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## **Inspection Report**

**To:** Norman Divers (Charah Solutions, Inc.)  
**From:** Robert Stolz, P.E., P.G.  
**Re:** Cheswick Ash Disposal Site – Annual CCR Unit Inspection Report  
**Inspection Date:** November 03, 2022  
**Report Date:** January 11, 2023

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### **INTRODUCTION**

Title 40 Code of Federal Regulations (CFR) Part 257 addresses, in part, the management of Coal Combustion Residuals (CCR Rule, or Rule) in regulated units, including landfills. Specific to §257.84(b) of the Rule, existing and new CCR landfills must be inspected on an annual basis by a qualified professional engineer. For the Cheswick Generating Station, this inspection requirement applies to the existing Cheswick Ash Disposal Site (Ash Disposal Site), operated by Cheswick Lefever, LLC. In support of this obligation, Mr. Robert Stolz (a qualified professional engineer with Aptim Environmental & Infrastructure, LLC [APTIM]) conducted an on-site inspection of the Ash Disposal Site on November 03, 2022. The findings from this annual inspection are summarized in the remaining sections of this correspondence.

As required, this report will be placed in the Cheswick facility's operating record per §257.105(g)(9), noticed to the State Director per §257.106(g)(7), and posted to the publicly accessible internet site per §257.107(g)(7). Placement of the prior annual inspection report into the facility's operating record was accomplished on January 16, 2022. Per §257.84(b)(4), the current report will be entered into the facility's operating record no later than January 16, 2023.

### **BACKGROUND**

The Ash Disposal Site is a captive landfill used for the disposal of CCR materials and other residual wastes generated at the Cheswick Station, and is operated/maintained in accordance with Pennsylvania Department of Environmental Protection (PADEP) Solid Waste Permit No. 300720. Active operations are ongoing in the South Valley (Phase I; 51 acres), while the North Valley (Phase II; 31 acres) remains as an unpermitted potential future phase within the Solid Waste Permit boundary. If ever constructed, the North Valley would be considered a new CCR Landfill per the Rule.

Construction of the South Valley commenced in 1980 and disposal of CCR materials began in 1982. When ultimate development conditions are reached, the final upper surface elevation of South Valley will be at approximately 1,200 feet mean sea level (ft. MSL).

The active fill area is generally level, with minor sloping to facilitate drainage. It is estimated that approximately one foot of CCR have been placed across the active fill area since the previous

annual inspection. The active fill area is currently estimated to have an approximate average elevation of 1,113 - 1,114 ft. MSL, based on visual observation.

With respect to the Ash Disposal Site, APTIM's evaluation has focused on the following items as outlined in §257.84(b)(1)(i-ii):

- *A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record; and*
- *A visual inspection of the CCR unit to identify signs of distress or malfunction.*

Specific to APTIM's preparation of the annual inspection report, and per §257.84(b)(2) (i-iv), the following aspects have been addressed:

- *Any changes in geometry of the structure since the previous annual inspection;*
- *The approximate volume of CCR contained in the unit at the time of the inspection;*
- *Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and*
- *Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.*

## **OPERATING RECORDS REVIEW**

Principal items reviewed as part of this year's inspection included, but were not limited to: Design Drawings, Weekly and Periodic Landfill Inspection Reports that have been completed since the 2021 Inspection, 2021 Annual Landfill Operations Report, and Solid Waste Permit No. 300720. During the site inspection, Mr. Stolz interviewed facility personnel (Mr. Richard Ravotti) to verify the information contained within the operating record.

### Environmental Control System Overview

#### i. Leachate Collection System

- a. The South Valley disposal area has a gravity underdrain system. This system consists of a below-grade piping network that facilitates leachate conveyance ultimately for treatment at the Monarch Mine Dewatering Plant (MMDP). Treated effluent from the MMDP is discharged to Little Deer Creek via Outfall 002 in accordance with the Cheswick Station's National Pollutant Discharge Elimination System (NPDES) Permit.

#### ii. Stormwater Management

- a. "Non-contact" stormwater from the South Valley disposal area is routed (via NPDES-permitted perimeter drainage channels) to the sedimentation pond located at the base of the landfill.

- b. "Contact" stormwater from within the active disposal area is collected in the leachate underdrain system and routed for treatment in the MMDP as described above.
- iii. Cover System
  - a. The eastern slope and portions of the northern and southern slopes of South Valley have final cover and established vegetation. The final cover system on the slopes includes benches to dissipate energy build-up and reduce erosion from stormwater run-off.

#### Summary of Landfill Construction

It is estimated that approximately one foot of CCR has been placed across the active fill area since the previous annual inspection. The active fill area is currently estimated to have an approximate average elevation of 1,113 - 1,114 ft. MSL. Exterior slopes have a final cover in place along with well-established and properly maintained vegetation. Contact water and non-contact stormwater risers were being extended at the time of inspection to support future disposal lifts.

#### Review of Prior Inspections

- i. Weekly inspections: A review of weekly inspections has concluded that no significant deficiencies occurred at the facility that required remedial actions.
- ii. Annual inspections: A review of the previous annual inspection report has determined that there were no deficiencies or releases, actual or potential structural weaknesses, or concern to the stability of the land form. All environmental control systems were in good operating condition and functioning as intended.

#### CCR Disposal

Approximately 3,696,344 tons of CCR had been disposed in the landfill through December 2021. Approximately 50,128 tons of CCR were disposed in 2022, resulting in a total disposed quantity of 3,746,472 tons of CCR.

### **SITE INSPECTION**

The site inspection was performed on November 03, 2022, by Mr. Stolz, during which time efforts were focused on identification of standard geotechnical signs of distress or malfunction. Specific aspects such as slumping at the toe of slope, tensile cracking, abnormal or excessive erosion on the side slopes, slope bulging, and groundwater/surface water seepage or ponding were assessed. If present, these readily visible signs are potential indicators of structural weakness of the CCR Landfill unit.

#### Visual Signs of Distress or Malfunction

No visual signs of distress or malfunction were observed during the inspection. Stormwater drainage features, slope appearance and stability, leachate conveyance mechanisms, and overall site conditions were assessed. Closed portions of the South Valley exhibited well established vegetative cover.

### Review of Environmental Control Systems

With no evidence to the contrary, the environmental control systems at South Valley are believed to be in good operating condition and functioning as intended. At the time of the inspection, leachate and stormwater conveyance systems were operating as designed.

### Review of Previously Recommended Actions

No corrective actions were required based on the findings of the 2021 Annual Inspection. Recommendations were limited to the continued operation and maintenance of the facility and maintaining access to closed portions of the landfill for inspection purposes. These recommendations were found to have been followed, based on site conditions and the review of weekly inspection logs.

## **CONCLUSIONS**

### Changes in Geometry

CCR material placement has progressed in the active disposal area throughout this year. As of the date of the inspection, fill elevations in the active disposal area were at approximately 1,113 - 1,114 ft. MSL. Changes in geometry are limited to the elevation increase of the active disposal area.

### In-Place CCR Disposal Quantities

Approximately 3,696,344 tons of CCR had been disposed in the landfill through December 2021. Approximately 50,128 tons of CCR were disposed in 2022, resulting in a total disposed quantity of 3,746,472 tons of CCR.

### Appearances of an Actual or Potential Structural Weakness of CCR Unit

At the time of inspection, there were no signs of distress or malfunction that would indicate actual or potential structural weakness at South Valley.

### Changes that May Affect the Stability or Operation of the CCR Unit

There have been no changes to the South Valley area that pose a threat or concern to the stability of the land form.


## **RECOMMENDATIONS**

1. Continue operation and maintenance in the active areas as currently performed.
2. Clear woody vegetation from within landfill limits.
3. Ensure adequate access to the closed portions of the landfill to maintain the ability to perform weekly visual site structural inspections.

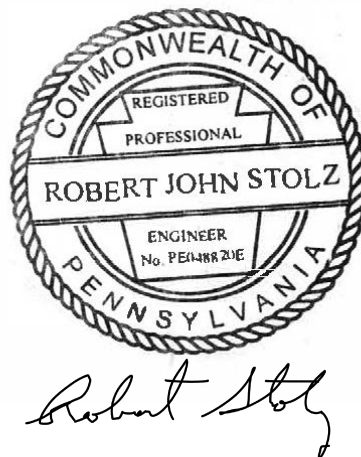
There were no deficiencies or releases identified during the annual inspection that required the owner or operator to perform corrective actions per §257.84(b)(5).

## PROFESSIONAL ENGINEER'S CERTIFICATION

In accordance with §257.84(b) of the Rule, I hereby certify based on a review of available information within the facility's operating records and observations from my personal on-site inspection (including the photographs contained in Attachment 2), that the Cheswick Ash Disposal Site does not exhibit any appearances of actual/potential structural weakness that would be disruptive to the normal operations of the South Valley CCR Unit. The unit is being operated and maintained consistent with recognized and generally accepted good engineering standards and practices.

Certified by: Robert Stolz   
Date: January 11, 2023

Robert Stolz, P.E., P.G.  
Professional Engineer Registration PE048820E  
Aptim Environmental & Infrastructure, LLC



## ATTACHMENTS

1. Site Map
2. Inspection Photo Log

## REFERENCES

1. 2021 Cheswick Generating Station Annual Landfill Operations Report.
2. Weekly and Periodic Landfill Inspection Reports 2021/2022.
3. 40 Code of Federal Regulations, Part 257.
4. Solid Waste Permit No. 300720

**Attachment 1**  
**Site Map**



File: O:\PROJECT\110870\Genon - Cheswick Power Station\631025205\631025205-B1.dwg  
Plot Date/Time: Nov 21, 2022 - 4:36pm  
Plotted By: Evan.Schlegel

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	11/21/22	--	E. Schlegel	DS	RS	631025205-B1



**LEGEND:**  
① 2022 ANNUAL INSPECTION PHOTOGRAPH (ARROW DENOTES DIRECTION OF VIEW)



**REFERENCES:**  
1. GOOGLE AERIAL PHOTOGRAPHY, DATED 11/2021.



500 Penn Center Boulevard,  
Suite 1000  
Pittsburgh, Pennsylvania 15235

CHESWICK GENERATING STATION

PHOTOGRAPH LOCATION MAP  
CHESWICK ASH DISPOSAL SITE

CHESWICK GENERATING STATION  
SPRINGDALE, ALLEGHENY COUNTY, PENNSYLVANIA



**Attachment 2**  
**Photo Log**



**Project:** Cheswick Landfill 2022 Annual Inspection

**Photographer:** Robert Stolz

Image: 1  
Date: 11/03/2022  
Time: 11:28 AM  
Direction: West-Northwest

**Description:**

View upslope from active placement area with non-contact stormwater junction box riser visible at center. Well vegetated with no erosion or instability evident.

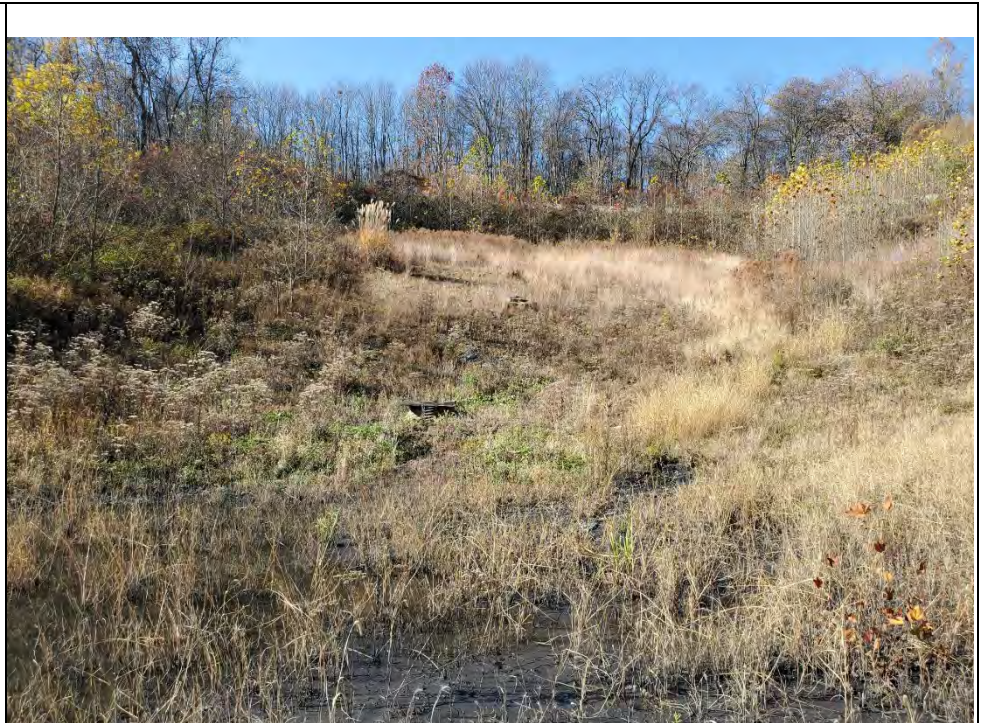


Image: 2  
Date: 11/03/2022  
Time: 11:30 AM  
Direction: East-Northeast

**Description:** View of active placement area. Graded and compacted.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 3  
Date: 11/03/2022  
Time: 11:32 AM  
Direction: West-Southwest

**Description:**

View upslope from active placement area with non-contact stormwater junction box riser visible at center. Well vegetated with no erosion or instability evident.



Image: 4  
Date: 11/03/2022  
Time: 11:35 AM  
Direction: East-Northeast

**Description:**

View of active placement area. Graded and compacted.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 5  
Date: 11/03/2022  
Time: 11:42 AM  
Direction: South-Southeast

**Description:**

View of active placement area. Graded and compacted, with recent minor erosion rills. Contact water (leachate) drains to leachate collection layer.



Image: 6  
Date: 11/03/2022  
Time: 11:43 AM  
Direction: North-Northwest

**Description:**

View of active placement area. Graded and compacted. Contact water (leachate) drains to leachate collection layer.





**Project:** Cheswick Landfill 2022 Annual Inspection

**Photographer:** Robert Stolz

Image: 7  
Date: 11/03/2022  
Time: 11:45 AM  
Direction: South-Southeast

**Description:**

View of active placement area. Contact water (leachate) drains to leachate collection layer. Contact water (leachate) riser is present in center of photo.



Image: 8  
Date: 11/03/2022  
Time: 11:52 AM  
Direction: South

**Description:**

View of active placement area. Graded and compacted. Contact water (leachate) drains to leachate collection layer.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 9  
Date: 11/03/2022  
Time: 12:03 PM  
Direction: South-Southeast

**Description:**

View of upper bench and non-contact stormwater inlet on east landfill slope. Well vegetated with no indications of erosion or instability.



Image: 10  
Date: 11/03/2022  
Time: 12:05 PM  
Direction: Southeast

**Description:**

View of revetment-lined stormwater channel at the south end of the upper bench on the east landfill slope. Channel is in good condition with no obstructions.





**Project:** Cheswick Landfill 2022 Annual Inspection

**Photographer:** Robert Stolz

Image: 11  
Date: 11/03/2022  
Time: 12:34 PM  
Direction: Southeast

**Description:**

View of revetment-lined stormwater channel at the north edge of the east landfill slope. Channel is in good condition with no obstructions.



Image: 12  
Date: 11/03/2022  
Time: 12:09 PM  
Direction: Northeast

**Description:**

View of revetment-lined stormwater channel at the south edge of the east landfill slope (further downslope than Photo 10) Channel is in good condition with no obstructions.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 13  
 Date: 11/03/2022  
 Time: 12:10 PM  
 Direction: North

Description:

Northward view of well vegetated east landfill bench with no indication of erosion or instability. End of growing season mowing event has yet to take place.



Image: 14  
 Date: 11/03/2022  
 Time: 12:17 PM  
 Direction: Northeast

Description:

View of concrete-lined stormwater channel at the south edge of the east landfill slope (further downslope than Photo 12).





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 15  
Date: 11/03/2022  
Time: 11:55 AM  
Direction: South-Southeast

**Description:**

Southward view of well vegetated mid-slope landfill bench with no indication of erosion or instability.



Image: 16  
Date: 11/03/2022  
Time: 12:58 PM  
Direction: East

**Description:**

View of non-contact stormwater channel leading to the Sedimentation Pond.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 17  
Date: 11/03/2022  
Time: 1:01 PM  
Direction: West-Southwest

**Description:**

View of east side of landfill from Sedimentation Pond emergency spillway. Vegetation is well established with no indication of erosion or slope instability. Small trees are present which will be removed during the next mowing and maintenance event.



Image: 18  
Date: 11/03/2022  
Time: 1:01 PM  
Direction: Southwest

**Description:**

Concrete-lined non-contact stormwater channel entering the Sedimentation Pond. Surrounding area is vegetated with no indication of erosion or instability.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 19  
Date: 11/03/2022  
Time: 1:02 PM  
Direction: Southeast

**Description:**

View of emergency spillway inlet at the Sedimentation Pond.



Image: 20  
Date: 11/03/2022  
Time: 1:02 PM  
Direction: Northeast

**Description:**

View of emergency spillway outlet at the Sedimentation Pond.





**Project: Cheswick Landfill 2022 Annual Inspection**

**Photographer: Robert Stolz**

Image: 21  
Date: 11/03/2022  
Time: 1:07 PM  
Direction: Southwest

**Description:**

View of Sedimentation Pond emergency spillway outlet, non-contact stormwater outlet pipes, and capped contact stormwater (leachate) pipe. Contact stormwater drains to pump station.



Image: 22  
Date: 11/03/2022  
Time: 1:10 PM  
Direction: Southwest

**Description:**

View of leachate pump station.

