



June 16, 2015

Elizabeth Kromhout, P.G.  
Permitting & Compliance Assistance Program  
Division of Solid Wastes  
Florida Department of Environmental Protection  
2600 Blair Stone Rd  
Tallahassee, FL 32399-2400

RE: Volusia County Solid Waste Services  
Tomoka Farms Road Landfill (TFRLF) North Cell Class I Disposal Area  
FDEP Permit No.: 0078767-030-SO-01  
WACS # 27540  
Application for Permit Minor Modification to Expand ZOD

Dear Ms. Kromhout:

HDR Engineering, Inc. (HDR) is submitting this application for a minor modification to the facility operation permit (Number 0078767-030-SO-01) for the Tomoka Farms Road Landfill (TFRLF) - North Cell Class I on behalf of the Volusia County Solid Waste Division. The minor permit modification (MPM) request includes expanding the zone of discharge (ZOD) to the eastern boundary of the County-owned TFRFL property.

The TFRFL was under a benzene evaluation monitoring program from February 2010 to 2014 because of benzene detections above the Primary Drinking Water Standard (PDWS) in groundwater monitoring wells B82-1, B85, B85-6, and B87-6 located on the east side of the Class III Landfill and outside of the Zone of Discharge (ZOD). After reviewing the 2014 Annual Groundwater Benzene Evaluation Monitoring Summary Report for the TFRFL, the Florida Department of Environmental Protection (FDEP) – Central District (CD), on April 14, 2015, has recommended to:

- A. Discontinue the Benzene Evaluation Monitoring (EM) program
- B. Suspend monitoring of the EM wells - except for the following EM wells that were recommended to be added to the Monitoring Plan Implementation Schedule (MPIS):
  - 1. B82-1 (Zone 4),
  - 2. B87-6 (Zone 6),
  - 3. B85 (Zone 4)
  - 4. B85-6 (Zone 6)

The Department also recommended that the two following current MPIS wells be suspended from monitoring:

1. B41-1 (Zone 4),
2. B45-1 (Zone 4)

The Specific Condition D1 in the current permit (Permit #SO64-0078767-030) limits the horizontal ZOD to within 100 ft. from the edge of the “solid waste deposits”, or to the property boundary, whichever is less. However, the results of the recent groundwater evaluation monitoring indicated that benzene concentrations were detected above the PDWS at locations outside the ZOD on the east side of the Class III Landfill. Therefore, the groundwater quality will be in conflict with the current permit condition under the ZOD limit of the permit; and a revision to this ZOD is necessary. The permit revision for ZOD expansions is also submitted in response to the recommendation from the FDEP –CD.

It is important to note that this revision will also affect the Class III (Permit No.: 0078767-034-SO-T3) and Class I Construction (Permit No.: SC64-0078767-029) permits. It had been previously discussed during a conference call with FDEP that the FDEP would modify the other permits once the ZOD adjustment request is approved.

### **ZOD Adjustment**

This application is submitted to the FDEP to revise the existing Zone of Discharge (ZOD). The site plan with the proposed adjusted ZOD boundary is provided in Figure 1. The boundary of the proposed adjusted ZOD is outlined and defined by points A to G in the proposed ZOD plan, and the coordinates of these points which are defined as latitude and longitude are described as follows:

- A: N 29°07'41.29", W 81°04'58.76" (East of the Southeast corner of the Class III Landfill);
- B: N 29°08'08.20", W 81°05'00.06" (East of the Northeast corner of the Class III Landfill on the facility property boundary);
- C: N 29°08'07.87", W 81°05'08.90" (Approximately 800 ft. West of Point B on the facility property boundary);
- D: N 29°08'23.49", W 81°05'20.30" (East facility boundary projected from the north boundary line of the Phase II Class I landfill);
- E: N 29°08'23.21", W 81°06'14.75" (West of the Northwest corner of the Class I Landfill);
- F: N 29°07'53.70", W 81°06'14.21" (West of the Closed Class I Landfill);
- G: N 29°07'39.32", W 81°06'04.89" (Southwest of the Closed Class I Landfill).

The requested ZOD is contained within the landfill property owned by Volusia County. The ZOD line from Point B to Point D is along the facility western property boundary, and the remaining ZOD boundary is located within the facility.

It is understood that the expanded ZOD must comply with each of the following three criteria under Rule 62-520.465(2) (b), F.A.C.:

- a. The requested zone of discharge will not cause violations of applicable ground water standards in present and future potable water supplies;
- b. The requested zone of discharge will not interfere with the existing or designated uses of contiguous waters outside a permitted mixing zone; and
- c. The economic and social benefits of a zone of discharge of larger dimensions than those in the current permit outweigh the economic, environmental, and social costs resulting from the larger zone of discharge.

The details are explained as follows:

Item a. – The proposed ZOD provides a down-gradient buffer within the Volusia County owned property. Tables 1 and 2 include an inventory of permitted wells within one-mile of the TFRLF site. The well inventory information presented in Tables 1 and 2 is provided by the Florida Health Department and St. Johns River Water Management District, respectively. Figure 1 shows the site plan for the TFRLF with the proposed adjusted ZOD line including the monitoring wells and surface water monitoring locations for the current MPIS. Figure 2 illustrates the locations of the wells and the well type distribution within 1-mile and 2-miles of the proposed adjusted ZOD. The inventory includes the following details:

- Well inventory from the Florida Health Department (Table 1) shows that there are no portable well or public supply wells within 500 ft. of the proposed adjusted ZOD. The only wells within this range are 56 groundwater monitoring wells for the TFRL under Permit No. 0078767-034-T3 and twenty six monitoring wells for the B5/B37 Site Assessment B5-Post Remediation Status monitoring. One well previously located on the facility property (PW-2 in Figure 1) has been recently abandoned and the pump has been pulled. There are also seven non-potable wells (NPW) located within 500 ft. of the proposed ZOD.
- Within 1 mile of the proposed adjusted ZOD line, however, over 500 ft. from the proposed adjusted ZOD, there was one monitoring well located. Also, there were no potable wells found within this range except one well located alongside the TFRL administration building (Lat. No. 29°07'45"/Long. No. 81°04'53") (PW-1 in Figure 1). This well is not used for consumption and has been labeled as "Not for Drinking" at the site.
- There are two non-potable wells beyond 1 mile, but within 6,000 ft. from the proposed adjusted ZOD line (Table 1).
- There are fourteen wells permitted by the St. Johns River Water Management District within 1 mile of the TFRL as indicated in Table 2. These wells are described as mining/dewatering wells. Three of the wells have been removed or abandoned and one well was proposed but never installed. These wells are neither used for domestic nor for public supply purposes.

Item b. – There are no contiguous waters adjacent to, or permitted mixing zones impacted by the TFRLF, therefore this requirement is not applicable.

Item c. – There will be no economic, environmental, or social costs associated with expanding the TFRLF ZOD. The proposed adjusted ZOD is contained within the landfill property boundary owned by Volusia County.

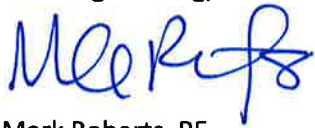
Additionally, the overall groundwater flow direction is generally from the southwest toward the northeast direction across the landfill, and the existing compliance wells are within the ZOD and positioned more than 500 feet up-gradient from the new line of compliance in the northeast and east directions of the Class III Landfill. Groundwater flow velocity across the landfill site is very slow (<10 ft./year, MPIS Technical report, August 2014) and the compliance wells in the area of the ZOD expansion are positioned to effectively monitor groundwater quality and flow. The current groundwater monitoring program will continue to protect human health and the environment and no additional measures are required.

**Minor Permit Modification Fee**

It is understood that the permit fee for this minor permit modification is \$250.00. Volusia County will pay by credit card once the Department has indicated it has received the application.

Please call me at (904) 598-8979 or email me at [mark.roberts@hdrinc.com](mailto:mark.roberts@hdrinc.com) with any questions or comments.

Sincerely,  
**HDR Engineering, Inc.**



Mark Roberts, PE  
Sr. Project Manager  
FL License No. 54187



Handi Wang, Ph.D.  
Sr. Scientist

**Attachments**

Attachment 1 Form 62-701 900(1)

**Figures**

Figure 1 Tomoka Farms Road Landfill Site Map with Proposed ZOD Boundary  
Figure 2 Well Locations around Proposed ZOD Boundary

**Tables**

Table 1 List of Wells Permitted by the Florida Health Department  
Table 2 List of Wells Permitted by the St. Johns River Water Management District

cc: Leonard Marion, Volusia County  
Jennifer Stirk, Volusia County  
Thomas F. Lubozynski, Florida DEP – Central District

Attachment 1

Form 62-701 900(1)



# 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: August 12, 2012

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

Northwest District  
160 Governmental Center  
Suite 308  
Pensacola, FL 32502-5794  
850-595-8300

Northeast District  
7777 Baymeadows Way West  
Suite 100  
Jacksonville, FL 32256-7590  
904-256-1700

Central District  
3319 Maguire Boulevard  
Suite 232  
Orlando, FL 32803-3767  
407-897-4100

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

South District  
2295 Victoria Ave, Suite 364  
P.O. Box 2549  
Fort Myers, FL 33901-3881  
239-344-5600

Southeast District  
400 North Congress Avenue  
Suite 200  
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 appropriate Department 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.

**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



**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 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):      |  |

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**NOTE:** Waste Processing Facilities should apply on Form 62-701.900(4), FAC;  
Yard Trash Disposal Facilities should notify on Form 62-701.900(3), FAC;  
Compost Facilities should apply on Form 62-709.901(1), 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

3. Classification of application:

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

4. Facility name: \_\_\_\_\_

5. DEP ID number: \_\_\_\_\_ County: \_\_\_\_\_

6. Facility location (main entrance):

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7. Location coordinates:

Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

Latitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "

Datum: \_\_\_\_\_ Coordinate method: \_\_\_\_\_

Collected by: \_\_\_\_\_ Company/Affiliation: \_\_\_\_\_

8. Applicant name (operating authority): \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
Street or P.O. Box City State Zip  
Contact person: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_  
Title: \_\_\_\_\_  
\_\_\_\_\_  
E-Mail address (if available) \_\_\_\_\_
9. Authorized agent/Consultant: \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
Street or P.O. Box City State Zip  
Contact person: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_  
Title: \_\_\_\_\_  
\_\_\_\_\_  
E-Mail address (if available) \_\_\_\_\_
10. Landowner (if different than applicant): \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
Street or P.O. Box City State Zip  
Contact person: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_  
\_\_\_\_\_  
E-Mail address (if available) \_\_\_\_\_
11. Cities, towns, and areas to be served:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. Population to be served:  
Current: \_\_\_\_\_ Five-Year Projection: \_\_\_\_\_
13. Date site will be ready to be inspected for completion: \_\_\_\_\_
14. Expected life of the facility: \_\_\_\_\_ years
15. Estimated costs:  
Total Construction: \$ \_\_\_\_\_ Closing Costs: \$ \_\_\_\_\_
16. Anticipated construction starting and completion dates:  
From: \_\_\_\_\_ To: \_\_\_\_\_
17. Expected volume or weight of waste to be received:  
\_\_\_\_\_ yds<sup>3</sup>/day \_\_\_\_\_ tons/day \_\_\_\_\_ gallons/day

**PART B. DISPOSAL FACILITY GENERAL INFORMATION**

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

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2. Facility site supervisor: \_\_\_\_\_

Title: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_

\_\_\_\_\_  
E-Mail address (if available)

3. Disposal area: Total acres: \_\_\_\_\_ Used acres: \_\_\_\_\_ Available acres: \_\_\_\_\_

4. Weighing scales used: ☐ Yes ☐ No

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

6. Charge for waste received: \_\_\_\_\_ \$/yds<sup>3</sup> \_\_\_\_\_ \$/ton

7. Surrounding land use, zoning:

☐ Residential

☐ Industrial

☐ Agricultural

☐ None

☐ Commercial

☐ Other (describe):

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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

☐ Industrial sludge

☐ Agricultural

☐ Domestic sludge

☐ Asbestos

☐ Other (describe):

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9. Salvaging permitted: ☐ Yes ☐ No
10. Attendant: ☐ Yes ☐ No      Trained operator: ☐ Yes ☐ No
11. Trained spotters: ☐ Yes ☐ No      Number of spotters used: \_\_\_\_\_
12. Site located in: ☐ Floodplain      ☐ Wetlands      ☐ Other (describe):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
13. Days of operation: \_\_\_\_\_
14. Hours of operation: \_\_\_\_\_
15. Days working face covered: \_\_\_\_\_
16. Elevation of water table: \_\_\_\_\_ ft. Datum Used: \_\_\_\_\_
17. Number of monitoring wells: \_\_\_\_\_
18. Number of surface monitoring points: \_\_\_\_\_
19. Gas controls used: ☐ Yes ☐ No      Type controls: ☐ Active ☐ Passive
- Gas flaring: ☐ Yes ☐ No      Gas recovery: ☐ Yes ☐ No
20. Landfill unit liner type:
- |   |   |
|---|---|
| <input type="checkbox"/> Natural soils      | <input type="checkbox"/> Double geomembrane                           |
| <input type="checkbox"/> Single clay liner  | <input type="checkbox"/> Geomembrane & composite                      |
| <input type="checkbox"/> Single geomembrane | <input type="checkbox"/> Double composite                             |
| <input type="checkbox"/> Single composite   | <input type="checkbox"/> None   |
| <input type="checkbox"/> Slurry wall        | <input type="checkbox"/> Other (describe):<br>_____<br>_____<br>_____ |
21. Leachate collection method:
- |   |   |
|---|---|
| <input type="checkbox"/> Collection pipes                             | <input type="checkbox"/> Double geomembrane |
| <input type="checkbox"/> Geonets                                      | <input type="checkbox"/> Gravel layer       |
| <input type="checkbox"/> Well points                                  | <input type="checkbox"/> Interceptor trench |
| <input type="checkbox"/> Perimeter ditch                              | <input type="checkbox"/> None               |
| <input type="checkbox"/> Other (describe):<br>_____<br>_____<br>_____ |   |

22. Leachate storage method:

<input type="checkbox"/> Tanks	<input type="checkbox"/> Surface impoundments
<input type="checkbox"/> Other (describe):	

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23. Leachate treatment method:

<input type="checkbox"/> Oxidation	<input type="checkbox"/> Chemical treatment
<input type="checkbox"/> Secondary	<input type="checkbox"/> Settling
<input type="checkbox"/> Advanced	<input type="checkbox"/> None
<input type="checkbox"/> Other (describe):	

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24. Leachate disposal method:

<input type="checkbox"/> Recirculated	<input type="checkbox"/> Pumped to WWTP
<input type="checkbox"/> Transported to WWTP	<input type="checkbox"/> Discharged to surface water/wetland
<input type="checkbox"/> Injection well	<input type="checkbox"/> Percolation ponds
<input type="checkbox"/> Evaporation	<input type="checkbox"/> Spray irrigation
<input type="checkbox"/> Other (describe):	

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25. For leachate discharged to surface waters:

Name and Class of receiving water:

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26. Storm Water:

Collected: ☐ Yes ☐ No

Type of treatment:

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Name and Class of receiving water:

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

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**PART C. PROHIBITIONS (62-701.300, FAC)**

**LOCATION**

- |                                  |   |  |
|----------------------------------|---|--|
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)                               |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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); |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)                             |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)                     |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC)                        |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)                    |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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)               |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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)         |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 9. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)                             |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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)**

**LOCATION**

- |                                  |   |  |
|----------------------------------|---|--|
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 1. Four copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a), FAC)  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)  |

**LOCATION****PART D CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 ½ 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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

7. Operation Plan and Closure Plan; (62-701.320(7)(e)1, FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

8. Contingency Plan; (62-701.320(7)(e)2, FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. A regional map or plan with the project location in relation to major roadways and population centers;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. A vicinity map or aerial photograph no more than one year old showing the facility site and relevant surface features located within 1000 feet of the facility;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. A site plan showing all property boundaries certified by a Florida Licensed Professional Surveyor and Mapper;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)



**LOCATION****PART D CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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 the state; (62-701.320(7)(i), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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; (62-701.320(8), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. Regional map or aerial photograph no more than five years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

2. Plot plan with a scale not greater than 200 feet to the inch showing: (62-701.330(3)(b), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Dimensions;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. Locations of proposed and existing water quality monitoring wells;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Locations of soil borings;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

d. Proposed plan of trenching or disposal areas;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

f. Any previously filled waste disposal areas;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

g. Fencing or other measures to restrict access;

**LOCATION****PART E CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Proposed fill areas;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. Borrow areas;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Access roads;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

d. Grades required for proper drainage;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

e. Cross sections of lifts;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

f. Special drainage devices if necessary;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

g. Fencing;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

h. Equipment facilities;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

4. A report on the landfill describing the following: (62-701.330(3)(d), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. The current and projected population and area to be served by the proposed site;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. The anticipated type, annual quantity, and source of solid waste expressed in tons;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Planned active life of the facility, the final design height of the facility, and the maximum height of the facility during its operation;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

d. The source and type of cover material used for the landfill;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)**

**LOCATION**

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)**

**LOCATION**

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. Describe how the landfill shall be designed so the 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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

2. Landfill liner requirements; (62-701.400(3), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. General construction requirements; (62-701.400(3)(a), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(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 ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(5) Installed to cover all surrounding earth which could come into contact with the waste or leachate;

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART G CONTINUED**

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

- (1) Upper geomembrane thickness and properties;
- (2) Design leachate head for primary leachate collection and removal system (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 thickness 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  $\leq 1$  inch, head not to exceed thickness of drainage layer);

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

- (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 a 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;

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART G CONTINUED**

(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;

(3) Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and non-destructive seam testing, seam testing location, frequency, procedure, sample size, and geomembrane repairs;

(4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembranes, and procedures for lining system acceptance;

(5) Geotextile and geogrids specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;

(6) Geonet and geocomposites specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials;

(7) Geosynthetic clay liner specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART G CONTINUED**

f. Standards for soil liner components; (62-701.400(3)(f), FAC)

- (1) Description of construction procedures including over-excavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil components in layers;
- (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;
- (3) Procedures for testing in situ soils to demonstrate they meet the specifications for soil liners;
- (4) Specifications for soil component of liner including at a minimum:
  - (a) Allowable particle size distribution, and Atterberg limits including 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;

**LOCATION****PART G CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**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;
- (3) Have granular material or synthetic geotextile to prevent clogging;
- (4) Have a method for testing and cleaning clogged pipes or contingent designs for reducing 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 geomembranes 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;**

**LOCATION****PART G CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(2) Designed in segments to allow for inspection and repair, as needed, without interruption of service;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(3) General design requirements;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(b) Leak detection and collection system with hydraulic conductivity  $\geq 1$  cm/sec;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(c) Lower geomembrane place on subbase  $\geq 6$  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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(d) Design calculation to predict potential leakage through the upper liner;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(e) Daily inspection requirements, and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(4) Description of procedures to prevent uplift, if applicable;



**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART G CONTINUED**

(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;

(6) Procedures for controlling vectors and off-site odors;

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 for the tank, if needed;

(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 overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling;

(7) Inspections, corrective action, and reporting requirements;

(a) Weekly inspection of overfill prevention system;

(b) Weekly inspection of exposed tank exteriors;

(c) Inspection of 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)

**LOCATION****PART G CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(1) Describe materials of construction;

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

(a) Interstitial space monitoring at least weekly;

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

(c) Interior tank coatings compatible with stored leachate;

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

(3) Describe an overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling, and provide for weekly inspections;

(4) Inspection reports available for Department review;

d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e), FAC)

## 6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC)

a. Provide CQA Plan including:

(1) Specifications and construction requirements for liner system;

(2) Detailed description of quality control testing procedures and frequencies;

(3) Identification of supervising professional engineer;

(4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project;

(5) State qualifications of CQA professional engineer and support personnel;

**LOCATION****PART G CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(6) Description of CQA reporting forms and documents;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

7. Soil liner CQA; (62-701.400(8), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. Description of field test section construction and test methods to be implemented prior to liner installation;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Description of field test methods, including rejection criteria and corrective measures to insure proper liner installation;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

8. For surface water management systems at aboveground disposal units, provide documentation showing the design of any features intended to convey stormwater to a permitted or exempted treatment system; (62-701.400(9), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Regional and site specific geology and hydrology;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART H CONTINUED**

c. Background quality of ground water and surface water;

d. Any on-site hydraulic connections between aquifers;

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;

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

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;

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

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

2. Report signed, sealed, and dated by P.E. and/or P.G.;

**PART I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:

a. Description of subsurface conditions including soil stratigraphy and ground water table conditions;

b. Investigate for the presence of muck, previously filled areas, soft ground, lineaments, and sink holes;

c. Estimates of average and maximum high water table across the site;

d. Foundation analysis including:

(1) Foundation bearing capacity analysis;

**LOCATION****PART I CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(2) Total and differential subgrade settlement analysis;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(3) Slope stability analysis;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

e. Description of methods used in the investigation, and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations, and conclusions;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

2. Report signed, sealed, and dated by P.E. and/or P.G.;

**PART J. VERTICAL EXPANSION OF LANDFILLS (62-701.430, FAC)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

3. Provide foundation and settlement analysis for the vertical expansion;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

4. Provide total settlement calculations demonstrating that the final elevations of the lining system, gravity drainage, and no other component of the design will be adversely affected;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

5. Minimum stability factor of safety of 1.5 for the lining system component interface stability and for deep stability;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion;

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

**LOCATION**

- |                                  |   |   |
|----------------------------------|---|---|
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 1. Provide documentation that the 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)   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | a. Designating responsible operating and maintenance personnel;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | b. Emergency preparedness and response, as required in subsection 62-701.320(16), FAC;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | c. Controlling types of waste received at the landfill;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | d. Weighing incoming waste;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | e. Vehicle traffic control and unloading;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | f. Method and sequence of filling waste;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | g. Waste compaction and application of cover;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | h. Operations of gas, leachate, and stormwater controls;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | i. Water quality monitoring;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | j. Maintaining and cleaning the leachate collection system;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <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. DEP permit, engineering drawings, water quality records, etc.); (62-701.500(3), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 4. Describe the waste records that will be compiled monthly and provided to the Department annually; (62-701.500(4), FAC)   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 5. Describe methods of access control; (62-701.500(5), FAC)   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized waste at the landfill; (62-701.500(6), FAC)  |

**LOCATION****PART K CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Waste layer thickness and compaction frequencies;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. Special considerations for first layer of waste placed above the liner and leachate collection system;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Slopes of cell working face and side grades above land surface, and planned lift depths during operation;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

d. Maximum width of working face;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

e. Description of type of initial cover to be used at the facility that controls:

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(1) Vector breeding/animal attraction;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(2) Fires;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(3) Odors;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(4) Blowing litter;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(5) Moisture infiltration;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

f. Procedures for applying initial cover, including minimum cover frequencies;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

g. Procedures for applying intermediate cover;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

h. Time frames for applying final cover;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

i. Procedures for controlling scavenging and salvaging;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

j. Description of litter policing methods;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

k. Erosion control procedures;

**LOCATION****PART K CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Leachate level monitoring;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9), FAC; (62-701.500(10), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

11. Equipment and operation feature requirements; (62-701.500(11), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

a. Sufficient equipment for excavating, spreading, compacting, and covering waste;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

c. Communications equipment;



**LOCATION****PART K CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

d. Dust control methods;

e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;

f. Litter control devices;

g. Signs indicating operating authority, traffic flow, hours of operation, and disposal restrictions;

12. Provide a description of all-weather access road, inside perimeter road, and other on-site roads necessary for access at the landfill; (62-701.500(12), FAC)

13. Additional record keeping and reporting requirements; (62-701.500(13), FAC)

a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;

b. Monitoring information, calibration and maintenance records, and copies of reports required by permit maintained for at least 10 years;

c. Maintain annual estimates of the remaining life of constructed landfills, and of other permitted areas not yet constructed, and submit this estimate annually to the Department;

d. Procedures for archiving and retrieving records which are more than five years old;

**PART L. WATER QUALITY MONITORING REQUIREMENTS (62-701.510, FAC)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. A water quality monitoring plan shall be submitted describing the proposed ground water and surface water monitoring systems, and shall meet at least the following requirements:

a. Based on the information obtained in the hydrogeological investigation and signed, dated, and sealed by the P.G. or P.E. who prepared it; (62-701.510(2)(a), FAC)

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART L CONTINUED**

b. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b), FAC)

c. Ground water monitoring requirements; (62-701.510(3), FAC)

- (1) Detection wells located downgradient from and within 50 feet of disposal units;
- (2) Downgradient compliance wells as required;
- (3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
- (4) Location information for each monitoring well;
- (5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells, unless site specific conditions justify alternate well spacings;
- (6) Properly selected well screen locations;
- (7) Monitoring wells constructed to provide representative ground water samples;
- (8) Procedures for properly abandoning monitoring wells;
- (9) Detailed description of detection sensors, if proposed;

d. Surface water monitoring requirements; (62-701.510(4), FAC)

- (1) Location of and justification for all proposed surface water monitoring points;
- (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;

e. Initial and routine sampling frequency and requirements; (62-701.510(5), FAC)

- (1) Initial background ground water and surface water sampling and analysis requirements;

**LOCATION****PART L CONTINUED**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(2) Routine monitoring well sampling and analysis requirements;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(3) Routine surface water sampling and analysis requirements;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

f. Describe procedures for implementing evaluation monitoring, prevention measures, and corrective action as required; (62-701.510(6), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

g. Water quality monitoring report requirements; (62-701.510(8), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(1) Semi-annual report requirements; (see paragraphs 62-701.510(5)(c) and (d), FAC for sampling frequencies)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(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;

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

(3) Two and one-half year report requirements, or every five years if in long-term care, signed dated, and sealed by P.G. or P.E.;

**PART M. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC)****LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

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

**LOCATION**

- |                                  |   |   |
|----------------------------------|---|---|
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 1. Provide documentation for a gas management system that will: (62-701.530(1), FAC)  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input 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;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | b. Be designed for site specific conditions;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | c. Be designed to reduce gas pressure in the interior of the landfill;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | d. Be designed to not interfere with the liner, leachate control system, or final cover;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input 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) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC)  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | 4. Landfill gas recovery facilities; (62-701.530(5), FAC)   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | a. Provide information required in Rules 62-701.320(7) and 62-701.330(3), FAC;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | b. Provide information required in Rule 62-701.600(4), FAC, where relevant and practical;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | c. Provide estimates of current and expected gas generation rates and description of condensate disposal methods;   |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | d. Provide description of procedures for condensate sampling, analyzing, and data reporting;  |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | e. Provide closure plan describing methods to control gas after recovery facility ceases operation, and any other requirements contained in Rule 62-701.400(10), FAC;                             |

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

**LOCATION**

S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	1. Closure permit requirements; (62-701.600(2), FAC)
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	a. Application submitted to the Department at least 90 days prior to final receipt of wastes;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	b. Closure plan shall include the following:
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(1) Closure design plan;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(2) Closure operation plan;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(3) Plan for long-term care;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(4) A demonstration that proof of financial assurance for long-term care will be provided;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	2. Closure design plan including the following requirements: (62-701.600(3), FAC)
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	a. Plan sheet showing phases of site closing;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	b. Drawings showing existing topography and proposed final grades;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	c. Provisions to close units when they reach approved design dimensions;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	d. Final elevations before settlement;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	e. Side slope design including benches, terraces, down slope drainage ways, energy dissipaters, and description of expected precipitation effects;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	f. Final cover installation plans including:
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(1) CQA plan for installing and testing final cover;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(2) Schedule for installing final cover after final receipt of waste;
S <input type="checkbox"/> _____	N/A <input type="checkbox"/> N/C <input type="checkbox"/>	(3) Description of drought resistant species to be used in the vegetative cover;

**LOCATION**S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐S ☐ \_\_\_\_\_ N/A ☐ N/C ☐**PART O CONTINUED**

(4) Top gradient design to maximize runoff and minimize erosion;

(5) Provisions for cover material to be used for final cover maintenance;

g. Final cover design requirements;

(1) Protective soil layer design;

(2) Barrier soil layer design;

(3) Erosion control vegetation;

(4) Geomembrane barrier layer design;

(5) Geosynthetic clay liner design, if used;

(6) Stability analysis of the cover system and the disposed waste;

h. Proposed method of stormwater control;

i. Proposed method of access control;

j. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC;

3. Closure operation plan shall include: (62-701.600(4), FAC)

a. Detailed description of actions which will be taken to close the landfill;

b. Time schedule for completion of closing and long-term care;

c. Describe proposed method for demonstrating financial assurance for long-term care;

d. Operation of the water quality monitoring plan required in Rule 62-701.510, FAC;

e. Development and implementation of gas management system required in Rule 62-701.530, FAC;

**LOCATION****PART O CONTINUED**

- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 4. Certification of closure construction completion including: (62-701.600(6), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ a. Survey monuments; (62-701.600(6)(a), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ b. Final survey report; (62-701.600(6)(b), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 5. Declaration to the public; (62-701.600(7), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 6. Official date of closing; (62-701.600(8), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 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)****LOCATION**

- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 1. Describe how the requirements for use of closed solid waste disposal areas will be achieved; (62-701.610(1), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 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)****LOCATION**

- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 1. Maintaining the gas collection and monitoring system; (62-701.620(5), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 2. Stabilization report requirements; (62-701.620(6), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 3. Right of access; (62-701.620(7), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 4. Requirements for replacement of monitoring devices; (62-701.620(8), FAC)
- S ☐ \_\_\_\_\_ N/A ☐ N/C ☐ 5. Completion of long-term care signed and sealed by professional engineer; (62-701.620(9), FAC)

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

**LOCATION**

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

1. Provide cost estimates for closing, long-term care, and corrective action costs estimated by a P.E. for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3) & (7), FAC)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

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)

S ☐ \_\_\_\_\_ N/A ☐ N/C ☐

3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms. (62-701.630(5), (6), & (9), FAC)



1. Applicant:

\_\_\_\_\_ is aware that statements made in this form and attached information are an application for a minor modification to the 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.

E-Mail Address (if available)

Date: 6/10/15

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.

Name and Title (please type)

Florida Registration Number (please affix seal)

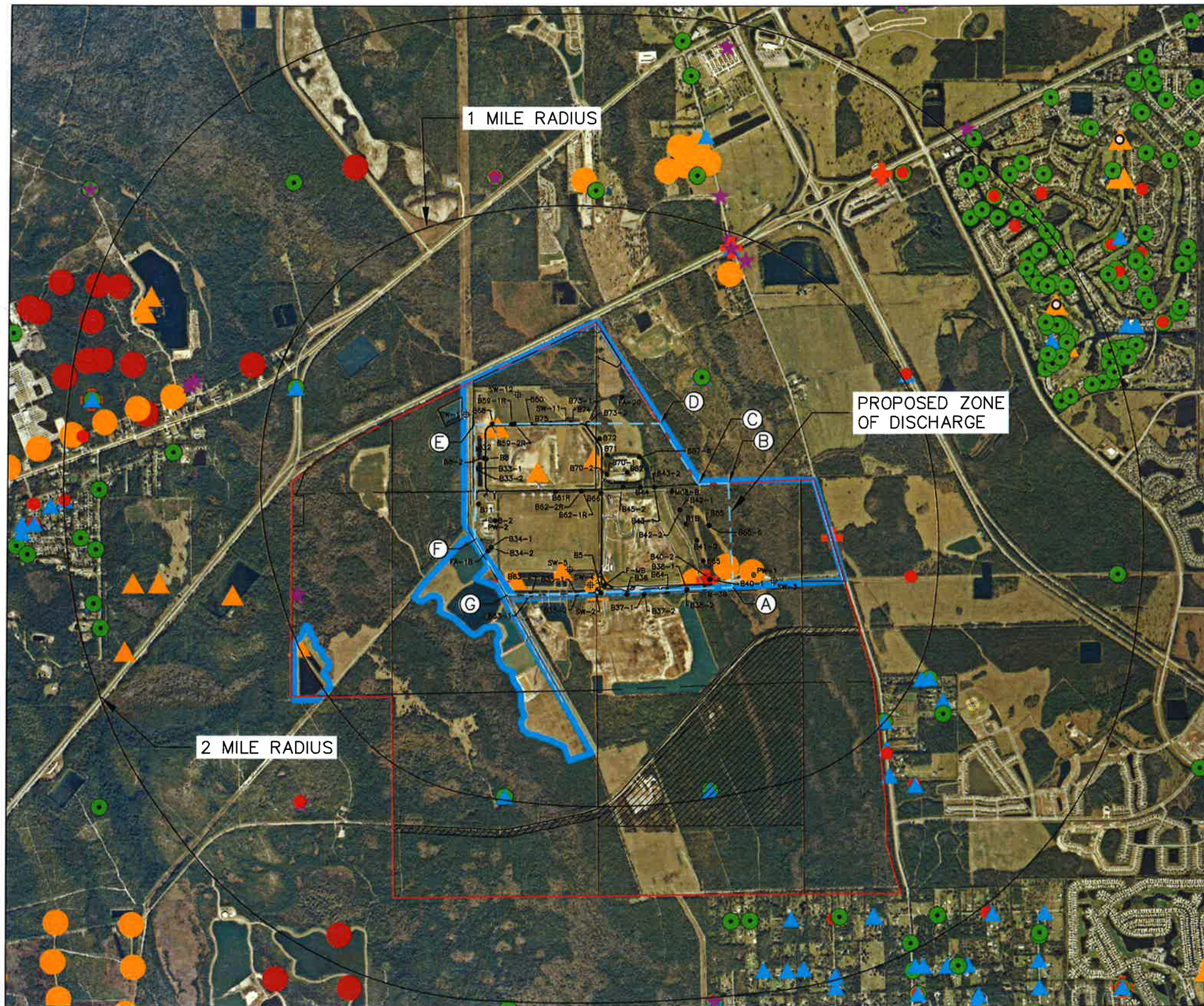
Date: 06/15/15

## Figures









- NOTES:**
1. LANDFILL AND SURROUNDING AERIAL FROM VOLUSIA COUNTY PROPERTY APPRAISER WEBSITE, 2014.
  2. MONITORING WELLS SHOWN ON THIS MAP:
    - (1) WELLS IN THE FACILITY PERMIT (NO. 0078767-034-SO-T3).
    - (2) 4 WELLS FROM THE BENZENE EVALUATION MONITORING PROGRAM.

**LEGEND:**

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- PROPOSED ZONE OF DISCHARGE
- PROPERTY NOT OWNED BY VOLUSIA COUNTY
- ⊕ PW-1 POTABLE WATER WELL
- PRODUCTION WELL (DISTRICT)
- MONITORING WELL (DISTRICT)
- ★ MONITORING WELL (COUNTY)
- IRRIGATION WELL (COUNTY)
- ▲ SURFACE WATER PUMP (DISTRICT)
- ▲ DOMESTIC WELL (COUNTY)
- OTHER WELL TYPE (UNIDENTIFIED)



A) N 29°07'41.29" W 81°04'58.76"	D) N 29°08'23.49" W 81°05'20.30"	G) N 29°07'39.32" W 81°06'04.89"
B) N 29°08'08.20" W 81°05'00.06"	E) N 29°08'23.21" W 81°06'14.75"	
C) N 29°08'07.87" W 81°05'08.90"	F) N 29°07'53.70" W 81°06'14.21"	



**WELL LOCATIONS AROUND PROPOSED  
ZONE OF DISCHARGE BOUNDARY**  
SOURCE: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DATE  
JUNE 2015  
FIGURE



## Tables

**Table 1**  
**List of Wells Permittd by Florida Health Department**

PID	Street No.	Direction	Street Name	City	Zip	Well Construction Method	Other Construction Method	WellUse*	Casing Material	Size of Well Casing	Static Water Level	Pumping Water Level	Casing Diameter	Casing Depth
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128								4"	
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"			2	18
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"			2	18
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"	na	na	2 in	25 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"	na	na	2 in	3 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"	na	na	2 in	3 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"	na	na	2 in	25 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32127	Other	AUGER	MW	PVC	2	na	na	2 in	3 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124						na	na	2 in	28 ft
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124						na	na	2 in	12 ft
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	18.5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	2'		2"	20'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	5'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	2'		2"	6'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3.5'		2"	20'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	3'		2"	6'
621100000020	1990		TOMOKA FARMS	DAYTONA BEACH	32117	Other	Auger	MW	PVC	2"	2'		2"	6'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	40'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	40'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	40'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	40'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	NPW	PVC	2"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Direct Push	NPW	PVC	3/4"			2"	25'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	Direct Push	NPW	PVC	3/4"			2"	40'
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	2"			2"	5'
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	2"			2"	5'
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	2"			2"	5'
621401030020	2165		TOMOKA FARMS	PORT ORANGE	32128			NPW		2"			2"	80'
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"	9 1/4'	20'	2"	23'
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"	4.90	13.20	2"	22'
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"	12.20	18.2	2"	38'
621401030020	2165		TOMOKA FARMS	PORT ORANGE	32128	Combination		NPW	Galvanized	2"	20'		2"	103'

**Table 1**  
**List of Wells Permittd by Florida Health Department**

PID	Street No.	Direction	Street Name	City	Zip	Well Construction Method	Other Construction Method	WellUse*	Casing Material	Size of Well Casing	Static Water Level	Pumping Water Level	Casing Diameter	Casing Depth
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"			2"	5'
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"			2"	25'
620900000020	1190		TOMOKA FARMS	DAYTONA BEACH	32128	Other	AUGER	MW	PVC	1"	3'	3'	2"	30'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	SONIC	MW	PVC	2"			2	87
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128			MW		2"	3.4'			23'
622600000012	2455		TOMOKA FARMS	DAYTONA BEACH	32128	Jetted		NPW	PVC		16	16	2	30
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	AUGER	MW	PVC	2"			2"	18'
622600000015	2447		TOMOKA FARMS RD	DAYTONA BEACH	32128	Rotary		DPW	PVC	4"	15	25'	4"	88'
621401030031	2169		TOMOKA FARMS RD	PORT ORANGE	32128			DPW	Galvanized	2			2"	25'
523400000120	1490		TOMOKA FARMS RD	DAYTONA BEACH	32124	Combination		NPW	Galvanized	4"	12		4"	89'
622600000014	2431		TOMOKA FARMS RD	PORT ORANGE	32124	Rotary		DPW	PVC	4	15		4"	130
522218000020	401		TOMOKA FARMS ROAD	DAYTONA BEACH		Jetted		NPW	PVC	2"	4		2"	21
622600000081	2495		TOMOKA FARMS RD	PORT ORANGE	32128	Rotary		MW	PVC	2"			2	52
622600000081	2495		TOMOKA FARMS RD	PORT ORANGE	32128	Rotary		MW	PVC	2"			2	29
523400000130	1496		TOMOKA FARMS	DAYTONA BEACH	32124	Combination		DPW	Galvanized	4"	18	18	4	85
522218000010	401	N	TOMOKA FARMS	DAYTONA BEACH	32124	Combination		NPW	Galvanized	4	18		4	100
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	7
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	7
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	23
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	ROTARY	MW	PVC	2"			2	23
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	ROTARY	MW	PVC	2			2	23
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	23
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	ROTARY	MW	PVC	2			2	7
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	ROTARY	MW	PVC	2			2	7
523400000093	1510		TOMOKA FARMS	DAYTONA BEACH	32124	Combination		NPW	Galvanized	4	23		4	89
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	2
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	2
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	2
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	29
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	29
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	2
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	12
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	31
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	AUGER	MW	PVC	2			2	34
620400000036	0000		TOMOKA FARMS RD	DAYTONA BEACH	32117	Rotary		MW	PVC	2	16.37		2	20
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128								4	80
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	72'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	2'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	26'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Other	Auger	MW	PVC	2"			2"	26'

Table 1  
List of Wells Permittd by Florida Health Department

PID	Street No.	Direction	Street Name	City	Zip	Well Construction Method	Other Construction Method	WellUse*	Casing Material	Size of Well Casing	Static Water Level	Pumping Water Level	Casing Diameter	Casing Depth
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	56'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	56'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	56'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	56'
622600000081	2495		TOMOKA FARMS	PORT ORANGE	32128	Rotary		MW	PVC	2			2"	29'
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128								4"	
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128								120	4"
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128								4"	
622201000480	2278		TOMOKA FARMS	PORT ORANGE	32128	Combination		DPW	Galvanized	2"			2	85
622201000480	2278		TOMOKA FARMS	PORT ORANGE	32128	Combination		DPW	Galvanized	4"	15	15	4	85
620900000020	1990		TOMOKA FARMS	PORT ORANGE	32128	Other	sonic	MW	PVC	2"			2	30
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Auger		MW	PVC	2"	6		2	40
620900000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Auger		MW	PVC	2"	6		2	40
629000000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	Auger	MW	PVC	2"	6		2	40
629000000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	Auger	MW	PVC	2"	9		2	86
629000000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	Auger	MW	PVC	2"	6		2	40
629000000020	1990		TOMOKA FARMS	DAYTONA BEACH	32128	Other	Auger	MW	PVC	2"	9		2	86
522700000140	1415		TOMOKA FARMS	DAYTONA BEACH	32124	Combination		NPW	Galvanized	4"	10	10	4	89
522700000140	1415		TOMOKA FARMS	DAYTONA BEACH	32124	Plugged by Approved Method			Galvanized	4"			4	89
522707000010	299	N	TOMOKA FARMS	DAYTONA BEACH	32124	Combination		NPW	Blk Steel	4"	15		4	95
522707000010	299	N	TOMOKA FARMS	DAYTONA BEACH	32124	Combination		NPW	Blk Steel	4"	21	21	4	93
522707000010	299	N	TOMOKA FARMS	DAYTONA BEACH	32124			NPW	Blk Steel	4"			4	
620900000020	1990		TOMOKA FARMS RD	DAYTONA BEACH	32124	Other	ABANDONMENT	OW	Other	2"				

Note:

Color Refernce Chart

Wells within the 500 feet of ZOD

Wells beyond 6000 feet of ZOD

Wells beyond 5280 feet but within 6000 feet of ZOD

Well between 500 - 700 ft of ZOD

\*WellUse

MW - Monitoring Well

NPW - Non-Potable Well

DPW - Domestic Potable Well

PWS - Public Water Supply

Other -Other unknown well type



Table 2  
List of Wells Within 1 mile of the Proposed ZOD  
Tomoka Farms Road Landfill

Permitted by St. Johns River Water Management District

Permit Number	Sequence No.	Station ID	Station_Alias_	Station Type	Project Name	Received Date	Issue Date	Permit Expired	Applicant	Owner	Permit Status	Projected _Acres	County	Well Casing Diameter (inch)	Casing Depth (ft)	Well Total Depth (ft)	Section _ID	Township _ID	Range_ID	Source	Station _Status	MAX_CAP_QT	Compliance _Status	District _Permit	Project_Use	Latitude _No	Longitude No
9367	3	17930	A - Admin Building	Production Well	Tomoka Landfill	5/18/1999	11/11/1999	8/4/2002	Volusia County	Volusia County	Closed	20.00	Volusia	2	100	140	10	16S	32E	Floridan Aquifer	Active	15.00	In Compliance	Inactive	Mining/Dewatering	290745	810453
63875	1	23881	2	Production Well	Volusia County Landfill-Gel Recycling Ctr.	1/24/2000	2/8/2000	2/8/2020	Volusia County Landfill-Gel Recycl	Volusia County Landfill-Gel Recycl	Issued	3.00	Volusia	6	18	18	34	15S	32E	Surficial Aquifer	Proposed	250.00	In Compliance	Active	Commercial/Industrial/Institutional	290901	810460
9367	6	17931	B - Security Trailer	Production Well	Power Line Borrow Pit	9/11/2006	4/10/2007	2/18/2023	Volusia County	Volusia County	Closed	3448.00	Volusia	2	90	110	10	16S	32E	Floridan Aquifer	Abandoned	60.00	In Compliance	Inactive	Mining/Dewatering	290746	810501
9367	3	17933	D - Recycle Center	Production Well	Tomoka Landfill	5/18/1999	11/11/1999	8/4/2002	Volusia County	Volusia County	Closed	20.00	Volusia	4	96	110	10	16S	32E	Floridan Aquifer	Active	100.00	In Compliance	Inactive	Mining/Dewatering	290742	810510
9367	3	22637	I - Effluent Ditch	Pump	Tomoka Landfill	5/18/1999	11/11/1999	8/4/2002	Volusia County	Volusia County	Closed	20.00	Volusia	NA*	NA*	NA*	9	16S	32E	Effluent Ditch	Active	2500.00	In Compliance	Inactive	Mining/Dewatering	290740	810539
9367	6	17932	C - Maintenance	Production Well	Power Line Borrow Pit	9/11/2006	4/10/2007	2/18/2023	Volusia County	Volusia County	Closed	3448.00	Volusia	2	100	120	9	16S	32E	Floridan Aquifer	Active	15.00	In Compliance	Inactive	Mining/Dewatering	290741	810539
9367	7	21896	E - Borrow Pit A	Pump	Tomoka Farms Road Landfill	6/6/2011	7/8/2011	2/18/2023	Volusia County	Volusia County	Issued	3448.00	Volusia	NA*	NA*	NA*	4	16S	32E	Borrow Pit A	Active	1900.00	Undetermined	Active	Mining/Dewatering	290814	810540
9367	4	21898	F - South Cell Ditch	Pump	Tomoka Farms Road Landfill	8/2/2002	2/18/2003	2/18/2023	Volusia County	Volusia County	Closed	1017.85	Volusia	NA*	NA*	NA*	9	16S	32E	South Cell Ditch	Active	2500.00	Out Of Compliance	Inactive	Mining/Dewatering	290746	810549
9367	6	21899	G - North Cell Ditch	Pump	Power Line Borrow Pit	9/11/2006	4/10/2007	2/18/2023	Volusia County	Volusia County	Closed	3448.00	Volusia	NA*	NA*	NA*	4	16S	32E	North Cell Ditch	Active	1400.00	In Compliance	Inactive	Mining/Dewatering	290811	810556
9367	6	104951	SW1	Pump	Power Line Borrow Pit	9/11/2006	4/10/2007	2/18/2023	Volusia County	Volusia County	Closed	3448.00	Volusia	NA*	NA*	NA*	9	16S	32E	Southwest 1	Removed	1400.00	In Compliance	Inactive	Mining/Dewatering	290743	810603
9367	7	409825	H @ SW1	Pump	Tomoka Farms Road Landfill	6/6/2011	7/8/2011	2/18/2023	Volusia County	Volusia County	Issued	3448.00	Volusia	NA*	NA*	NA*	9	16S	32E		Active	2500.00	Undetermined	Active	Mining/Dewatering	290743	810605
9367	6	21897	H - Borrow Pit D	Pump	Power Line Borrow Pit	9/11/2006	4/10/2007	2/18/2023	Volusia County	Volusia County	Closed	3448.00	Volusia	NA*	NA*	NA*	4	16S	32E	Borrow Pit D	Removed	2500.00	In Compliance	Inactive	Mining/Dewatering	290823	810608
9367	7	409826	H new - Borrow Pit D	Pump	Tomoka Farms Road Landfill	6/6/2011	7/8/2011	2/18/2023	Volusia County	Volusia County	Issued	3448.00	Volusia	NA*	NA*	NA*	4	16S	32E		Active	2600.00	Undetermined	Active	Mining/Dewatering	290823	810609
9367	7	39633	NW1	Pump	Tomoka Farms Road Landfill	6/6/2011	7/8/2011	2/18/2023	Volusia County	Volusia County	Issued	3448.00	Volusia	NA*	NA*	NA*	8	16S	32E	Northwest Borrow Pit	Active	1100.00	Undetermined	Active	Mining/Dewatering	290727	810706

Note:        \* Not Available