

2020 ANNUAL INSPECTION REPORT

LANDFILL NO. 11

OEPA PERMIT TO INSTALL: 06-7028

**FORMER STUART STATION
MANCHESTER, ADAMS COUNTY, OHIO**

Prepared for:

Kingfisher Development, LLC
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Prepared by:

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MARK LAHR, P.E.

NOVEMBER 09, 2020



Purpose

I have conducted the annual inspection in compliance with the Federal CCR Rule, 40 CFR Part 257.

Statement of Qualifications

I am a practicing Civil/Geotechnical Professional Engineer registered in the State of Ohio. I am experienced in the design, maintenance, and operation of landfills.

Review of Landfill Documentation [§257.84(b)(1)(i)]

Design, History, and Operation of the Facility

Landfill No. 11 was permitted in 2003. This facility is constructed on top of closed Ash Pond 8. Construction of the west area started in 2004 and the west area was completed in 2012. The facility is designed to contain 7.8 million cubic yards of waste material. Receipt of material began in 2006 after completing the west area liner in 2005.

Permanent side slopes at the facility are 3:1 slope with a 20-foot wide bench for every 20 feet of vertical rise. The liner is 1.5 feet of compacted clay with a permeability of 1×10^{-7} cm/sec or lower. The cap is 2.0 feet of compacted clay with six inches of vegetative cover. Drainage media consists of a minimum of 1.0 feet of bottom ash. The bottom is crowned to allow for settlement of the pond ash material below and still provide drainage of leachate through the perimeter drain, which outlets approximately every 100 feet into a perimeter ditch.

Fly ash is moisture conditioned and compacted to achieve project requirements. Inactive areas are covered with temporary cover.

Periodic Inspections

The Weekly Inspection reports conducted through 2020 were reviewed. These periodic inspections indicated no issues with slope stability.

Visual Inspection of Landfill [§257.84(b)(1)(ii)]

Landfill No. 11 is in good structural condition. Appendix A provides the *Landfill Annual Field Inspection Report*.

Changes in Geometry [§257.84(b)(2)(i)]

There were no changes to permanent slopes in the form of slides, sloughs or bulges or other indication of deformation or other indicators of instability. Additional CCR material (~500,000 CY) was placed on the eastern area of landfill in 2020.

Volume of CCR [§257.84(b)(2)(ii)]

Landfill No. 11 contains approximately 4.6 million cubic yards of CCR material.

Structural Weakness [§257.84(b)(2)(iii)]

No indication was found of an actual or potential structural weakness of the CCR unit or any existing condition that was disrupting or had the potential to disrupt the operation and safety of the CCR unit and appurtenant structures.

Other Changes [§257.84(b)(2)(iv)]

No changes were found to the CCR unit which could affect the stability or operation of the structure since the previous annual inspection.

APPENDIX A
LANDFILL ANNUAL FIELD
INSPECTION REPORT

LANDFILL ANNUAL FIELD INSPECTION REPORT
Former JM Stuart Station

Inspection Date: October 29, 2020

Weather Conditions: rainy, high around 50 degrees (heavy rain the night before)

CCR Unit: Landfill No. 11

Original PTI Number: 06-7028

Construction / Design Details:

24 inch thick compacted clay liner, 12 inch bottom ash drainage layer, 24 inch clay cover, 6 inch vegetative cover soil, and grass ground cover.

	Action			
	None	Monitor	Repair	Engineer

PERMANENT COVER SLOPES (3H:1V)

Cover Vegetation

Trees?

Woody Brush? Describe and Locate: Areas around cover system inlets

Grass Ground Cover:
Condition: Generally in very good condition.

Surface Damage

Soil Erosion Rills - minor erosion rill noted near northern upper inlet

Rodent Burrows

Slope Instabilities

Slides / Sloughs: surficial shallow slide noted on southern edge of western cell.

Cracks: none

Bulges: none

Other

Water Seeps / Saturated Areas

Monitoring Instruments

Groundwater monitoring wells, settlement plates, and piezometers.

Other

	Action			
	None	Monitor	Repair	Engineer
Hydraulic Structures				
Leachate Drains: good condition Drains outlet ~ every 100 feet along southern portion of the landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bench Drains 24" dia HDPE pipe with inlets on each bench Minor erosion at one pipe location on southwestern bench	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Perimeter Ditch Combined clay lined ditch with grass cover and concrete on the south side Minor erosion on eastern cell - west channel near active CCR cell	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inlet Two sets of three concrete catch basins in bottom of perimeter ditch Some minor vegetation / debris accumulation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discharge Conduit Six HDPE pipes convey water from the catch basins to Pond 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forebay Located in Pond 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments / Additional Remarks

Repair minor erosion of bench along bench drain
Conduct minor maintenance to remove debris from perimeter ditch inlets
Monitor / mow brushy areas around the upper level and bench drain inlets
Monitor perimeter ditch erosion