REMEDY SELECTION PROGRESS REPORT

WILSON PHASE II LANDFILL
D.B. WILSON GENERATING STATION
OHIO COUNTY, KENTUCKY

December 13, 2019

Prepared For:

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TABLE OF CONTENTS

List of Figures

List of Tables

1.0 INTRODUCTION

In accordance with provisions of the United States Environmental Protection Agency's (USEPA) coal combustion residual (CCR) rule, Title 40 of the Code of Federal Regulations (CFR) Section 257.97, Big Rivers Electric Cooperation (BREC) is in the process of selecting a remedy for groundwater impacts at the D.B. Wilson Generating Station Phase II Landfill (the Unit), located in Ohio County, Kentucky **(Figure 1)**.

Assessment monitoring results indicate the presence of cobalt at a Statistically Significant Level (SSL) above the Ground Water Protection Standard (GWPS) in one monitoring well (MW-10) at the Unit. A map depicting site features along with locations of all program monitoring wells is presented as **Figure 2**.

In response to the SSL exceedance, BREC evaluated the nature and extent of groundwater impacts as required by Title 40 CFR Section 257.95(g) for characterization monitoring. In addition, BREC performed an Assessment of Corrective Measures (ACM), to identify applicable remedial technologies to address cobalt impacts in groundwater pursuant to Tile 40 CFR Section 257.96. A notice of ACM initiation dated January 14, 2019 was posted to BREC's publicly-accessible CCR reporting website. A report summarizing the results of the ACM (AECOM, June 2019) was posted to BREC's publicly-accessible CCR reporting website on June 14, 2019.

Title 40 CFR Section 257.97(a) requires that progress reports be prepared on a semi-annual basis describing progress made in selecting and designing a remedy. The following sections provide an overview of BREC's activities previously performed, currently underway, and planned in the future to select a remedy that meets the requirement of Title 40 CFR Section 257.97 (b) as follows:

(1) Be protective of human health and the environment;

(2) Attain the GWPS as specified pursuant to Section 257.95(h);

(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of Appendix IV constituents into the environment;

(4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems;

(5) Comply with standards for management of wastes as specified in Section 257.98(d).

2.0 SITE BACKGROUND

2.1 Site Description

The Wilson Phase II Landfill is located in Ohio County approximately 5 miles northwest of the town of Centertown, Kentucky (**Figure 1**). The property is located northwest and adjacent to the D.B. Wilson Generating Station (Wilson Station). The Wilson Phase II Landfill is a Kentucky permitted landfill that receives special wastes generated by burning of coal at Wilson Station. The current Wilson Phase II Landfill footprint is approximately 92 acres (**Figure 2**). Adjacent to the Phase II Landfill on the east is the Wilson Station Phase I Landfill which is currently being regulated by the Kentucky Department of Environmental Protection, Division of Waste Management (KDMW) under of Title 401 of the Kentucky Administrative Regulations (KAR) Section 45.

The Wilson Phase II Landfill is raised above adjacent ground to a maximum elevation of approximately 520 feet above mean sea level (amsl). The original ground surface within the landfill footprint was an irregular post-mining reclaimed surface.

2.2 Groundwater Investigation Summary

Monitoring wells were installed in the vicinity of the Phase II Landfill in January and February 2009 prior to the implementation of the CCR Rule. However, the existing wells meet the requirements of Section 257.90 of the CCR Rule for installation of a groundwater monitoring system consisting of wells that adequately represent the quality of background groundwater and groundwater representing the downgradient waste boundary. The existing wells are located along the perimeter of the permitted footprint for the Phase II Landfill. One upgradient monitoring well (MW-8) and four downgradient monitoring wells (MW-5, MW-6, MW-7, and MW-10) were installed adjacent to the Phase II Landfill to determine the general direction of groundwater movement and to monitor groundwater quality beneath the Unit. The monitoring wells were installed in the uppermost saturated portion of the unconsolidated mine spoil aquifer (characterized by sand, gravel, and larger size clasts in a silt and clay matrix).

Nine rounds of Baseline groundwater sampling for Appendix III constituents were conducted between April 2016 and October 2017. Statistical evaluation for Detection monitoring indicated that SSIs over background had occurred, and therefore, Assessment monitoring was triggered. Detection monitoring activities and data are presented in the annual reports that have been prepared to date, (AECOM 2018 and 2019).

As part of assessment monitoring, background and downgradient wells for the Phase II Landfill were sampled for Appendix IV constituents in April, July, and October 2018. GWPSs were established for assessment monitoring of the Appendix IV constituents, and statistical evaluation indicated exceedances of GWPSs at SSLs, as detailed in **Table 1** below.

Table 1 Wilson Station Phase II Landfill Constituents of Concern

Monitoring Well (Date)	Parameter
	Cobalt GWPS 0.005 (mg/L)
MW-10 (Apr 2018)	**0.0412**
MW-10 (Jul 2018)	**0.0704**
MW-10 (Oct 2018)	**0.114**

GWPSs are the greater of the site-specific background concentrations, the USEPA primary drinking water standard maximum contaminant limits (MCL), or GWPS provided in 40 CFR 257.95(3)(h)(2)

Five characterization monitoring wells (MW-4D, MW-102, MW-104, MW-105, and MW-110) were subsequently installed to estimate the downgradient extent of impacted groundwater. Sample collection for Appendix III and IV parameters took place in November 2018 and June 2019. With the exception of MW-4D, the analytical results for lithium were below the GWPS. The additional characterization data are summarized in **Table 2** below.

Table 2 – Wilson Station Phase II Landfill Characterization Sample Results

Monitoring Well (Date)	Parameter
	Cobalt UPL 0.0016 GWPS 0.005 (mg/L)
MW-4D (Nov 2018)	**0.0122**
MW-102 (Nov 2018)	0.00263 J
MW-104 (Nov 2018)	0.00388 J
MW-105 (Nov 2018)	0.00488 J
MW-110 (Nov 2018)	0.00240 J
MW-4D (June 2019)	**0.010**
MW-102 (June 2019)	0.00286 J
MW-104 (June 2019)	0.00164 J
MW-105 (June 2019)	0.00435 J
MW-110 (June 2019)	0.000827 J

J=Estimated concentration above minimum detection limit but below reporting limit
Bold value exceeds GWPS

The results from both characterization sampling events helped to confirm the downgradient (southwestern) extent of COC impacts above GWPS at the Unit. However, further downgradient characterization is anticipated in 2020.

2.3 Conceptual Site Model

A Conceptual Site Model (CSM) has been developed to support the remedy selection process for groundwater corrective action at the Unit.

2.3.1 Physical Setting

The Unit is located within the Interior Low Plateaus physiographic province. The province is part of the Interior Plains division of the United States. Characteristic features of the province include unglaciated rolling limestone plains with alluvial valleys and entrenched rivers and streams. Several large rivers are in the region, including the Green, the Ohio, the Kentucky, the Tennessee, and the Cumberland Rivers.

The Phase II Landfill at Wilson Station is located on a ridge to the east of the Green River at an elevation of approximately 420 ft., amsl, with a maximum elevation of 520 ft. amsl. Near the Unit, maximum topographic relief is on the order of 70 feet. Precipitation falling on the Phase II Landfill is directed to ponds in the south side of the unit and then to Elk Creek under Kentucky Pollution Discharge and Elimination System permit. Elk Creek is a primary tributary to the Green River, and it flows westward to the Green River.

2.3.2 Geology

The Unit lies in the Western Kentucky Coalfields section, characterized by rolling uplands underlain by coal-bearing bedrock of the Pennsylvanian Period. The geology underlying the Unit consists of unconsolidated materials, including loess, alluvial deposits and mine spoil, underlain by Upper to Middle Pennsylvanian-age clastic and carbonate bedrock consisting primarily of sandstone and shale. The unconsolidated materials also include mine spoil used as fill, and silty and clayey residuum. The mine spoil is reported to contain bedrock blocks that were also placed as fill.

The geologic quadrangle (Geologic map of the Equality quadrangle, Ohio County, Kentucky, 1969) for the Site vicinity published by the United States Geological Survey shows the surficial material to be unconsolidated Quaternary alluvium and Upper Pennsylvanian coal deposits, however, north of State Route 85 these materials were removed as part of historic strip-mining operations. Where present, the alluvium consists of silty clay and clayey silt, which ranges in thickness from 6 feet (MW-104) to 36 feet (MW-102). Within close proximity to the Unit, and north of State Route 85, mine spoils range in thickness from 33 feet (MW-1) to 86 feet (MW-4D).

The unconsolidated materials are shown to be underlain by bedrock of the Middle Pennsylvanian Carbondale Formation. The Carbondale Formation consists of cyclic sequences of sandstones, shales, siltstones and coals. The Carbondale sediments were deposited in a fluvial-deltaic system. As a result of this depositional environment, the lithologic units of the Carbondale tend to be lenticular bodies rather than continuous sheet-like strata. Gradational and abrupt horizontal changes in lithology are often encountered.

2.3.3 Hydrogeology

For purposes of compliance with the CCR Rule groundwater monitoring requirements, the unconsolidated mine spoil is considered to be the uppermost aquifer underlying the Phase II Landfill. The uppermost aquifer is unconfined and first encountered at an elevation of approximately 400 ft., amsl at the north end of the Phase II Landfill and 395 ft. amsl at the south end. Flow direction beneath the Site is typically to the south and southeast. The mine spoil is bounded on the south (i.e., downgradient) by a headwall of undisturbed Carbondale Formation.

Slug tests were performed on April 23, 2019 at monitoring wells MW-4, MW-4D, and MW-10 to assess the hydraulic characteristics of the uppermost aquifer. The estimated hydraulic conductivity of the monitoring wells tested were 8.03×10^{-2} centimeters per second (cm/sec) in MW-4, 9.30×10^{-2} cm/sec in MW-4D, and 2.91×10^{-2} cm/sec in MW-10. Hydraulic conductivity for the Carbondale Formation is estimated from literature, and for the purposes of this ACM, a range for sandstone of 1×10^{-4} cm/sec to 1×10^{-5} cm/sec is used. Groundwater flow downgradient of the mine spoil beneath the Phase II Landfill is therefore rate-limited by the lower permeability in the Carbondale Formation.

2.3.4 Constituents of Concern (COC)

As discussed above, a single Appendix IV COC (cobalt) was detected at concentrations exceeding GWPS in one monitoring well location (MW-10). As a result, the corrective measure evaluation is confined to the area adjacent to the well in which the exceedance was identified.

2.3.5 Potential Receptors/Exposure Pathways

Contact with water (e.g., shallow groundwater or surface water) impacted by COCs at levels above GWPS is regarded as the exposure pathway for exposure of potential receptors. Based on data published by KGS, there are no known groundwater wells used for drinking water within a 1-mile radius of the Wilson Phase II Landfill, thus limiting the potential receptors to the surface water, i.e., the Green River and its tributary, Elk Creek. The pathways to these receptors include seepage of water from the Phase II Landfill through manmade and natural hydraulic barriers and groundwater discharge.

Other potential exposure pathways (e.g., soil or vapor) are not considered complete as the CCR material is isolated in the Unit. This isolation prevents direct access by individuals that might result in direct contact or ingestion. In addition, the inherent non-volatile nature of the unit-specific COCs eliminates the potential for a complete vapor pathway (i.e., vapor intrusion to indoor air).

2.4 Interim Corrective Measures

No formal interim corrective measures have been performed at the Wilson Landfill for groundwater, but corrective measures for known non-groundwater releases (landfill seepage) are underway. The compatibility of those corrective measures with potential groundwater remedies is being evaluated as part of the remedy selection process.

2.5 Assessment of Corrective Measures Summary

Title 40 CFR Section 257.96(c) requires that the ACM include an analysis of the effectiveness of potential corrective measures in meeting the objectives for remedies identified under Section 257.97(b), by addressing at least the following:

1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
2) The time required to begin and complete the remedy; and
3) The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

Several potential corrective measures technologies were evaluated to identify which ones could be carried forward as components of corrective measures alternatives. The results of the corrective measures technology evaluation are presented in **Table 3** below.

Table 3 – Potential Corrective Measures Options Technology Description/Overview

Potentially Applicable Technology	Status	Description/Overview
No Action	Not retained as standalone technology, but carried forward for baseline comparisons	This technology has been included in the preliminary evaluation/screening but is not retained because it will not meet the established CAOs.
Institutional Controls (ICs)	Retained as supplement to corrective measures alternatives	The use of ICs (i.e., Environmental Covenant, groundwater use restrictions, etc.) is retained as a useful technology. However, it is noted the ICs are not anticipated to be used as a stand-alone technology. Environmental Covenants, groundwater use restrictions, etc., are expected to be combined with other applicable technologies as part of corrective measures alternatives.
Groundwater Monitoring (Assessment and Detection mode)	Retained as supplement to corrective measures alternatives	The use of groundwater monitoring (Assessment and/or Detection modes as appropriate) when combined with other applicable technologies as part of any proposed corrective measures alternative is retained to address the CAO and to track the effectiveness of the overall remedy. However, it is not retained as a standalone technology.
Hydraulic Containment	Retained	The use of hydraulic containment is retained because it is an effective means of preventing offsite migration of soluble contaminants. Hydraulic containment requires management and potential ex-situ treatment of extracted groundwater, so it is not a stand-alone technology. The CSM will guide the design of any groundwater extraction system to optimize the total discharge of groundwater needed to provide hydraulic containment.
Physical Containment	Retained	The use of physical containment is retained because it can be an effective means of managing groundwater flow. Physical containment often requires pairing with hydraulic containment and/or in-situ treatment (funnel and gate style) to manage the flux of groundwater flow into the system. The CSM will guide the design of any physical barrier system, but technology limitations may increase implementation difficulty with scale.
Ex-situ Physical/Chemical/Biological Treatment	Retained	Ex-situ treatment technologies are retained as a way of removing contaminants from extracted groundwater from a hydraulic containment system. Ex-situ treatment may be paired with wastewater treatment, non-groundwater release treatment systems, or with permitted discharge to manage groundwater contamination. The CSM and data gaps investigations will guide the design of any ex-situ treatment
In-situ Physical/Chemical Treatment	Retained	In-situ treatment technologies are retained for circumstances in which groundwater flow volumes are particularly low, source controls are effective, COCs are amenable to treatment, and impacted groundwater is not expected to persist as a treatment demand. The CSM and data gaps investigations will guide the design of any in-situ treatment

Potentially Applicable Technology	Status	Description/Overview
Permeable Reactive Barriers (PRB)	Retained	The use of PRBs is retained for circumstances in which groundwater flow volumes are particularly low or in which they can be paired with physical containment to achieve passive management of impacted groundwater. The CSM, as well as bench and pilot-scale testing will guide the design of any PRB system.
Closure in Place (CiP) (of the regulated unit)	Retained	The use of CiP as a source control technology and is amenable with respect to CAO attainment.
Closure by Removal (CbR) (of the regulated unit)	Retained	The use of CbR as a source control technology is amenable with respect to CAO attainment.
Other Source Control Technologies	Retained	Control of source area non-groundwater (i.e., leachate seeps) related releases. Engineering measures, including seepage/leachate collection, lining of trenches and/or ponds, and other isolation methods are part of operational practices and/or closure technologies selected for the site.

Note: Technologies that were retained may be used as components of a corrective action alternative, but when evaluated in conjunction with other available technologies any single technology may not be utilized.

Preliminary assembly of corrective measures alternatives was performed based on site-specific and regional geology and groundwater conditions. For the Unit, six corrective measures alternatives were developed from this list of applicable corrective measures technologies:

- Alternative #1 – No Action and Groundwater Monitoring
- Alternative #2a – Closure in Place (CiP), Institutional Controls (ICs), Other Source Control, and Groundwater Monitoring
- Alternative #2b – Closure by Removal (CbR), ICs, and Groundwater Monitoring
- Alternative #3 – CiP, ICs, Hydraulic Containment, Other Source Control (consisting of seepage collection and treatment), Ex-Situ Treatment, and Groundwater Monitoring
- Alternative #4 – CiP, ICs, Other Source Control, Physical Containment, PRB, and Groundwater Monitoring
- Alternative #5 – CiP, ICs, Other Source Control, In-Situ Treatment, and Groundwater Monitoring

The assembly of corrective measures alternatives presented in the ACM is considered preliminary and could be revised at a later date following detailed analysis during the remedy selection process and/or following comment from the regulatory community and public.

3.0 REMEDY SELECTION PROGRESS

Six corrective measure alternatives were identified during the ACM process for potential implementation at the Unit to address groundwater impacts. Each corrective measure alternative consists of one or more corrective measures technologies assembled into a strategy for the groundwater remedy. Each alternative is discussed in more detail below.

3.1 Potential Corrective Action Alternatives

3.1.1 Alternative #1 – No Action and Groundwater Monitoring

Alternative #1 consists of taking no action to address groundwater impacts at the Unit. Under the No Action alternative, no corrective action would be implemented to remove, control, mitigate, or minimize exposure to impacted groundwater. The No Action alternative establishes a baseline or reference point against which each of the corrective measure alternatives is compared.

Since Alternative #1 would not attain the CAOs for the Unit, this alternative would not likely be acceptable to stakeholders. Therefore, Alternative #1 is not recommended for further consideration.

3.1.2 Alternative #2a – Closure in Place (CiP), Institutional Controls (ICs), Other Source Control, and Groundwater Monitoring

Alternative #2a employs a combination of four of the retained corrective measures technologies:

- CiP source control, which consists of planned Phase II Landfill closure activities;
- Implementation of ICs designed to restrict the property to industrial use and to prohibit groundwater use for potable purposes;
- Other source control consisting of collection and management of seeps emanating from the east side of the Phase II Landfill; and
- Groundwater Monitoring (Assessment) to track the effectiveness of the corrective measures and to identify conditions that allow the return to Detection monitoring and ultimately to cessation of corrective measures.

CiP was selected as the source control technology because the site's operational planning includes closure-related activities that will eventually result in placement of an engineered cap. CiP via CCR stabilization and capping would serve to control the source of COCs and thereby reduce contaminant loading to the surrounding environment.

Implementation of ICs is employed to help maintain the CiP and associated corrective measures by limiting the accessibility of the unit to unauthorized users and restricting future use of the property to those activities that may result in exposure potentials.

Seepage from CCR is present along the east side of the Phase II Landfill and the Wilson Station is in the process of designing a collection system that will convey seepage liquids to existing onsite treatment.

Groundwater monitoring of the unit is required by 40 CFR 257.90 through .98. The unit triggered Assessment-mode monitoring by the detection of indicator parameters (Appendix III of 40 CFR 257) in downgradient monitoring wells at concentrations representing a SSI over background. Continued groundwater monitoring is required under 40 CFR 257.95 until the CAOs are met. The CAOs are anticipated to be met as the effect of source control technologies are realized and as natural attenuation

Alternative #2a is recommended for further evaluation.

3.1.3 Alternative #2b – Closure by Removal (CbR), ICs, and Groundwater Monitoring

Alternative #2b is similar to Alternative #2a except that CiP is replaced by CbR, which consists of excavation and removal of the Phase II Landfill, implementation of ICs and an Environmental Covenant intended to restrict the unit to industrial use and prohibit groundwater use for potable purposes. The excavation of impacted CCR material would typically be completed using standard construction equipment (e.g., backhoe, excavator, wheel loader, dump trucks). The excavated materials are then placed directly into dump trucks for transport/disposal or beneficial use. Excavation limits would typically be verified with confirmation sampling to demonstrate that the underlying soil is not impacted above applicable standards.

Groundwater monitoring of the unit is required by 40 CFR 257.90 through .98. The unit triggered Assessment-mode monitoring by the detection of indicator parameters (Appendix III of 40 CFR 257) in downgradient monitoring wells at concentrations representing a SSI over background. Continued groundwater monitoring is required under 40 CFR 257.95 until the CAOs are met. The CAOs are anticipated to be met as the effect of source control technologies are realized and as natural attenuation mechanisms (advection, dilution and dispersion) take effect.

Given that Alternative #2b is likely cost prohibitive, this alternative is not recommended for further consideration.

3.1.4 Alternative #3 – CiP, ICs, Hydraulic Containment, Other Source Control, Ex-Situ Treatment, and Groundwater Monitoring

Alternative #3 builds on Alternative #2a to also include the addition of Hydraulic Containment and Ex-Situ Treatment of groundwater:

- CiP source control, which consists of future planned Phase II Landfill closure activities following its operational life cycle;
- Other Source Control by means of collection and management of seepage liquids from the Landfill and conveyance to existing onsite treatment;
- Implementation of ICs designed to restrict the property to industrial use and to prohibit groundwater use for potable purposes;
- Hydraulic Containment using one or more vertical wells designed to prevent the movement of impacted groundwater past the limits of the unit to the downgradient groundwater environment and potential points of exposure;
- Ex-Situ Treatment of groundwater extracted for hydraulic containment, which involves above-ground physical/chemical treatment methods and/or permitted discharge until the CAOs are achieved; and
- Groundwater Monitoring (Assessment mode) to track the effectiveness of the corrective measures and to identify conditions that allow the return to Detection-mode monitoring and ultimately to cessation of corrective measures.

Vertical groundwater recovery wells for Hydraulic Containment would be installed near the downgradient limit of the unit in the vicinity of MW-10. Due to the varying hydraulic conductivity values within the uppermost aquifer, Pre-Design Studies are anticipated to be needed to identify the appropriate number, design, and spacing of the extraction well system.

Alternative #3 incorporates treatment of extracted groundwater before it can be discharged to an outfall. Treatment will consist of piping the extracted groundwater to an existing surface water impoundment at the Wilson Station, which will accommodate conveyed discharge from the other source control collection remedy, and which will allow for compliance with discharge permits through an established NPDES outfall.

The COC concentrations downgradient of the hydraulic containment would also be expected to decrease over time through natural attenuation mechanisms including advection, dilution, and dispersion. As such, groundwater monitoring would be modified to include system performance monitoring, which may require installation of wells at new locations to evaluate the efficacy of hydraulic containment and to identify when CAOs have been achieved.

Alternative #3 is recommended for further evaluation.

3.1.5 Alternative #4 – CiP, ICs, Physical Containment, Permeable Reactive Barrier, and Groundwater Monitoring

Alternative #4 consists of BREC's planned unit closure activities, other source control, physical containment of impacted groundwater via installation of a funnel-gate system, and in-situ treatment of contained groundwater via PRB installed at the containment gate. Impacted groundwater would be contained by slurry wall constructed in a funnel-and-gate arrangement that directs the flow of groundwater to the PRB. The slurry wall would be installed by trenching equipment, and the length of the barrier would be 2,700 feet, with the target depth would be approximately 60 ft. A PRB would be installed at the "gate," and treatability studies would be required to design the reactive media, which would include granular zero-valent iron (ZVI), for treatment of cobalt.

Alternative #4 is recommended for further evaluation.

3.1.6 Alternative #5 – CiP, ICs, Other Source Control, In-Situ Treatment, and Groundwater Monitoring

Alternative #5 consists of BREC's planned unit closure activities, other source control, and in-situ treatment of groundwater via a PRB installed into the mine spoil in a linear arrangement downgradient of the Phase II Landfill. Impacted groundwater would be treated in-situ as it migrates through the PRB made of granular ZVI material. Treatability studies would be required to design the reactive media. The PRB would be installed with conventional drilling and injection methods along the south and southeast boundaries of the Phase II Landfill in the vicinity of MW-10 and MW-4/MW-4D.

Alternative #5 is recommended for further evaluation.

3.2 Remedy Evaluation

Currently BREC considers four (4) potential corrective action alternatives as viable options to address groundwater impacts at the Unit, including:

- Alternative #2a;
- Alternative #3;
- Alternative #4; and
- Alternative #5.

To evaluate each alternative, additional data collection will likely be required. BREC is currently evaluating data collection needs in the following areas to assist with remedy selection:

1) Nature and Extent – groundwater trends, influence of non-groundwater remedies, etc.
2) Physical Characteristics – available data on the physical characteristics of the landfill and retention pond
3) Performance Modeling – data needed to develop digital models demonstrating the effectiveness of potential alternatives
4) Engineering – feasibility, cost estimates, etc.

BREC is working to establish a comprehensive list of data collection needs to proceed forward with remedy evaluation and anticipates providing additional data in future semi-annual remedy selection progress reports.

In 2019, BREC constructed a series of collection trenches around the perimeter of the Unit to address non-groundwater releases. The 2020 groundwater monitoring program will assist in evaluating the success of the non-groundwater release remedies and provide relevant and important information to be considered in the final groundwater remedy selection.

4.0 CONCLUSION

Additional updates regarding remedy selection, including any additional corrective measures being considered, will be presented twice a year in future remedy selection progress reports. Once sufficient data has been collected to select an effective comprehensive remedy for the Unit, a public meeting will be held 30 days prior to formal remedy selection, followed by a detailed Remedy Selection Report describing the remedy and proposed schedule for implementation.

If needed, the next remedy selection progress report for the Unit is expected in June 2020.

5.0 REFERENCES

AECOM, 2018. Annual Groundwater Monitoring and Corrective Action Report, 2016-2017; D.B. Wilson CCR Landfill, Ohio County, Kentucky.

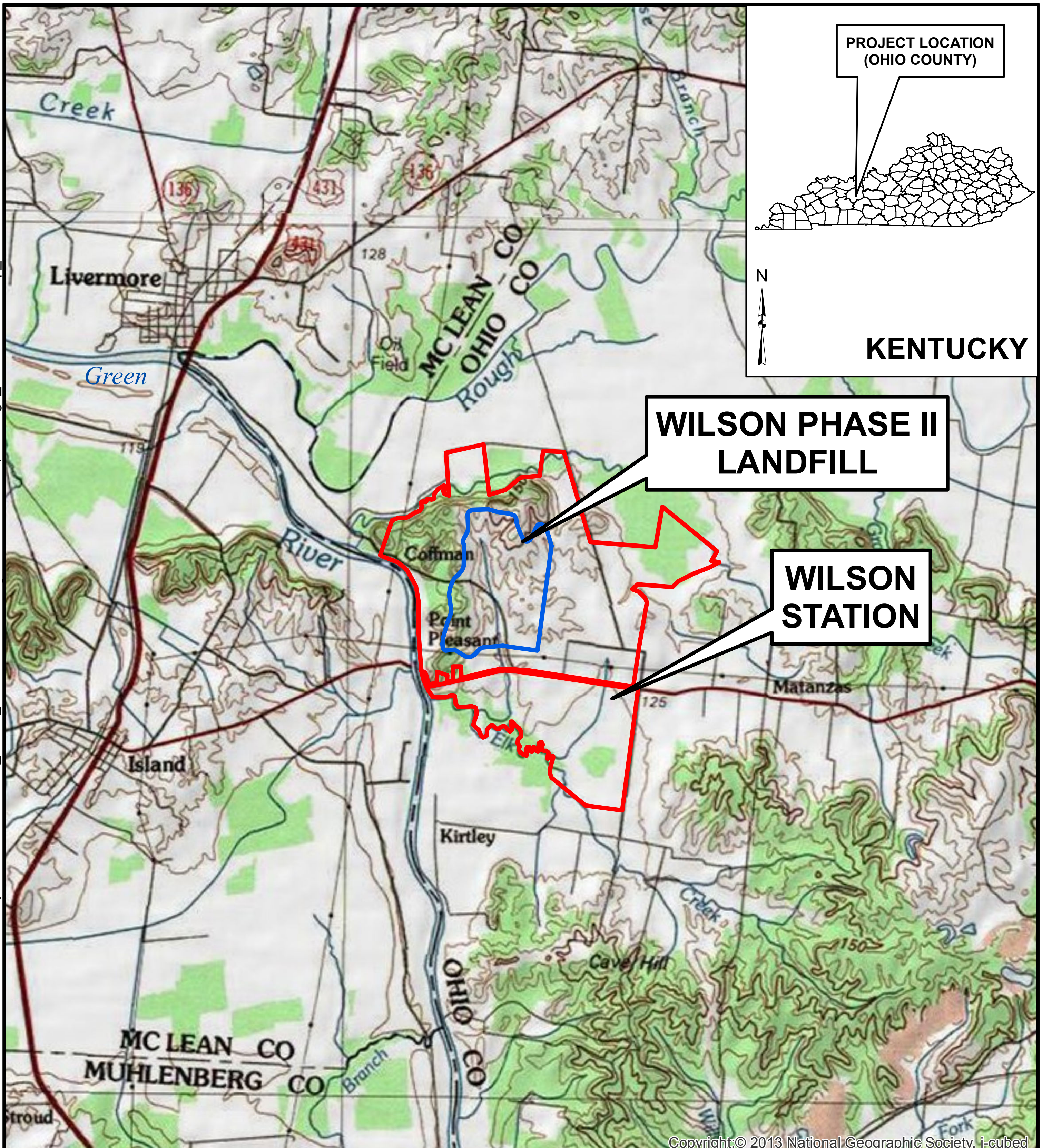
AECOM, 2019. Annual Groundwater Monitoring and Corrective Action Report, 2018; D.B. Wilson CCR Landfill, Ohio County, Kentucky.

EPA, 40 CFR Part 257. [EPA–HQ–RCRA–2015–0331; FRL–9928–44–OSWER]. RIN–2050–AE81. Technical Amendments to the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities—Correction of the Effective Date. Federal Register / Vol. 80, No. 127 / Thursday, July 2, 2015 / Rules and Regulations.

Goudarzi, G.H., Geologic Map of the Equality Quadrangle, Western Kentucky, U.S. Geological Survey, 1969.

Figures

Document Path: G:\Cincinnati\DCS\Projects\ENV\60579935_BREC_WilGW\900-CAD-GIS\920-GIS or Graphics\Fig1_Site Location Map_Wilson ACM Revised.mxd



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EQUALITY QUADRANGLE
(https://viewer.nationalmap.gov/basic/)

0 3,000 6,000
Feet

N

Big Rivers ELECTRIC CORPORATION

Wilson Station
Ohio County, Kentucky

FIGURE 1
SITE LOCATION MAP

DATE: 5/21/2019	SCALE: 1IN = 1,500 FEET
CREATED BY: ALW	
JOB NO. 60602363	

Legend

- Property Boundary
- CCR Phase 2 Fill
- Bond Increment
- KAR Permit Area
- Downgradient CCR Monitoring Well Location
- Upgradient CCR Monitoring Well Location
- Characterization Monitoring Well Location
- Monitoring Well Location (Water Level Only)
- Piezometer Location (Water Level Only)

0 750 1,500
Feet

Wilson Station Landfill
Ohio County, Kentucky

FIGURE 2
WELL LOCATION MAP

DATE: 12/9/2019	SCALE: 1IN = 750 FEET
CREATED BY: ALW	
JOB NO. 60579935	

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