



*Commonwealth of Virginia*

***VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY***

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**VIRGINIA WASTE MANAGEMENT BOARD  
ORDER BY CONSENT  
ISSUED TO  
WASTE MANAGEMENT ENTITIES, HOST TERMINALS, LLC, and  
VANE BROTHERS MARINE SAFETY & SERVICES, INC.**

**SECTION A: PURPOSE**

This is a Consent Order issued under the authority of Va. Code § 10.1-1402(18), between the Virginia Department of Environmental Quality (“DEQ”), pursuant to authority delegated by the Virginia Waste Management Board (“Board”), and Waste Management, Inc., Host Terminals, LLC, Vane Brothers Marine Safety & Services, Inc., for the purpose of allowing offsite transportation of leachate. This Order supersedes and terminates the Emergency Order by Consent issued by the Board to Atlantic Waste Disposal, Inc., T. Parker Host, Inc., Tri-Port Terminals, Inc., and Vane Brothers Marine Safety & Services, Inc., on December 16, 2015, and the Consent Order issued by the Board to Waste Management, Inc., Moran Towing Corporation and Host Terminals, Inc. on September 12, 2017.

**SECTION B: DEFINITIONS**

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. “2020 Order Parties” means Waste Management, Inc., Vane Brothers Marine Safety & Services, Inc., and Host Terminals, LLC, collectively, and its affiliates, partners, subsidiaries, and parents. The 2020 Order Parties are certified to do business in Virginia.
2. “Board” means the Virginia Waste Management Board, a permanent citizens’ board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and -1401.
3. “Department” or “DEQ” means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.

4. “Director” means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
5. “Leachate” means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials from such waste. Leachate and any material with which it is mixed is solid waste; except that leachate that is pumped from a collection tank for transportation to disposal in an off-site facility is regulated as septage, leachate discharged into a waste water collection system is regulated as industrial waste water and leachate that has contaminated groundwater is regulated as contaminated groundwater.
6. “Leachate Management Plan” means the plan attached to this Order as Appendix A.
7. “Order” means this document, also known as a “Consent Order” or “Order by Consent.”
8. “PVSC” means the Passaic Valley Sewage Commission wastewater treatment plant located in Newark, New Jersey.
9. “Regulations” or “VSWMR” means the Virginia Solid Waste Management Regulations, 9 VAC 20-81-10 *et seq.*
10. “Waste Management Entities” means Atlantic Waste Disposal Inc., Waste Management of Virginia, Inc., King George Landfill, Inc., Waste Management Disposal Services of Virginia, Inc. and USA Waste of Virginia Landfill, Inc., collectively, and its affiliates, partners, subsidiaries, and parents. Waste Management entities are certified to do business in Virginia.
11. “Va. Code” means the Code of Virginia (1950), as amended.
12. “VAC” means the Virginia Administrative Code.
13. “Virginia Waste Management Act” means Chapter 14 (§ 10.1-1400 *et seq.*) of Title 10.1 of the Va. Code. Article 2 (Va. Code §§ 10.1-1408.1 through -1413.1) of the Virginia Waste Management Act addresses Solid Waste Management.

### **SECTION C: FINDINGS OF FACT AND CONCLUSIONS OF LAW**

1. The Waste Management Entities, which are corporate entities and are part of the Waste Management family of companies, (collectively “Waste Management”), operate six landfills throughout the Commonwealth of Virginia. Five of these facilities have historically used an offsite industrial pre-treatment facility to manage and discharge leachate, a substance within the jurisdiction of the Board, to a permitted waste-water treatment plant.

2. Beginning in October, 2015, the industrial pre-treatment facility was no longer able to process leachate for discharge to the treatment plant, leading to an exigency in leachate management, particularly for the “Atlantic landfill” (Solid Waste Permit 562), operated by

Atlantic Waste Disposal, Inc. Although short-term measures were identified and employed by Atlantic, no durable, local option was available for the excess volume of leachate.

3. Atlantic Waste Disposal, Inc. (“Atlantic Waste”), constructed a leachate treatment facility at the landfill and began treating leachate on October 6, 2017. The initial phase of the treatment plant was completed at 0.2 Million Gallons per Day (“MGD”) and it is currently in the process of upgrading the plant to 0.5 MGD and anticipate completion by the end of 2020. The leachate treatment facility is treating leachate from the Waste Management Entities’ landfills and third party facilities, subject to the conditions of its permit.

4. On December 16, 2015, the Virginia Waste Management Board issued an Emergency Order by Consent (“Emergency Order”), to Atlantic Waste Disposal, Inc., T. Parker Host, Inc., Tri-Port Terminals, Inc. (subsequent to this Emergency Order, Tri-Port Terminals, Inc., was sold to Host Terminals, Inc., and renamed Tidewater Tank Terminals), and Vane Brothers Marine Safety & Services, Inc. (“Emergency Order Parties”), for the purpose of allowing emergency offsite transportation of leachate. Pursuant to this Emergency Order, leachate was transported via a double hulled, ocean going barge to the PVSC. The PVSC wastewater plant is authorized to receive and treat the leachate.

5. On September 20, 2016, the Board entered into an Order by Consent (“2016 Order”) with Atlantic Waste, for violations of the Waste Management Act unrelated to the offsite leachate transportation and disposal. This Order further memorialized the offsite leachate transport and disposal by requiring Atlantic Waste, in Appendix A(4), to remove no less than 3,500,000 million gallons of leachate and contaminated stormwater per week.

6. Ultimately, a regulatory variance, memorializing this leachate transportation, was issued to distinguish container standards developed for shipping solid waste in water-tight containers that are tested and certified, from double hulled A 1, ocean manned barges designed to carry oil, that are being used to transport the leachate. The Emergency Order Parties verified that the barges were protective of human health and are designed and constructed to meet stricter and more appropriate standards than those contained in the Regulations. The variance continued until December 31, 2016, and was extended pursuant to its terms.

7. On September 12, 2017, the Board entered into an Order by Consent (“2017 Order”) with the Waste Management Entities., Host Terminals Inc., and Moran Towing Corporation (“2017 Order Parties”), for the purpose of allowing offsite transportation of leachate. The 2017 Order provided longer term authorization to transport leachate via barge through an appropriate, enforceable mechanism capturing the necessary requirements consistent with applicable provisions. Additionally, the 2017 Order terminated the regulatory variance, and superceded and canceled the Appendix A(4) requirement in the 2016 Order. The 2016 Order was ultimately terminated on May 21, 2019, as the requirements of the 2016 Order had been satisfied.

8. On March 20, 2020, Waste Management contacted DEQ stating that due to a planned flood wall construction at the PVSC dock, a new dock would not be able to accommodate the existing 3 million gallon barge. At PVSC operator’s request, Waste

Management has sourced a smaller barge and tug (2 million gallons) through their existing provider, Host Terminals LLC, to facilitate the continued disposal of offsite leachate. Host Terminals LLC, has contracted Vane Brothers Marine Safety & Services, Inc., who owns the smaller barge that complies with the relevant criteria described in the Emergency Order, to replace Moran Towing Corporation, thus necessitating a new consent order.

9. DEQ is in the process of executing the Financial Assurance (“FA”) mechanism memorializing that Host Terminals, LLC, and Vane Brothers Marine Safety & Services, Inc. has the appropriate Financial Assurance in place for the 2 million gallon barge. The FA mechanism will be executed prior to execution of this Order.

10. An imminent risk of overflow and discharge of leachate is present at the facilities owned by the Waste Management Entities. In order to mitigate the risk and promote the long-term management of excess leachate, Waste Management has identified the PVSC wastewater treatment plant in to manage the leachate. Exercising this management option necessitates the barging of the leachate for transport from the Tidewater Tank Terminals facility in Chesapeake, Virginia, to PVSC by way of an ocean route. The double hulled barge is chartered from Vane Brothers Marine Safety & Services, Inc., and will travel from Tidewater Tank Terminals northbound on the Elizabeth River to Norfolk harbor, and then travel northward on the Atlantic Ocean to its current treatment destination at PVSC on Newark Bay. The method of transport and management of the leachate at PVSC is more particularly described in the Leachate Management and Transportation Plan and incorporated to this Order by reference as Appendix C.

11. Based on a review of files, and inspections since the Emergency Order, DEQ has observed that an elevated risk of overflow and discharge of leachate is present at the facilities owned by the Waste Management Entities.

12. Va. Code § 10.1-1402(18) states that “The Board shall carry out the purposes and provisions of this chapter and compatible provisions of federal acts and is authorized to:… make separate orders and regulations it deems necessary to meet any emergency to protect public health, natural resources and the environment from the release or imminent threat of release of waste.”

13. Therefore, the Board concludes that pursuant to Va. Code § 10.1-1402(18), Waste Management, Inc., Vane Brothers Marine Safety & Services, Inc., and Host Terminals, LLC (“2020 Parties”), may transport leachate offsite, pursuant to the provisions of this Order, to reduce the elevated risk of overflow and discharge of leachate.

#### **SECTION D: AGREEMENT AND ORDER**

Accordingly, by virtue of the authority granted it in Va. Code § 10.1-1402, the Board orders the 2020 Order Parties, and the 2020 Order Parties agree:

1. Perform the actions described in Appendix A, B, and C, of this Order.

2. No other solid waste is authorized to be managed via double hulled barge other than leachate.
3. Transportation of leachate shall be in compliance with the Leachate Management Plan, dated November 2016 (Appendix C of this Order), submitted by the Waste Management Entities. Any substantive changes in the Leachate Management Plan shall be with Department notification and approval.
4. Management of leachate via double hulled barge shall only occur at the Tidewater Tank Terminals Facility from a Waste Management Party's facility that has a Permit or Permit by Rule in accordance with 9 VAC 20-170 *et. seq.*
5. Management of leachate via barge shall only occur in double hulled barges that have been certified by the American Bureau of Shipping as "Maltese Cross, A1 Oil Tank Class" or such other similar American Bureau of Shipping Standard that may exist from time to time, and that carry a current U.S. Coast Guard Certificate of Inspection.
6. This Order shall provide coverage until September 12, 2022, unless otherwise amended or terminated as provided for in the provisions of this Order.
7. Both the Board and the 2020 Order Parties understand and agree that this Order supersedes and terminates the Consent Orders issued by the Board to the Emergency Order Parties on December 16, 2015, and to the 2017 Order Parties on September 12, 2017.

#### **SECTION E: ADMINISTRATIVE PROVISIONS**

1. The Board may modify, rewrite, or amend this Order with the consent of the 2020 Order Parties for good cause shown by the 2020 Order Parties, or on their own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, the 2020 Order Parties admit the jurisdictional allegations, findings of fact, and conclusions of law contained herein.
4. The 2020 Order Parties consent to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
5. The 2020 Order Parties declare they have received fair and due process under the Administrative Process Act and the Virginia Waste Management Act and they waive the right to any hearing or other administrative proceeding authorized or required by law or

regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.

6. Failure by the 2020 Order Parties to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. The 2020 Order Parties shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. The 2020 Order Parties shall demonstrate that such circumstances were beyond their control and not due to a lack of good faith or diligence on their part. The 2020 Order Parties shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
  - a. the reasons for the delay or noncompliance;
  - b. the projected duration of any such delay or noncompliance;
  - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
  - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and the 2020 Order Parties. Nevertheless, the 2020 Order Parties agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:

- a. The Director or his designee terminates the Order after the 2020 Order Parties have completed all of the requirements of the Order;
- b. The 2020 Order Parties petition the Director or his designee to terminate the Order after they have completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
- c. the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to the 2020 Order Parties.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the 2020 Order Parties from their obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by the 2020 Order Parties and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The undersigned representatives of the 2020 Order Parties certify that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind the 2020 Order Parties to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of the 2020 Order Parties.
14. This Order constitutes the entire agreement and understanding of the parties concerning transport leachate offsite identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.
15. By their signatures below, the 2020 Order Parties voluntarily agree to the issuance of this Order.

And it is so ORDERED this 6 day of MAY, 2020

  
\_\_\_\_\_  
Craig R. Nicol, Regional Director  
Department of Environmental Quality

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Waste Management Inc. voluntarily agrees to the issuance of this Order.

Date: 3/30/2020 By: [Signature], Director of Proposal Operations  
(Person) (Title)  
Waste Management Inc.

Commonwealth of Virginia  
City/County of Norfolk

The foregoing document was signed and acknowledged before me this 30 day of March, 2020, by Scott Thacker who is Director of Proposal Operations of Waste Management Inc., on behalf of the corporation.

[Signature] Christie Murden  
Notary Public

7810501  
Registration No.

My commission expires: July 31, 2023

Notary seal:



Vane Brothers Marine Safety & Services, Inc. voluntarily agrees to the issuance of this Order.

Date: 3/30/20 By: Brendan Mac Gillivray VICE-PRESIDENT  
(Person) (Title)  
Vane Brothers Marine Safety & Services, Inc.

State of Maryland  
City/County of Baltimore

The foregoing document was signed and acknowledged before me this 30<sup>th</sup> day of March, 2020, by Brendan Mac Gillivray who is Vice President of Vane Brothers Marine Safety & Services, Inc., on behalf of the corporation.

Judith P. Robbins  
Notary Public

Registration No.

My commission expires: July 19, 2022

Notary seal:

Host Terminals, Inc. voluntarily agrees to the issuance of this Order.

Date: 3/30/20 By: Kelsey Host Sarcone, authorized signer  
(Person) (Title)  
Host Terminals, Inc.  
UC

Commonwealth of Virginia  
City/County of Norfolk

The foregoing document was signed and acknowledged before me this 30 day of March, 2020, by Kelsey Host Sarcone who is Authorized Signer of Host Terminals, Inc., on behalf of the corporation.

Christine Murden  
Notary Public

7810501  
Registration No.

My commission expires: July 31, 2023

Notary seal:



## **APPENDIX A SCHEDULE OF COMPLIANCE**

1. Upon the Waste Management Entities signing of this Order, the Waste Management Entities shall remove no fewer than 3,500,000 million gallons of Leachate and contaminated stormwater per month via off-site transportation or on-site treatment. The Waste Management Entities shall record Leachate and stormwater data in monthly amounts, segregated into volumes based on off-site transportation and on-site treatment, and keep the records on site for review by Department staff during Landfill inspections.
2. The Waste Management Entities may submit a written request to remove via off-site transportation or on-site treatment fewer than 3,500,000 million gallons of Leachate and contaminated stormwater per month provided the requests contains sufficient justification for the need for the reduction. This request shall be in writing and specify the revised gallons per month of leachate to be removed. DEQ shall respond to such written request within five working days of the request. The Waste Management Entities shall not remove leachate in lesser volumes than specified in paragraph 1 prior to receiving authorization from the DEQ unless the sole reason for not removing the specified volume threshold is a lack of Leachate. This reduction shall be memorialized and incorporated by reference as Appendix B.
3. By January 1, 2022, the Waste Management Entities shall submit a plan for cessation (“Plan”) of offsite leachate transport via barge to DEQ for review and approval. The Plan will become enforceable, subject to the terms of this Order, upon DEQ approval.

**APPENDIX B**  
**Minimum Monthly Leachate Removal**

<b>Minimum Monthly Leachate Removal (gallons)</b>	<b>Revised Monthly Leachate Removal (gallons)</b>	<b>DEQ Approval Date</b>
12,000,000	6,600,000	September 12, 2017
6,600,000	3,500,000	June 1, 2018

**APPENDIX C  
LEACHATE MANAGEMENT AND TRANSPORTATION PLAN**

**LEACHATE MANAGEMENT PLAN**



**Virginia Landfills**

**March 2020**



**LEACHATE MANAGEMENT PLAN  
VIRGINIA LANDFILLS**

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## **1.0 PURPOSE**

The purpose of the Leachate and Management Plan (Plan) is to:

- Describe current landfill management practices
- Describe current leachate disposal outlets
- Describe safe, environmentally sound transportation practices

## **2.0 BACKGROUND**

**Waste Management currently operates six (6) solid waste landfills in Virginia. The landfills include:**

- **Atlantic Waste Disposal – 3474 Atlantic Lane in Waverly (Sussex County), Virginia**
- **Bethel Landfill – 100 North Park Lane in Hampton, Virginia**
- **Charles City County Landfill – 8000 Chambers Road in Charles City, Virginia**
- **King George Landfill – 10376 Bullock Drive in King George, Virginia**
- **Maplewood Recycling and Waste Disposal Facility – 20221 Maplewood Road in Jetersville (Amelia County), Virginia**
- **Middle Peninsula Landfill and Recycling Facility – 12885 George Washington Memorial Highway in Glens (Gloucester County), Virginia**

## **3.0 LEACHATE MANAGEMENT**

The leachate collection systems are designed in accordance with Virginia Solid Waste Management Regulations 9VAC 20-81-210.A.(1)(c) to ensure that less than 12 inches of leachate would be present above the Resource Conservation and Recovery Act (RCRA) Subtitle D liner at any time.

### **3.1 ATLANTIC WASTE DISPOSAL**

The leachate collection system has been designed using a 24-hour, 25-year storm as required by the regulations to ensure that no more than 12 inches of leachate will be present above the Landfill's RCRA liner at any time. Leachate is removed from the cells by gravity to lift stations where leachate is pumped into a force main system to leachate storage tanks. The leachate collection system was designed and constructed to maintain less than 30 centimeters of leachate head over the RCRA liner system excluding manifold trenches and sumps. Using the existing liner system configuration, the upper most liner is considered the recirculation liner and the underlying liner is considered the RCRA liner. The less than 30-centimeter leachate head limit applies to the RCRA liner system and not the recirculation liner. While no more than 12-inches of leachate

head may accumulate over the lower RCRA liner system, head may exceed 12-inches above the upper (recirculation) until the leachate pumps evacuate the liquid off the liner.

### 3.1.1 LEACHATE STORAGE AND CONTAINMENT

AWD maintains a permanent leachate storage capacity of 2 million gallons. Tanks 1, 2, 3, and 4 each have a capacity of 500,000 gallons. A leachate load out area is located adjacent to Tanks 3 and 4. A second (auxiliary) leachate loadout area is located adjacent to Tank 2. All the leachate tanks are interconnected which allows leachate to be pumped from one tank to another should the need arise. In addition, all the leachate tanks are located within secondary containment areas.

This storage capacity would not be exceeded during continued waste filling operations at the site. Therefore, the existing tanks will meet Virginia Department of Environmental Quality (VDEQ) 7-day storage requirement.

A leachate storage impoundment was constructed in the July 2015; a second impoundment was constructed in August 2015 and additional impoundments have been subsequently added as an addition to the leachate storage system at the facility. Combined, as of march 20, 2020, the site a total of 4 (4) impoundments (see Table 1 below) that have a design capacity of approximately 35,056,154 gallons with 1 foot of free board and are proposed to be operated as temporary basins until cell construction begins in the area of the respective impoundments.

**Table 1  
Leachate Surface Impoundments**

Surface Impoundment	Design Capacity (gallons)	Capacity to Top of Berm (gallons)
#1	Removed	
#2	4,588,759	5,532,955
#3	Removed	
#4	14,053,986	15,943,345
#5	10,603,027	11,989,780
#6	5,810,382	6,583,880
#7	Removed	
#8	Removed	
#9	Removed	
#10	Removed	
#11	Removed	
<b>Totals</b>	35,056,154	40,049,960

Leachate may be pumped from the storage tank(s) or the impoundments to tanker trucks for transportation and disposal at a Private- or Publicly Owned Treatment Works (POTW).

Temporary leachate storage tanks (frac tanks) may also be used at AWD. These tanks are used when temporary long-term storage of leachate is required and the means of conveying the collected leachate to the permanent tanks does not exist or for long-term persistent seeps.

### **3.1.2 LEACHATE DISPOSAL**

Atlantic Waste Disposal has constructed a leachate treatment plant on-site that is designed to treat approximately 0.2 million gallons per day (“MGD”), and is currently upgrading the plant to 0.5 MGD. To maximize the plant capacity, AWD will treat approximately 100,000-250,000 gallons per day of on-site and will also accept leachate from the other WM and 3<sup>rd</sup> party landfills.

In addition, excess leachate not treated onsite is transferred from the storage tanks to tanker trucks, rail cars, and barge via tanker trucks for transportation to an approved offsite treatment and disposal facility. The barge is a double-hulled, ocean going barge that loads from the Tidewater Tank Terminal in Chesapeake, Virginia. At this time, the leachate is taken to a POTW or privately operated wastewater treatment vendors for disposal and characterization samples are taken and analyzed, as needed, for parameters specified by the treatment facility.

## **3.2 BETHEL LANDFILL**

The leachate collection and management systems at the Facility were designed in accordance with VSWMR 9 VAC 20-81-210.A.(1)(c) and industry standards to ensure that less than 12 inches of leachate would be present above the Landfill’s RCRA liner at any time.

**The landfill was designed in a manner that each of the landfill cells drain to a sump that contains a submersible pump that pumps the collected leachate into the force main system and ultimately to the leachate storage tanks. The pumps in the sumps are equipped with automatic on/off controls and settings for high level alarms. In the event head on the liner in a particular landfill cell exceeds 12-inches, leachate recirculation in the immediate vicinity of that cell will be halted, if applicable. Leachate recirculation in that cell area will not recommence until the leachate head in that cell has been reduced to less than 12-inches. Leachate is removed from the cells by submersible pumps and transported via a force main to the leachate storage tanks.**

### **3.2.1 LEACHATE STORAGE AND CONTAINMENT**

Bethel Landfill maintains a permanent leachate storage capacity of 350,000 gallons. Specifically, two leachate storage tanks are located on site, one with 250,000 gallons, the second with 100,000 gallons. From the leachate sumps, the collected leachate, and landfill gas condensate are transported via force mains to the two on-site leachate storage tanks. These tanks have sufficient capacity to meet VDEQ 7-day storage requirement.

The leachate tanks are interconnected which allows leachate to be pumped from one tank to another or isolated using valves should the need arise. In addition, the leachate tanks are located within a secondary containment area.

### **3.2.2 LEACHATE DISPOSAL**

Prior to final disposal the leachate is direct discharged to Hampton Roads Sanitation District (HRSD). Leachate that requires pretreatment to meet the HRSD permit is processed through a Moving Bed Biofilm Bioreactor (MBBR) pretreatment unit and direct discharged to HRSD. Should leachate flow exceed the HRSD discharge permit, leachate is transferred to tanker trucks for transportation to an approved offsite POTW facility

### **3.3 CHARLES CITY COUNTY LANDFILL**

The leachate collection and management systems at the Facility were designed in accordance with VSWMR 9 VAC 20-81-210.A.(1)(c) and industry standards to ensure that less than 12 inches of leachate would be present above the Landfill's RCRA liner at any time. The landfill was designed in a manner that each of the landfill cells drain to a sump that contains a submersible pump that pumps the collected leachate into the force main system and ultimately to the leachate storage tanks. The pumps in the sumps are equipped with automatic on/off controls and settings for high level alarms. In the event head on the liner in a particular landfill cell exceeds 12-inches, leachate recirculation in the immediate vicinity of that cell will be halted, if applicable. Leachate recirculation in that cell area will not recommence until the leachate head in that cell has been reduced to less than 12-inches. Leachate is removed from the cells by submersible pumps and transported via a force main to the leachate storage tanks.

#### **3.3.1 LEACHATE STORAGE AND CONTAINMENT**

Charles City maintains a permanent leachate storage capacity of 550,000 gallons. Specifically, two leachate storage tanks are located on site, each having a capacity of 225,000 gallons. From the leachate sumps, the collected leachate, as well as leak detection fluids, and landfill gas condensate are transported via force mains to the two 225,000-gallon on-site leachate storage tanks. These tanks have sufficient capacity to meet VDEQ 7-day storage requirement.

**A leachate load out area is located adjacent to the storage tanks, and is designed to drain any potentially spilled liquids from transfer operations back into the secondary containment area. The leachate tanks are interconnected which allows leachate to be pumped from one tank to another or isolated using valves should the need arise.**

### **3.3.2 LEACHATE DISPOSAL**

Leachate is transferred from the storage tanks to tanker trucks for transportation to an approved offsite POTW facility. At this time, the leachate is taken to a POTW or privately operated wastewater treatment vendors for disposal and characterization samples are taken and analyzed, as needed, for parameters specified by the treatment facility.

### **3.3 KING GEORGE LANDFILL**

The leachate collection and management systems at the Facility were designed in accordance with VSWMR 9 VAC 20-81-210.A.(1)(c) and industry standards to ensure that less than 12 inches of leachate would be present above the Landfill's RCRA liner at any time.

**The landfill was designed in a manner that each of the landfill cells drain to a sump that contains a submersible pump that pumps the collected leachate into the force main system and ultimately to the leachate storage tanks. The pumps in the sumps are equipped with automatic on/off controls and settings for high level alarms. In the event head on the liner in a particular landfill cell exceeds 12-inches, leachate recirculation in the immediate vicinity of that cell will be halted. Leachate recirculation in that cell area will not recommence until the leachate head in that cell has been reduced to less than 12-inches. Leachate is removed from the cells by submersible pumps and transported via a force main to the leachate storage tanks.**

#### **3.3.1 LEACHATE STORAGE AND CONTAINMENT**

King George maintains a permanent leachate storage capacity of 1,000,000 gallons. Specifically, four leachate storage tanks are located on site, each having a capacity of 250,000 gallons. From the leachate sumps, the collected leachate, leak detection fluids, and landfill gas condensate are transported via force mains to the four 250,000-gallon on-site leachate storage tanks. These tanks have sufficient capacity to meet VDEQ 7-day storage requirement.

**A leachate load out area is located adjacent to the storage tanks, and is designed to drain any potentially spilled liquids from transfer operations back into the secondary containment area. The leachate tanks are interconnected which allows leachate to be pumped from one tank to another or isolated using valves should the need arise. In addition, the leachate tanks are located within a secondary containment area.**

### **3.3.2 LEACHATE DISPOSAL**

The primary outlet for leachate at King George is to utilize the two on-site leachate concentrators. Each concentrator has a capacity to treat 30,000 gallons of leachate per day. A third concentrator planned for 2017, would treat an additional 40,000 gallons of leachate per day.

**Excess leachate is transferred from the storage tanks to tanker trucks for transportation to an approved offsite treatment and disposal facility. At this time, the leachate is taken to a POTW or privately operated wastewater treatment vendors for disposal and characterization samples are taken and analyzed, as needed, for parameters specified by the treatment facility.**

### **3.4 MAPLEWOOD RECYCLING AND WASTE DISPOSAL FACILITY**

The leachate collection and management systems at the Facility were designed in accordance with VSWMR 9 VAC 20-81-210.A.(1)(c) and industry standards to ensure that less than 12 inches of leachate would be present above the Landfill's RCRA liner at any time.

The landfill was designed in a manner that each of the landfill cells drain to a sump that contains a submersible pump that pumps the collected leachate into the force main system and ultimately to the leachate storage tanks. The pumps in the sumps are equipped with automatic on/off controls and settings for high level alarms. In the event head on the liner in a particular landfill cell exceeds 12-inches, leachate recirculation in the immediate vicinity of that cell will be halted, if applicable. Leachate recirculation in that cell area will not recommence until the leachate head in that cell has been reduced to less than 12-inches. Leachate is removed from the cells by submersible pumps and transported via a force main to the leachate storage tanks.

#### **3.4.1 LEACHATE STORAGE AND CONTAINMENT**

Maplewood maintains a permanent leachate storage capacity of 915,000 gallons. Specifically, four leachate storage tanks are located on site. The leachate sumps pump the collected leachate, as well as the leak detection fluids, and landfill gas condensate via force mains to either the two 260,000-gallon, the 295,000 gallon or the 100,000 gallon on-site leachate storage tanks. These tanks have sufficient capacity to meet VDEQ 7-day storage requirement.

**A leachate load out area is located adjacent to the storage tanks, and is designed to drain any potentially spilled liquids from transfer operations back into the secondary containment area. The leachate tanks are interconnected which allows leachate to be pumped from one tank to another or isolated using valves should the need arise.**

#### **3.4.2 LEACHATE DISPOSAL**

Leachate is transferred from the storage tanks to tanker trucks for transportation to an approved offsite POTW facility. At this time, the leachate is taken to a POTW or privately operated

wastewater treatment vendors for disposal and characterization samples are taken and analyzed, as needed, for parameters specified by the treatment facility.

### **3.5 MIDDLE PENINSULA LANDFILL AND RECYCLING FACILITY**

**The leachate collection and management systems at the Facility were designed in accordance with VSWMR 9 VAC 20-81-210.A.(1)(c) and industry standards to ensure that less than 12 inches of leachate would be present above the Landfill's RCRA liner at any time. The landfill was designed in a manner that each of the landfill cells drain to a sump that contains a submersible pump that pumps the collected leachate into the force main system and ultimately to the leachate storage tanks. The pumps in the sumps are equipped with automatic on/off controls and settings for high level alarms. In the event head on the liner in a particular landfill cell exceeds 12-inches, leachate recirculation in the immediate vicinity of that cell will be halted, if applicable. Leachate recirculation in that cell area will not recommence until the leachate head in that cell has been reduced to less than 12-inches. Leachate is removed from the cells by submersible pumps and transported via a force main to the leachate storage tanks.**

#### **3.5.1 LEACHATE STORAGE AND CONTAINMENT**

Middle Peninsula maintains a permanent leachate storage capacity of 1,500,000 gallons. Specifically, three leachate storage tanks are located on site, each having a capacity of 500,000 gallons. From the leachate sumps, the collected leachate and landfill gas condensate are transported via force mains to the three 500,000-gallon on-site leachate storage tanks. These tanks have sufficient capacity to meet VDEQ 7-day storage requirement.

**A leachate load out area is located adjacent to the storage tanks, and is designed to drain any potentially spilled liquids from transfer operations back into the secondary containment area. The leachate tanks are interconnected which allows leachate to be pumped from one tank to another or isolated using valves should the need arise.**

#### **3.5.2 LEACHATE DISPOSAL**

Leachate is transferred from the storage tanks to tanker trucks for transportation to an approved offsite POTW facility. At this time, the leachate is taken to a POTW or privately operated wastewater treatment vendors for disposal and characterization samples are taken and analyzed, as needed, for parameters specified by the treatment facility.

## **4.0 HAULER REQUIREMENTS**

### **4.1 TRUCKING**

All Waste Management sites use leachate haulers that are Department of Transportation certified, insured and permitted to haul leachate to the disposal facilities. Waste Management is listed as additionally insured on all insurance policies.

### **4.2 RAIL**

Rail tank cars are inspected and certified using Federal Railroad Administration (FRA) guidelines for carrying liquid cargos. Railway companies are required to satisfy all Waste Management safety and insurance requirements.

### **4.3 BARGE**

Barges used for transport of leachate are double- hulled, A1 ocean manned barges that are U.S. Coast Guard inspected and under conditions or requirements established by the U.S. Coast Guard or pursuant to its authority.

## **5.0 SPILL RESPONSE**

In the event of an environmental incident while transporting leachate, Waste Management sites and haulers will contact one of the following local emergency response providers:

Oakley Environmental Services  
5115 Prince George Drive  
Prince George, Virginia 23875  
Office Phone: (800) 948-7157  
24-hour spill response: (804) 712-4534

Clean Harbors Environmental Services  
17465 Eltham Road  
West Point, VA 23181  
Office Phone: (757) 603-7493  
24-hour spill response: (800) 645-8265

In addition, Waste Management will notify VDEQ immediately of any environmental issues associated with the incident. The local VDEQ spill response coordinator is listed below:

Jeremy Kazio - DEQ-PRO Pollution Response Coordinator

4949-A Cox Rd., Glen Allen VA 23060

(804) 527-5042 (office)

(804) 382-0925 (mobile)