January 15, 2016

Big Rivers Electric Corporation
Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule
CCR Landfill Annual Inspection Report

CCR Landfill Information

Name:	D.B. Wilson CCR Landfill
Operator:	D.B. Wilson Generating Station
Address:	5663 State Route 85 West Centertown, KY 42328

Qualified Professional Engineer

Name:	David A. Lamb
Company:	Associated Engineers, Inc.
Kentucky P.E. Number:	17822

Regulatory Applicability

Per 40 CFR §257.84(b), annual inspections by a qualified professional engineer must ensure that the design, construction, operation, and maintenance of the CCR landfill is consistent with recognized and generally accepted good engineering standards.

Annual inspections of any CCR landfill must include, at a minimum: (1) a review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person, and results of previous annual inspections); and (2) a visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

Additionally, following each annual inspection, the qualified professional engineer must prepare an inspection report which documents the following: (1) any changes in geometry of the structure since the previous annual inspection, (2) the approximate volume of CCR at the time of the inspection, (3) any 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; and (4) any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

Inspection Description

This is the first annual inspection report for the D.B. Wilson CCR landfill pursuant to the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule which became effective April 17, 2015.

An inspection was conducted on December 3, 2015; commencing in the morning and continuing throughout the afternoon, first with a drive-by inspection and followed by an on-ground inspection. The inspection was conducted by Tim Brown P.E. and Matthew Lile of Associated Engineers, Inc. of Madisonville, Kentucky.

The inspection consisted of a visual assessment of the landfill and associated drainage control features (refer to Aerial Photo of the landfill and the Annual Inspection Checklist included with this report); and began on the north side of the landfill. The inspection noted that the slope and benches are fairly well vegetated with some erosion and bare areas with some benches retaining standing water creating very wet and soft ground conditions. Vegetation thickness and type varies across the north face with some thickly grassed areas and some areas supporting woody grasses and briars. Typical issues are animal tracking/burrows, longitudinal ruts from tractor and mower tires, spotty unvegetated/poorly vegetated areas and exposed shaley material across the slope. There is a deep ditch that has eroded from west to east diagonally across the north slope starting where the face ties into natural ground and flowing to the toe of the slope below the first bench. Vegetation is poor in this area supporting thick stands of sericea lespedeza and little grass.

The inspection moved to the east side of the landfill which is in various phases of soil cover and vegetation. Continuing around the corner from the north face, the northeast and central portions of the east face are mostly covered and vegetated with the upper benches having been most recently vegetated. The newly vegetated areas support good grass stands but rills are numerous where soil appears thin or contains rocks. The southern portion of the east face is in various stages of being covered and is not vegetated. Generally, the east side of the landfill is stable where covered and vegetated but there are significant areas of erosion and seepage on upper slopes and benches; along the lower slope and toe; and in areas having poor, sparse or no vegetation. There are several areas along the lower partial bench in the mid-section of the east slope where seepage from finished slopes has caused erosion extending downslope from the seeps. A failure between unfinished upper and mid-slope storm inlets has occurred in the central portion of the newly revegetated section of the east face. Drainage bypasses the upper inlet and eroded a path beneath the soil cover and exits at the downslope inlet. A wide area extending from the toe of the east face east towards the power line corridor is extremely wet with ponded water and little to no vegetation (phragmites is common in these areas). Sporadic small piles of rip rap are scattered along benches and at seep locations. Water is also standing in longitudinal depressions made by tractor and mower tires. Some areas of exposed CCR material are visible and erosion is occurring around some of the storm water inlets. Animal burrowing and tracking are visible sporadically across the east landfill face. Some areas of apparent soil slumping and saturated ground are evident along benches and toes of the east face. It should be noted that 2015 was one of the wettest years on record, complicating repair work.

The entire west side of the landfill is active and CCR material is several feet thick, increasing in grade to the east. The south face of the landfill has been covered and vegetated for a short period of time and vegetation is thin, the soil is rocky and erosion rills are present on the slope.

The toe of the slope is flat and poorly drained and is bordered by a gravel access road to the south. The majority of active CCR material is being placed in the central portion of the landfill.

Associated Engineers, Inc. will be retained to assist in developing measures to address maintenance items (e.g. erosion, bare spots, drainage and seepage issues, invasive vegetation, animal burrows, etc.) identified in this inspection description.

(i) CCR Landfill Geometry

This is the first annual inspection report for the D.B. Wilson CCR landfill pursuant to the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule which became effective April 17, 2015 and will serve as the baseline for any geometric changes that may occur in the future.

(ii) CCR Landfill Volume

The approximate total volume of CCR contained in the unit at the time of inspection is 1.8 million cubic yards. This volume was calculated from available flight derived pre-disposal baseline topography compared to December 2015 flight derived topographic contours.

(iii) CCR Landfill Structural, Operational, and Safety Items

Noted Deficiencies

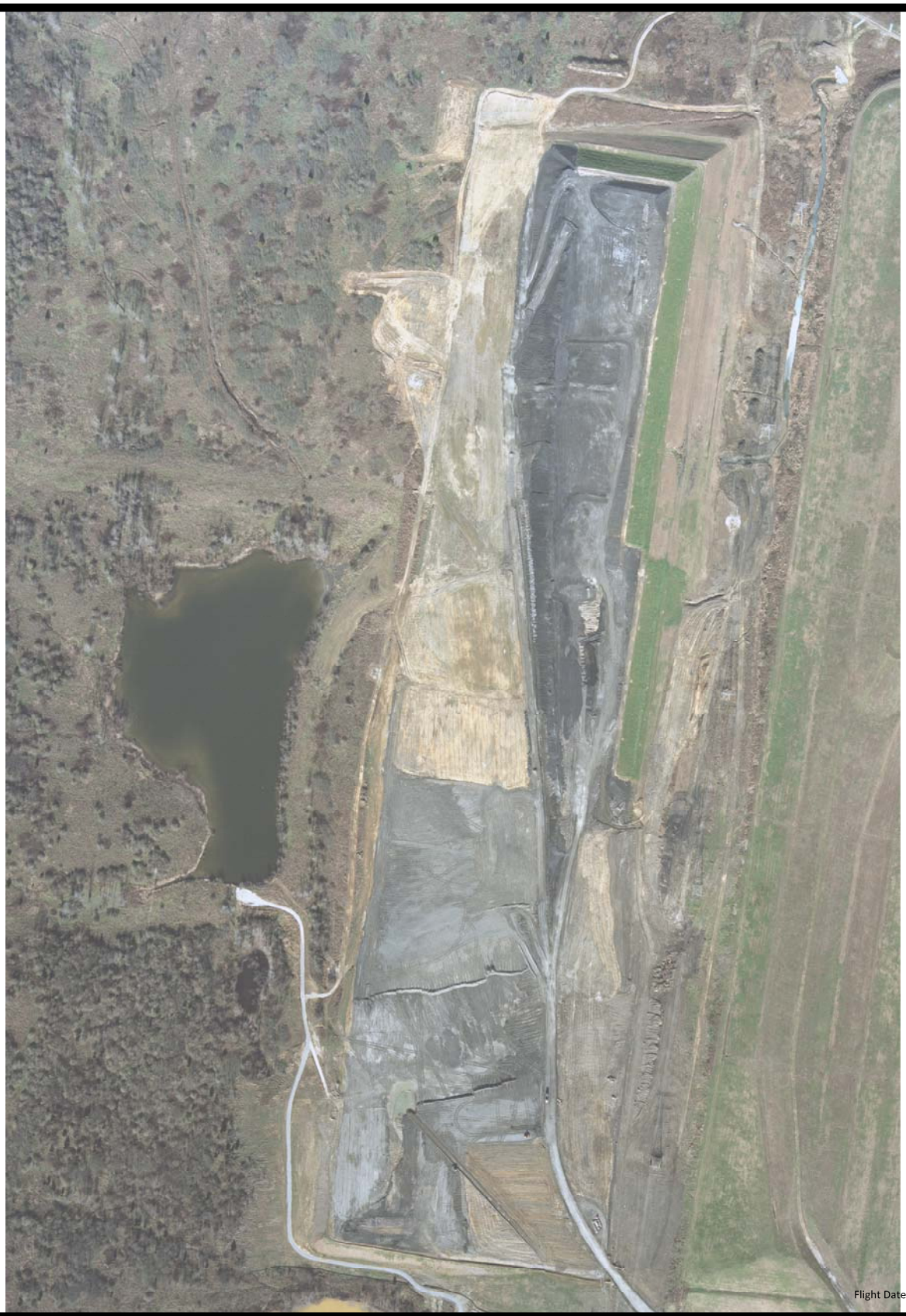
1. Surficial scarp in cover material (east side lowest partial bench)
2. Significant seepage (east side toe and lower slopes/benches)
3. Perimeter toe ditch erosion (north side)

Corrective Measures

Associated Engineers, Inc. will be retained to assist in developing measures to address, as soon as practicable, the surficial scarp in cover material (east side lowest partial bench), significant seepage (east side toe and lower slopes/benches) and the perimeter toe ditch erosion (north side).

(iv) CCR Landfill Changes

This is the first annual inspection report for the D.B. Wilson CCR landfill pursuant to the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule which became effective April 17, 2015 and will serve as the baseline for any future changes which may have affected the stability or operation of the CCR unit since the previous annual inspection.



Flight Date: December 6, 2015

BIG RIVERS ELECTRIC

D.B. WILSON GENERATING STATION
CCR LANDFILL

Job Number:	15-0141A
Date:	1/15/2016
Scale:	NOT TO SCALE
Drawn By:	E.J.A.

ASSOCIATED ENGINEERS, INC.
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BREC Final Rule CCR Landfill Annual Inspection Checklist

Generating Station:	D.B. Wilson	Weather:	Partly cloudy
Landfill:	D.B. Wilson	Temperature (Degrees F):	36 (average)
Date:	December 3, 2015	Inspector/Qualified Person:	Tim Brown & Matthew Lile (AEI)

	ITEM	STATUS			OBSERVATIONS
		YES	NO	N/A	
1	**CONDITION OF INACTIVE AREA**				
	Access road deterioration (potholes, rutting, etc.)	☐	☐	☒	
	Any erosion	☒	☐	☐	Surficial erosion/rills in cover material & perimeter ditch (north side).
	Longitudinal cracks	☐	☒	☐	
	Transverse cracks	☐	☒	☐	
	Visual depressions	☒	☐	☐	Minor ponding in bench flowlines; ruts and tracking from tractor & mower tires
	Visual settlement	☐	☒	☐	
	Bulging or slumping	☒	☐	☐	Surficial scarp in cover material (east side second bench)
	Any drainage features obstructed or damaged	☒	☐	☐	Catch basin grades/soil settlement around basins & flowline obstructions
	Are drainage features flowing	☒	☐	☐	
	Is seepage present	☒	☐	☐	Significant seepage (east side toe and lower slopes/benches)
	Is seepage or discharge carrying sediment	☒	☐	☐	
	Adequate vegetative cover	☐	☒	☐	Bare areas & invasive species monocultures
	Are trees growing on the slope	☐	☒	☐	
	Are there any animal burrows	☒	☐	☐	Sporadic animal borrows; primarily small rodent
	Any stone deterioration	☐	☐	☒	
	Adequate riprap/slope protection	☐	☐	☒	
	Debris or trash present	☐	☒	☐	
	Is there exposed CCR material	☒	☐	☐	Isolated areas
2	**CONDITION OF ACTIVE AREA**				
	Access road deterioration (potholes, rutting, etc.)	☐	☒	☐	
	Any erosion	☐	☒	☐	
	Any cracks	☐	☒	☐	
	Any slides	☐	☒	☐	
	Visual depressions	☒	☐	☐	Minimal depressions due to incomplete grading
	Visual settlement	☐	☒	☐	

		STATUS			OBSERVATIONS
		YES	NO	N/A	
	Bulging or slumping	☐	☒	☐	
	Any drainage features obstructed or damaged	☒	☐	☐	Settlement around catch basins & incomplete grading
	Is seepage present	☐	☒	☐	
	Is seepage or discharge carrying sediment	☐	☒	☐	
	Debris or trash present	☐	☒	☐	
3	**LINER AND LEACHATE COLLECTION SYSTEM**				
	Are liners intact and being installed correctly	☐	☐	☒	
	Is the leachate collection operating correctly	☐	☐	☒	
	Is the leachate collection pond/storage functioning correctly	☐	☐	☒	
	Is there any slope/bank erosion on pond	☐	☐	☒	
	Are there any animal burrows on pond	☐	☐	☒	
	Is the spillway functioning and discharging correctly	☐	☐	☒	
4	**RUN-ON/RUNOFF-CONTROLS**				
	Are run-on/runoff controls in place	☐	☐	☒	
	Are run-on/runoff controls functioning	☐	☐	☒	
	Are run-on/runoff controls effective	☐	☐	☒	
	Are run-on runoff controls being maintained	☐	☐	☒	
	Signs of seepage or wetness	☐	☐	☒	
	Sediment transport or deposition	☐	☐	☒	

DEFICIENCIES AND MAINTENANCE ITEMS

1. Surficial scarp in cover material (east side lowest partial bench)
2. Significant seepage (east side toe and lower slopes/benches)
3. Perimeter toe ditch erosion (north side)

Professional Engineer Certification [Per 40 CFR §257.84(b)
Annual Inspections by a Qualified Professional Engineer

I hereby certify that myself or an agent under my review has prepared this Annual Inspection Report (Report), and being familiar with the provisions of the final rule to regulate the disposal of coal combustion residuals (CCR) as solid waste under subtitle D of the Resource Conservation and Recovery Act (RCRA), attest that this Report has been prepared in accordance with good engineering practices and meets the intent of 40 CFR Part 257.84(b). To the best of my knowledge and belief, the information contained in this Report is true, complete, and accurate.

David A Lamb

David A. Lamb P.E.

State of Kentucky License No. 17822

Date: 1-15-2016