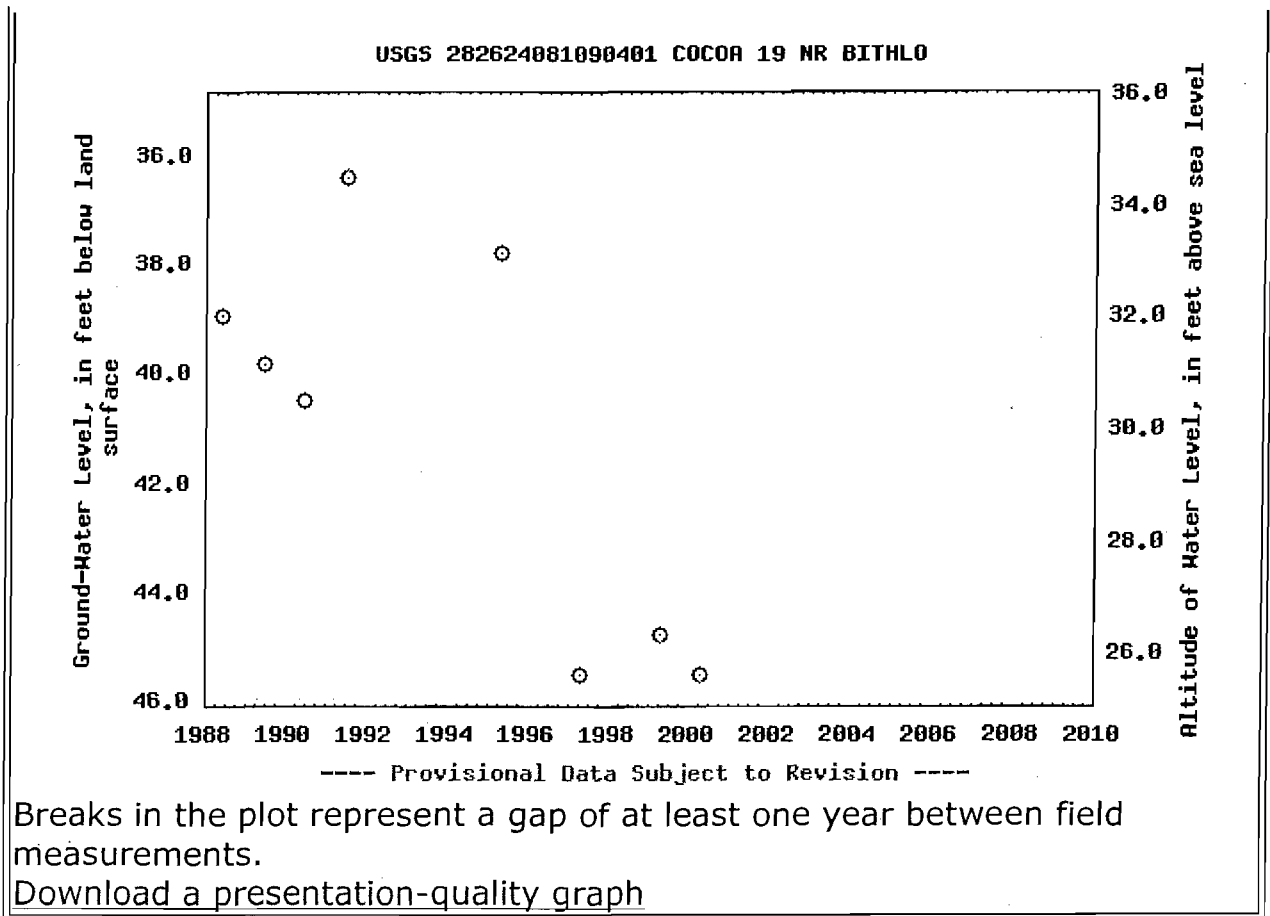
[Save file of selected sites to local disk for future upload](#)

USGS 282624081090401 COCOA 19 NR BITHLO

Available data for this site Ground-water: Field measurements

GO

<p>Orange County, Florida Hydrologic Unit Code 03080101 Latitude 28°26'24", Longitude 81°09'04" NAD27 Land-surface elevation 71.0 feet above sea level NGVD29 The depth of the well is 600 feet below land surface. This well is completed in the Floridan aquifer system (S400FLORDN) national aquifer. This well is completed in the FLORIDAN AQUIFER SYSTEM (120FLRD) local aquifer.</p>	<p>Output formats</p> <p>Table of data</p> <p>Tab-separated data</p> <p>Graph of data</p> <p>Reselect period</p>
Empty space for data table	



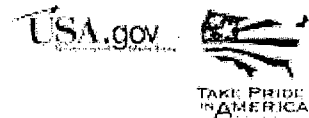
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[U.S. Department of the Interior | U.S. Geological Survey](#)
Title: Ground water for Florida: Water Levels
URL: <http://waterdata.usgs.gov/fl/nwis/gwlevels?>



Page Contact Information: [Florida NWISWeb Maintainer](#)
 Page Last Modified: 2009-04-27 15:29:52 EDT
 1.94 1.87 nadww01

USGS 283007081122705
0678 UFA EASTERN WWTP NR UNION PARK, FL

Site Description

LOCATION

Latitude 28°30'08", Longitude 81°11'44" NAD27,
Orange County, Florida , Hydrologic Unit 03080101

SITE TYPE:

Ground Water

DESCRIPTION

The depth of the well is 470 feet below land surface.
The depth of the hole is 470 feet below land surface.
Altitude of land surface datum 81.26 feet above sea level NGVD29.
This well is completed in the FLORIDAN AQUIFER (120FLRD) local aquifer.

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
<u>Water Quality Samples</u>	2000-05-18	2000-09-14	2
<u>Ground-water levels</u>	2000-05-18	2005-09-20	11

OPERATION:

Record for this site is maintained by the USGS Florida - Altamonte Springs
Office Water Science Center

CONTACT INFORMATION

Email questions about this site to [Florida NWISWeb Data Inquiries](#)

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USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
 Ground Water

Geographic Area:
 United States

GO

NEWS New Mapper and Experimental Real-Time Web Service - updated August 2009

Ground-water levels for the Nation

Search Results -- 1 sites found

Search Criteria

site_no list = . 283007081122705
Minimum number of levels = 1

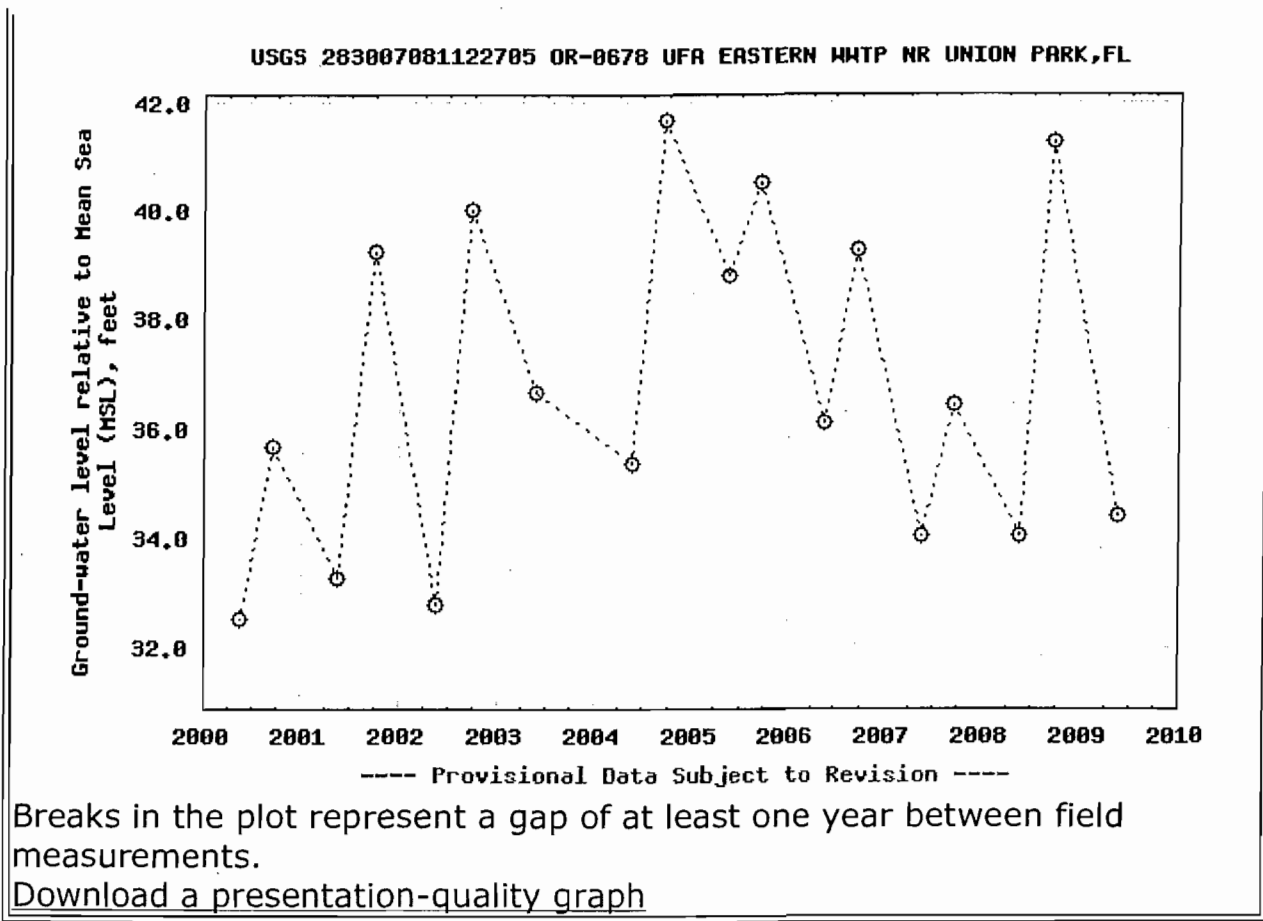
Save file of selected sites to local disk for future upload

USGS 283007081122705 OR-0678 UFA EASTERN WWTP NR UNION PARK,FL

Available data for this site Ground-water: Field measurements

GO

<p>Orange County, Florida Hydrologic Unit Code 03080101 Latitude 28°30'08", Longitude 81°11'44" NAD27 Land-surface elevation 81.26 feet above sea level NGVD29 The depth of the well is 470 feet below land surface. The depth of the hole is 470 feet below land surface. This well is completed in the Floridan aquifer system (S400FLORDN) national aquifer. This well is completed in the Floridan Aquifer System (120FLRD) local aquifer.</p>	<p>Output formats</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 2px;">Table of data</td></tr> <tr><td style="padding: 2px;">Tab-separated data</td></tr> <tr><td style="padding: 2px;">Graph of data</td></tr> <tr><td style="padding: 2px;">Reselect period</td></tr> </table>	Table of data	Tab-separated data	Graph of data	Reselect period
Table of data					
Tab-separated data					
Graph of data					
Reselect period					

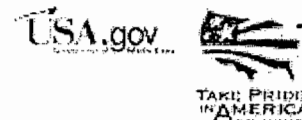


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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)
Title: Ground water for USA: Water Levels
URL: <http://waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [NWISWeb Support Team](#)
 Page Last Modified: 2009-08-04 10:15:24 EDT
 2.02 1.94 nadww01

**USGS 283008081114501
OCU EWRF PILOT ASR UFA AT ORLANDO, FL**

Site Description

LOCATION

Latitude 28°30'08", Longitude 81°11'45" NAD83,
Orange County, Florida, Hydrologic Unit 03080101

SITE TYPE:

Ground Water

DESCRIPTION

The depth of the well is 1330 feet below land surface.
Altitude of land surface datum 80.5 feet above sea level NGVD29.
This well is completed in the AVON PARK LIMESTONE (124AVPK)
local aquifer.

AVAILABLE DATA:

*****There are no data available online for this site.*****

Contact the state office (below) to inquire about the availability of
other data for this site.

OPERATION:

Record for this site is maintained by the USGS Florida - Altamonte
Springs Office Water Science Center

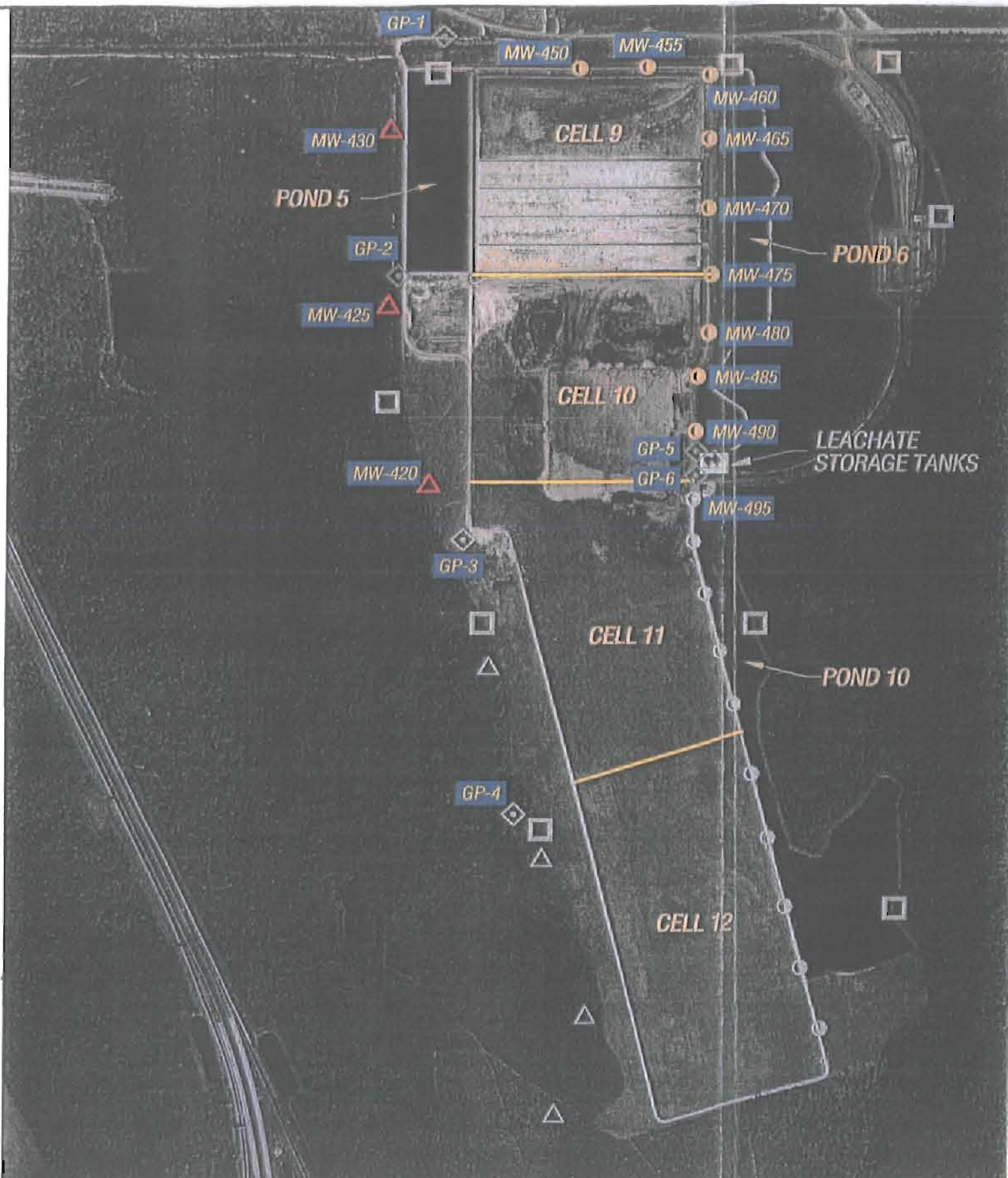
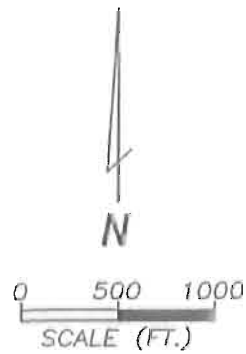
CONTACT INFORMATION

Email questions about this site to [Florida NWISWeb Data Inquiries](#)

Exhibit F

***Ground Water Monitoring Wells
for Southern Expansion Site***





LEGEND

- EXISTING DOWNGRAIDENT MONITORING WELL CLUSTER
- EXISTING UPGRADIENT MONITORING WELL CLUSTER
- EXISTING GAS MONITORING PROBE
- PROPOSED DOWNGRAIDENT MONITORING WELL CLUSTER
- PROPOSED UPGRADIENT MONITORING WELL CLUSTER
- PROPOSED GAS MONITORING PROBE
- PROPOSED SURFACE WATER MONITORING STATION

NOTES

1. ALL LOCATIONS ARE APPROXIMATE
2. MONITORING WELL CLUSTERS INCLUDE SHALLOW AND INTERMEDIATE WELLS (SEE TABLE 1 FOR DETAILS)
3. EXISTING MONITORING WELLS MW-450 AND MW-455 NOT INCLUDED IN 2000 PLAN
4. EXISTING GAS PROBES GP-5 AND GP-6 HAVE BEEN ABANDONED AND ARE NO LONGER IN USE

<p>VERIFY SCALE</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.</p>	<p>REUSE OF DOCUMENTS</p> <p>THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CHM-HILLGLACE & RADCLIFFE-JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CHM/WCG JOINT VENTURE.</p> <p>NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>JMG</td> <td>DATE</td> <td>11-27-07</td> </tr> <tr> <td>DRAWN</td> <td>TLM</td> <td>DATE</td> <td>11-27-07</td> </tr> <tr> <td>CHECKED</td> <td>JMG</td> <td>DATE</td> <td>11-27-07</td> </tr> <tr> <td>APPROVED</td> <td>MAO</td> <td>DATE</td> <td>11-27-07</td> </tr> <tr> <td>NO.</td> <td>APVR</td> <td>DESCRIPTION</td> <td>DATE</td> </tr> <tr> <td>NO.</td> <td>BY</td> <td>REVISIONS</td> <td>DATE</td> </tr> </table>	DESIGNED	JMG	DATE	11-27-07	DRAWN	TLM	DATE	11-27-07	CHECKED	JMG	DATE	11-27-07	APPROVED	MAO	DATE	11-27-07	NO.	APVR	DESCRIPTION	DATE	NO.	BY	REVISIONS	DATE	<p>Geotechnical and Environmental Consultants, Inc.</p>	<p>CHM/WCG</p> <p>50 EAST ROBINSON STREET, SUITE 800 ORLANDO, FLORIDA 32801</p>	<p>ORANGE COUNTY LANDFILL EXPANSION</p> <p>FIGURE 1</p> <p>WATER QUALITY AND LEACHATE MONITORING PLAN REVIEW GROUNDWATER AND SURFACE WATER MONITORING LOCATIONS CELLS 10-12</p> <p>SCALE: 1" = 1000'</p> <p>PROJ. NO. 25600</p>
DESIGNED	JMG	DATE	11-27-07																										
DRAWN	TLM	DATE	11-27-07																										
CHECKED	JMG	DATE	11-27-07																										
APPROVED	MAO	DATE	11-27-07																										
NO.	APVR	DESCRIPTION	DATE																										
NO.	BY	REVISIONS	DATE																										

SCHEMATIC DESIGN



June 23, 2009
Project No. 01-08-0480-301

RECEIVED

JUN 25 2009

Mr. Ron Beladi, P.E.
Neel-Schaffer, Inc.
2600 Lake Lucien Drive, Suite 117
Maitland, Florida 32751

**Monitoring Well Completion Form and Associated Information for
Newly Installed Monitoring Wells 495S and 495I
Orange County Landfill Cell 10 Expansion – Stage I / Stage II
Orange County, Florida**

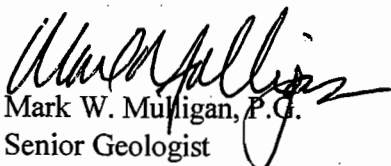
Dear Mr. Beladi:

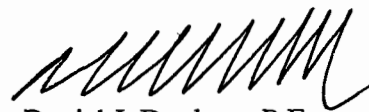
Nodarse & Associates, Inc. (N&A) is pleased to present you with the attached information for the newly installed monitoring wells MW-495S and MW495I associated with the Cell 10 Expansion at the Orange County Landfill. Attached with this letter is the Florida Department of Environmental Protection Monitoring Well Completion Form, lithologic log, map showing the locations of the monitoring wells, the Orange County Health Department New Well construction Permit (#090296) and the Orange County Health Department Well Completion Report (which has already been submitted to Orange County Health Department). Three (3) copies of these documents have been provided for you.

Thank you very much for the opportunity to provide our services to you. Should you have any questions concerning this proposal, or if we can be of further assistance, please contact us at (407) 740-6110.

Sincerely,

NODARSE & ASSOCIATES, INC.


Mark W. Mulhigan, P.G.
Senior Geologist


Daniel J. Dunham, P.E.
Executive Vice President

cc Ms. Margorie Heidorn, PG FDEP Central District (2 copies)
Mr. Jeff Jay – Orange County Solid Waste (one copy via email)
Mr. Jim Flynt – Orange County Solid Waste (one copy via email)

Survey Report for Monitoring Well As Built Information Orange County Landfill – Cell 10

Date of Report: 6/15/09
Date of Field Work: 6/08/08
Party Chief: Billy Smith

Well Designation: 495I

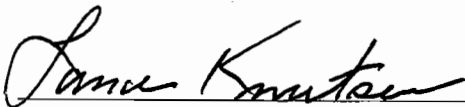
Horizontal Position (NAD83-North American Datum of 1983):

Latitude: 28° 27' 28.23" N
Longitude: 81° 13' 32.50" W

Elevations (National Geodetic Vertical Datum of 1929):

Top of Well Casing: 90.25
Adjacent Concrete Base: 86.98
Adjacent Ground: 86.9

Submitted By:



Lance Knutsen
PLS No. 4364
Survey Manager
Mehta and Associates, Inc.

ATTACHMENT C
Florida Department of Environmental Protection
 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767
MONITORING WELL COMPLETION REPORT FORM

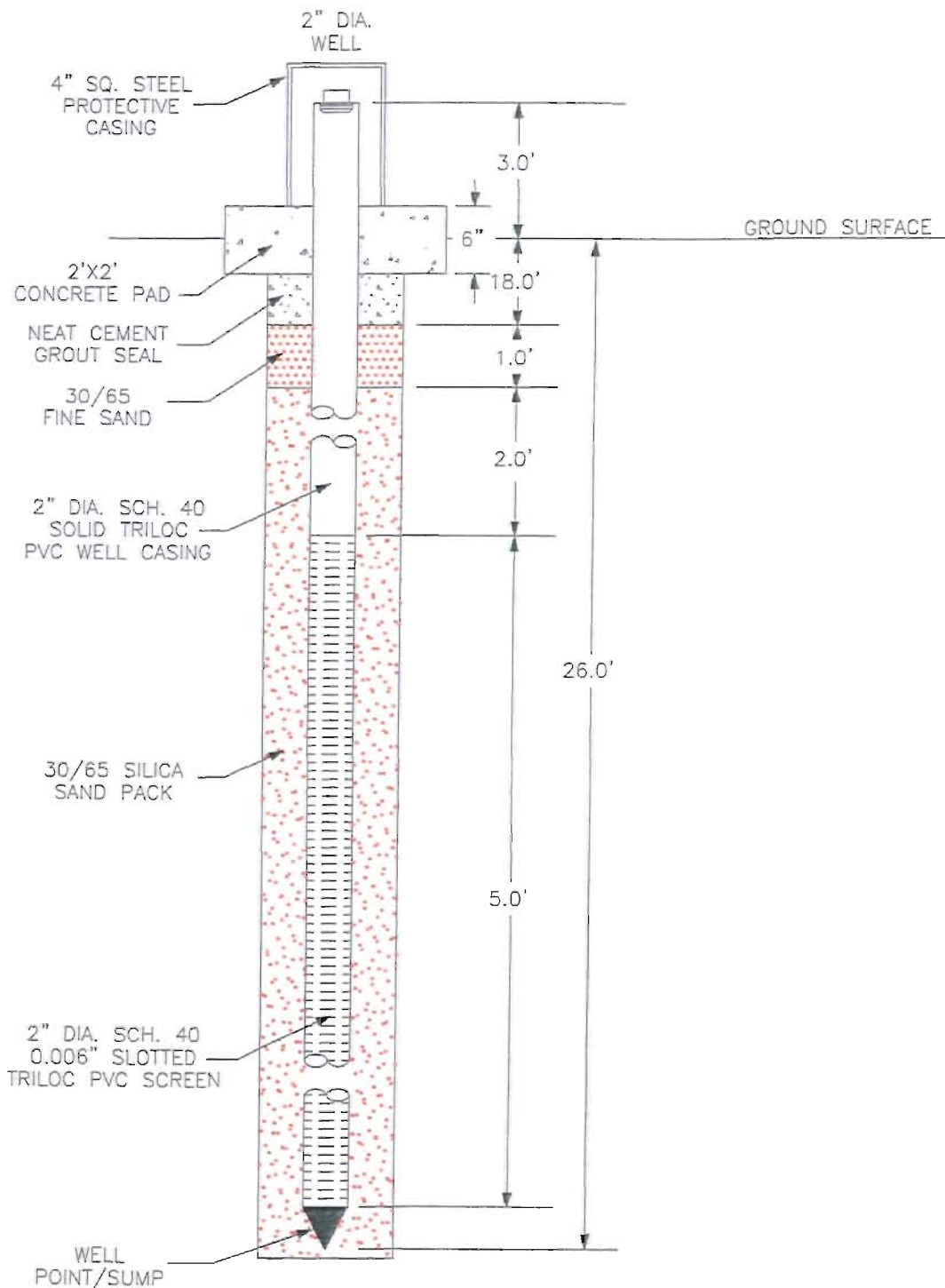
Facility Name: Orange County Landfill		Date: June 23, 2009
DEP Permit No.: SO48-0128169-010	WACS Facility ID #: 21847	
WACS Monitoring Site ID #: 4951	WACS Monitoring Site Name:	
Well Type: <input type="checkbox"/> Background <input type="checkbox"/> Detection <input checked="" type="checkbox"/> Compliance <input type="checkbox"/> Other _____		
LATITUDE AND LONGITUDE (See Next Page For Requirements): Lat 28° 27' 28.23" N / Long 81° 13' 32.50" W		
Coordinate Accuracy: 1-Foot	Datum: NAD 1983	Elevation Datum: NGVD29
Collection Method: GPS	Collection Date: 6-8-09	
Collector Name: Billy Smith	Collector Affiliation: Mehta and Associates, Inc.	
Aquifer Monitored: Shallow		
Drilling Method: Hollow Stem Auger	Date Installed: 5-20-09	
Installed By: Nodarse & Associates, Inc. Jim Smith, License # 7352		
Bore Hole Diameter: 8 1/4"	Total Depth:(BLS) 26'	
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 21'
Screen Type: PVC	Screen Slot Size: 0.006"	Screen Length: 5'
Screen Diameter: 2"	Screen Interval: _____ 21' _____ To _____ 26' _____ (BLS)	
Filter Pack Type: Silica Sand	Filter Pack Grain Size: 30/65	
Filter Interval Covered: 7'	Filter Interval: _____ 19' _____ To _____ 26' _____ (BLS)	
Sealant Type: 30/65 Silica Sand	Sealant Interval: _____ 18' _____ To _____ 19' _____ (BLS)	
Grout Type: Portland Type II	Grout Interval: _____ 0' _____ To _____ 18' _____ (BLS)	
Top Of Casing Elev. (NGVD): 90.25	Ground Surface Elev. (NGVD): 86.9	
Post Development Water Level Elev. (NGVD): 76.50	Date And Time Measured: 5-20-09	
Describe Well Development: Submersible Electric Pump operated for approximately one hour until development water Was clear of turbidity.		
Remarks:		
Name Of Person Preparing Report: Mark Mulligan, PG		
Organization: Nodarse & Associates, Inc.	Phone Number: 407-740-6110	

NOTE Attach As-Built Mw Construction Diagram, Lithologic Log, And Survey Drawing (See Next Page).

(NGVD)=National Geodetic Vertical Datum Of 1929 (BLS) = Below Land Surface

Additional Survey Notes:

1. Latitude and Longitude Requirements and Definitions:
 - a. **Latitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.
 - b. **Longitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.
 - c. **Eastings and northings** (State Plane Coordinates) **must** be converted to latitude and longitude.
 - d. **Coordinate Accuracy:** the measured, estimated degree of correctness of the measurement. An accuracy of 15 feet or 5 meters is required.
 - e. **Datum:** the horizontal reference for measuring locations on the Earth's surface. NAD83-North American Datum of 1983 is preferred.
 - f. **Elevation Datum:** the reference datum from which elevation measurements are made. NGVD29 (National Geodetic Vertical Datum of 1929 is required).
 - g. **Collection Method:** the method or mechanism used to derive the measurements, e.g. GPS, map, aerial photo, etc.
 - h. **Collection Date:** the date and time on which the measurements were taken.
 - i. **Collector Name:** the name of the person taking the measurement.
 - j. **Collector Affiliation:** the agency or company for whom the collector works.
2. As specified in the MPIS, One (1) paper copy and one (1) electronic copy of a drawing must be submitted within thirty (30) days following monitoring well installation showing the location of all monitoring wells (active and abandoned), water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to NGVD with an accuracy of 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, with an accuracy of 15 feet, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. **[62-701.510(1)(c)&(3)(d)1, F.A.C.]**
3. If a monitoring well is being replaced or new wells are being added to an existing ground water monitoring plan, only the new wells needs to be surveyed as long as all other monitoring wells in the MPIS have been surveyed and certified by a Florida Licensed Surveyor and Mapper and there is no reason to believe that the elevations have changed. This location and elevation determinations and the certification must be provided with the Monitoring Well Completion Form for the new well,.



INSTALLATION REPORT

INSTALLATION DATE: 5-20-09
INSTALLED BY: NODARSE & ASSOCIATES, INC.
DEPTH TO GROUNDWATER: 9.0 FEET
INSTALLATION METHOD: HOLLOW STEM AUGER

WELL No. MW-495(i)

MONITORING WELL DETAIL
 CELL 10 EXPANSION
 ORANGE COUNTY LANDIFLL
 ORANGE COUNTY, FLORIDA

DRAWN: MG
 CHKD: MM
 SCALE: NOTED
 DATE: 6-3-09



PROJ. NO: 01-08-0480-301A
 DETAIL: 1

SOIL BORING LOG

BORING/PIT NO: MW-495 S & I

SHEET OF

DATE: #	PROJECT NAME: Orange County Landfill Cell 10 PROJECT NO: 01-08-0480-301	
BORING PIT/SITE LOCATION PLAN:	SEC: TWN: RGE: LAT: LONG:	
	DRILLING CO: Nodarse & Associates, Inc.	
	DRILL CREW: Eric and Reggie	
	DRILLING/TRENCHING METHOD: Soil Penetration Test / Hollow Stem Auger	
	PIT DIMENSIONS: LENGTH WIDTH DEPTH	
	GROUNDWATER LEVELS	
	DATE	ACTUAL TIME
	DEPTH BLS	

DEPTH	SAMPLE NO.	PEN. RATE/ BLOW COUNTS	DESCRIPTION	FID <input type="checkbox"/>		USCS	REMARKS
				PID <input type="checkbox"/>	(PPM)		
0	2		Brown Fine Sand (FS) from land surface to 6 feet below land surface (BLS)			SW	
2	4			SW			
4	6			SW			
6	8		Brown FS with slight clay content			SC	
8	10			SW		WET at 8 feet BLS	
10	12		Brown FS from 8 feet BLS to 20 feet BLS			SW	
12	14			SW			
14	16			SW			
16	18			SW			
18	20			SW			
20	22		Tan FS from 20 feet BLS to 25 feet BLS			SW	
22	24			SW			
24	25			SW			
25	26			CL			
			Green Clay, moderately stiff				
			End of Boring				

PREPARED BY: Mark Mulligan



Charlie Crist
Governor

Ana M. Viamonte Ros, M.D., M.P.H.
State Surgeon General

Orange County Health Department
Division of Environmental Health
Attn: Raymond Roe, Supervisor
800 N Mercy Dr., Ste 1
Orlando, FL 32808

WELL COMPLETION REPORT (Please complete in black ink or type.)

PERMIT # 090296 CUP# WUP DID # _____

If permit is for multiple wells indicate the number of wells drilled 2

Indicate remaining wells to be cancelled 0

WATER WELL CONTRACTOR'S SIGNATURE Jan P. Smith License # 7352

Verify that the information provided in this report is accurate and true.

OWNER'S NAME ORANGE COUNTY SOLID WASTE MNG

COMPLETION DATE 5-26-09 Florida Unique I.D. _____

WELL USE: DEP/ Public _____ Irrigation _____ Domestic _____ Monitor X

HRS Limited _____ 62-524 _____ Other _____

DRILL METHOD [] Rotary [] Cable Tool [] Combination

[] Jet [X] Auger Other _____

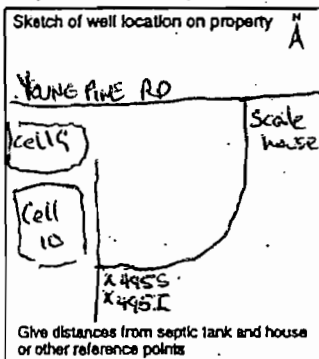
KS-I
195-S

Grout	No. of Bags	From (Fl.)	To (Fl.)
Neat Cement:	85	0	18'
Bentonite: ✓	3	0	10'

WELL LOCATION: County ORANGE
1/4 of 1/4 of Section 21 Twp: 23S Rge: 31E
Latitude 28° 28' 14.43" N Longitude 81° 13' 12.29" W

DATE STAMP

Official Use Only



CHEMICAL ANALYSIS WHEN REQUIRED

Iron: _____ ppm Sulfate: _____ ppm

Chloride: _____ ppm

[] Lab Test [] Field Test Kit

Pump Type

[] Centrifugal [] Jet [] Submersible [] Turbine

Horsepower _____ Capacity _____ G.P.M. _____

Pump Depth _____ Ft. Intake Depth _____ Ft.

Measured Static Water Level 9' Measured Pumping Water Level 10'
After _____ Hours at _____ G.P.M. Measuring Pt. (Describe): _____
Which is _____ Ft. [] Above [] Below Land Surface
Casing: [] Black Steel [] Galv. [X] PVC Other _____

[] Open Hole [] Screen	Depth (Fl.)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Note cavities, depth to producing zones. Color Grain Size Type of Material
	From	To	
Casing Diameter & Depth (Fl.)			
Diameter <u>2"</u>			<u>495-S 2" DIAMETER PVC</u>
From <u>0'</u>			<u>TO 18' BLS W/ 5' OF 0.006"</u>
To <u>18'</u>			<u>SCREEN W/ 30/65 SAND</u>
Diameter <u>2"</u>			<u>495-I 2" DIAMETER PVC</u>
From <u>0'</u>			<u>TO 26' BLS W/ 5' OF</u>
To <u>26'</u>			<u>0.006" SCREEN AND</u>
			<u>30/65 SAND FILTER PACK</u>
Liner [] or Casing []			
Diameter _____			
From _____			
To _____			

Driller's Name: ERIC BLUMKE
(print or type)

Form 408-3-3 Rev. 12/05

To expedite your application, please return the well completion report within two weeks after the well has been constructed. Please attach a copy of permit with the well completion report.

Well location address: 5901 YOUNG PINE ROAD

City ORLANDO FL, Zip code 32829



STATE OF FLORIDA
 DEPARTMENT OF HEALTH
 Orange County Health Department
 800 N. Mercy Dr., Suite 1 Orlando, FL 32808
 Phone 407 -521-2630

XXXXXXXX

Permit # 090296 Fee \$83.00
 Date Issued 5/21/2009 315882

Well Location 5901 Young Pine Rd
 S 21 T 23 R 31 Orlando

Permit for: **New Well Construction**
 Primary Use: *Monitoring*
 Issued to

Nodarse & Associate Lic # 7352
 James P. Smith
 1675 Lee Road
 Winter Park FL 32789

Well must meet all required setbacks
 Authority Chapter 36-A Orange County Well Code

Construction Specifics

Drilling Meth:		Type Well:	Shallow
Annular Mat:	Sand	Casing Mat:	PVC
Casing joined by		Well Diameter	12 in
Grout:		Casing depth	ft
Pump Type:		Exceed 75psi	No
Tank Type:		Electric	No
Delineated:	N		

ATTACHMENT C

Florida Department of Environmental Protection

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

MONITORING WELL COMPLETION REPORT FORM

Facility Name: Orange County Landfill		Date: June 23, 2009
DEP Permit No.: SO48-0128169-010		WACS Facility ID #: 21847
WACS Monitoring Site ID #: 495S		WACS Monitoring Site Name:
Well Type: <input type="checkbox"/> Background <input type="checkbox"/> Detection <input checked="" type="checkbox"/> Compliance <input type="checkbox"/> Other _____		
LATITUDE AND LONGITUDE (See Next Page For Requirements): Lat 28° 27' 28.28" N / Long 81° 13' 32.51" W		
Coordinate Accuracy: 1-Foot	Datum: NAD 1983	Elevation Datum: NGVD29
Collection Method: GPS		Collection Date: 6-8-09
Collector Name: Billy Smith		Collector Affiliation: Mehta and Associates, Inc.
Aquifer Monitored: Shallow		
Drilling Method: Hollow Stem Auger		Date Installed: 5-20-09
Installed By: Nodarse & Associates, Inc. Jim Smith, License # 7352		
Bore Hole Diameter: 8 1/4"		Total Depth:(BLS) 18'
Casing Type: PVC	Casing Diameter: 2"	Casing Length: 13'
Screen Type: PVC	Screen Slot Size: 0.006"	Screen Length: 5'
Screen Diameter: 2"	Screen Interval: _____ 13' _____ To _____ 18' _____ (BLS)	
Filter Pack Type: Silica Sand		Filter Pack Grain Size: 30/65
Filter Interval Covered:	Filter Interval: _____ 11' _____ To _____ 18' _____ (BLS)	
Sealant Type: 30/65 Silica Sand	Sealant Interval: _____ 10' _____ To _____ 11' _____ (BLS)	
Grout Type: Portland Type II	Grout Interval: _____ 0' _____ To _____ 10' _____ (BLS)	
Top Of Casing Elev. (NGVD): 90.30		Ground Surface Elev. (NGVD): 86.9
Post Development Water Level Elev. (NGVD): 77.30		Date And Time Measured: 5-20-09
Describe Well Development: Submersible Electric Pump operated for approximately one hour until development water		
Was clear of turbidity.		
Remarks:		
Name Of Person Preparing Report: Mark Mulligan, PG		
Organization: Nodarse & Associates, Inc.		Phone Number: 407-740-6110

NOTE Attach As-Built Mw Construction Diagram, Lithologic Log, And Survey Drawing (See Next Page).

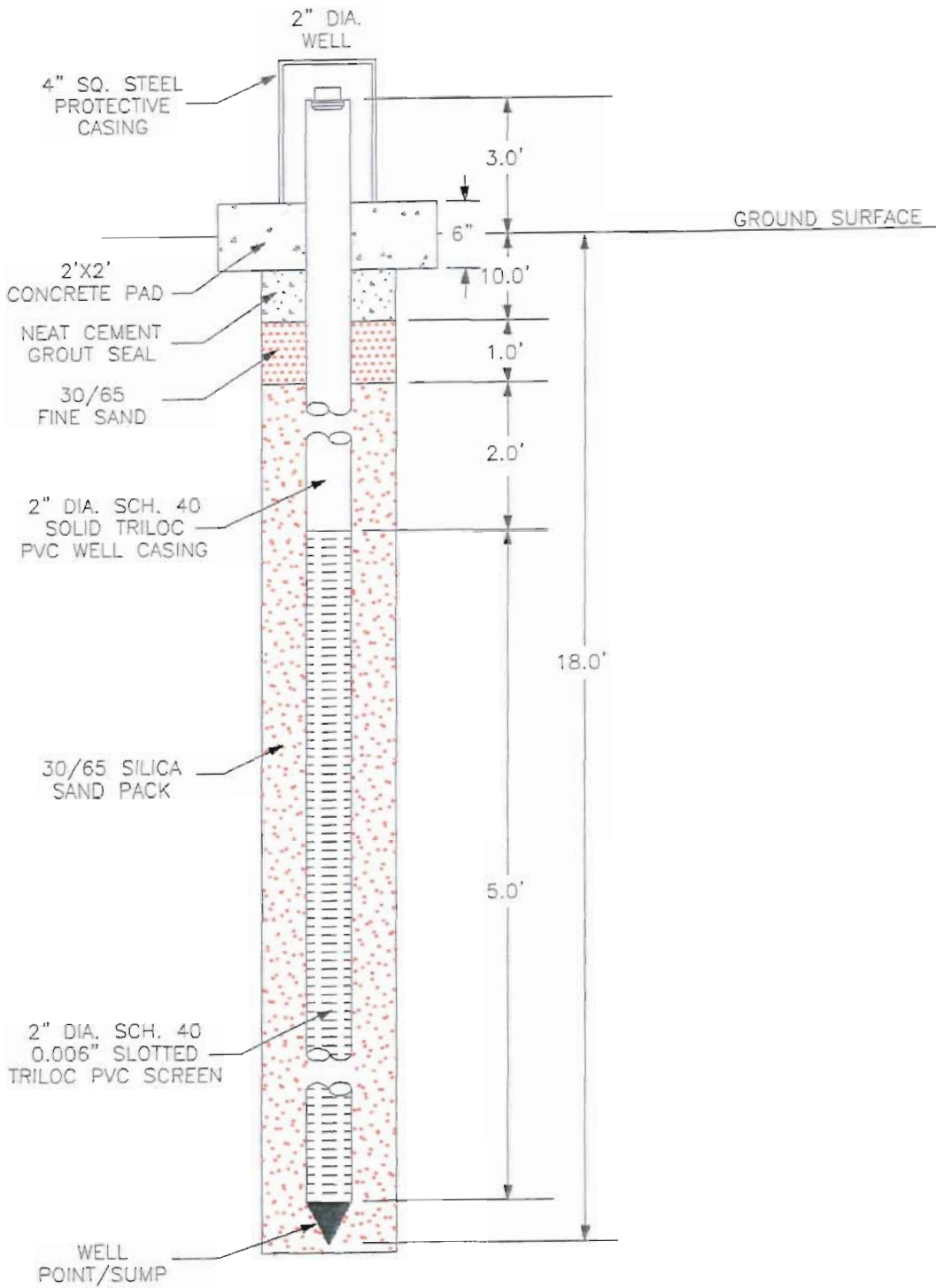
(NGVD)=National Geodetic Vertical Datum Of 1929 (BLS) = Below Land Surface

CD Revised form 3/12/2008m

DEP Form 62-522.900(3) Effective April 14, 1994

Additional Survey Notes:

1. Latitude and Longitude Requirements and Definitions:
 - a. **Latitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.
 - b. **Longitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.
 - c. **Eastings and northings** (State Plane Coordinates) **must** be converted to latitude and longitude.
 - d. **Coordinate Accuracy:** the measured, estimated degree of correctness of the measurement. An accuracy of 15 feet or 5 meters is required.
 - e. **Datum:** the horizontal reference for measuring locations on the Earth's surface. NAD83-North American Datum of 1983 is preferred.
 - f. **Elevation Datum:** the reference datum from which elevation measurements are made. NGVD29 (National Geodetic Vertical Datum of 1929 is required.
 - g. **Collection Method:** the method or mechanism used to derive the measurements, e.g. GPS, map, aerial photo, etc.
 - h. **Collection Date:** the date and time on which the measurements were taken.
 - i. **Collector Name:** the name of the person taking the measurement.
 - j. **Collector Affiliation:** the agency or company for whom the collector works.
2. As specified in the MPIS, One (1) paper copy and one (1) electronic copy of a drawing must be submitted within thirty (30) days following monitoring well installation showing the location of all monitoring wells (active and abandoned), water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to NGVD with an accuracy of 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, with an accuracy of 15 feet, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. **[62-701.510(1)(c)&(3)(d)1, F.A.C.]**
3. If a monitoring well is being replaced or new wells are being added to an existing ground water monitoring plan, only the new wells needs to be surveyed as long as all other monitoring wells in the MPIS have been surveyed and certified by a Florida Licensed Surveyor and Mapper and there is no reason to believe that the elevations have changed. This location and elevation determinations and the certification must be provided with the Monitoring Well Completion Form for the new well,.



INSTALLATION REPORT

INSTALLATION DATE: 5-20-09
INSTALLED BY: NODARSE & ASSOCIATES, INC.
DEPTH TO GROUNDWATER: 9.0 FEET
INSTALLATION METHOD: HOLLOW STEM AUGER

WELL No. MW-495(s)

MONITORING WELL DETAIL
 CELL 10 EXPANSION
 ORANGE COUNTY LANDIFLL
 ORANGE COUNTY, FLORIDA

DRAWN: MG		
CHKD: MM		
SCALE: NOTED		
DATE: 6-3-09	PROJ. NO: 01-08-0480-301A	DETAIL: 2

Orange County Health Department
Division of Environmental Health
Attn: Raymond Roe, Supervisor
800 N Mercy Dr., Ste 1
Orlando, FL 32808

WELL COMPLETION REPORT (Please complete in black ink or type.)

PERMIT # 090296 CUP/WUP # _____ DID # _____

If permit is for multiple wells indicate the number of wells drilled 2

Indicate remaining wells to be cancelled 0

WATER WELL CONTRACTOR'S SIGNATURE Jan P. Smith License # 7352

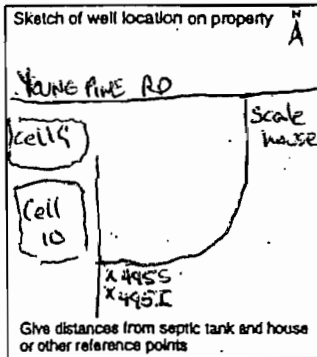
Verify that the information provided in this report is accurate and true.

Grout	No. of Bags	From (Ft.)	To (Ft.)
Neat Cement:	<u>85</u>	<u>0</u>	<u>18'</u>
Bentonite: <input checked="" type="checkbox"/>	<u>3</u>	<u>0</u>	<u>10'</u>

WELL LOCATION: County ORANGE
1/4 of 1/4 of Section 21 Twp: 23S Rge: 31E
Latitude 28° 28' 14.43" N Longitude 81° 13' 12.29" W

DATE STAMP

Official Use Only



CHEMICAL ANALYSIS WHEN REQUIRED
Iron: _____ ppm Sulfate: _____ ppm
Chloride: _____ ppm
 Lab Test Field Test Kit

Pump Type
 Centrifugal Jet Submersible Turbine
Horsepower _____ Capacity _____ G.P.M. _____
Pump Depth _____ Ft. Intake Depth _____ Ft.

Form 408-3-3 Rev. 12/05

OWNER'S NAME ORANGE COUNTY SOLID WASTE MNG
COMPLETION DATE 5-28-09 Florida Unique I.D. _____
WELL USE: DEP/Public _____ Irrigation _____ Domestic _____ Monitor
HRS Limited _____ 62-524 _____ Other _____

DRILL METHOD Rotary Cable Tool Combination
 Jet Auger Other _____

Measured Static Water Level 9' Measured Pumping Water Level 10'
After _____ Hours at _____ G.P.M. Measuring Pt. (Describe): _____
Which is _____ Ft. Above Below Land Surface
Casing: Black Steel Galv. PVC Other _____

Casing Diameter & Depth (Ft.)	Depth (Ft.)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Note cavities, depth to producing zones. Color Grain Size Type of Material
	From	To	
Diameter <u>2"</u> From <u>0'</u> To <u>18'</u>			<u>495-S 2" DIAMETER PVC TO 18' BLS W/ 5' OF COG" SCREEN W/ 30/65 SAND</u>
Diameter <u>2"</u> From <u>0'</u> To <u>26'</u>			<u>495-I 2" DIAMETER PVC TO 26' BLS W/ 5' OF 0.006" SCREEN AND 30/65 SAND FILTER PACK</u>
Liner <input type="checkbox"/> or Casing <input type="checkbox"/>			
Diameter _____			
From _____			
To _____			

Driller's Name: ERIC BLUEMKE
(print or type)

To expedite your application, please return the well completion report within two weeks after the well has been constructed. Please attach a copy of permit with the well completion report.

Well location address: 5901 YOUNG PINE ROAD

City ORLANDO FL, Zip code 32829



STATE OF FLORIDA
 DEPARTMENT OF HEALTH
 Orange County Health Department
 800 N. Mercy Dr., Suite 1 Orlando, FL 32808
 Phone 407 -521-2630

XXXXXXXX

Permit # 090296 Fee \$8300
 Date Issued 5/21/2009 313882

Well Location 5901 Young Pine Rd
 S 21 T 23 R 31 Orlando

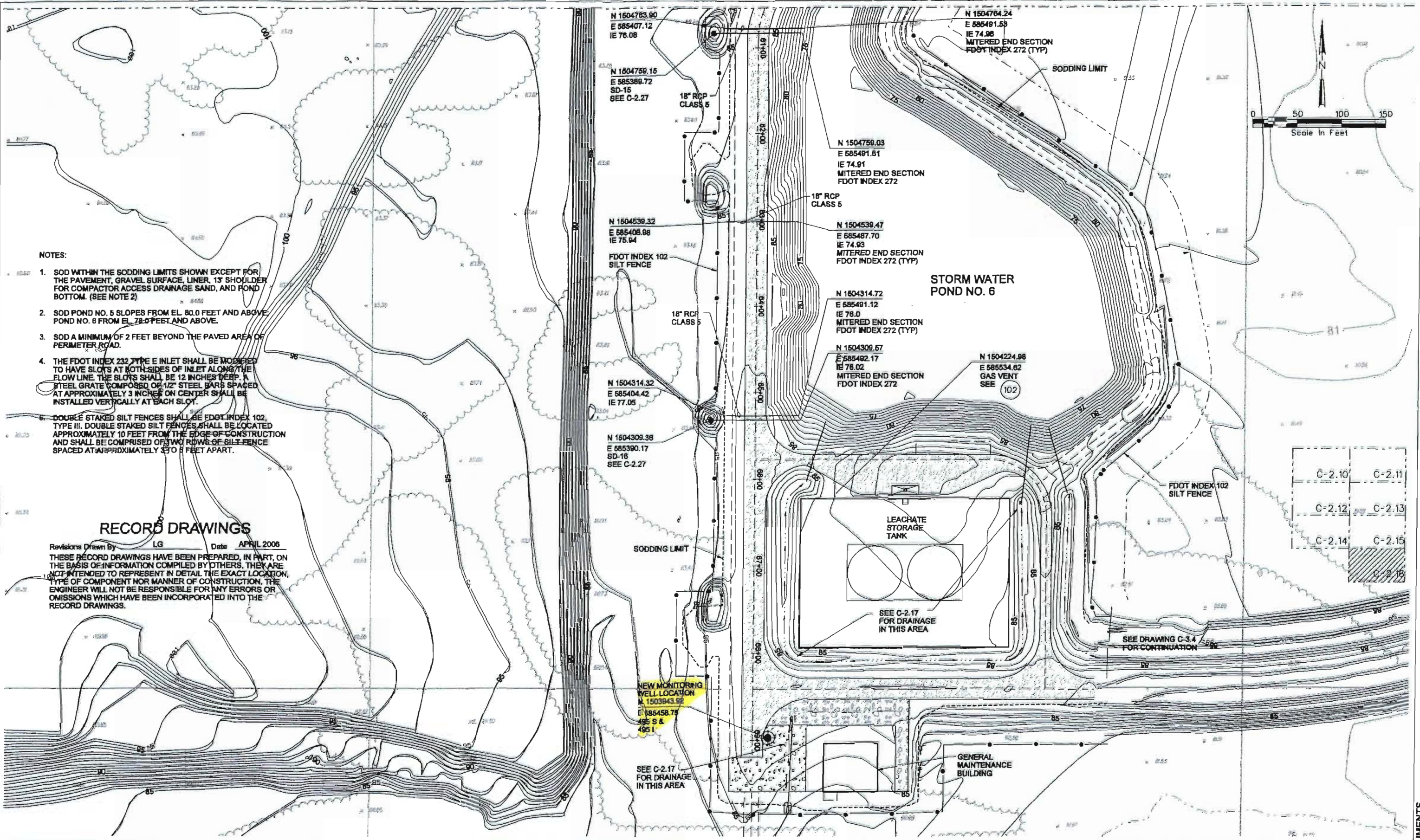
Permit for: **New Well Construction**
 Primary Use: Monitoring
 Issued to

Nodarse & Associate Lic # 7352
 James P. Smith
 1675 Lee Road
 Winter Park FL 32789

Construction Specifics

Drilling Meth:		Type Well:	Shallow
Annular Mat:	Sand	Casing Mat:	PVC
Casing joined by		Well Diameter	12 in
Grout:		Casing depth	ft
Pump Type:		Exceed 75psi	No
Tank Type:		Electric	No
Delineated:	N		

Well must meet all required setbacks
 Authority Chapter 36-A Orange County Well Code




- NOTES:**
1. SOD WITHIN THE SODDING LIMITS SHOWN EXCEPT FOR THE PAVEMENT, GRAVEL SURFACE, LINER, 1' SHOULDER FOR COMPACTOR ACCESS DRAINAGE SAND, AND POND BOTTOM. (SEE NOTE 2)
 2. SOD POND NO. 5 SLOPES FROM EL. 80.0 FEET AND ABOVE. POND NO. 6 FROM EL. 78.0 FEET AND ABOVE.
 3. SOD A MINIMUM OF 2 FEET BEYOND THE PAVED AREA OF PERIMETER ROAD.
 4. THE FDOT INDEX 232 TYPE E INLET SHALL BE MODIFIED TO HAVE SLOTS AT BOTH SIDES OF INLET ALONG THE FLOW LINE. THE SLOTS SHALL BE 12 INCHES DEEP. A STEEL GRATE COMPOSED OF 1/2" STEEL BARS SPACED AT APPROXIMATELY 3 INCHES ON CENTER SHALL BE INSTALLED VERTICALLY AT EACH SLOT.
 5. DOUBLE STAKED SILT FENCES SHALL BE FDOT INDEX 102, TYPE III. DOUBLE STAKED SILT FENCES SHALL BE LOCATED APPROXIMATELY 10 FEET FROM THE EDGE OF CONSTRUCTION AND SHALL BE COMPRISED OF TWO ROWS OF SILT FENCE SPACED AT APPROXIMATELY 3 TO 8 FEET APART.

RECORD DRAWINGS

Revisions Drawn By LG Date APRIL 2008
 THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

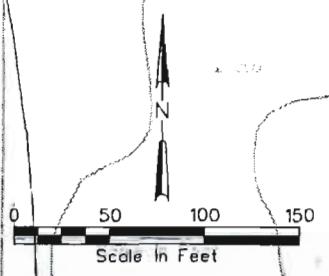
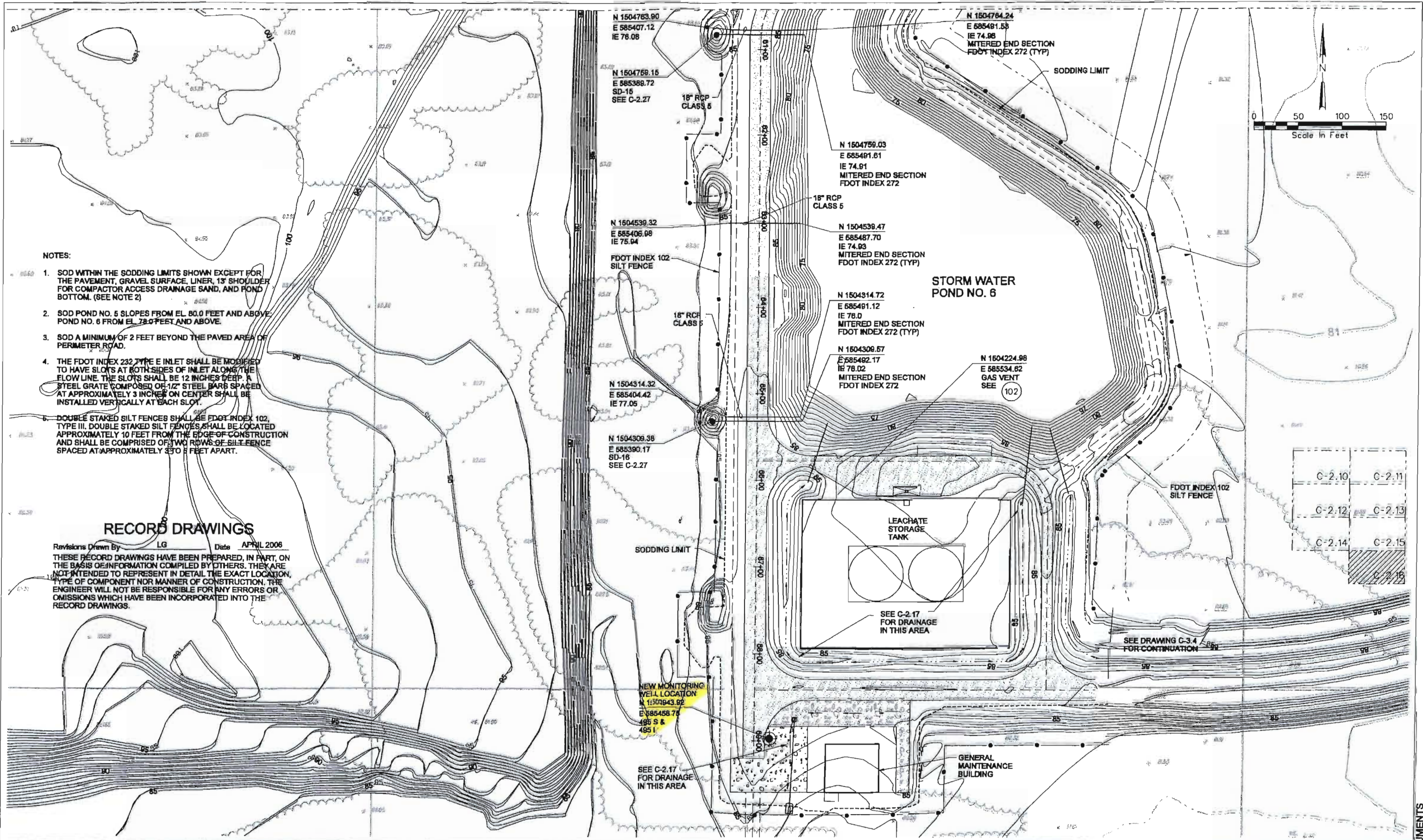
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	REUSE OF DOCUMENTS THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M-HILL/GLACE & RADCLIFFE-JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M-HILL/GLACE & RADCLIFFE JOINT VENTURE.	DESIGNED	K.R.C.	DATE	03/21/01
		DRAWN	W.B.	DATE	03/21/01
		CHECKED	G.M.	DATE	03/21/01
		APPROVED	R.B.	DATE	03/21/01
		DATE	CADD FILE NAME	1481c77d.dgn	



225 EAST ROBINSON STREET, SUITE 905
ORLANDO, FLORIDA 32801

ORANGE COUNTY LANDFILL EXPANSION		SHEET OF
DRAINAGE AND EROSION CONTROL PLAN		DWG. NO. C-2.16
		SCALE:
		PROJ. NO. 084907051

AS BUILT DOCUMENTS



- NOTES:**
- SOD WITHIN THE SODDING LIMITS SHOWN EXCEPT FOR THE PAVEMENT, GRAVEL SURFACE, LINER, 13' SHOULDER FOR COMPACTOR ACCESS DRAINAGE SAND, AND POND BOTTOM. (SEE NOTE 2)
 - SOD POND NO. 5 SLOPES FROM EL. 80.0 FEET AND ABOVE. POND NO. 6 FROM EL. 78.0 FEET AND ABOVE.
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RECORD DRAWINGS

Revisions Drawn By LG Date APRIL 2006
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VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	REUSE OF DOCUMENTS THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M-HILL/GLAC & RADCLIFFE JOINT VENTURE AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M-HILL/GLAC & RADCLIFFE JOINT VENTURE. NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.	DESIGNED	K.R.C.	DATE	03/21/01	 225 EAST ROBINSON STREET, SUITE 505 ORLANDO, FLORIDA 32801 EB0000072	ORANGE COUNTY LANDFILL EXPANSION DRAINAGE AND EROSION CONTROL PLAN	SHEET	OF
		DRAWN	W.B.	DATE	03/21/01			DWG. NO.	C-2.16
CHECKED	G.M.	DATE	03/21/01	SCALE					
APPROVED	R.B.	DATE	03/21/01	PROJ. NO.	CS4807051				
DATE	1491c77d.dgn								

AS BUILT DOCUMENTS

Exhibit G

Electronic File of Permit Application

