# 2023 ANNUAL CCR UNIT INSPECTION INDIAN RIVER LANDFILL NRG INDIAN RIVER STATION DAGSBORO, DELAWARE

# SCS ENGINEERS

25221158.00 | January 18, 2024

40 Shuman Blvd, Suite 216 Naperville, IL 60563

# 1.0 INTRODUCTION

## 1.1 OVERVIEW OF ANNUAL INSPECTION REPORT

SCS Engineers (SCS) has completed an annual inspection of the NRG Indian River Landfill (IRLF) at the Indian River Generating Station in Dagsboro, Delaware. The annual inspection was completed in accordance with the U.S. Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule, 40 CFR 257 Subpart D (CCR Rule). Per 40 CFR 257.84(b)(1), an annual inspection is required to be conducted by a qualified professional engineer for all existing and new CCR landfills and any lateral expansion of a CCR landfill. For the Indian River Generating Station (owned by Indian River Power, LLC, a subsidiary of NRG Energy, Inc. [NRG]), this inspection requirement applies to Phase II of the existing Indian River Landfill.

The purpose of the annual inspection is to evaluate whether the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The findings from this annual inspection are summarized in subsequent sections of this report, in accordance with 40 CFR 257.84(b)(2).

This report must be placed in the Indian River facility's operating record per  $\S257.105(g)(9)$ , noticed to the State Director per  $\S257.106(g)(7)$ , and posted to the publicly accessible internet site per  $\S257.107(g)(7)$ . The 2022 annual inspection report was placed into the facility's operating record on January 18, 2023. Therefore, this report must be placed into the facility's operating record on or before January 18, 2024, to meet the annual reporting requirements of  $\S257.84(b)(4)$ .

## 1.2 OVERVIEW OF INDIAN RIVER LANDFILL

The Indian River Landfill is an industrial waste landfill used to dispose CCR and other industrial wastes generated at the station. The landfill is permitted by State of Delaware Department of Natural Resources and Environmental Control (DNREC) Solid Waste Permit No. SW-22/02.

The landfill consists of two major phases. Phase I is a 46-acre unlined, closed landfill that was operated between 1980 and 2014. Phase II is a 28-acre landfill expansion of Phase I that overlays the western slopes of Phase I and expands the landfill footprint to the west. Phase II has two landfill cells (Cells 1 and 2). The east portion of both Cells 1 and 2 overlays onto the western sideslopes of Phase I. Both landfill cells, including the overlay area, have a composite liner system at their base.

The Phase II expansion began accepting waste on September 17, 2010, within Cell 1. Cell 2 received operational authorization in 2015. Cell 1 is not actively receiving CCR material and has a vegetated intermediate cover. Cell 2 is currently open and actively receiving CCR material. No areas of Phase II have received final cover as described in §257.102(d)(3).

# 2.0 ANNUAL INSPECTION

Mr. Richard Southorn, a qualified professional engineer with SCS, conducted the 2023 annual on-site inspection of IRLF on October 17, 2023. The annual inspection and evaluation 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.

Per §257.84(b)(2) (i-iv), the following aspects of the CCR unit must be documented as part of the annual inspection:

- 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.

## 2.1 REVIEW OF OPERATING RECORD

The operating records review of the facility's operating record and verification were performed before and during the site inspection. Files reviewed included, but were not limited to:

- 2011 Phase II Landfill Expansion Application;
- NRG Permit SW-22/02;
- Previous Annual Landfill Operations Report;
- CCR Rule Inspection Reports;
- Leachate Collection System Daily Inspection Reports;
- Daily/After Storm Event Erosion Control/Emissions Inspection Forms;
- Disposal volume records provided by Indian River; and
- Miscellaneous reports and documents on NRG's CCR Rule Compliance Data Website. (<a href="https://www.nrg.com/legal/coal-combustion-residuals.html">https://www.nrg.com/legal/coal-combustion-residuals.html</a>)

During the site inspection, Mr. Southorn interviewed Mr. David Roesler (Landfill Manager) to verify the information contained within the operating record.

#### 2.2 VISUAL INSPECTION

A visual inspection of the landfill was completed after review of the Operating Record to identify signs of distress or malfunction of the CCR unit. The visual inspection included observations of the following:

- Active disposal area (Cell 2 of Phase II);
- Intermediate cover areas (Phase II);
- Final Cover areas (Phase I);
- Non-contact storm water run-on and run-off control features, including terrace benches, swales, downchutes, and sedimentation detention basins; and
- Leachate collection pump houses.

Mr. Southorn focused on standard geotechnical signs of distress or malfunction such as slumping at the toe of slope, tensile cracking, abnormal or excessive erosion on the side slopes or stormwater management facilities, slope bulging, groundwater/surface water seepage or ponding, etc. These visual signs are potential indicators of structural weakness of the CCR Landfill unit.

A checklist documenting inspection findings is provided as **Attachment 1** to this report. Photographs taken during the inspection are provided as **Attachment 2** to this report. Findings are reported in **Section 3** of this report.

# 3.0 REGULATORY FINDINGS OF ANNUAL INSPECTION

CCR Rule Documentation Requirement  §257.84(b)(2):	Annual Inspection Findings
§257.84(b)(2)(i):  (i) Any changes in geometry of the structure since the previous annual inspection;"	Changes in geometry include the placement of CCR and intermediate cover in Phase II Cell 2.
§257.84(b)(2)(ii):  "(ii) The approximate volume of CCR contained in the unit at the time of the inspection;"	Phase II design documents indicate that Cells 1 and 2 have a total combined disposal capacity of approximately 2.2 Million cubic yards (cy). Cell 1 has approximately 1,194,000 cy total disposal capacity, while Cell 2 has approximately 1,006,000 cy total disposal capacity.  Cell 1: Cell 1 has largely been filled, but NRG Energy estimates that Phase II Cell 1 has approximately 5,000 cy of emergency capacity left in the event that Cell 2 becomes inaccessible. Therefore, Cell 1 is estimated to contain 1,189,000 cy of CCR material.  Cell 2: At the end of calendar year 2022, approximately 318,355 cy had been placed in Phase II Cell 2. An additional 3,143 tons of CCR material were placed in Phase II Cell 2 in 2023. This equates to 2,806 cy, based on an assumed conversion factor of 1 cy = 1.12 ton. Therefore, the estimated total volume disposed in Phase II Cell 2 is 321,161 cy (318,355 cy + 2,806 cy).  Phase II (Cells 1 and 2): The estimated total disposed volume in Phase II is 1,510,161 cy (1,189,000 cy + 321,161 cy).  It is noted that the conversion factor is based on design documents in the Phase II permit application. Additionally, Phase I volumes have not been evaluated because Phase I was closed prior to the inception of the CCR Rule and is not regulated under the CCR Rule.

CCR Rule Documentation Requirement §257.84(b)(2):	Annual Inspection Findings
§257.84(b)(2)(iii):  "(iii) 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;"	At the time of this inspection, there were no signs of actual or potential structural weakness or existing conditions that are disrupting or have the potential to disrupt the operation and/or safety of the CCR landfill. No signs of distress or malfunction were observed.
§257.84(b)(2)(iv):  "(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.	There have been no changes observed during the annual inspection that have affected the stability or operation of the CCR unit since the previous annual inspection.

# 4.0 RECOMMENDATIONS

Based on the on-site inspection performed on October 17, 2023, SCS recommends the following actions:

1. Continue operation, inspections, and maintenance within the active landfilling area as currently performed.

There were no deficiencies or releases identified during the 2023 annual inspection that require the owner or operator to perform corrective actions as required under §257.84(b)(5).

# 5.0 PROFESSIONAL ENGINEER'S CERTIFICATION

In accordance with §257.84(b) of the CCR 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 that the IRLF does not exhibit any appearances of actual/potential structural weakness that would be disruptive to the normal operations of the IRLF. The unit is being operated and maintained consistent with recognized and generally accepted good engineering standards and practices.

Certified by: Richard Southorn

Date: <u>January 18, 2024</u>

Richard Southorn, P.E. Professional Engineer Registration No. PE 20894 SCS Engineers



#### **ATTACHMENTS**

- 1. Site Map
- 2. Inspection Photo Log

#### **REFERENCES**

- 1. 2022 Landfill Periodic Inspection Report (dated January 18, 2023)
- 2. Annual Landfill Operations Reports, NRG Energy Indian River Generating Station
- 3. 40 Code of Federal Regulations Part 257.
- 4. Routine Inspection Reports.
- 5. DNREC Solid Waste Permit No. 22/02
- 6. CCR Rule Documents on NRG website (<a href="https://www.nrg.com/legal/coal-combustion-residuals.html">https://www.nrg.com/legal/coal-combustion-residuals.html</a>)

# Attachment 1 Coal Combustion Residuals Landfill Annual Inspection Checklist

# **CCR LANDFILL ANNUAL INSPECTION CHECKLIST**

Facility	y Name		Featu	Inspection Date				
Indian Riv	ver Landfil	I	Indian River	October 17, 2023				
Station	n/Owner		Stat	е				
Indian River	Power (NI	RG)	Delawa					
Inspec	cted By	Phon	e No.	Туре	Type of Landfill			
Richard	Southorn	(630) 95	(630) 957-7653		☐ Closed			
		Weather			Temperature (°F)			
☐ Wet □	⊠ Dry	y □ Snow Cover □ Other:			55			
Total precipita	ation last	24 hours (in)						
0.5"								
Remarks:								

	CHECKS AND OBSERVATIONS									
	1. Is the haul route maintained?						⊠ Yes		No	□ N/A
	Are stormwater BMPs inspected and serviceable?						⊠ Yes		No	□ N/A
OPERATIONS	3. Is the leachate system functional?					⊠ Yes		No	□ N/A	
	4. Is	there evidence	e of erosion?				☐ Yes	⊠ N	No	□ N/A
OPE	5. Ar	e stormwater r	etention basins function	ning	properly?		⊠ Yes □ No		No	□ N/A
	Commen	ts / Action Ite	ms				1			
	Actions	⊠ None	☐ Maintenance	□N	☐ Monitoring		Minor Repair		☐ Eng	ineering
	PROBLEMS									COVER
	□ 1. None		☐ 5. Vegetation, brush		☐ 9. Settlement		☐ 13. Seep	age		Vegetation
REACE	☐ 2. Animal burrows		☐ 6. Vegetation, islands		$\square$ 10. Cracks		☐ 14. Ponding			Gravel
JPPER LANDFILL SURFACE	☐ 3. Animal damage		☐ 7. Poor grass cover		☐ 11. Erosion		☐ 15. Bare spots		:s 🗆	Soil
IDFIL	☐ 4. Tree	s, large brush	☐ 8. Slope stability		☐ 12. Rills		☐ 16. Other:		$\boxtimes$	Other:
R LAN			, and the second		_				CC	R
JPPE	Commen	ts / Action Ite	ms							
1										
	Actions	⊠ None	e ☐ Maintenance ☐ Monitoring ☐ N				linor Repair		☐ Eng	ineering

	PROBLEMS									COVER	
	□ 1. None		☐ 5. Vegetation, brush		☐ 9. Settlen	☐ 9. Settlement		☐ 13. Seepage		□ Vegetation	
MS	☐ 2. Animal burrows		☐ 6. Vegetation, islands		☐ 10. Cracks		☐ 14. Ponding			Gravel	
BER	☐ 3. Anim	nal damage	☐ 7. Poor grass cover		☐ 11. Erosio	on	☐ 15. Bare spots		s 🗆	Soil	
SLOPES AND PERIMETER BERMS	☐ 4. Trees, large brush		☐ 8. Slope stability	. Slope stability		☐ 12. Rills		☐ 16. Other:		Other:	
ERIN				OBSE	RVATIONS				,		
ND P	1. Do slopes and berms provide positive drainage?  ☐ No							Ю	□ N/A		
PES /	2. Is there exposed waste on exterior slopes? ☐ Yes ☒ No							lo	□ N/A		
SLO	Commen	ts / Action Ite	ms				1	<u> </u>		l	
	None.										
	Actions	⊠ None	☐ Maintenance		lonitoring	□N	linor Repair		□ Eng	gineering	
				PRO	BLEMS						
	⊠ 1. None	e ☐ 3. Pip	ing leaking	□ 5.	Tank leaking						
TEM	☐ 2. Sum	☐ 2. Sump ☐ 4. Containment leaking			Other:						
SYS	OBSERVATIONS										
EACHATE SYSTEM	1. Is the leachate transmission system functioning properly? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$							lo	□ N/A		
LEAC	Commen	ts / Action Ite	ms					•			
	None.										
	Actions     ⋈ None     ☐ Maintenance     ⋈ Monitoring     ☐ Minor Repair     ☐ E							□ Eng	gineering		

	PROBLEMS									
	⊠ 1. Non	e 🗆	3. Ditch failure	☐ 5. Debris	☐ 7. Si	It fences	☐ 9. Riprap aprons			
STC	☐ 2. Chai	nnel 🗆	4. Ditch washouts	☐ 6. Sediment	☐ 8. Fil	lter socks	☐ 10. Other:			
NTR				OBSERVATIONS	3					
02 I	Are erosion or sediment controls in place?						□ No			
JIMEN	2. Are drop structures in good repair?						□ No	□ N/A		
EROSION AND SEDIMENT CONTROLS	3. Are perimeter run-on diversion ditches present and in good repair?   ☑ Yes							□ N/A		
NOISC	4. Are perimeter run-off diversion ditches present and in good repair? ☐ № Yes ☐ No							□ N/A		
ER	Commen	ts / Actio	n Items			•				
	None.									
	Actions          □ Maintenance         □ Monitoring         □ Minor Repair         □ Engineering         □         □         □									
	Inspector's Signature:									
		ober 17, 2								

# Attachment 2 Coal Combustion Residuals Landfill Annual Inspection Photographs

OF

:\25221158.00\Drawings\Annual Inspections\2023 Photolog\2023 Photo Log.dwg,

DRAWN:

11/20/2023

REVISED:

Image Number: 3296

Date: 10/17/2023

Time: 7:13 AM

Direction: South-Southwest

#### Description:

Speed limit sign and outer side slope of Phase II, Cell 2. The side slope is well vegetated and maintained. No signs of vegetative stress, erosion, or geotechnical instability. Road is well maintained.

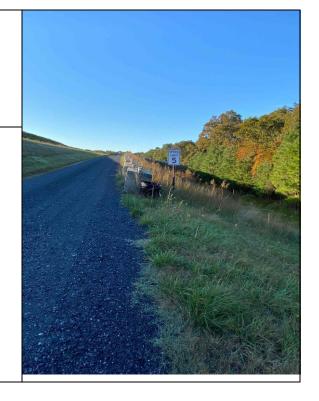


Image Number: 3298

Date: 10/17/2023

Time: 7:16 AM

Direction: West

#### Description:

Phase II, Cell 1/Cell 2 boundary. Non-contact water that drains from the Cell 1 boundary is intercepted by a constructed berm and ditch and is directed to the stormwater perimeter channel.



Image Number: 3302

Date: 10/17/2023

Time: 7:18 AM

Direction: Southwest

#### Description:

Phase II, Cell 1 / Cell 2 boundary. Slopes are well vegetated with no sign of erosion, sloughing, or animal borrows.



Image Number: 3304

Date: 10/17/2023

Time: 7:19 AM

Direction: North-Northwest

#### Description:

Phase II Cell 2 intermediate cover. Material is graded to drain to the north. The intermediate cover is well maintained.

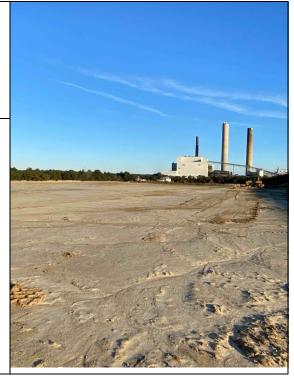


Image Number: 3306

Date: 10/17/2023

Time: 7:20 AM

Direction: North

#### Description:

Overview of the vegetated Phase I intermediate cover slopes. No signs of erosion, sloughing, or animal borrows.



Image Number: 3308

Date: 10/17/2023

Time: 7:21 AM

Direction: West-Southwest

#### Description:

Phase II Cell 2 intermediate cover. Material is graded to drain to north and is well maintained.



Image Number: 3310

Date: 10/17/2023

Time: 7:54 AM

Direction: North-Northwest

#### Description:

Non-contact water flowing over intermediate cover. The water is slowed through berms to minimize erosion. Water flows through pipes located at the toe of the berm.

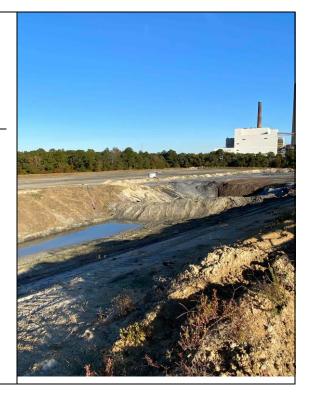


Image Number: 3312

Date: 10/17/2023

Time: 7:54 AM

Direction: East

#### Description:

Erosion control berm installed on top of the intermediate cover to slow sheet flow and direct non-contact water. Non-contact water intercepted by the berm is discharged through pipes located at the toe of the berm. These pipes discharge to the perimeter non-contact water channel.



Image Number: 3314

Date: 10/17/2023

Time: 7:55 AM

Direction: North

#### Description:

Overview of the vegetated Phase I intermediate cover slopes. No signs of erosion, sloughing, or animal borrows. Well maintained.



Image Number: 3316

Date: 10/17/2023

Time: 7:56 AM

Direction: Northwest

#### Description:

Phase II Cell 2 intermediate cover. Material is graded and compacted. View downstream from an erosion control berm. The black pipes convey water from the upstream side of the berm (left side) to the perimeter non-contact water ditch (out of picture on right).



Image Number: 3318

Date: 10/17/2023

Time: 7:56 AM

Direction: North-Northeast

#### Description:

Upstream side of erosion control berm photographed in Image Number 3316. The black pipes convey water from the upstream side of the berm to the perimeter non-contact water ditch.



Image Number: 3320

Date: 10/17/2023

Time: 7:56 AM

Direction: North-Northeast

#### Description:

Active disposal area (approximately 1/4 acre) to north of erosion control berm shown in Image Number 3318. The active area is well graded and maintained.



Image Number: 3322

Date: 10/17/2023

Time: 7:57 AM

Direction: West-Southwest

#### Description:

Phase II Cell 2 intermediate cover. Material is graded and well maintained.



Image Number: 3324

Date: 10/17/2023 Time: 7:57 AM

Direction: East-Northeast

#### Description:

Active disposal area (approximately 1/4 acre) with some ponded contact water after overnight rain. The active area is well graded and maintained.



Image Number: 3326

Date: 10/17/2023

Time: 7:58 AM

Direction: North

#### Description:

Vegetated intermediate cover on northern area of Phase II Cell II. Vegetated intermediate cover is present to north of photo location. Intermediate cover without vegetation is present to the south of the photo location. Well maintained. No ponding water.

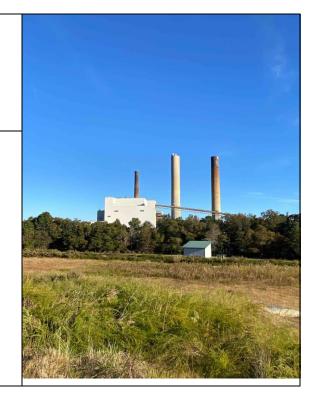


Image Number: 3328

Date: 10/17/2023

Time: 7:59 AM

Direction: East

#### Description:

Limits of vegetated intermediate cover on erosion control berm. Intermediate cover is soil to the south (right on picture) and vegetated soils to the north (left on picture).

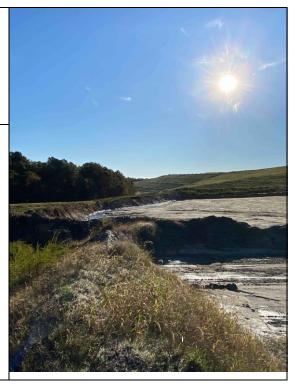


Image Number: 3330

Date: 10/17/2023

Time: 8 AM

Direction: North-Northwest

#### Description:

Vegetated intermediate cover is well maintained. No ponding non-contact water observed. No erosion observed.

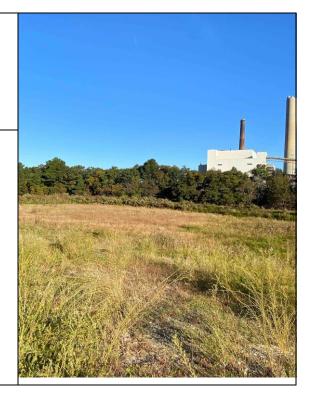


Image Number: 3332

Date: 10/17/2023

Time: 8:02 AM

Direction: South-Southwest

#### Description:

Vegetated intermediate cover on terrace near exterior of Phase II, Cell II. Well maintained. No observed ponding or significant erosion.

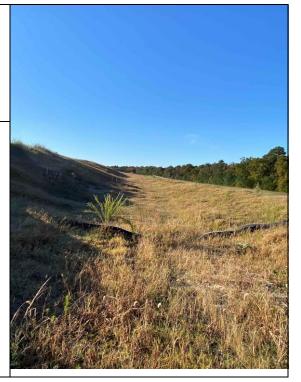


Image Number: 3334

Date: 10/17/2023

Time: 8:02 AM

Direction: Southwest

#### Description:

Vegetated intermediate cover on terrace near exterior of Phase II, Cell II. Well maintained. No observed ponding or significant erosion.

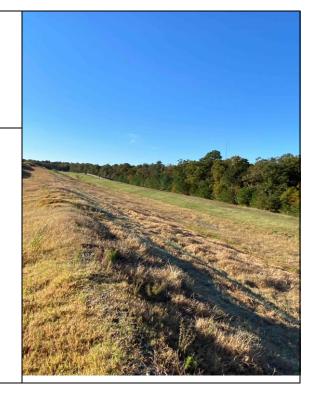


Image Number: 3336

Date: 10/17/2023

Time: 8:04 AM

Direction: South

# Description:

Phase II Cell 2 intermediate cover. Material is graded and well maintained.



Image Number: 3338

Date: 10/17/2023

Time: 8:05 AM

Direction: South-Southeast

#### Description:

Phase II Cell 2 intermediate cover. Material is graded and well maintained.



Image Number: 3340

Date: 10/17/2023

Time: 8:06 AM

Direction: South-Southwest

#### Description:

Vegetated intermediate cover on terrace near exterior of Phase II, Cell II. Well maintained. No observed ponding or significant erosion.



Image Number: 3342

Date: 10/17/2023

Time: 8:18 AM

Direction: South

Description:

Perimeter non-contact water (stormwater) ditch with erosion control revetment concrete blocks. Well maintained.

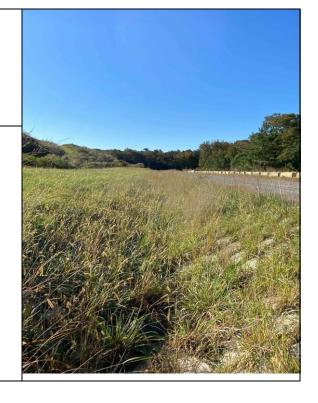


Image Number: 3344

Date: 10/17/2023 Time: 8:20 AM

Direction: North-Northeast

Description:

Well vegetated sideslope terrace. Well maintained. No erosion, sloughing, or animal borrows were observed.



Image Number: 3346

Date: 10/17/2023

Time: 8:20 AM

Direction: East-Northeast

#### Description:

Vegetation on side slopes is well established. Vegetation on side slopes of landfill is well established. No signs of erosion, sloughing, or animal borrows.



Image Number: 3348

Date: 10/17/2023

Time: 8:20 AM

Direction: South-Southwest

#### Description:

Standing on landfill final cover with overview of south settling basin in background. Vegetation on side slopes of landfill is well established. No signs of erosion, sloughing, or animal borrows.

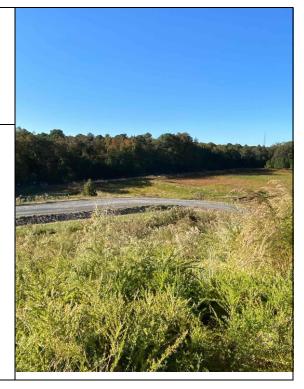


Image Number: 3354

Date: 10/17/2023

Time: 8:25 AM

Direction: East

Description:

Aggregate lined ditch recently cleaned and free of

obstructions.

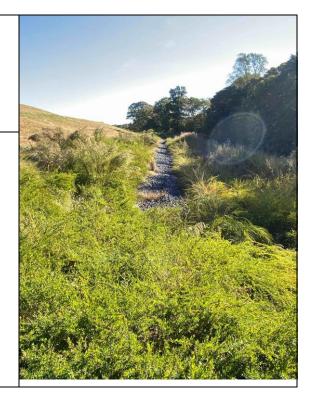


Image Number: 3356

Date: 10/17/2023 Time: 8:26 AM

Direction: East-Northeast

Description:

Vegetation on side slopes is well established. No signs of erosion, sloughing, or animal borrows.

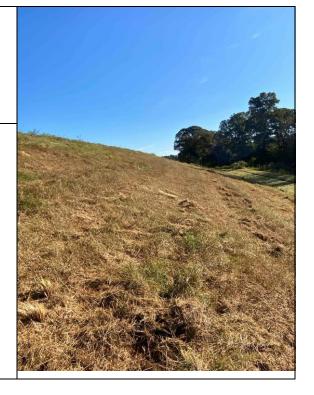


Image Number: 3358

Date: 10/17/2023

Time: 8:39 AM

Direction: West

#### Description:

Inlet to downslope pipe is well maintained and free of obstructions.



Image Number: 3360

Date: 10/17/2023

Time: 8:40 AM

Direction: Northeast

# Description:

Terrace berm segment on the Phase I landfill side slope. Clear of obstructions and functioning as intended. Vegetative cover is dense and healthy.



Image Number: 3362

Date: 10/17/2023

Time: 8:40 AM

Direction: West-Southwest

#### Description:

Final cover on side slopes of Phase II, Cell 1. Vegetation is healthy with full coverage. No signs of erosion or stability issues were observed.



Image Number: 3364

Date: 10/17/2023 Time: 8:42 AM

Direction: West-Southwest

#### Description:

Perimeter landfill ditch segment is in good working condition with no obstructions.



Image Number: 3366

Date: 10/17/2023

Time: 8:56 AM

Direction: North

#### Description:

Phase I, Cell 1 leachate liquid level indicator and controls in working condition.



Image Number: 3368

Date: 10/17/2023

Time: 8:56 AM

Direction: Northwest

#### Description:

Inside the Phase I, Cell 1 leachate pump house. Cleanout riser and pump risers with T-connections to forcemain are shown in this photograph. Building is well maintained.



Image Number: 3370

Date: 10/17/2023

Time: 8:56 AM

Direction: West

#### Description:

Perimeter landfill ditch segment is in good working condition with no obstructions.

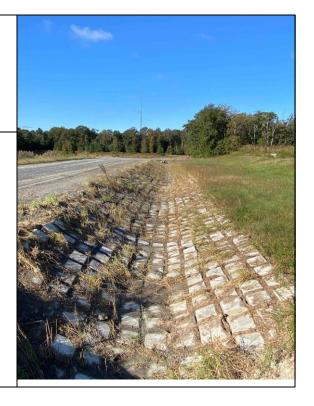


Image Number: 3372

Date: 10/17/2023

Time: 9 AM

Direction: North-Northeast

#### Description:

Inlet to Southeast Detention Basin forebay in good condition. Free of obstruction at inlets and outlets.



Image Number: 3374

Date: 10/17/2023 Time: 9:01 AM

Direction: South

#### Description:

Forebay berm within the Southeast Detention Basin in good condition. Vegetation coverage is dense and healthy.



Image Number: 3378

Date: 10/17/2023 Time: 9:05 AM

Direction: South-Southeast

#### Description:

Phase II, Cell 2 leachate pump house. Building exterior is in good condition. Building is appropriately marked (signage).



Image Number: 3380

Date: 10/17/2023

Time: 9:05 AM

Direction: East

#### Description:

Phase II, Cell 2 leachate liquid level indicator and controls in working condition.



Image Number: 3382

Date: 10/17/2023 Time: 9:07 AM

Direction: East-Southeast

#### Description:

Pipes from intermediate cover areas of Phase II Cell 2 convey non-contact water into north perimeter ditch.

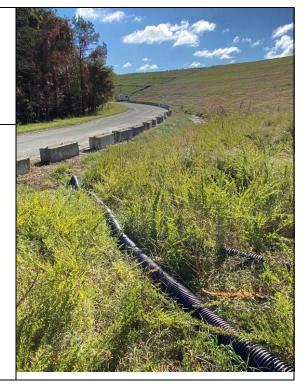


Image Number: 3384

Date: 10/17/2023

Time: 9:08 AM

Direction: East-Southeast

#### Description:

Landfill side slopes and terrace are well maintained. No evidence of slope stability issues or erosion.



Image Number: 3386

Date: 10/17/2023

Time: 9:10 AM
Direction: South

#### Description:

Downchute near southwest forebay of the Northeast Detention Basin. Pipe and downchute are functioning appropriately, as intended.

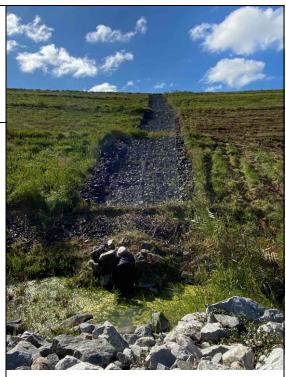


Image Number: 3388

Date: 10/17/2023

Time: 9:12 AM

Direction: West

### Description:

Phase I final cover and terrace berm. Vegetation coverage is dense and healthy.



Image Number: 3390

Date: 10/17/2023 Time: 9:12 AM

Direction: East-Southeast

### Description:

Phase I final cover. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3392

Date: 10/17/2023

Time: 9:14 AM

Direction: South

### Description:

Phase I final cover. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3394

Date: 10/17/2023 Time: 9:15 AM

Direction: North-Northwest

#### Description:

Phase I final cover. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3396

Date: 10/17/2023

Time: 9:17 AM

Direction: North-Northwest

Description:

Downchute is well maintained and functions as intended.



Image Number: 3398

Date: 10/17/2023 Time: 9:17 AM

Direction: East-Southeast

Description:

Downslope pipe inlets are well maintained and free of obstructions.



Image Number: 3400

Date: 10/17/2023

Time: 9:18 AM

Direction: West-Southwest

### Description:

Phase I final cover. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3402

Date: 10/17/2023 Time: 9:18 AM

Direction: North-Northeast

### Description:

Phase I side slopes and terrace berm are well maintained. No evidence of slope stability issues or erosion.

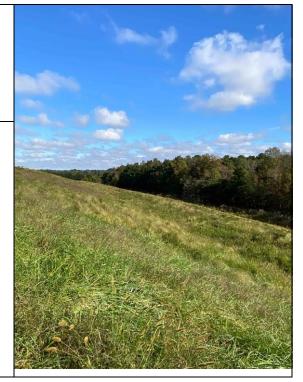


Image Number: 3404

Date: 10/17/2023 Time: 9:24 AM

Direction: South-Southeast

### Description:

Inlet to non-contact water pipe is well maintained and clear from obstructions.

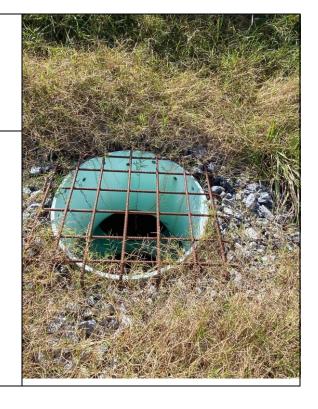


Image Number: 3406

Date: 10/17/2023 Time: 9:24 AM

Direction: South-Southwest

### Description:

Phase I final cover. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3408

Date: 10/17/2023

Time: 9:24 AM

Direction: North

### Description:

Letdown pipe location from plateau terrace into access road ditch on Phase I final cover area. Free draining with no obstructions. No evidence of erosion or scour.



Image Number: 3410

Date: 10/17/2023 Time: 9:25 AM

Direction: South-Southeast

#### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.

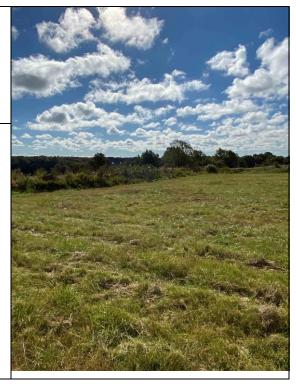


Image Number: 3412

Date: 10/17/2023

Time: 9:26 AM

Direction: Southwest

### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3414

Date: 10/17/2023 Time: 9:27 AM

Direction: East-Southeast

#### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3416

Date: 10/17/2023

Time: 9:27 AM

Direction: Southwest

### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No animal burrows, erosion, or sloughing were observed.



Image Number: 3418

Date: 10/17/2023

Time: 9:28 AM

Direction: North

#### Description:

Phase II final cover plateau. Vegetation is well established with no signs of erosion, sloughing, or animal burrows. No animal burrows, erosion, or sloughing were observed.



Image Number: 3420

Date: 10/17/2023

Time: 9:28 AM

Direction: South

### Description:

Final cover on plateau, with Phase II Cell 1 pump house in the background. Vegetation is dense and healthy. No animal burrows, erosion, or sloughing were observed.

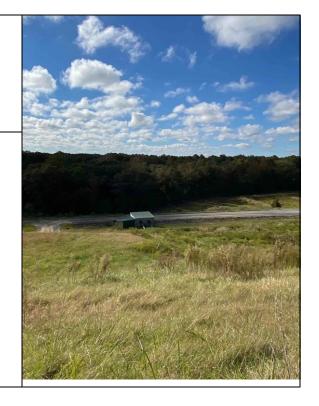


Image Number: 3422

Date: 10/17/2023

Time: 9:28 AM

Direction: North

#### Description:

Phase II final cover plateau. Vegetation is well established with no signs of erosion, sloughing, or animal burrows.

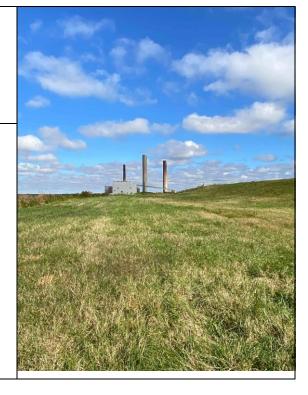


Image Number: 3424

Date: 10/17/2023

Time: 9:30 AM

Direction: Northwest

### Description:

Overlooking Phase II, Cell 2 active area from Phase II, Cell 1 plateau.

Phase II final cover plateau. Vegetation is well established with no signs of erosion, sloughing, or animal burrows.

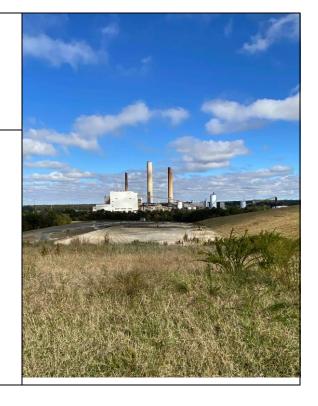


Image Number: 3428

Date: 10/17/2023

Time: 9:31 AM

Direction: West-Northwest

#### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No signs of erosion, sloughing, or animal burrows.



Image Number: 3430

Date: 10/17/2023

Time: 9:32 AM

Direction: East-Northeast

### Description:

Overview of Phase II sideslope final cover in foreground, Phase I sideslope final cover in background, and Northwest Basin.

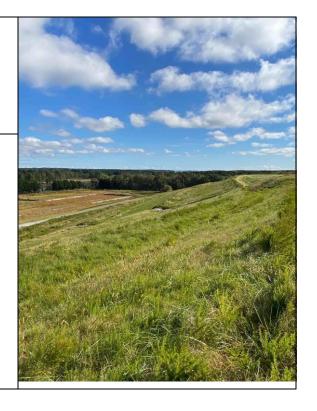


Image Number: 3432

Date: 10/17/2023

Time: 9:34 AM

Direction: North

# Description:

Phase I downchute downchute riprap. Free of obstructions and functioning. No signs of wash out or erosion.

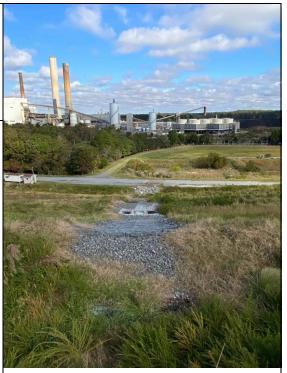


Image Number: 3434

Date: 10/17/2023

Time: 9:35 AM

Direction: Southeast

### Description:

Phase II final cover plateau area. Vegetation coverage is dense and healthy. No signs of erosion, sloughing, or animal burrows.



Image Number: 3436

Date: 10/17/2023

Time: 9:36 AM

Direction: East-Northeast

#### Description:

Phase II final cover plateau. Vegetation is well established with no signs of erosion, sloughing, or animal burrows.



Image Number: 3438

Date: 10/17/2023

Time: 9:36 AM

Direction: Southeast

### Description:

Phase I downchute riprap. Free of obstructions and functioning. No signs of wash out or erosion.

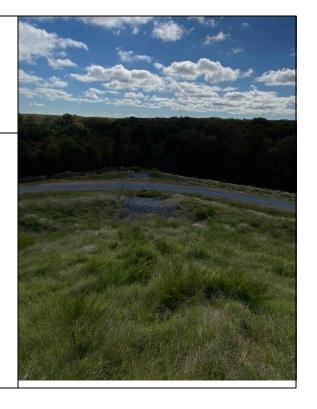


Image Number: 3440

Date: 10/17/2023

Time: 9:37 AM

Direction: East

# Description:

Phase I downchute pipe inlets with grated covers. Free of obstructions and functioning.

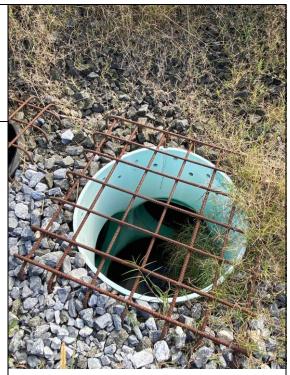


Image Number: 3442

Date: 10/17/2023

Time: 9:38 AM

Direction: Northeast

### Description:

Phase I downchute pipe inlets with grated covers. Some vegetation should be cleared to eliminate obstructions for noncontact water to enter the pipe.



Image Number: 3444

Date: 10/17/2023 Time: 9:39 AM

Direction: North-Northeast

#### Description:

Overview of Northwest Basin settling pond from landfill plateau. Final cover is well maintained.

