CCR Rule Operating Criteria §257.84(b)(1) 2024 Annual Inspection by A Qualified Engineer Final

CCR Landfill Hunter Power Plant Castle Dale, Utah

December 13, 2024

PREPARED FOR

PacifiCorp

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PREPARED BY

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PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify, as a Professional Engineer in the State of Utah, that the information in this document was assembled under my direct supervisory control. This report is not intended or represented to be suitable for reuse by PacifiCorp or others without specific verification or adaptation by the Engineer.

I hereby certify, as a Professional Engineer in the State of Utah that this report has been prepared in accordance with and meets the requirements of 40 Code of Federal Regulations §257.84(b)(1).

Charl Tembries

Chad Tomlinson, P.E.

Charl Tombinson: 12/13/2024

December 13, 2024

Date

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1.0 OVERVIEW OF FINDINGS

This annual inspection and report were completed to provide due diligence by PacifiCorp and reasonable assurance, to the extent obtained by it, of continued safe operation of its coal combustion residual (CCR) facilities. The inspection was performed according to the requirements for annual inspection 257.84 (for CCR landfills) of 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Final Rule, dated April 17, 2015 [1].

1.1 General Overview

The Hunter Power Plant (Plant) is operated by PacifiCorp and is a coal-fueled steam-electric operation with three operating units having a total generating capacity of 1,577.2 MW. Fly ash, bottom ash, and flue gas desulfurization (FGD) produced by the plant are disposed of in the CCR Landfill. These waste materials are delivered to the CCR landfill by truck.

The CCR rules requirement for signage is not applicable to CCR landfills. They are only required for surface water impoundments. Therefore, signage for the Hunter Lardis not required

1.2 Location

The Hunter Power Plant is located in Emery County, Utah, approximately 2.5 miles south of Castle Dale, Utah. Access to the plant is provided by Utah Highway 10 (UT-10). The CCR Landfill is located approximately 1.4 miles southeast of the plant. The majority of the CCR Landfill is used for disposal of dry bottom ash, fly ash, and FGD material with a smaller portion permitted as a Class IIIb Industrial Waste Landfill.

1.3 Summary of Inspection Findings

The field inspection was performed on August 22, 2024 and found the principal project features of the Hunter CCR Landfill to be in satisfactory condition. Nothing was observed that would suggest an active or impending issue with stability of the landfill and the run-on and run-off control features were being maintained to preserve design capacity. The layout of the CCR Landfill is provided in **Figure 1**.

A completed inspection checklist and photographic log of the 2024 inspection are presented in **Appendix A** and **B**, respectively. Observations from the 2024 inspection include the following:

- Hay is being spread across the non-reclaimed ash slopes to minimize erosion and provide organic substrate for future cover. Vegetation is beginning to establish on non-reclaimed slopes.
- Inlets and outlets of culverts associated with run-off channels had varying degrees of accumulated vegetation and sediment with sediment at some of the culverts starting to impact hydraulic performance.
- The sediment pond had no standing water.



Figure 1 : Hunter CCR Landfill

2.0 DESIGN AND DOCUMENTATION REVIEW

2.1 Design and Construction Information

Tetra Tech reviewed the CCR Landfill Draft Basis of Design Memorandum [2], CCR Landfill Design Documents [3], and Run-On and Run-Off Control Plan [4] to obtain information regarding the design and operation of the CCR Landfill. The CCR Landfill occupies approximately 230 acres and includes an existing access (haul) road, perimeter ditches, and the zero-discharge stormwater retention basis (104 acre-ft) with a total landfill; capacity of 44.5 million cubic yards. A typical cross-section of the CCR Landfill is presented in **Figure 2**

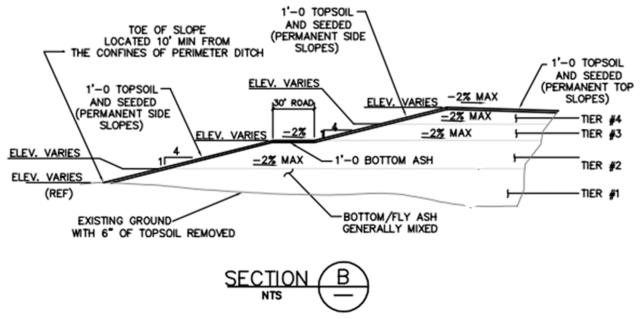


Figure 2 - Typical Cross Section of CCR Landfill

Stormwater runoff from the CCR Landfill is controlled by a perimeter ditch that discharges stormwater to the Stormwater Retention Basin. Stormwater run-on is prevented with run-on control berms and a run-on diversion channel.

2.2 Operating History

There have been no recorded incidences of slope failure or failure of the CCR Landfill's run-on and run-off control system.

2.3 Previous Periodic Structural Analyses

The Cornforth Phase 1 geotechnical study [5] was completed in 2009 and did not recommend a formal risk assessment of the landfill structure.

2.4 Results of Inspection by a Qualified Professional Engineer

The CCR Landfill is subject to periodic inspections by the Hunter Power Plant staff. Tetra Tech reviewed the inspection reports and did not find anything that indicated that the integrity of the CCR Landfill is compromised. These inspections are documented and retained by PacifiCorp.

Review of the results of these inspections did not identify any previously unidentified issues. It is the opinion of the author of this document that the interim inspections and reporting by plant staff are appropriate and adequate, as required by the CCR rules and industry standards, for this CCR Unit.

2.4.1 Results of Previous Annual Inspections

This is the tenth annual periodic inspection conducted under CCR rules [1]. Prior to conducting the 2024 inspection, Tetra Tech staff reviewed the previous annual inspection [6,7,8,9,10,11,12,13, 14] to identify any areas of concern to focus on during the 2024 inspection. The previous annual inspection identified no structural deficiencies that would indicate a cause for concern associated with failure of the landfill slopes or run-on and run-off control system.

This report and other pertinent reports and data are accessible at the following website: https://www.brkenergy.com/ccr/pacificorp-ccr-rule-compliance-data-and-information.html

3.0 FIELD INSPECTION OF EXPANSION LANDFILL

3.1 General Overview of Annual Inspection

A field inspection was conducted on August 22, 2024, by Tetra Tech staff, Chad Tomlinson, P.E. Personnel from the Hunter Plant met with Chad Tomlinson and accompanied him during the inspection. The field inspection was performed by walking along the toe of the landfill slopes and drainage features. Features and conditions were documented on the inspection checklist (**Appendix A**) and were photographed (**Appendix B**). The approximate locations of the photos are detailed in the inspection photo log overview map on the first page of **Appendix B**. In addition to documenting current features, the photograph log of existing conditions is intended to provide a baseline for future inspections.

3.2 Geometry Review

There have been no changes in the design geometry of the landfill. Once a specific portion of the landfill has reached capacity, the external slopes are being graded to 4H:1V.

3.3 Volume of CCR Stored

It is estimated the current volume of CCR stored in the landfill at approximately 19.046 million cubic yards (CY) considering approximately 236,936 CY of ash placed in the CCR Landfill since the last inspection.

3.4 Observed Changes

This is the tenth annual inspection conducted pursuant to §257.84(b)(1) for the CCR Landfill. Based on a review of the 2023 Annual Inspection Report [14], there does not appear any material changes to the condition of CCR Landfill and drainage features. A table summarizing the findings from the 2023 annual inspection and any changes observed from the 2024 inspection is presented in **Table 1**.

Table 1 - Summary of Changes from 2023 and 2024 Annual Inspections

2023 Annual Inspection Observations	2024 Observations
Extent of rilling of the non-reclaimed slopes appeared to be similar to what was observed in 2021.	Rilling of non-reclaimed slopes appeared to be less than observed during the 2023 inspection.
Straw continues to be used as temporary cover on external ash slopes.	Straw continues to be used as a temporary cover on the ash landfill.

4

2023 Annual Inspection Observations	2024 Observations
No water was observed in outlet of Retention Pond Discharge Structure.	Similar to 2023 no water was observed at outlet of discharge structure.
Most culverts have varying amounts of accumulated sediment. Recommend clearing inlet and outlet of culverts of debris and sediment.	Some of the culverts had significant accumulation of sediment at their inlets and outlets. Recommend removing sediment to preserve hydraulic capacity.

3.5 Monitoring, Maintenance, and Repair Recommendations

Based on the results of the site inspection, there were no identified deficiencies indicative of structural weaknesses of the CCR Landfill slopes. However, as part of PacifiCorp's operation of CCR Landfill, Tetra Tech recommends the following:

Clear inlet and outlet ends of culverts to preserve design flow capacity.

4.0 LIMITATIONS AND CONSULTANT QUALIFICATIONS

This report presents observations and conclusions drawn from a review of pertinent documents referenced in Section 5, and a field inspection of the CCR Landfill. The purpose of the review and inspection has been to assess the safety or adequacy of the facilities according to industry standards against catastrophic failure of the major constructed elements during normal operations or unusual or extreme events based on visual inspection and available information. A secondary purpose is to identify any potential deficiencies related to the CCR rules [1].

The conclusions and professional opinions presented herein were developed by the independent consultant and are in accordance with generally accepted engineering principles and practices at the time and location the services were provided. Tetra Tech makes no other warranty, either expressed or implied

4.1 Professional Engineer qualifications

The professional engineer for this inspection is Chad Tomlinson. He is licensed in the State of Utah (4777863-2202) as a civil engineer. He has over 22 years of experience in civil/structural engineering and has performed inspections and safety evaluations on landfills, dams, canals, and numerous other water containing structures.

5.0 SOURCE(S)

- [1] USEPA, 2015. 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. April 17, 2015. 201 pp.
- [2] URS, 2015. Hunter Power Plant CCR Landfill Draft Basis of Design Memorandum. November 2015.
- [3] URS, 2015. Hunter Plant PacifiCorp CCR Landfill Design Documents. December 2015.
- [4] Tetra Tech, 2024. §257.81 Run-on and Run-off Control for CCR Landfills: Hunter Power Plant Coal Combustion Residual Landfill. Revision 1. September 27, 2024.
- [5] Cornforth Consultants Inc., "Phase I Geotechnical Assessments: Scrubber Emergency Holding Pond and FGD Cell/Ash Landfill, Hunter Power Plant," Castle Dale, Utah, 2009.
- [6] URS, 2015. 2015 Coal Combustion Residuals Annual Inspection: Hunter Power Plant Landfill. December 29, 2015.
- [7] URS, 2016. 2016 Coal Combustion Residuals Annual Inspection: Hunter Power Plant Landfill. November 29, 2016.
- [8] URS, 2017. 2017 Coal Combustion Residuals Annual Inspection: Hunter Power Plant Landfill. November 30, 2017.
- [9] AECOM, 2018. 2018 Coal Combustion Residuals Annual Inspection: Hunter Power Plant, Hunter CCR Landfill," December 11, 2018.
- [10] AECOM, 2019. 2019 Coal Combustion Residuals Annual Inspection: Hunter Power Plant, Hunter CCR Landfill. December 18, 2019.
- [11] AECOM, 2020. 2020 Coal Combustion Residuals Annual Inspection: Hunter Power Plant, Hunter CCR Landfill. December 15, 2020.
- [12] Tetra Tech, 2021. CCR Rule Operating Criteria §257.84(b)(1) Annual Inspection by A Qualified Engineer. CCR Landfill. Hunter Power Plant. December 16, 2021.
- [13] Tetra Tech, 2022. CCR Rule Operating Criteria §257.84(b)(1) Annual Inspection by A Qualified Engineer. CCR Landfill. Hunter Power Plant. December 16, 2022.
- [14] Tetra Tech, 2023. CCR Rule Operating Criteria §257.84(b)(1) Annual Inspection by A Qualified Engineer. CCR Landfill. Hunter Power Plant. December 15, 2023.

REVISIONS

Revision Number	Date	Revision Made	By Whom
В	11/14/2024	Issued to PacifiCorp for Review	Chad Tomlinson
0	12/13/2024	Issued for Use	Chad Tomlinson

APPENDIX A – ANNUAL INSPECTION CHECKLIST



Annual Landfill Inspection Report

Feature Name: Feature ID: Date: Hunter CCR Landfill NA 08/22/2024

	pected by: d Tomlinson	Date: 08/22/	2024	Phone No.: 801-633-9765	
Type of Inspection: ☐ Initial ☐ Periodic ☐ Follow-up ☐ Other: Annual Inspection Weather ☐ Other ☐ Other				_ , _ , _ ,	
Ren	narks:				
CCF	R Landfill observed to be in satisfactory condition. No deficienci	ies identified.			
Tot Nor	al Precipitation Last 24 hours:				
1401	PROBLEM	ıç		COVER	
			□ 43 Caanaaa	_	
		9. Settlement 10. Cracks	13. Seepage 14. Ponding	☐ Vegetation☐ Gravel	
	3. Animal damage 7. Poor grass cover	11. Erosion	15. Other:	Soil	
	4. Weeds & brush 8. Slope stability	12. Rills	15. Other.	Asphalt	
COVER	Si siope stability	12. 11113		Other: Temporary	
9				cover consisting of	
				straw on portions of	
				landfill slope.	
	Comments/Action Items: None				
	Actions: None Maintenance Monitoring N	1inor Repair 🔲 Er	ngineering		
	PROBLEM	ıs		COVER	
	1. None 5. Vegetation >2" dia.	9. Settlement	13. Seepage	☐ Vegetation	
S	2. Animal burrows 6. Bare spots >25 ft ²	10. Cracks	14. Ponding	Gravel	
₹	, —	11. Erosion	☐ 15. Other:	Soil	
BEI	4. Weeds & brush \ \ \ \ 8. Slope stability \ \ \ \ \	12. Rills		Asphalt	
Ë				Other: Temporary	
ē				cover consisting of	
S				straw on portions of	
& PERIMETER BERMS				landfill slopes.	
ES 8	OBSERVATIONS				
SLOPES	16. Do slopes and berms provide positive drainage?			Yes No N/A	
S	17. Is there exposed waste on exterior slopes?	∑ Yes ☐ No ☐ N/A			
	Comments/Action Items: Minor rilling of ash slopes observed.				
Actions: None Maintenance Monitoring Minor Repair Engineering PROBLEMS					
Σ	1. None 3. Piping leaking	5. Tank leak	ing		
STE	2. Sump 4. Containment leaking	6. Other:			
S	OBSERVATIONS				
111					
HATE	7. Is the Leachate transmission system functioning properl	ly?		☐ Yes ☐ No ☒ N/A	
ACHATE	7. Is the Leachate transmission system functioning properl 8. Is the leak detection system functioning properly?	ly?		☐ Yes ☐ No ☑ N/A ☐ Yes ☐ No ☑ N/A	
LEACHATE SYSTE		ly?			

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Annual Landfill Inspection Report

Feature Name: Feature ID: Date: **Hunter CCR Landfill** NA 08/22/2024 **PROBLEMS** EROSION SEDIMENT CONTROLS 🛛 5. Debris 🗌 1. None 3. Ditch failure 7. Silt fences 9. Rip rap aprons 2. Channel 4. Ditch washouts 8. Filter socks 10. Other: **OBSERVATIONS** ☐ Yes ⊠ No 11. No erosion or sediment controls. 12. Is there exposed waste on exterior slopes? Graded ash slopes have temporary straw cover. 13. Are perimeter run-on diversion ditches present and in good repair? Yes □ No □ N/A 14. Are perimeter run-off diversion ditches present and in good repair? Comments/Action Items: Sediment and debris accumulated at inlet and outlet of drainage culverts. Actions: None Maintenance Monitoring Minor Repair Engineering **OBSERVATIONS** 1. Are temporary covers functioning as intended? Straw used as temporary cover. 2. Are stormwater systems functioning as intended? 3. Are fences and gates in good condition? 4. Are security devices in good condition? ☐ Yes ☐ No ☒ N/A 5. Are signs in good condition? ☐ Yes ☐ No ☐ N/A 6. Are reference monuments/survey monuments in good condition? Comments/Action Items: None Actions: None Maintenance Monitoring Minor Repair Engineering (Tembries Inspector Signature: (Date: 8/22/2024

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APPENDIX B – PHOTOGRAPHIC LOG

Hunter CCR Landfill – 2024 Photographic Log Locations

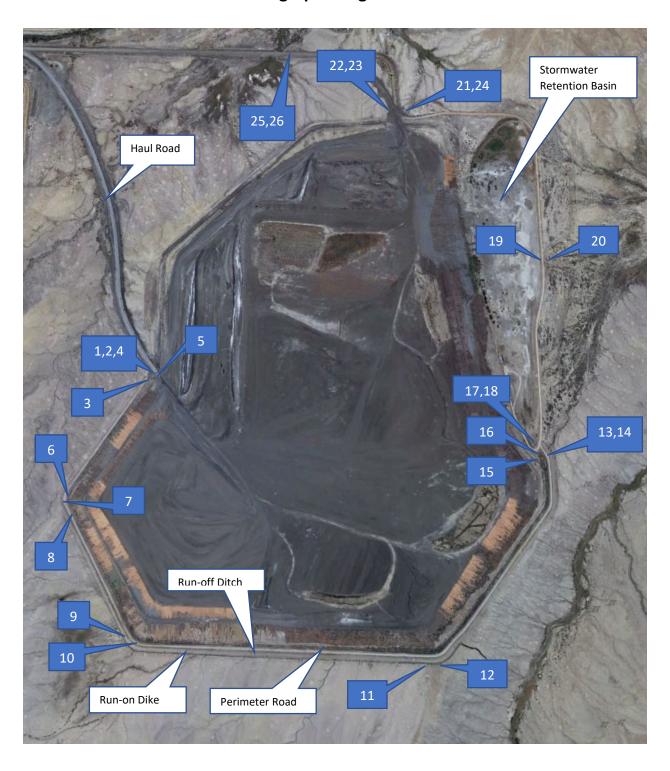


Photo Number: 1	Date: 8/22/2024 12:53 p.m.
Location: Hunter CCR Landfill	Comments: Looking north at inlet of culvert draining run-off channel shown in Photograph 2. Note minor amounts of ash deposited at inlet.



Photo Number: 2	Date: 8/22/2024 12:55 p.m.
Location: Hunter CCR Landfill	Comments: Looking southwest along northwest slope of landfill at run-off ditch and run-on berm.



Photo Number: 3	Date: 8/22/2024 12:59 p.m.
Location: Hunter CCR Landfill	Comments: Looking north at outlet of culvert draining run-off channel shown in Photograph 2.



Photo Number: 4	Date: 8/22/2024 1:02 p.m.
Location: Hunter CCR Landfill	Comments: Looking south at outlet of culvert in Photograph 1. Note minor amounts of ash deposited at inlet.



Photo Number: 5	Date: 8/22/2024 1:04 p.m.
Location: Hunter CCR Landfill	Comments: Looking southeast up at haul road grate. Road grate used to remove ash from tires and intercept stormwater running down haul road.



Photo Number: 6	Date: 8/22/2024 1:08 p.m.
Location: Hunter CCR Landfill	Comments: Looking north at along runoff channel draining into culvert shown on Photograph 1.



Photo Number: 7	Date: 8/22/2024 1:09 p.m.
Location:	Comments: Looking southeast at high point of runoff ditch
Hunter CCR Landfill	



Photo Number: 8	Date: 8/22/2024 1:12 p.m.
Location:	Comments: Looking southeast along run-on berm. Drainage ditch shown in
Hunter CCR Landfill	Photograph 7 can be seen on the left side of the photograph.



Photo Number: 9	Date: 8/22/2024 1:18 p.m.
Location:	Comments: Looking northwest along run-on diversion berm.
Hunter CCR Landfill	

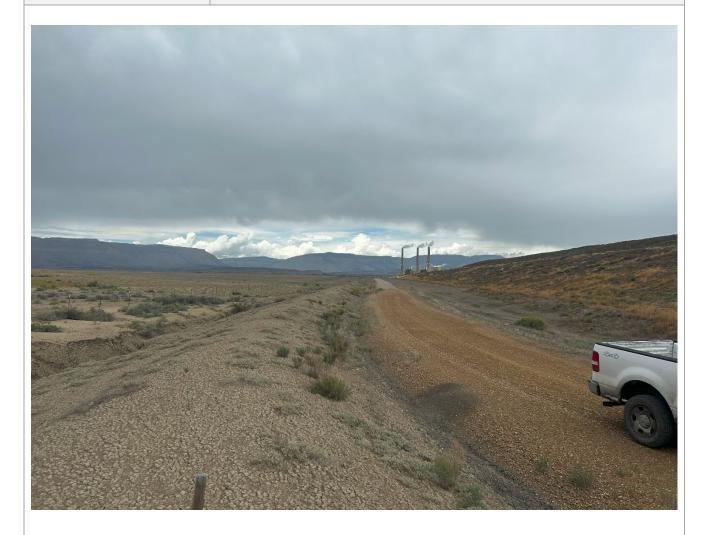


Photo Number: 10	Date: 8/22/2024 1:19 p.m.
Location:	Comments: Looking east along run-on diversion berm. Not run-on ditch can
Hunter CCR Landfill	be seen on the right side of the photograph.



Photo Number: 11	Date: 8/22/2024 1:27 p.m.
Location: Hunter CCR Landfill	Comments: Looking west along run-on berm with run-on ditch and run-off ditch seen on the left and right sides of the photograph, respectively.



Photo Number: 12	Date: 8/22/2024 1:28 p.m.
Location: Hunter CCR Landfill	Comments: Looking northeast along run-on berm and termination of run-on ditch seen on the right side of the photograph.



Photo Number: 13	Date: 8/22/2024 1:33 p.m.
Location:	Comments: Looking south along channel created by perimeter road and run-
Hunter CCR Landfill	on berm.

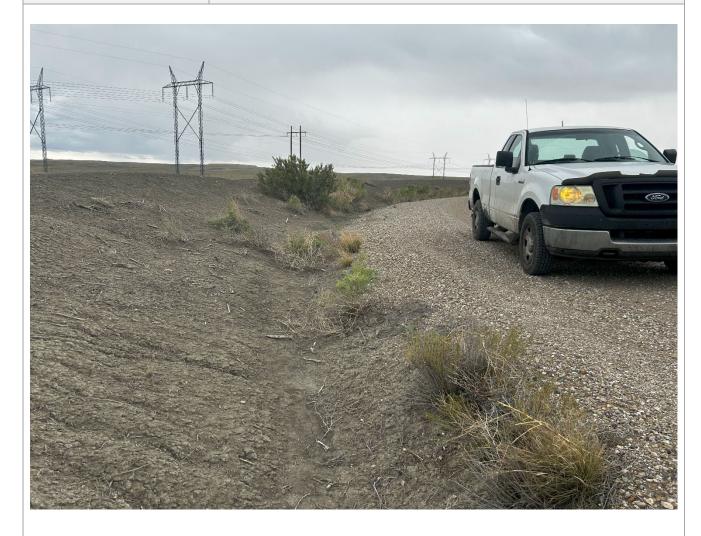


Photo Number: 14	Date: 8/22/2024 1:34 p.m.
Location: Hunter CCR Landfill	Comments: Looking north at inlet of culvert draining channel shown on Photograph 13.



Photo Number: 15	Date: 8/22/2024 1:35 p.m.
Location: Hunter CCR Landfill	Comments: Looking east at outlet of culvert shown in Photograph 14. Minor vegetation observed and debris observed.



Photo Number: 16	Date: 8/22/2024 1:37 p.m.
Location:	Comments: Looking north at inlet of culvert draining into Retention Basin.
Hunter CCR Landfill	Inlet was observed to be free of debris and vegetation.



Photo Number: 17	Date: 8/22/2024 1:40 p.m.
Location: Hunter CCR Landfill	Comments: Looking north into Retention Basin from above outlet of culvert shown in Photograph 16.



Photo Number: 18	Date: 8/22/2024 1:41 p.m.
Location: Hunter CCR Landfill	Comments: Looking south at outlet of culvert shown in Photograph 16. Accumulated vegetation observed.



Photo Number: 19	Date: 8/22/2024 1:42 p.m.
Location:	Comments: Looking east at outlet structure for Retention Basin.
Hunter CCR Landfill	·



Photo Number: 20	Date: 8/22/2024 1:45 p.m.
Location:	Comments: Looking west at outlet of discharge structure for Retention
Hunter CCR Landfill	Basin.



Photo Number: 21	Date: 8/22/2024 1:51 p.m.
Location: Hunter CCR Landfill	Comments: Looking west at outlet of culvert installed under road going to industrial landfill. Culvert was observed to mostly filled with sediment



Photo Number: 22	Date : 8/22/2024 1:53 p.m.
Location:	Comments: Looking east at inlet of culvert shown in Photograph 21. There
Hunter CCR Landfill	was less sediment accumulation observed on inlet side then outlet side.



Photo Number: 23	Date: 8/22/2024 1:59 p.m.
Location: Hunter CCR Landfill	Comments: Looking west along drainage ditch discharging to culvert inlet shown in Photograph 22.



Photo Number: 24	Date: 8/22/2024 2:00 p.m.
Location:	Comments: Looking east above outlet of culvert shown in Photograph 21
Hunter CCR Landfill	towards where drainage channel discharges to Retention Basin.

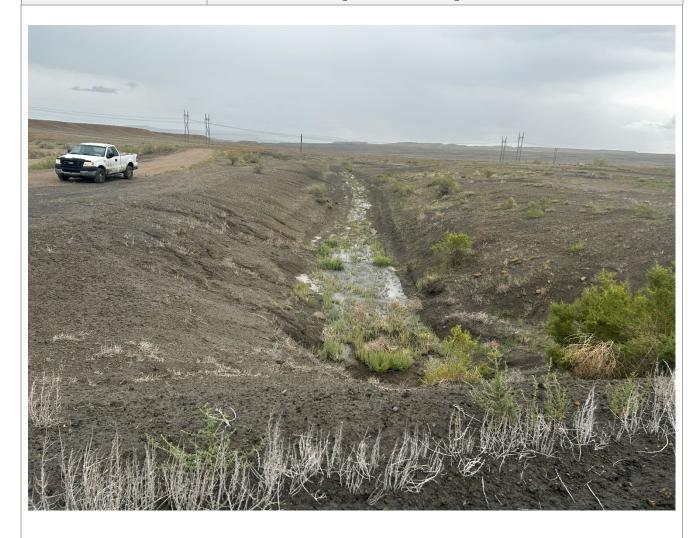


Photo Number: 25	Date: 8/22/2024 2:00 p.m.
Location: Hunter CCR Landfill	Comments: Looking east west at retention area on the right (north side) of the road. Retention area collect water from the right side of the road.



Photo Number: 26	Date: 8/22/2024 2:00 p.m.
Location: Hunter CCR Landfill	Comments: Looking east west at retention area on the left (south side) of the road. Retention area collect water from the left side of the road.

