

TRAIL RIDGE LANDFILL

MINOR MODIFICATION
TO USE A PORTABLE TIPPER

+ HAVE 2 WORKING FEELS

DOCL - July 23, 2005

| Permitting Application - Permit Detail and Log Permit | | | | | | | | | |
|---|--|---|--|--------------------------------|--|--------------------------------|--|--|--|
| SITE Permit | | | | | | | | | |
| Site Name: TRAIL RIDGE LANDFILL LF1 | | | | | | Site #: 0013393 | | | |
| County: DUVAL | | Comments: <input checked="" type="checkbox"/> | | RPAs: <input type="checkbox"/> | | OAGS: <input type="checkbox"/> | | | |
| Project | | | | | | | | | |
| Permit #: 0000000000 | | Project #: 000 | | Received: 07/22/2005 | | ORAF: <input type="checkbox"/> | | | |
| Permit Office: RED DISTRICT | | | | | | Agency Action: Pending | | | |
| Project Name: TRAIL RIDGE LF - OPER. PLAN MM | | | | | | Desc: | | | |
| Type/Sub/Desc: SC / MM | | MINOR MODIFICATION | | | | GOE: | | | |
| Logged: 07/26/2005 | | Issued: | | Expires: | | OAG: <input type="checkbox"/> | | | |
| Fee: 250.00 | | Fee Rcd: 000.00 | | Date: | | Override: NONE | | | |
| Related Party | | | | | | | | | |
| Role: APPLICANT | | Begin: 07/26/2005 | | End: | | | | | |
| Name: MATHES, GREG | | Company: WASTE MANAGEMENT INC OF FLORIDA | | | | | | | |
| Address: 5110 U.S. HWY 20 SOUTH | | | | | | | | | |
| City: BALDWIN | | State: FL | | Zip: 32234 3608 | | Country: USA | | | |
| Phone: 904-289-9100 | | Fax: 904-289-9015 | | Email: | | | | | |
| Processors | | | | | | | | | |
| Processor: NOGAS_M | | Active: 07/26/2005 | | Inactive: | | Events: | | | |

Comments

Comments

Site: 103496 Project: 03

RECEIPT # 509620 - 07/25/05

Cash Receiving Application - Collection Point Log Remittance

Collection Point Log Remittance

AREA **NED** Total **\$11,459.10**

Remittance **636213** TYPE **CP** Received Date **07/26/2005** Status **RECEIVED**

SYSRCPT **603620** FNR Check **5349** Amount **250.00**

SSN/FIR# Name **ENGLAND THIMS & MILLER INC**

First Middle Title Suf

Address1 **14775 ST AUGUSTINE ROAD** Short Comments

Address2 **AW/OH/SC0013493-013**

City **JACKSONVILLE** ST **FL** Zip **32258** County

PAYMENT(S)

| Payment# | Area | Obj | Code/Description | Payment Amount | Reference# | Applic | Fund | SCUE |
|----------|------|-------|------------------|----------------|---------------|--------|------|----------|
| 701863 | NED | 00224 | SOLID WASTE-CON | 250.00 | SC0013493-013 | PA | 0010 | COMPLETE |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

COMMIT FREQUENTLY **\$250.00** Payment total

ENGLAND, THIMS & MILLER, INC.

14775 ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258
904-642-8990

| DATE | INVOICE | AMOUNT |
|---------------------|---------|--------|
| Permit Modification | | |
| 98-34 | | |
| | | |
| | | |

509620

63-9232/630

DATE 7-21-05

5349

PAY TWO HUNDRED FIFTY AND 00/100

DOLLARS

CHECK
AMOUNT

TO
THE ORDER
OF

Florida Department of
Environmental Protection

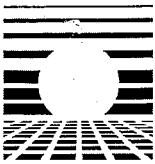
\$ **250.00**

IRONSTONE BANK
JACKSONVILLE, FL

ENGLAND, THIMS & MILLER, INC.
Joseph C. Miller
TWO SIGNATURES REQUIRED FOR AMOUNTS ABOVE \$5000.00

⑈005349⑈ ⑆063092327⑆009061592290⑈

SECURITY FEATURES: MICRO PRINT BORDERS - COLORED BRICK PATTERN - WATERMARK ON BACK - MISSING FEATURE INDICATES A COPY



England-Thimys & Miller, Inc.

ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

14775 St. Augustine Road, Jacksonville, FL 32258
(904) 642-8990 Fax: (904) 646-9485 http://www.etm-inc.com

LETTER OF TRANSMITTAL

To: Florida Dept. of Environmental Protection
ATTN: Mary Nogas, P. E.
Address: Solid Waste Section
7825 Baymeadows Way, Suite B-200
Jacksonville, FL 32256

Date: July 22, 2005
Job No: 98-34
Reference: Trail Ridge Landfill
Permit Modification
VIA: COURIER

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

- ☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of Letter ☐ Change Order ☐ _____

| COPIES | DATE | NO. | DESCRIPTION |
|--------|---------|-----|---|
| 4 | 7-22-05 | | Application for Permit Modification |
| 4 | 7-22-05 | | Operation Plan (Revised) |
| 4 | 7-22-05 | | Product Information |
| 1 | 7-22-05 | | Check in the amount of \$250.00 for processing fee. |
| | | | |
| | | | |

RECEIVED
JUL 22 2005
STATE OF FLORIDA
DEPARTMENT OF ENV. PROTECTION
NORTHEAST DISTRICT - JACKSONVILLE

THESE ARE TRANSMITTED AS CHECKED BELOW:

- ☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ for corrected prints
☐ Review and comment ☐ _____
☐ FOR BIDS DUE _____, 2003 ☐ PRINTS RETURNED AFTER LOAN TO US

Remarks Please feel free to give me a call at (904) 265-3132 if you have any questions relating to this application.

COPY TO: File
Greg Mathes

SIGNED: Francis Dayao, P.E.

ENGLAND, THIMS & MILLER, INC.
14775 ST. AUGUSTINE ROAD
JACKSONVILLE, FL 32258
904-642-8990

| DATE | INVOICE | AMOUNT |
|------|---------------------|--------|
| | Permit Modification | |
| | 98-34 | |
| | | |
| | | |

DATE 7-21-05
5349

63-9232/630

PAY TWO HUNDRED FIFTY AND 00/100 DOLLARS

CHECK
AMOUNT

TO,
THE ORDER
OF

Florida Department of
Environmental Protection

\$ **250.00**

IRONSTONE BANK
JACKSONVILLE, FL

ENGLAND, THIMS & MILLER, INC.
Joseph C. Thims
TWO SIGNATURES REQUIRED FOR AMOUNTS ABOVE \$5000.00

⑈005349⑈ ⑆063092327⑆009061592290⑈

SECURITY FEATURES: MICRO PRINT BORDERS · COLORED BRICK PATTERN · WATERMARK ON BACK · MISSING FEATURE INDICATES A COPY

ENGLAND, THIMS & MILLER, INC.

14775 St. Augustine Road
Jacksonville, Florida 32258

Tel (904) 642-8990 Fax (904) 646-9485

LETTER OF TRANSMITTAL

TO: Emerson Raulerson, P. E.

Solid Waste Section

Dept. of Environmental Protection

7825 Baymeadows Way, Suite B-200

Jacksonville, Florida 32256

DATE: August 24, 2005

JOB NO: 98-34

RE: Trail Ridge Landfill – Permit Modification

- COURIER -

RECEIVED

AUG 24 2005

WE ARE SENDING YOU:

☒ Attached

☐ Under separate cover

☐ Shop Drawings

☐ Prints

☐ Plans

☐ Specifications

☒ Copy of letter

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT - JACKSONVILLE

| COPIES | DESCRIPTION |
|--------|--|
| 5 | Response to Request for Additional Information (FDEP File No. 13493-013) |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

THESE ARE TRANSMITTED: -

☐ For your use

☒ For review and comment

☐ As requested

☐ Other For Signatures

REMARKS:

CC: Greg Mathes

SIGNED:

Francis Dayao
Francis Dayao, P. E.

DEP003616



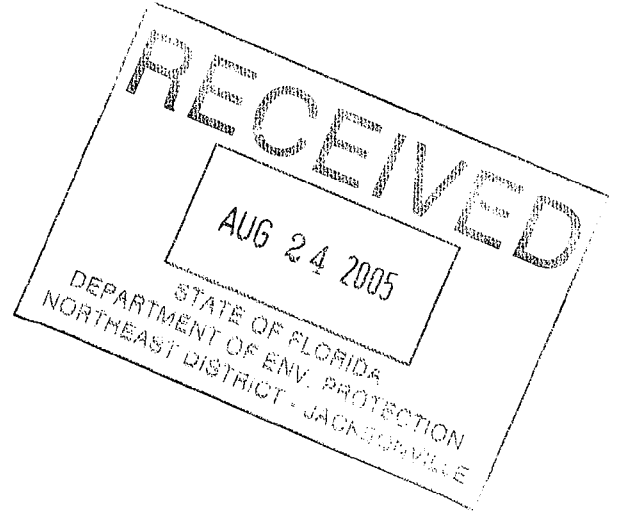
England-Thimby & Miller, Inc.

ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485
CA - 00002584 • www.etm-inc.com • LC - 0000316

August 24, 2005

Mr. Emerson C. Raulerson, P.E.
Solid Waste Section
Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, FL 32256-7590

Reference: Trail Ridge Landfill – Permit Modification
FDEP File No. 13493-013
ETM No. 98-34



Dear Mr. Raulerson:

In response to staff comments dated August 17, 2005, we offer the following. Please note the Department's comments (bold face type) are followed by our response in *italics*:

1. **The Department understands you are proposing changes to only those portions of the provided "TRAIL RIDGE LANDFILL REVISED OPERATION PLAN," that are underlined or struck through. Therefore, the Department only reviewed those underlined or struck through portions. If this is incorrect and other portions were changed, please resubmit the plan with all changes either underlined in the case of additions, or struck through in the case of deletions. If this understanding is correct, please confirm. Finally, please note any changes not appropriately delineated shall not be misconstrued as having been approved.**

The Department's understanding is correct.

2. **In section VIII, OPERATION PLAN, subsection A, OPERATION PERSONNEL AND HOURS OF OPERATION, please revise the second paragraph to not only indicate that at least one trained spotter will be on-site at all times when the landfill receives waste, but rather indicate that at least one "trained" spotter will be present at the working face at all times waste is being accepted and/or spread out prior to disposal at that respective working face (FAC Rule 62-701.500(1)). For example, if waste is being accepted at both working faces at the same time, there will be at least one "trained" spotter at each working face, for a minimum of 2 trained spotters.**

The second paragraph has been revised.

Also, please revise section F, Paragraph 5, to specify that at the tipper working face there will be at least one "trained" spotter while waste is being accepted and/or spread out prior to disposal.

The fifth paragraph has been revised.

3. Please specify the equipment and personnel, including heavy equipment operators, spotters, etc., that you will have present at the tipper working face while tipping and/or spreading waste. Please confirm that a spotter will inspect all loads not only as they are being tipped, but also as they are being spread. Please also indicate how you will use the heavy equipment, e.g., to spread and/or compact the waste.

The tipper working face shall have the landfill tipper and tipper operator. A compactor and operator will also be operating within the tipper working face. A trained spotter will also be present at the tipper working face to inspect all loads as the loads are being tipped and spread. A compactor will be utilized to spread and compact the solid waste. In order to maximize usage, the compactor assigned to the tipper working face may move back and forth between the working faces when solid waste is not being disposed of and/or spread within the tipper working face.

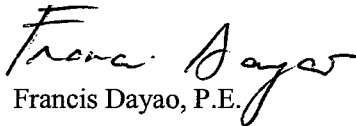
4. Please propose a maximum size for each of the two working faces.

The first working face shall be wide enough to accommodate vehicles discharging solid waste and to minimize the exposed area and unnecessary use of cover material. The second working face where the landfill tipper will be located will only be wide enough to accommodate tractor trailers discharging solid waste via the landfill tipper. The second working face will also be wide enough to minimize the exposed area and unnecessary use of cover material.

We hope these comments adequately address your concerns. Please contact our office if you require additional information.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Francis Dayao, P.E.

Attachment: Revised Operation Plan

Cc: Greg Mathes

VIII. OPERATION PLAN

A. OPERATION PERSONNEL AND HOURS OF OPERATION

The District Manager is responsible for the overall operation of the Trail Ridge Landfill. The District Manager's responsibility is to assure that operations at the site are performed in accordance with the procedures outlined in this Operation Plan.

The District Manager, the Operations Manager and several operators are trained operators under Rule 62-701.320(15), F.A.C. At least one trained operator will be on-site during all times when the landfill receives waste. Further, at least one trained spotter will be at the working face at all times waste is being accepted and/or spread out prior to disposal at that respective working face. ~~when the landfill receives waste.~~

1. Hours of Operation

- a. Normal Monday - Friday: 6:00 A.M. to 7:00 P.M.
- b. Normal Saturday: 6:00 A.M. to 3:00 P.M.
- c. Maximum Hours: 5:00 A.M. to 10:00 P.M.

During emergency situations, i.e., after a hurricane, the landfill may operate beyond the above hours. However, the Florida Department of Environmental Protection must be notified at the first available opportunity. The landfill will have lights with at least 3 candle-feet of illumination for operation during non-daylight hours.

2. Personnel

Personnel expected to be at the landfill includes:

| Personnel | Total |
|---------------------|-------|
| District Manager | 1 |
| Operations Manager | 1 |
| Equipment Operators | 8 |
| Mechanic | 1 |
| Labors/Spotters | 6 |
| Compliance Officer | 1 |
| Clerical | 3 |

On a normal basis, the personnel present during operating hours on the landfill will include a trained operator, a trained spotter, a material handler (laborer) and

Frank Agnew
8/24/08

two equipment operators. During peak operating hours, the facility will have additional personnel, in accordance with the Personnel Matrix in Attachment A.

A work schedule is developed on a weekly basis to ensure that adequate staff is present on the landfill to handle the expected volume of waste.

B. CONTINGENCY OPERATIONS

The on-site entrance road is an all-weather road. The entrance road and administration area are paved. The pavement extends beyond the ticket office/scale house to the perimeter road around the landfill. The perimeter road is a stabilized limerock road. Haul roads beyond this point are maintained for adverse weather condition usage.

Emergency conditions at the facility may be created by a natural disaster (i.e., hurricane or tornado), flooding and fire. Waste is not normally delivered to the site during emergency conditions. The following procedures will be implemented with the imminent threat of a major storm.

1. Initial cover will be applied and compacted over all exposed waste.
2. All landfill equipment will be fueled and parked near natural wind screens, earthen mounds or tree areas.
3. All lightweight signs and equipment will be secured.
4. Work will begin in dry areas only when operations are resumed and waste materials will not be disposed in standing water.

The surface water management system will allow disposal operations to continue during periods of inclement weather. This will include the utilization of temporary berms and ditches to drain stormwater away from the active face.

In the event of a natural disaster in the area, operational hours will be extended as appropriate to meet the needs of the community and the Department will be notified.

In the event a hot load is received or a fire occurs at the landfill, the operator will extinguish the fire, as soon as possible. Hot loads will be discharged in an area on the landfill isolated from the current active face, spread out and covered with soil to extinguish the fire. The load will only be discharge onto an area that has a minimum of 12 inches of cover for separation from existing waste. After the load is extinguished, the waste will be moved to the active face for disposal or left in place with intermediate cover placed over it.

If a fire occurs within the working face, the operator will cease operations in the working face until the fire is extinguished. The operator will direct all waste disposal to

another operational area that is a safe distance from the fire. The temporary disposal area shall not interfere with fire fighting equipment.

For a subsurface fire that occurs outside the working face, the operator will cordon off the area and determine if the working face should be moved until the fire is extinguished. At no time shall the landfill place waste in a burning area.

C. WASTE CONTROL

The waste stream will be monitored by the scale house operator, as each vehicle passes by the ticket office/scale house and then again at the working face by the spotter(s). In addition, the scale house is equipped with cameras/video monitoring systems, which record a time-coded picture of the vehicles entering the site.

There will be at least one trained spotter at the working face to observe the wastes disposed at all times the landfill receives waste. If any unacceptable wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the landfill owner/operator will promptly notify the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known for subsequent removal off site. If the waste is deemed hazardous, the area where the wastes are deposited will be immediately cordoned off from public access. If the generator or hauler cannot be identified, the landfill owner/operator will assure the cleanup, transportation, and disposal of the waste at an appropriate waste management facility.

In the event unacceptable waste is identified after the hauler has left the facility, the unacceptable waste shall be removed from the working face and placed in close proximity to the working face. At the end of the day, at a minimum, unacceptable waste such as batteries, oil filters, used oil, etc. will be removed from the landfill and stored at the existing concrete storage area adjacent to the waste tire storage and processing area. Within the storage area, the materials shall be placed in a single layer on pallets. (The water level in the storage area will be checked on a weekly basis and accumulated water will be pumped out and treated as leachate). Tires will be placed within the tire storage areas. White goods will be stored in a roll-off box. White goods and batteries will be taken off site by various recyclers on a quarterly basis at a minimum.

Only two types of biological waste are accepted for disposal, bodies of domestic animals and treated biomedical waste. Before the bodies of domestic animals are brought to the facility, the landfill will request information about the waste to determine if the animals were diseased. If the animals were not diseased, the bodies will be disposed within the working face and then covered immediately with either additional waste or initial cover. If the bodies of the domestic animal are from diseased animals, the bodies will be handled in accordance with Section 823.041(1), F.S. Treated biomedical waste will be

disposed within the working face and then covered with either additional waste or initial cover.

D. WEIGHING WASTE

All incoming waste will be weighed and recorded on a daily basis at the on-site scales prior to disposal. The on-site scales include at least one scale for incoming vehicles and one scale for outgoing vehicles.

E. VEHICLE TRAFFIC CONTROL

Signs are provided to direct traffic to the disposal area. Further, spotters will direct incoming vehicles to their final disposal area.

F. METHOD AND SEQUENCE OF FILLING WASTE

The landfill will have two (2) working faces and ~~The working face~~ will be consistent with orderly traffic control, waste spreading, and compaction activities.

All solid waste will be spread in layers of approximately two feet in thickness and compacted to approximately one foot in thickness or as thin a layer as practical before the next layer is applied. Bulky materials, which are not easily compacted, will be worked into other materials as much as practical.

The first layer of waste placed above the liner and leachate collection system will be a minimum of four feet in compacted layer thickness and will consist of selected waste loads containing no large rigid objects that may damage the liner or leachate collection system. The placement of this initial waste will be supervised by a quality assurance monitor under the supervision of a Florida Registered professional Engineer.

Solid waste will be formed into cells to construct horizontal lifts. The working face of the cell and side grades will be at a slope no greater than three feet horizontal to one foot vertical rise. Lift depth will normally not exceed ten feet but may be deeper, depending on specific operations, daily volume of waste, width of working face, and good safety practices. In general, the initial fill will be placed from east to west in a 300-foot wide section that corresponds to the leachate collection area.

The first working face will be only wide enough to accommodate vehicles discharging the waste, and to minimize the exposed area and unnecessary use of cover material. The second working face will be located near the first working face and shall have a portable tipper used to unload solid waste trailers. The location of the portable tipper within the second working face will be determined by the landfill operator and will vary depending on the amount of solid waste being received and weather conditions. The second

working face shall have a "trained" spotter whenever solid waste is being accepted and/or spread out prior to disposal.

G. WASTE COMPACTION AND APPLICATION OF COVER

Waste will be spread in layers of approximately two (2) feet in thickness and compacted to approximately one (1) foot in thickness or as thin a layer as practical before the next layer is applied. In general three to five passes with the compactor will be made on each layer of refuse.

Initial cover will be applied and maintained at the landfill in order to minimize any adverse environmental, safety, or health effects such as those resulting birds, unauthorized wastes, blowing litter, odors, disease vectors, or fires. The minimum frequency for applying initial cover is at the end of each work day. A 6" thick initial soil cover or an FDEP approved alternate daily cover may also be applied at the end of each operating day.

For those areas where additional solid waste will be deposited within 18 hours, a temporary cover, such as a tarpaulin, may be placed on the working face at the end of the work day and removed prior to deposition of additional waste. Additionally, waste tires that have been cut into sufficiently small parts may be utilized as initial cover on the landfill, in accordance with Rule 62-711.400(3)(a), F.A.C.

An intermediate cover, in addition to the six (6) inch initial cover, will be applied and maintained within seven (7) days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion. All or part of this intermediate cover may be removed before placing additional waste or installing final cover. The intermediate cover will consist of either a 12" compacted layer of soil or a 16" compacted layer of 50/50 mixture of soil/mulch. The mulch/soil mixture will be a fairly homogeneous mixture and the mulch will be ground into sufficiently small pieces (approx. 1" or less).

Final cover will be applied to a solid waste disposal unit once it has been filled to its design dimensions. The final cover including permanent vegetation will be placed over the entire surface of each completed solid waste disposal unit within 180 days after final waste placement. Solid waste disposal units, which are designated by phase, are shown on **Permit Drawings Nos. 14 and 15.**

H. OPERATION OF GAS, LEACHATE AND STORMWATER CONTROLS

1. Gas Collection System

The permanent gas collection system will be installed as each phase reaches its final contour in accordance with NSPS time frames. Further, the temporary gas collection system will be installed within five years of waste placement within a phase. All gas extraction wells are designed and installed for connection to the active gas extraction system including collection lines, blowers and flare station.

The gas management system will be monitored on a monthly basis, which will include inspection of each well and calibration of the system, as needed. This monitoring will be documented.

2. Leachate

The primary leachate collection system consists of an 8" perforated HDPE collection pipe surrounded by an aggregate encasement, which is covered by a geotextile fabric. This collection system is located in a trench on top of the primary liner. Leachate is collected within each leachate sector (300' wide, typical) and directed to the collection system by a geonet drainage blanket located on top of the primary liner.

The primary leachate collection pipes passes through the leachate collection sump and terminates at the leachate vault on the east side of the landfill. The leachate collection sump consists of an 18" or 24" diameter HDPE pipe (riser pipe) surrounded by an aggregate sump. The riser pipe extends from the sump up to the leachate vault. The 8" HDPE leachate collection pipe discharges directly into the riser pipe as well as the sump. A small submersible pump is located inside each riser pipe. Level sensors in the riser pipe are used to control the pump, which removes leachate as it accumulates. The pumps are mounted on wheels and can easily be removed for maintenance.

The leachate pumps discharge into a leachate force main which transfer the leachate to the fiberglass storage tanks (20,000 gallons each). Each leachate pump discharges through a flow meter that is monitored daily, Monday through Friday. Therefore, each leachate sector can be monitored for leachate generation. The leachate collection system, including the storage tanks, is located over the liner system. The leachate storage tanks are visually inspected daily, Monday through Friday, by on-site personnel. A daily log (Monday through Friday) is kept outlining leachate generation and storage volumes. Leachate will be transported off-site by tanker at regular intervals based on leachate production. The leachate

is transported to the Buckman Street Wastewater Treatment Facility for treatment and disposal.

The secondary (detection) leachate collection system is constructed and operates similarly to the primary system. The exceptions for this system include:

- a. Multiple layers of geonet were installed in lieu of the 8" HDPE perforated pipe.
- b. The secondary leachate collection system is piped to a separate storage tank (20,000 gallons).

3. Stormwater Treatment and Detention

The Stormwater Management System was designed in accordance with Rules 62-25, 40C-4 and 40C-42, F.A.C. for both treatment and peak flow attenuation. The stormwater treatment is provided by wet detention.

In general, a minimum of the first 1" of runoff will be treated prior to discharge. The treated stormwater will be discharged from the stormwater pump station via the wetland irrigation system.

4. Stormwater Management

a. Stormwater/Leachate Separation

Stormwater which falls on a section of the lined landfill, which is not currently being used for waste disposal, is separated from the leachate collection. This is accomplished by closing the valve upstream of the active phase and isolating this portion of the leachate collection system. A 36" high HDPE flap is welded to the liner at this phase line to prevent stormwater from flowing to the active area. A temporary pump-out is provided upstream of each valve and flap to pump uncontaminated stormwater from the inactive liner into the perimeter ditch. Any stormwater that comes in contact with waste will be considered leachate and handled in accordance with the Leachate Management Plan.

b. Stormwater Collection

All stormwater is collected and directed into the stormwater basin. The collection system includes terraces on the final landfill slopes in conjunction with downcomer piping. This system will control runoff and minimize erosion on the landfill side slopes. Details of this system are shown on the

Permit Drawings. The existing wetland discharge of treated stormwater occurs through a 2" perforated spreader pipe. The wetland irrigation occurs adjacent to the stormwater management basin.

I. WATER QUALITY MONITORING

There is an existing Environmental Media Monitoring Plan (Groundwater, Surface Water, and Leachate) for this facility which is part of the current Solid Waste Permit and will continue a part of this renewal permit. This plan includes semi-annual monitoring of each media.

J. MAINTENANCE OF LEACHATE COLLECTION SYSTEM

Each leachate vault box (located at the east end of each leachate collection pipe) has a flow meter for the primary and secondary leachate collection system. These flow meters will be read daily, Monday thru Friday. If the reading in a flow meter is noticeably diminishing or otherwise reduced compared to the other flow meters and daily rainfall records, the flow meter will be checked for proper operation. Prior to the next permit renewal and in the event it is deemed necessary, the leachate collection system will be either videoed to determine if there is a clog or other reason for diminished flow or the leachate collection pipe will be flushed cleaned.

K. OPERATION RECORD

The operating record consists of all records, reports, analytical results, demonstrations, and notifications required by Chapter 62-701, F.A.C., any construction, operation, and closure plans and permits, including all modifications to those permits issued by the Department, Permit Document Plans, as well as training records required by Chapter 62-701.320(15), F.A.C. The record is considered part of the operation plan and will be kept with the plan at the landfill facility. The operating record will be available for inspection at reasonable times by Department personnel.

L. WASTE RECORDS

All solid waste will be weighed as it is received. Landfill operators will record, in tons per day, the amount of solid waste received and will estimate the amount of each waste listed below. Waste reports will be compiled monthly, and copies provided to the Department quarterly.

Types of waste received:

- a. Residential/household waste
- b. Commercial waste
- c. Treated biomedical waste
- d. Water treatment sludge
- e. Construction and demolition debris
- f. Agricultural waste
- g. Industrial waste
- h. Waste tires
- i. Asbestos
- j. Industrial sludge
- k. Domestic sludge
- l. Non-Hazardous special wastes

M. ACCESS CONTROL

Access to the landfill is provided by a paved entrance road from U.S. 301.

The entire site is fenced. Access is restricted by a gate near the entrance off U.S. 301 as well as a second gate closer to the site. All gates will be locked at night and whenever the landfill is closed. Public access and receipt of wastes will occur only when an attendant is on duty.

Traffic control on site is accomplished by signage and site personnel. Spotters will assist with traffic control at the working face by directing in-coming trucks to their final unloading area.

Access to areas restricted from traffic will be controlled by temporary earthen berms and barricades.

N. WASTE MONITORING

1. The operations will include a load checking program to detect and discourage attempts to dispose of unauthorized wastes at the landfill. The load checking program consists of the following minimum requirements:
 - a. The landfill operator will examine at least three random loads of solid waste delivered to the landfill each week. The waste collection vehicle drivers selected by the inspector will be directed to discharge their loads at a designated location within the landfill (near the working face). A detailed inspection of the discharged material will be made for any unauthorized wastes.
 - b. If unauthorized wastes are found, the facility will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identity of the waste sources.
2. Handling hazardous wastes.
 - a. If any regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the landfill owner/operator will promptly notify the Department by telephone, the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known. The area where the wastes are deposited will be immediately cordoned off from public access. If the generator or hauler cannot be identified, the landfill owner/operator will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

The operator will provide a report of the discovery of hazardous waste to the Department within seven days. The report will include the date of the incident, how the materials were discovered, transferred and transported, the disposal location, and if known, the source of the material. The material will be transferred and disposed off site in accordance with applicable local, state and federal regulations. The clean up will include determining the extent of contamination as well as the handling of materials that are contaminated by the hazardous waste.
 - b. Subsequent shipments from sources found or suspected to be previously responsible for shipping regulated hazardous waste will be subject to precautionary measure prior to the solid waste management facility accepting wastes.

3. Recording inspection results. Information and observations resulting from each random inspection will be recorded in writing and retained at the landfill for at least three years. The recorded information will include: the date and time of the inspection; the names of the hauling firm and the driver of the vehicle; the vehicle license plate number; the source of the waste, as stated by the driver; and observations made by the inspector during the detailed inspection. The written record will be signed by the inspector.

O. WASTE HANDLING

All solid waste will be spread in layers of approximately two feet in thickness and compacted to approximately one foot in thickness or as thin a layer as practical before the next layer is applied. Bulky materials, which are not easily compacted, will be worked into other materials as much as practical.

The first layer of waste placed above the liner and leachate collection system will be a minimum of four feet in compacted layer thickness and will consist of selected waste loads containing no large rigid objects that may damage the liner or leachate collection system.

Solid waste will be formed into cells to construct horizontal lifts. The working face of the cell and side grades will be at a slope no greater than three feet horizontal to one foot vertical rise. Lift depth will normally not exceed ten feet but may be deeper, depending on specific operations, daily volume of waste, width of working face, and good safety practices.

The working face will be only wide enough to accommodate vehicles discharging the waste, and to minimize the exposed area and unnecessary use of cover material.

Initial cover will be applied and maintained at the landfill in order to minimize any adverse environmental, safety, or health effects such as those resulting birds, unauthorized wastes, blowing litter, odors, disease vectors, or fires. The minimum frequency for applying initial cover is at the end of each work day.

However, for those areas where additional solid waste will be deposited within 18 hours, a temporary cover, such as a tarpaulin, may be placed on the working face at the end of the work day and removed prior to deposition of additional waste. Additionally, waste tires that have been cut into sufficiently small parts may be utilized as initial cover on the landfill, in accordance with Rule 62-711.400(3)(a), F.A.C.

An intermediate cover, in addition to the initial cover, will be applied and maintained within seven days of cell completion if additional solid waste will not be deposited within 180 days of cell completion. The landfill operator may remove all or part of the

intermediate cover before placing additional waste or installing final cover. The intermediate cover will consist of either a 12" compacted layer of soil or a 16" compacted layer of 50/50 mixture of soil/mulch. The mulch/soil mixture will be a fairly homogeneous mixture and the mulch will be ground into sufficiently small pieces (approx. 1" or less).

Solid waste disposal units, which have been filled to design dimensions, will receive final cover within 180 days after attaining final elevation or in accordance with the closure plan for the landfill. The solid waste disposal units are shown on **Permit Drawing Nos. 14 and 15**.

Uncontrolled and unauthorized scavenging is not permitted at the landfill site. Salvaging is also not permitted.

A litter policing operation will be employed to keep litter from leaving the working area of the landfill. Litter outside the working area will be picked up within 24 hours. Some litter may be exposed through the initial cover, if it is in traffic areas and away from public view.

Erosion control measures will be employed to correct any erosion which exposes waste or causes malfunction of the stormwater management system. Erosion control measures will be implemented within three days of occurrences. If the erosion cannot be corrected within seven days of occurrence, the landfill operator will notify the Department and propose a corrective schedule.

P. LEACHATE MANAGEMENT

The landfill operator will monitor the leachate level in and record the flow from both the leachate collection (primary) and detention (secondary) sumps on a daily basis, Monday through Friday. The operator will maintain at least one backup pump on site or have access to a backup pump that can be installed within hours of discovery that a pump is not operating. The operator/owner will sample and analyze the leachate in accordance with the Environmental Media Monitoring Plan and will submit the results to the Department.

The operator will operate and maintain the leachate collection system to collect and remove leachate from the landfill. The leachate will be stored on site in the six 20,000-gallon leachate storage tanks and will be transported to Buckman Street Wastewater Treatment Facility for treatment and disposal.

The quantity of leachate collected by the leachate collection and removal system will be recorded (in gallons) on a daily basis, Monday through Friday. The amount of leachate transported off site will be recorded on a daily basis, Monday through Friday.

If the flow from any secondary leachate detection sump exceeds 4,492 gallons per day for one day, the Department will be notified within 24 hours and a follow-up report prepared within 7 days. The follow-up report will include a description and assessment of the situation, proposed remedial actions, the proposed remedial action and a schedule for commencing and completing the remediation.

A recording rain gauge is operated and maintained to record precipitation at the landfill. These precipitation records will be maintained and used to compare with leachate generation rates.

Q. LEACHATE SPILLAGE CONTROL PLAN

The leachate storage and pumping facilities are inside a concrete containment area, which will hold 140% of the volume of the storage tanks plus one foot of freeboard. This facility is constructed on top of the liner system. Therefore, the Leachate Spillage Control Plan is directed at those spills that would occur outside the containment area.

The Leachate Spillage Control Plan consists of four major elements; Training, Containment, Remediation and Notification as described below:

1. Training

The tanker driver and/or site personnel (the Attendant for the purposes of this subsection) will be trained to prevent spills. The Attendant will perform the following prior to loading the tanker truck:

- a. Inspect the tanker for signs of leakage.
- b. Verify all tanker discharge valves are closed.
- c. Verify the tanker is completely within the leachate loading area containment curbing.
- d. Verify the liquid level in the containment sump is at or below the discharge pipe.
- e. Verify the containment sump discharge gate valve is closed.
- f. Verify the leachate fill hose is securely fastened to the inlet port of the tanker.
- g. Verify the available tanker volume.

Upon completion of this inspection, the Attendant will begin the following fill sequence:

1. Operate the leachate loading pump for approximately five minutes or until 500 gallons of leachate has been pumped and then discontinue pumping.

2. Inspect the tanker, fill hose and pumping system for leakage.
3. Upon verification that no spilling or leaking has occurred, restart pumping.
4. Continuously monitor the tanker fill operations.
5. Monitor the leachate flow meter until approximately 95% of the available tanker volume has been filled.
6. Discontinue filling operations and remove fill hose.
7. Perform a final inspection of tanker and tanker fill area.

2. Containment

If a spill occurs, the Attendant will notify the District Manager of the spill and request assistance. The Attendant will institute the following containment sequence:

- a. Cease pumping.
- b. Place sandbags around drainage structures down slope from the loading area to prevent any spillage from entering the drainage system. (NOTE: The first 500 gallons of spillage inside the containment curb will drain naturally into the 500-gallon containment sump.)
- c. Create an earthen berm around the spill with on-site sands taken from the daily cover stockpile.

3. Remediation

After the spill has been securely contained, the following cleanup will begin:

- a. Pump the leachate in the containment sump into the on-site storage tanks.
- b. Spread absorbent sands across all areas in contact with the spill.
- c. Remove the contaminated sand to the landfill disposal area.

4. Notification

In the event of a leachate spill, the Department will be notified.

The outlined Spillage Control Plan focuses primarily on a spill at the tanker truck loading area. However, if a leachate spill is discovered at any location on site, the pertinent containment, remediation and notification procedures described above will be implemented.

R. COMBUSTIBLE GAS MONITORING PROGRAM

The combustible gas monitoring program is provided in **Appendix F** and will be monitored quarterly with the results submitted to the Department.

If combustible gas levels exceed twenty-five percent of the lower explosive limit in structures (excluding gas control or recovery components) or the lower explosive limits at or beyond the property boundary, Trail Ridge Landfill will:

1. Immediately take all necessary steps to ensure protection of human health and notify the Department.
2. Within seven days of detection, submit to the Department for approval a remediation plan for the gas releases. The plan will describe the nature and extent of the problem and the proposed remedy. The remedy will be completed within 60 days of detection unless otherwise approved by the Department.

S. STORMWATER MANAGEMENT

1. Stormwater Handling

The stormwater management system was installed as part of the initial construction and is operated and maintained in accordance with the requirements of the DEP Solid Waste permit. The stormwater management system includes the wet detention basin as well as the swales, drainage ditches and culverts, discharge structures, downcomer pipes and other appurtenances as required. Pertinent features of the stormwater handling system include:

- a. Potentially contaminated stormwater will be segregated from clean stormwater and contaminated stormwater will not be discharged from the site;
- b. A 24-hour, 25-year rainfall event is detained on site;
- c. Stormwater is treated to meet the requirements of Rule 62-25, F.A.C.;
- d. The maximum discharge rate following a 25-year, 24-hour storm event does not exceed the pre-development discharge from this design storm.

Stormwater is routed through the internal ditch and culvert network to the wet detention basin for treatment. The discharge structure releases the stormwater at the control rate to a dispersion pond, which ultimately discharges to the adjacent wetlands.

The discharge structure was designed to effectively prevent floating materials from being released from the site.

2. Stormwater Treatment

a. Clean Stormwater

Stormwater runoff is treated in the existing wet detention basin. This basin is designed to treat 2.5 inches of runoff from the impervious surfaces and detain a 25-year, 24-hour storm event.

b. Other Stormwater

Stormwater which comes into contact with refuse will be segregated from the clean stormwater and will not be discharged from the site. This potentially contaminated water includes stormwater which falls on uncovered refuse or has otherwise made contact with refuse.

Temporary berms will be constructed in advance of the active fill face to collect stormwater which falls in the active area. This potentially contaminated stormwater will be pumped onto the working face or back into previously filled portions of the landfill.

3. Erosion Control

Stormwater terraces will be constructed on the side slopes of the completed landfill. These berms will route surface water flow to downcomer pipes buried in the final cover, and ultimately to the perimeter drainage ditch. This system of terraces and pipes will minimize erosion of the final cover. Vegetative cover will be established and maintained, as soon as practical, after finish contours are completed.

When erosion occurs, repair will begin within three days and the reason for the erosion will be evaluated to eliminate the source. Should the repair require more than 7 days, the Department will be notified as required by Rule 62-701.500(7)(j), F.A.C.

T. EQUIPMENT

Sufficient equipment (including three compactors, two dozers, an excavator, a loader, a grader, a water wagon, three trucks, a service truck and a tractor) is provided to ensure proper operation of the landfill and for spreading, compacting and covering waste. In addition, due to tractor trailers disposing at the landfill, a tipper has been added to the operations. Substitutions and additions to the equipment listed above may occur. However, equipment capable of performing comparably to the listed equipment will be maintained on site. In addition, equipment is available within 24 hours from other

company operations and distributors should any situation dictate the requirement for additional equipment.

The minimum equipment at the working face will include two compactors and one dozer. When the waste receipt exceeds 2600 tons per day, an additional compactor will be provided for spreading and/or compaction.

U. OPERATION FEATURES

The scale house and the administrative building both have telephones for routine emergency communications. Further, both facilities provide shelter, sanitary facilities and first aid equipment.

Dust originating from haul road surfaces will be controlled by periodic sweeping and/or watering of road surfaces, as required. Additionally, final cover will be vegetated as soon as practical after application of final cover, in order to minimize the blowing of dust on site.

In the event a hot load is received or a fire occurs at the landfill, the operator will extinguish the fire, as soon as possible. Hot loads will be discharged in an area on the landfill isolated from the current active face, spread out and covered with soil to extinguish the fire. The load will only be discharged onto an area that has a minimum of 12 inches of cover for separation from existing waste. After the load is extinguished, the waste will be moved to the active face for disposal or left in place and intermediate cover placed over it.

If a fire occurs within the working face, the operator will cease operations in the working face until the fire is extinguished. The operator will direct all waste disposal to another operational area that is a safe distance from the fire. The temporary disposal area shall not interfere with fire fighting equipment.

When a fire occurs at the landfill, the application of additional compacted cover will be utilized to cut off the flow of oxygen into the burning area. If this does not contain the fire, the affected area will be thoroughly wetted, excavated, and wetted again prior to reconstructing the cells. The chance of fire occurring at a properly run sanitary landfill is minimal.

For a subsurface fire that occurs outside the working face, the operator will cordon off the area and determine if the working face should be moved until the fire is extinguished. At no time shall the landfill place waste in a burning area.

Instruction in fire fighting procedures is routinely provided to site personnel, and portable fire extinguishers are located on each machine and vehicle. Local Fire Departments will be employed to assist the site personnel and equipment, if necessary.

Fire hydrants are located on site and are connected to the pump system, which draws water from the stormwater basin.

Trail Ridge Landfill, Inc. has developed an extensive program regarding safety and accident prevention. As part of this program, employees are trained in proper operation and emergency procedures. Telephone communication and First Aid equipment are provided at the facility. Operating vehicles are in compliance with current OSHA safety requirements, including caging and shields to protect operators. All appropriate equipment has back-up alarms and those alarms are maintained in good repair.

The problem of blowing litter will be minimized by limiting the active working face and using initial cover or tarpaulins over the active fill areas. Other methods, such as the utilization of casual labor pickers and portable fencing will be employed as required to contain loose paper and other wind-blown refuse during fill operations. Any loose paper or similar refuse blown outside the working area will be picked up on a regular basis.

Signage indicating the name of facility, operating authority, hours of operation and charges for disposal is located adjacent to the gate, prior to the ticket/scale house. Additional signs are placed on site to direct traffic. Warning signs are located in operating areas dealing with leachate and gas collection.

V. ROADS

The entrance road and ticket office/scale house area are paved. Beyond the paved area, all-weather perimeter roads are maintained to the active fill area, monitoring devices, and stormwater controls. Service and haul road construction and maintenance are coordinated with the landfill phasing and development.

W. RECORD KEEPING

The landfill operator will:

1. Keep records of all information used to develop or support the permit applications and any supplemental information pertaining to construction of the landfill throughout the design period. Records pertaining to the operation of the landfill will be kept for the design period of the landfill.
2. Retain records of all monitoring information, including calibration and maintenance records, all original chart recordings for continuous monitoring

instrumentation, and copies of all reports required by permit, for at least ten years. Background water quality records will be kept for the design period of the landfill.

3. Maintain an annual estimate of the remaining life and capacity in cubic yards of the existing, constructed landfill and remaining capacity and site life of other permitted areas not yet constructed. The annual estimate will be based on a summary of the heights, lengths, and widths of the solid waste disposal units. The estimate will be made and reported annually to the Department.
4. Records which are more than five years old and which are required to be retained may be archived, provided that the landfill operator can retrieve them for inspection within seven days.

X. WASTE TIRE PROCESSING

The landfill includes a waste tire processing facility. The permit application and operations plan for the waste tire processing are contained in **Appendix H**.

Y. INSPECTIONS

The operator will inspect all the active area on a weekly basis, the closed areas, at a minimum, on a monthly basis, and both areas after major storm events. Further, the operator will inspect the leachate collection system and gas collection system on a weekly basis. The checklist contained in Attachment B will be used for the inspections. Eroded areas will be repaired within 3 days of discovery and other insufficiencies will be repaired within 7 days.

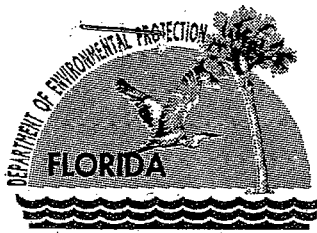
IX. WATER QUALITY MONITORING

A. SURFACE WATER MONITORING

A surface water monitoring plan was approved as part of the original permit as well as the permit renewal. A summary of the monitoring data and recommendation for continued monitoring is provided in **Appendix I**.

B. GROUNDWATER MONITORING

A groundwater monitoring plan was approved as part of the original permit as well as the permit renewal. A summary of the monitoring data and recommendation for continued monitoring is provided in **Appendix I**.



Jeb Bush
Governor

Department of Environmental Protection

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Colleen M. Castille
Secretary

August 17, 2005

Mr. Greg Mathes
General Manager
Trail Ridge Landfill Inc.
5110 U.S. Highway 301
Jacksonville, FL 32234

Re: Trail Ridge Landfill, Inc.
FDEP File Number 13493-013
Request for Additional Information
Duval County - Solid Waste

Dear Mr. Mathes:

The Department has reviewed your submittal, received July 22, 2005. The following review is enclosed:

Attachment 1, Review Memorandum, dated August 17, 2005, prepared by Julia Boesch

The information requested in this review is required for the Department to proceed with the processing of your permit application. Please provide the requested information by September 20, 2005. Action on the application will be delayed until the requested information is received in this office. Please reference the associated DEP file number in all written correspondence concerning this project.

If you have any comments concerning this matter, please contact Julia Boesch at the letterhead address or telephone number 904.807.3356.

Sincerely,

Emerson C. Raulerson, P.E.
Solid Waste Section

JB/ml

cc Francis Dayao, P.E., England, Thims, and Miller, Inc.

"More Protection, Less Process"

Printed on recycled paper.

DEP003638

Florida Department of Environmental Protection

Memorandum

TO: Files

THROUGH: Emerson C. Raulerson, P. E. *ECR*
Solid Waste Section

FROM: ⁴³Julia Boesch, Engineering Specialist
Solid Waste Section

DATE: August 17, 2005

SUBJECT: Trail Ridge Landfill
FDEP File Numbers 13493-013
First Request for Additional Information
Duval County- Solid Waste

The Department has reviewed your minor modification application, received on July 22, 2005, to modify the facility to utilize a tipper and to have two working faces, and requests the following information:

1. The Department understands you are proposing changes to only those portions of the provided "TRAIL RIDGE LANDFILL REVISED OPERATION PLAN," that are underlined or struck through. Therefore, the Department only reviewed those underlined or struck through portions. If this is incorrect and other portions were changed, please resubmit the plan with all changes either underlined in the case of additions, or struck through in the case of deletions. If this understanding is correct, please confirm. Finally, please note any changes not appropriately delineated shall not be misconstrued as having been approved.
2. In section VIII, OPERATION PLAN, subsection A, OPERATION PERSONNEL AND HOURS OF OPERATION, please revise the second paragraph to not only indicate that at least one trained spotter will be on-site at all times when the landfill receives waste, but rather indicate that at least one "trained" spotter will be present at the working face at all times waste is being accepted and/or spread out prior to disposal at that respective working face (FAC Rule 62-701.500(1)). For example, if waste is being accepted at both working faces at the same time, there will be at least one "trained" spotter at each working face, for a minimum of 2 trained spotters.

Also, please revise section F, Paragraph 5, to specify that at the tipper working face there will be at least one "trained" spotter while waste is being accepted and/or spread out prior to disposal.

Review Memorandum
August 17, 2005
Page two

3. Please specify the equipment and personnel, including heavy equipment operators, tipper operators, spotters, etc., that you will have present at the tipper working face while tipping and/or spreading waste. Please confirm that a spotter will inspect all loads not only as they are being tipped, but also as they are being spread. Please also indicate how you will use the heavy equipment, e.g., to spread and/or compact the waste.
4. Please propose a maximum size for each of the two working faces.



England-Thims & Miller, Inc.

ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

July 22, 2005

Ms. Mary C. Nogas, P.E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill
Application for Minor Permit Modification
FDEP Permit No. 0013493-010-SC
ET&M Project No. 98-34

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill, Inc., please find herewith four copies of the Application for a Permit to Construct Operate, Modify or Close a Solid Waste Management Facility. The permit application is for a minor permit modification to authorize Trail Ridge Landfill to operate a second working face and utilize a portable tipper. Please note that information relating to this request is underlined and limited to Sections F and T of the revised Operation Plan.

I would respectfully request that any questions regarding this application be directed to me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Francis Dayao
Francis Dayao, P. E.
Project Engineer

Attachments: Permit Application - 4 copies
Operation Plan - 4 copies
Product Information - 4 copies
Application Fee for a Minor Permit Modification - \$250.00

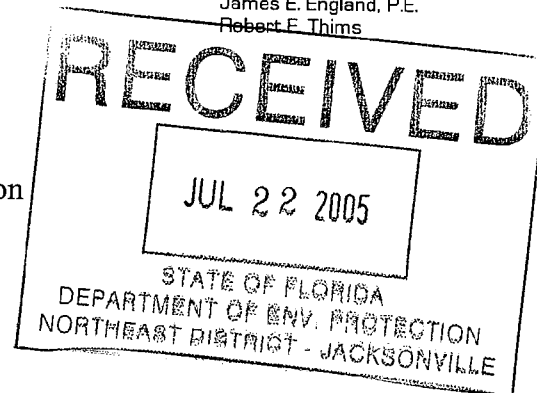
cc: Greg Mathes w/attachments

Principals

Douglas C. Miller, P.E., CEO
N. Hugh Mathews, P.E., President
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CFO, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Thomas N. Fallin, P.E., V.P.

Emeritus

James E. England, P.E.
Robert F. Thims



PERMIT APPLICATION
FOR
MINOR PERMIT MODIFICATION



Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

| |
|--|
| DEP Form # 62-701 900(1) |
| Form Title <u>Solid Waste Management Facility Permit</u> |
| Effective Date _____ |
| DEP Application No. _____ |
| (Filled by DEP) |

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

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

APPLICATION INSTRUCTIONS AND FORMS

Northwest District
160 Governmental Center
Pensacola, FL 32501-6794
850-495-6360

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

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

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

South District
2296 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-8875

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6800

REGfiles: 5/2001

DEP003643

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

NOTE: Portions of some parts may not be applicable.

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

III. Application Parts Required for Closure Permits

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

NOTE: Portions of some parts may not be applicable.

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.

Application Codes

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

VI. LISTING OF APPLICATION PARTS

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

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

A. GENERAL INFORMATION

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

☒ Disposal

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

☐ Non-Disposal

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

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

2. Type of application:

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

3. Classification of application:

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

4. Facility name: Trail Ridge Landfill

5. DEP ID number: GMS3116P02787 **County:** Duval

6. Facility location (main entrance): 5110 U.S. Hwy. 301

Baldwin, Florida 32234

7. Location coordinates:

Section: 18, 19
20, 21 Township: 3S Range: 23E

Latitude: 30 ° 14 ' 00 " Longitude: 82 ° 02 ' 30 "

8. Applicant name (operating authority): Trail Ridge Landfill, Inc.
Mailing address: 5110 U.S. Hwy. 301 Baldwin Florida 32234
Street or P. O. Box City State Zip
Contact person: Greg Mathes Telephone: (904) 289-9100
Title: Director of Landfill Operations
E-Mail address (if available): gmathes@wm.com
9. Authorized agent/Consultant: England, Thims & Miller, Inc.
Mailing address: 14775 St. Augustine Road, Jacksonville, Florida 32258
Street or P. O. Box City State Zip
Contact person: Juanitta Clem Telephone: (904) 642-8990
Title: Vice President
E-Mail address (if available): clemj@etminc.com
10. Landowner (if different than applicant): City of Jacksonville
Suite 200
Mailing address: 140 W. Monroe Street, Jacksonville, Florida 32202
Street or P. O. Box City State Zip
Contact person: Chris Pearson Telephone: (904) 630-4593
E-Mail address (if available): chrisp@coj.net
11. Cities, towns and areas to be served: City of Jacksonville (Duval County),
St. Johns County and Northeast Florida
12. Population to be served:
Current: 805,469 (2002 Duval) 132,829 (2002 St. Johns) Five-Year Projection: 845,580 (2007 Duval) 149,506 (2007 St. Johns)
13. Date site will be ready to be inspected for completion: N/A
14. Expected life of the facility: 14 years
15. Estimated costs:
Total Construction: \$ N/A Closing Costs: \$ 14.4 Million
16. Anticipated construction starting and completion dates:
From: On-Going To: On-Going
17. Expected volume or weight of waste to be received:
5,000 yds³/day * (peak) 3,900 tons/day gallons/day
(monthly average)

B. DISPOSAL FACILITY GENERAL INFORMATION

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

Minor permit modification to authorize facility to operate a second working face and to authorize the use of a landfill tipper.

2. Facility site supervisor: Greg Mathes

Title: Director of Landfill Operations Telephone: () 904-289-9100

gmathes@wm.com

E-Mail address (if available)

3. Disposal area: Total 148 acres; Used 148 acres; Available 0 acres

4. Weighing scales used: ☒ Yes ☐ No

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

6. Charge for waste received: N/A \$/yds³ 40.00 \$/ton

7. Surrounding land use, zoning:

☐ Residential
☒ Agricultural
☐ Commercial

☐ Industrial
☐ None
☒ Other Describe: Silviculture

8. Types of waste received:

| | |
|--|--|
| <input checked="" type="checkbox"/> Residential | <input checked="" type="checkbox"/> C & D debris |
| <input checked="" type="checkbox"/> Commercial | <input checked="" type="checkbox"/> Shredded/cut tires |
| <input type="checkbox"/> Incinerator/WTE ash | <input type="checkbox"/> Yard trash |
| <input type="checkbox"/> Treated biomedical | <input type="checkbox"/> Septic tank |
| <input checked="" type="checkbox"/> Water treatment sludge | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Air treatment sludge | <input checked="" type="checkbox"/> Industrial sludge |
| <input checked="" type="checkbox"/> Agricultural | <input checked="" type="checkbox"/> Domestic sludge |
| <input checked="" type="checkbox"/> Asbestos | |
| <input checked="" type="checkbox"/> Other Describe: <u>Non-Hazardous Special Waste</u> | |

9. Salvaging permitted: ☐ Yes ☒ No

10. Attendant: ☒ Yes ☐ No Trained operator: ☒ Yes ☐ No

11. Spotters: Yes ☒ No ☐ Number of spotters used: 1

12. Site located in: ☐ Floodplain ☐ Wetlands ☒ Other Upland Pines Flatwoods

13. Property recorded as a Disposal Site in County Land Records: ☐ Yes ☒ No
14. Days of operation: Monday - Saturday
15. Hours of operation: 5:00 A.M. - 10:00 P.M.*
16. Days Working Face covered: Daily with cover dirt or tarpaulin
17. Elevation of water table: varies Ft. (NGVD 1929)
18. Number of monitoring wells: 50 (37 wells monitored)
19. Number of surface monitoring points: 2
20. Gas controls used: ☒ Yes ☐ No Type controls: ☒ Active ☐ Passive
Gas flaring: ☒ Yes ☐ No Gas recovery: ☐ Yes ☒ No
21. Landfill unit liner type:
☐ Natural soils ☒ Double geomembrane
☐ Single clay liner ☐ Geomembrane & composite
☐ Single geomembrane ☐ Double composite
☐ Single composite ☐ None
☐ Slurry wall
☐ Other Describe: With Bentonite Mat and 6" clay subgrade
22. Leachate collection method:
☒ Collection pipes ☐ Sand layer
☒ Geonets ☐ Gravel layer
☐ Well points ☐ Interceptor trench
☐ Perimeter ditch ☐ None
☐ Other Describe: _____
23. Leachate storage method:
☒ Tanks
☐ Surface impoundments
☐ Other Describe: _____
24. Leachate treatment method:
☐ Oxidation ☐ Chemical treatment
☐ Secondary ☐ Settling
☐ Advanced
☐ None
☒ Other off-site Treatment at a City Wastewater Treatment Facility

* May vary dependent upon waste receipt.

25. Leachate disposal method:

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

26. For leachate discharged to surface waters:

Name and Class of receiving water: N/A

27. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment: wet detention

Name and Class of receiving water: Headwaters of Deep Creek - Class III

28. Environmental Resources Permit (ERP) number or status: Permitted as Solid

Waste Permit (DEP File Nos. 184444, 184445 and 184447). Pond was permitted, constructed and certified.

C. NON-DISPOSAL FACILITY GENERAL INFORMATION N/C

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

2. Facility site supervisor: _____

Title: _____ Telephone: (____) _____

E-Mail address (if available)

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

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

5. Site located in: ☐ Floodplain ☐ Wetlands ☐ Other _____

6. Days of operation: _____

7. Hours of operation: _____

8. Number of operating staff: _____

9. Expected useful life: _____ Years

10. Weighing scales used: ☐ Yes ☐ No

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

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

13. Charge for waste received: _____

14. Storm Water Collected: ☐ Yes ☐ No

Type of treatment: _____

Name and Class of receiving water: _____

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

16. Final residue produced:

_____ % of normal processing rate _____ % of maximum processing rate

_____ Tons/day _____ Tons/day

Disposed of at:

Facility name: _____ County: _____

17. Estimated operating costs: \$ _____
Total cost/ton: \$ _____ Net cost/ton: \$ _____
18. Provide a site plan, at a scale not greater than 200 feet to the inch, which shows the facility location and identifies the proposed waste and final residue storage areas, total acreage of the site, and any other features which are relevant to the prohibitions or location restrictions in Rule 62-701.300, FAC, such as water bodies or wetlands on or within 200 feet of the site, and potable water wells on or within 500 feet of the site.
19. Provide a description of how the waste and final residue will be managed to not be expected to cause violations of the Department's ground water, surface water or air standards or criteria.
20. Provide an estimate of the maximum amount of waste and final residue that will be store on-site.
21. Provide a detailed description of the technology use at the facility and the functions of all processing equipment that will be utilized. The descriptions shall explain the flow of waste and residue through all the proposed unit operations and shall include: (1) regular facility operations as they are expected to occur; (2) procedures for start up operations, and scheduled and unscheduled shut down operations; (3) potential safety hazards and control methods, including fire detection and control; (4) a description of any expected air emissions and wastewater discharges from the facility which may be potential pollution sources; (5) a description and usage rate of any chemical or biological additives that will be used in the process; and (6) process flow diagrams for the facility operations.
22. Provide a description of the loading, unloading and processing areas.
23. Provide a description of the leachate control system that will be used to prevent discharge of leachate to the environment and mixing of leachate with stormwater. Note: Ground water monitoring may be required for the facility depending on the method of leachate control used.
24. Provide an operation plan for the facility which includes: (1) a description of general facility operations, the number of personnel responsible for the operations including their respective job descriptions, and the types of equipment that will be used at the facility; (2) procedures to ensure any unauthorized wastes received at the site will be properly managed; (3) a contingency plan to cover operation interruptions and emergencies such as fires, explosions, or natural disasters; (4) procedures to ensure operational records needed for the facility will be adequately prepared and maintained; and (5) procedures to ensure that the wastes and final residue will be managed to not be expected to cause pollution.
25. Provide a closure plan that describes the procedures that will be implemented when the facility closes including: (1) estimated time to complete closure; (2) procedures for removing and properly managing or disposing of all wastes and final residues; (3) notification of the Department upon ceasing operations and completion of final closure.

D. PROHIBITIONS (62-701.300, FAC) N/C

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> | |
|----------|-----------------|------------|------------|---|
| — | — | — | — | 1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC) |
| — | — | — | — | 2. If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12) through (16), FAC, then document this qualification(s). |
| — | — | — | — | 3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC) |
| — | — | — | — | 4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC) |
| — | — | — | — | 5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC) |
| — | — | — | — | 6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC) |
| — | — | — | — | 7. Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC) |
| — | — | — | — | 8. Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC) |
| — | — | — | — | 9. Provide documentation that the facility will be in compliance with the special waste for waste-to-energy facilities restrictions; (62-701.300(9), FAC) |
| — | — | — | — | 10. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC) |
| — | — | — | — | 11. Provide documentation that the facility will be in compliance with the used oil restrictions; (62-701.300(11), FAC) |

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

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

| | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|---|-----------------|------------|------------|
| X | Attached | — | — |
| — | — | — | X |
| — | — | — | X |
| — | — | — | X |
| — | — | X | — |
| — | — | — | X |
| — | — | — | X |

PART E CONTINUED

d. Other necessary details to support the engineering report.

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)
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)
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)
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)
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)
15. Explain how the operator training requirements will be satisfied for the facility; (62-701.320(15), FAC)

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

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> | |
|----------|-----------------|------------|------------|---|
| — | — | — | — | 1. Vicinity map or aerial photograph no more than 1 year old and of appropriate scale showing land use and local zoning within one mile of the landfill and of sufficient scale to show all homes or other structures, water bodies, and roads other significant features of the vicinity. All significant features shall be labeled; (62-701.330(3)(a), FAC) |
| — | — | — | — | 2. Vicinity map or aerial photograph no more than 1 year old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(b), FAC) |
| — | — | — | — | 3. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(c), FAC) |
| — | — | — | — | a. Dimensions; |
| — | — | — | — | b. Locations of proposed and existing water quality monitoring wells; |
| — | — | — | — | c. Locations of soil borings; |
| — | — | — | — | d. Proposed plan of trenching or disposal areas; |
| — | — | — | — | e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets; |
| — | — | — | — | f. Any previously filled waste disposal areas; |
| — | — | — | — | g. Fencing or other measures to restrict access. |
| — | — | — | — | 4. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(3)(d), FAC): |
| — | — | — | — | a. Proposed fill areas; |
| — | — | — | — | b. Borrow areas; |
| — | — | — | — | c. Access roads; |
| — | — | — | — | d. Grades required for proper drainage; |
| — | — | — | — | e. Cross sections of lifts; |

| S | LOCATION | N/A | N/C |
|---|----------|-----|-----|
|---|----------|-----|-----|

PART F CONTINUED

- f. Special drainage devices if necessary;
- g. Fencing;
- h. Equipment facilities.

5. A report on the landfill describing the following;
(62-701.330(3) (e), FAC)

- a. The current and projected population and area to be served by the proposed site;
- b. The anticipated type, annual quantity, and source of solid waste, expressed in tons;
- c. The anticipated facility life;
- d. The source and type of cover material used for the landfill.

6. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160, FAC;
(62-701.330(3) (h), FAC)

7. Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill;
(62-701.330(3) (i), FAC)

.. GENERAL CRITERIA FOR LANDFILLS (62-701.340, FAC) N/A

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

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

| S | LOCATION | N/A | N/C |
|---|----------|-----|-----|
|---|----------|-----|-----|

1. Describe how the landfill shall be designed so that solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill; (62-701.400(2),FAC)

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

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

(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;

(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.

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

PART H CONTINUED

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 ($k > 10$ 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)

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

S LOCATION N/A N/C

PART H CONTINUED

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 nondestructive 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 geomembrane and procedures for lining system acceptance;
- (5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;
- (6) Geonet and geocomposite 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 material and any overlying materials;

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

- (1) Description of construction procedures including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| — | — | — | — |
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| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |

PART H CONTINUED

- (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, 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.

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

S LOCATION N/A N/C

PART H CONTINUED

5

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

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

| | | | |
|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
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| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

- (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 a upper and lower 60-mil minimum thickness geomembrane;
 - (b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec;
 - (c) Lower geomembrane placed on subbase ≥ 6 inches thick with $k \leq 1 \times 10^{-5}$ cm/sec or on an approved geosynthetic clay liner with $k \leq 1 \times 10^{-7}$ cm/sec;
 - (d) Design calculation to predict potential leakage through the upper liner;
 - (e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;
- (4) Description of procedures to prevent uplift, if applicable;
- (5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;
- (6) Procedures for controlling disease vectors and off-site odors.

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

PART H CONTINUED

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

7. Soil Liner CQA (62-701.400(8)FAC)

- a. Documentation that an adequate borrow source has been located with test results or description of the field exploration and laboratory testing program to define a suitable borrow source;
- b. Description of field test section construction and test methods to be implemented prior to liner installation;
- c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation.

8. Surface water management systems; (62-701.400(9),FAC)

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

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

- 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;

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

I. **HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(1), FAC) N/A**

| <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> | |
|-----------------|------------|------------|---|
| _____ | _____ | _____ | 1. Submit a hydrogeological investigation and site report including at least the following information: |
| _____ | _____ | _____ | a. Regional and site specific geology and hydrogeology; |
| _____ | _____ | _____ | b. Direction and rate of ground water and surface water flow including seasonal variations; |
| _____ | _____ | _____ | 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, and all community water supply wells within 1000 feet, of the waste storage and disposal areas; |
| _____ | _____ | _____ | 2. Report signed, sealed and dated by PE or PG. |

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

S LOCATION 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;
 - (2) Total and differential subgrade settlement analysis;
 - (3) Slope stability analysis;
 - e. Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;
 - 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.
2. Report signed, sealed and dated by PE or PG.

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

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

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

- | | | | | |
|----------|-----------------|-------|----------|--|
| _____ | _____ | _____ | <u>X</u> | 1. Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1),FAC) |
| _____ | _____ | _____ | | 2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC) |
| _____ | _____ | _____ | <u>X</u> | a. Designating responsible operating and maintenance personnel; |
| _____ | _____ | _____ | <u>X</u> | b. Contingency operations for emergencies; |
| _____ | _____ | _____ | <u>X</u> | c. Controlling types of waste received at the landfill; |
| _____ | _____ | _____ | <u>X</u> | d. Weighing incoming waste; |
| _____ | _____ | _____ | <u>X</u> | e. Vehicle traffic control and unloading; |
| <u>X</u> | <u>Attached</u> | _____ | | f. Method and sequence of filling waste; |
| _____ | _____ | _____ | <u>X</u> | g. Waste compaction and application of cover; |
| _____ | _____ | _____ | <u>X</u> | h. Operations of gas, leachate, and stormwater controls; |
| _____ | _____ | _____ | <u>X</u> | i. Water quality monitoring; |
| _____ | _____ | _____ | <u>X</u> | j. Maintaining and cleaning the leachate collection system; |
| _____ | _____ | _____ | <u>X</u> | 3. Provide a description of the landfill operation record to be used at the landfill; details as to location of where various operational records will be kept (i.e. FDEP permit, engineering drawings, water quality records, etc.) (62-701.500(3),FAC) |
| _____ | _____ | _____ | <u>X</u> | 4. Describe the waste records that will be compiled monthly and provided to the Department quarterly; (62-701.500(4),FAC) |
| _____ | _____ | _____ | <u>X</u> | 5. Describe methods of access control; (62-701.500(5),FAC) |
| _____ | _____ | _____ | <u>X</u> | 6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized wastes at the landfill; (62-701.500(6),FAC) |
| _____ | _____ | _____ | | 7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7),FAC) |
| _____ | _____ | _____ | <u>X</u> | a. Waste layer thickness and compaction frequencies; |

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

PART L CONTINUED

| | | | | | |
|----------|------------------|----------|----------|-----|---|
| — | — | — | <u>X</u> | f. | Procedures for recording quantities of leachate generated in gal/day and including this in the operating record; |
| — | — | — | <u>X</u> | g. | Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record; |
| — | — | — | <u>X</u> | h. | Procedures for water pressure cleaning or video inspecting leachate collection systems. |
| — | — | — | <u>X</u> | 9. | Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9), FAC) |
| — | — | <u>X</u> | — | 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) |
| — | — | — | — | 11. | Equipment and operation feature requirements; (62-701.500(11), FAC) |
| <u>X</u> | <u>Attached*</u> | — | — | a. | Sufficient equipment for excavating, spreading, compacting and covering waste; |
| — | — | — | — | b. | Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown; |
| — | — | — | — | c. | Communications equipment; |
| — | — | — | — | 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, disposal restrictions. |
| — | — | — | <u>X</u> | 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) |
| — | — | — | — | 13. | Additional record keeping and reporting requirements; (62-701.500(13), FAC) |

* A tipper has been added.

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |

PART L CONTINUED

- a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
- b. Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
- c. Maintain annual estimates of the remaining life of constructed landfills and of other permitted areas not yet constructed and submit this estimate annually to the Department;
- d. Procedures for archiving and retrieving records which are more than five year old.

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

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> | |
|----------|-----------------|------------|------------|--|
| — | — | — | — | 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; |
| — | — | — | — | 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) |
| — | — | — | — | 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) Well screen locations properly selected; |
| — | — | — | — | (7) Procedures for properly abandoning monitoring wells; |
| — | — | — | — | (8) Detailed description of detection sensors if proposed. |

[illegible]

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

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC)
2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC)
3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC)
4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC)
5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

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

1. Provide the design for a gas management systems that will (62-701.530(1), FAC):
 - a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;
 - b. Be designed for site-specific conditions;
 - c. Be designed to reduce gas pressure in the interior of the landfill;
 - d. Be designed to not interfere with the liner, leachate control system or final cover.
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):
3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC):
4. Landfill gas recovery facilities; (62-701.530(5), FAC):
 - a. Information required in Rules 62-701.320(7) and 62-701.330(3), FAC supplied;
 - b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
 - c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;
 - d. Description of procedures for condensate sampling, analyzing and data reporting provided;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

PART O CONTINUED

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

P. **LANDFILL FINAL CLOSURE REQUIREMENTS** (62-701.600, FAC) N/A

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

- a. Documentation that a written notice including a schedule for closure will be provided to the Department at least one year prior to final receipt of wastes;
- b. Notice to user requirements within 120 days of final receipt of wastes;
- c. Notice to public requirements within 10 days of final receipt of wastes.

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

- a. Application submitted to Department at least 90 days prior to final receipt of wastes;
- b. Closure plan shall include the following:
 - (1) Closure report;
 - (2) Closure design plan;
 - (3) Closure operation plan;
 - (4) Closure procedures;
 - (5) Plan for long term care;
 - (6) A demonstration that proof of financial responsibility for long term care will be provided.

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

- a. General information requirements;
 - (1) Identification of landfill;

LOCATIONN/AN/C

PART P CONTINUED

e. Development and implementation of the water quality monitoring plan required in Rule 62-701.510, FAC;

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

6. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(7), FAC)

Q. CLOSURE PROCEDURES (62-701.610,FAC) N/C

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

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

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

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

| | | | |
|-------|-------|-------|--|
| _____ | _____ | _____ | 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). |
| _____ | _____ | _____ | 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). |
| _____ | _____ | _____ | 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 permit modification. 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.

Date: 07/20/05

Date: 7-24-2018

**TRAIL RIDGE LANDFILL
REVISED OPERATION PLAN**

VIII. OPERATION PLAN

A. OPERATION PERSONNEL AND HOURS OF OPERATION

The District Manager is responsible for the overall operation of the Trail Ridge Landfill. The District Manager's responsibility is to assure that operations at the site are performed in accordance with the procedures outlined in this Operation Plan.

The District Manager, the Operations Manager and several operators are trained operators under Rule 62-701.320(15), F.A.C. At least one trained operator will be on-site during all times when the landfill receives waste. Further, at least one trained spotter will be at the working face at all times when the landfill receives waste.

1. Hours of Operation

- a. Normal Monday - Friday: 6:00 A.M. to 7:00 P.M.
- b. Normal Saturday: 6:00 A.M. to 3:00 P.M.
- c. Maximum Hours: 5:00 A.M. to 10:00 P.M.

During emergency situations, i.e., after a hurricane, the landfill may operate beyond the above hours. However, the Florida Department of Environmental Protection must be notified at the first available opportunity. The landfill will have lights with at least 3 candle-feet of illumination for operation during non-daylight hours.

2. Personnel

Personnel expected to be at the landfill includes:

| Personnel | Total |
|---------------------|-------|
| District Manager | 1 |
| Operations Manager | 1 |
| Equipment Operators | 8 |
| Mechanic | 1 |
| Labors/Spotters | 6 |
| Compliance Officer | 1 |
| Clerical | 3 |

On a normal basis, the personnel present during operating hours on the landfill will include a trained operator, a trained spotter, a material handler (laborer) and two equipment operators. During peak operating hours, the facility will have additional personnel, in accordance with the Personnel Matrix in Attachment A.

A work schedule is developed on a weekly basis to ensure that adequate staff is present on the landfill to handle the expected volume of waste.

B. CONTINGENCY OPERATIONS

The on-site entrance road is an all-weather road. The entrance road and administration area are paved. The pavement extends beyond the ticket office/scale house to the perimeter road around the landfill. The perimeter road is a stabilized limerock road. Haul roads beyond this point are maintained for adverse weather condition usage.

Emergency conditions at the facility may be created by a natural disaster (i.e., hurricane or tornado), flooding and fire. Waste is not normally delivered to the site during emergency conditions. The following procedures will be implemented with the imminent threat of a major storm.

1. Initial cover will be applied and compacted over all exposed waste.
2. All landfill equipment will be fueled and parked near natural wind screens, earthen mounds or tree areas.
3. All lightweight signs and equipment will be secured.
4. Work will begin in dry areas only when operations are resumed and waste materials will not be disposed in standing water.

The surface water management system will allow disposal operations to continue during periods of inclement weather. This will include the utilization of temporary berms and ditches to drain stormwater away from the active face.

In the event of a natural disaster in the area, operational hours will be extended as appropriate to meet the needs of the community and the Department will be notified.

In the event a hot load is received or a fire occurs at the landfill, the operator will extinguish the fire, as soon as possible. Hot loads will be discharged in an area on the landfill isolated from the current active face, spread out and covered with soil to extinguish the fire. The load will only be discharge onto an area that has a minimum of 12 inches of cover for separation from existing waste. After the load is extinguished, the waste will be moved to the active face for disposal or left in place with intermediate cover placed over it.

If a fire occurs within the working face, the operator will cease operations in the working face until the fire is extinguished. The operator will direct all waste disposal to another operational area that is a safe distance from the fire. The temporary disposal area shall not interfere with fire fighting equipment.

For a subsurface fire that occurs outside the working face, the operator will cordon off the area and determine if the working face should be moved until the fire is extinguished. At no time shall the landfill place waste in a burning area.

C. WASTE CONTROL

The waste stream will be monitored by the scale house operator, as each vehicle passes by the ticket office/scale house and then again at the working face by the spotter(s). In addition, the scale house is equipped with cameras/video monitoring systems, which record a time-coded picture of the vehicles entering the site.

There will be at least one trained spotter at the working face to observe the wastes disposed at all times the landfill receives waste. If any unacceptable wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the landfill owner/operator will promptly notify the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known for subsequent removal off site. If the waste is deemed hazardous, the area where the wastes are deposited will be immediately cordoned off from public access. If the generator or hauler cannot be identified, the landfill owner/operator will assure the cleanup, transportation, and disposal of the waste at an appropriate waste management facility.

In the event unacceptable waste is identified after the hauler has left the facility, the unacceptable waste shall be removed from the working face and placed in close proximity to the working face. At the end of the day, at a minimum, unacceptable waste such as batteries, oil filters, used oil, etc. will be removed from the landfill and stored at the existing concrete storage area adjacent to the waste tire storage and processing area. Within the storage area, the materials shall be placed in a single layer on pallets. (The water level in the storage area will be checked on a weekly basis and accumulated water will be pumped out and treated as leachate). Tires will be placed within the tire storage areas. White goods will be stored in a roll-off box. White goods and batteries will be taken off site by various recyclers on a quarterly basis at a minimum.

Only two types of biological waste are accepted for disposal, bodies of domestic animals and treated biomedical waste. Before the bodies of domestic animals are brought to the facility, the landfill will request information about the waste to determine if the animals were diseased. If the animals were not diseased, the bodies will be disposed within the working face and then covered immediately with either additional waste or initial cover. If the bodies of the domestic animal are from diseased animals, the bodies will be handled in accordance with Section 823.041(1), F.S. Treated biomedical waste will be disposed within the working face and then covered with either additional waste or initial cover.

D. WEIGHING WASTE

All incoming waste will be weighed and recorded on a daily basis at the on-site scales prior to disposal. The on-site scales include at least one scale for incoming vehicles and one scale for outgoing vehicles.

E. VEHICLE TRAFFIC CONTROL

Signs are provided to direct traffic to the disposal area. Further, spotters will direct incoming vehicles to their final disposal area.

F. METHOD AND SEQUENCE OF FILLING WASTE

The landfill will have two (2) working faces and ~~The working face~~ will be consistent with orderly traffic control, waste spreading, and compaction activities.

All solid waste will be spread in layers of approximately two feet in thickness and compacted to approximately one foot in thickness or as thin a layer as practical before the next layer is applied. Bulky materials, which are not easily compacted, will be worked into other materials as much as practical.

The first layer of waste placed above the liner and leachate collection system will be a minimum of four feet in compacted layer thickness and will consist of selected waste loads containing no large rigid objects that may damage the liner or leachate collection system. The placement of this initial waste will be supervised by a quality assurance monitor under the supervision of a Florida Registered professional Engineer.

Solid waste will be formed into cells to construct horizontal lifts. The working face of the cell and side grades will be at a slope no greater than three feet horizontal to one foot vertical rise. Lift depth will normally not exceed ten feet but may be deeper, depending on specific operations, daily volume of waste, width of working face, and good safety practices. In general, the initial fill will be placed from east to west in a 300-foot wide section that corresponds to the leachate collection area.

The first working face will be only wide enough to accommodate vehicles discharging the waste, and to minimize the exposed area and unnecessary use of cover material. The second working face will be located near the first working face and shall have a portable tipper used to unload solid waste trailers. The location of the portable tipper within the second working face will be determined by the landfill operator and will vary depending on the amount of solid waste being received and weather conditions. The second working face shall have a spotter whenever solid waste is being unloaded from the tipper.

G. WASTE COMPACTION AND APPLICATION OF COVER

Waste will be spread in layers of approximately two (2) feet in thickness and compacted to approximately one (1) foot in thickness or as thin a layer as practical before the next layer is applied. In general three to five passes with the compactor will be made on each layer of refuse.

Initial cover will be applied and maintained at the landfill in order to minimize any adverse environmental, safety, or health effects such as those resulting birds, unauthorized wastes, blowing litter, odors, disease vectors, or fires. The minimum frequency for applying initial cover is at the end of each work day. A 6" thick initial soil cover or an FDEP approved alternate daily cover may also be applied at the end of each operating day.

For those areas where additional solid waste will be deposited within 18 hours, a temporary cover, such as a tarpaulin, may be placed on the working face at the end of the work day and removed prior to deposition of additional waste. Additionally, waste tires that have been cut into sufficiently small parts may be utilized as initial cover on the landfill, in accordance with Rule 62-711.400(3)(a), F.A.C.

An intermediate cover, in addition to the six (6) inch initial cover, will be applied and maintained within seven (7) days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion. All or part of this intermediate cover may be removed before placing additional waste or installing final cover. The intermediate cover will consist of either a 12" compacted layer of soil or a 16" compacted layer of 50/50 mixture of soil/mulch. The mulch/soil mixture will be a fairly homogeneous mixture and the mulch will be ground into sufficiently small pieces (approx. 1" or less).

Final cover will be applied to a solid waste disposal unit once it has been filled to its design dimensions. The final cover including permanent vegetation will be placed over the entire surface of each completed solid waste disposal unit within 180 days after final waste placement. Solid waste disposal units, which are designated by phase, are shown on **Permit Drawings Nos. 14 and 15**.

H. OPERATION OF GAS, LEACHATE AND STORMWATER CONTROLS

1. Gas Collection System

The permanent gas collection system will be installed as each phase reaches its final contour in accordance with NSPS time frames. Further, the temporary gas collection system will be installed within five years of waste placement within a

phase. All gas extraction wells are designed and installed for connection to the active gas extraction system including collection lines, blowers and flare station.

The gas management system will be monitored on a monthly basis, which will include inspection of each well and calibration of the system, as needed. This monitoring will be documented.

2. Leachate

The primary leachate collection system consists of an 8" perforated HDPE collection pipe surrounded by an aggregate encasement, which is covered by a geotextile fabric. This collection system is located in a trench on top of the primary liner. Leachate is collected within each leachate sector (300' wide, typical) and directed to the collection system by a geonet drainage blanket located on top of the primary liner.

The primary leachate collection pipes pass through the leachate collection sump and terminate at the leachate vault on the east side of the landfill. The leachate collection sump consists of an 18" or 24" diameter HDPE pipe (riser pipe) surrounded by an aggregate sump. The riser pipe extends from the sump up to the leachate vault. The 8" HDPE leachate collection pipe discharges directly into the riser pipe as well as the sump. A small submersible pump is located inside each riser pipe. Level sensors in the riser pipe are used to control the pump, which removes leachate as it accumulates. The pumps are mounted on wheels and can easily be removed for maintenance.

The leachate pumps discharge into a leachate force main which transfer the leachate to the fiberglass storage tanks (20,000 gallons each). Each leachate pump discharges through a flow meter that is monitored daily, Monday through Friday. Therefore, each leachate sector can be monitored for leachate generation. The leachate collection system, including the storage tanks, is located over the liner system. The leachate storage tanks are visually inspected daily, Monday through Friday, by on-site personnel. A daily log (Monday through Friday) is kept outlining leachate generation and storage volumes. Leachate will be transported off-site by tanker at regular intervals based on leachate production. The leachate is transported to the Buckman Street Wastewater Treatment Facility for treatment and disposal.

The secondary (detection) leachate collection system is constructed and operates similarly to the primary system. The exceptions for this system include:

- a. Multiple layers of geonet were installed in lieu of the 8" HDPE perforated pipe.

- b. The secondary leachate collection system is piped to a separate storage tank (20,000 gallons).

3. Stormwater Treatment and Detention

The Stormwater Management System was designed in accordance with Rules 62-25, 40C-4 and 40C-42, F.A.C. for both treatment and peak flow attenuation. The stormwater treatment is provided by wet detention.

In general, a minimum of the first 1" of runoff will be treated prior to discharge. The treated stormwater will be discharged from the stormwater pump station via the wetland irrigation system.

4. Stormwater Management

a. Stormwater/Leachate Separation

Stormwater which falls on a section of the lined landfill, which is not currently being used for waste disposal, is separated from the leachate collection. This is accomplished by closing the valve upstream of the active phase and isolating this portion of the leachate collection system. A 36" high HDPE flap is welded to the liner at this phase line to prevent stormwater from flowing to the active area. A temporary pump-out is provided upstream of each valve and flap to pump uncontaminated stormwater from the inactive liner into the perimeter ditch. Any stormwater that comes in contact with waste will be considered leachate and handled in accordance with the Leachate Management Plan.

b. Stormwater Collection

All stormwater is collected and directed into the stormwater basin. The collection system includes terraces on the final landfill slopes in conjunction with downcomer piping. This system will control runoff and minimize erosion on the landfill side slopes. Details of this system are shown on the Permit Drawings. The existing wetland discharge of treated stormwater occurs through a 2" perforated spreader pipe. The wetland irrigation occurs adjacent to the stormwater management basin.

I. WATER QUALITY MONITORING

There is an existing Environmental Media Monitoring Plan (Groundwater, Surface Water, and Leachate) for this facility which is part of the current Solid Waste Permit and will continue a part of this renewal permit. This plan includes semi-annual monitoring of each media.

J. MAINTENANCE OF LEACHATE COLLECTION SYSTEM

Each leachate vault box (located at the east end of each leachate collection pipe) has a flow meter for the primary and secondary leachate collection system. These flow meters will be read daily, Monday thru Friday. If the reading in a flow meter is noticeably diminishing or otherwise reduced compared to the other flow meters and daily rainfall records, the flow meter will be checked for proper operation. Prior to the next permit renewal and in the event it is deemed necessary, the leachate collection system will be either videoed to determine if there is a clog or other reason for diminished flow or the leachate collection pipe will be flushed cleaned.

K. OPERATION RECORD

The operating record consists of all records, reports, analytical results, demonstrations, and notifications required by Chapter 62-701, F.A.C., any construction, operation, and closure plans and permits, including all modifications to those permits issued by the Department, Permit Document Plans, as well as training records required by Chapter 62-701.320(15), F.A.C. The record is considered part of the operation plan and will be kept with the plan at the landfill facility. The operating record will be available for inspection at reasonable times by Department personnel.

L. WASTE RECORDS

All solid waste will be weighed as it is received. Landfill operators will record, in tons per day, the amount of solid waste received and will estimate the amount of each waste listed below. Waste reports will be compiled monthly, and copies provided to the Department quarterly.

Types of waste received:

- a. Residential/household waste
- b. Commercial waste
- c. Treated biomedical waste
- d. Water treatment sludge
- e. Construction and demolition debris
- f. Agricultural waste
- g. Industrial waste
- h. Waste tires
- i. Asbestos
- j. Industrial sludge
- k. Domestic sludge
- l. Non-Hazardous special wastes

M. ACCESS CONTROL

Access to the landfill is provided by a paved entrance road from U.S. 301.

The entire site is fenced. Access is restricted by a gate near the entrance off U.S. 301 as well as a second gate closer to the site. All gates will be locked at night and whenever the landfill is closed. Public access and receipt of wastes will occur only when an attendant is on duty.

Traffic control on site is accomplished by signage and site personnel. Spotters will assist with traffic control at the working face by directing in-coming trucks to their final unloading area.

Access to areas restricted from traffic will be controlled by temporary earthen berms and barricades.

N. WASTE MONITORING

1. The operations will include a load checking program to detect and discourage attempts to dispose of unauthorized wastes at the landfill. The load checking program consists of the following minimum requirements:
 - a. The landfill operator will examine at least three random loads of solid waste delivered to the landfill each week. The waste collection vehicle drivers selected by the inspector will be directed to discharge their loads at a designated location within the landfill (near the working face). A detailed inspection of the discharged material will be made for any unauthorized wastes.
 - b. If unauthorized wastes are found, the facility will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identity of the waste sources.
2. Handling hazardous wastes.
 - a. If any regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the landfill owner/operator will promptly notify the Department by telephone, the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known. The area where the wastes are deposited will be immediately cordoned off from public access. If the generator or hauler cannot be identified, the landfill owner/operator will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

The operator will provide a report of the discovery of hazardous waste to the Department within seven days. The report will include the date of the incident, how the materials were discovered, transferred and transported, the disposal location, and if known, the source of the material. The material will be transferred and disposed off site in accordance with applicable local, state and federal regulations. The clean up will include determining the extent of contamination as well as the handling of materials that are contaminated by the hazardous waste.

- b. Subsequent shipments from sources found or suspected to be previously responsible for shipping regulated hazardous waste will be subject to precautionary measure prior to the solid waste management facility accepting wastes.

3. Recording inspection results. Information and observations resulting from each random inspection will be recorded in writing and retained at the landfill for at least three years. The recorded information will include: the date and time of the inspection; the names of the hauling firm and the driver of the vehicle; the vehicle license plate number; the source of the waste, as stated by the driver; and observations made by the inspector during the detailed inspection. The written record will be signed by the inspector.

O. WASTE HANDLING

All solid waste will be spread in layers of approximately two feet in thickness and compacted to approximately one foot in thickness or as thin a layer as practical before the next layer is applied. Bulky materials, which are not easily compacted, will be worked into other materials as much as practical.

The first layer of waste placed above the liner and leachate collection system will be a minimum of four feet in compacted layer thickness and will consist of selected waste loads containing no large rigid objects that may damage the liner or leachate collection system.

Solid waste will be formed into cells to construct horizontal lifts. The working face of the cell and side grades will be at a slope no greater than three feet horizontal to one foot vertical rise. Lift depth will normally not exceed ten feet but may be deeper, depending on specific operations, daily volume of waste, width of working face, and good safety practices.

The working face will be only wide enough to accommodate vehicles discharging the waste, and to minimize the exposed area and unnecessary use of cover material.

Initial cover will be applied and maintained at the landfill in order to minimize any adverse environmental, safety, or health effects such as those resulting birds, unauthorized wastes, blowing litter, odors, disease vectors, or fires. The minimum frequency for applying initial cover is at the end of each work day.

However, for those areas where additional solid waste will be deposited within 18 hours, a temporary cover, such as a tarpaulin, may be placed on the working face at the end of the work day and removed prior to deposition of additional waste. Additionally, waste tires that have been cut into sufficiently small parts may be utilized as initial cover on the landfill, in accordance with Rule 62-711.400(3)(a), F.A.C.

An intermediate cover, in addition to the initial cover, will be applied and maintained within seven days of cell completion if additional solid waste will not be deposited

within 180 days of cell completion. The landfill operator may remove all or part of the intermediate cover before placing additional waste or installing final cover. The intermediate cover will consist of either a 12" compacted layer of soil or a 16" compacted layer of 50/50 mixture of soil/mulch. The mulch/soil mixture will be a fairly homogeneous mixture and the mulch will be ground into sufficiently small pieces (approx. 1" or less).

Solid waste disposal units, which have been filled to design dimensions, will receive final cover within 180 days after attaining final elevation or in accordance with the closure plan for the landfill. The solid waste disposal units are shown on **Permit Drawing Nos. 14 and 15**.

Uncontrolled and unauthorized scavenging is not permitted at the landfill site. Salvaging is also not permitted.

A litter policing operation will be employed to keep litter from leaving the working area of the landfill. Litter outside the working area will be picked up within 24 hours. Some litter may be exposed through the initial cover, if it is in traffic areas and away from public view.

Erosion control measures will be employed to correct any erosion which exposes waste or causes malfunction of the stormwater management system. Erosion control measures will be implemented within three days of occurrences. If the erosion cannot be corrected within seven days of occurrence, the landfill operator will notify the Department and propose a corrective schedule.

P. LEACHATE MANAGEMENT

The landfill operator will monitor the leachate level in and record the flow from both the leachate collection (primary) and detention (secondary) sumps on a daily basis, Monday through Friday. The operator will maintain at least one backup pump on site or have access to a backup pump that can be installed within hours of discovery that a pump is not operating. The operator/owner will sample and analyze the leachate in accordance with the Environmental Media Monitoring Plan and will submit the results to the Department.

The operator will operate and maintain the leachate collection system to collect and remove leachate from the landfill. The leachate will be stored on site in the six 20,000-gallon leachate storage tanks and will be transported to Buckman Street Wastewater Treatment Facility for treatment and disposal.

The quantity of leachate collected by the leachate collection and removal system will be recorded (in gallons) on a daily basis, Monday through Friday. The amount of leachate transported off site will be recorded on a daily basis, Monday through Friday.

If the flow from any secondary leachate detection sump exceeds 4,492 gallons per day for one day, the Department will be notified within 24 hours and a follow-up report prepared within 7 days. The follow-up report will include a description and assessment of the situation, proposed remedial actions, the proposed remedial action and a schedule for commencing and completing the remediation.

A recording rain gauge is operated and maintained to record precipitation at the landfill. These precipitation records will be maintained and used to compare with leachate generation rates.

Q. LEACHATE SPILLAGE CONTROL PLAN

The leachate storage and pumping facilities are inside a concrete containment area, which will hold 140% of the volume of the storage tanks plus one foot of freeboard. This facility is constructed on top of the liner system. Therefore, the Leachate Spillage Control Plan is directed at those spills that would occur outside the containment area.

The Leachate Spillage Control Plan consists of four major elements; Training, Containment, Remediation and Notification as described below:

1. Training

The tanker driver and/or site personnel (the Attendant for the purposes of this subsection) will be trained to prevent spills. The Attendant will perform the following prior to loading the tanker truck:

- a. Inspect the tanker for signs of leakage.
- b. Verify all tanker discharge valves are closed.
- c. Verify the tanker is completely within the leachate loading area containment curbing.
- d. Verify the liquid level in the containment sump is at or below the discharge pipe.
- e. Verify the containment sump discharge gate valve is closed.
- f. Verify the leachate fill hose is securely fastened to the inlet port of the tanker.
- g. Verify the available tanker volume.

Upon completion of this inspection, the Attendant will begin the following fill sequence:

1. Operate the leachate loading pump for approximately five minutes or until 500 gallons of leachate has been pumped and then discontinue pumping.
 2. Inspect the tanker, fill hose and pumping system for leakage.
 3. Upon verification that no spilling or leaking has occurred, restart pumping.
 4. Continuously monitor the tanker fill operations.
 5. Monitor the leachate flow meter until approximately 95% of the available tanker volume has been filled.
 6. Discontinue filling operations and remove fill hose.
 7. Perform a final inspection of tanker and tanker fill area.
2. Containment

If a spill occurs, the Attendant will notify the District Manager of the spill and request assistance. The Attendant will institute the following containment sequence:

- a. Cease pumping.
 - b. Place sandbags around drainage structures down slope from the loading area to prevent any spillage from entering the drainage system. (NOTE: The first 500 gallons of spillage inside the containment curb will drain naturally into the 500-gallon containment sump.)
 - c. Create an earthen berm around the spill with on-site sands taken from the daily cover stockpile.
3. Remediation

After the spill has been securely contained, the following cleanup will begin:

- a. Pump the leachate in the containment sump into the on-site storage tanks.
 - b. Spread absorbent sands across all areas in contact with the spill.
 - c. Remove the contaminated sand to the landfill disposal area.
4. Notification

In the event of a leachate spill, the Department will be notified.

The outlined Spillage Control Plan focuses primarily on a spill at the tanker truck loading area. However, if a leachate spill is discovered at any location on site, the pertinent containment, remediation and notification procedures described above will be implemented.

R. COMBUSTIBLE GAS MONITORING PROGRAM

The combustible gas monitoring program is provided in **Appendix F** and will be monitored quarterly with the results submitted to the Department.

If combustible gas levels exceed twenty-five percent of the lower explosive limit in structures (excluding gas control or recovery components) or the lower explosive limits at or beyond the property boundary, Trail Ridge Landfill will:

1. Immediately take all necessary steps to ensure protection of human health and notify the Department.
2. Within seven days of detection, submit to the Department for approval a remediation plan for the gas releases. The plan will describe the nature and extent of the problem and the proposed remedy. The remedy will be completed within 60 days of detection unless otherwise approved by the Department.

S. STORMWATER MANAGEMENT

1. Stormwater Handling

The stormwater management system was installed as part of the initial construction and is operated and maintained in accordance with the requirements of the DEP Solid Waste permit. The stormwater management system includes the wet detention basin as well as the swales, drainage ditches and culverts, discharge structures, downcomer pipes and other appurtenances as required. Pertinent features of the stormwater handling system include:

- a. Potentially contaminated stormwater will be segregated from clean stormwater and contaminated stormwater will not be discharged from the site;
- b. A 24-hour, 25-year rainfall event is detained on site;
- c. Stormwater is treated to meet the requirements of Rule 62-25, F.A.C.;
- d. The maximum discharge rate following a 25-year, 24-hour storm event does not exceed the pre-development discharge from this design storm.

Stormwater is routed through the internal ditch and culvert network to the wet detention basin for treatment. The discharge structure releases the stormwater at the control rate to a dispersion pond, which ultimately discharges to the adjacent wetlands.

The discharge structure was designed to effectively prevent floating materials from being released from the site.

2. Stormwater Treatment

a. Clean Stormwater

Stormwater runoff is treated in the existing wet detention basin. This basin is designed to treat 2.5 inches of runoff from the impervious surfaces and detain a 25-year, 24-hour storm event.

b. Other Stormwater

Stormwater which comes into contact with refuse will be segregated from the clean stormwater and will not be discharged from the site. This potentially contaminated water includes stormwater which falls on uncovered refuse or has otherwise made contact with refuse.

Temporary berms will be constructed in advance of the active fill face to collect stormwater which falls in the active area. This potentially contaminated stormwater will be pumped onto the working face or back into previously filled portions of the landfill.

3. Erosion Control

Stormwater terraces will be constructed on the side slopes of the completed landfill. These berms will route surface water flow to downcomer pipes buried in the final cover, and ultimately to the perimeter drainage ditch. This system of terraces and pipes will minimize erosion of the final cover. Vegetative cover will be established and maintained, as soon as practical, after finish contours are completed.

When erosion occurs, repair will begin within three days and the reason for the erosion will be evaluated to eliminate the source. Should the repair require more than 7 days, the Department will be notified as required by Rule 62-701.500(7)(j), F.A.C.

T. EQUIPMENT

Sufficient equipment (including three compactors, two dozers, an excavator, a loader, a grader, a water wagon, three trucks, a service truck and a tractor) is provided to ensure proper operation of the landfill and for spreading, compacting and covering waste. In addition, due to tractor trailers disposing at the landfill, a tipper has been added to the operations. Substitutions and additions to the equipment listed above may occur. However, equipment capable of performing comparably to the listed equipment will be maintained on site. In addition, equipment is available within 24 hours from other

company operations and distributors should any situation dictate the requirement for additional equipment.

The minimum equipment at the working face will include two compactors and one dozer. When the waste receipt exceeds 2600 tons per day, an additional compactor will be provided for spreading and/or compaction.

U. OPERATION FEATURES

The scale house and the administrative building both have telephones for routine emergency communications. Further, both facilities provide shelter, sanitary facilities and first aid equipment.

Dust originating from haul road surfaces will be controlled by periodic sweeping and/or watering of road surfaces, as required. Additionally, final cover will be vegetated as soon as practical after application of final cover, in order to minimize the blowing of dust on site.

In the event a hot load is received or a fire occurs at the landfill, the operator will extinguish the fire, as soon as possible. Hot loads will be discharged in an area on the landfill isolated from the current active face, spread out and covered with soil to extinguish the fire. The load will only be discharged onto an area that has a minimum of 12 inches of cover for separation from existing waste. After the load is extinguished, the waste will be moved to the active face for disposal or left in place and intermediate cover placed over it.

If a fire occurs within the working face, the operator will cease operations in the working face until the fire is extinguished. The operator will direct all waste disposal to another operational area that is a safe distance from the fire. The temporary disposal area shall not interfere with fire fighting equipment.

When a fire occurs at the landfill, the application of additional compacted cover will be utilized to cut off the flow of oxygen into the burning area. If this does not contain the fire, the affected area will be thoroughly wetted, excavated, and wetted again prior to reconstructing the cells. The chance of fire occurring at a properly run sanitary landfill is minimal.

For a subsurface fire that occurs outside the working face, the operator will cordon off the area and determine if the working face should be moved until the fire is extinguished. At no time shall the landfill place waste in a burning area.

instrumentation, and copies of all reports required by permit, for at least ten years. Background water quality records will be kept for the design period of the landfill.

3. Maintain an annual estimate of the remaining life and capacity in cubic yards of the existing, constructed landfill and remaining capacity and site life of other permitted areas not yet constructed. The annual estimate will be based on a summary of the heights, lengths, and widths of the solid waste disposal units. The estimate will be made and reported annually to the Department.
4. Records which are more than five years old and which are required to be retained may be archived, provided that the landfill operator can retrieve them for inspection within seven days.

X. WASTE TIRE PROCESSING

The landfill includes a waste tire processing facility. The permit application and operations plan for the waste tire processing are contained in **Appendix H**.

Y. INSPECTIONS

The operator will inspect all the active area on a weekly basis, the closed areas, at a minimum, on a monthly basis, and both areas after major storm events. Further, the operator will inspect the leachate collection system and gas collection system on a weekly basis. The checklist contained in Attachment B will be used for the inspections. Eroded areas will be repaired within 3 days of discovery and other insufficiencies will be repaired within 7 days.

IX. WATER QUALITY MONITORING

A. SURFACE WATER MONITORING

A surface water monitoring plan was approved as part of the original permit as well as the permit renewal. A summary of the monitoring data and recommendation for continued monitoring is provided in **Appendix I**.

B. GROUNDWATER MONITORING

A groundwater monitoring plan was approved as part of the original permit as well as the permit renewal. A summary of the monitoring data and recommendation for continued monitoring is provided in **Appendix I**.

PORTABLE TIPPER



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TIPPERS

LOW PROFILE LANDFILL

The patented Low Profile Portable is the most advanced tipper available today. Its compact design allows the tipper to be moved with a common fifth wheel equipped tractor. With an optional dolly, the tipper can be towed by most landfill-based moving equipment.

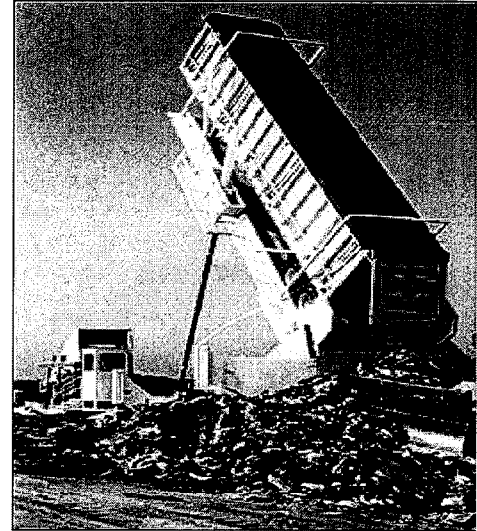
The average time required to move and reset a Low Profile tipper within a landfill is less than 30 minutes. As a result, it provides an excellent option when the working face is large enough to require frequent tipper relocation. This in turn makes it easier to unload waste close to the working face.

OPTIONAL SELF-CLEANING DECK

The new patented Self-Cleaning Deck saves time and money by preventing waste from accumulating on or under the Tipper's deck.

Each time the deck is elevated in the tipping cycle, the Self-Cleaning Deck causes material spilled during unloading to pass through the rear chute. This optional feature eliminates the costly and time-consuming task of cleaning material from the deck or from around the running gear of your Tipper.

This feature is available on all new Columbia "Low-Profile" Landfill Tippers and also may be installed in the field as an upgrade to your existing unit.



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U.S. Patents #5080548, #5344271, #5458451 & #6579054
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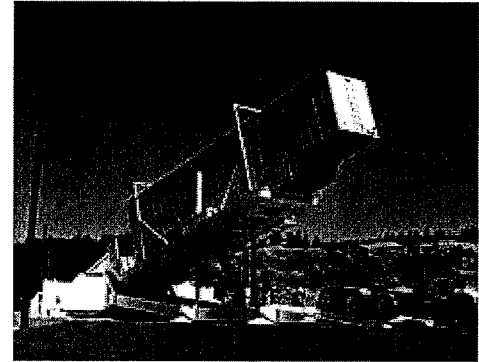
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TIPPERS

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Columbia's Portable Tippers are quickly becoming the preferred method of unloading most bulk commodities across the country and abroad. Because of our attention to detail and quality, in over 20 years of operation, our tippers have proven to be safe, reliable and efficient: No reported safety issues, an average of less than 1 downtime hour per 1000 of operation, and an approximately 3 minute cycle time which allows a 10 to 12 trailer per hour throughput. Additionally, using tippers to discharge the load means that you no longer need to operate and maintain heavier and more expensive self-unloading trailers. The resulting weight savings allows you to transport larger payloads.

The average time required to move and reset a Low Profile Portable tipper is less than 4 hours.



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OTHER TIPPERS:

LOW PROFILE LANDFILL

FIXED INSTALLATION

U.S. Patents #5080548, #5344271, #5458451 & #6579054
Canadian Patent #2046194 (1995)

