AECOM
1000 Corporate Centre Drive, Suite 250
Franklin, Tennessee 37067
USA
aecom.com

October 16, 2017

Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402

Groundwater Monitoring System
Active Ash Pond 2
TVA Johnsonville Fossil Plant
New Johnsonville, Tennessee

1.0 Introduction

This letter documents AECOM's certification of the groundwater monitoring system for the Tennessee Valley Authority (TVA) Johnsonville Fossil Plant coal combustion residuals (CCR) unit Active Ash Pond 2. Based on the information evaluated by AECOM, the groundwater monitoring system, first year baseline monitoring phase of TVA's Coal Combustion Residuals CCR-Rule Groundwater Quality Monitoring Program, meets the performance standard specified in the Final CCR Rule at 40 CFR § 257.91.

2.0 Summary of Findings

In establishing the groundwater monitoring system for Active Ash Pond 2, at the Johnsonville Fossil Plant in New Johnsonville, Tennessee, AECOM reviewed available groundwater data, developed a hydrogeologic characterization of the site, and designed and monitored the installation of the new monitoring wells. Based upon review of the available information, the groundwater monitoring system at Active Ash Pond 2 meets the performance standard specified in of 40 CFR § 257.91, based on the following criteria:

- There are a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples that accurately represent the quality of background groundwater unaffected by CCR, and accurately represent the quality of groundwater at the downgradient waste boundary (257.91(a)(1) and (2)).
- The wells provide samples from the uppermost aquifer (257.91(a) and 257.53).
- The groundwater monitoring system contains two background and four monitoring wells downgradient of the waste boundary, thus the number of wells in the system exceeds the minimum specified in 257.91(c).
- The system contains two background wells (B-9, JOF-101) representing conditions unaffected by CCR (257.91(a)(1) and (c)(1)).

- The system contains four wells located downgradient (10-AP1, 10-AP3, JOF-103, JOF-104) to monitor groundwater near the waste boundary (257.91(a)(2) and (c)(1)).
- The system includes additional wells as needed to meet the performance standard (257.91(c)(2)).
- Wells are constructed appropriately (257.91(e)).

3.0 Qualified Professional Engineer Certification

I, Patrick H. White being a Registered Professional Engineer in good standing in the State of Tennessee do hereby certify, to the best of my knowledge, information, and belief that the information contained in this certification is prepared in accordance with the accepted practice of engineering; that the information contained herein is accurate as of the date of my signature below; and that the design and construction of the groundwater monitoring system as described above meets the requirements of 40 CFR § 257.91. Opinions relating to environmental, geologic, and hydrogeologic conditions or other estimates are based on available data and that actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

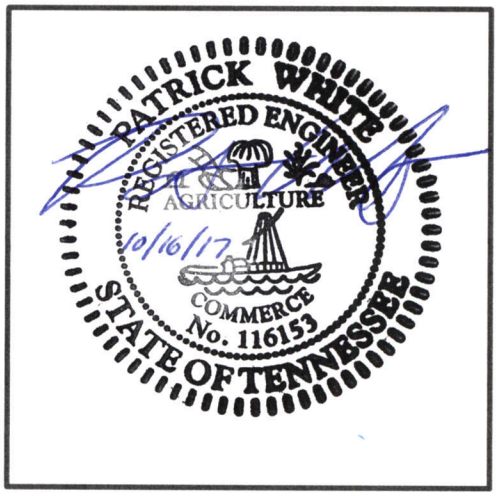
SIGNATURE: _____ DATE: 10/16/17

PRINTED NAME: Patrick H. White

ADDRESS: 1000 Corporate Centre Drive, Ste 250
Franklin, Tennessee 37067

TELEPHONE: (615) 771-2480

Attachments: CCR Rule Monitoring System Plan
Table 1 –Well Construction Information



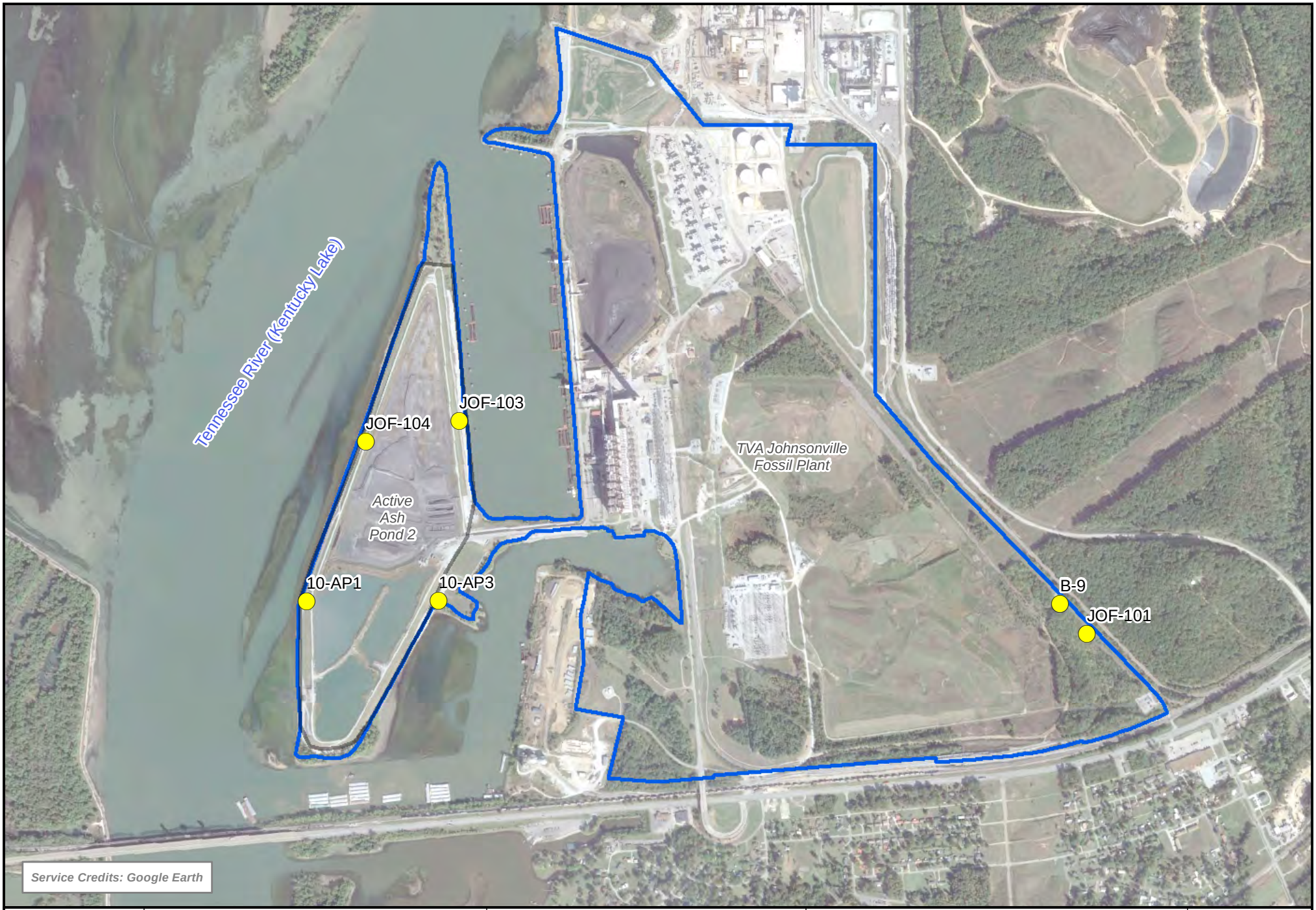


FIGURE:

1

CCR Rule Monitoring System Plan
Active Ash Pond 2
Johnsonville Fossil Plant
Tennessee Valley Authority

N

0 650 1,300 Feet

DATE:	DRAWN BY:	PROJECT NUMBER:
10/4/2017	TEG	60439352

Legend

- CCR Rule Monitoring System Wells
- TVA JOF Property Boundary

AECOM ENVIRONMENT
500 ENTERPRISE DRIVE, SUITE 1A
ROCKY HILL, CT 06067
PHONE: (860) 263-5777
WEB: WWW.AECOM.COM

AECOM

Document Path: L:\Group\IT_GIS\GIS Projects\TVA\JOF\Maps\20170915\Figure 1_JOF CCR Rule Monitoring System Wells.mxd

Table 1
WELL CONSTRUCTION INFORMATION
CCR RULE GROUNDWATER MONITORING SYSTEM
ACTIVE ASH POND 2
TVA JOHNSONVILLE FOSSIL PLANT

Well ID	UNID #	Position Relative to CCR Unit	Top of Casing Elevation (ft)	Ground Elevation (ft)	Screened Interval (ft btoc)	Screened Formation	Total Well Depth (ft btoc)	Pump Intake Depth (ft btoc)	Well Diameter (in) / Material	Well Co-ordinates	
										TN State Plane NAD27 Northing (ft)	TN State Plane NAD27 Easting (ft)
10-AP1	JOF-00-GW-43-001	Downgradient	370.51	367.74	39.0 - 49.1	Alluvial Deposits	49.5	47	2-in PVC	600071.01	1409558.2
10-AP3	JOF-00-GW-43-002	Downgradient	367.27	364.33	37.4 - 47.5	Alluvial Deposits	47.6	45.5	2-in PVC	600075.74	1410884.49
B-9	JOF-00-GW-43-009	Background	423.88	420.7	40.5 - 50.0	Alluvial Deposits	50.6	48	2-in PVC	600048.31	1417118.09
JOF-101	JOF-00-GW-43-013	Background	424.59	420.7	43.6 - 53.2	Alluvial Deposits	54.1	52	4-in PVC	599749.73	1417389.23
JOF-103	JOF-00-GW-43-015	Downgradient	374.24	370.7	41.9 - 52.1	Alluvial Deposits	52.3	50.5	4-in PVC	601959.88	1411092.41
JOF-104	JOF-00-GW-43-016	Downgradient	379.44	375.3	48.4 - 58.6	Alluvial Deposits	58.8	57	4-in PVC	601826.86	1410175.07

Well construction and survey information based on data provided by TVA Well Inventory, October 1, 2017.
Elevation in National Geodetic Vertical Datum 1929.
ft btoc - feet below top of casing