

July 29, 2021

**2021 Annual Inspection of CCR Facilities  
Gallatin Fossil Plant  
Gallatin, Sumner County, Tennessee**

The 2021 Annual Inspection of CCR facilities at Tennessee Valley Authority's (TVA's) Gallatin Fossil Plant (GAF) included review of the following structures:

- Ash Pond A
- Ash Pond E
- Bottom Ash Pond
- Middle Pond A
- North Rail Loop Landfill

The field reconnaissance was performed on June 14, 2021, in accordance with the GAF Inspection Plan. The weather at the time of the inspection was sunny and 81 degrees Fahrenheit. Approximately 2.2 inches of rain was recorded at Gallatin seven days prior to the inspection. The results of the field inspection (inspection forms, photo logs, and site layout maps) and instrumentation review are included within this report and the attached documents. The report and attachments were prepared in accordance with TVA's Performance Monitoring of CCR Storage Facilities Guidance Document and applicable sections of the published Environmental Protection Agency (EPA) CCR Rule.

**Data Review**

Documents reviewed prior to performing the field work included:

- GAF Inspection Plan
- Previous Inspection Reports
- Monthly and Annual instrumentation reports
- Published CCR Rules established by the EPA
- CCR Rule Demonstrations available on TVA's publicly available CCR Rule website

These documents were reviewed for previously identified areas of interest, potential locations of structural weakness at each facility, instrumentation condition and readings, and documentation of any construction activities that occurred since the previous annual inspection.

**General Conditions**

The Bottom Ash Pond, Middle Pond A, and Ash Pond A ceased receiving CCR sluice waters in June 2019. The sluice waters are now sent to the Bottom Ash Dewatering Facility (BADW) to be treated prior to discharge through a permitted outfall. Ash Pond E is currently dewatered and contains previously sluiced ash. The dry scrubber material has been removed from Ash Pond E and placed in the North Rail Loop Landfill. Ash Pond A, Middle Pond A, Bottom Ash Pond, and Ash Pond E placed a Notification of Intent to Close on the Operations Record on July 19, 2019 along with updated closure and post closure care plans.

Dry scrubber CCR material (gypsum and fly ash) and bottom ash from the BADW are currently being placed in the North Rail Loop Landfill. The dry storage facility began accepting dry CCR material June 8, 2016. It should be noted that routine stacking operations are currently being performed in Cell 1 of the landfill. Cell 2 construction has been completed, however, no waste has been placed within the cell.

A general overview of site conditions is provided below. The inspection team did not observe any critical deficiencies or actual/potential structural weakness of the inspected facilities.

- A good stand of grass is generally maintained on the slopes of the perimeter dikes and slopes of all the facilities
- Adequate impoundment freeboard was observed at Ash Pond A, Ash Pond E, Middle Pond A and the Bottom Ash Pond. Several of these units are maintained in a dry condition
- Routine maintenance activities are on-going including maintaining vegetation
- No evidence of sinkholes or depressions were observed
- No global slope instability was observed during this inspection
- Outlet structures and drainage pipes were generally in good condition

### **Areas of Interest**

No new areas of interest were identified during this inspection.

TVA observed seepage from the Seep 13 grouted cofferdam in May 2021. TVA has notified the Tennessee Department of Environment and Conservation and has initiated the activities required under the Seepage Action Plan. TVA is currently preparing the Corrective Action Plan to repair the collection system. During this inspection no seepage could be observed due to the elevated river level.

Minor leakage was observed in the spillway risers in Ash Pond A. It is recommended to monitor the structures and repair if conditions worsen.

### **Instrumentation**

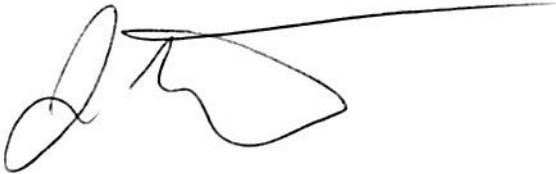
Instrumentation data was reviewed from September 10, 2020, through June 14, 2021. This data included automated and manual water level readings obtained at the piezometers. Instrumentation data is analyzed monthly by TVA for significant fluctuations in piezometer water levels. The maximum recorded water level reading at each piezometer during the aforementioned report period and an instrumentation layout are provided in Attachment C.

There are no instruments installed at the Bottom Ash Pond, Middle Pond A, or North Rail Loop Landfill.

The piezometer GAF\_G\_2C\_PZ4 at Ash Pond E is under evaluation by TVA. It is recommended that upon completion of the evaluation, TVA follow appropriate corrective actions to repair the instruments, if required.

**CCR Rule Compliance**

Based on 40 CFR §257.83 and §257.84 from the published EPA CCR Rules, various metrics are required to be provided at each CCR impoundment and landfill facility for the annual inspection in addition to the visual assessment of the CCR units. A table of these metrics is presented in Attachment D.



Jason Curtsinger, PE

- Attachment A – Inspection Checklists
- Attachment B – Photo Log and Site Layout
- Attachment C – Instrumentation Readings and Layout
- Attachment D – CCR Rule Requirements Tables



## **Attachment A**

### **Inspection Checklists**

- Ash Pond A
- Ash Pond E
- Bottom Ash Pond
- Middle Pond A
- North Rail Loop Landfill



# IMPOUNDMENT INSPECTION

1. Site Name: Gallatin Fossil Plant

2. Facility Name: Ash Pond A

3. Date: 6/14/21

4. Type:  Quarterly  Annual

5. Operator Name: Baker Construction

6. Hazard Classification: Significant

7. Inspector's Names: Jason Curtsinger (Lead), Billy Marlin

8. Weather Conditions / Temperature: Sunny, 81 deg F

Check the appropriate box below. If not applicable, record "N/A". Provide comments when appropriate. Any other areas that should be investigated more closely should also be noted in the "Comments" section. Indicate the locations of any areas identified, and photograph and attach to the form. Previous observation forms should be reviewed and any NEW observations or degradation of previous conditions should be reported on this observation form.

	Yes	No		Yes	No
9. Pre-Job Safety Briefing Performed	X		<b>15. DIKE TOE AREAS</b>		
10. Activity / Construction on / at facility		X	A. Seepage <input type="radio"/> New <input type="radio"/> Existing		X
<b>11. DIKE CREST</b>			<input type="radio"/> Clear or Muddy		N/A
A. Settlement / Cracking		X	<input type="radio"/> Flow Increase / Decrease		N/A
B. Rutting		X	<input type="radio"/> Aquatic Vegetation Growing		N/A
C. Lateral Displacement		X	<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A
D. Erosion		X	B. Boils <input type="radio"/> New <input type="radio"/> Existing		X
<b>12. IMPOUNDMENT</b>			<input type="radio"/> Clear or Muddy		N/A
A. Minimum Freeboard Required		5 FT	<input type="radio"/> Flow Increase / Decrease		N/A
B. Actual Minimum Freeboard		>5 FT	<input type="radio"/> Growing in Size		N/A
C. Pool Elevation Measurement		463.8 FT	C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X
<b>13. DIKE INTERIOR/EXTERIOR SLOPES</b>			<b>16. SEEPAGE COLLECTION SYSTEM</b>		
A. Instabilities (Sloughs or Slides)		X	A. Estimated Flow Measurement		N/A
B. Erosion		X	B. Increased Flow		N/A
C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X	C. Emitting Clear or Dirty Water		N/A
D. Vegetation / Brush / Trees (excessive)		X	<b>17. SPILLWAY WEIRS &amp; OUTLETS</b>		
E. Animal Burrows <input type="radio"/> New <input type="radio"/> Existing		X	A. Decant Riser Misaligned		X
F. Seepage <input type="radio"/> New <input type="radio"/> Existing		X	B. Decant Pipe Joints Leaking/Separated	X	
<input type="radio"/> Clear or Muddy		N/A	C. Headwall in Good Condition		N/A
<input type="radio"/> Increased Flow		N/A	D. Siphons/Emergency Spillway in Good Condition	X	
<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A	<b>18. OPERATIONS &amp; MAINTENANCE</b>		
G. Seep around Drain Pipe (s)		X	A. Routine O&M Performed	X	
<b>14. DEFICIENCIES</b>			B. Changes in Operations		X
A. Prior Deficiencies Checked	X		<b>19. INSTRUMENTATION</b>		
B. New Deficiencies Identified / Flagged		X	A. Instrumentation readings reviewed	X	
C. Immediate Actions Taken (Note Below)		X	B. Instrumentation functioning properly	X	
D. Photos of deficiencies attached		X	C. Physical Damage to Instrumentation		X

20. Major adverse changes in these items could cause instability and should be investigated more closely as soon as possible for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, etc.) in the space below. General inspection comments and observations should also be noted below.

17B - Minor leakage was observed in the spillway risers. It is recommended to monitor and repair if conditions worsen.

21. Who was Notified of New Deficiency: (Date / Time) \_\_\_\_\_ N/A

22. I hereby attest the above is based on actual field observations made during the period indicated, by either myself or an appointed representative and are accurate, complete, and correct to the best of my knowledge.

Period Covered:

From: Sept 2020

To: June 2021

Signature: 

Date: 7/29/21



# IMPOUNDMENT INSPECTION

1. Site Name: Gallatin Fossil Plant      2. Facility Name: Ash Pond E      3. Date: 6/14/21  
 4. Type:  Quarterly  Annual  
 5. Operator Name: Baker Construction      6. Hazard Classification: Significant  
 7. Inspector's Names: Jason Curtsinger (Lead), Daniel Brough, Patrick Kiser, Veronica Barredo  
 8. Weather Conditions / Temperature: Sunny, 81 deg F

Check the appropriate box below. If not applicable, record "N/A". Provide comments when appropriate. Any other areas that should be investigated more closely should also be noted in the "Comments" section. Indicate the locations of any areas identified, and photograph and attach to the form. Previous observation forms should be reviewed and any NEW observations or degradation of previous conditions should be reported on this observation form.

	Yes	No		Yes	No
9. Pre-Job Safety Briefing Performed	X		<b>15. DIKE TOE AREAS</b>		
10. Activity / Construction on / at facility		X	A. Seepage <input type="radio"/> New <input checked="" type="radio"/> Existing	X	
<b>11. DIKE CREST</b>			<input type="radio"/> Clear or Muddy		Clear
A. Settlement / Cracking		X	<input type="radio"/> Flow Increase / Decrease		No change
B. Rutting		X	<input type="radio"/> Aquatic Vegetation Growing		X
C. Lateral Displacement		X	<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		X
D. Erosion		X	B. Boils <input type="radio"/> New <input type="radio"/> Existing		X
<b>12. IMPOUNDMENT</b>			<input type="radio"/> Clear or Muddy		N/A
A. Minimum Freeboard Required		5 FT	<input type="radio"/> Flow Increase / Decrease		N/A
B. Actual Minimum Freeboard		Dry	<input type="radio"/> Growing in Size		N/A
C. Pool Elevation Measurement		Dry	C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X
<b>13. DIKE INTERIOR/EXTERIOR SLOPES</b>			<b>16. SEEPAGE COLLECTION SYSTEM</b>		
A. Instabilities (Sloughs or Slides)		X	A. Estimated Flow Measurement		10 to 15 gpm
B. Erosion		X	B. Increased Flow		Slight decrease
C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X	C. Emitting Clear or Dirty Water		Clear
D. Vegetation / Brush / Trees (excessive)		X	<b>17. SPILLWAY WEIRS &amp; OUTLETS</b>		
E. Animal Burrows <input type="radio"/> New <input type="radio"/> Existing		X	A. Decant Riser Misaligned		N/A
F. Seepage <input type="radio"/> New <input type="radio"/> Existing		X	B. Decant Pipe Joints Leaking/Separated		N/A
<input type="radio"/> Clear or Muddy		N/A	C. Headwall in Good Condition		N/A
<input type="radio"/> Increased Flow		N/A	D. Siphons/Emergency Spillway in Good Condition		N/A
<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A	<b>18. OPERATIONS &amp; MAINTENANCE</b>		
G. Seep around Drain Pipe (s)		X	A. Routine O&M Performed	X	
<b>14. DEFICIENCIES</b>			B. Changes in Operations		X
A. Prior Deficiencies Checked	X		<b>19. INSTRUMENTATION</b>		
B. New Deficiencies Identified / Flagged		X	A. Instrumentation readings reviewed	X	
C. Immediate Actions Taken (Note Below)		X	B. Instrumentation functioning properly		X
D. Photos of deficiencies attached		X	C. Physical Damage to Instrumentation		X

20. Major adverse changes in these items could cause instability and should be investigated more closely as soon as possible for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, etc.) in the space below. General Inspection comments and observations should also be noted below.

10 - Removal of the temporary stockpile from Ash Pond E was completed at the end of 2020.

12A/B - The pond has been decanted of free water.

15A/16 - Seepage was observed from the Seep 13 grouted cofferdam in May 2021 and reported to TDEC. Seepage could not be observed during this inspection because of the river level. TVA is working on the plan to repair the collection system.

19B - Piezometer GAF\_G\_2C\_PZ4 does not appear to be functioning correctly. It is recommended that TVA evaluate the sensors and make repairs as needed.

21. Who was Notified of New Deficiency: (Date / Time)      N/A

22. I hereby attest the above is based on actual field observations made during the period indicated, by either myself or an appointed representative and are accurate, complete, and correct to the best of my knowledge.

Period Covered:

From: Sept 2020

To: June 2021

Signature: 

Date: 7/29/21



# IMPOUNDMENT INSPECTION

1. Site Name: Gallatin Fossil Plant

2. Facility Name: Bottom Ash Pond

3. Date: 6/14/21

4. Type:  Quarterly  Annual

5. Operator Name: Baker Construction

6. Hazard Classification: Low

7. Inspector's Names: Jason Curtsinger

8. Weather Conditions / Temperature: Sunny, 81 deg F

Check the appropriate box below. If not applicable, record "N/A". Provide comments when appropriate. Any other areas that should be investigated more closely should also be noted in the "Comments" section. Indicate the locations of any areas identified, and photograph and attach to the form. Previous observation forms should be reviewed and any NEW observations or degradation of previous conditions should be reported on this observation form.

	Yes	No		Yes	No
9. Pre-Job Safety Briefing Performed	X		<b>15. DIKE TOE AREAS</b>		
10. Activity / Construction on / at facility		X	A. Seepage <input type="radio"/> New <input type="radio"/> Existing		X
<b>11. DIKE CREST</b>			<input type="radio"/> Clear or Muddy		N/A
A. Settlement / Cracking		X	<input type="radio"/> Flow Increase / Decrease		N/A
B. Rutting		X	<input type="radio"/> Aquatic Vegetation Growing		N/A
C. Lateral Displacement		X	<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A
D. Erosion		X	B. Boils <input type="radio"/> New <input type="radio"/> Existing		X
<b>12. IMPOUNDMENT</b>			<input type="radio"/> Clear or Muddy		N/A
A. Minimum Freeboard Required		2 FT	<input type="radio"/> Flow Increase / Decrease		N/A
B. Actual Minimum Freeboard		Dry	<input type="radio"/> Growing in Size		N/A
C. Pool Elevation Measurement		Dry	C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X
<b>13. DIKE INTERIOR/EXTERIOR SLOPES</b>			<b>16. SEEPAGE COLLECTION SYSTEM</b>		
A. Instabilities (Sloughs or Slides)		X	A. Estimated Flow Measurement		N/A
B. Erosion		X	B. Increased Flow		N/A
C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X	C. Emitting Clear or Dirty Water		N/A
D. Vegetation / Brush / Trees (excessive)		X	<b>17. SPILLWAY WEIRS &amp; OUTLETS</b>		
E. Animal Burrows <input type="radio"/> New <input type="radio"/> Existing		X	A. Decant Riser Misaligned		N/A
F. Seepage <input type="radio"/> New <input type="radio"/> Existing		X	B. Decant Pipe Joints Leaking/Separated		N/A
<input type="radio"/> Clear or Muddy		N/A	C. Headwall in Good Condition		N/A
<input type="radio"/> Increased Flow		N/A	D. Siphons/Emergency Spillway in Good Condition		N/A
<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A	<b>18. OPERATIONS &amp; MAINTENANCE</b>		
G. Seep around Drain Pipe (s)		X	A. Routine O&M Performed	X	
<b>14. DEFICIENCIES</b>			B. Changes in Operations		X
A. Prior Deficiencies Checked		N/A	<b>19. INSTRUMENTATION</b>		
B. New Deficiencies Identified / Flagged		X	A. Instrumentation readings reviewed		N/A
C. Immediate Actions Taken (Note Below)		X	B. Instrumentation functioning properly		N/A
D. Photos of deficiencies attached		X	C. Physical Damage to Instrumentation		N/A

20. Major adverse changes in these items could cause instability and should be investigated more closely as soon as possible for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, etc.) in the space below. General inspection comments and observations should also be noted below.

14A - No deficiencies identified during previous annual inspection.

17 - Outlet from the unit is through three pipes installed horizontally. Pipes appeared to be in good condition.

19 - No instrumentation is installed at this unit.

21. Who was Notified of New Deficiency: (Date / Time) \_\_\_\_\_ N/A

22. I hereby attest the above is based on actual field observations made during the period indicated, by either myself or an appointed representative and are accurate, complete, and correct to the best of my knowledge.

Period Covered:

From: Sept 2020 To: June 2021

Signature: 

Date: 7/29/21



# IMPOUNDMENT INSPECTION

1. Site Name: Gallatin Fossil Plant

2. Facility Name: Middle Pond A

3. Date: 6/14/21

4. Type:  Quarterly  Annual

5. Operator Name: Baker Construction

6. Hazard Classification: Low

7. Inspector's Names: Jason Curtsinger

8. Weather Conditions / Temperature: Sunny, 81 deg F

Check the appropriate box below. If not applicable, record "N/A". Provide comments when appropriate. Any other areas that should be investigated more closely should also be noted in the "Comments" section. Indicate the locations of any areas identified, and photograph and attach to the form. Previous observation forms should be reviewed and any NEW observations or degradation of previous conditions should be reported on this observation form.

	Yes	No		Yes	No
9. Pre-Job Safety Briefing Performed	X		<b>15. DIKE TOE AREAS</b>		
10. Activity / Construction on / at facility		X	A. Seepage <input type="radio"/> New <input type="radio"/> Existing		X
<b>11. DIKE CREST</b>			<input type="radio"/> Clear or Muddy		N/A
A. Settlement / Cracking		X	<input type="radio"/> Flow Increase / Decrease		N/A
B. Rutting		X	<input type="radio"/> Aquatic Vegetation Growing		N/A
C. Lateral Displacement		X	<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A
D. Erosion		X	B. Boils <input type="radio"/> New <input type="radio"/> Existing		X
<b>12. IMPOUNDMENT</b>			<input type="radio"/> Clear or Muddy		N/A
A. Minimum Freeboard Required		2 FT	<input type="radio"/> Flow Increase / Decrease		N/A
B. Actual Minimum Freeboard		Dry	<input type="radio"/> Growing in Size		N/A
C. Pool Elevation Measurement		Dry	C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X
<b>13. DIKE INTERIOR/EXTERIOR SLOPES</b>			<b>16. SEEPAGE COLLECTION SYSTEM</b>		
A. Instabilities (Sloughs or Slides)		X	A. Estimated Flow Measurement		N/A
B. Erosion		X	B. Increased Flow		N/A
C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X	C. Emitting Clear or Dirty Water		N/A
D. Vegetation / Brush / Trees (excessive)		X	<b>17. SPILLWAY WEIRS &amp; OUTLETS</b>		
E. Animal Burrows <input type="radio"/> New <input type="radio"/> Existing		X	A. Decant Riser Misaligned		N/A
F. Seepage <input type="radio"/> New <input type="radio"/> Existing		X	B. Decant Pipe Joints Leaking/Separated		N/A
<input type="radio"/> Clear or Muddy		N/A	C. Headwall in Good Condition		N/A
<input type="radio"/> Increased Flow		N/A	D. Siphons/Emergency Spillway in Good Condition		N/A
<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A	<b>18. OPERATIONS &amp; MAINTENANCE</b>		
G. Seep around Drain Pipe (s)		X	A. Routine O&M Performed	X	
<b>14. DEFICIENCIES</b>			B. Changes in Operations		X
A. Prior Deficiencies Checked		N/A	<b>19. INSTRUMENTATION</b>		
B. New Deficiencies Identified / Flagged		X	A. Instrumentation readings reviewed		N/A
C. Immediate Actions Taken (Note Below)		X	B. Instrumentation functioning properly		N/A
D. Photos of deficiencies attached		X	C. Physical Damage to Instrumentation		N/A

20. Major adverse changes in these items could cause instability and should be investigated more closely as soon as possible for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, etc.) in the space below. General inspection comments and observations should also be noted below.

14A - No deficiencies identified during previous annual inspection.

17 - Outlet from the unit is through two pipes installed horizontally. Pipes appeared to be in good condition.

19 - No instrumentation is installed at this unit.

21. Who was Notified of New Deficiency: (Date / Time)  N/A

22. I hereby attest the above is based on actual field observations made during the period indicated, by either myself or an appointed representative and are accurate, complete, and correct to the best of my knowledge.

Period Covered:

From: Sept 2020

To: June 2021

Signature: 

Date: 7/29/21





# LANDFILL INSPECTION

1. Site Name: Gallatin Fossil Plant      2. Facility Name: North Rail Loop Landfill      3. Date: 6/14/21  
 4. Type:  Quarterly  Annual  
 5. Operator Name: Baker Construction      6. Hazard Classification: N/A  
 7. Inspector's Names: Jason Curtsinger (LEAD), Chad Oliver  
 8. Weather Conditions / Temperature: Sunny, 81 deg F

Check the appropriate box below. If not applicable, record "N/A". Provide comments when appropriate. Any other areas that should be investigated more closely should also be noted in the "Comments" section. Indicate the locations of any areas identified, and photograph and attach to the form. Previous observation forms should be reviewed and any NEW observations or degradation of previous conditions should be reported on this observation form.

	Yes	No		Yes	No
9. Pre-Job Safety Briefing Performed	X		<b>14. LEACHATE COLLECTION SYSTEM</b>		
10. Activity / Construction on / at facility	X		A. Operating Properly	X	
<b>11. STACK CREST &amp; SLOPES</b>			<input type="radio"/> Pumps	X	
A. Settlement / Cracking		X	<input type="radio"/> Less than 1 foot (30 cm) of head on liner	X	
B. Rutting		X	<input type="radio"/> Piping	X	
C. Lateral Displacement		X	<input type="radio"/> Tanks		N/A
D. Erosion		X	<b>15. PERIMETER DRAINAGE DITCHES &amp; DOWNDRAINS</b>		
E. Instabilities (Sloughs or Slides)		X	A. Erosion in Ditches or Downdrains		X
<b>12. DIKE SLOPES &amp; TOE AREA</b>			B. Vegetation Maintained	X	
A. Instabilities (Sloughs or Slides)		X	C. Adequate Riprap Protection Provided	X	
B. Erosion		X	D. Drainage Pipes Silted/Impeded		X
C. Sinkholes/Depressions <input type="radio"/> New <input type="radio"/> Existing		X	<b>16. OPERATIONS &amp; MAINTENANCE</b>		
D. Vegetation / Brush / Trees (excessive)		X	A. Routine O&M Performed	X	
E. Animal Burrows <input type="radio"/> New <input type="radio"/> Existing		X	B. Changes in Operations		X
F. Seepage <input type="radio"/> New <input type="radio"/> Existing		X	C. Adequate Dust Control	X	
<input type="radio"/> Clear or Muddy		N/A	D. Excessive standing/ponding water		X
<input type="radio"/> Increased Flow		N/A	<b>17. INSTRUMENTATION</b>		
<input type="radio"/> Ash or Clay Deposits Below Seep Outlet		N/A	A. Instrumentation readings reviewed		N/A
G. Seep around Drain Pipe (s)		X	B. Instrumentation functioning properly		N/A
<b>13. DEFICIENCIES</b>			C. Physical Damage to Instrumentation		N/A
A. Prior Deficiencies Checked	X				
B. New Deficiencies Identified / Flagged		X			
C. Immediate Actions Taken (Note Below)		X			
D. Photos of deficiencies attached		X			

18. Major adverse changes in these items could cause instability and should be investigated more closely as soon as possible for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, etc.) in the space below. General Inspection comments and observations should also be noted below.

9 - Routine stacking was being performed at the time of this inspection.

17 - No instrumentation is installed at this unit.

19. Who was Notified of New Deficiency: (Date / Time)      N/A

20. I hereby attest the above is based on actual field observations made during the period indicated, by either myself or an appointed representative and are accurate, complete, and correct to the best of my knowledge.

Period Covered:

From: Sept 2020 To: June 2021

Signature: 

Date: 7/29/21

## **Attachment B**

### **Photo Log and Site Layout**

- Ash Pond A
- Ash Pond E
- Bottom Ash Pond
- Middle Pond A
- North Rail Loop Landfill

**Gallatin Fossil Plant (GAF) 2021 Annual Inspection  
Photo Log**



**Photo 1**

General view facing south of spillway risers at Ash Pond A. No deficiency pictured.



**Photo 2**

Typical view of exterior dike slope at Ash Pond A. No deficiency pictured.



**Gallatin Fossil Plant (GAF) 2021 Annual Inspection  
Photo Log**



**Photo 3**

General view of outlet pipes from Middle Pond A into Ash Pond A. No deficiency pictured.



**Photo 4**

General view of Middle Pond A looking north. No deficiency pictured.



**Gallatin Fossil Plant (GAF) 2021 Annual Inspection  
Photo Log**



<b>Photo 5</b>	General view of Bottom Ash Pond looking south. No deficiency pictured.
----------------	--



<b>Photo 6</b>	Seep 13 at Ash Pond E on May 27, 2021 to show observed seepage. This area could not be viewed during the Annual Inspection due to the elevated river level.
----------------	---



**Legend**

● Photo Location



## **Attachment C**

### **Instrumentation Readings and Layout**

- Ash Pond A
- Ash Pond E

<b>GAF Instrumentation Data</b>			
<b>Facility: Ash Pond A</b>			
<b>Instrument<sup>1</sup></b>	<b>Instrument Type</b>	<b>Maximum Water Elevation Since Previous Inspection (ft)</b>	<b>Date Maximum Water Elevation Recorded</b>
GAF_PZA5	Piezometer	458.1	4/24/2021
GAF_PZA9	Piezometer	460.6	3/29/2021
GAF_PZ2B	Piezometer	Dry	6/14/2021
GAF_PZ4B	Piezometer	456.5	3/29/2021
GAF_PZ5B	Piezometer	465.4	4/1/2021
GAF_PZK2B	Piezometer	463.0	3/29/2021
GAF_PZ02KA_1	Piezometer	466.7	3/19/2021
GAF_PZ02KA_2	Piezometer	474.8	3/29/2021
GAF_PZ02KA_3	Piezometer	472.7	3/29/2021
GAF_PZ02KB_1	Piezometer	Dry	6/14/2021
GAF_PZ02KB_2	Piezometer	466.6	3/29/2021
GAF_PZ02KB_3	Piezometer	466.1	3/29/2021
GAF_Q_2B_PZ1	Piezometer	456.8	6/1/2021
GAF_Q_2B_PZ2	Piezometer	457.2	6/1/2021
GAF_Q_2B_PZ3	Piezometer	456.8	6/1/2021
GAF_Q_2B_PZ4	Piezometer	Dry	6/1/2021

1: See Instrumentation Layout for location of instruments.



<b>GAF Instrumentation Data</b>			
<b>Facility: Ash Pond E</b>			
<b>Instrument<sup>1</sup></b>	<b>Instrument Type</b>	<b>Maximum Water Elevation Since Previous Inspection (ft)</b>	<b>Date Maximum Water Elevation Recorded</b>
GAF_PZE2	Piezometer	461.0	3/28/2021
GAF_PZE6	Piezometer	458.2	3/29/2021
GAF_PZE8	Piezometer	463.2	3/29/2021
GAF_PZE12	Piezometer	457.6	5/5/2021
GAF_PZE14	Piezometer	451.0	3/29/2021
GAF_PZE18	Piezometer	456.7	3/28/2021
GAF_PZE20	Piezometer	452.9	4/1/2021
GAF_PZ6B	Piezometer	Dry	6/14/2021
GAF_PZ8B	Piezometer	456.1	3/29/2021
GAF_PZ9B	Piezometer	456.3	4/9/2021
GAF_PZ9C	Piezometer	457.1	3/28/2021
GAF_PZ10B	Piezometer	450.8	3/29/2021
GAF_PZ11A	Piezometer	458.4	3/28/2021
GAF_PZ11B	Piezometer	457.1	3/28/2021
GAF_PZ12B	Piezometer	458.6	3/28/2021
GAF_PZ02BA_1	Piezometer	459.1	3/29/2021
GAF_PZ02BA_2	Piezometer	458.5	3/29/2021
GAF_PZ02BA_3	Piezometer	455.6	3/29/2021
GAF_PZ02B_1	Piezometer	458.5	3/28/2021
GAF_PZ02B_2	Piezometer	460.8	3/29/2021
GAF_PZ02B_3	Piezometer	456.5	3/29/2021
GAF_C_2A_PZ1	Piezometer	450.8	11/5/2020
GAF_C_2A_PZ2	Piezometer	451.0	11/5/2020
GAF_C_2A_PZ3	Piezometer	451.9	11/5/2020
GAF_C_2A_PZ4	Piezometer	457.6	11/5/2020
GAF_C_2A_PZ5	Piezometer	459.3	11/5/2020
GAF_C_2C_PZ1	Piezometer	448.4	11/5/2020
GAF_C_2C_PZ2	Piezometer	448.3	11/5/2020
GAF_C_2C_PZ3	Piezometer	448.3	11/5/2020
GAF_C_2C_PZ4	Piezometer	448.3	11/5/2020
GAF_G_2A_PZ1	Piezometer	456.1	6/1/2021
GAF_G_2A_PZ2	Piezometer	Dry	6/1/2021
GAF_G_2A_PZ3	Piezometer	455.4	6/1/2021
GAF_G_2A_PZ4	Piezometer	Dry	6/1/2021
GAF_G_2C_PZ1	Piezometer	450.4	6/1/2021
GAF_G_2C_PZ2	Piezometer	454.9	6/1/2021
GAF_G_2C_PZ3	Piezometer	Dry	11/5/2020
GAF_G_2C_PZ4*	Piezometer	480.5	11/5/2020

1: See Instrumentation Layout for location of instruments.

\*Denotes instruments that are under evaluation by TVA.





Figure No. 1  
 Title  
**GAF Instrumentation (as of 02/2021)**

Client/Project  
 Tennessee Valley Authority  
 Gallatin Fossil Plant  
 Monthly Instrumentation Reports

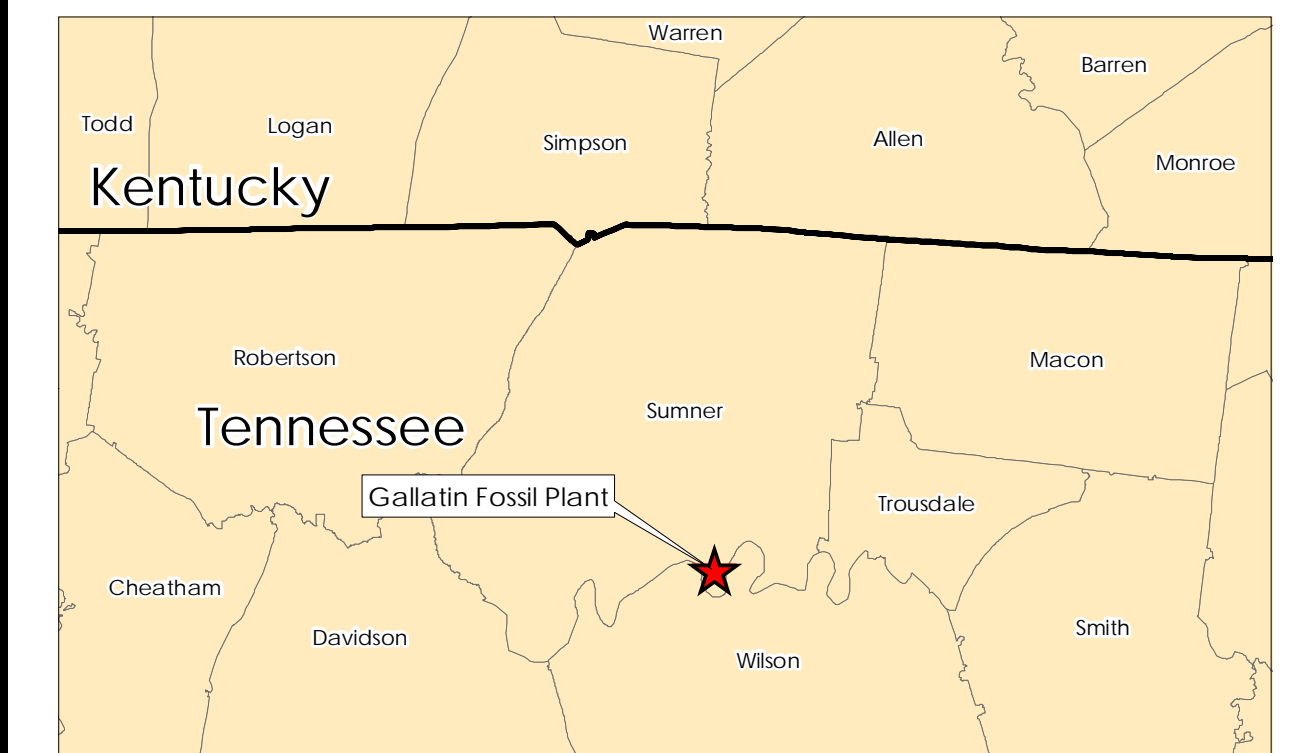
Project Location 175568429  
 Sumner County, Tennessee Prepared by WSW on 2021-03-03  
 Technical Review by JK on 2021-03-03  
 Independent Review by RG on 2021-03-03

0 400 800 1,200  
 Feet  
 1:4,800 (At original document size of 22x34)

- Piezometers
- Stability Sections
- CCR Unit Boundary

Piezometer Name	Northing (TN STP 1927)	Easting (TN STP 1927)
GAF_PZA05	708,368.74	1,881,417.01
GAF_PZA09	709,132.64	1,882,470.74
GAF_AshPA_PZ04B	707,518.78	1,880,739.20
GAF_AshPA_PZ05B	706,980.73	1,879,812.24
GAF_AshPA_PZ02KB	708,952.27	1,881,959.80
GAF_AshPA_PZ02KA	708,966.76	1,881,971.32
GAF_AshPA_PZ02KB_1-3	708,982.37	1,881,955.32
GAF_Q_2B	708,153.23	1,881,242.06
GAF_PZC01	707,402.48	1,879,680.01
GAF_PZD01	707,207.49	1,877,231.21
GAF_PZE02	703,007.37	1,879,022.21
GAF_PZE06	702,733.38	1,878,070.14
GAF_PZE08	703,835.47	1,877,934.64
GAF_PZE12	704,854.47	1,877,754.46
GAF_PZE14	706,343.79	1,877,425.50
GAF_PZE18	707,190.77	1,877,765.92
GAF_PZE20	706,856.53	1,878,704.54
GAF_AshPE_PZ06B	706,876.29	1,878,741.41
GAF_AshPE_PZ08B	707,141.99	1,877,803.25
GAF_AshPE_PZ09B	706,879.05	1,877,572.38
GAF_AshPE_PZ09C	706,906.86	1,877,544.78
GAF_AshPE_PZ10B	703,827.36	1,877,881.93
GAF_AshPE_PZ11A	702,757.09	1,878,642.82
GAF_AshPE_PZ11B	702,709.90	1,878,657.40
GAF_AshPE_PZ12B	702,956.94	1,879,038.84
GAF_AshPE_PZ0B2A	702,808.34	1,878,084.96
GAF_AshPE_PZ0B2B	702,711.24	1,878,056.80
GAF_C_2A	703,768.53	1,877,944.72
GAF_C_2C	703,776.28	1,877,875.62
GAF_G_2A	706,884.58	1,878,696.41
GAF_G_2C	706,904.64	1,878,737.40

- Notes
- Coordinate System: NAD 1927 StatePlane Tennessee FIPS 4100
  - Imagery courtesy of BING (Dated February 2020)
  - Instruments shown are monitored under the long-term instrumentation monitoring program. Additional instruments may be installed at the site for other purposes.





## **Attachment D**

### **CCR Rule Requirements Tables**

- Ash Pond A
- Ash Pond E
- Bottom Ash Pond
- Middle Pond A
- North Rail Loop Landfill

<b>Gallatin Fossil Plant</b>		
<b>CCR Rule Section §257.83 - Inspection Requirements for CCR Surface Impoundments</b>		
<b>Ash Pond A, Middle Pond A, Bottom Ash Pond, and Ash Pond E</b>		
	<b>Ash Pond A</b>	<b>Ash Pond E</b>
Any changes in geometry of the impounding structure since the previous annual inspection	No	No
Location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	See Attachment C	See Attachment C
Approximate minimum depth (elevation) of the impounded water since the previous annual inspection <sup>1</sup>	11.4 ft (463.8 ft)	No free water
Approximate maximum depth (elevation) of the impounded water since the previous annual inspection <sup>1</sup>	11.4 ft (463.8 ft)	No free water
Approximate present depth (elevation) of the impounded water <sup>1</sup>	11.4 ft (463.8 ft)	No free water
Approximate minimum depth (elevation) of the CCR material since the previous annual inspection <sup>2</sup>	7.2 ft (452.2 ft)	0 ft (445 ft)
Approximate maximum depth (elevation) of the CCR material since the previous annual inspection <sup>2</sup>	25 ft (470 ft)	33 ft (478 ft)
Approximate present depth (elevation) of the CCR material <sup>2</sup>	7.2 to 25 ft (452.2 to 470 ft)	0 to 33 ft (445 to 478 ft)
Storage capacity of the impounding structure at the time of the inspection <sup>3</sup>	636,600 CY	933,500 CY
Approximate volume of impounded water at the time of the inspection <sup>1</sup>	242,000 CY	No free water
Approximate volume of CCR material at the time of the inspection <sup>2</sup>	5,525,000 CY	4,950,000 CY
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	None observed, See Attachment A	None observed, See Attachment A
Any other changes which may have affected the stability or operation of the impounding structure since the previous annual inspection	None observed, See Attachment A	None observed, See Attachment A

1 - Based on lowest elevation of free water from August 2017 hydrographic survey.

2 -The CCR depth and quantities provided were estimated based on available boring data, cross-sections, and survey information. TVA is currently performing a project to verify these estimated values.

3 - Based on the lowest top of dike elevation.

<b>Gallatin Fossil Plant</b>		
<b>CCR Rule Section §257.83 - Inspection Requirements for CCR Surface Impoundments</b>		
<b>Ash Pond A, Middle Pond A, Bottom Ash Pond, and Ash Pond E</b>		
	<b>Bottom Ash Pond</b>	<b>Middle Pond A</b>
Any changes in geometry of the impounding structure since the previous annual inspection	No	No
Location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	No instrumentation installed	No instrumentation installed
Approximate minimum depth (elevation) of the impounded water since the previous annual inspection	No free water	No free water
Approximate maximum depth (elevation) of the impounded water since the previous annual inspection	No free water	No free water
Approximate present depth (elevation) of the impounded water	No free water	No free water
Approximate minimum depth (elevation) of the CCR material since the previous annual inspection <sup>2</sup>	12 ft (472 ft)	13 ft (473 ft)
Approximate maximum depth (elevation) of the CCR material since the previous annual inspection <sup>2</sup>	23 ft (483 ft)	21 ft (481 ft)
Approximate present depth (elevation) of the CCR material <sup>2</sup>	12 to 23 ft (472 to 483 ft)	13 to 21 ft (473 to 481 ft)
Storage capacity of the impounding structure at the time of the inspection	12,700 CY	15,700 CY
Approximate volume of impounded water at the time of the inspection	No free water	No free water
Approximate volume of CCR material at the time of the inspection <sup>2</sup>	400,000 CY	1,040,000 CY
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	None observed, See Attachment A	None observed, See Attachment A
Any other changes which may have affected the stability or operation of the impounding structure since the previous annual inspection	None observed, See Attachment A	None observed, See Attachment A

1 - Based on lowest elevation of free water from September 2016 hydrographic survey.

2 -The CCR depth and quantities provided were estimated based on available boring data, cross-sections, and survey information. TVA is currently performing a project to verify these estimated values.

3 - Based on the lowest top of dike elevation.

<b>Gallatin Fossil Plant</b> <b>CCR Rule Section §257.84 - Inspection Requirements for CCR Landfills</b>	
	<b>North Rail Loop Landfill</b>
Any changes in geometry of the structure since the previous annual inspection	No
The approximate volume of CCR contained in the unit at the time of the inspection (CY)	891,500 CY
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	None observed, See Attachment A
Any other changes which may have affected the stability or operation of the CCR unit since the previous annual inspection	None observed, See Attachment A