



**Charles R. Lowman Power Plant  
Leroy, AL**

**CCR Impoundment Inspection Report**

**November 2018**

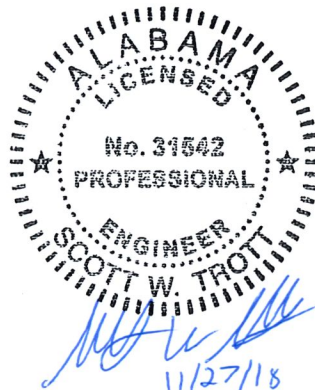


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**Engineer's Certification**

I hereby certify that it is my professional understanding that the inspections conducted and resulting CCR Annual Inspection Report presented herein meet the requirements of Section 257.83 (b) of Title 40 of the Code of Federal Regulations as amended upon the date of this certification.

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The Charles R. Lowman Power Plant campus in Leroy, AL includes three impoundments for the storage of coal combustion residual (CCR) material. These are noted as shown in Figure 1.



**Figure 1**  
Identification of Ponds

The field inspections outlined herein were completed on October 23, 2018. The inspection staff consisted of staff from CDG Engineers and Associates, Inc. (CDG) as indicated below.

<b>Company</b>	<b>Name / Title</b>
CDG	Scott W. Trott, P.E. / Project Manager
CDG	Jacob Williams / Project Engineer
PowerSouth	Dustin Kilcrease
PowerSouth	John Goldman
PowerSouth	Jonathan Singleton

Inspection procedures were completed in accordance with § 257.83(b)(1)(i)-(iii). Documentation including pertinent previous report documents and documents within the facility's operating record have been reviewed as part of the inspection efforts. The visual inspections examined the overall condition of each structure to identify any potential signs of distress or malfunction. Piping and related hydraulic structures traversing each impoundment were also visually inspected to address the condition and ability of each to meet its intended design purpose.

Findings have been generated by CDG's inspection and are found in Tables 1 – 3 contained herein.

**Table 1**  
Summary for Unit 1 Bottom Ash Pond Inspection

Unit 1 Bottom Ash Pond		
Item	Reference	Comment
Changes in Geometry	§ 257.83(b)(2): (i)	<ul style="list-style-type: none"> <li>No changes to impoundment footprint</li> </ul>
Existing Instrumentation	§ 257.83(b)(2): (ii)	<ul style="list-style-type: none"> <li>Two pumps with hour meters</li> <li>Pumps currently offline</li> <li>Pump suction removed from pond</li> </ul>
Minimum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>0'-0"</li> <li>10.00' MSL</li> </ul>
Maximum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>18'-0"</li> <li>28.00' MSL</li> </ul>
Present Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>Varying depth, not continuous surface</li> <li>Average water depth if distributed over impoundment area estimated at 1'-0" over CCR</li> <li>Average water elevation estimated at 11.00' MSL</li> </ul>
Minimum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>Minimum CCR depth 0'-0" in cleaned areas</li> <li>Minimum CCR elevation 10'-0" MSL</li> </ul>
Maximum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>Maximum CCR depth estimated at 18'-0"</li> <li>Maximum CCR elevation is 28'-0"</li> </ul>
Present CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>CCR depth not uniform across impoundment</li> <li>Present CCR depth is averaged to 5'-0"</li> <li>Present CCR elevation is averaged to 15.00' MSL</li> </ul>
Storage Capacity	§ 257.83(b)(2): (iv)	<ul style="list-style-type: none"> <li>408,000 yd<sup>3</sup></li> </ul>
Volume of Impounded Water	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>Impounded water volume estimated at 30,653 yd<sup>3</sup></li> </ul>
Volume of Impounded CCR	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>Impounded CCR estimated at 153,267 yd<sup>3</sup></li> </ul>
Observed Actual or Potential Structural Weakness	§ 257.83(b)(2): (vi)	<ul style="list-style-type: none"> <li>None observed</li> </ul>
Observations of Changes Impacting Stability or Operation	§ 257.83(b)(2): (vii)	<ul style="list-style-type: none"> <li>None observed</li> </ul>

**Table 2**  
Summary for Unit 2/3 Bottom Ash Pond Inspection

Unit 2/3 Bottom Ash Pond		
Item	Reference	Comment
Changes in Geometry	§ 257.83(b)(2): (i)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>
Existing Instrumentation	§ 257.83(b)(2): (ii)	<ul style="list-style-type: none"> <li>• Flow totalizer on pumping units</li> <li>• Visual water level indicator at northwest corner</li> </ul>
Minimum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 2'-0" per visual level indicator</li> <li>• 41.00' MSL</li> </ul>
Maximum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 6'-0" per visual level indicator</li> <li>• 45.00' MSL</li> </ul>
Present Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 2'-4" per visual level indicator</li> <li>• 41.25' MSL</li> </ul>
Minimum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• Minimum CCR depth estimated at 2'-0"</li> <li>• Minimum CCR elevation 26.00' MSL</li> </ul>
Maximum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• Maximum CCR depth estimated at 19'-0"</li> <li>• Maximum CCR elevation is 43.00' MSL</li> </ul>
Present CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• CCR depth not uniform across impoundment</li> <li>• Average CCR depth estimated at 15'-6"</li> <li>• Average CCR elevation estimated at 39.50' MSL</li> </ul>
Storage Capacity	§ 257.83(b)(2): (iv)	<ul style="list-style-type: none"> <li>• 1,065,000 yd<sup>3</sup></li> </ul>
Volume of Impounded Water	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>• Impounded water volume estimated at 112,530 yd<sup>3</sup></li> </ul>
Volume of Impounded CCR	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>• Impounded CCR volume estimated at 775,207 yd<sup>3</sup></li> </ul>
Observed Actual or Potential Structural Weakness	§ 257.83(b)(2): (vi)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>
Observations of Changes Impacting Stability or Operation	§ 257.83(b)(2): (vii)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>

**Table 3**  
Summary for FGD Waste Pond Inspection

FGD Waste Pond		
Item	Reference	Comment
Changes in Geometry	§ 257.83(b)(2): (i)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>
Existing Instrumentation	§ 257.83(b)(2): (ii)	<ul style="list-style-type: none"> <li>• Two pumps with hour meters</li> <li>• Visual water level indicator at southwest corner</li> </ul>
Minimum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 2'-6" per visual level indicator</li> <li>• 43.00' MSL</li> </ul>
Maximum Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 5'-5" per visual level indicator</li> <li>• 45.50' MSL</li> </ul>
Present Water Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• 3'-6" per visual level indicator</li> <li>• 43.50' MSL</li> </ul>
Minimum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• Minimum CCR depth estimated at 1'-0"</li> <li>• Minimum CCR elevation 26.00' MSL</li> </ul>
Maximum CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• Maximum CCR depth estimated at 18'-0"</li> <li>• Maximum CCR elevation is 43.00' MSL</li> </ul>
Present CCR Depth and Elevation	§ 257.83(b)(2): (iii)	<ul style="list-style-type: none"> <li>• CCR depth not uniform across impoundment</li> <li>• Average CCR depth estimated at 18'-0"</li> <li>• Average CCR elevation estimated at 43.00' MSL</li> </ul>
Design Storage Capacity	§ 257.83(b)(2): (iv)	<ul style="list-style-type: none"> <li>• 1,281,450 yd<sup>3</sup></li> </ul>
Volume of Impounded Free Water	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>• Impounded water volume estimated at 208,927 yd<sup>3</sup></li> </ul>
Volume of Impounded CCR	§ 257.83(b)(2): (v)	<ul style="list-style-type: none"> <li>• Impounded CCR volume estimated at 1,074,480 yd<sup>3</sup></li> </ul>
Observed Actual or Potential Structural Weakness	§ 257.83(b)(2): (vi)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>
Observations of Changes Impacting Stability or Operation	§ 257.83(b)(2): (vii)	<ul style="list-style-type: none"> <li>• None observed</li> </ul>