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December 06, 2011

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Mr. Tom Lubozynski, PE
Waste Program Manager
Central Florida District
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

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DEP Central Dist.

**RE: FDEP Application for Renewal of the Existing Closure Permit
Class I Landfill - North Cell
FDEP Permit No. SF64-0078737-020
Tomoka Farms Road Landfill**

Dear Mr. Lubozynski:

On behalf of the Volusia County Public Works Solid Waste Division (County), HDR Engineering, Inc. (HDR) is hereby submitting four (4) copies of the Florida Department of Environmental Protection (FDEP) application for Closure Permit Renewal for the North Cell Class I landfill at the Tomoka Farms Road Landfill.

The post closure care provisions for the North and South Cells were combined through the North Cell's closure permit application submitted in November 2006. The post closure care provisions for the two Cells are still combined and this closure permit renewal application does not propose any changes to the post closure care provisions.

The application fee of \$7,500.00 for this Closure Permit Renewal application is being submitted in the form of a check from Volusia County to FDEP along with this application package.

If you have any questions or require additional information, please contact me or Carlo Lebron at (904)598-8900.

Sincerely,
HDR Engineering, Inc.

Kanishka Perera, PE
Project Manager
PE No. 67647

Carlo Lebron, PE
Vice President
PE No. 60815

Enclosures: Permit Application
Volusia County Check – Permit Application Fee

cc: Mr. Leonard Marion, Director, Volusia County Solid Waste Division
Mr. Chet Purves, Landfill Manager, Volusia County Solid Waste Division

Volusia County Solid Waste System

Tomoka Farms Road Landfill Class I Landfill-North Cell Closure Permit Renewal Application

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Prepared for:

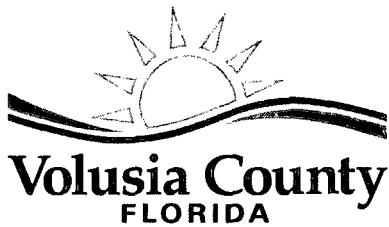


Prepared By:

HDR Engineering Inc.
200 W. Forsyth Street,
Suite 800
Jacksonville FL, 32202
904-598-8900



HDR




Volusia County
Solid Waste Division

**Tomoka Farms Road Landfill
Class I Landfill – North Cell
Closure Permit Renewal Application
Engineering Report**

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Prepared for:
Volusia County – Solid Waste Division
3151 East New York Avenue
DeLand, Florida 32724

Prepared by:
HDR Engineering, Inc.
200 W. Forsyth Street, Ste. 800
Jacksonville, Florida 32202
Certificate of Authorization #4213
Date: December 06, 2011


12/06/11
Kanishka Perera, P.E.
Florida P.E. No.: 67647

HDR Project No. 0195-170995

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APPENDICES

APPENDIX A	FIGURE SHOWING AREA OF CLASS I LANDFILL NORTH CELL
APPENDIX B	CLOSURE AND LONG-TERM CARE COST ESTIMATES
APPENDIX C	FINANCIAL ASSURANCE DEFERRAL APPLICATION FORM

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Reset Form

Print Form



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(1), F.A.C.

Form Title: Application to Construct, Operate, Modify, or
Close a Solid Waste Management Facility

Effective Date: January 6, 2010

Incorporated in Rule: 62-701.330(3), F.A.C.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

APPLICATION INSTRUCTIONS AND FORMS

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Northwest District
160 Governmental Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

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

Southwest District
13051 N. Telecom Pkwy
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

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

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. 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.

II. Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills - Submit Parts A through S
- B. Asbestos Monofills - Submit Parts A,B,C,D,E,F,I,K,M, O through S
- C. Industrial Solid Waste Disposal Facilities - Submit Parts A through S

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 and C 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".

III. Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills - Submit Parts A,B,L, N through S
- B. Asbestos Monofills - Submit Parts A,B,M, O through S
- C. Industrial Solid Waste Disposal Facilities - Submit Parts A,B, L through S

NOTE: Portions of some Parts may not be applicable.

IV. 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 expiring 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.

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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:	PROHIBITIONS
PART D:	SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL
PART E:	LANDFILL PERMIT REQUIREMENTS
PART F:	GENERAL CRITERIA FOR LANDFILLS
PART G:	LANDFILL CONSTRUCTION REQUIREMENTS
PART H:	HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS
PART I:	GEOTECHNICAL INVESTIGATION REQUIREMENTS
PART J:	VERTICAL EXPANSION OF LANDFILLS
PART K:	LANDFILL OPERATION REQUIREMENTS
PART L:	WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS
PART M:	SPECIAL WASTE HANDLING REQUIREMENTS
PART N:	GAS MANAGEMENT SYSTEM REQUIREMENTS
PART O:	LANDFILL CLOSURE REQUIREMENTS
PART P:	OTHER CLOSURE PROCEDURES
PART Q:	LONG-TERM CARE
PART R:	FINANCIAL ASSURANCE
PART S:	CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

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V593354

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

PART A. GENERAL INFORMATION

1. Type of disposal facility (check all that apply):

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

2. Type of application:

- ☐ Construction
☐ Operation
☐ Construction/Operation
☒ Closure
☐ Long-term Care Only

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3. Classification of application:

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

4. Facility name: Tomoka Farms Road Landfill - North Cell Class I Solid Waste Disposal Area

5. DEP ID number: 27540 County: Volusia

6. Facility location (main entrance):
1990 Tomoka Farms Road, Port Orange, FL 32128

7. Location coordinates:

Section: 9 Township: 16S Range: 32E
Latitude: 29° 7' 50" Longitude: 81° 6' 2"
Datum: NAD 1983/90 (east) Coordinate Method: AutoCAD/GPS
Collected by: J.E. Zapert Company/Affiliation: Sliger & Associates, Inc.

8. Applicant name (operating authority): Volusia County Solid Waste Division
- Mailing address: 3151 East New York Avenue DeLand FL 32724
Street or P.O. Box City State Zip
- Contact person: Leonard Marion Telephone: (386) 943-7889
- Title: Solid Waste Director
- E-Mail address (if available): lmarion@co.volusia.fl.us
9. Authorized agent/Consultant: HDR Engineering, Inc.
- Mailing address: 200 W. Forsyth St., Ste. 800 Jacksonville FL 32202-4321
Street or P.O. Box City State Zip
- Contact person: Kanishka Perera, P.E. Telephone: (904) 598-8900
- Title: Project Manager
- E-Mail address (if available): Kanishka.Perera@hdrinc.com
10. Landowner (if different than applicant): Same
- Mailing address: Same
Street or P.O. Box City State Zip
- Contact person: Same Telephone: () Same
- Same
E-Mail address (if available):
11. Cities, towns and areas to be served:
Volusia and Flagler Counties

12. Population to be served:
Current: 605,356 Five-Year Projection: 654,921
13. Date site will be ready to be inspected for completion: NA
14. Expected life of the facility: 5.58 years
15. Estimated costs:
Total Construction: \$ _____ Closing Costs: \$ 9,364,941.36
16. Anticipated construction starting and completion dates:
From: N/A To: N/A
17. Expected volume or weight of waste to be received:
890 yds³/day _____ tons/day _____ gallons/day

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PART B. DISPOSAL FACILITY GENERAL INFORMATION

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

This application is for the closure permit renewal of the North Cell at the Tomoka Farms Road Landfill (TFRL). Please note that the current closure permit for the North Cell (SF64-0078737-020) includes provision of post-closure care to the South Cell and therefore, this application also requests renewal to continue post-closure care for the South Cell at the TFRL.

2. Facility site supervisor: Chester Purves

Title: Supervisor Telephone: (386) 947-2952

cpurves@co.volusia.fl.us

E-Mail address (if available)

3. Disposal area: Total 87.3 acres; Used 65.65 acres; Available 21.65 acres.

4. Weighing scales used: ☒ Yes ☐ No

5. Security to prevent unauthorized use: ☒ Yes ☐ No

6. Charge for waste received: _____ \$/yds³ 34 \$/ton

7. Surrounding land use, zoning:

☐ Residential

☐ Industrial

☒ Agricultural

☐ None

☐ Commercial

☐ Other Describe:

8. Types of waste received:

☒ Household

☐ C & D debris

☒ Commercial

☐ Shredded/cut tires

☐ Incinerator/WTE ash

☐ Yard trash

☐ Treated biomedical

☒ Septic tank

☐ Water treatment sludge

☒ Industrial

- ☐ Air treatment sludge
☒ Agricultural
☐ Asbestos

- ☒ Industrial sludge
☐ Domestic sludge
☐ Other Describe:

9. Salvaging permitted: ☐ Yes ☒ No

10. Attendant: ☒ Yes ☐ No

Trained operator: ☒ Yes ☐ No

11. Trained spotters: ☒ Yes ☐ No

Number of spotters used: 1

12. Site located in: ☒ Floodplain
☐ Uplands

☒ Wetlands

☒ Other:

13. Days of operation: 6 days/week, 310 days/year, closed Christmas Day, Thanksgiving & New Yr

14. Hours of operation: M-F 7:00 a.m. - 5:30 p.m., and Saturday 8:00 a.m. - 3:00 p.m.

15. Days Working Face covered: Daily

16. Elevation of water table: 26 ft. Datum Used: NGVD 1929

17. Number of monitoring wells: 54

18. Number of surface monitoring points: 7

19. Gas controls used: ☒ Yes ☐ No

Type controls: ☒ Active ☐ Passive

Gas flaring: ☒ Yes ☐ No

Gas recovery: ☒ Yes ☐ No

20. Landfill unit liner type:

☐ Natural soils

☐ Double geomembrane

☐ Single clay liner

☐ Geomembrane & composite

☐ Single geomembrane

☒ Double composite

☐ Single composite

☐ None

☐ Slurry wall

☐ Other Describe:

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21. Leachate collection method:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Collection pipes | <input 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 checked="" type="checkbox"/> Other Describe:
Sump/pump station-leachate collection for onsite treatment | |

22. Leachate storage method:

- | | |
|--|--|
| <input type="checkbox"/> Tanks | <input checked="" type="checkbox"/> Surface impoundments |
| <input type="checkbox"/> Other Describe: | |

23. Leachate treatment method:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Oxidation | <input type="checkbox"/> Chemical treatment |
| <input type="checkbox"/> Secondary | <input checked="" type="checkbox"/> Settling |
| <input type="checkbox"/> Advanced | <input type="checkbox"/> None |
| <input type="checkbox"/> Other | |

24. Leachate disposal method:

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

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25. For leachate discharged to surface waters:

Name and Class of receiving water:

N/A

26. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment:

Wetland detention and natural treatment

Name and Class of receiving water:

Unnamed Class III headwaters of Tomoka River

27. Environmental Resources Permit (ERP) number or status:

ERP 64-020632-003 EM

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PART C. PROHIBITIONS (62-701.300, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12) through (18), FAC, then document this qualification(s).
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Provide documentation that the facility will be in compliance with the used oil and oily waste restrictions; (62-701.300(11), FAC)

PART D. 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>	
<input checked="" type="checkbox"/>	Section D.1	<input type="checkbox"/>	<input type="checkbox"/>	1. Four copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a), FAC)

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S LOCATION N/A N/C

PART D CONTINUED

- | | | | | |
|-------------------------------------|-------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | Section D.2 | <input type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input checked="" type="checkbox"/> | Section D.3 | <input type="checkbox"/> | <input type="checkbox"/> | 3. A letter of transmittal to the Department; (62-701.320(7)(a),FAC) |
| <input checked="" type="checkbox"/> | Section D.4 | <input type="checkbox"/> | <input type="checkbox"/> | 4. A completed application form dated and signed by the applicant; (62-701.320(7)(b),FAC) |
| <input checked="" type="checkbox"/> | Section D.5 | <input type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input checked="" type="checkbox"/> | Section D.6 | <input type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Operation Plan and Closure Plan; (62-701.320(7)(e)1,FAC) |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Contingency Plan; (62-701.320(7)(e)2,FAC) |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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; (62-701.320(7)(f),FAC) |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. A regional map or plan with the project location in relation to major roadways and population centers; |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. A vicinity map or aerial photograph no more than 1 year old showing the facility site and relevant surface features located within 1000 feet of the facility; |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. A site plan showing all property boundaries certified by a Florida Licensed Professional Surveyor and Mapper; and |
| <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | d. Other necessary details to support the engineering report, including referencing elevations to a consistent, nationally recognized datum and identifying the method used for collecting latitude and longitude data. |

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S **LOCATION** **N/A** **N/C**

PART D CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|---|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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; (62-701.320(7)(h),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 15. Explain how the operator and spotter training requirements and special criteria will be satisfied for the facility; (62-701.320(15), FAC) |

PART E. LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC)

S **LOCATION** **N/A** **N/C**

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Regional map or aerial photograph no more than 5 years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(b),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. Dimensions; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. Locations of proposed and existing water quality monitoring wells; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Locations of soil borings; |

S LOCATION N/A N/C

PART E CONTINUED

☐ _____ ☒ ☐

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.

☐ _____ ☒ ☐

3. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(3)(c),FAC):

☐ _____ ☒ ☐

a. Proposed fill areas;

☐ _____ ☒ ☐

b. Borrow areas;

☐ _____ ☒ ☐

c. Access roads;

☐ _____ ☒ ☐

d. Grades required for proper drainage;

☐ _____ ☒ ☐

e. Cross sections of lifts;

☐ _____ ☒ ☐

f. Special drainage devices if necessary;

☐ _____ ☒ ☐

g. Fencing;

☐ _____ ☒ ☐

h. Equipment facilities.

☐ _____ ☒ ☐

4. A report on the landfill describing the following; (62-701.330(3)(d),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. Planned active life of the facility, the final design height of the facility and the maximum height of the facility during its operation;

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S **LOCATION** **N/A** **N/C**

PART E CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|---|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | d. The source and type of cover material used for the landfill. |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. 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)(g),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. 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)(h),FAC) |

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

S **LOCATION** **N/A** **N/C**

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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(3)(b),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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(3)(c),FAC) |

PART G. LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400,FAC)

S **LOCATION** **N/A** **N/C**

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|---|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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 and shall be designed to achieve a minimum factor of safety of 1.5 using peak strength values to prevent failures of side slopes and deep-seated failures; (62-701.400(2),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Landfill liner requirements; (62-701.400(3),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. General construction requirements; (62-701.400(3)(a),FAC): |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (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; |

S LOCATION N/A N/C

PART G CONTINUED

☐ _____ ☒ ☐

(2) Document foundation is adequate to prevent liner failure;

☐ _____ ☒ ☐

(3) Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;

☐ _____ ☒ ☐

(4) Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;

☐ _____ ☒ ☐

(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)

☐ _____ ☒ ☐

(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)

☐ _____ ☒ ☐

(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)

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S **LOCATION** **N/A** **N/C**

☐ _____ ☒ ☐

☐ _____ ☒ ☐

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☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

☐ _____ ☒ ☐

PART G CONTINUED

- (1) Factory and field seam test methods to ensure all geomembrane seams achieve the minimum specifications;
 - (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 and LLDPE geomembranes, if used, meet the specifications in GRI GM17;
 - (6) PVC geomembranes, if used, meet the specifications in PGI 1104;
 - (7) Interface shear strength testing results of the actual components which will be used in the liner system;
 - (8) Transmissivity testing results of geonets if they are used in the liner system;
 - (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)
- (1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program;
 - (2) Material specifications for geomembranes, geocomposites, geotextiles, geogrids, and geonets;

S LOCATION N/A N/C

PART G CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (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; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (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; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (6) Geonet and geocomposite specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (7) Geosynthetic clay liner specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil material and any overlying materials; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | f. Standards for soil liner components (62-710.400(3)(f),FAC): |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (1) Description of construction procedures including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (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; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners; |

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S **LOCATION** **N/A** **N/C**

PART G CONTINUED

☐ _____ ☒ ☐

(4) Specifications for soil component of liner including at a minimum:

☐ _____ ☒ ☐

(a) Allowable particle size distribution, Atterberg limits, shrinkage limit;

☐ _____ ☒ ☐

(b) Placement moisture and dry density criteria;

☐ _____ ☒ ☐

(c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;

☐ _____ ☒ ☐

(d) Minimum thickness of soil liner;

☐ _____ ☒ ☐

(e) Lift thickness;

☐ _____ ☒ ☐

(f) Surface preparation (scarification);

☐ _____ ☒ ☐

(g) Type and percentage of clay mineral within the soil component;

☐ _____ ☒ ☐

(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.

☐ _____ ☒ ☐

g. If a Class III landfill is to be constructed with a bottom liner system, provide a description of how the minimum requirements for the liner will be achieved.

☐ _____ ☒ ☐

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)

☐ _____ ☒ ☐

(1) Constructed of materials chemically resistant to the waste and leachate;

☐ _____ ☒ ☐

(2) Have sufficient mechanical properties to prevent collapse under pressure;

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☐ _____ ☒ ☐

(3) Have granular material or synthetic geotextile to prevent clogging;

☐ _____ ☒ ☐

(4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas;

☐ _____ ☒ ☐

b. Other LCRS requirements; (62-701.400(4)(b) and (c),FAC)

☐ _____ ☒ ☐

(1) Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec;

☐ _____ ☒ ☐

(2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;

☐ _____ ☒ ☐

(3) Bottom slope design to accommodate for predicted settlement and still meet minimum slope requirements;

☐ _____ ☒ ☐

(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)

☐ _____ ☒ ☐

a. Describe general procedures for recirculating leachate;

☐ _____ ☒ ☐

b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;

☐ _____ ☒ ☐

c. Describe procedures for preventing perched water conditions and gas buildup;

☐ _____ ☒ ☐

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;

☐ _____ ☒ ☐

e. Describe methods of gas management in accordance with Rule 62-701.530, FAC;

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☐ _____ ☒ ☐

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)

☐ _____ ☒ ☐

(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 vectors and off-site odors.

S LOCATION N/A N/C

PART G CONTINUED

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

(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;

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

(7) Inspections, corrective action and reporting requirements;

☐ _____ ☒ ☐

(a) Overflow prevention system weekly;

☐ _____ ☒ ☐

(b) Exposed tank exteriors weekly;

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

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

☐ _____ ☒ ☐

(e) Inspection reports available for department review.

☐ _____ ☒ ☐

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

S **LOCATION** **N/A** **N/C**

PART G CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (1) Describe materials of construction; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (2) A double-walled tank design system to be used with the following requirements; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (a) Interstitial space monitoring at least weekly; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (b) Corrosion protection provided for primary tank interior and external surface of outer shell; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (c) Interior tank coatings compatible with stored leachate; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (d) Cathodic protection inspected weekly and repaired as needed; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (3) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling and provide for weekly inspections; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (4) Inspection reports available for department review. |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e), FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. Provide CQA Plan including: |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (1) Specifications and construction requirements for liner system; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (2) Detailed description of quality control testing procedures and frequencies; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (3) Identification of supervising professional engineer; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project; |

S LOCATION N/A N/C

PART G CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (5) State qualifications of CQA professional engineer and support personnel; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (6) Description of CQA reporting forms and documents; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. An independent laboratory experienced in the testing of geosynthetics to perform required testing; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Soil Liner CQA (62-701.400(8)FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. Description of field test section construction and test methods to be implemented prior to liner installation; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation. |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Surface water management systems; (62-701.400(9),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. Provide a copy of a Department permit for stormwater control or documentation that no such permit is required; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Details of stormwater control design including retention ponds, detention ponds, and drainage ways; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. Gas control systems; (62-701.400(10),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |

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

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Submit a hydrogeological investigation and site report including at least the following information:
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Regional and site specific geology and hydrogeology;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Direction and rate of ground water and surface water flow including seasonal variations;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Background quality of ground water and surface water;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Any on-site hydraulic connections between aquifers;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	f. Description of topography, soil types and surface water drainage systems;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	h. Identify and locate any existing contaminated areas on the site;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	i. Include a map showing the locations of all potable wells within 500 feet of the waste storage and disposal areas;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Report signed, sealed and dated by PE and/or PG.

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

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

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

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Describe how the vertical expansion shall not cause or contribute to leachate leakage from the existing landfill, shall not cause objectionable odors, or adversely affect the closure design of the existing landfill;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Provide foundation and settlement analysis for the vertical expansion;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion.

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PART K. LANDFILL OPERATION REQUIREMENTS (62-701.500,FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Designating responsible operating and maintenance personnel;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Emergency preparedness and response, as required in subsection 62-701.320(16), FAC;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Controlling types of waste received at the landfill;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Weighing incoming waste;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	e. Vehicle traffic control and unloading;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	f. Method and sequence of filling waste;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	g. Waste compaction and application of cover;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	h. Operations of gas, leachate, and stormwater controls;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	i. Water quality monitoring.
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	j. Maintaining and cleaning the leachate collection system;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Describe the waste records that will be compiled monthly and provided to the Department annually; (62-701.500(4),FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Describe methods of access control; (62-701.500(5),FAC)

S **LOCATION** **N/A** **N/C**

PART K CONTINUED

- | | | | | |
|--------------------------|-------|-------------------------------------|--------------------------|--|
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7),FAC) |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. Waste layer thickness and compaction frequencies; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. Special considerations for first layer of waste placed above liner and leachate collection system; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Slopes of cell working face and side grades above land surface, planned lift depths during operation; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | d. Maximum width of working face; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | e. Description of type of initial cover to be used at the facility that controls: |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (1) Vector breeding/animal attraction |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (2) Fires |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (3) Odors |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (4) Blowing litter |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | (5) Moisture infiltration |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | f. Procedures for applying initial cover including minimum cover frequencies; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | g. Procedures for applying intermediate cover; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | h. Time frames for applying final cover; |
| <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | i. Procedures for controlling scavenging and salvaging. |

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S **LOCATION** **N/A** **N/C**

PART K CONTINUED

☐ _____ ☒ ☐

j. Description of litter policing methods;

☐ _____ ☒ ☐

k. Erosion control procedures.

☐ _____ ☒ ☐

8. Describe operational procedures for leachate management including; (62-701.500(8),FAC)

☐ _____ ☒ ☐

a. Leachate level monitoring, sampling, analysis and data results submitted to the Department;

☐ _____ ☒ ☐

b. Operation and maintenance of leachate collection and removal system, and treatment as required;

☐ _____ ☒ ☐

c. Procedures for managing leachate if it becomes regulated as a hazardous waste;

☐ _____ ☒ ☐

d. Identification of treatment or disposal facilities that may be used for off-site discharge and treatment of leachate;

☐ _____ ☒ ☐

e. Contingency plan for managing leachate during emergencies or equipment problems;

☐ _____ ☒ ☐

f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record;

☐ _____ ☒ ☐

g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record;

☐ _____ ☒ ☐

h. Procedures for water pressure cleaning or video inspecting leachate collection systems.

☐ _____ ☒ ☐

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)

☐ _____ ☒ ☐

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)

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<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	PART K CONTINUED
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Equipment and operation feature requirements; (62-701.500(11),FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Sufficient equipment for excavating, spreading, compacting and covering waste;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Communications equipment;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Dust control methods;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	f. Litter control devices;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	g. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions.
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Additional record keeping and reporting requirements; (62-701.500(13),FAC)
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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;
<input type="checkbox"/>	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Procedures for archiving and retrieving records which are more than five year old.

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

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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)
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b),FAC)
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Ground water monitoring requirements; (62-701.510(3),FAC)
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(1) Detection wells located downgradient from and within 50 feet of disposal units;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(2) Downgradient compliance wells as required;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(4) Location information for each monitoring well;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(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;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(6) Well screen locations properly selected;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(7) Monitoring wells constructed to provide representative ground water samples;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(8) Procedures for properly abandoning monitoring wells;
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(9) Detailed description of detection sensors if proposed.
<input type="checkbox"/>	Section L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Surface water monitoring requirements; (62-701.510(4),FAC)

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S LOCATION N/A N/C

PART L CONTINUED

- | | | | | |
|--------------------------|------------------|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (1) Location of and justification for all proposed surface water monitoring points; |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor; |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | e. Leachate sampling locations proposed; (62-701.510(5),FAC) |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | f. Initial and routine sampling frequency and requirements; (62-701.510(6),FAC) |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (1) Initial background ground water and surface water sampling and analysis requirements; |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (2) Routine leachate sampling and analysis requirements; |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (3) Routine monitoring well sampling and analysis requirements; |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (4) Routine surface water sampling and analysis requirements. |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | g. Describe procedures for implementing evaluation monitoring, prevention measures and corrective action as required; (62-701.510(7),FAC) |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | h. Water quality monitoring report requirements;(62-701.510(9),FAC) |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (1) Semi-annual report requirements (see paragraphs 62 701.510(6)(c),(d)and (e) for sampling frequencies); |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (2) Documentation that the water quality data shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, unless an alternate form of submittal is specified in the permit. |
| <input type="checkbox"/> | <u>Section L</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (3) Two and one-half year report requirements, or every five years if in long-term care, signed, dated and sealed by PG or PE. |

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

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

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

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Provide the design for a gas management system that will (62-701.530(1), FAC):
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Be designed for site-specific conditions;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Be designed to reduce gas pressure in the interior of the landfill;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Be designed to not interfere with the liner, leachate control system or final cover.
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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):
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC):
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Landfill gas recovery facilities; (62-701.530(5), FAC):

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	PART N CONTINUED
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Information required in Rules 62-701.320(7) and 62-701.330(3), FAC supplied;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Description of procedures for condensate sampling, analyzing and data reporting provided;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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;
<input type="checkbox"/>	Section N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.

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

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Closure permit requirements; (62-701.600(2),FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Application submitted to Department at least 90 days prior to final receipt of wastes;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Closure plan shall include the following:
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(1) Closure design plan;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(2) Closure operation plan;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(3) Plan for long-term care;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(4) A demonstration that proof of financial responsibility for long-term care will be provided.

S **LOCATION** **N/A** **N/C**

PART O CONTINUED

<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Closure design plan including the following requirements: (62-701.600(3),FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Plan sheet showing phases of site closing;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Drawings showing existing topography and proposed final grades;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Provisions to close units when they reach approved design dimensions;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Final elevations before settlement;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	e. Side slope design including benches, terraces, down slope drainage ways, energy dissipaters and discussion of expected precipitation effects;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. Final cover installation plans including:
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(1) CQA plan for installing and testing final cover;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(2) Schedule for installing final cover after final receipt of waste;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(3) Description of drought-resistant species to be used in the vegetative cover;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(4) Top gradient design to maximize runoff and minimize erosion;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(5) Provisions for cover material to be used for final cover maintenance.
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	g. Final cover design requirements:
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(1) Protective soil layer design;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(2) Barrier soil layer design;

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<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	<u>PART O CONTINUED</u>
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(3) Erosion control vegetation;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(4) Geomembrane barrier layer design;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(5) Geosynthetic clay liner design if used;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(6) Stability analysis of the cover system and the disposed waste.
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	h. Proposed method of stormwater control;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. Proposed method of access control;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	j. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC.
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Closure operation plan shall include: (62-701.600(4), FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Detailed description of actions which will be taken to close the landfill;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Time schedule for completion of closing and long-term care;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Describe proposed method for demonstrating financial assurance for long-term care;
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. Operation of the water quality monitoring plan required in Rule 62-701.510, FAC.
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	e. Development and implementation of gas management system required in Rule 62-701.530, FAC.
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Certification of closure construction completion including: (62-701.600(6), FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Survey monuments; (62-701.600(6)(a), FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Final survey report; (62-701.600(6)(b), FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	PART O CONTINUED
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Declaration to the public; (62-701.600(7),FAC)
<input type="checkbox"/>	Section O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Official date of closing; (62-701.600(8),FAC)
<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(9),FAC)

PART P. OTHER CLOSURE PROCEDURES (62-701.610,FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	Section P	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Describe how the requirements for use of closed solid waste disposal areas will be achieved;(62-701.610(1),FAC)
<input type="checkbox"/>	Section P	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Describe how the requirements for relocation of wastes will be achieved; (62-701.610(2), FAC)

PART Q. LONG-TERM CARE (62-701.620,FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input type="checkbox"/>	Section Q	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Maintaining the gas collection and monitoring system; (62-701.620(5), FAC)
<input type="checkbox"/>	Section Q	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Stabilization report requirements; (62-701.620(6),FAC)
<input type="checkbox"/>	Section Q	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Right of access;(62-701.620(7),FAC)
<input type="checkbox"/>	Section Q	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Requirements for replacement of monitoring devices; (62-701.620(8),FAC)
<input type="checkbox"/>	Section Q	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Completion of long-term care signed and sealed by professional engineer (62-701.620(9), FAC).

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PART R. FINANCIAL ASSURANCE (62-701.630,FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
<input checked="" type="checkbox"/>	Section R.1	<input type="checkbox"/>	<input type="checkbox"/>	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).
<input checked="" type="checkbox"/>	Section R.2	<input type="checkbox"/>	<input type="checkbox"/>	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).
<input checked="" type="checkbox"/>	Section R.3	<input type="checkbox"/>	<input type="checkbox"/>	3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms; (62-701.630(5),(6),&(9), FAC).
<input checked="" type="checkbox"/>	Section R.4	<input type="checkbox"/>	<input type="checkbox"/>	4. Provide documentation and the appropriate forms for delaying submitting proof of financial assurance for solid waste disposal units that qualify; (62-701.630(2)(c), FAC).

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1. Applicant:

The undersigned applicant or authorized representative of Volusia County

_____ is aware that statements made in this form and attached

information are an application for a Renewal of Closure 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.

Yusef J. ...
Signature of Applicant or Agent

Leonard Marion, Director
Name and Title (please type)

Imarion@co.volusia.fl.us
E-Mail address (if available)

3151 East New York Avenue

Mailing Address

DeLand, FL 32724

City, State, Zip Code

(386) 943-7889

Telephone Number

Date: 11-23-11

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.

Signature

Kanishka Perera, Project Manager

67647
Florida Registration Number
(please affix seal)

200 W. Forsyth St., Ste. 800

Mailing Address

Jacksonville, FL 32202-4321

City, State, Zip Code

Kanishka.Perera@hdrinc.com

E-Mail address (if available)

(904) 598-8900

Telephone Number

Date: 12/06/10

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SECTION A

GENERAL INFORMATION

The information required for Part A of the permit application is included on the application form.

The following documents are incorporated by reference into this permit application:

1. Tomoka Farms Road Landfill, North Cell Class I Closure, Intermediate Modification Permit Application, Prepared By: HDR Engineering, Inc., Jacksonville, Florida 32202, dated August 25, 2010. Received and stamped September 14, 2010, Central District – DEP.
2. First Request for Additional Information from DEP – Central District dated October 14, 2010.
3. Response to First Request for Additional Information from HDR Engineering, Inc., dated November 11, 2010 (Tomoka Farms Road Landfill, North Cell Class I Closure, Intermediate Modification Permit Application, dated November 2010). Received and stamped November 12, 2010, Central District – DEP.
4. Second Request for Additional Information from DEP – Central District dated December 6, 2010.
5. Response to Second Request for Additional Information from HDR Engineering, Inc., dated January 4, 2011. Received and stamped January 6, 2011, Central District – DEP.
6. Permit Application Completion letter from DEP – Central District dated January 31, 2011.
7. Tomoka Farms Road Landfill – South Cell Closure Permit Application, Prepared by: SCS Engineers, Daytona Beach, Florida 32118, dated August 21, 2000. Received and stamped October 13, 2000, Central District – DEP
8. Financial Responsibility Closure & Long-Term Care Cost Estimates FY 2006, dated August 2006.
9. Financial Responsibility Closure & Long-Term Care Cost Estimates FY 2007, dated August 2007.
10. Certification of Construction Completion, Class I - North Cell Toe Drain and Temporary Runoff Containment Berm, dated May 27, 2011.

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SECTION B

DISPOSAL FACILITY GENERAL INFORMATION

Volusia County operates the North Cell Class I landfill at the Tomoka Farms Road Landfill (TFRL) under Permit No SO64-0078767-023, issued by the Florida Department of Environmental Protection (FDEP) on June 2, 2008. The North Cell has a separate closure permit (SF64-0078737-20) which also includes post-closure care requirements for the South Cell. The closure permit was issued on May 30, 2007 and it will expire on February 15, 2012. This closure permit renewal application has been prepared to renew the existing closure permit.

The construction permit for the North Cell describes the final cover (from top to bottom) as 6 inches of topsoil, 18 inches of compacted protective soil layer, double sided geocomposite, 40-mil linear low density polyethylene (LLDPE) flexible geomembrane liner, and 12 inches grading layer of granular fill (intermediate cover), which protects the geomembrane from the underlying solid waste. A closure permit application was submitted in November 2006 that included the construction of an exposed geomembrane cover (EGC) on the south slope of the North Cell; however, the County modified that closure permit in order to remove the EGC plans and use a traditional soil final cover in its place. This modification was carried out through a closure permit intermediate modification application submitted in August 2010 and approved in June 2011.

The South Cell was closed under permit SF64-0078767-011, issued March 8, 2001. The County has been monitoring the South Cell as part of the on-going landfill activities; these include water quality monitoring, landfill gas monitoring, maintenance of the final cover, stormwater management facilities, and monitoring devices. The post closure care provisions for the North and South Cells were combined through the North Cell's closure permit application submitted in November 2006. The post closure care provisions for the two Cells are still combined and this closure permit renewal application does not propose any changes to the post closure care provisions.

In April 2011, a toe drain and a temporary runoff containment berm were constructed at south sideslope of the North Cell Class I landfill to ensure leachate in this area is properly drained and collected. Additionally, this toe drain was intended to be part of the North Cell closure sequence construction. The construction efforts included locating the base liner anchor berm, locating the waste limits, cut and capping the existing gas pipeline, installing the toe drain trench and toe drain leachate collection pipe, connecting the toe drain pipe to the existing leachate collection cleanout riser pipe, and reconstructing the berm surrounding the toe drain trench. Additional information on this construction can be found in the certification of construction completion submitted to the FDEP on May 27, 2011 and approved on July 29, 2011.

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SECTION D

GENERAL PERMIT REQUIREMENTS

D.1 PERMIT APPLICATION COPIES

Four (4) copies of the completed application form, supporting data and reports have been submitted herewith.

D.2 CERTIFICATION

Appropriate professional certifications are provided on all applicable submittals herewith.

D.3 TRANSMITTAL LETTER

A letter of transmittal to FDEP is submitted herewith.

D.4 FDEP FORM

A completed, dated, signed and sealed application form is included in this closure permit renewal application.

D.5 PERMIT APPLICATION FEE

A check in the amount of \$7,500.00 for the closure permit renewal application is submitted herewith.

D.6 ENGINEERING REPORT

The Engineering Report is contained herewith.

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SECTION L

WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS

Water quality and leachate monitoring requirements were addressed in the engineering report of North Cell Closure Permit Intermediate Modification application submitted on August 25, 2010 and approved on June 27, 2011. This closure permit renewal application does not propose any changes to water quality and leachate monitoring requirements and therefore this section is marked as "no substantial change" on the FDEP Form 62-701.900(1).

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SECTION N

GAS MANAGEMENT SYSTEM REQUIREMENTS

Gas management requirements were addressed in the engineering reports of North Cell Closure Permit Intermediate Modification application (dated August 25, 2010) and subsequent RAI#1 response (dated November 11, 2010). This intermediate permit modification was approved by the FDEP on June 27, 2011. No changes to gas management requirements are proposed for this closure permit renewal application and therefore this section is marked as "no substantial change" on the FDEP Form 62-701.900(1).

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SECTION O

LANDFILL FINAL CLOSURE REQUIREMENTS

Landfill final closure requirements were addressed in the engineering reports of North Cell Closure Permit Intermediate Modification application (dated August 25, 2010) and subsequent RAI responses (dated November 11, 2010 and January 4, 2011). This intermediate permit modification was approved by the FDEP on June 27, 2011. No changes to landfill final closure requirements are proposed for this closure permit renewal application and therefore, this section is marked as "no substantial change" on the FDEP Form 62-701.900(1).

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SECTION P

CLOSURE PROCEDURES

Closure procedures were addressed in the engineering report of North Cell Closure Permit Intermediate Modification application submitted on August 25, 2010 and approved on June 27, 2011. This closure permit renewal application does not propose any changes to closure procedures and therefore, this section is marked as "no substantial change" on the FDEP Form 62-701.900(1).

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SECTION Q

LONG TERM CARE REQUIREMENTS

Landfill long term care requirements were addressed in the engineering reports of North Cell Closure Permit Intermediate Modification application (dated August 25, 2010) and subsequent RAI responses (dated November 11, 2010 and January 4, 2011). This intermediate permit modification was approved by the FDEP on June 27, 2011. No changes to landfill long term care requirements are proposed for this closure permit renewal application and therefore, this section is marked as "no substantial change" on the FDEP Form 62-701.900(1).

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SECTION R

FINANCIAL RESPONSIBILITY REQUIREMENTS

R.1 ESTIMATED COSTS

Estimates of closure and long-term care costs are provided in the Appendix B. Cost estimates are provided on FDEP Form 62-701.900(28) separately for North and South Cells. Supporting third party quotes are also provided in Appendix B. Please note that the Phase 2 Expansion Area has not yet been constructed and proof of financial assurance funding for the Phase 2 Expansion Area will be submitted to FDEP at least 60 days prior to the waste acceptance in accordance with the Rule 62-701.630(2)(c).

R.2 ANNUAL COST ADJUSTMENTS

Volusia County will provide the FDEP with annual cost adjustments of the closure and long-term care, in accordance with Rule 62-701.630(4), FAC. The County will either use the FDEP issued inflation factor or recalculate the estimates in the event of changes to the closure or long term care plan.

R.3 FUNDING MECHANISMS

The County has established an escrow account to provide funding for closure and long-term care.

R.4 FINANCIAL ASSURANCE DELAY

The proof of financial assurance funding for the Phase 2 Expansion Area will be submitted to FDEP at least 60 days prior to the waste acceptance in accordance with the Rule 62-701.630(2)(c). A financial assurance deferral application form for the Phase 2 Expansion Area is provided as Appendix C.

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APPENDIX A

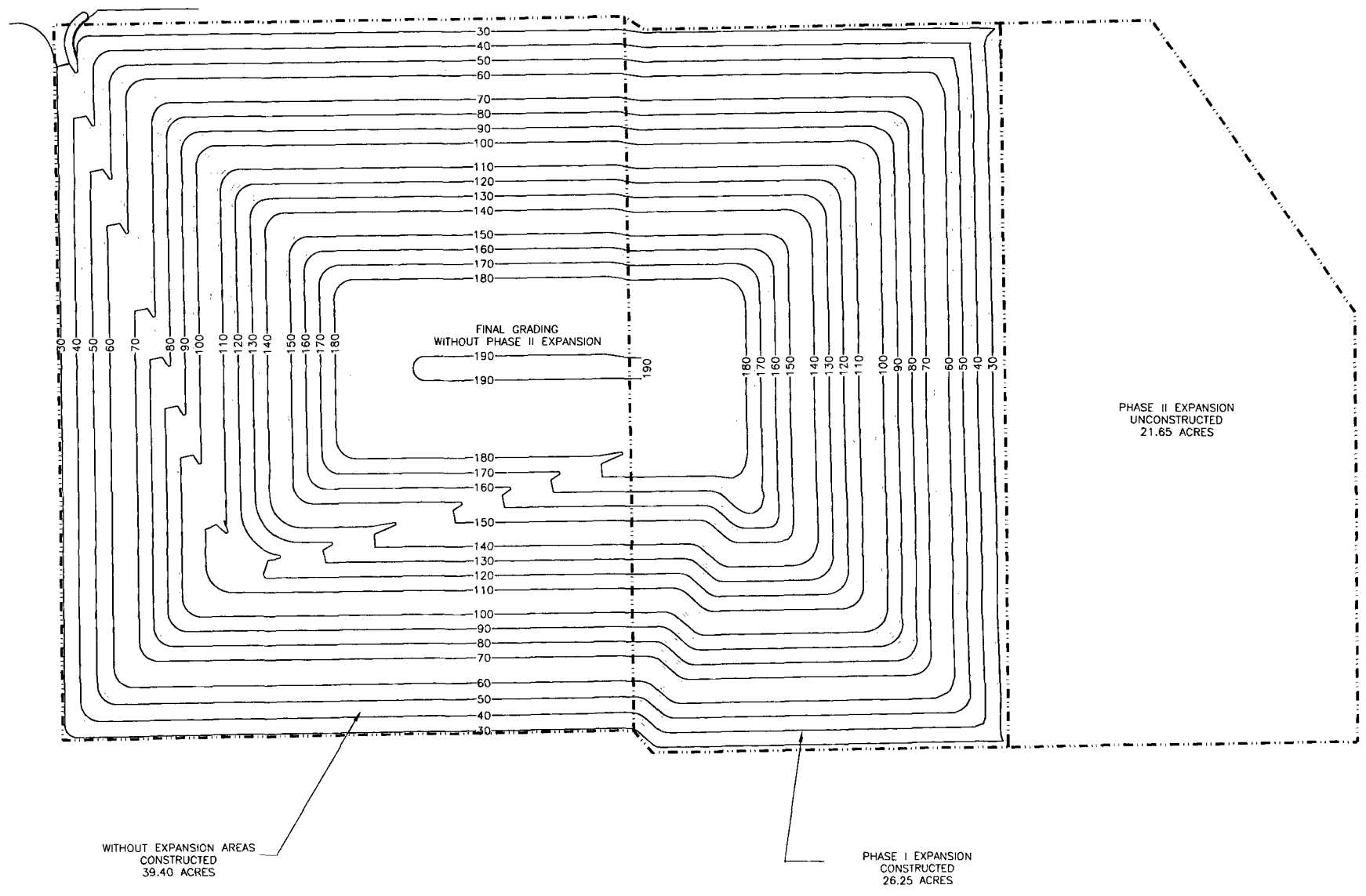
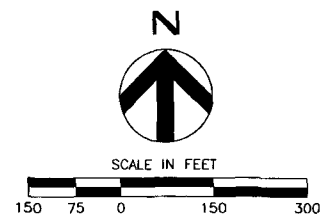
Figure Showing Area of Class I Landfill North Cell

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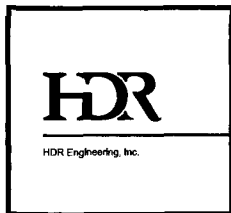
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1	12/5/2011	ISSUED FOR APPROVAL
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	K. PERERA
DESIGNED BY	K. SINGH
DRAWN BY	C. BREWER
CHECKED BY	D. BEBEN
PROJECT NUMBER	170995

CLASS I LANDFILL - NORTH CELL AREA			
		FILENAME	FIG 1.dwg
		SCALE	AS SHOWN
			SHEET FIG 1