

# DTE Energy Monroe Power Plant

## **Bottom Ash Impoundment CCR Rule Compliance Project**

### **Annual Inspection Report - 2024**

Project Number: 60733958

August 30, 2024

Prepared by:



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# 1. Introduction

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## 1.1 Introduction

The 2024 Annual Inspection Report (AIR) was prepared by AECOM for the DTE Electric Company (DTE) to summarize the results of the annual inspection of the Monroe Power Plant Bottom Ash Impoundment. This annual inspection complies with the United States Environmental Protection Agency Coal Combustion Residuals Rule (40 CFR 257.83) ("CCR Rule"). Under the CCR Rule, the Bottom Ash Impoundment is an "existing surface impoundment" and must be inspected by a qualified professional engineer on a periodic basis, not to exceed one year.

## 1.2 Background Information

The Bottom Ash Impoundment area was constructed in the late 1960's by building a perimeter dike to surround a low area of the adjacent Lake Erie; the area south of the plant was removed from the Waters of the United States by an Act of Congress prior to plant construction. CCR materials have historically been placed and allowed to drain into the pond from the north end of the pond; these materials previously formed a delta that extended about 1/3 of the way into the pond, however a majority of the CCR material has been removed as part of ongoing closure of the impoundment. Wastewater flow into the pond ceased on October 21, 2020.

## 1.3 Personnel

The annual inspection was performed by Mr. Andrew N. Rodzianko, P.E., with assistance from DTE personnel. Weekly inspections have been and continue to be performed by DTE's plant personnel.

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## 2. Annual Inspection Results

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### 2.1 2023/2024 Inspections

DTE/AECOM performed the following visual inspections in 2023/2024:

- The annual inspection on July 18, 2024 (provided in Appendix A)
- Weekly inspections by DTE personnel during 2023 and 2024

Prior to the physical inspection on July 18th, AECOM reviewed the updated available information about the condition of the Bottom Ash Impoundment.

The annual and weekly inspections included the embankment crest, exterior slopes of the embankment, discharge structures, and discrete observations of the interior of the basins based on accessibility.

No sign of vegetative distress or structural issues were observed during the annual inspection on the embankment crest, exterior slopes of the embankment or discharge structure. These structures appeared to be in good condition. No known changes to the exterior geometry of the impoundment have occurred since the last inspection, however closure construction continues after starting in March 2021 as described below. Instrumentation related to geotechnical monitoring of the impoundment slopes is not present at the impoundment.

The water elevation of the pond is approximately ~574.5 feet above mean sea level (MSL) as noted in the inspection report in Appendix A. Water depth ranges from zero along the northern shore to 3 feet along the eastern and southern perimeter and up to about 20 feet in depth near the weir. The storage capacity of the impoundment has been estimated to be 37.2M cubic feet ("CCR Impoundment Inflow Design Flood Control System Plan: Inactive Bottom Ash Impoundment, Monroe Power Plant", AECOM revised August 30, 2024). CCR materials have not been placed in the impoundment since prior to October 2015.

Closure construction in the Bottom Ash Impoundment commenced in March 2021. As of August 2024, approximately 95% of the volume of CCR in the pond has been removed through a combination of dry and wet excavation and dredging and has been transported off-site.

Noteworthy observations are listed below, however, these conditions do not represent an immediate concern for the safe operation or stability of the Bottom Ash Impoundment and will be addressed either as part of closure activities or regular maintenance of the Bottom Ash Impoundment.

- The northern/upstream face side of the separation berm continues to show signs of erosion and sloughing, as noted in last year's report; this is especially visible on the western portion for a length of approximately 100-150' where plastic bollards have been impacted. This has occurred due to wave action and undercutting from dredging of CCR in these areas. Repair of this upstream section is anticipated to occur either with completion of the closure project or immediately after – the sloughing is not an immediate threat (a width of approximately 20 feet of the separation berm at the crest still exists and DTE has temporarily ceased vehicle traffic over the berm).

- The downslope sides of portions of the Impoundment (especially the western side) are heavily vegetated and/or below the water surface. A thorough inspection of the entire surface perimeter of the impoundment is not practical. Maintenance of the vegetation is advised.
- A few small sinkholes (between several inches up to a foot in diameter and depth) were observed in the dike immediately north of the principal spillway. It is recommended to fill these with gravel and continue to monitor and maintain.

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## 3. Maintenance Activities in 2024

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### 3.1 Maintenance Activities

Site access roads have been repaired/improved as part of the ongoing closure construction.

Periodic mowing of the vegetation along the perimeter is performed by DTE personnel.

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## 4. Conclusion and Certification

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### 4.1 Conclusion

The annual inspection did not identify any evidence of structural weakness or instability in the Bottom Ash Impoundment at DTE's Monroe Power Plant. Observations included continued inspections of the perimeter of the impoundment as well as a review of closure construction that began in March 2021.

Based on the annual inspection results and review of available data, the Bottom Ash Impoundment was designed and constructed with generally accepted good engineering standards. Additionally, the Bottom Ash Impoundment is operated and maintained using generally accepted good engineering practice.

### 4.2 Certification

Certified by:



Andrew N. Rodzianko, P.E. Michigan License #6201061456  
Senior Civil Engineer



# CCR Impoundment Inspection Report

Station/Owner Monroe Bottom Ash Impoundment / DTE Energy	County Monroe	State Michigan
Inspected By Andrew N. Rodzianko, P.E.	Date 07/18/2024	Phone No. 440-785-5658
Type of Impoundment: <input type="checkbox"/> Concrete Gravity <input checked="" type="checkbox"/> Embankment <input type="checkbox"/> Concrete Arch <input type="checkbox"/> Stone Masonry <input type="checkbox"/> Concrete Buttress <input type="checkbox"/> Other	Type of Inspection <input type="checkbox"/> Initial <input checked="" type="checkbox"/> Periodic <input type="checkbox"/> Follow up <input type="checkbox"/> Other	Weather <input type="checkbox"/> Wet <input checked="" type="checkbox"/> Dry <input type="checkbox"/> Snow Cover <input type="checkbox"/> Other
Hazard Description As documented in its Hazard Potential Classification Assessment, dated 03/04/24, AECOM's opinion is that the Bottom Ash Impoundment at the Monroe Power Plant falls under the definition of the CCR rule as a significant hazard potential CCR surface impoundment.	Condition Assessment <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> Poor <input type="checkbox"/> Not rated <input type="checkbox"/> Fair	
Remarks: Overall, the impoundment was found to be in satisfactory condition with ongoing closure by removal activities being performed with completion expected later this year. Some minor maintenance and repair is recommended along the perimeter slopes, as noted herein. Water level differential is approximately 2 feet between the impoundment and surrounding surface waters to the west (cooling water discharge channel) and approximately in equilibrium with on-site water features to the north, east, and south.	Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input checked="" type="checkbox"/> Monitoring <input checked="" type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering	Recommendations <input type="checkbox"/> Inspection letter <input checked="" type="checkbox"/> See Actions <input type="checkbox"/> Deficiency letter <input type="checkbox"/> <input type="checkbox"/> EOR notice <input type="checkbox"/> <input type="checkbox"/> Engineering study <input type="checkbox"/> Inspection by EOR  <input type="checkbox"/> Other reinspection
Pool Level (ft) Approximately 574.50	Total Precipitation since last inspection n/a	

	Problems	COVER:
UPSTREAM SLOPE/FACE	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Vegetation >2" dia. <input checked="" type="checkbox"/> 3. Veg. height >6" <input type="checkbox"/> 4. High bushes <input type="checkbox"/> 5. Animal Burrows <input type="checkbox"/> 6. Livestock damage <input type="checkbox"/> 7. Wave Erosion <input type="checkbox"/> 8. Slides <input type="checkbox"/> 9. Depressions <input type="checkbox"/> 10. Bulges <input type="checkbox"/> 11. Cracks <input type="checkbox"/> 12. Spalling <input checked="" type="checkbox"/> 13. Scarps <input checked="" type="checkbox"/> 14. Sloughing <input type="checkbox"/> 15. Holes <input type="checkbox"/> 16. Undermining <input type="checkbox"/> 17. Displaced joints <input type="checkbox"/> 18. Deteriorated joints <input type="checkbox"/> 19. Exposed reinforcement <input checked="" type="checkbox"/> 20. Veg. or sediment in rip rap <input type="checkbox"/> 21. Displaced rip rap <input type="checkbox"/> 22. Sparse rip rap <input checked="" type="checkbox"/> 23. Other Erosion <input type="checkbox"/> 24. Other	<input checked="" type="checkbox"/> Vegetation <input checked="" type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input checked="" type="checkbox"/> Other
	Comments /Action Items West – tall vegetation needs maintenance. Unable to observe signs of erosion, animal burrows, etc. South – separation berm actively eroding/sloughing, however DTE is aware of the issue and mitigating the risk. Global slope stability analyses have been recently performed to confirm low risk of berm failure. East and North – riprap recently placed along majority of slopes as part of closure activities. Small section along northwest slope scheduled for completion later this year. Some vegetation growth in riprap along toe.	
	Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering	



# CCR Impoundment Inspection Report

<b>TOP OF DAM/CREST</b>	<b>PROBLEMS</b>				<b>COVER:</b>
	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Vegetation >2" dia. <input checked="" type="checkbox"/> 3. Veg. height >6" <input type="checkbox"/> 4. High bushes <input type="checkbox"/> 5. Animal Burrows <input type="checkbox"/> 6. Livestock damage	<input checked="" type="checkbox"/> 7. Ruts <input checked="" type="checkbox"/> 8. Depressions <input type="checkbox"/> 9. Unlevel <input type="checkbox"/> 10. Misalignment <input type="checkbox"/> 11. Signs of overtopping	<input type="checkbox"/> 12. Cracks <input type="checkbox"/> 13. Deteriorated joints <input type="checkbox"/> 14. Displaced joints <input type="checkbox"/> 15. Exposed reinforcement <input type="checkbox"/> 16. Settlement	<input type="checkbox"/> 17. Scarps <input type="checkbox"/> 18. Spalling <input checked="" type="checkbox"/> 19. Sinkholes <input type="checkbox"/> 20. Puddles <input type="checkbox"/> 21. Other	<input type="checkbox"/> Vegetation <input type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input checked="" type="checkbox"/> Other
	Comments /Action Items West – tall vegetation needs maintenance in some areas. Small sinkholes (see photo 2) observed just north of weir spillway should be filled with gravel and monitored. Minor ruts/depressions in some areas should be filled/leveled as part of regular roadway maintenance. South – separation berm roadway along crest in fair condition, however is at risk due to erosion noted along slope. DTE has closed road to vehicular traffic until such time repairs can be completed. East and North – riprap recently placed along majority of crest as part of closure activities. Small section along northwest slope scheduled for completion later this year.				
	Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input checked="" type="checkbox"/> Monitoring <input checked="" type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering				
<b>DOWNSTREAM SLOPE/FACE</b>	<b>PROBLEMS</b>				<b>COVER:</b>
	<input type="checkbox"/> 1. None <input checked="" type="checkbox"/> 2. Vegetation >2" dia. <input checked="" type="checkbox"/> 3. Veg. height >6" <input checked="" type="checkbox"/> 4. High bushes <input type="checkbox"/> 5. Poor grass cover <input type="checkbox"/> 6. Animal Burrows <input type="checkbox"/> 7. Livestock damage	<input type="checkbox"/> 8. Wetness <input type="checkbox"/> 9. Seepage <input type="checkbox"/> 10. Boils <input type="checkbox"/> 11. Puddles <input type="checkbox"/> 12. Erosion <input type="checkbox"/> 13. Slope instability <input type="checkbox"/> 14. Scarps	<input type="checkbox"/> 15. Sloughs/bulges <input type="checkbox"/> 16. Depressions <input type="checkbox"/> 17. Undercutting <input type="checkbox"/> 18. Rutting/rills <input type="checkbox"/> 19. Cracks <input type="checkbox"/> 20. Scour <input type="checkbox"/> 21. Spalling	<input type="checkbox"/> 22. Displaced joints <input type="checkbox"/> 23. Deteriorated joints <input type="checkbox"/> 24. Exposed reinforcement <input type="checkbox"/> 25. Riprap needs attention <input checked="" type="checkbox"/> 26. Veg. or sediment in rip rap <input type="checkbox"/> 27. Other	<input checked="" type="checkbox"/> Vegetation <input checked="" type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other
	28. Does standing water or seepage contain sediment?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
	29. Is there natural hillside seepage in embankment area?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
	Describe seepage with regard to quantity and clarity (turbidity). Note changes: N/A				
	Comments /Action Items West – tall/woody vegetation should be removed, however is not a significant concern due to fair overall condition of embankment and small water level differential. Unable to observe signs of erosion, animal burrows, etc. South – some vegetation growth but in good condition. East and North – vegetation along slope of adjacent process water ditch in fair condition, no signs of erosion observed.				
Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering					

# CCR Impoundment Inspection Report

		PROBLEMS				COVER:
TOE CONTACT	<input checked="" type="checkbox"/> 1. None <input type="checkbox"/> 2. Vegetation >2" dia. <input type="checkbox"/> 3. Veg. height >6" <input type="checkbox"/> 4. High bushes <input type="checkbox"/> 5. Poor grass cover <input type="checkbox"/> 6. Animal Burrows <input type="checkbox"/> 7. Livestock damage	<input type="checkbox"/> 8. Wetness <input type="checkbox"/> 9. Seepage <input type="checkbox"/> 10. Boils <input type="checkbox"/> 11. Puddles <input type="checkbox"/> 12. Erosion <input type="checkbox"/> 13. Slope instability <input type="checkbox"/> 14. Scarps	<input type="checkbox"/> 15. Sloughs/bulges <input type="checkbox"/> 16. Depressions <input type="checkbox"/> 17. Undercutting <input type="checkbox"/> 18. Rutting/rills <input type="checkbox"/> 19. Cracks <input type="checkbox"/> 20. Scour <input type="checkbox"/> 21. Spalling	<input type="checkbox"/> 22. Displaced joints <input type="checkbox"/> 23. Deteriorated joints <input type="checkbox"/> 24. Exposed reinforcement <input type="checkbox"/> 25. Riprap needs attention <input type="checkbox"/> 26. Veg. or sediment in rip rap <input type="checkbox"/> 27. Other	<input type="checkbox"/> Vegetation <input type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	
	28. Does standing water or seepage contain sediment?					<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
	Describe seepage with regard to quantity and clarity (turbidity). Note changes:					
	N/A					
Comments /Action Items						
Toe submerged under water on all sides and unable to observe.						
Actions <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering						
ABUTMENT CONTACTS	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Vegetation >2" dia. <input checked="" type="checkbox"/> 3. Veg. height >6" <input type="checkbox"/> 4. High bushes <input type="checkbox"/> 5. Poor grass cover <input type="checkbox"/> 6. Animal Burrows <input type="checkbox"/> 7. Livestock damage	<input type="checkbox"/> 8. Wetness <input type="checkbox"/> 9. Seepage <input type="checkbox"/> 10. Boils <input type="checkbox"/> 11. Puddles <input type="checkbox"/> 12. Erosion <input type="checkbox"/> 13. Slope instability <input type="checkbox"/> 14. Scarps	<input type="checkbox"/> 15. Sloughs/bulges <input type="checkbox"/> 16. Depressions <input type="checkbox"/> 17. Undercutting <input type="checkbox"/> 18. Rutting/rills <input type="checkbox"/> 19. Cracks <input type="checkbox"/> 20. Scour <input type="checkbox"/> 21. Spalling	<input type="checkbox"/> 22. Displaced joints <input type="checkbox"/> 23. Deteriorated joints <input type="checkbox"/> 24. Exposed reinforcement <input type="checkbox"/> 25. Riprap needs attention <input type="checkbox"/> 26. Veg. or sediment in rip rap <input type="checkbox"/> 27. Other	<input checked="" type="checkbox"/> Vegetation <input type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	
	Comments /Action Items					
	No issues observed other than maintenance, as noted previously.					
	Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering					

# CCR Impoundment Inspection Report

<b>PRINCIPAL SPILLWAY</b>	<b>OBSERVATIONS</b>				
	<input type="checkbox"/> No Spillway				
	Is spillway control system operating properly?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>PROBLEMS</b>				<b>CHANNEL LINING</b>
	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Trashguard <input type="checkbox"/> 3. Debris <input checked="" type="checkbox"/> 4. Obstructed <input type="checkbox"/> 5. Plugged/Clogged <input type="checkbox"/> 6. Gates Damaged <input type="checkbox"/> 7. Gates leaking <input type="checkbox"/> 8. Gates Rusted	<input type="checkbox"/> 9. Misalignment <input type="checkbox"/> 10. Joints leaking <input type="checkbox"/> 11. Joint deterioration <input type="checkbox"/> 12. Joint displacement <input type="checkbox"/> 13. Conduit collapsed <input type="checkbox"/> 14. Exposed reinforcement <input type="checkbox"/> 15. Erosion	<input type="checkbox"/> 16. Undermining <input type="checkbox"/> 17. Voids <input type="checkbox"/> 18. Cracks <input type="checkbox"/> 19. Holes <input type="checkbox"/> 20. Spalling <input type="checkbox"/> 21. Slides <input type="checkbox"/> 22. Outlet undercutting	<input type="checkbox"/> 23. Sloughing <input type="checkbox"/> 24. Scarps <input type="checkbox"/> 25. Deteriorated lining <input type="checkbox"/> 26. Boils <input type="checkbox"/> 27. Outlet erosion <input type="checkbox"/> 28. Displaced rip rap <input type="checkbox"/> 29. Sparse rip rap <input type="checkbox"/> 30. Other	<input checked="" type="checkbox"/> Vegetation <input checked="" type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other
Comments /Action Items 207.5 foot long steel weir observed to be inactive (water level below weir) with minor corrosion and some leakage at vertical joints between steel weir plates, but otherwise in good condition. Downstream outlet channel obstructed with overgrown vegetation which should be removed/maintained to allow for better future inspection and to allow for clear flow path when spillway activates. Some riprap observed immediately downstream of weir.					
Actions <input type="checkbox"/> None <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering					
<b>EMERGENCY SPILLWAY</b>	<b>OBSERVATIONS</b>				
	<input type="checkbox"/> No emergency spillway			<input checked="" type="checkbox"/> Same as principal spillway	
	<b>PROBLEMS</b>				<b>CHANNEL LINING</b>
	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. Debris in channel <input type="checkbox"/> 3. Gates <input type="checkbox"/> 4. Misalignment	<input type="checkbox"/> 5. Joint deterioration <input type="checkbox"/> 6. Joint displacement <input type="checkbox"/> 7. Exposed reinforcement <input type="checkbox"/> 8. Erosion	<input type="checkbox"/> 9. Undermining <input type="checkbox"/> 10. Voids <input type="checkbox"/> 11. Cracks <input type="checkbox"/> 12. Holes <input type="checkbox"/> 13. Outlet erosion	<input type="checkbox"/> 14. Displaced rip rap <input type="checkbox"/> 15. Sparse rip rap <input type="checkbox"/> 16. Outlet undercutting <input type="checkbox"/> 17. Inadequate capacity <input type="checkbox"/> 18. Other	<input type="checkbox"/> Vegetation <input type="checkbox"/> Rip rap <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other
	Comments /Action Items				
Actions <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering					

# CCR Impoundment Inspection Report

OUTLET STRUCTURE	Observations	
	1. Is discharge system operating properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	2. Valves and operators in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	3. Walkway in good condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	4. Is there any turbidity observed at the outlet?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	5. Seepage at pipe outlet	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	6. No Bottom Drain	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	7. Bottom Drain Operable	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	8. Subsurface Drain Dry	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	9. Subsurface drain muddy flow	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	10. Subsurface drain obstructed	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	11. Animal guard	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	12. other	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<p>Comments /Action Items</p> <p>Walkway/structure observed to be in satisfactory condition with minor wear and tear and corrosion. Spillway not active, so no turbidity impacts to observe, however noted turbidity curtains on impoundment/inlet side to be in good condition.</p>		
<p>Actions <input checked="" type="checkbox"/>None <input type="checkbox"/>Maintenance <input type="checkbox"/>Monitoring <input type="checkbox"/>Minor Repair <input type="checkbox"/>Engineering</p>		
RESERVIOR/POOL	OBSERVATION	
	Has there been a sudden drop in the level of the Impoundment <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>	
	PROBLEMS	
	<input checked="" type="checkbox"/> 1. None <input type="checkbox"/> 2. Inadequate freeboard <input type="checkbox"/> 3. Skimmer <input type="checkbox"/> 4. Depressions <input type="checkbox"/> 5. Whirlpools <input type="checkbox"/> 6. Sinkholes <input type="checkbox"/> 7. Unwanted growth in pond water	
	<p>Comments /Action Items</p> <p>None</p>	
<p>Actions <input checked="" type="checkbox"/>None <input type="checkbox"/>Maintenance <input type="checkbox"/>Monitoring <input type="checkbox"/>Minor Repair <input type="checkbox"/>Engineering</p>		

# CCR Impoundment Inspection Report

OBSERVATIONS	
OTHER	1. leachate/stormwater (RCP; CMP) drain pipes that pass through or under an ash basin intact? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	2. Drainage/ diversion ditches/riprap-lined channels in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	3. Other steel structures/steel reinforcement in concrete structures in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	4. Other concrete structures in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	5. Overflow pipes and flap gates on filter dam/ drain pipe filter zone in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	6. Howell Bunger Valves in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	7. Weirs in good condition? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</span>
	8. Perimeter Fences and Gates in good condition? <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	9. Security devices in good condition <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	10. Signs in good condition <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</span>
	11. Instrumentation in good condition <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</span>
	12. Reference monuments/Survey Monuments in good condition <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
	13. other <span style="float: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</span>
Comments /Action Items None	
Actions <input checked="" type="checkbox"/> None <input type="checkbox"/> Maintenance <input type="checkbox"/> Monitoring <input type="checkbox"/> Minor Repair <input type="checkbox"/> Engineering	

Are there any other abnormal conditions at the Impoundment that could pose a risk to public health, safety or welfare; the environment or natural resources  Yes  No

Inspector Signature 

Date: 07/18/2024



**Photo 1: Western perimeter dike, looking north. Gravel road in satisfactory condition. Heavy vegetation visible on both slopes, with large/woody vegetation on downstream/west slope.**



**Photo 2: View of upstream side of principal spillway structure from north. Small sinkhole visible in foreground. A few similar sinkholes behind concrete bin block, not visible.**



**Photo 3: View of downstream side of principal spillway structure from north. Riprap outlet channel overgrown with vegetation.**



**Photo 4: View of principal spillway walkway from south.**



**Photo 5: Impoundment side of western perimeter dike, looking north. Photo taken from separation berm at southwest corner of impoundment.**



**Photo 6: Sloughing and erosion of south separation berm (impoundment side).**



**Photo 7: South separation berm, looking west. Vegetation growth on both sides. Roadway in fair condition, however closed to vehicular traffic due to north (impoundment side) slope sloughing as seen in photo 6.**



**Photo 8: East internal slope of impoundment, view from south separation berm at southeast corner of impoundment. Riprap cover, typical of east and north slopes. Some vegetation growth near water line.**