



# CCP Annual Inspection Report

Brickhaven No. 2 Mine Tract A Structural Fill

DWM Permit 1910, DEMLR Permit 19-25

Charah Solutions, Inc.

*Moncure, North Carolina*

February 2021



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# Introduction

This report summarizes the findings for the annual inspection conducted on January 14, 2021, of the Brickhaven No.2 Mine Tract "A" structural fill located off Moncure-Flatwood Road in Chatham County, North Carolina. The site is owned by Green Meadow, LLC and operated by Charah Solutions, Inc. (Charah) under North Carolina Department of Environmental Quality (NCDEQ) Division of Waste Management (DWM) Structural Fill Permit 1910 issued June 5, 2015, in conjunction with the NCDEQ Division of Energy, Mineral and Land Resources (NCDEMLR) Mining Permit 19-25 also issued June 5, 2015. The Brickhaven No. 2 Mine Tract "A" structural fill project has been permitted and constructed in accordance with the North Carolina Coal Ash Management Act of 2014 (CAMA) and NCDEQ structural fill rules. The structural fill has been completed and the closure certification submittal is pending as this report is written.

# Inspection Report

The goal of this inspection is to ensure the closure and maintenance of the structural fill unit is consistent with recognized good engineering practices and to ensure a detailed level of engineering analysis is applied to evaluate existing conditions. This inspection includes the following.

- A discussion of the findings and remedies for any issues found in the document review.
- A discussion of the findings and remedies for any issues found in the site inspection.
- Any appearance of an actual or potential structural weakness of the coal combustion products (CCP) unit.
- Any existing conditions that are disrupting, or have the potential to disrupt, the operation and safety of the CCP unit.

The inspection report below discusses the document and visual inspection review.

## Document Review

HDR performed a cursory review of the available permit documents as well as Charah's adherence to required recordkeeping.

## Permit Documents

- NCDEQ structural fill permit and modification(s)
- NCDEQ mine permit and modification(s)
- Construction certifications
- Erosion control permit and modification(s)
- NPDES permit
- Leachate discharge permit
- Leachate pump and haul permit
- NCDEQ inspection reports
- Stormwater pollution prevention plan

## Operational Documents

- Operations plan
- Safety reports
- Groundwater reports
- Leachate collection and discharge records
- Leachate analysis reports
- Site inspection (weekly) reports
- Training records for the qualified person(s) performing the weekly inspections
- Incident reports (safety, delivery of non-CCP materials, spills, etc.)

The documentation appeared well organized and complete. Spot checks of the documentation indicated that the NDPES general permit for stormwater discharge NCGO20000 expired on September 30, 2020; however, the permit may have been extended. The NDPES construction permit expired in 2016. The site should follow-up on these items and annotate the record accordingly. Mr. Greg Grambusch (Charah) was informed at the site. Review of the above documents did not reveal any indications of operation or safety concerns regarding the CCP structural fill.

## Visual Site Inspection

A visual inspection was conducted by Eric Wright (HDR) and Mr. Grambusch of the CCP structural fill. This inspection was performed to identify signs of distress, malfunction, or threats to safety not identified in the document review or weekly inspection records. The weather during the site visit was overcast and with temperatures slightly above 40 degrees Fahrenheit. HDR staff conducted the site inspection on foot, traversing the cap of the structural fill, reviewing the leachate enclosures and the tank area.

The site inspection included an evaluation of the following site features.

1. Structural fill access
2. Leachate management system
3. Stormwater and erosion control
4. Structural fill visual stability

### Structural Fill Access

Automobile access to the facility is from Moncure-Flatwood road, which is controlled by a staffed gate requiring check in and check out of visitors. Prior to closure, CCP arrived via railroad and was unloaded onto off-road dump trucks. This area was not reviewed as ash is no longer being received at the site. The roads to and around the structural fill were being rebuilt during the inspection.

### Leachate Management

The leachate management system for the cells includes a series of perforated high-density polyethylene (HDPE) pipes within the lined area that drain to a sump in Cell 1 with two pumps installed to pump leachate to three onsite storage tanks. The leachate enclosure and tanks

exhibited no signs of leakage at the time of the inspection, and the leachate collection pipes were in good working order. The leachate tanks contained about 17 feet of liquid.

The panel at the Cell 1 leachate enclosure reported two leachate levels, 1.17 feet and 11.5 feet. Neither pump was operating at the time of inspection. If the 11.5-foot level is correct, steps need to be taken to reduce the levels. If the reading is incorrect, as was indicated by on-site staff, the panel needs to be corrected. The panel at the Cell 6 enclosure indicated 9.6 inches of liquid in the sump.

An Operation and Maintenance (O&M) manual present at the Cell 1 sump is exposed to the elements and its condition is deteriorating.

## **Stormwater Segregation and Erosion Control**

At the time of this inspection, all slopes were covered with soil. Overall, the areas with interim cover appeared to have adequate soil cover and showed no signs of operational or structural concern with one exception under the power lines. The final slopes were seeded and exhibited a good stand of vegetation that was functioning as intended. No signs of CCP release were observed.

## **Structural Fill Stability**

Based on the site inspection, no structural weaknesses were observed in the compacted CCP material.

## **Summary**

Site staff is performing and maintaining the permit documents and the routine maintenance and monitoring reports as required. The following deficiencies in site conditions and documentation were identified to Charah staff at the time of inspection:

- Correct erosion rilling under the power lines
- Correct the level conditions at Sump #1
- Protect the O&M manual
- Follow-up on expired NPDES permit

HDR's review and visual inspection of placement identified no apparent structural weaknesses in the CCP material placed as a part of the permanent structural fill.

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# A

Appendix A – As-built  
Drawing

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Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11

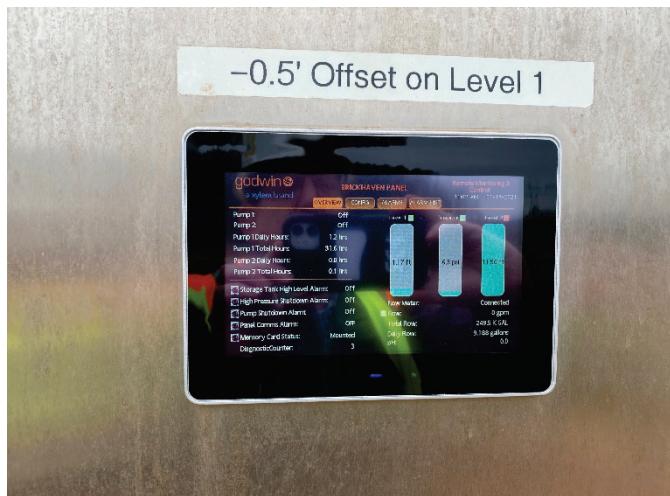


Photo 12



Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21



Photo 22



Photo 23



Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31



Photo 32



Photo 33



Photo 34



Photo 35



Photo 36



Photo 37



Photo 38



Photo 39



Photo 40



Photo 41



Photo 42



Photo 43



Photo 44



Photo 45



Photo 46



Photo 47

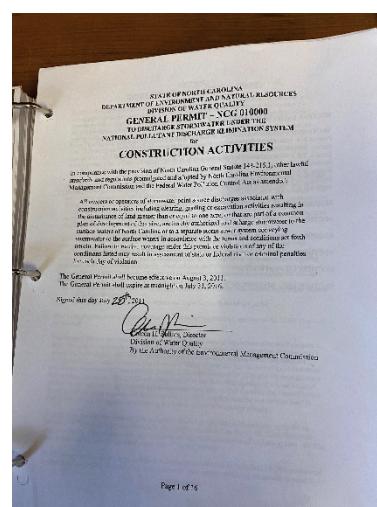


Photo 48

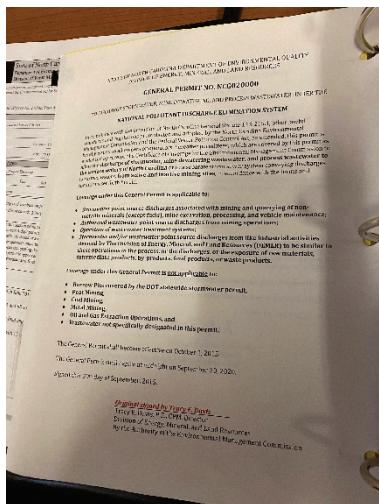


Photo 49

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# B

## Appendix B – Site Inspection Photographs

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**MCADAMS**

The John R. McAdams Company, Inc.  
2905 Meridian Parkway  
Durham, NC 27713

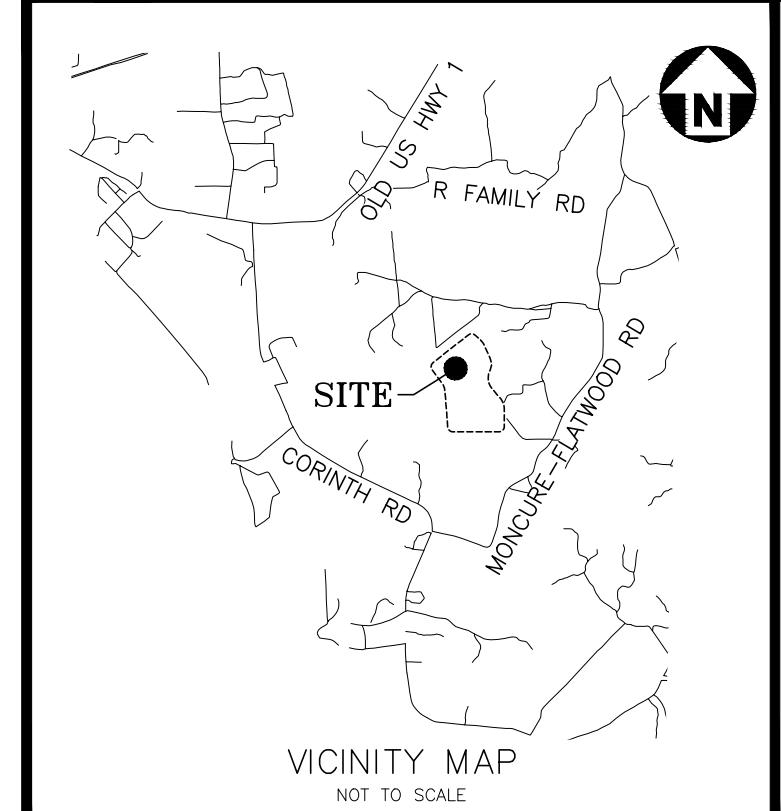
phone 919. 361. 5000  
fax 919. 361. 2269  
license number: C-0293, C-187

[www.mcadamsco.com](http://www.mcadamsco.com)

#### CLIENT

NAME CHARAH  
ADDRESS 12601 PLANTSIDE DRIVE  
ADDRESS LOUISVILLE, KENTUCKY 40299  
PHONE: XXX. XXXX. XXXX

## BRICKHAVEN NO. 2 MINE TRACT "A" CLOSURE CAP AS-BUILT CHATHAM COUNTY, NORTH CAROLINA



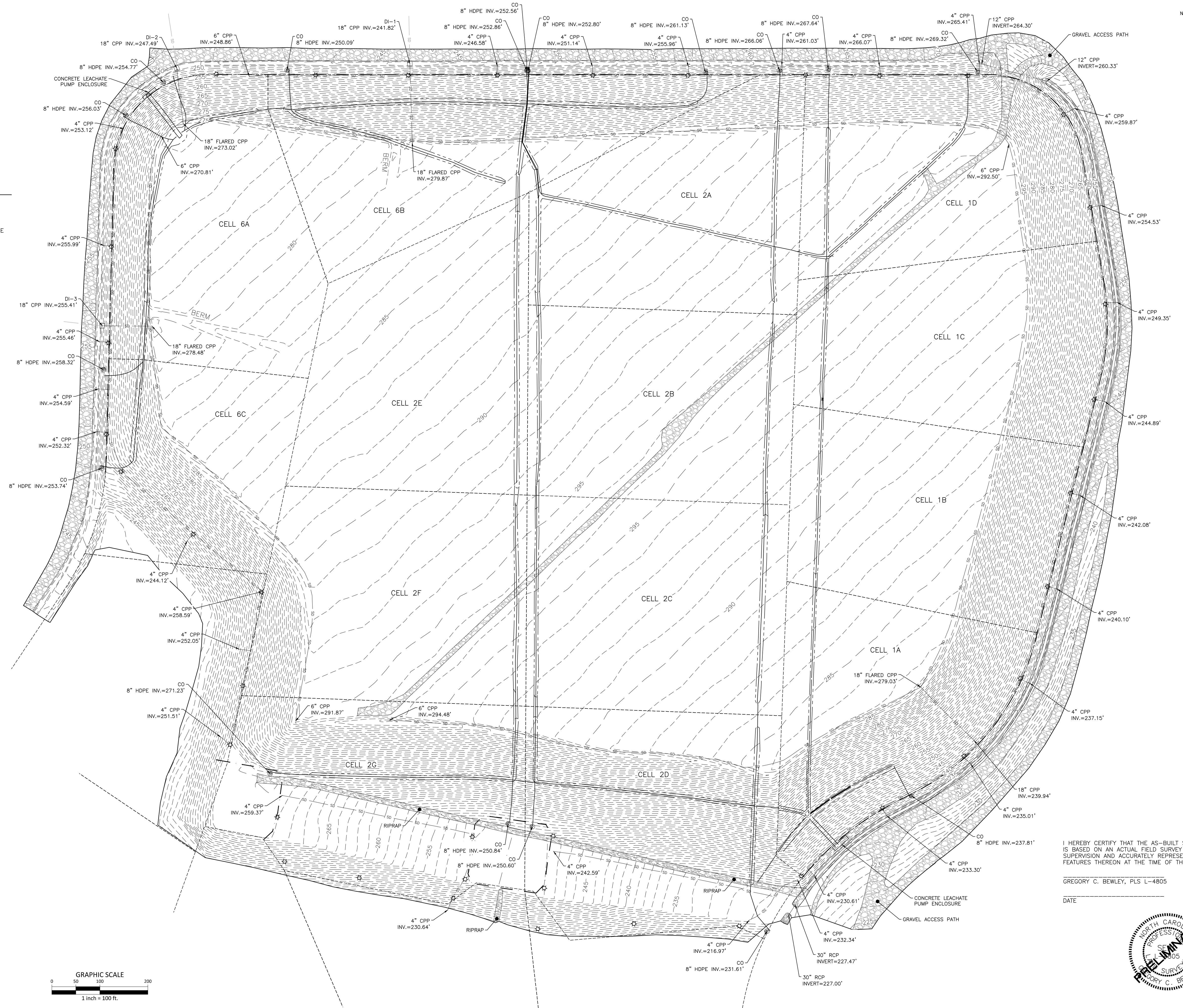
#### GENERAL NOTES

1. THIS IS AN AS-BUILT SURVEY, THIS IS NOT A BOUNDARY SURVEY.
2. BEARINGS FOR THIS SURVEY ARE BASED ON NC GRID NAD 83 (2011).
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN US SURVEY FEET.
4. ELEVATIONS FOR THIS SURVEY ARE BASED ON NAVD 88 DATUM AS DETERMINED BY GPS OBSERVATION.



#### LEGEND

- - - MINOR CONTOUR
- - - MAJOR CONTOUR
- - - LEACHATE PIPE ENCLOSURE
- SD — SD DRAIN PIPE
- - - ANCHOR TRENCH
- - - CELL BOUNDARY
- ✖ EDGE OF WASTE MARKER
- ◎ CLEANOUT MARKER
- CLEANOUT
- DROP INLET
- ▨ GRAVEL



#### REVISIONS

NO. DATE

#### PLAN INFORMATION

PROJECT NO. CHR-15010  
FILENAME CHR-15010-CAP-ASBUILT  
CHECKED BY GCB  
DRAWN BY ATC  
SCALE 1"=100'  
DATE 02/10/2021

#### SHEET

**1 of 1**

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HDR Engineering, Inc. of the Carolinas  
440 S Church Street, Suite 1000  
Charlotte, NC 28202-2075  
704.338.6700  
NC License F0116

**[hdrinc.com](http://hdrinc.com)**

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