



# Reid/HMP&L CCR Surface Impoundment

Disposal of Coal Combustion Residuals (CCR) from Electric  
Utilities Final Rule  
CCR Surface Impoundment 2019 Annual Inspection Report

Big Rivers Electric Corporation

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Henderson, KY 42420

Project number: 60613511

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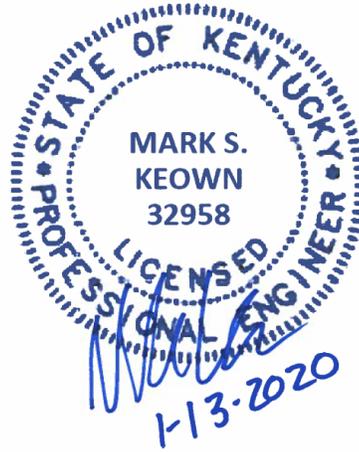
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# 1. Project Background

In accordance with the United States Environmental Protection Agency (USEPA) Final Coal Combustion Residual (CCR) Rule §257.83, annual inspection by a qualified professional engineer is required for each CCR surface impoundment.

The CCR Rule requires a visual inspection by a licensed civil engineer of each CCR unit to ensure the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. AECOM completed the annual inspection in accordance with CCR Rule requirements and prepared this Annual Inspection Report for the Reid/HMP&LCCR Surface Impoundment at Sebree Station, located in Webster County, Kentucky. This inspection was performed in accordance with the scope of work presented in our proposal, dated August 23, 2019, executed under purchase order 255958 as part of general services agreement with Big Rivers Electric Corporation dated November 16, 2017.

The CCR unit has been in existence for more than 40 years. The CCR unit operator has general maintenance and repair procedures in place as they determine necessity. There are no known occurrences of structural instability of the CCR unit. The current Reid/HMP&LCCR Surface Impoundment footprint is approximately 25.4 acres. An aerial photograph of Reid/HMP&LCCR Surface Impoundment is shown below in Figure 1.



**Figure 1:** Big Rivers Reid/HMP&LCCR Surface Impoundment Overview

## 2. Regulatory Requirements

The annual inspection must include the criteria specified in CCR Rule Section 257.83(b) (1) which at a minimum includes:

- (i) 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., CCR unit design and construction information required by §§ 257.73(c)(1) and 257.74(c)(1), previous periodic structural stability assessments required under §§ 257.73(d) and 257.74(d), the results of inspections by a qualified person, and results of previous annual inspections);
- (ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures; and
- (iii) A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.

In addition to the annual inspections, 7-day inspections and 30-day instrumentation monitoring per CCR Rule Section 257.83 (a) (1) are completed by BREC and are documented in the facility operating record per § 257.105(g)(5) .

Once the annual inspection has been completed, the CCR Rule Section 257.83(b) (2) requires the qualified professional engineer to prepare a report following each inspection that addresses the following:

- (i) Any changes in geometry of the impounding structure since the previous annual inspection;
- (ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;
- (iii) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;
- (iv) The storage capacity of the impounding structure at the time of the inspection;
- (v) The approximate volume of the impounded water and CCR at the time of the inspection;
- (vi) 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 appurtenant structures;
- (vii) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

## 3. Review of Available Information

Prior to completing the visual inspection of the CCR unit, AECOM reviewed the 2018 Annual Inspection Report, dated January 11, 2019 prepared by AECOM, Inc. for the CCR surface impoundment. Observations by the inspecting engineer were documented in the inspection report and BREC completed the appropriate repairs where necessary. The observations from the 2018 annual inspection include:

- Wet, saturated soils along the northeast corner of the embankment toe to be repaired through regrading to promote positive drainage and re-seeding
- Rutting was present in the area but BREC planned to use lightweight or handheld mowing equipment in the repaired area.

The 2018 inspection concluded “no deficiencies or disrupting conditions that would require immediate measures to remedy were identified in the inspection. The inspection findings consisted of maintenance items that were not

observed to be signs or potential signs of significant structural weakness.” Although no deficiencies were identified, the previously stated observations were addressed as part of surface impoundment general maintenance and monitoring.

## 4. Inspection Observations & Procedures

The Reid/HMP&LCCR Surface Impoundment consists of an ash pond located adjacent to the west of the Sebree Station cooling towers. The ash pond received CCR effluent flow from the Robert A. Reid and the HMP&L Station 2 generating units prior to February 1, 2019, at which point the pond was retired. Per CCR Rule Section 257.83 (b) (3) the owner or operator of the CCR unit (BREC) must complete the initial inspection no later than January 18, 2016. This report summarizes the fifth annual inspection performed by BREC since the CCR Rule took effect April 17, 2015. The inspection was completed on September 12, 2019 to visually inspect the dikes of the impoundment, and on September 30, 2019 to inspect the hydraulic structures with use of a remote operated camera. The inspection was completed by AECOM personnel Mark Keown, P.E. and Scott Meszi.

Visual inspection of the surface impoundment and embankments was conducted on September 12, 2019. The inspection began at the southwest corner near the principal spillway stop log structure. The stop log structure was in good condition showing no signs of deterioration or instability, and the inlet to the structure was not obstructed. The overflow weir discharged into a 48-inch outlet pipe. The outlet pipe inspection by remote video camera was completed on September 30, 2019 by Envision Contractors, LLC. The inspection ended after 221 feet due to mud in the spillway piping. However, the piping section within the embankment was inspected and determined to be clear and in good working condition. No signs were present of bad pipe joints or leaks that may result in internal erosion of the embankment. There was a minor sag in the pipe observed. However, this did not show signs of affecting the structural integrity of the outlet pipe. The sag should continue to be monitored.

The inspection proceeded along the south dike adjacent to the cooling towers, moving west at the crest then returning to the east at the toe of the southern dike. The dike becomes incised at the southeast corner and a portion of the east side of the pond, therefore the inspection continued along the west dike. A depression indicative of possible settlement was noted on a side slope of the southern dike, which may be associated with drainage pipes in the vicinity. Excessive vegetation was noted within the riprap on the inboard slope, and the east embankment downstream slope. Ruts and ponding water were observed at the southwest toe of slope. The west embankment downstream slope was generally well vegetated and maintained. These observations were addressed by BREC following the inspection, and are discussed further in Section 5.

## 5. Inspection Findings

Per CCR Rule Section 257.83(b) (2) the following deductions were made after completion of the inspection.

### CCR Surface Impoundment Geometry

The Reid/HMP&LCCR Surface Impoundment consists of an earthen embankment on the south, west and north sides and incised to the east as shown in Figure 1. The impoundment is approximately 2,500 feet to the east of the Green River and the maximum height of the embankment is 42 feet on the west dike. As discussed previously in Section 4, the ash pond no longer receives CCR flow as of February 1, 2019.

Per the 2019 annual inspection observations, BREC cleared vegetation from inboard slope and riprap on the north side as well as the vegetation on the east embankment slope. Ruts were repaired by BREC by regrading and seeding. Depressions were regraded and seeded by BREC.

The Reid/HMP&LCCR Surface Impoundment instrumentation consists of five piezometers and one water level indicator.

### **Piezometers**

The location and maximum recorded readings of each piezometer between the January 11, 2019 inspection report and the September 12, 2019 inspection are presented in the table below.

Piezometer ID	Northing	Easting	Top of Casing Elevation (AMSL)	Depth to Water Static Level (ft.)	Static Water Elevation (AMSL)
P-1A	483464.43	1491086.43	428.95	13.31	415.64
P-2A	483141.96	1491515.32	428.63	10.92	417.71
P-3A	483772.54	1491306.43	428.75	15.82	412.93
P-4	483033.84	1491399.12	397.44	4.72	392.72
P-5	483415.93	1490969.80	395.34	9.27	386.07

### **Water Surface Level Indicator**

The maximum water surface elevation since the January 11, 2019 annual inspection report was approximately 10.91 feet below top of casing in P-2A, corresponding to the water surface elevation of 417.7 feet above mean sea level.

### **CCR Surface Impoundment Contents Depths and Elevations**

The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection of the Reid/HMP&LCCR Surface Impoundment are provided below. The measurements are based on the survey report by Associated Engineers, Inc. dated October 24, 2019. The basis for the measurements include: the available measure water surface elevations, the September 2019 flight derived topographic contours and bathymetric survey data, and the best available as-built design data for the impoundment prior to placement of CCR materials (provided by Big Rivers Electric Corporation).

Elevations are provided as feet above MSL and depths are provided as height in feet above the impoundment's design bottom prior to placement of CCR material. All values are rounded off to the nearest tenth of foot.

CCR Surface Impoundment Properties	Minimum	Maximum	Present
Depth of Impounded Water (ft.)	Not Available <sup>1</sup>	Not Available <sup>1</sup>	14.8 <sup>2</sup>
Elevation of Impounded Water (ft. above MSL)	423.7	426.4	423.7
Depth of Impounded CCR Material (ft.)	15.4	40.7	40.7
Elevation of Impounded CCR Material (ft. above MSL)	408.9	442.0	428.7 <sup>3</sup>

<sup>1</sup> Depth not available due to absence of bathymetric survey data at times of minimum and maximum pool elevations. However, the depth of impounded water ranged from 0 to approximately 14.8 feet at the time of survey.

<sup>2</sup> At location of maximum impounded water depth

<sup>3</sup> At location of maximum CCR material depth

### CCR Surface Impoundment Storage Capacity

The total storage capacity of the Reid/HMP&L CCR Surface Impoundment at the time of the September 2019 survey was estimated to be 758,873 cubic yards. This volume was based on the assumption CCR can be placed up to the spillway elevation of 425.8 ft above MSL. The storage capacity is provided by Associated Engineers, Inc. and the estimated capacity is based on the available measured water surface elevations, the September 2019 flight derived topographic contours and bathymetric survey data, and the best available as-built design data for the impoundment prior to placement of CCR material, provided by BREC.

### CCR Surface Impoundment Contents Volumes

The total volume of CCR material contained in the Reid/HMP&L CCR Surface Impoundment at the time of the September 2019 survey was estimated to be 720,688 cubic yards, which includes CCR material above the impoundment pool elevation. The total volume of impounded water was estimated at 66,934 cubic yards.

The volumes are based on the survey completed by Associated Engineers, Inc. in September 2019. The estimated volumes are based on the September 2019 flight derived topographic contours and bathymetric survey data and the best available as-built design data for the impoundment prior to placement of CCR material, provided by Big Rivers Electric Corporation.

### CCR Surface Impoundment Structural, Operational, and Safety Items

No deficiencies or disrupting conditions that would require immediate measures to remedy were identified in the inspection. The inspection findings consisted of maintenance items that were not observed to be signs or potential signs of significant structural weakness. The video inspection completed on September 30, 2019 by Envision Contractors, LLC of the piping associated with the structure show the pipes are in good condition. It was observed that sediment tends to accumulate in flatter sections of pipe during periods of low discharge due to slower moving water. However, the accumulation is very minor and will likely be forced out during periods of higher discharge from the overflow weir.

The visual observations were primarily limited to minor vegetation growth within the riprap on the upstream slope of the north embankment. The vegetative growth was removed following the inspection. A depression indicative of possible settlement was noted on a side slope of the southern dike. However, following the inspection, the depression was regraded and seeded to establish vegetation. The downstream slope of the south embankment was re-seeded at the time of the inspection to improve vegetative cover. Ruts observed within the southwest corner were regraded and seeded following the inspection. At the time of this report, the inspection observations had been addressed by BREC. The observations are discussed further below in Section 6 "Recommendations". BREC has been made aware of the aforementioned observations and are continuing to monitor the areas.

### CCR Surface Impoundment Changes

There have been no changes to the Reid/HMP&L CCR Surface Impoundment since the previous 2018 annual inspection that may have the potential to affect the stability or operation of the CCR unit. Changes include typical operations activity and maintenance such as mowing or spraying to control vegetation on the upstream slopes of the

perimeter berm. As discussed previously, the CCR surface impoundment no longer receives CCR flow from the plant.

## 6. Recommendations

### General Maintenance Items and Monitoring Conditions

1. Continue to spray 2 to 3 times per year to kill weeds along the inboard slopes of the surface impoundment. Current schedule is effective.
2. Continue to monitor the re-graded and re-seeded areas. Continue to use lightweight mowing equipment to minimize rutting if subgrade is soft or wet. Monitor for any signs or seepage such as wetness on the slope or flowing water.
3. Consider mowing with lightweight equipment at the crest of the south slope to minimize erosion of the inboard embankment.

### Repairs and/or Deficiencies

Based on the results of the inspection and provided the general maintenance items discussed above are addressed and monitored, no deficiencies were observed, and no repairs required for the Reid/HMP&LCCR Surface Impoundment.





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# Green CCR Surface Impoundment

Disposal of Coal Combustion Residuals (CCR) from Electric Utilities  
Final Rule

CCR Surface Impoundment 2019 Annual Inspection Report

**Big Rivers Electric Corporation**

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January 10, 2020

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# 1. Project Background

In accordance with the United States Environmental Protection Agency (USEPA) Final Coal Combustion Residual (CCR) Rule §257.83, annual inspection by a qualified professional engineer is required for each CCR surface impoundment.

The CCR Rule requires a visual inspection by a licensed civil engineer of each CCR unit to ensure the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. AECOM completed the annual inspection in accordance with CCR Rule requirements and prepared this Green CCR Surface Impoundment Annual Inspection Report for the Sebree Station, located in Henderson County, Kentucky. This inspection was performed in accordance with the scope of work presented in our proposal, dated August 23, 2019, executed under purchase order 255959 as part of general services agreement with Big Rivers Electric Corporation dated November 16, 2017.

The CCR unit has been in existence for more than 40 years. The CCR unit operator has general maintenance and repair procedures in place as they determine necessity. There are no known occurrences of structural instability of the CCR unit. The current Green CCR Surface Impoundment footprint is approximately 21 acres. An aerial photograph of Green CCR Surface Impoundment is shown below in **Figure 1**.



**Figure 1: Green CCR Surface Impoundment Aerial Photograph**

## 2. Regulatory Requirements

The annual inspection includes the criteria specified in CCR Rule Section 257.83(b) (1) which at a minimum includes:

- (i) 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. These files include, CCR unit design and construction information required by §§ 257.73(c)(1) and 257.74(c)(1), previous periodic structural

stability assessments required under §§ 257.73(d) and 257.74(d), the results of inspections by a qualified person, and results of previous annual inspections;

- (ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures; and
- (iii) A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.

In addition to the annual inspections, 7-day inspections and 30-day instrumentation monitoring per CCR Rule Section 257.83 (a) (1) are completed by BREC and are documented in the facility operating record per § 257.105(g)(5) .

Once the annual inspection has been completed, the CCR Rule Section 257.83(b) (2) requires the qualified professional engineer to prepare a report following each inspection that addresses the following:

- (i) Any changes in geometry of the impounding structure since the previous annual inspection;
- (ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;
- (iii) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;
- (iv) The storage capacity of the impounding structure at the time of the inspection;
- (v) The approximate volume of the impounded water and CCR at the time of the inspection;
- (vi) 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 appurtenant structures;
- (vii) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

### 3. Review of Available Information

Prior to completing the visual inspection of the CCR unit, AECOM reviewed the 2018 Annual Inspection Report, prepared by AECOM, dated February 7, 2019, for the CCR surface impoundment. Observations by the inspecting engineer were documented in the inspection report and BREC completed the appropriate repairs where necessary. The observations from the 2018 annual inspection include:

- An area of the crest access road was missing gravel within the southeast corner of the embankment;
- Some vegetation was present among the rip-rap on the upstream slope;
- Thick vegetation was present around the spillway pipe outlets

The 2018 inspection concluded “no deficiencies or disrupting conditions that would require immediate measures to remedy were identified in the inspection. The inspection findings consisted of maintenance items that were not observed to be signs or potential signs of significant structural weakness.” Although no deficiencies were identified, the maintenance items discussed above were addressed by BREC prior to submittal of the final report.

## 4. Inspection Procedures & Observations

The Green CCR Surface Impoundment consists of an ash pond which receives flow from the plant and is located approximately 400 feet west of the west of the Green River at the Sebree Station. This report summarizes the fifth annual inspection performed by BREC since the CCR Rule took effect April 17, 2015. The inspection was completed on September 12, 2019 to visually inspect the dikes of the impoundment, and on September 30, 2019 to inspect the hydraulic structures with use of a remote operated camera. The inspection was completed by AECOM personnel Mark Keown, P.E. and Scott Mesi.

Visual inspection of the surface impoundment and embankments were performed on September 12, 2019. The inspection began at the northwest corner of the impoundment on the embankment crest access road. The crest access road was paved with gravel and appeared to be well maintained. However, an area of the crest access road was missing gravel within the south embankment of the impoundment. Rip rap was present as slope protection on the upstream embankment slope, and typically appeared to be well maintained, although some vegetation was noted on the west embankment. Erosion was also noted on the northeast corner of the impoundment. The south embankment downstream slope was generally well vegetated and maintained but the east side of the south embankment contained excessive phragmites

The east side of the impoundment interior contains CCR material at or above the current pool elevation. Active management of CCR material was observed where stored above the pool elevation. The east crest access road is not well separated from interior CCR storage areas however, shows no signs of instability or deficiencies.

The south embankment contains the emergency overflow structure, which consists of two 30-inch diameter corrugated steel discharge pipes. The upstream end of the overflow structure has a concrete common headwall with variable height steel debris deflectors that should be removed. The pipe conveyances were inspected on August 29, 2019 by Envision Contractors, LLC using a remote camera and found to be in acceptable operating condition.

## 5. Inspection Findings

In accordance with CCR Rule Section 257.83(b) (2) the inspection findings are presented in the following sections.

### CCR Surface Impoundment Geometry

The Green CCR Surface Impoundment consists of an earthen embankment to the south, and incised on the remaining sides. The south embankment has a maximum height of 19.5 feet. The middle of the south embankment was constructed on a ridge and the toe of the embankment was previously a drainage area.

The west side of the pond is bounded by a gravel access road with a drainage ditch to the west generally less than five feet in height, the original design drawings by Burns and Roe, Inc., dated August 10, 1978 show the west side of the pond as incised. Although shown as incised on the design drawings, the east side of the impoundment has a maximum height of approximately eight feet above surrounding ground surface, with a 40-foot wide access road parallel to the east dike supporting the toe of slope. CCR has been placed above the normal pool elevation on the upstream side of the east dike creating reclaimed land. The area has been regraded as part of the active CCR management operations.

### CCR Surface Impoundment Instrumentation

The Green River CCR Surface Impoundment instrumentation consists of five piezometers and one water level indicator. The piezometers are measured on a monthly basis by BREC.

#### Piezometers

The location and maximum recorded readings of each piezometer between the previous January 11, 2019 inspection report and the most recent September 12, 2019 inspection are presented in the table below.

Piezometer ID	Northing	Easting	Top of Casing Elevation (AMSL)	Depth to Water Static Level (ft.)	Static Water Elevation (AMSL)
P-1A	480202.55	1492104.21	396.17	13.03	383.14
P-2A	480186.48	1492464.48	395.98	13.76	382.22
P-3A	480175.11	1492692.75	395.91	14.00	381.91
P-6	480122.51	1492462.58	379.33	2.22	377.11
P-7	480137.28	1492099.00	380.26	1.72	378.54

#### Water Surface Level Indicator

The maximum water surface elevation between the September 12, 2019 inspection and the previous January 11, 2019 annual inspection report was recorded at a depth of 13.03 feet below top of casing at P-1A, which corresponds to a water surface elevation of 383.14 feet above mean sea level.

### CCR Surface Impoundment Contents Depths and Elevations

The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection of the Green CCR Surface Impoundment are provided below. The measurements are based on the survey report by Associated Engineers, Inc. dated October 24, 2019. The basis for the measurements include: the available measure water surface elevations, the September 2019 flight derived topographic contours and bathymetric survey data, and as-built design data for the impoundment prior to placement of CCR material, prepared by Burns and Roe, Inc. Engineering and Consultants, dated June 30, 1978, provided by BREC.

Elevations are provided as feet above MSL and depths are provided as height in feet above the impoundment's design bottom prior to placement of CCR material. All values are rounded off to the nearest tenth of foot.

CCR Surface Impoundment Properties	Minimum	Maximum	Present
Depth of Impounded Water (ft)	Not Available <sup>1</sup>	Not Available <sup>1</sup>	19.8 <sup>2</sup>
Elevation of Impounded Water (ft above MSL)	391.7	392.0	392.0
Depth of Impounded CCR Material (ft)	14.5	56.8	56.8 <sup>3</sup>
Elevation of Impounded CCR Material (ft above MSL)	374.5	419.3	419.3 <sup>3</sup>

<sup>1</sup> Depth not available due to absence of bathymetric survey data at times of minimum and maximum pool elevations. However, the depth of impounded water ranged from 0 to 19.8 feet at the time of survey.

<sup>2</sup> At location of maximum impounded water depth

<sup>3</sup> At location of maximum CCR material depth

### CCR Surface Impoundment Storage Capacity

The total storage capacity of the Green Surface Impoundment at the time of the September 2019 survey was estimated to be 976,165 cubic yards. This volume was based on the assumption CCR can be placed up to the spillway elevation of 393.8 ft above MSL. The storage capacity is provided by Associated Engineers, Inc. and the estimated capacity is based on the available measured water surface elevations, the September 2019 flight derived topographic contours and bathymetric survey data, and the as-built design data for the impoundment prior to placement of CCR material, prepared by Burns and Roe, Inc. Engineering and Consultants, dated June 30, 1978, provided by BREC.

### CCR Surface Impoundment Contents Volumes

The total volume of CCR material contained in the Green CCR Surface Impoundment at the time of the September 2019 survey was estimated to be 882,093 cubic yards which includes CCR material above the impoundment pool elevation. The total volume of impounded water was estimated at 165,762 cubic yards.

The volumes are based on the survey completed by Associated Engineers, Inc. in September of 2019. The estimated volumes are based on the September 2019 flight derived topographic contours and bathymetric survey data and the as-built design data for the impoundment prior to placement of CCR material, prepared by Burns and Roe, Inc. Engineering and Consultants, dated June 30, 1978, provided by BREC.

### CCR Surface Impoundment Structural, Operational, and Safety Items

No deficiencies or disrupting conditions that would require immediate measures to remedy were identified in the inspection. The inspection findings consisted of maintenance items that were not observed to be signs or potential signs of significant structural weakness. The video inspection completed on September 30, 2019 by Envision Contractors, LLC of the piping associated with the structure show the pipes are in good condition to operate as designed and the outfall is unobstructed. The observations were limited to sparse vegetation, and weed control as discussed further in Section 6 below. At the time of this report, BREC has addressed the sparse vegetation by seeding and spraying for weed control.

### CCR Surface Impoundment Changes

There have been no changes to the Green Surface Impoundment since the previous 2018 annual inspection that may have the potential to affect the stability or operation of the CCR unit. Changes include typical operations activity such as, placement of additional CCR material and maintenance such as mowing or spraying to control vegetation on the upstream slopes of the perimeter berm.

## 6. Recommendations

### General Maintenance Items and Monitoring Conditions

1. Continue to spray 2 to 3 times per year to kill weeds along the inboard slopes of the surface impoundment. Current schedule is effective.
2. Sparse vegetation was noted in a small area near the crest of the south embankment and a small strip on the west Access Road berm on the downstream side. No signs of erosion were present. After notifying BREC of the sparse vegetation the area was re-seeded and protected with straw. No further actions or repairs required aside from maintenance and inspection of the repairs.
3. The phragmites growing in the southeast corner of the CCR Surface Impoundment (near the landfill storage ponds outfall) should be sprayed as part of the regular maintenance. At the time of this report, the phragmites had been sufficiently removed. No further actions or repairs required aside from maintenance and inspection of the repairs.

### Repairs and/or Deficiencies

Based on the results of the inspection and the general maintenance items completed by BREC after the inspection findings were documented, no deficiencies were observed and no further repairs are required for the Green CCR Surface Impoundment at this time.