



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

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March 26, 2021

John Dottellis
Area Engineering Manager
Waste Management, Furnace Associates Inc.
11220 Assett Loop, Suite 201
Manassas, Virginia 20109

**Re: Lorton Construction, Demolition and Debris (CDD) Landfill
Solid Waste Permit Number 331, Lorton, Fairfax County, Virginia
Facility Closure Certification**

Dear Mr. Dottellis:

The Virginia Department of Environmental Quality (DEQ) Northern Regional Office (NRO) has reviewed the following documents, pertaining to the above referenced facility, and submitted on behalf of Furnace Associates, Inc., a subsidiary of Waste Management, by Draper Aden Associates, and Golder Associates Inc.

- *Lorton Landfill 27 Acre Cap for 2020 Closure Project, Permit # 331, Fairfax County, Virginia*, dated November 30, 2020, which appears to be complete and satisfactory and seems to fulfill the requirements of 9VAC20-81-160.D.4., of the Virginia Solid Waste Management Regulations (VSWMR).
- A construction quality assurance certification verifying that closure has been completed as specified in the closure plan, and in accordance with the requirements of 9VAC20-81-160.D.4., of VSWMR, signed by Mr. Kenneth M. Piazza Jr., P.E., of Draper Aden Associates, and dated November 30, 2020.
- A certification verifying that closure has been completed in accordance with the requirements of 9VAC20-81-160.D.5.d., of VSWMR, signed by Mr. James R. DiFrancesco, P.E., of Golder Associates Inc., and dated March 5, 2021.

- Response to DEQ review comments addressing and certifying the thickness of soil protective cover, prepared by Draper Aden Associates, signed by Mr. Kenneth M. Piazza Jr., and dated March 24, 2021.
- *Lorton Landfill 24.6 Acre Cap for 2019 Closure Project, Permit # 331, Fairfax County, Virginia*, dated December 23, 2019, which appears to be complete and satisfactory and seems to fulfill the requirements of 9VAC20-81-160.D.4., of the Virginia Solid Waste Management Regulations (VSWMR).
- A construction quality assurance certification verifying that closure has been completed as specified in the closure plan, and in accordance with the requirements of 9VAC20-81-160.D.4., of VSWMR, signed by Mr. Kenneth M. Piazza Jr., P.E., of Draper Aden Associates, and dated December 23, 2019.
- *Lorton Landfill 16 Acre Cap for 2018 – 2019 Closure Project, Permit # 331, Fairfax County, Virginia*, dated August 19, 2019, which appears to be complete and satisfactory and seems to fulfill the requirements of 9VAC20-81-160.D.4., of the Virginia Solid Waste Management Regulations (VSWMR).
- A construction quality assurance certification verifying that closure has been completed as specified in the closure plan, and in accordance with the requirements of 9VAC20-81-160.D.4., of VSWMR, signed by Mr. Kenneth M. Piazza Jr., P.E., of Draper Aden Associates, and dated August 19, 2019.

The documentation provided to the Department, and the site inspection conducted by DEQ personnel on February 4, 2021, indicate that the following final closure construction phases of Lorton CDD Landfill, have been completed in accordance with the requirements of VSWMR, 9VAC20-81, and therefore, satisfy 9VAC20-81-160.D.4., and 9VAC20-81-160.D.5.a. through c:

Phase I - Approximately 16 acres in total, of which approximately 8.8 acres located in the north western, and approximately 7 acres, in the south western portions of Lorton CDD Landfill, were closed in 2019.

Phase II - Approximately 24.6 acres in total, of which approximately 3.4 acres located in the north eastern, and approximately 21.2 acres in the western portion of Lorton CDD Landfill were closed in 2019.

Phase III - Approximately 27 acres in total, located on top of the landfill, and including the top plateau area of Lorton CDD Landfill, were closed in 2020.

The final cover system, listed in descending order, and the specific sections of the reports that document the construction of each component are shown below:

Final Cover Component	Documentation
<ul style="list-style-type: none"> 18 inches of additional protective soil cover layer in areas where trees and shrubs were planted. 	Response to DEQ Review Comments
<ul style="list-style-type: none"> 24 inches of protective soil cover, including particle size of less than, or equal to 6 inches in diameter. 	Response to DEQ Review Comments 5.0 CQA Earthwork 5.2.4 Protective Cover 5.2.8 Protective Cover
<ul style="list-style-type: none"> 18 inches of compacted clay with hydraulic conductivity of less than, or equal to 1×10^{-5} cm/s. 	5.0 CQA Earthwork 5.2.3 Infiltration Layer 5.2.7 Infiltration Layer Material
<ul style="list-style-type: none"> 12 inches of compacted intermediate soil cover. 	5.0 CQA Earthwork 5.2.2 Intermediate Cover Layer 5.2.6 Intermediate Layer Materials

The establishment of adequate vegetative cover, in accordance with 9VAC20-81-140.B.1.f, will be ascertained during the next compliance inspection of the facility.

The post closure care period for this facility begins on **April 1, 2021**. This final closure certification is approved and the post closure care period may commence with the following conditions:

1. In accordance with VSWMR, 9VAC20-81-170.A.1.a., through d., following closure of all disposal units, the owner or operator shall conduct post-closure care of the facility. Post-closure care shall consist of at least the following:
 - 1.a. Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;
 - 1.b. Maintaining and operating the leachate collection system in accordance with the requirements of 9VAC20-81-210, VSWMR. The director may allow to terminate leachate management, if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;
 - 1.c. Maintaining the ground water monitoring system and monitoring ground water in accordance with the requirements of 9VAC20-81-250, VSWMR; and
 - 1.d. Maintaining and operating the gas monitoring system in accordance with the requirements of 9VAC20-81-200, VSWMR.
2. In accordance with 9VAC20-81-170.B.2.c., VSWMR, the post-closure care period must be conducted for a minimum of ten (10) years.

3. In accordance with 9VAC20-81-170.B.3., VSWMR, the length of the post-closure care period may be:
 - 3.a. Decreased by the director if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the director; or
 - 3.b. Increased by the director if the director determines that additional time is necessary to complete the corrective measures, and to protect human health and the environment. If the post-closure period is increased, the owner or operator shall submit a revised post-closure plan for review and approval, and continue post-closure monitoring and maintenance in accordance with the approved plan.

4. In accordance with 9VAC20-81-170.C.1., VSWMR, following completion of the post-closure care period for each disposal unit, the owner or operator shall submit to the department a certificate, signed by the owner or operator and a registered professional engineer, verifying that post-closure care has been completed in accordance with the post-closure plan. The certificate shall be accompanied by an evaluation, prepared by a professional engineer or professional geologist licensed in the Commonwealth, assessing and evaluating the landfill's potential for harm to human health and the environment in the event that post-closure monitoring and maintenance are discontinued.

A copy of the construction quality assurance report and all record drawings must be retained in the operating record for Solid Waste Permit Number 331. Please note the facility will be subject to annual solid waste management fees in accordance with 9VAC20-90-115 and Table 4.1 of 9VAC20-90-130, based on the amount of waste deposited in the landfill in the year of 2018. For the years following, the facility will be subject to annual solid waste management fees for facilities in post-closure care.

If you have any questions, or require addition information regarding this correspondence, please do not hesitate to contact Yurek Aurelson, solid waste permit writer at 703-583-3844, or yurek.aurelson@deq.virginia.gov.

Respectfully,



Richard Doucette
Land Protection and Revitalization Program Manager

Enclosed: Closure Inspection Checklist

Copy: Kenneth M. Piazza, Jr., Draper Aden Associates
Robert J. Link, Draper Aden Associates
Suzanne Taylor, DEQ-CO
Yurek Aurelson, DEQ-NRO