

**BEFORE THE  
ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:

PETITION OF ILLINOIS POWER  
RESOURCES GENERATING, LLC FOR  
AN ADJUSTED STANDARD FROM  
35 ILL. ADMIN. CODE PART 845 OR, IN  
THE ALTERNATIVE, A FINDING OF  
INAPPLICABILITY

AS 21-\_\_\_\_\_

(Adjusted Standard)

**NOTICE OF FILING**

To: Pollution Control Board, Attn: Clerk  
100 West Randolph Street  
James R. Thompson Center, Suite 11-500  
Chicago, Illinois 60601-3218

Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the attached Petition of Illinois Power Resources Generating, LLC for an Adjusted Standard from 35 Ill. Admin. Code Part 845, or In the Alternative, a Finding of Inapplicability, Appearances, and a Certificate of Service, copies of which are herewith served upon you.

/s/ Robert Middleton  
Robert Middleton

Dated: May 11, 2021

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**CERTIFICATE OF SERVICE**

I, the undersigned, certify that on this 11<sup>th</sup> day of May, 2021:

I have electronically served a true and correct copy of the attached Petition of Illinois Power Resources Generating, LLC for an Adjusted Standard from 35 Ill. Admin. Code Part 845, or In the Alternative, a Finding of Inapplicability and Appearances on behalf of Illinois Power Resources Generating, LLC by electronically filing with the Clerk of the Illinois Pollution Control Board and by e-mail upon the following persons:

Pollution Control Board, Attn: Clerk  
100 West Randolph Street  
James R. Thompson Center, Suite 11-500  
Chicago, Illinois 60601-3218

Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276

My e-mail address is [rmiddleton@schiffhardin.com](mailto:rmiddleton@schiffhardin.com). The number of pages in the e-mail transmission is 6. The e-mail transmission took place before 5:00 p.m.

/s/ Robert Middleton  
Robert Middleton

Dated: May 11, 2021

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INAPPLICABILITY

AS 21-\_\_\_\_\_

(Adjusted Standard)

**APPEARANCE**

I, Robert Middleton, hereby file my appearance in this proceeding on behalf of Illinois  
Power Resources Generating, LLC.

/s/ Robert Middleton

---

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AS 21-\_\_\_\_\_

(Adjusted Standard)

**APPEARANCE**

I, Josh More, hereby file my appearance in this proceeding on behalf of Illinois Power Resources Generating, LLC.

/s/ Josh More

---

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Dated: May 11, 2021

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AS 21-\_\_\_\_\_

(Adjusted Standard)

**APPEARANCE**

I, Sarah Lode, hereby file my appearance in this proceeding on behalf of Illinois Power Resources Generating, LLC.

/s/ Sarah Lode

---

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(Adjusted Standard)

**PETITION FOR AN ADJUSTED STANDARD  
FROM 35 ILL. ADMIN. CODE PART 845 OR, IN THE ALTERNATIVE,  
A FINDING OF INAPPLICABILITY**

Submitted on behalf of  
Illinois Power Resources Generating, LLC

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**I. INTRODUCTION.**

Illinois Power Resources Generating, LLC (“IPRG”) respectfully submits this Petition for an Adjusted Standard, or in the Alternative, a Finding of Inapplicability (“Petition”) concerning the former Gypsum Management Facility (“GMF”) Recycle Pond (“Recycle Pond”) located at its Duck Creek Power Plant (“Duck Creek”) near Canton, Illinois.

The Recycle Pond does not qualify as a “CCR surface impoundment” under either Illinois’ newly enacted Standards for the Disposal of Coal Combustion Residuals (“Part 845”) or the federal CCR regulations upon which Part 845 was based.<sup>1</sup> Moreover, the Recycle Pond is lined, never directly nor intentionally received CCR, contains – at most – 500 cubic yards of sediment (which may or may not include any CCR), and does not pose the types of risk to the environment and human health that federal and state CCR regulations aim to address. Yet the Illinois Environmental Protection Agency (“IEPA”) has incorrectly asserted that the Recycle Pond is subject to Part 845.

The Recycle Pond need not comply with Part 845 because the pond plainly does not fit the definition of a “CCR surface impoundment.” To the extent the definition of a CCR surface impoundment could be interpreted so expansively as to encompass the Recycle Pond, an adjusted standard is warranted because the excessive costs of compliance with Part 845 are totally inappropriate here, where the pond poses no reasonable probability of an adverse effect on human health and the environment.

For the reasons set forth herein, IPRG respectfully requests that the Board issue a finding of inapplicability with respect to the Duck Creek Recycle Pond. In the alternative, IPRG requests an adjusted standard exempting the unit from Part 845 requirements.

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<sup>1</sup> As discussed in Section III.A.1, *infra*, IEPA intended Part 845 to cover *only* CCR surface impoundments already subject to the federal CCR regulations.

**II. FACTUAL AND PROCEDURAL BACKGROUND.**<sup>2</sup>

**A. Duck Creek Power Plant.**

Duck Creek is a former coal-fired power plant located southeast of Canton, Illinois. IPRG, Duck Creek Power Plant Site Map, attached as Ex. 1. Opening in 1976, the plant had a single coal-fired unit, with a generation capacity of between 441 MW and 473 MW, depending on the time of year. *See* Declaration of Cynthia Vodopivec (“Vodopivec Decl.”), attached as Ex. 2. Throughout its operational life, the plant utilized a wet scrubber system on its coal-fired unit, with a new wet scrubber system beginning operation in 2009. Ex. 2. In 2007, a GMF Pond and the Recycle Pond were installed. The Recycle Pond recycled water from the GMF Pond for use in the wet scrubber system. Ex. 2.

Duck Creek closed in December 2019. Currently, Duck Creek employs two individuals. These employees maintain the station, facilitate ongoing plant closure operations, implement NPDES permitting, manage the onsite landfill, and assist with pond closure efforts. Ex. 2 at 2.

The plant is located on approximately 6,500 acres zoned for Heavy Industrial use. The plant is surrounded by undeveloped land, but is located near three small bodies of water used for recreation (Rice Lake, Miserable Lake, and Big Lake), as well as the Illinois River. Ex. 1; Ex. 2.

**B. Duck Creek’s CCR Storage.**

Duck Creek operated as a coal-fired power plant. Coal combustion residual (“CCR”) is a byproduct of the coal-fired power generation process. Prior to closure, Duck Creek operated two CCR surface impoundments, Ash Pond 1 and Ash Pond 2; a bottom ash basin; and a CCR landfill. Ex. 1; Ex. 2. Duck Creek ceased all operations that produced CCR in 2019. Ex. 2.

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<sup>2</sup> IPRG reserves the right to supplement or amend its Petition to reflect new or additional information discovered in the course of investigating the facts set forth herein.

**C. Recycle Pond.**

This Petition concerns the Duck Creek Recycle Pond, which, to the knowledge of Duck Creek personnel, never directly or indirectly received CCR or gypsum. Letter from Geosyntec Consultants, Inc. to Vistra Energy (Dec. 9, 2020), attached as Ex. 3 at 5. Following a review of the design, history, groundwater monitoring, and a recent bathymetric survey of the Recycle Pond, Geosyntec Consultants concluded that:

1. The Recycle Pond was not designed to hold an accumulation of CCR.
2. The Recycle Pond does not treat, store, nor is used for disposal of CCR.
3. The Recycle Pond is lined and there are no impacts above the maximum [Part 845 groundwater protection standards].
4. The Recycle Pond does not present a reasonable probability of an adverse effect on human health or the environment.<sup>3</sup>

The GMF Pond is 2.5 miles north of Duck Creek and served as the wet impoundment basin for gypsum produced by the wet scrubber system at Duck Creek. Ex. 3 at 2. The Recycle Pond was designed and constructed adjacent to the GMF Pond in 2007. The Recycle Pond is 8.5 acres in area and lined with a 60-mil HDPE geomembrane. Ex. 3 at 2. Designed to receive clarified process water from the GMF Pond, an HPDE-lined earthen transfer channel connects the Recycle Pond to the GMF Pond. Through the earthen transfer channel, clarified process water was decanted from the GMF Pond into the Recycle Pond. Ex. 3 at 2-3.

A pump-house returned clarified water from the Recycle Pond back to the plant via pipeline for use in the wet scrubber system during plant operations. Ex. 3 at 2-3. During periods when the plant was shut down, water from the Recycle Pond was recirculated to the top of the gypsum stack in the GMF pond. Ex. 3 at 3.

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<sup>3</sup> Ex. 3 at 5.

Water in the Recycle Pond was necessarily clear of sediment (CCR or otherwise) in order to be utilized in the wet scrubber system. Ex. 3 at 3. Throughout the lifetime of the Recycle Pond, it never had to be dredged or cleaned out due to a buildup of sediment that would have caused operational issues with the scrubber system. *Id.*

#### Bathymetric Survey

A November 2020 bathymetric survey confirms that any potential CCR in the Recycle Pond (though there is no indication that there is *any* CCR in the Recycle Pond) would be *de minimis*. Ex. 3 at 4-5. The survey found that the pond was “clear and still,” with a minimal sediment buildup consisting of a “dusting” of sediment along the bottom and sides. Ex. 3 at 4. The survey noted a slight flattening at the base of the slope opposite the discharge inlet which was estimated to be approximately 50 cubic yards of sediment. The survey found that the pond was 160,900 cubic yards in volume, with less than 500 cubic yards of potential sediment, accounting for approximately 0.3% of the Recycle Pond’s volume. Ex. 3 at 4. The equipment used to calculate this volume is accurate within 0.1% of depth. Letter from IngenAE to Vistra Energy (Mar. 9, 2021), attached as Ex. 4 at 2.

In analyzing the bathymetric survey, Geosyntec Consultants noted that the small volume of potential sediment in the Recycle Pond “could have been caused by atmospheric dust accumulation.” Ex. 3 at 4.

#### Groundwater Impact

The Recycle Pond is a lined unit, and there have been no known groundwater exceedances attributable to the pond. Ex. 3 at 2-4. Any potential groundwater impacts from the Recycle Pond would be captured as part of the ongoing groundwater monitoring program for the GMF Pond and the Recycle Pond. Ex. 3 at 4. Monitoring wells are located upstream and downstream of both

ponds, and water samples are evaluated for parameters and compared against Part 845 standards. Ex. 3 at 4.

The monitoring wells located downstream of the Recycle Pond were first sampled in January 2019 and again in August 2020. Ex. 3 at 4. The 2019 and 2020 results showed concentrations below the Part 845 standards. In July 2019, a single sample showed an exceedance of pH. Ex. 3 at 4. There is no indication that the pH exceedance was in any way attributable to the lined Recycle Pond.

**D. The Federal CCR Rule and the WIIN Act.**

Federal law regulates CCR disposal via the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities* (“Final Rule”), known as Part 257, promulgated pursuant to RCRA Subtitle D. See 80 Fed. Reg. 21302 (Apr. 17, 2015). Part 257 applies to certain CCR landfills, as well as CCR surface impoundments, defined as “a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.” 40 C.F.R. § 257.53. Part 257 establishes comprehensive technical requirements for regulated CCR landfills and CCR surface impoundments.

As a corollary to Part 257, the Water Infrastructure Improvements for the Nation (“WIIN”) Act, P.L. No 114-322, was enacted in December 2016. Pursuant to the WIIN Act, States can adopt permit programs to operate in lieu of Part 257. 42 U.S.C. § 6945(d)(1)(B). These programs, which must be approved by EPA, must be as protective as Part 257. 42 U.S.C. § 6945(d)(1).

**E. The Illinois CCR Act and Part 845.**

The Illinois Legislature adopted the Illinois Coal Ash Pollution Prevention Act (“Illinois CCR Act”), 415 Ill. Comp. Stat. 5/22.59, on July 30, 2019. In adopting the Illinois CCR Act, the Legislature stated that “CCR generated by the electric generating industry has caused groundwater

contamination and other forms of pollution at active and inactive plants throughout this State” and “environmental laws should be supplemented to ensure consistent, responsible regulation of all existing CCR surface impoundments[.]”<sup>4</sup> 415 Ill. Comp. Stat. 5/22.59(a).

In defining a CCR surface impoundment, the Illinois CCR Act adopted Part 257’s definition: “a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit<sup>5</sup> treats, stores, or disposes of CCR.” 415 Ill. Comp. Stat. 5/3.143. Only ponds that satisfy this definition are subject to Part 257 or the Illinois CCR Act.

The Illinois CCR Act regulates CCR surface impoundments at all stages of the impoundment’s life cycle. This includes a broad prohibition against allowing the discharge of contaminants from a CCR surface impoundment into the environment so as to cause a violation of the Act. Under the CCR Act, owners and operators of CCR surface impoundments are required to obtain permits prior to construction or closure of CCR surface impoundments. The CCR Act further requires post-closure financial assurance for closed CCR surface impoundments. 415 Ill. Comp. Stat. 5/22.59(b), (d), (f). Furthermore, the fee regime established by the Illinois CCR Act requires owners and operators of CCR impoundments to pay fees for certain closed CCR surface impoundments, as well as those that are not yet closed. 415 Ill. Comp. Stat. 5/22.59(j).

Finally, under the Illinois CCR Act, the Board must adopt regulations governing CCR surface impoundments that are at least as protective and comprehensive as the federal rules in Part 257. *See* 415 Ill. Comp. Stat. 5/22.59(g).

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<sup>4</sup> Prior to passage of the Illinois CCR Act, most CCR surface impoundments in Illinois were regulated as waste water treatment units. R 20-19, IEPA’s Statement of Reasons (Mar. 30, 2020), excerpts attached as Ex. 5 at 4.

<sup>5</sup> As discussed below, Part 845 substitutes the word “unit” for “surface impoundment,” but this results in no meaningful difference between the definitions.

**F. The Part 845 Rulemaking.**

On March 30, 2020, IEPA proposed Part 845 of Illinois Administrative Code's Title 35, entitled "Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments." In IEPA's Statement of Reasons issued with the proposed regulations, IEPA directly tied Part 845 to the Illinois CCR Act:

The foremost purpose and effect of this regulatory proposal is to fulfill Illinois EPA's statutory obligation to propose CCR rules consistent with the requirements in Section 22.59(g). The second purpose and effect of this regulatory proposal is to protect the groundwater within the state of Illinois. Groundwater has an essential and pervasive role in the social and economic well-being of Illinois, and is important to the vitality, health, safety, and welfare of its citizens. This rule has been developed based on the goals above and the principle that groundwater resources should be utilized for beneficial and legitimate purposes. *See* 415 ILCS 55/1 *et seq.* Its purpose is to prevent waste and degradation of Illinois' groundwater. The proposed rule establishes a framework to manage the underground water resource to allow for maximum benefit of the State.

Ex. 5 at 10. The Statement of Reasons included a list of "Affected Facilities" which IEPA identified as "[p]ower generating facilities with CCR surface impoundments [that] may be affected by Illinois EPA's proposed rule." Ex. 5 at 36. IEPA incorrectly identified that Duck Creek had 5 surface impoundments subject to Part 845. *Id.* at 37.

**G. The Board's Opinion and the Final Rules.**

On February 4, 2021, the Board issued its second notice opinion and order of the Board ("Second Notice Opinion"), excerpts attached as Ex. 6. The Board largely adopted IEPA's proposed rules. Crucially, the Board adopted IEPA's proposed definition of a "CCR surface impoundment," which had been itself adopted from the Illinois CCR Act and Part 257. Thus, Part 845 defines a "CCR surface impoundment" as a "natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the surface impoundment treats, stores, or disposes of CCR." The Board in Part 845, the Illinois

legislature in the Illinois CCR Act, and EPA in Part 257 have all adopted the same definition of “CCR surface impoundment.”

In addition to the general definition of a “CCR surface impoundment,” the Board also adopted definitions of “existing” and “inactive” CCR surface impoundments. An “existing CCR surface impoundment” is “a CCR surface impoundment in which CCR is placed both before and after October 19, 2015, or for which construction started before commenced prior to October 19, 2015 and in which CCR is placed on or after October 19, 2015. A CCR surface impoundment has started commenced construction if the owner or operator has obtained the federal, State, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun before prior to October 19, 2015.” An “inactive CCR surface impoundment” is “a CCR surface impoundment in which CCR was placed before but not after October 19, 2015 and still contains CCR on or after October 19, 2015. Inactive CCR surface impoundments may be located at an active facility or inactive facility.”

Although the Part 845 definition of a CCR surface impoundment is nearly identical to that in Part 257 and U.S. EPA has recognized that *de minimis* units are not CCR surface impoundments subject to Part 257,<sup>6</sup> the Board rejected industry’s request to adopt a definition of *de minimis* units in Part 845. However, the Board suggested that IEPA has discretion to determine that *de minimis* units are not CCR surface impoundments subject to Part 845. Should an owner or operator of a *de minimis* unit disagree with the Agency’s characterization of a unit, the Board notes that the owner or operator could petition for a variance or an adjusted standard:

Regulatory relief mechanisms are available to owners and operators when they disagree with an IEPA determination concerning whether a unit is a CCR surface

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<sup>6</sup> Discussed in Section III.A, *infra*.

impoundment. In those instances, an owner or operator may seek an adjusted standard or a variance from the Board

Ex. 6 at 14.

On April 15, 2021, the Board adopted Part 845 as final, with an effective date of April 21, 2021.

**H. Communications and Negotiations with IEPA.**

IPRG has been in communications and negotiations with IEPA since July 2020 regarding the proper characterization of the Recycle Pond. These discussions began when IEPA issued a Violation Notice (“VN”) to IPRG alleging that IPRG failed to pay initial fees for the Duck Creek GMF Recycle Pond. IEPA Violation Notice W-2020-00034 (July 28, 2020) (the “Initial Fee VN”), attached as Ex. 7. The Agency had “determined that GMF Recycle Pond is a CCR surface impoundment that has not completed closure, and therefore, is subject to an initial fee [under 415 ILCS 22.59(j)(1)].” *Id.*

On September 14, 2020, IPRG sent a written response to the Agency. Letter from IPRG to IEPA (Sept. 14, 2020) (“September 2020 Letter”), attached as Ex. 8. In the September 2020 letter, IPRG explained that the Recycle Pond “was not ‘designed to hold an accumulation of CCR and liquids,’ nor does it ‘treat[], store[], or dispose[] of CCR’ (415 ILCS 5/3.143) and is therefore not subject to fees under 415 ILCS 22.59[.]” Ex. 8 at 1. IPRG further explained that the Recycle Pond “contains no meaningful amount of CCR” because the pond was “designed to capture water from the GMF Pond after the CCR has settled in the GMF Pond.” Ex. 8 at 1. In other words, IPRG pointed to the strong likelihood that the Recycle Pond contains no CCR, that fact that it has never been designed to hold CCR, and that if it did happen to hold any CCR it would be an insignificant volume.

To work towards a cooperative resolution of the Initial Fee VN, IPRG proposed a bathymetric survey “to demonstrate that the Duck Creek GMF Recycle Pond contains no meaningful amount of CCR.” Ex. 8 at 2. IPRG included a proposed bathymetric study with the September 2020 letter and agreed to perform sediment sampling should the bathymetric study identify “meaningful amounts of sediment[.]” *Id.* at 2.

In December 2020, IPRG sent its second written response to the Agency. Letter from IPRG to IEPA (Dec. 9, 2020) (“December 2020 Letter”), attached as Ex. 9. In the December 2020 Letter, IPRG reiterated that the Recycle Pond was not designed to contain CCR, that it was designed to capture water after any CCR had settled in the GMF Pond, and that, “[a]ccordingly, the GMF Recycle Pond is ‘not designed to hold an accumulation of CCR and liquids’ and therefore, is not a ‘CCR Surface Impoundment’[.]” *Id.* at 1.

With the December 2020 Letter, IPRG sent the results of IngenAE’s bathymetric survey, which determined that sediment accounts for “less than 500 cubic yards of the Recycle Pond’s total volume of 160,900 cubic yards.” *Id.* at 1. IPRG further highlighted that the Recycle Pond had never been dredged, so the potential 500 cubic yards of sediment represented all of the sediment buildup from the unit’s entire operational life. IPRG also noted that the study “found no delta near the discharge channel inlet from the GMF Pond, meaning that the inlet is not a source of sediment.” *Id.* at 1.

The December 2020 Letter highlighted also Geosyntec Consultants’ review of groundwater monitoring data for wells downgradient of the Recycle Pond and its conclusion that the pond “does not present a reasonable probability of an adverse effect on human health or environment.” *Id.* at 2. Given the data and this conclusion, IPRG argued that it would be inappropriate to subject IPRG to Part 845’s “onerous monitoring, permitting, and closure requirements[.]” *Id.*

On March 24, 2021, IPRG sent a written response to a VN regarding annual fees that IPRG received from the Agency in December 2020. Letter from IPRG to IEPA (Mar. 24, 2021), attached as Ex. 10. In the March 2021 letter, IPRG provided the Agency with additional information that the Agency had requested in a March 3, 2021 call regarding the bathymetric survey conducted by IngenAE and regarding Geosyntec Consultants' analysis of the Recycle Pond. The Agency had requested – and the March 2021 letter included – a copy of the Geosyntec trip report, information on whether the bathymetric study included a comparison to the original or designed body of the pond, and the margin of error or accuracy of the equipment used for the study. *Id.* at 1. These documents further detailed that any CCR in the Recycle Pond would be minimal because the pond had never “directly nor indirectly received [...] gypsum or CCR materials” and that the Recycle Pond “had no issues delivering the clean water required by the [wet scrubber] in the plant.” Ex. 10 at 13.

On April 6, 2021, the Agency sent a Notice of Non-Issuance of Compliance Commitment Agreement, attached as Ex. 11. Despite the productive communications between IPRG and the Agency, the Agency notified IPRG that it was not able to resolve the Recycle Pond VNs with the issuance of a Compliance Commitment Agreement. Ex. 11.

**I. Requested Relief.**

This Petition requests a finding of inapplicability from the Part 845 requirements for the Duck Creek GMF Recycle Pond or, in the alternative, an adjusted standard exempting the Duck Creek GMF Recycle Pond from the requirements of Part 845.

**III. REQUEST FOR FINDING OF INAPPLICABILITY.**

As an alternative to its request for an adjusted standard for the Duck Creek Recycle Pond, IPRG requests that the Board find that Part 845 is inapplicable to the Recycle Pond.

The Board has previously granted such requests where a petition for an adjusted standard made a request for inapplicability in the alternative. *See* Opinion and Order of the Board, *In the Matter of Petition of Westwood Lands, Inc. for an Adjusted Standard from Portions of 35 Ill. Adm. Code 807.14 and 35 Ill. Adm. Code 807.104 and 35 Ill. Adm. Code 810.103 or, in the Alternative, a Finding of Inapplicability*, As. 09-3 (Oct. 7, 2010) (granting request for a finding of inapplicability from solid waste regulations); Opinion and Order of the Board, *In the Matter of Petition of Jo'Lyn Corporation and Falcon Waste and Recycling Inc. for an Adjusted Standard from 35 Ill. Adm. Code 807.103 and 35 Ill. Adm. Code 810.103, or in the Alternative, a Finding of Inapplicability*, AS 04-02 (Apr. 7, 2004) (granting a request for a finding of inapplicability from solid waste regulations).

As detailed below, a finding of inapplicability is appropriate here because the Duck Creek GMF Recycle Pond is not a “CCR surface impoundment” subject to Part 845.

**A. The Recycle Pond is a De Minimis Unit Not Subject to Part 845.**

The Recycle Pond is outside the scope of Part 845, which only regulates “CCR surface impoundments.” Indeed, Part 845’s “Scope and Purpose” explicitly states that Part 845 applies to “owners and operators of new and existing CCR surface impoundments” and “inactive CCR surface impoundments at active and inactive electric utilities or independent power producers.” Part 845.100. The Recycle Pond is not a new or existing CCR surface impoundment or an inactive CCR surface impoundment. Thus, the Recycle Pond is outside the scope of Part 845 and is not covered by the Act.

1. The Recycle Pond is not a “CCR Surface Impoundment.”

The Recycle Pond is not a “CCR surface impoundment” as defined in Part 257 or Part 845. Part 257 and Part 845 use the same definition of a CCR surface impoundment: “a natural topographic depression, man-made excavation, or diked area, which is designed to hold an

accumulation of CCR and liquids, and the unit<sup>7</sup> treats, stores, or disposes of CCR.” 80 Fed. Reg. 21302, 21357 (Apr. 17, 2015).

The Recycle Pond was not designed to hold CCR. The pond was designed to receive clarified process water from the GMF Pond after any CCR in the GMF Pond had settled and the water had been decanted prior to transfer to the Recycle Pond. Thus, the Recycle Pond does not meet the first criterion necessary to be considered a CCR surface impoundment.

Design aside, the pond has never been intentionally used to treat, store, or dispose of CCR. Further, there is no evidence that CCR has been unintentionally treated, stored, or disposed of in the Recycle Pond. Indeed, the pond accumulated – at most – 500 cubic yards of sediment during the course of its operational life. There is no evidence to suggest that any of this sediment – which represents 0.3% of the volume of the Recycle Pond – is CCR. Indeed, in analyzing the Recycle Pond, Geosyntec Consultants noted that the small volume of sediment may be “atmospheric dust accumulation.” Ex. 10 at 7. Plant personnel recall no instances in which the Recycle Pond received – directly or indirectly – CCR. *Id.* at 13. Thus, the Recycle Pond does not meet the second criterion – that the unit “treats, stores, or disposes of CCR” – necessary to be considered a surface impoundment under Part 845 and Part 257.

The Recycle Pond meets neither criteria for the definition of a “CCR surface impoundment,” and therefore is not subject to Part 845.

Even if the incidental sediment in the Recycle Pond did include some volume of CCR (and there is no evidence to suggest that it does), this small volume of historic and indirect discharges of CCR does not simply convert the Recycle Pond into a “CCR surface impoundment.” Indeed, the Recycle Pond would be just the type of “*de minimis*” unit that the U.S. EPA determined was

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<sup>7</sup> Part 845 substitutes “surface impoundment” for “unit,” but this works no substantive change.

not a CCR surface impoundment under Part 257, and it should accordingly be excluded from Part 845 under the same definition. In the Part 257 Final Rule preamble, issued on April 17, 2015, U.S.

EPA stated that:

The Agency received many comments on the proposed definition of CCR surface impoundment. The majority of commenters argued that the definition was overly broad and would inappropriately capture surface impoundments that are not designed to hold an accumulation of CCR. Commenters were concerned that the proposed definition could be interpreted to include downstream secondary and tertiary surface impoundments, such as polishing, cooling, wastewater and holding ponds that receive only *de minimis* amounts of CCR.

80 Fed. Reg. 21302, 21357 (Apr. 17, 2015).

To respond to *de minimis* concerns raised by commenters, U.S. EPA reviewed the risk assessment on which Part 257 was based to understand “the characteristics of the surface impoundments that are the source of the risks the rule seeks to address.” *Id.*

Specifically, these are units that contain a large amount of CCR managed with water, under a hydraulic head that promotes the rapid leaching of contaminants. . . EPA agrees with commenters that *units containing only truly “de minimis” levels of CCR are unlikely to present the significant risks this rule is intended to address.*

*Id.* at 21357.

With this context, U.S. EPA clarified “the types of units that are covered by the rule” by amending the definition of CCR surface impoundment in the Final Rule to be “a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.” *Id.* This amendment was intended to implement U.S. EPA’s determination that *de minimis* units would be excluded from Part 257 requirements. Part 845 adopted this amended definition of a “CCR surface impoundment” that U.S. EPA designed to exclude *de minimis* units from Part 257.

That *de minimis* units do not present the same types of risk as CCR surface impoundments was U.S. EPA’s key consideration in amending the CCR surface impoundment definition: U.S.

EPA “agrees with commenters that relying solely on the criterion from the proposed rule that the unit be designed to accumulate CCR could inadvertently capture units that present significantly lower risks, such as process water or cooling water ponds, because, although they will accumulate any trace amounts of CCR that are present, they will not contain the significant quantities that give rise to the risks modeled in EPA’s assessment. By contrast, units that are designed to hold an accumulation of CCR and in which treatment, storage, or disposal occurs will contain substantial amounts of CCR and consequently are a potentially significant source of contaminants.” *Id.*

It is this definition of a “CCR surface impoundment,” developed by U.S. EPA to exclude *de minimis* units, which the Illinois CCR Act and Part 845 adopted. Thus, Part 845 and the Illinois CCR Act do not apply to *de minimis* units.

In the course of the Part 845 rulemaking, the Board declined to define “*de minimis*,” but that did not mean that *de minimis* units would be suddenly regulated by Part 845. Second Notice Opinion, Ex. 6 at 14-15. In fact, the Board declined to define *de minimis*, at least in part, to assure conformity with U.S. EPA’s rule. *Id.* at 15. As detailed above, Part 257 does not apply to *de minimis* units as described by U.S. EPA in the Preamble to its final CCR rule.

Consistent with U.S. EPA’s approach to *de minimis* units, the Board recognized that IEPA could determine whether a unit qualifies as an excluded *de minimis* unit, and that an owner or operator who disagreed could seek relief from the Board. *Id.* at 14. IEPA or the Board have the authority to determine that a unit is *de minimis* and thus not a “CCR surface impoundment” subject to Part 257 and Part 845. For the reasons set forth below, IPRG requests that the Board determine that the Recycle Pond is not a regulated CCR surface impoundment.<sup>8</sup>

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<sup>8</sup> Should the Board deny this request, IPRG asks the Board for an adjusted standard with respect to the Recycle Pond.

As detailed above, the Recycle Pond does not “contain a large amount of CCR managed with water, under a hydraulic head that promotes the rapid leaching of contaminants.” 80 Fed. Reg. 21302, 21357 (Apr. 17, 2015). To the extent any of the minimal volume of sediment in the Recycle Pond is CCR, such CCR would have had to pass through the GMF Pond decanter process after any CCR in the GMF Pond had settled. The Recycle Pond has never intentionally received CCR, and in its years of operation it never had to be dredged. The decanted water from the Recycle Pond was used for Duck Creek’s wet scrubber system, so any sediment buildup or contamination would have made the water unusable and required attention. This was never necessary. Ex. 10 at 7. Further, groundwater monitoring in the vicinity of the Recycle Pond has shown concentrations below the Part 845 standards. *Id.* A single 2019 sample indicated an elevated pH level, and there is no indication that the pH exceedance is associated with the lined Recycle Pond. *Id.* The Recycle Pond simple does not present the types of “significant risks” Part 845 is intended to address.

Because that the Recycle Pond is a *de minimis* unit and therefore not a CCR surface impoundment under Part 257, the Board should determine that it is also not regulated by Part 845. Part 257 and Part 845 use the same definition of a “CCR surface impoundment” which plainly excludes the Recycle Pond.

Should the Board decline to determine that the Recycle Pond is not regulated by Part 845, it would create a situation in which the same words have different meanings for the purposes of Part 257 and Part 845. Part 257 plainly excludes the Recycle Pond. And so should 845. Indeed, it was the intent of the Agency and the Board that Part 845 would regulate the same CCR surface impoundments as Part 257. *See, e.g.*, IEPA Pre-Filed Answers (Aug. 3, 2020), excerpts attached as Ex. 12, at 7-8 (“It is the Agency’s position that the same universe of CCR surface impoundments is intended to be regulated by Part 845.”); *id.* at 17 (“CCR surface impoundments not subject to

Part 257, are not subject to the requirements of Part 845.”); *see* R 2020-019, *In the Matter of Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed new 35 Ill. Adm. Code 845*, Hearing Transcript (Aug. 11, 2020), excerpts attached as Ex. 13 at 43-44 (Q: “[M]y question was is Part 845 intended to apply to the same ponds that are subject to requirements under Part 257 given that they both define CCR surface impoundments in an identical fashion?” A: “In the Agency’s opinion, they will be the same ones.”); Ex. 6 at 8 (“As proposed, many of the technical elements required of owners and operators of CCR surface impoundments are already required under federal law. Under both 40 CFR 257 and Part 845, owners and operators are required to install groundwater monitoring systems, conduct periodic groundwater monitoring, create closure and post-closure care plans, and, if necessary, conduct corrective action. The owners and operators are required under both the federal rule and Part 845 to follow design criteria for newly constructed CCR surface impoundments and maintain publicly available records”). Likewise, the Attorney General has indicated that Part 845 and Part 257 cover the same universe of units. R 20-19, Office of the Attorney General’s Comments in Response to Ameren’s Proposed Modifications to the Joint Committee on Administrative Rules, at 5 (Apr. 7, 2021), excerpts attached as Ex. 14 (noting “the Board’s regulations have the same temporal scope as the federal Part 257 regulations” meaning CCR surface impoundments in existence as of October 19, 2015, are regulated under Part 845). Further, IEPA admitted that it did not even conduct its own risk assessment when developing Part 845, relying instead on U.S. EPA’s Part 257 risk assessment. R 2020-019, *In the Matter of Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed new 35 Ill. Adm. Code 845*, First Supplement to IEPA Pre-Filed Responses (Aug. 5, 2020), excerpts attached as Ex. 15 at p. 37-38.

As such, a unit that is excluded from regulation under Part 257, such as the Recycle Pond, should also be excluded from regulation under Part 845.

2. The Recycle Pond is not an Existing, New, or Inactive CCR Surface Impoundment.

The Recycle Pond does not meet the definition of any CCR surface impoundments, including an “existing CCR surface impoundment,” a “new CCR surface impoundment,” or an “inactive CCR surface impoundment” under either Part 845 or Part 257. At the most basic level, a unit cannot be considered an “existing” or “inactive” CCR surface impoundment without first meeting the definition of a “CCR surface impoundment.” *See, e.g.,* Second Notice Opinion, Ex. 6 at 15 (“The Board notes that for an impoundment to be an inactive surface impoundment, first it must be a CCR surface impoundment, which is defined in Section 845.120 as being designed to ‘hold CCR and liquid.’”)

Part 845 defines an “existing CCR surface impoundment” as “a CCR surface impoundment in which CCR is placed both before and after October 19, 2015, or for which construction started before commenced prior to October 19, 2015 and in which CCR is placed on or after October 19, 2015. A CCR surface impoundment has started commenced construction if the owner or operator has obtained the federal, State, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun before prior to October 19, 2015.” The Recycle Pond is not a CCR surface impoundment, and CCR was never placed into the Recycle Pond, either before or after October 19, 2015. The Recycle Pond is therefore not an “existing CCR surface impoundment” under Part 845.

Part 845 defines a “new CCR surface impoundment” as “a CCR surface impoundment or lateral expansion of an existing or new CCR surface impoundment that first receives CCR or commences construction after October 19, 2015. A new CCR surface impoundment has

commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun after October 19, 2015.” The Recycle Pond is not a CCR surface impoundment, was constructed in 2007, and has never received CCR either before or after October 19, 2015. The Recycle Pond is therefore not a “new CCR surface impoundment” under Part 845.

Part 845 defines an “inactive CCR surface impoundment” as “a CCR surface impoundment in which CCR was placed before but not after October 19, 2015 and still contains CCR on or after October 19, 2015. Inactive CCR surface impoundments may be located at an active facility or inactive facility.” The Recycle Pond is not a CCR surface impoundment, and CCR has never been “placed” in the Recycle pond at any point, before or after October 19, 2015. The Recycle Pond is therefore not an “inactive CCR surface impoundment” under Part 845.

None of Part 845’s definitions of a “CCR surface impoundment” – whether it be “existing,” “new,” or “inactive” – encompasses the Recycle Pond, which is not a CCR surface impoundment and has never received any CCR. The Recycle Pond should thus be excluded from regulation under Part 845.

#### **IV. PETITION FOR AN ADJUSTED STANDARD.**

Should the Board determine that the Duck Creek GMF Recycle Pond is a “CCR surface impoundment” as defined under Part 257 and Part 845, IPRG respectfully requests in the alternative that the Board grant an adjusted standard from 35 Illinois Administrative Code Part 845 for the Recycle Pond. The Board has the authority to grant an adjusted standard from a rule of general applicability for persons who can justify such an adjustment under the applicable statutory factors. 415 Ill. Comp. Stat. 5/28.1(a). Consistent with the considerations outlined in Section 28.1, the adjusted standard IPRG requests is warranted. As such, IPRG’s request for an adjusted standard for the Duck Creek GMF Recycle Pond should be granted.

**A. Regulatory Standard.**

Under Section 28.1 of the Act, the Board must consider the following factors in determining whether to grant an adjusted standard:

(c) If a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard<sup>9</sup>, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by petitioner, that:

(1) factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner;

(2) the existence of those factors justifies an adjusted standard;

(3) the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and

(4) the adjusted standard is consistent with any applicable federal law.

415 Ill. Comp. Stat. 5/28.1.

The Act further requires that any adjusted standard must be “consistent” with subsection (a) of Section 27, which requires that “the Board shall take into account the existing physical conditions, the character of the area involved, including the character of surrounding land uses, zoning classifications, the nature of the existing air quality, or receiving body of water, as the case may be<sup>10</sup>, and the technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution.” 415 Ill. Comp. Stat. 5/27(a).<sup>11</sup>

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<sup>9</sup> Part 845 does not specify a level of justification required to qualify for an adjusted standard.

<sup>10</sup> The physical conditions at Duck Creek and character of the area involved, including the character of surrounding land uses, and zoning classifications are discussed *supra* at Part II.A.

<sup>11</sup> The Illinois Court of Appeals has held that the Board’s review is limited to the factors set forth in Sections 27(a) and 28.1: “The Act sets forth the factors the Board is to consider when determining whether to grant an adjusted standard. The Board lacks the authority to add to or rewrite the statutory factors.” *Emerald Performance Materials, LLC v. Illinois Pollution Control Bd.*, 2016 IL App (3d) 150526, ¶ 27 (2016).

An adjusted standard for the Recycle Pond would be consistent with Section 27, and the factors set forth in Section 28.1 indicate that the Board should grant an adjusted standard for the Recycle Pond.

**B. The Duck Creek GMF Recycle Pond.**

1. IPRG Requests an Adjusted Standard Exempting the Recycle Pond From all Provisions of Part 845.

Should the Board determine that the Recycle Pond is a “CCR Surface Impoundment” under Part 845, the Board should grant an adjusted standard from Part 845.100 exempting the unit from the requirements of Part 845. IPRG has set forth proposed language infra in Part IV.C.

2. The factors relating to the Recycle Pond are significantly different from the factors the Board relied on in adopting Part 845.

When assessing a petition for an adjusted standard, the Board’s first consideration is whether the Section 28.1 factors relating to the petitioner are significantly different from the factors considered in adopting the regulation at issue. *See* 415 Ill. Comp. Stat. 5/28.1(c)(1). Here, the factors relating to the Recycle Pond are significantly different from the factors the Board considered when adopting Part 845.

Part 845 – like Part 257 before it – was designed to address the risk to groundwater posed by CCR surface impoundments:

The second purpose and effect of this regulatory proposal is to protect the groundwater within the state of Illinois. The proposed rule contains a program for groundwater monitoring and the remediation of contaminated groundwater resulting from leaking CCR surface impoundments. Groundwater has an essential and pervasive role in the social and economic well-being of Illinois, and is important to the vitality, health, safety, and welfare of its citizens. This rule has been developed based on the goals above and the principle that groundwater resources should be utilized for beneficial and legitimate purposes . . . Its purpose is to prevent waste and degradation of Illinois’ groundwater. The proposed rule establishes a framework to manage the underground water resource to allow for maximum benefit of the State.

Statement of Reasons, Ex. 5 at 10; *see also id.* at 3 (“The presence of [certain contaminants that can be found in CCR] threatens groundwater use as these contaminants are soluble and mobile. When the CCR surface impoundments are not lined with impermeable material, these contaminants may leach into the *groundwater*, affecting the potential use of the *groundwater*.”) (emphasis added).

Groundwater contamination was a consistent focus of the Part 845 rulemaking. The Board’s Second Notice Opinion highlighted that “[a]mong the program’s primary goals is protecting groundwater from contamination by CCR pollutants leaking from surface impoundments.” Ex 6 at 1; *see also id.* at 3 (“In Illinois, CCR has caused groundwater contamination and other forms of pollution that are harmful to human health and the environment.”); *id.* at 41 (“[T]he installation and operation of a leachate collection system in a new CCR surface impoundments serves the same purpose as in a landfill to reduce the head on the liner to reduce the threat of groundwater contamination.”); *id.* at 48 (“The Board finds that the proposed leachate collection system provides additional groundwater protection against the potential threats of contamination from new CCR surface impoundments, while allowing the operation of the impoundments in compliance with Part 845.”).<sup>12</sup>

Part 257 is instructive when considering whether certain CCR surface impoundments pose the risks that Part 845 seeks to address. This is true both because Part 257 and Part 845 use an identical definition of "CCR surface impoundment" and because IEPA proposed, and the Board adopted, Part 845 relying on the U.S. EPA's Part 257 risk assessment, so Part 845 is also based

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<sup>12</sup> In passing the Illinois CCR Act, the Illinois legislature made clear that the Act is intended to address and prevent groundwater contamination caused by CCR surface impoundments. *See* 415 Ill. Comp. Stat. 22.59(a)(3) (“The General Assembly finds that. . . ***CCR generated by the electric generating industry has caused groundwater contamination***[.]”) (emphasis added.)

upon U.S. EPA's risk assessment. *See supra* at Section III.A. U.S. EPA sought to regulate “units that *contain a large amount of CCR* managed with water, under a hydraulic head that promotes the rapid leaching of contaminants.” FR at 21357. (emphasis added).

The factors relating to the Recycle Pond are substantially and significantly different than those that motivated U.S. EPA in Part 257 and also the state legislature, IEPA, and the Board in regulating CCR surface impoundments in Part 845 in order to protect groundwater. The Recycle Pond is a lined unit with no known evidence of any damage to the liner. The Recycle Pond does not contain large amounts of CCR under a hydraulic head that promotes rapid leaching of contaminants to groundwater. The Recycle Pond is not known to have ever received CCR. To the extent any of the minimal volume of sediment in the Recycle Pond is CCR, it would be *de minimis*, and not present the type of risk that Part 845 is intended to address.

As Principal Engineer John Seymour explained in his December 2020 *De Minimis* Certification Letter, the Recycle Pond is approximately 0.3% sediment by volume and groundwater monitoring has revealed constituents below the Part 845 standards. Ex. 3 at 4. Given these findings, Seymour concluded that “[t]he Recycle Pond is lined and there are no impacts above the maximum [ground water protection standards]” and that “[t]he Recycle Pond does not present a reasonable probability of adverse effect on human health or the environment.” Ex. 3 at 8.

The Recycle Pond does not pose a similar threat to groundwater as the CCR surface impoundments that motivated Part 257 and Part 845. As such, the requested adjusted standard may be granted based upon this Petition.

An additional distinction between the Recycle Pond and the CCR surface impoundments that IEPA and the Board set out to regulate in Part 845 is the burden of compliance. During the

Part 845 rulemaking, the Board justified certain requirements, such as expedited timeframes for compliance, as feasible and reasonable because the units subject to Part 845 were also subject to Part 257. This meant that owners had had years to develop and implement compliance plans. *See*, Second Notice Opinion, Ex. 6 at 8. But here, the Recycle Pond is not subject to Part 257, so IPRG has had no need to initiate compliance actions under Part 257. If the Recycle Pond were subject to Part 845, IPRG would need to initiate costly and time-intensive compliance actions. As such, the feasibility and cost of Part 845 compliance for the Recycle Pond differs substantially from the units the Board anticipated would be covered by Part 845. Those CCR surface impoundments were subject to Part 257, which means that the owners and operators already had years of Part 257 compliance activity that could be used to comply with Part 845.

3. The Factors Relating to the Recycle Pond—Which Differ from Those Relied upon by the Board in Passing Part 845 Justify an Adjusted Standard.

That the Recycle Pond is not subject to Part 257 and does not contain a large volume of CCR managed under a hydraulic head justifies the requested adjusted standard. The Recycle Pond simply does not present the risks that Part 845 was intended to address. And, as detailed below, regulation under Part 845 will be extremely costly and burdensome—without any meaningful benefit. Accordingly, IPRG's adjusted standard is justified.

4. The Requested Adjusted Standard Will not Result in Adverse Environmental or Health Effects.

The Recycle Pond was not designed to hold CCR, has never intentionally received CCR, and there is no evidence of CCR groundwater impacts from the Recycle Pond. The Recycle Pond does not present the types of risk to human health and the environment that Part 845 (and Part 257) were designed to address. *See* Ex. 3 at 8.

Finally, granting the adjusted standard does not remove all regulations pertaining to the Recycle Pond. The Recycle Pond is subject to Part 620 standards, governing groundwater quality.

5. The Requested Adjusted Standard is Consistent with Federal Law.

As discussed *supra* at Section III, the Recycle Pond is not subject to Part 257. It is not regulated as an existing CCR surface impoundment or an inactive CCR surface impoundment. As such, exempting the Recycle Pond from regulation under Part 845 is consistent with federal law.

6. The Costs of Requiring the Recycle Pond to Comply with Part 845 are Not Reasonable.

When determining whether to grant an adjusted standard, the Board must consider the technical feasibility and economic reasonableness of reducing a particular type of pollution. 415 Ill. Comp. Stat. 5/27(a). Courts have held that extremely high costs of controlling a particular pollutant are economically unreasonable.<sup>13</sup> Where a treatment or control technology would not significantly improve environmental conditions, or increase the aesthetic or recreational value of the receiving water body, especially given high associated implementation costs, the treatment or control is not economically reasonable.<sup>14</sup> Here, compliance with Part 845 is not reasonable for the Recycle Pond, which poses “no reasonable probability of an adverse effect on human health or the environment.” *See* Ex. 3 at 5.

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<sup>13</sup> *E.P.A. v. Pollution Control Bd.*, 721 N.E.2d 723, 731, 242 Ill. Dec. 444, 452, 308 Ill.App.3d 741, 752 (Ill. App. 2 Dist.,1999) (Upholding Board’s finding that compliance would be economically unreasonable where “[a]ccording to the uncontested figures Swenson presented, the cost of installing a powder coating system would be more than 15 times the average control cost the Board historically has used to measure reasonableness.”); *Granite City Div. of Nat. Steel Co. v. Illinois Pollution Control Bd.*, 613 N.E.2d 719, 734, 184 Ill.Dec. 402, 417, 155 Ill.2d 149, 183 (Ill.,1993) (“The Act specifically provides for variance and adjusted standard procedures by which the Board may relieve a discharger from compliance with its environmental control standards upon a showing of unreasonable economic or individual hardship.”).

<sup>14</sup> *See, e.g., Proposed Water Quality Standard for Wood River (Olin, East Alton)*, R81-24, p. 6 (Nov. 12, 1982); *Ameren Energy Generating Co. v. IEPA (Coffeen Power Station)*, R09-38, p. 42 (Mar. 18, 2010).

Should the Board deny IPRG's Petition and require the Recycle Pond to comply with Part 845, including for operation and closure, IPRG would incur substantial costs to mitigate risks that do not exist.<sup>15</sup> These costs would include:

- Perform location restriction demonstrations including certification (35 Ill. Adm. Code 845.300-340);
- Perform a hydrogeological site investigation (35 Ill. Adm. Code 845.620);
- Install a groundwater monitoring system and collect groundwater monitoring data on at least a quarterly basis for at least 5 years with the potential to reduce the frequency to semiannually thereafter (35 Ill. Adm. Code 845.650);
- Prepare a hazard potential classification assessment and certification (35 Ill. Adm. Code 845.400(a)(2));
- Prepare a structural stability assessment and certification (35 Ill. Adm. Code 845.450(c));
- Prepare a safety factor assessment and certification with the operating permit application and subsequent annual inspections (35 Ill. Adm. Code 845.460(b));
- Prepare a fugitive dust control plan and certification with the operating permit application and subsequent annual inspections (35 Ill. Adm. Code 845.500(b)(7));
- Obtain a construction permit for the construction of a new CCR surface impoundment (35 Ill. Adm. Code 845.220);
- Obtain an operating permit at least every five years until the unit is closed (35 Ill. Adm. Code 845.230);
- Close the Recycle Pond in place or by removal (35 Ill. Adm. Code 845.710); and
- Perform numerous other assessments and analyses (see, e.g., 35 Ill. Adm. Code 845.510(c)(3), 845.530, and 845.540).<sup>16</sup>

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<sup>15</sup> As mentioned above, because the Recycle Pond is not subject to Part 257, none of these actions have been undertaken to date and all compliance costs would be attributed to Part 845.

<sup>16</sup> Due to the prescriptive nature of Part 845, technically feasible compliance alternatives to meet the requirements of Part 845 are very limited.

The Recycle Pond contains – at most – 500 cubic yards of sediment which may or may not contain any CCR, so many of these requirements make no practical sense as applied to the Recycle Pond. The Recycle Pond simply does not cause a hazard, risk of structural instability, or contain material that could contribute fugitive dust, for example.

Additionally, compliance with Part 845 would require that IPRG close the Recycle Pond as a CCR surface impoundment. Closure and post-closure costs would potentially total millions of dollars. Ex. 2.

Costs to comply with Part 845 are exacerbated by the fact that the Recycle Pond is not subject to Part 257. Accordingly, compliance with Part 845 deadlines – which presume that the regulated units are also subject to Part 257 – would, in some cases, be infeasible and, in many cases, more costly on the aggressive timeline adopted in Part 845.

As Cynthia Vodopivec, Vice President of Environmental Health and Safety for IPRG's ultimate parent company Vistra Corp. testified during the Part 845 rulemaking, Part 845 imposes costly or impracticable requirements owners and operators of CCR surface impoundments, "often without associated environmental benefits." *See*, R 20-19, Pre-filed Testimony of Cynthia Vodopivec (Aug. 27, 2020), excerpts attached as Ex. 16 at 2. While Vistra Corp. (testifying as Dynegy Midwest Generation, LLC) "supports the broad outlines of [Part 845]," Vistra Corp. raised specific concerns about the cost of certain regulations. *See*, Ex. 16 at 1. Should the Board deny IPRG's Petition and require the Recycle Pond to comply with Part 845, IPRG would potentially incur many of the costs Ms. Vodopivec testified about. Vistra Corp. estimates that groundwater monitoring would cost approximately \$40,000 per year, if done in conjunction with the GMF Pond. Ex. 2. Additionally, the closure alternative analysis for the Recycle Pond could cost approximately \$500,000. Ex. 16 at 17.

Finally, Part 845's stringent post-closure care regulations require financial assurance be provided for corrective action and/or closure of CCR surface impoundments. Financial assurance annual costs are estimated to be between 1% and 2% of the costs to perform corrective action and closure. Ex. 16 at 19.

Despite the extreme costs of compliance with Part 845, implementation would not provide any meaningful benefit to human health or the environment because, as discussed above, the Recycle Pond does not present the types of risk that inspired regulation of CCR surface impoundments under Part 257 and Part 845. This is especially true given that the Recycle Pond would remain subject to applicable Part 620 standard requirements.

Finally, IEPA and the Board relied on the assumption that units subject to Part 845 were already subject to Part 257 when considering the economic reasonableness of the Part 845 requirements. Indeed, IEPA performed no economic reasonableness analysis of the Part 845 rulemaking, relying instead on U.S. EPA's technical feasibility and economic reasonableness determination in Part 257. Instead of engaging in a meaningful analysis, IEPA simply held – and the Board likewise cited – that “owners and operators of CCR surface impoundments are already subject to 40 CFR 257, [so] many of the technical and economic requirements applicable to owners and operators in the proposed Part 845 are already required under federal law.” Statement of Reasons, R20-19, Ex. 5 at 33-34 (Mar. 30, 2020); Second Notice Opinion, Ex. 6 at 8.

However, Part 257 does not apply to units with a *de minimis* amount of CCR. Part 257 is very clear that it only applies to CCR surface impoundments that contained a significant volume of CCR and liquids as of the October 19, 2015. U.S. EPA did not consider units such as the Recycle Pond in promulgating Part 257, and therefore, neither did IEPA's Part 845 proposal or the

Board in promulgating Part 845.<sup>17</sup> In other words, neither IEPA nor the Board made any determination as to the economic reasonableness of applying Part 845 to the Recycle Pond.

In summary, requiring compliance with Part 845 would be extremely costly with potentially no benefits to human health and the environment because the Recycle Pond has no reasonable probability of an adverse effect on human health or the environment. *See* Ex. 3 at 5. Compliance with Part 845 is economically unreasonable and IPRG's request for an adjusted standard should be granted.

**C. Proposed Language of Adjusted Standard.**

IPRG proposes the following adjusted standard language:

1. Pursuant to Section 28.1 of the Environmental Protection Act, the Board grants Illinois Power Resource Generating, LLC ("IPRG") an adjusted standard from 35 Ill. Adm. Code 845.100 for the GMF Recycle Pond at Duck Creek Power Plant. 415 ILCS 5/28.1.
2. The adjusted standard applies to IPRG's Duck Creek Power Plant.
3. The Part 845 regulations do not apply to the GMF Recycle Pond.
4. The adjusted standard is effective as of the date of this order.

**D. The Automatic Stay Applies.**

IPRG has filed this petition for an individual adjusted standard within 20 days after the effective date of Part 845, so the operation and application of Part 845 is automatically stayed as to the Duck Creek GMF Recycle Pond pending the disposition of this petition. 415 Ill. Comp. Stat. 5/28.1(e). Part 845 was not promulgated to implement, in whole or in part, the requirements of the CWA (33 U.S.C. § 1251 et seq.), Safe Drinking Water Act (42 U.S.C. § 300(f) et seq.), Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et

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<sup>17</sup> The Board requested an analysis from the Department of Commerce and Economic Opportunity, but none was performed. Ex. 6 at 8.

seq.), Clean Air Act (42 U.S.C. § 7401 et seq.), or the State programs concerning RCRA, UIC, or NPDES (see 415 Ill. Comp. Stat. 5/28.1).

**E. Hearing Request.**

IPRG requests a hearing on this Petition pursuant to 35 Ill. Admin. Code 104.406(j).

**F. Supporting Documentation.**

A list of IPRG's exhibits is below:

- Exhibit 1. Duck Creek Power Plant Site Map (May 9, 2021).
- Exhibit 2. Declaration of Cynthia Vodopivec on behalf of Illinois Power Resources Generating, LLC
- Exhibit 3. Letter from Geosyntec Consultants, Inc. to Vistra Energy (Dec. 9, 2020)
- Exhibit 4. Letter from IngenAE to Vistra Energy (Mar. 9, 2021)
- Exhibit 5. R 20-19, IEPA's Statement of Reasons (Mar. 30, 2020) (excerpted)
- Exhibit 6. R 20-19, Second Notice, Opinion and Order (Feb. 4, 2021) (excerpted)
- Exhibit 7. IEPA Violation Notice W-2020-00034 (July 28, 2020)
- Exhibit 8. Letter from IPRG to IEPA (Sept. 14, 2020)
- Exhibit 9. Letter from IPRG to IEPA (Dec. 9, 2020)
- Exhibit 10. Letter from IPRG to IEPA (Mar. 24, 2021)
- Exhibit 11. IEPA Notice of Non-Issuance of Compliance Commitment Agreement (Apr. 6, 2021)
- Exhibit 12. R 20-19, IEPA's Pre-Filed Answers (Aug. 3, 2020) (excerpted)
- Exhibit 13. R 2020-019, *In the Matter of Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed new 35 Ill. Adm. Code 845*, Hearing Transcript (Aug. 11, 2020) (excerpted)
- Exhibit 14. R 20-19, Office of the Attorney General's Comments in Response to Ameren's Proposed Modifications to the Joint Committee on Administrative Rules, at 5 (Apr. 7, 2021) (excerpted)
- Exhibit 15. R 2020-019, *In the Matter of Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed new 35 Ill. Adm. Code 845*, First Supplement to IEPA Pre-Filed Responses (Aug. 5, 2020) (excerpted)

Exhibit 16. R 20-19, Pre-filed Testimony of Cynthia Vodopivec (Aug. 27, 2020)  
(excerpted)

V. **CONCLUSION.**

For the foregoing reasons, IPRG respectfully requests that the Board grant its request for inapplicability of Part 845 to the Duck Creek Recycle Pond or, in the alternative, an adjusted standard.

Respectfully Submitted,

ILLINOIS POWER RESOURCES  
GENERATING, LLC.

By: /s/ Josh R. More  
One of its attorneys

Dated: May 11, 2021

SCHIFF HARDIN LLP  
*Attorney for Petitioner Illinois Power  
Resources Generating, LLC*  
Josh More  
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233 South Wacker Drive  
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**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 1**

17751 North CILCO Road, Canton, IL 61520



**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 2**

**DECLARATION OF CYNTHIA VODOPIVEC ON  
BEHALF OF ILLINOIS POWER RESOURCES GENERATING, LLC.**

I, Cynthia Vodopivec, affirm and declare as follows:

1. I am Senior Vice President, Environmental Health and Safety at Vistra Corp., the indirect corporate parent of Illinois Power Resources Generating, LLC (“IPRG”). As part of my duties, I oversee permitting, regulatory development, compliance (air, water, and waste issues), and health and safety at the Company, including Illinois Power Resources Generating, LLC’s Duck Creek Power Plant in Canton, Illinois. I have worked in this role for 6 years. I received a Bachelor’s Degree in Engineering from Dartmouth College in 1998 and an MBA from Rensselaer in 2009.

2. I participated in the preparation of IPRG’s Petition for an Adjusted Standard from 35 Ill. Adm. Code Part 845 Or, in the Alternative, A Finding of Inapplicability (the “Petition”).

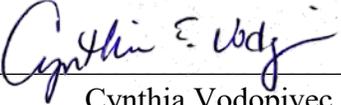
3. I have read the Petition and, based on my personal knowledge and belief, the facts stated therein regarding the Duck Creek Power Plant and its operation and the Duck Creek GMF Recycle Pond (“Recycle Pond”) are true and correct.

4. In further support of the Petition, I state that:

- a. Duck Creek is a former coal-fired power plant located southeast of Canton, Illinois. The plant opened in 1976 and operated a single coal-fired unit, with a generation capacity of between 441 MW and 473 MW, depending on the time of year. Prior to closure, Duck Creek operated two CCR surface impoundments, Ash Pond 1 and Ash Pond 2; a bottom ash basin; and a CCR landfill.
- b. The plant is located on approximately 6,500 acres zoned for Heavy Industrial use. The plant is surrounded by undeveloped land, but is located near three small bodies of water used for recreation (Rice Lake, Miserable Lake, and Big Lake), as well as the Illinois River.
- c. Throughout its operational life, the plant utilized a wet scrubber system on its coal-fired unit, with a new wet scrubber system beginning operation in 2009. In 2007, a GMF Pond and the Recycle Pond were installed. The Recycle Pond recycled water from the GMF Pond for use in the wet scrubber system.
- d. The Duck Creek Power Plant closed in December 2019. Duck Creek ceased all operations that produced CCR in 2019. Currently, Duck Creek employs two individuals. These employees maintain the station, facilitate ongoing plant closure operations, implement NPDES permitting, manage the onsite landfill, and assist with pond closure efforts.

- e. The Recycle Pond is not regulated under the federal rules promulgated to govern CCR surface impoundments, 40 C.F.R. Part 257, Subsection D. The Recycle Pond was not designed to hold an accumulation of CCR and liquids, and the unit has never treated, stored, or disposed of CCR. Costs to comply with Part 845 are exacerbated by the fact that the Recycle Pond is not subject to Part 257.
- f. IPRG estimates that compliance with Part 845 would incur large costs with little to no environmental benefit. These costs would include:
  - Closure and post-closure costs that would potentially total millions of dollars.
  - Groundwater monitoring that would cost approximately \$40,000 per year, if done in conjunction with monitoring of the GMF Pond.
  - A closure alternative analysis for the Recycle Pond that would cost approximately \$500,000.

FURTHER, Declarant sayeth not.

  
\_\_\_\_\_  
Cynthia Vodopivec

Dated:

this 11th day of May 2021.

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 3**



134 N. La Salle Street, Suite 300  
Chicago, Illinois 60602  
PH 312.658.0500  
FAX 312.416.3919  
[www.geosyntec.com](http://www.geosyntec.com)

December 9, 2020

Mr. Victor Modeer, PE, D.GE  
Consulting Engineer  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

**Subject: *De minimis* Certification Letter for GMF Recycle Pond  
Duck Creek Power Station, Canton, Illinois**

Dear Mr. Modeer:

This letter summarizes Geosyntec's findings regarding whether the Gypsum Management Facility (GMF) Recycle Pond (Recycle Pond) at the Duck Creek Power Station ("DC Station"): (i) is designed to hold an accumulation of coal combustion residuals ("CCR"), (ii) assess the amount of sediment in the Recycle Pond, and (iii) assess whether the Recycle Pond presents a reasonable probability of an adverse effect on human health or the environment. In summary, it was found that the Recycle Pond is not designed to contain CCR, contains a *de minimis* amount of sediment, and does not present a reasonable probability of an adverse effect on human health or the environment.

John Seymour, P.E., of Geosyntec Consultants (Geosyntec), has reviewed several documents detailing the design, operations, construction, and environmental impacts of the Recycle Pond and applicable regulations. The following provides his understanding of the Recycle Pond and the reasoning to exclude the Recycle Pond from the proposed Part 845 regulations based upon pertinent proposed definitions, a site inspection conducted on December 1, 2020 by a Geosyntec Senior Civil Engineer, interviews with knowledgeable DC Station personnel, a bathymetric survey, and relevant documentation.

## **REGULATORY CRITERIA**

The Illinois Environmental Protection Agency (IEPA) proposed Part 845 "Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments" (IEPA, 2020) does not define "*de minimus*". Consequently, this analysis looks to United States Environmental Protection Agency (USEPA) guidance provided in the preamble to the federal CCR rule issued in 2015. In the preamble to the final rule, USEPA stated the following:

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 2

*... EPA agrees with commenters that units containing only truly “de minimis” levels of CCR are unlikely to present the significant risks this rule is intended to address.<sup>1</sup>*

And,

*EPA agrees with commenters that relying solely on the criterion from the proposed rule that the unit be designed to accumulate CCR could inadvertently capture units that present significantly lower risks, such as process water or cooling water ponds, because, although they will accumulate any trace amounts of CCR that are present, they will not contain the significant quantities that give rise to the risks modeled in EPA’s assessment.<sup>1</sup>*

The federal CCR rule’s definition of the term “CCR surface impoundment,” which Part 845 incorporates, sets forth the following three criteria<sup>2</sup>:

- (1) The unit is a natural topographic depression, manmade excavation or diked area;*
- (2) the unit is designed to hold an accumulation of CCR and liquid; and*
- (3) the unit treats, stores or disposes of CCR.*

## **RECYCLE POND BACKGROUND**

The DC Station is located southeast of Canton, Illinois. The Recycle Pond is located approximately 2.5 miles north of the generating station. Design drawings for the Recycle Pond were prepared by Hanson Professional Services, Inc. (Hanson), dated 2007. The Recycle Pond is 8.5-acres in plan area and is lined with a 60-mil HDPE geomembrane. The Recycle Pond is adjacent and hydraulically connected to the GMF Stack Pond via an overflow channel. It was constructed following the construction drawings, specifications and the construction quality assurance program prepared by Hanson.

## **DESIGN AND OPERATIONS**

The Recycle Pond was designed to receive “clear water” from the GMF Stack Pond<sup>2</sup> according to the History of Construction (HoC) Report for the GMF Stack Pond (AECOM, 2016). Appended to the HoC Report is the Operations and Maintenance Manual (O&MM), (Hanson, 2014). The O&MM supports this conclusion through the following statement in *italic font*:

---

<sup>1</sup> 81 Fed. Reg. 21,302, 21,357(April 17, 2015).

<sup>2</sup> AECOM HoC Report, Page 8.

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 3

*Clarified process water will then be siphoned or decanted to the recycle pond and returned to the Plant for reuse via pipeline. (Section 4.1, Operations Activities, Site Operations)*

And,

*The major components of the GMF consist of:*

- *The gypsum stack;*
- *The recycle pond;*
- *The HDPE-lined earthen transfer channel that connects the two structures, and through which clarified process water will be decanted from the gypsum stack into the recycle pond; and*
- *The recycle pond decant system and pump-house, through which process water will be returned to the Plant for reuse.*

From Section 4.4, Gypsum Management Facility Startup (Hanson, 2014). (underline emphasis added)

And,

*...clarified return water will be siphoned into the recycle pond using one of two redundant 10-inch diameter siphon pipelines. Water that flows from the gypsum stack to the recycle pond will be pumped back to the Plant for reuse, or recirculated to the top of the gypsum stack during periods when the plant is shutdown. (Section 4.5, Gypsum Management Facility operations, Hanson, 2014)*

*Clarified water will be transferred from the rim ditch to the perimeter ditch where it will be carried to the transfer channel for discharge to the recycle pond. (Section 4.5.2 Gypsum Dike and Cell Construction, Hanson, 2014)*

Water from the Recycle Pond was pumped to the station for use in the wet scrubber system. This water could not be used in the scrubber system at the plant if it contained undesirable sediment or CCR materials.

The Recycle Pond has never had to be dredged or cleaned out because of buildup of materials that could cause operational issues at the plant according to station personnel interviewed during the December 1, 2020 site inspection (Trip Report included in Attachment A).

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 4

## **BATHYMETRIC SURVEY RESULTS**

A bathymetric survey was conducted of the Recycle Pond in November of 2020 by IngenAE. Pond bottom surface elevation data was collected over the entire pond area including the slopes and bottom. Figure 1 displays the grades of the bathymetric survey. Figure 2 presents cross sections that show the 2020 grades. The grades on the bottom are very regular and flat with minor anomalies around the edges of the bottom.

A review of Figures 1 and 2 also indicates no significant sediment accumulation around the discharge channel inlet where the most sedimentation would have occurred if the unit was designed to receive CCR from the GMF Stack Pond. A slight flattening was found at the base of the slope opposite the discharge inlet and was estimated to be approximately 50 cuyd. Several other similar features (slope flattening or higher elevations of the bottom) occur around the perimeter of the base of the pond.

During the site inspection on December 1<sup>st</sup>, the water was clear and still, and a “dusting” of sediment could be observed on the floor and sides of the Recycle Pond. Significant accumulation was not seen.

The results of the bathymetric survey and site inspection indicate less than 500 cuyd of sediment that could have been caused by atmospheric dust accumulation.

Figure 3 is a calculation of the Recycle Pond water volume based on the water elevation of 607.35 ft. The pond volume is 160,900 cuyd. Therefore, the amount of possible sediment in the bottom of the Recycle Pond is approximately 0.3% of the total volume.

## **GROUNDWATER IMPACT**

The Recycle Pond is part of the on-going ground water monitoring program for the GMF Stack Pond. Monitoring wells are placed upstream and downstream of both ponds and monitored. The water collected from the sampling events is evaluated for various parameters and compared against the proposed Part 845 ground water protection standards (GWPS). Monitoring wells that are located downstream of the Recycle Pond were first sampled in January 2019 and the latest samples were collected in August 2020. The last quarterly groundwater monitoring report was provided to IEPA in November 2020 (Luminant, 2020) and displayed time series graphs of all of the data from 2018 through August 2020.

The results for over the past year show that the maximum concentrations of the dataset are below the GWPS. Only one sample (G72S) had an exceedance of pH on one occasion (July 2019).

Mr. Victor Modeer, PE, D.GE  
December 9, 2020  
Page 5

### CERTIFICATION

The observations and opinions presented herein are based on the information gathered by Geosyntec and others, using the due diligence ordinarily exercised under similar circumstances by competent members of the engineering profession. Based upon the review of documentation, a site inspection, interviews with DC Plant personnel, the bathymetric survey, and groundwater monitoring data, I have concluded the following:

1. The Recycle Pond was not designed to hold an accumulation of CCR.
2. The Recycle Pond does not treat, store nor is used for disposal of CCR.
3. The Recycle Pond is lined and there are no impacts above the maximum GWPS
4. The Recycle Pond does not present a reasonable probability of an adverse effect on human health or the environment.

Therefore, it should not be characterized as a CCR surface impoundment under the federal CCR rule and Part 845.

John Seymour, P.E., Senior Principal Engineer

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

*John Seymour*  
December 9, 2020

Illinois P.E. 062.040562

cc: Joshua More, Schiff Hardin  
Collin Carson, Vistra Energy



Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 6

## REFERENCES

- AECOM, History of Construction, USEPA Final CCR Rule, 40 CFR 257.73(s), Duck Creek Power Station, Canton, Illinois, 2016.
- Hanson Professional Services, Inc., Operation and Maintenance Manual, Duck Creek Energy Center, Gypsum Management Facility, Fulton County, Illinois, Revised 2014.
- Illinois Environmental Protection Agency Proposed “Part 845 “Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments”, March 30, 2020.
- Luminant, Letter to Illinois Environmental Protection Agency, Duck Creek Power Plant, Gypsum Management Facility, Permit 2017-EO-62640, 3<sup>rd</sup> Quarter 2020 Groundwater Monitoring Report, November 25, 2020.
- United States Environmental Protection Agency, “40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule”, April 17, 2015.

## FIGURES

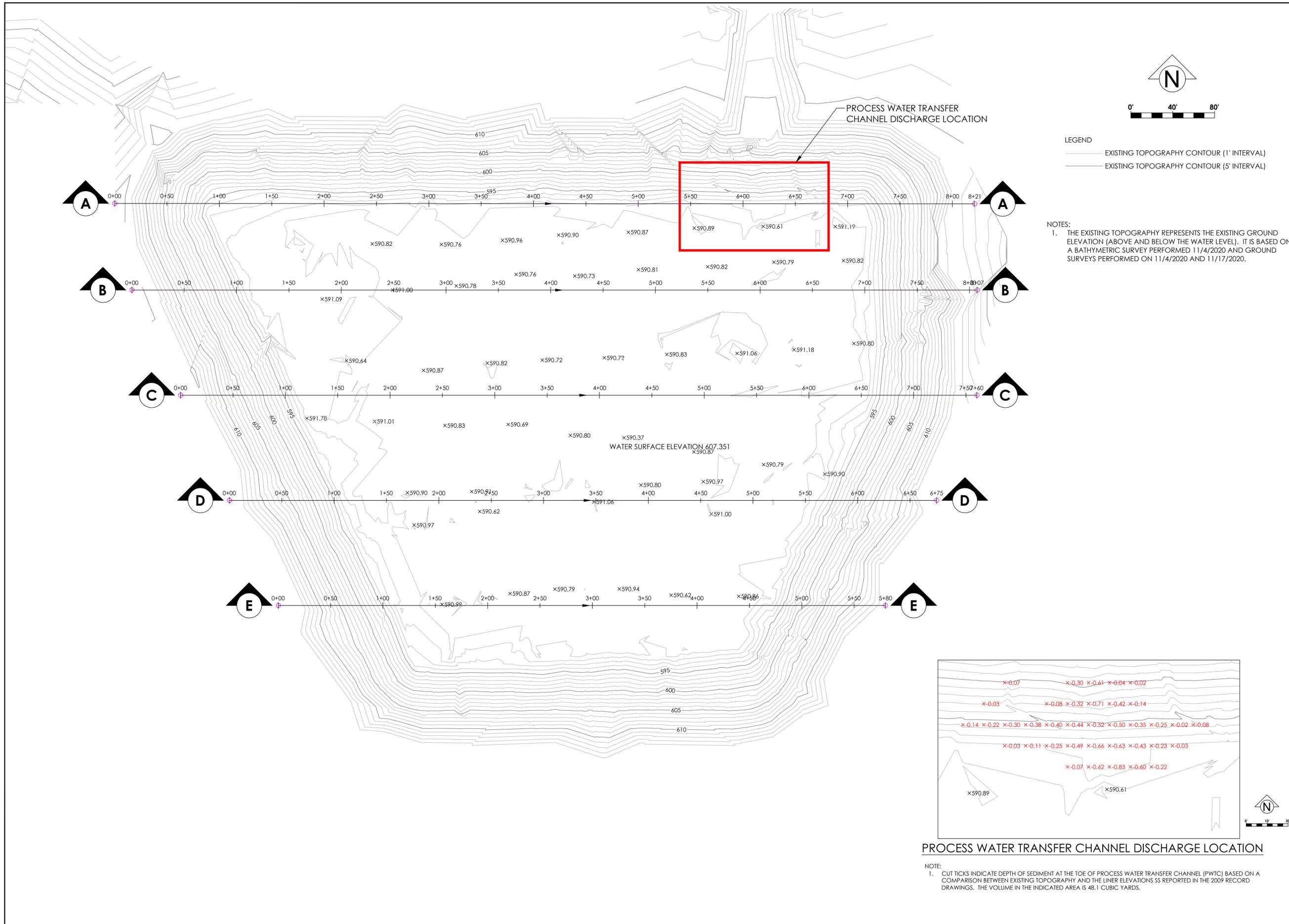
Figure 1: Existing Recycle Pond Topography

Figure 2: Recycle Pond Sections

Figure 3: Recycle Pond Water Volume Calculation



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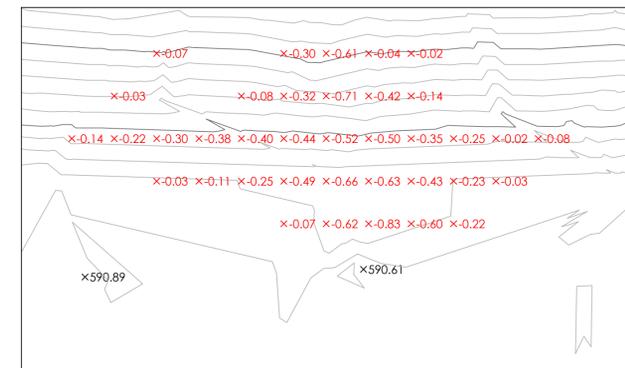


LEGEND  
 ——— EXISTING TOPOGRAPHY CONTOUR (1' INTERVAL)  
 ——— EXISTING TOPOGRAPHY CONTOUR (5' INTERVAL)

NOTES:  
 1. THE EXISTING TOPOGRAPHY REPRESENTS THE EXISTING GROUND ELEVATION (ABOVE AND BELOW THE WATER LEVEL). IT IS BASED ON A BATHYMETRIC SURVEY PERFORMED 11/4/2020 AND GROUND SURVEYS PERFORMED ON 11/4/2020 AND 11/17/2020.

Submissions / Revisions:	Date:
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Project Name & Location:  
**DUCK CREEK  
 POWER PLANT**



PROCESS WATER TRANSFER CHANNEL DISCHARGE LOCATION

NOTE:  
 1. CUT TICKS INDICATE DEPTH OF SEDIMENT AT THE TOE OF PROCESS WATER TRANSFER CHANNEL (PWTC) BASED ON A COMPARISON BETWEEN EXISTING TOPOGRAPHY AND THE LINER ELEVATIONS SS REPORTED IN THE 2009 RECORD DRAWINGS. THE VOLUME IN THE INDICATED AREA IS 48.1 CUBIC YARDS.

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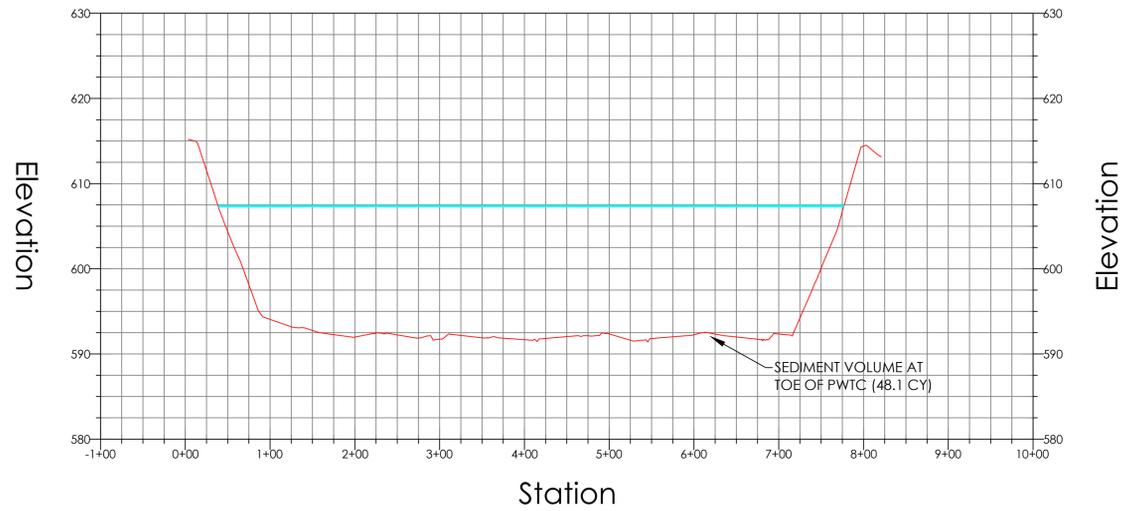
Drawing Name:  
**RECYCLE POND  
 EXISTING  
 TOPOGRAPHY**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No.
Drawn By: CB	<b>1</b>
Approved By: BH	
Scale: AS NOTED	

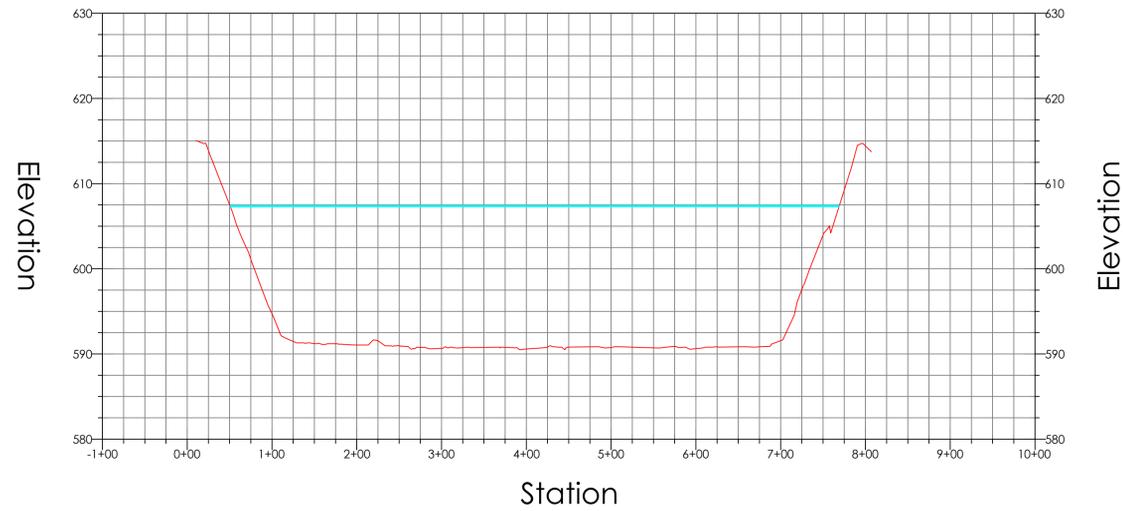


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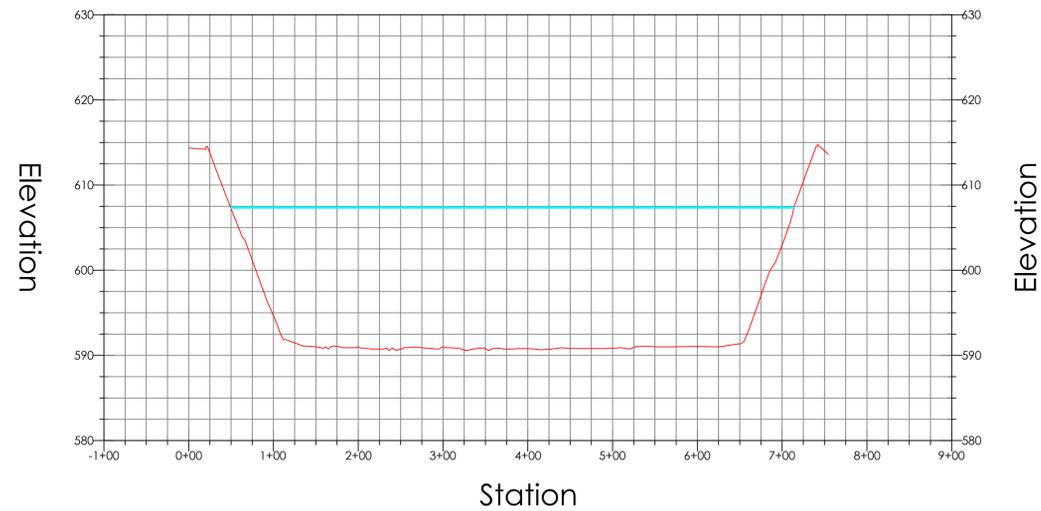
SECTION A (NORTH TOE)



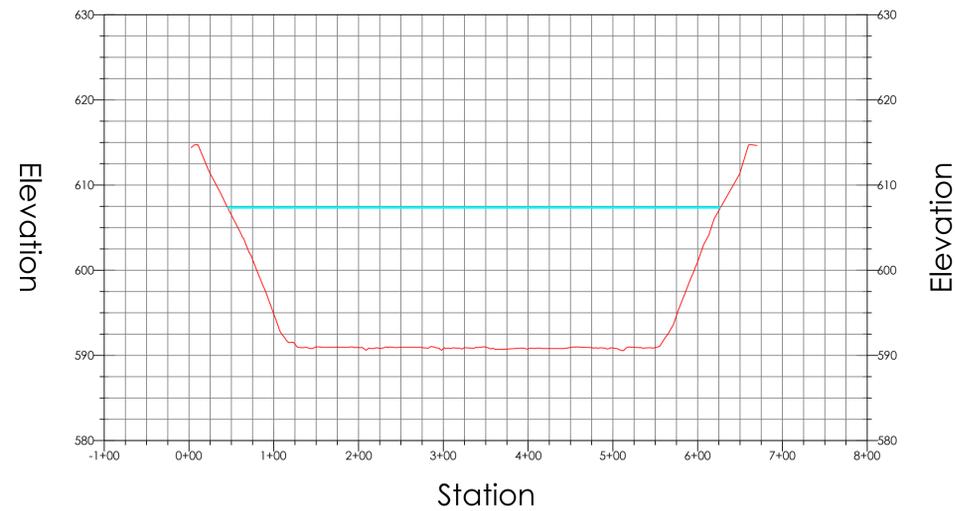
SECTION B (1,397,400N)



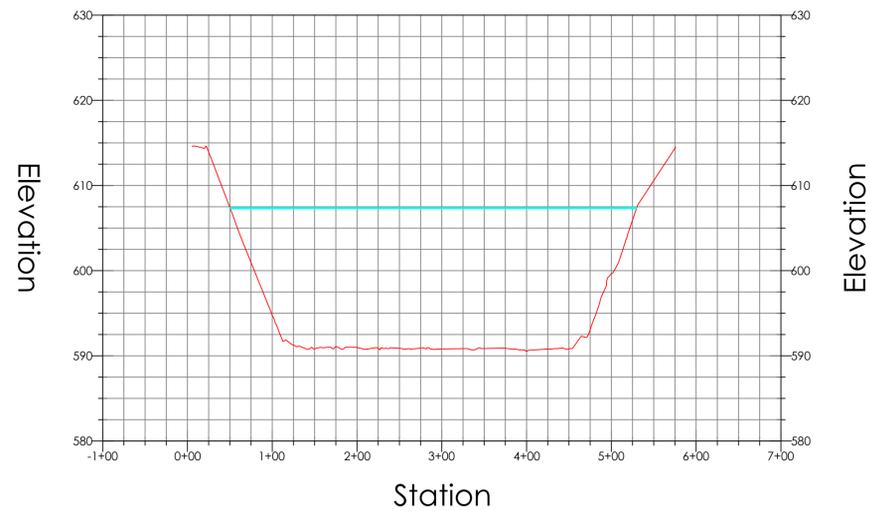
SECTION C (1,397,300N)



SECTION D (1,397,200N)



SECTION E (1,397,100N)



LEGEND

- EXISTING TOPOGRPAHY
- WATER ELEVATION

Submissions / Revisions:	Date:
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Project Name & Location:

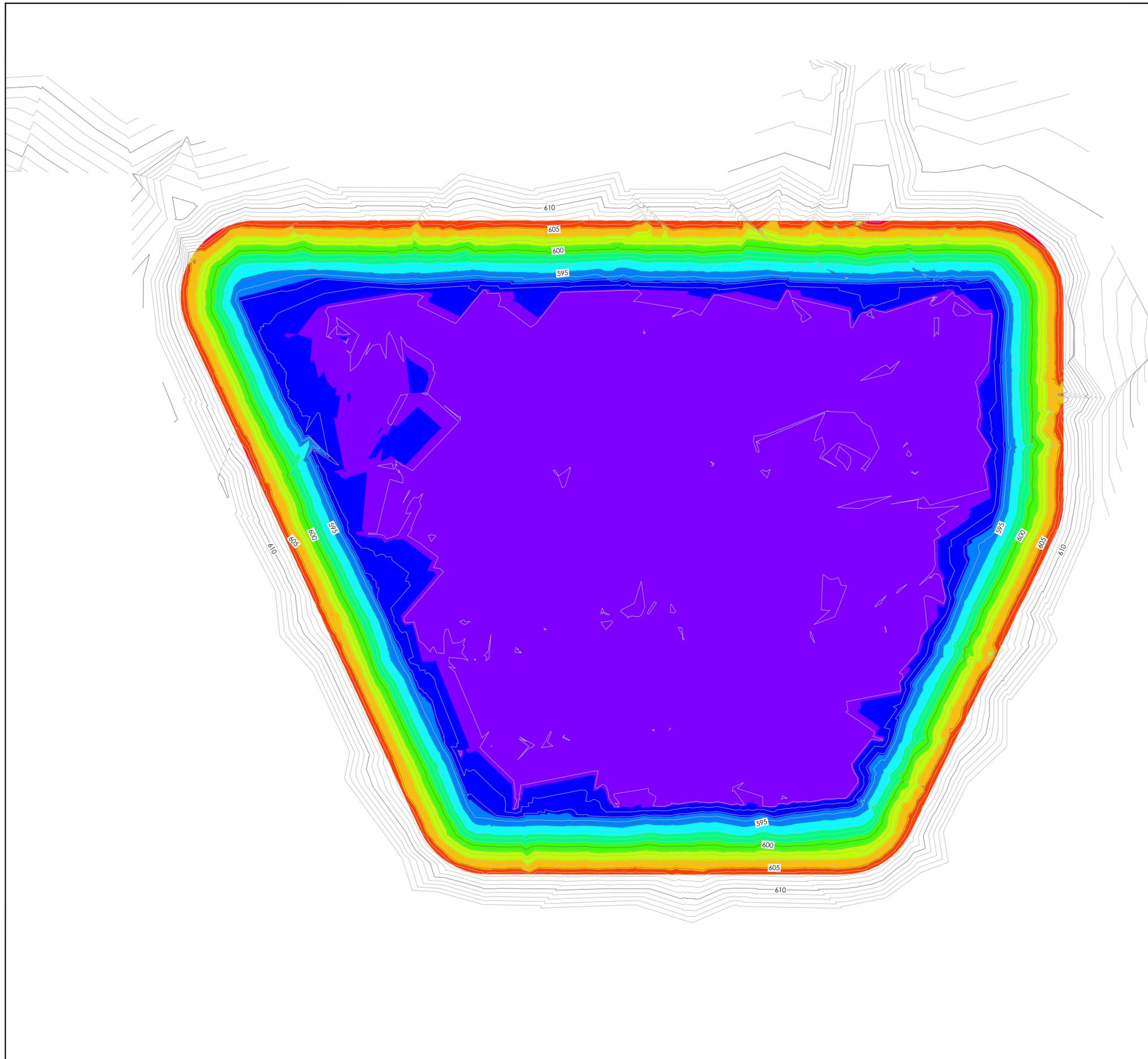
**DUCK CREEK  
 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 SECTIONS**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No.
Drawn By: CB	<b>2</b>
Approved By: BH	
Scale: AS NOTED	



LEGEND  
 ——— EXISTING TOPOGRAPHY CONTOUR (1' INTERVAL)  
 ——— EXISTING TOPOGRAPHY CONTOUR (5' INTERVAL)

NOTES:  
 1. VOLUME SUMMARY:  
 BASE SURFACE RECYCLE POND SURVEY  
 COMPARISON SURFACE WATER ELEVATION  
 CUT VOLUME 1.71 CU. YD.  
 FILL VOLUME 160,918.01 CU. YD.  
 NET VOLUME 160,916.29 CU. YD.<FILL>

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-2.000	0.000	Red
2	0.000	2.000	Orange
3	2.000	4.000	Yellow
4	4.000	6.000	Light Green
5	6.000	8.000	Green
6	8.000	10.000	Light Blue
7	10.000	12.000	Cyan
8	12.000	14.000	Blue
9	14.000	16.000	Dark Blue
10	16.000	18.000	Purple

NOTE: THE VOLUME OF WATER IN RECYCLE POND IS APPROXIMATELY 99.7 AC-FT BASED ON CURRENT WATER ELEVATION OF 607.35.



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Submissions / Revisions:	Date:
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Project Name & Location:  
**DUCK CREEK  
 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 WATER VOLUME  
 CALCULATION**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No. <b>3</b>
Drawn By: CB	
Approved By: BH	
Scale: AS NOTED	

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 4**



502 Earth City Expressway, Suite 120, St. Louis, Missouri 63045  
Phone 314-739-0906 ♦ Fax 314-739-0910 ♦ E-mail mgraminski@ingenae.com

March 9, 2021

Mr. Collin Carson  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

RE: Survey Report of November 2020 Data Collection Activities  
Duck Creek Gypsum Recycle Pond Bathymetric survey  
Fulton County, Illinois

Dear Mr. Carson:

On November 4 and 5, 2020, IngenAE performed a Topographic and Bathymetric survey of the Gypsum Recycle Pond at the Duck Creek Power Station. This letter will serve as a brief procedural report for that event.

IngenAE surveyed the existing conditions of the area within the containment banks of the Gypsum Recycle Pond, including the containment banks themselves, to develop an existing conditions surface and perform a volume calculation between the existing conditions surface and the bottom of gypsum within the pond as denoted by the as-built liner topography supplied by Vistra. The tasks included the following:

- Perform topographic ground survey of the perimeter containment berms and materials by use of a Trimble R8 GNSS System GPS unit.
- Perform a Bathymetric survey of the area beneath the ponded water to determine the existing surface of the bottom of the ponded area using a Trimble Hydrolite-TM portable hydrographic system attached to the R8 Receiver.
- Combine surveys to establish overall existing conditions surface of the overall pond.
- Calculate the approximate volume of sediment within the pond by comparing the existing conditions surface to the design containment pond bottom based on as-built data as supplied by Vistra.

A description of the data collection activities, including performance tolerances, is provided below. The topographic surfaces and volume calculations were previously transmitted in drawing format.

On the days of data collection, the weather was clear with winds less than 10 mph. The ambient temperature ranged from 46°F to 72°F. The Topographic Ground Surveying was performed with a Trimble R8 GNSS System GPS unit mounted on a range pole. To perform the Bathymetric Survey, the Trimble R8 was mounted on a Trimble Hydrolite-TM portable hydrographic survey system, which incorporates GPS equipment with a Sonarmite system echosounder. The unit was mounted on a remote-controlled boat. IngenAE also collected conventional topographic survey shots along the perimeter of the ponded water beginning at a depth of approximately 2 feet below the water up to the

crest of the pond berm. The bathymetric data was then merged with the conventional survey shots collected along the perimeters and acquired aerial digital topographic data to provide a master topographic map of the Gypsum Recycle Pond.

### **Trimble R8 GNSS System**

The Trimble R8 GNSS (Global Navigation Satellite System) System has a static surveying precision of 3mm for a 3 second static observation. When operated in real time kinetics (RTK) the reported possible horizontal variant is 8mm and vertical variant is 15mm, which equates to approximately 0.03' horizontally and 0.06' vertically (See attached specifications). RTK was used for this project because it offers an instantaneous report and is typically used for topographic work and is ideal for use with the sonar equipment.

Besides equipment capabilities, there are environmental factors that may impact the accuracy of the collected data, namely, the availability of global navigation satellites, weather conditions, and presence of vegetative growth or man-made obstructions. Conditions on November 4 and 5, 2020 were very favorable for accurate data collection. During field collection activities, the GPS unit locked in to 16 to 18 satellites, which is at the upper end of the typical range of 13 to 18. Weather conditions were clear with winds less than 10 mph. The pond is located in an open area and unobstructed by vegetative growth, trees or manmade objects, which provided clear observation of the skies.

### **Trimble Hydrolite-TM Portable Hydrographic Survey System**

A Trimble Hydrolite-TM portable hydrographic survey system was used to perform a Bathymetric Survey of the areas with ponded water. The system incorporates the Trimble R8 with a Sonarmite system single frequency echosounder mounted on a remote-controlled boat. This setup collected a single string of points every 1 to 2 feet at designated transects to make the data set as dense as necessary. A typical sample survey transect has an approximate 25-foot spacing between survey lines. The navigation of the survey lines is performed via hydro software programmed to collect data along each transect at approximate 2-foot intervals. The bottom elevation data survey is then processed to overlap the data for quality control. The reported accuracy of the Echosounder is 1 cm (three-hundredths of a foot) at the encountered pond depths (see attached datasheet). As stated previously, environmental conditions were very favorable for accurate data collection: the skies were clear, and winds were light, which led to calm water conditions during the survey.

Should you have any questions concerning this report, please do not hesitate to contact the undersigned at (314) 705-0039.

Sincerely,

**IngenAE, LLC**



Michael J. Graminski  
Director of Land Surveying



Brian Horvath  
Vice President

# TRIMBLE R8 GNSS SYSTEM

## KEY FEATURES

Advanced satellite tracking with **Trimble 360 receiver technology**

Includes Trimble Maxwell 6 chips with **440 channels**

**Unmatched GNSS tracking performance**

**Web user interface** and remote configuration

Base and rover communications **options to suit any application**



## THE INDUSTRY LEADING TOTAL GNSS SOLUTION

The Trimble® R8 GNSS system has long set the bar for advanced GNSS surveying systems. Through advanced Trimble 360 tracking technology and a comprehensive set of communication options integrated into a flexible system design, this integrated GNSS system delivers industry-leading performance. For surveyors facing demanding RTK applications, the Trimble R8 is an invaluable GNSS partner.

## TRIMBLE 360 RECEIVER TECHNOLOGY

### Future-proof your investment

Powerful Trimble 360 receiver technology integrated in the Trimble R8 supports signals from all existing and planned GNSS constellations and augmentation systems providing unmatched GNSS tracking performance. With this leading-edge technology, it is now possible for surveyors to expand the reach of their GNSS rovers into areas that were previously too obscured, such as under trees and in dense urban areas.

With two integrated Trimble Maxwell™ 6 chips, the Trimble R8 offers an unparalleled 440 GNSS channels. Also capable of tracking carrier signals from a wide range of satellite systems, including GPS, GLONASS, Galileo, BeiDou (COMPASS), and QZSS, the Trimble R8 provides a robust solution for surveyors.

The CMRx communications protocol in the Trimble R8 provides unprecedented correction compression for optimized bandwidth and full utilization all of the satellites in view, giving you the most reliable positioning performance.

Designed with the future in mind, Trimble 360 technology is optimized to receive future planned signals as the number of available satellites continues to grow. With Trimble 360 technology, the Trimble R8 delivers business confidence with a sound GNSS investment for today and long into the future.

## FLEXIBLE SYSTEM DESIGN

The Trimble R8 combines the most comprehensive feature set into an integrated and flexible system design for demanding surveying applications. Connect directly to the controller, receive RTK network corrections, and connect to the Internet via comprehensive communication options. With a built-in transmit/receive UHF radio, the Trimble R8 enables ultimate flexibility for rover or base operation. As a base station, the internal NTRIP caster provides you customized access<sup>1</sup> to base station corrections via the Internet.

Trimble's exclusive Web UI™ eliminates travel requirements for routine monitoring of base station receivers. Now you can assess the health and status of base receivers and perform remote configurations from the office. Likewise, you can download post-processing data through Web UI and save additional trips out to the field.

## AN INDUSTRY LEADING FIELD SOLUTION

If you're seeking the industry leading field solution, pair the Trimble R8 GNSS receiver with one of our powerful Trimble controllers, such as the Trimble TSC3, Trimble CU or Trimble Tablet Rugged PC featuring Trimble Access™ field software. These rugged controllers bring the power of the office to the field through an intuitive Windows-based interface.

Trimble Access field software offers numerous features and capabilities to streamline the flow of everyday surveying work. Streamlined workflows such as Roads, Monitoring, Mines, and Tunnels—guide crews through common project types and allows crews to get the job done faster with less distractions. Survey companies can also implement their unique workflows by taking advantage of the customization capabilities available in the Trimble Access Software Development Kit (SDK).

Need to get data back to the office immediately? Benefit from real-time data sharing via Trimble Access Services, now available with any valid Trimble Access maintenance agreement.

Back in the office, seamlessly transfer your field data using Trimble Business Center. Edit, process, and adjust collected data with confidence.

The Trimble R8 GNSS system—the industry leader for GNSS surveying applications.

<sup>1</sup> Cellular modem required.



# Seafloor™ datasheet

## HydroLite-TM™ Single Frequency Echosounder Kit

### About

The HydroLite-TM™ should be included in every survey and engineering company's standard equipment kit for hydrographic surveying. Developed to meet requirements for the U.S. Army Tactical Dive Teams, the rugged, wireless HydroLite-TM™ looks and feels like your traditional survey instrument. It quickly measures and logs depths more accurately than standard systems, making fast work of ponds, rivers, lakes and more.



Bathymetric Image using single beam Echosounder Image

### Benefits

- ▶ Portable, integrated hydrographic survey solution
- ▶ Adaptable to any vessel
- ▶ Wireless data transfer direct to data collector
- ▶ Meets IP-65 standards
- ▶ Quickly export XYZ data



HydroLite-TM™ in lake.



HydroLite-TM mounted on HyDrone-ASV



Rugged Shipping Case



### Scope of Supply

- ▶ HydroLite-TM Echosounder Kit
- ▶ HydroLite Boat Mount/Pole Kit
- ▶ Rugged Shipping Case
- ▶ User Manual/ Training Manual
- ▶ 1 year support and warranty

### Options

- ▶ GNSS Receiver
- ▶ Data Collector/Software
- ▶ PC Data Acquisition
- ▶ Digital Bar Check/Sound Velocity
- ▶ Tide Gauge
- ▶ Telemetry - Vehicle to Shore

### Echosounder

- ▶ Frequency: 200 KHz
- ▶ Beam Width: 9°
- ▶ Ping Rate: 6 Hz w/ 2Hz output
- ▶ Depth Accuracy: 1cm/ 0.1% of depth
- ▶ Output formats: NMEA, ASCII, ODOM, ATLAS
- ▶ Range: 0.3m - 75m
- ▶ I/O: Serial, Bluetooth
- ▶ Power: Rechargeable 12V Battery
- ▶ Compatibility: Trimble, Leica, Topcon, Sokkia, Epoch, Carlson, HYPACK, QPS, EIVA, PDS 2000.

# Seafloor™ datasheet

## HydroLite-DFX™ Dual Frequency Echosounder Kit

### About

The HydroLite-DFX™ is a portable dual frequency echosounder. The system combines both low frequency (30 kHz) and high frequency (200 kHz) transducers in one unit enabling penetration through soft sediments to detect hard bottom classification as well as detection of the surface layer. The unique design is also a helpful tool for bottom classification.

### Benefits

- ▶ Portable, integrated hydrographic survey solution
- ▶ Dual frequency
- ▶ Adaptable to any vessel
- ▶ Bluetooth and serial data transfer
- ▶ Meets IP-65 standards
- ▶ Quickly export XYZ data

### Scope of Supply

- ▶ HydroLite-DFX Echosounder Kit
- ▶ HydroLite Boat Mount/Pole Kit
- ▶ Rugged Shipping Case
- ▶ User Manual/ Training Manual
- ▶ 1 year support and warranty

### Options

- ▶ GPS/GNSS Receiver
- ▶ Digital bar check
- ▶ Tide Gauge
- ▶ Motion Sensor

### Echosounder

- ▶ Frequency: 200/30 kHz
- ▶ Beam Width: 9°/20°
- ▶ Ping Rate: 6 Hz w/ 2Hz output
- ▶ Depth Accuracy: 1cm/ 0.1% of depth
- ▶ Output formats: NMEA, ASCII, ODOM, ATLAS
- ▶ Range: 0.3 m - 200 m
- ▶ Transducer Cable: 5 m
- ▶ Power: External 12-18 vdc
- ▶ Compatibility: All Data Collectors & Acquisition Software



Sonarmite™ DFX Echosounder



Rugged Peli-type shipping case



**Seafloor Systems, Incorporated**

4415 Commodity Way | Shingle Springs, CA 95682 | USA  
530-677-1019 | info@seafloorsystems.com | www.seafloorsystems.com

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 5**

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

**NOTICE OF FILING**

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board a **NOTICE OF FILING; APPEARANCE; STATEMENT OF REASONS;** and **ATTACHMENTS: PROPOSED NEW 35 ILL. ADM. CODE PART 845;** and a **MOTION FOR ACCEPTANCE** on behalf of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

Respectfully submitted,

Dated: March 30, 2020

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY,

Rex L. Gradeless, #6303411  
Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276  
(217) 782-5544  
Rex.Gradeless@Illinois.gov

Petitioner,

BY: /s/ Rex L. Gradeless  
Rex L. Gradeless

**THIS FILING IS SUBMITTED ELECTRONICALLY**

**SERVICE LIST**

ILLINOIS POLLUTION CONTROL BOARD

Don Brown, Clerk  
James R. Thompson Center  
100 W. Randolph, Suite 11-500  
Chicago, IL 60601

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Office of Legal Services  
One Natural Resources Way  
Springfield IL 62702-1271

ILLINOIS ATTORNEY GENERAL

Matt Dunn, Division Chief Environmental  
69 W. Washington, Suite 1800,  
Chicago, IL 60602

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

**APPEARANCE**

The undersigned hereby enters his appearance as an attorney on behalf of the Illinois Environmental Protection Agency.

Respectfully submitted,

Dated: March 30, 2020

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY,

Rex L. Gradeless, #6303411  
Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276  
(217) 782-5544  
Rex.Gradeless@Illinois.gov

Petitioner,

BY: /s/ Rex L. Gradeless  
Rex L. Gradeless

**THIS FILING IS SUBMITTED ELECTRONICALLY**

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

**STATEMENT OF REASONS**

NOW COMES the Illinois Environmental Protection Agency (“Illinois EPA”), by and through its counsel, and hereby submits this Statement of Reasons to the Illinois Pollution Control Board (“Board”) pursuant to Sections 13, 22, 27 and 28 of the Environmental Protection Act (“Act”) (415 ILCS 5/13, 22, 27 and 28) and 35 Ill. Adm. Code 102.202 in support of the attached proposed regulations.

**I. INTRODUCTION**

The Illinois EPA has developed a rule of general applicability for coal combustion residual (“CCR”) surface impoundments at power generating facilities. The proposal contains comprehensive rules for the design, construction, operation, corrective action, closure and post-closure care of surface impoundments containing CCR. CCR is commonly referred to as coal ash, and CCR surface impoundments are commonly referred to as coal ash ponds or coal ash pits. This proposed rule includes groundwater protection standards applicable to each CCR surface impoundment at the waste boundary and requires each owner or operator to monitor groundwater. Illinois EPA’s proposed rule will include a permitting program as well as all federal standards for CCR surface impoundments promulgated by the United States Environmental Protection Agency (“USEPA”) under the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. 6901. In addition, the proposed rules

include procedures for public participation, closure alternatives analyses, and closure prioritization. The proposal also includes financial assurance requirements for CCR surface impoundments.

The Illinois EPA has prepared these draft rules as directed by a statutory mandate found in Public Act 101-171<sup>1</sup>, which requires Illinois EPA to file the draft rule with the Board no later than March 30, 2020, and the Board to adopt the rules no later than one year after receipt.

## II. BACKGROUND

Based upon information and belief, Illinois has 23 power plants which have used coal as a fuel source and may be impacted by this rule. *See* listing in Section VI. Ten of these plants are currently burning coal. Five of these plants have been converted to use natural gas as a fuel source and eight of these plants are no longer generating electricity. When coal is burned at power plants CCR is formed. CCR consists of fly ash, bottom ash, boiler slag, flue gas or fluid bed boiler desulfurization by-products. Fly ash is removed from exhaust gases, and is very fine, powdery, and made mostly of silica. Bottom ash is collected at the bottom of the furnaces, and is coarse, fine gravel sized, and angular. Boiler slag is molten bottom ash quenched with water. Flue gas desulfurization material is a by-product of removing sulfur dioxide from the air emissions of a coal fired power plant. It can be either wet sludge or dry powder. Disposal of CCR can be either a wet or dry system. Wet CCR is generally sluiced by pipe to an on-site surface impoundment. Dry CCR can be disposed in a landfill.

As noted above, in wet CCR handling systems, a piping system transports CCR to the impound system. The impound system can be composed of one or more surface impoundments. Typically, a CCR surface impoundment will have a primary cell where the majority of the solid

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<sup>1</sup> *See* Public Act 101-171, eff. 7-30-19 attached as Attachment D.

particles settle out of the waste water. In addition to the primary cell, an impound system may have one or two secondary cells, often referred to as polishing ponds for the settlement of very fine suspended solids. In some instances, the CCR surface impoundments have a constructed liner which allows the owner or operator to utilize heavy equipment to remove ash from the surface impoundment and dispose it off-site.

Historically, CCR may have been discharged to low lying areas or borrow pits at some locations. A borrow pit is an excavation where earth materials have been removed for site development. Borrow pits are usually incised, and the CCR and liquid is not contained by a dam, but contained in a depression or hole in the ground where earth materials have been removed. To increase storage capacity, owners or operators would sometimes build a CCR surface impoundment by constructing a diked enclosure. These structures are considered dams and are required to comply with Illinois' dam safety regulations. *See* 17 Ill. Adm. Code 3702.20. The size of the diked enclosure units ranges from less than an acre to over 300 acres.

The Illinois EPA has identified 73 CCR surface impoundments at power generating facilities. *See* Section VI. Some of surface impoundments are lined with impermeable materials, while others are not. Illinois EPA believes there are up to 6 CCR surface impoundments with liners that comply with the federal liner standards in 40 CFR 257.

The chemical make-up of CCR depends on the type of coal used, as well as the combustion technology and pollution control technology used at a facility. CCR can contain constituents such as antimony, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium 226 and 228, selenium, sulfate, and thallium. The presence of these contaminants threatens groundwater as these contaminants are soluble and mobile. When the CCR surface impoundments are not lined with impermeable material, these

contaminants may leach into the groundwater, affecting the potential use of the groundwater. While some of these contaminants affect the safety of drinking water, others affect taste and odor, and other potential uses such as irrigation.

#### Regulatory Development

Until the adoption of Section 22.59 of the Act in P.A. 101-171 on July 30, 2019, the Illinois EPA had generally permitted the construction and operation of CCR surface impoundments as a waste water treatment unit under Title III of the Act Subtitle C of the Board's administrative rules. Many of these impoundments are permitted through a National Pollutant Discharge Elimination System (NPDES) permit or state operating permit issued under Section 12(b) of the Act.

The regulation of CCR surface impoundments became a national focus on December 22, 2008, after a dike ruptured at the Kingston Fossil Plant in Kingston Tennessee and approximately 1.1 billion gallons of CCR was released to the Emory River. In response, USEPA began developing rules for coal ash ponds and coal ash landfills under RCRA. *See* 75 Fed. Reg. 35137 (June 21, 2010). Illinois EPA responded by developing a coal ash impoundment strategy that required groundwater monitoring at all power plants in Illinois that use coal as a fuel source.

Under the ash impoundment strategy, the Illinois EPA identified facilities with CCR surface impoundments, requested groundwater monitoring well data, requested potable water system surveys, requested hydrogeologic site assessments, required the installation of groundwater monitoring and conferred with the Illinois Department of Natural Resources on dam safety. The information gathered under Illinois EPA's ash impoundment strategy showed that 14 facilities had violations of the numerical groundwater quality standards on-site.

In 2009, the Board held that coal ash ponds should not be regulated under the existing on-site landfill regulations, and instead the ash ponds required their own regulations, either site-

broad strokes Illinois EPA's goals. A more detailed explanation of the proposed rules' purpose and effect is set forth in the Section IV: Regulatory Proposal: Language.

As noted above, Section 22.59(g) of the Act requires the Illinois EPA to propose CCR rules to the Board no later than March 30, 2020. The foremost purpose and effect of this regulatory proposal is to fulfill Illinois EPA's statutory obligation to propose CCR rules consistent with the requirements in Section 22.59(g).

The second purpose and effect of this regulatory proposal is to protect the groundwater within the state of Illinois. The proposed rule contains a program for groundwater monitoring and the remediation of contaminated groundwater resulting from leaking CCR surface impoundments. Groundwater has an essential and pervasive role in the social and economic well-being of Illinois, and is important to the vitality, health, safety, and welfare of its citizens. This rule has been developed based on the goals above and the principle that groundwater resources should be utilized for beneficial and legitimate purposes. *See* 415 ILCS 55/1 *et seq.* Its purpose is to prevent waste and degradation of Illinois' groundwater. The proposed rule establishes a framework to manage the underground water resource to allow for maximum benefit of the State.

The third purpose and effect of this proposed rule is to adopt the federal CCR rules in Illinois and obtain federal approval of Illinois' CCR surface impoundment program. The federal CCR rules provide a framework for Illinois to fill the regulatory gap that exists when CCR surface impoundments are no longer operating as waste water treatment units. With the adoption of these proposed rules, Illinois will have a program that covers the design, construction, operation, corrective action and closure of CCR surface impoundments. The proposed rules contain groundwater protection standards that apply in addition to the groundwater quality standards in Part 620. Owners or operators of CCR surface impoundments will be required to conduct

This Section generally describes the available financial assurance mechanisms and sets forth timeframes within which owners or operators must provide financial assurance. Further, this Section describes instances when owners or operators may use multiple mechanisms for a single CCR surface impoundment or when a single mechanism may be utilized for multiple CCR surface impoundments in Illinois.

Section 845.960: Trust Fund

This Section details the requirements applicable to the use of a Trust Fund for financial assurance pursuant to Subpart I.

Section 845.970: Surety Bond Guaranteeing Payment

This Section details the requirements applicable to the use of a Surety Bond Guaranteeing Payment for financial assurance pursuant to Subpart I.

Section 845.980: Surety Bond Guaranteeing Performance

This Section details the requirements applicable to the use of a Surety Bond Guaranteeing Performance for financial assurance pursuant to Subpart I.

Section 845.990: Letter of Credit

This Section details the requirements applicable to the use of a Letter of Credit for financial assurance pursuant to Subpart I.

**V. TECHNICAL FEASIBILITY AND ECONOMIC REASONABLENESS**

As mandated by P.A. 101-171, the proposed regulation must be as protective and comprehensive as Subpart D of 40 CFR 257.<sup>4</sup> Since owners and operators of CCR surface impoundments are already subject to 40 CFR 257, many of the technical and economic requirements applicable to owners and operators in the proposed Part 845 are already required

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<sup>4</sup> 415 ILCS 5/22.59(g)(1).

under federal law. For example, both 40 CFR 257 and the proposed Part 845 require groundwater monitoring systems and periodic groundwater monitoring, closure and post-closure care plans, corrective action, if necessary, to achieve groundwater protection standards, design criteria for any newly constructed CCR surface impoundments and the maintenance of publicly available records. The proposed regulation requires the owner or operator of CCR surface impoundments to complete a thorough alternatives analysis for corrective action and closure, the technical feasibility and economical reasonableness of which, will be a facility-specific determination based on multiple factors, including constructability, long and short term effectiveness, reliability and protection of human health and the environment. Therefore, the Illinois EPA believes proposed Part 845 is technically feasible and economically reasonable.

Public Act 101-171 also mandated fees and financial assurance for all CCR surface impoundments regulated by the proposed regulations.<sup>5</sup> Unlike P.A. 101-171, 40 CFR 257 is a self-implementing program. Therefore, documentation to demonstrate compliance are certified by a professional engineer and posted on a public website, relying on citizen lawsuits for enforcement. In contrast, the Illinois EPA, through the mandate of P.A. 101-171, proposes a permitting program administered by the Illinois EPA. As such, the documentation submitted to the Illinois EPA by the owners and operators of CCR surface impoundments is reviewed and approved by Illinois EPA staff during the operation, corrective action, and, if necessary, closure and post-closure care of every CCR surface impoundment in the state. The fees are set in P.A. 101-171, with higher initial fees for CCR surface impoundments that have not completed closure and lower fees for CCR surface impoundments that have completed closure.

In addition to the initial fee, annual fees are required by P.A. 101-171, again with CCR

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<sup>5</sup> 415 ILCS 5/22.59 (f); (g); (j)(1).

surface impoundments that have not completed closure paying a higher annual fee than those that have completed closure. CCR surface impoundments that close with the CCR left in place have a 30-year minimum post-closure care period, which may be longer if the groundwater protection standards that are protective of human health and the environment have not been achieved. However, CCR surface impoundments that close by removing CCR do not have a specified post-closure care period. Once the owner or operator of a CCR surface impoundment that has closed by removing CCR demonstrates that they have achieved the groundwater protection standards, which will assure protection of human health and the environment, annual fees cease, since all work required by the proposed rule will be completed. While the time required to achieve the groundwater protection standards will vary depending on hydrogeologic conditions at each facility, the potentially reduced post-closure care period when closure is by removal of CCR, offsets to some extent the potentially higher costs associated with closure by removal. Because the fee system is designed to support the Illinois EPA's administrative work for the review of documents and permitting associated with CCR surface impoundment operation, corrective action, and, if necessary, closure and post-closure care, the fees are reduced as work progresses and the potential higher costs associated with closing CCR surface impoundments may be offset by a shorter period over which fees are collected, the proposed regulations are economically reasonable.

The financial assurance requirements of P.A. 101-171 also create economic considerations in the proposed regulation that do not exist in 40 CFR 257. Each CCR surface impoundment must have and maintain financial assurance to cover the costs of corrective action, and, if necessary, closure and the post-closure care period. The proposed regulations allow the use of several different financial instruments, or combinations thereof, to provide financial assurance. Because CCR surface impoundments that close with the CCR left in place have a 30-year minimum post-

closure care period, financial assurance must necessarily extend at least 30 years past closure. The period for which financial assurance must be maintained is longer if the corrective action to meet groundwater protection standards is still ongoing at the end of the 30-year post-closure care period. However, CCR surface impoundments that close by removing CCR do not have a specified post-closure care period. Once the owner or operator of a CCR surface impoundment that has closed by removing CCR demonstrates that they have achieved the groundwater protection standards, the requirement for financial assurance ends. While the time required to achieve the groundwater protection standards will vary depending on hydrogeologic conditions at each facility, the potentially reduced post-closure care period when closure is by removal of CCR, offsets to some extent the costs associated with maintaining financial assurance. Financial assurance is required to guarantee that in the event of financial default by the owner or operator of a CCR surface impoundment, adequate funds will be available to complete corrective action, and, if necessary, closure and post-closure care, and the burden of those costs do not fall on the State, the local citizenry, or worse, the facilities set derelict for many years. Because financial assurance is designed to guarantee that corrective action, if necessary, closure and post-closure care will be completed in the event of financial default of an owner or operator and the term of financial assurance may be shorter when closure is by removal of CCR, the proposed regulations are economically reasonable.

## **VI. AFFECTED FACILITIES**

Power generating facilities with CCR surface impoundments may be affected by the Illinois EPA's proposed rule. These facilities include:

NAME OF FACILITY	CCR SURFACE IMPOUNDMENTS
<b>Ameren MO /UE</b>	
Venice	2
<b>Ameren Energy Generating</b>	
Hutsonville	5
Meredosia	3
<b>City Water Light and Power</b>	
City Water Light and Power	2
<b>Commercial Liability Partners, LLC</b>	
Wood River Station	4
<b>Grand Tower Energy Center, LLC</b>	
Grand Tower	1
<b>NRG</b>	
Will County Station	4
Waukegan Station	3
Lincoln Stone Quarry	1
Joliet 29	3
Powerton	5
<b>Prairie Power Inc</b>	
Prairie Power	1
<b>Southern Illinois Power Co-op</b>	
Southern Illinois Power Co-op	9
<b>Vistra</b>	
Baldwin Energy Center	4
Coffeen Station	4
Duck Creek Station	5
Edwards Station	1
Havana Station	3
Hennepin Station	6
Joppa Station	2

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 6**

ILLINOIS POLLUTION CONTROL BOARD

February 4, 2021

IN THE MATTER OF: )  
)  
STANDARDS FOR THE DISPOSAL OF ) R20-19  
COAL COMBUSTION RESIDUALS IN ) (Rulemaking - Land)  
SURFACE IMPOUNDMENTS: PROPOSED )  
NEW 35 ILL. ADM. CODE 845 )

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by B.F. Currie):

On March 30, 2020, the Illinois Environmental Protection Agency (IEPA or Agency) proposed that the Board adopt new rules entitled “Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments.” On final adoption, the new rules will govern the disposal of coal combustion residual or “CCR,” commonly called “coal ash,” which is generated by coal-fired power plants. These rules—to be housed in new Part 845 of the Illinois Administrative Code’s Title 35—will establish a comprehensive State permitting program to regulate all aspects of CCR surface impoundments, including location, design, construction, operation, closure, post-closure, financial assurance, and remediation. Among the program’s primary goals is protecting groundwater from contamination by CCR pollutants leaking from surface impoundments. The Board today proposes the rules for second-notice review by the Joint Committee on Administrative Rules (JCAR).

In 2019, the General Assembly passed and Governor JB Pritzker signed into law Public Act 101-171, the Coal Ash Pollution Prevention Act, which directly addressed CCR surface impoundments. The legislation added Section 22.59 to the Illinois Environmental Protection Act (Act), 415 ILCS 5/22.59, mandating this rulemaking. In Section 22.59, the General Assembly found that “CCR generated by the electric generating industry has caused groundwater contamination and other forms of pollution at active and inactive plants throughout this State” and that “environmental laws should be supplemented to ensure consistent, responsible regulation of all existing CCR surface impoundments.” 415 ILCS 22.59(a)(3), (a)(4). The General Assembly additionally found that:

Meaningful participation of State residents, especially vulnerable populations who may be affected by regulatory actions, is critical to ensure that environmental justice considerations are incorporated in the development of, decision-making related to, and implementation of environmental laws and rulemaking that protects and improves the well-being of communities in this State that bear disproportionate burdens imposed by environmental pollution. 415 ILCS 5/22.59(a)(5).

To aid in addressing these concerns, Section 22.59 requires that IEPA propose and the Board adopt new rules on CCR surface impoundments. 415 ILCS 5/22.59(g). Under Section 22.59,

combustion chamber. *Id.* Boiler slag is molten bottom ash that has been cooled with water. *Id.* Flue gas desulfurization material is a by-product of removing sulfur dioxide from the plant's air emissions. *Id.*

CCR's chemical constituents can vary based on the specific type of coal used at the plant, but they may include some or all the following elements: arsenic, beryllium, boron, cadmium, chromium, hexavalent chromium, cobalt, lead, manganese, mercury, selenium, thallium, and vanadium, as well as others. SR at 3. The presence of these contaminants poses a threat to groundwater that surrounds the power plants. 415 ILCS 5/22.59(a)(3). IEPA has identified 23 power plants in Illinois that have used coal as a fuel source and could be affected by these new rules. SR at 5.

When CCR is created at coal-fired power plants, it can be handled through either a wet or dry system. SR at 2. While wet systems involve transporting wet material by pipe to a surface impoundment near the power plant, dry CCR is disposed of in a landfill. *Id.* Usually, a CCR surface impoundment (CCRSI) system includes one or more impoundments; the first serves as the primary cell where most of the solid particles settle out of the wastewater. SR at 2-3. The CCRSI system may include additional impoundments called "polishing ponds" for removing very fine suspended particles. The impoundments may have a constructed liner, which allows CCR to be removed using heavy equipment. SR at 3

CCR surface impoundments are an environmental concern. 415 ILCS 5/22.59(a)(3) (2018). In December 2008, a dike ruptured at the Kingston Fossil Plant in Kingston Tennessee, releasing approximately 1.1 billion gallons of CCR into the adjacent Emory River. SR at 4. Following this release, the United States Environmental Protection Agency (USEPA) began developing rules for coal ash ponds and coal ash landfills. *Id.* At the 23 coal-fired plants in the State, IEPA has identified 73 that it considers surface impoundments. SR at 3. Some of these surface impoundments have liners made of impermeable material but most remain unlined. *Id.* Unlined surface impoundments risk allowing contaminants to leach from CCR into the groundwater, affecting the groundwater's potential use. SR at 4. In Illinois, CCR has caused groundwater contamination and other forms of pollution that are harmful to human health and the environment. 415 ILCS 5/22.59(a)(3) (2018).

After identifying facilities with CCR surface impoundments, IEPA gathered information from these facilities that included groundwater monitoring well data, potable water system surveys, and hydrogeologic site assessments. SR at 4. "The information gathered under [IEPA's] ash impoundment strategy showed that 14 facilities had violations of the numerical groundwater quality standards on-site." *Id.*

### **GENERAL LEGAL BACKGROUND**

Historically, IEPA regulated CCR surface impoundments as wastewater treatment units under the National Pollutant Discharge Elimination System (NPDES) permit program, or as a state operating permit issued under Section 12(b) of the Act (415 ILCS 5/12(b) (2018)). SR at 4. Regulating CCR became a national priority after the Kingston dike rupture. USEPA began developing rules for coal ash ponds and CCR landfills, first under the Resource Conservation

On January 14, 2021, the Office of the Illinois Attorney General filed a public comment, attaching a court order from the Circuit Court of Sangamon County. The court order dismissed with prejudice a case in which Ameren filed an action for declaratory judgment against IEPA concerning several of Ameren's CCR surface impoundments. On January 15, 2021, Ameren filed a public comment, responding to the Attorney General's filing.

Both comments are untimely as this rulemaking's record closed on November 6, 2020. Additionally, as Part 845 is a rule of general applicability, discussion of specific, ongoing legal actions between and amongst the participants is not relevant to the record. The Board considers neither late-filed public comment.

### **Economic Impact Study**

As required by Section 27(b) of the Act (415 ILCS 5/27(b) (2018)), the Board requested in a letter dated April 16, 2017, that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study (EcIS) of the proposed rules. The Board requested that DCEO determine by June 1, 2020, whether it would conduct an EcIS. The Board received no response to this request. No one at hearing testified or commented on the Board's request or DCEO's lack of response. Hearing notices were published in the *Springfield Journal-Register* and the *Chicago Sun Times* on both May 28 and July 17, 2020.

### **Outstanding Motions**

Under the Board's procedural rules, a motion to correct a hearing transcript may be filed within 21 days after the Board receives the transcript. 35 Ill. Adm. Code 101.604. If a participant fails to timely file a motion to correct the transcript, the participant waives the right to correct, unless material prejudice would result. *Id.* The Board received six motions to correct hearing transcripts.

First, on September 8, 2020, Dynegy filed a motion to correct the August 11 and 12, 2020 transcripts. The Board received those transcripts on August 17 and 20, 2020, respectively. As the 21-day deadline for filing the motion concerning the first transcript fell on the legal holiday of Labor Day, September 7, 2020, the deadline automatically extended to September 8, 2020 (35 Ill. Adm. Code 101.300(a)), making Dynegy's motion timely. Second, on September 11, 2020, Dynegy timely filed a motion to correct the August 13, 2020 transcript.

Third, on September 17, 2020, IEPA filed a motion to correct the August 11, 12, 13, and 25, 2020 transcripts, which the Board received on August 17, 20, and 21, 2020 and September 3, 2020, respectively. IEPA's motion was timely for the last transcript but untimely for the first three transcripts. The Board finds, however, that IEPA has not waived the right to correct the first three transcripts. Nearly all IEPA's requested corrections were substantive and, therefore, material prejudice would result absent correction. Finally, included in IEPA's motion was a timely response to Dynegy's two motions to correct (35 Ill. Adm. Code 101.500(d)).

The fourth motion to correct was timely filed on September 24, 2020, again by Dynegy, this time concerning the August 25, 2020 transcript. Fifth, on October 30, 2020, the

“De minimis unit” means any surface impoundment, including but not limited to process water or cooling water ponds, that only received CCR incidentally and does not contain an amount of CCR and liquid presenting a reasonable probability of adverse effects on human health or the environment. De minimis surface impoundments are not CCR surface impoundments. PC 126 at 16.

IEPA objects to this proposed definition, rejecting Dynegey’s contention that USEPA’s risk assessment makes an exemption for de minimis units. PC 129 at 5. Noting that Part 257 does not define “de minimis,” IEPA says, “USEPA has made no determinations whether any surface impoundment contains only de-minimis amounts of CCR.” *Id.* This is problematic, argues IEPA, as creating a definition has the potential for making proposed Part 845 less protective than the federal rule: “Any definition of de-minimis has the potential of being less protective or comprehensive, because USEPA has failed to define the meaning of de-minimis and does not currently operate a permit program, pursuant to which determinations of de-minimis might be made.” *Id.*

If the Board decides to add a “de minimis unit” definition, IEPA suggests following the standard of no “reasonable probability of adverse effects” found in RCRA. PC 129 at 5. In addition, IEPA explains that past operational practices must be considered in determining whether a unit is de minimis. *Id.* at 6. IEPA opposes any definition of de minimis unit that “requires the CCR present to be ‘incidental’ since how the CCR came to be present in the impoundment is insignificant compared to the fact that the CCR is there.” *Id.* IEPA therefore proposes the following alternative definition:

“De minimis unit” means any surface impoundment, including, but not limited to process water or cooling water ponds, which has not in the past and does not currently contain an amount of CCR presenting a reasonable probability of adverse effects on human health or the environment as determined by the Agency. De minimis surface impoundments are not CCR surface impoundments. *Id.* at 7.

**Board Findings.** The Board shares IEPA’s concerns about a “de minimis” definition. As USEPA uses no definition, the Board agrees that not creating a new definition for these rules would be more protective of human health and the environment. Regulatory relief mechanisms are available to owners and operators when they disagree with an IEPA determination concerning whether a unit is a CCR surface impoundment. In those instances, an owner or operator may seek an adjusted standard or a variance from the Board. Although the unit may contain a minimal amount of CCR, it is still the duty of IEPA and the Board to protect the environment and human health from CCR’s deleterious effects. In addition, IEPA has asserted that it will consider past operational practices of facilities in determining whether the unit can be considered a CCR surface impoundment:

The Agency does believe that past operational practices should have a bearing on whether an impoundment can be considered de-minimis. If an impoundment was operated for decades with a significant amount of CCR present, and then most of the CCR was removed so that currently there is truly de-minimis amount of CCR

present, the impacts of past operations, especially in unlined impoundments, is consequential. PC 129 at 6.

The Board agrees that adding a definition for “de minimis unit” would risk making Illinois’ rules less comprehensive than USEPA’s and leaving genuine environmental concerns unaddressed and therefore denies Dynegy’s request.

**Changing the Definition of “Inactive CCR Surface Impoundment.”** Dynegy proposes changes to the definition of “inactive CCR surface impoundment”: “‘Inactive surface impoundment’ means a CCR surface impoundment in which CCR was placed before but not after October 19, 2015 and still contains both CCR and liquids on or after October 19, 2015...” PC 126 at 9. PC 126 at 7. The definition in proposed Section 845.120 differs from the federal definition in 40 C.F.R. 257.53 by omitting the reference to containing “CCR and liquids.” *Id.* at 8. Dynegy argues that this omission “expanded the scope of Part 845 beyond the CCR Rule, and, more importantly, beyond the statutory mandate, by regulating units that do not fit the legislature’s definition of ‘CCR surface impoundment.’” *Id.* Dynegy proposes revising the definition to conform with that used in Part 257, arguing that “IEPA has created confusion as to whether units that did not contain liquids as of the date of the CCR Rule became effective may be regulated under Part 845.” *Id.* at 7, 9.

IEPA opposes conforming the definition with that in Part 257. PC 129 at 7. IEPA says that in its experience, some unlined CCR surface impoundments have leaked to the point that the CCR became dry. PC 120 at 35. In drafting the definition, IEPA therefore left out the term “liquids”: “experience has shown a cover system is needed to control potential effects to health and the environment to the maximum extent possible.” *Id.* For support, IEPA relies on USEPA’s position that simply because water has leaked from the impoundment does not mean it should not be considered an inactive CCR surface impoundment:

USEPA clearly states its position that inactive CCR surface impoundments require regulation and the only exceptions are inactive CCR surface impounds that are completely dewatered and have a cap that is consistent with Part 257. Given this position by USEPA, it appears the definition of “inactive CCR surface impoundment” in Part 257.53 is not intended to include CCR surface impoundments that have no liquids simply because the liquids have leaked into the environment. PC 129 at 34.

Dynegy argues that IEPA has misinterpreted the preamble to USEPA’s Part 257 by omitting the phrase “and liquids” from the definition. PC 137 at 22. Saying that the definition as proposed by IEPA would create an impossible scenario, Dynegy points to the preamble of Part 257. *Id.* Dynegy argues that the preamble identified a subset of units that qualified as “inactive CCR surface impoundments” but are not subject to all CCR Rule requirements because they were capped and dewatered within three years of the publication of the Rule. *Id.* In Dynegy’s view, the USEPA preamble is addressing exceptions from the applicable requirements rather than broadening the definition to include units that do not contain liquids. *Id.* at 22-23.

**Board Findings.** The Board does not dispute that CCR surface impoundments differ from CCR landfills, and it recognizes that they involve distinct operations. However, the Board is not persuaded that differences justify striking Section 845.420 from its proposal. The Board notes that the primary purpose of the leachate collection system is to remove the leachate collected in the unit to reduce the head on the liner. Exh. 2, Buscher PFT at 2. IEPA states that the reason for reducing the head on the liner in landfills is to reduce the threat of migration of leachate from the landfill into groundwater below the landfill. PC 120 at 44. Mr. Nielson agrees that “[i]ncreases in hydraulic head will increase the flow rate of fluids through a hypothetical hole in a geomembrane and then through porous media (compacted clay liner) as described by various theories of fluid dynamics.” MG Resps. at 40. Thus, the installation and operation of a leachate collection system in a new CCR surface impoundments serves the same purpose as in a landfill to reduce the head on the liner to reduce the threat of groundwater contamination.

Further, the Board recognizes that the operation of CCR surface impoundments unlike landfills require the head above the liner to be maintained at a level sufficient to not expose the CCR as well as provide storage for recycling transport water. In this regard, the proposed rules do not require the leachate in the CCR surface impoundment to be drained or establish a maximum head level above the liner like the Board’s landfill regulations. Thus, the owner or operator has the flexibility to operate the leachate collection system to maintain minimum head necessary to keep the CCR in the impoundment wet and provide for storage, but at the same time minimize potential threat to groundwater contamination by avoiding unnecessary build-up of head above the liner. To clarify the proposed intent, the Board accepts IEPA’s addition to Section 845.420(a).

Finally, regarding Midwest Generation’s contention that a leachate collection system is not needed if an impoundment is closed by removal, the Board notes that a new provision at Section 845.420 (a)(10) establishes a minimum use and does not limit dewatering during operation. In addition, the proposed rules do not require closure by removal. Based on these considerations, the Board declines to strike Section 845.420 from its proposal.

### **USEPA Risk Assessment**

Mr. Nielson argues that increased potential leakage of leachate through the liner does not necessarily result in statistically significant risk to human health and the environment.” MG Resps. at 40-41. He maintains that neither models nor damage cases document these risks. *Id.* at 41. Further he notes that the federal rule “does not require the reduction of hydraulic head on liner systems in CCR surface impoundments.” *Id.* at 42.

To support its contention that leachate collection systems are unnecessary for new CCR surface impoundments, Midwest Generation relies on this statement from USEPA’s December 2014 publication of Human and Ecological Risk Assessment of Coal Combustion Residuals (Regulation Identifier No. 2050-AE81): “Composite-lined units were found to be the most protective disposal practice, resulting in risks far below all criteria identified in this risk assessment.” Risk Assess. at 6-11; *see* MG Questions at 6. USEPA compared the risk analysis to data and damage cases and determined that “[n]o damage cases were identified for composite-lined units.” Risk Assessment at 5-47. Thus, Mr. Nielson argues that USEPA has concluded

maintained with a leachate collection and removal system.” PC 125 at 22 (emphasis in original). Midwest Generation adds that this threshold provides an incentive to construct smaller impoundments, which are more likely closed through removal. PC 125 at 22, citing Rokoff Test. at 15.

IEPA objects to Midwest Generation’s proposal to require a leachate collection and removal system only for impoundments covering an area of more than 20 acres. PC 129 at 15. Although Midwest Generation argues that impoundments smaller than that size are more likely to be closed by removal, IEPA notes that its proposal does not require closure by removal for impoundments of any size. *Id.* IEPA also argues that reducing hydraulic head on the liner is important for any CCR surface impoundment regardless of its size. *Id.* Arguing that USEPA’s Risk Assessment supports its position, IEPA asserts that it “stands by the leachate collection and removal system it has proposed.” *Id.* at 16.

**Board Findings.** The Board agrees with IEPA that the size of the CCR surface impoundment is not a factor when it comes to the primary purpose of the leachate collection system, *i.e.*, to reduce the hydraulic head on the liner. Although Midwest Generation contends that the smaller impoundments may close by removal, negating the need for a leachate collection system, Part 845 does not require their closure by removal. Further, the Board finds that record in this generally applicable rulemaking does not support allowing new CCR surface impoundments smaller than 20 acres to be constructed without leachate collection system by requiring such impoundments to close by removal. Therefore, the Board declines Midwest Generations proposed changes to Section 845.420(a)

Based on the above discussion of Midwest Generation’s significant issues, the Board finds that the record supports proposing Section 845.420’s leachate collection and removal system without revision, except for IEPA’s clarifying addition of subsection (a)(10). The Board finds that the proposed leachate collection system provides additional groundwater protection against the potential threats of contamination from new CCR surface impoundments, while allowing the operation of the impoundments in compliance with Part 845.

### **Proposed Requirements for Leachate Collection and Removal System**

Section 845.420 requires all new CCR surface impoundments to include a leachate collection and removal system designed, constructed, operated, and maintained to collect and remove leachate from the CCR surface impoundment during its active life and post-closure care period. Subsections (a)(1) through (a)(10) specify the placement, design, and operational requirements for the leachate collection system. Additionally, Section 845.420(b) requires the submittal of a qualified professional engineer certification that the design of the leachate collection system complies with the requirements of Section 845.420 with the facility’s construction permit application. Also, under Section 845.420(c), a similar certification that the leachate collection system has been constructed in accordance with the applicable requirements must be submitted with the facility’s initial operating permit application. The Board adopts these proposed requirements at second notice without any substantive changes, except for the addition of Section 845.420(a)(10).

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 7**



## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/785-0561

July 28, 2020

CERTIFIED MAIL # 7019 1120 0001 3038 3421  
RETURN RECEIPT REQUESTED

Illinois Power Resource Generating, LLC.  
c/o Phil Morris  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

**Re: Violation Notice: ILLINOIS POWER RESOURCE GENERATING, LLC –  
DUCK CREEK STATION  
Facility Id.: 6376  
Violation Notice No.: W-2020-00034**

Dear Mr. Morris:

This constitutes a Violation Notice pursuant to Section 31(a)(1) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/31(a)(1), and is based upon a review of available information and an investigation by representatives of the Illinois Environmental Protection Agency (“Illinois EPA”).

The Illinois EPA hereby provides notice of alleged violations of environmental laws, regulations, or permits as set forth in Attachment A to this notice. Attachment A includes an explanation of the activities that the Illinois EPA believes may resolve the specified alleged violations, including an estimate of a reasonable time period to complete the necessary activities. Due to the nature and seriousness of the alleged violations, please be advised that resolution of the violations may also require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

A written response, which may include a request for a meeting with representatives of the Illinois EPA, must be submitted via certified mail to the Illinois EPA within 45 days of receipt of this letter. If a meeting is requested, it shall be held within 60 days of receipt of this notice. The response must include information in rebuttal, explanation, or justification of each alleged violation and a statement indicating whether or not the facility wishes to enter into a Compliance Commitment Agreement (“CCA”) pursuant to Section 31(a) of the Act. If the facility wishes to enter into a CCA, the written response must also include proposed terms for the CCA that includes dates for achieving each commitment and may include a statement that compliance has been achieved for some or all of the alleged violations. The proposed terms of the CCA should contain sufficient detail and must include steps to be taken to achieve compliance and the necessary dates by which compliance will be achieved.

4302 N. Main Street, Rockford, IL 61103 (815) 987-7760  
595 S. State Street, Elgin, IL 60123 (847) 608-3131  
2125 S. First Street, Champaign, IL 61820 (217) 278-5800  
2009 Mall Street Collinsville, IL 62234 (618) 346-5120

9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000  
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022  
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200  
100 W. Randolph Street, Suite 4-500, Chicago, IL 60601

Page 2 of 2

ID NO 6376: ILLINOIS POWER RESOURCE GENERATING, LLC –  
DUCK CREEK STATION  
VN W-2020-00034

The Illinois EPA will review the proposed terms for a CCA provided by the facility and, within 30 days of receipt, will respond with either a proposed CCA or a notice that no CCA will be issued by the Illinois EPA. If the Illinois EPA sends a proposed CCA, the facility must respond in writing by either agreeing to and signing the proposed CCA or by notifying the Illinois EPA that the facility rejects the terms of the proposed CCA.

If a timely written response to this Violation Notice is not provided, it shall be considered a waiver of the opportunity to respond and meet, and the Illinois EPA may proceed with referral to a prosecutorial authority.

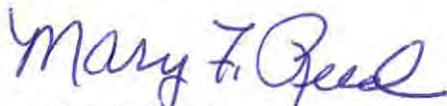
Written communications should be directed to:

Illinois EPA – Division of Public Water Supplies  
Attn: Andrea Rhodes, CAS #19  
P.O. BOX 19276  
Springfield, IL 62794-9276

All communications must include reference to this Violation Notice number, W-2020-00034.

Questions regarding this Violation Notice should be directed to Andrea Rhodes at 217/785-0561.

Sincerely,



Mary F. Reed  
Manager, Compliance Assurance Section  
Division of Public Water Supplies  
Bureau of Water

Attachments

BOW ID: W0578010001

PAGE NO. 1 OF 2

**ATTACHMENT A**

**ILLINOIS POWER RESOURCE GENERATING, LLC - DUCK CREEK STATION, ID NO 6376  
VIOLATION NOTICE NO. W-2020-00034:**

Questions regarding the violations identified in this attachment should be referred to Andrea Rhodes at (217) 785-0561.

A review of information available to the Illinois EPA indicates the following violations of statutes, regulations, or permits. Included with each type of violation is an explanation of the activities that the Illinois EPA believes may resolve the violation including an estimated time period for resolution.

**Coal Combustion Residuals Surface Impoundment Fees**

The Illinois Environmental Protection Act ("Act") Section 22.59 (j) establishes a fee system for Coal Combustion Residuals ("CCR") surface impoundments. CCR surface impoundments must pay an initial fee of seventy-five thousand dollars for CCR surface impoundments that have not completed closure and fifty thousand dollars for CCR surface impoundments that have completed closure and are in post-closure care.

(j) The owner or operator of a CCR surface impoundment shall pay the following fees:

- (1) An initial fee to the Agency within 6 months after the effective date of this amendatory Act of the 101<sup>st</sup> General Assembly of:

\$50,000 for each closed CCR surface impoundment; and

\$75,000 for each CCR surface impoundment that have not completed closure.

- (2) Annual fees to the Agency, beginning on July 1, 2020, of:

\$25,000 for each CCR surface impoundment that has not completed closure; and

\$15,000 for each CCR surface impoundment that has completed closure, but has not completed post-closure care.

To achieve compliance payment in full is expected immediately.

PAGE NO. 2 OF 2

ATTACHMENT A

ILLINOIS POWER RESOURCE GENERATING, LLC - DUCK CREEK STATION, ID NO 6376  
VIOLATION NOTICE NO. W-2020-00034:

<u>Violation Date</u>	<u>Violation Description</u>
02/01/2020	Failure to submit a \$75,000 initial fee for Duck Creek Station, GMF Recycle Pond (IEPA ID # W0578010001-05) that was due January 31, 2020. The Agency has determined that GMF Recycle Pond is a CCR surface impoundment that has not completed closure, and therefore, is subject to an initial fee.
Rule/Reg	Section 22.59(j)(1) of the Act 415 ILCS 22.59(j)(1).

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 8**



Schiff Hardin LLP  
233 South Wacker Drive  
Suite 7100  
Chicago, IL 60606

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T 312.258.5500  
F 312.258.5600

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schiffhardin.com

September 14, 2020

**Joshua R. More**  
(312) 258.5769  
jmore@schiffhardin.com

**VIA E-MAIL AND CERTIFIED MAIL**

Andrea Rhodes  
Illinois EPA – Division of Water Pollution Control  
P.O. Box 19276  
Springfield, IL 62794-9276  
Andrea.Rhodes@illinois.gov

**Re: Violation Notice No. W-2020-00034**

Dear Ms. Rhodes:

I write on behalf of Illinois Power Resources Generating, LLC (“IPRG”) with respect to Violation Notice No. W-2020-00034, received on July 30, 2020 (the “Notice”). This letter provides the written response required by 415 ILCS 5/31(a)(2). For the reasons partially outlined below, IPRG respectfully denies the factual and legal allegations of the Notice and requests a meeting with the Illinois Environmental Protection Agency (“IEPA” or “Agency”) to discuss the Notice under 415 ILCS 5/31(a)(2)(C).

The Notice alleges that IPRG has failed to submit a \$75,000 initial fee, pursuant to 415 ILCS 22.59(j)(1) for the GMF Recycle Pond at the Duck Creek Station (“Duck Creek”). On January 30, 2020, IPRG submitted a check totaling \$300,000 for Duck Creek: \$75,000 for Ash Pond No. 1; \$75,000 for Ash Pond No. 2; \$75,000 for the Bottom Ash Basin; and \$75,000 for the GMF Pond. As IPRG has consistently maintained, a separate fee for the Duck Creek GMF Recycle Pond is inappropriate for two reasons: (1) the GMF Recycle Pond was not “designed to hold an accumulation of CCR and liquids,” nor does it “treat[], store[], or dispose[] of CCR” (415 ILCS 5/3.143) and is therefore not subject to fees under 415 ILCS 22.59 (“Section 22.59”); and (2) if it is a CCR surface impoundment, the GMF Recycle Pond should be considered part of the larger GMF Pond, which should be assessed a single fee.<sup>1</sup>

First, the GMF Recycle Pond contains no meaningful amount of CCR. The GMF Recycle Pond is designed to capture water from the GMF Pond after the CCR has settled in the GMF Pond. Accordingly, the GMF Recycle Pond is not a “CCR surface impoundment” subject to fees under Section 22.59(j).

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<sup>1</sup> In addition to the information provided herein, IPRG incorporates by reference the materials provided in Luminant’s January 30, 2020 letter to the Agency as well as its April 28, 2020 letter to William E. Buscher.



Andrea Rhodes  
September 14, 2020  
Page 2

Second, if the Duck Creek GMF Recycle Pond is found to contain meaningful amounts of CCR, it is part of the larger GMF Pond system, which is a single CCR surface impoundment. The GMF Recycle Pond and GMF Pond are a single, continuous surface water treatment system, with a single NPDES permitted outfall and groundwater monitoring system. Those two units would therefore be a single “depression, . . . excavation, or diked area,” that should be considered a single CCR surface impoundment. 415 ILCS 5/3.143. Neither the Notice, nor any of IEPA’s other communications regarding invoices for Duck Creek, have provided any evidence regarding the construction or operation of the GMF Pond system to sustain the Agency’s burden to demonstrate that it qualifies as two separate CCR surface impoundments.

There are also policy reasons why the Duck Creek GMF Recycle Pond—if found to contain meaningful amounts of CCR—should not be assessed a separate fee. IEPA has stated that the fees at issue are intended to enable it to operate the Part 845 permitting program.<sup>2</sup> Under that program, the Agency has indicated that it will allow common permit applications, monitoring systems, and groundwater models for multi-cell impoundments like the Duck Creek GMF Pond.<sup>3</sup> To the extent any permits are required for the Duck Creek GMF Recycle Pond under Part 845, IPRG intends to have the entire Duck Creek GMF Pond system permitted as a single CCR surface impoundment. Thus, the administrative burden to the Agency of regulating this system under Part 845 will be that of a single unit; with only one permit application, one monitoring system, and one groundwater model requiring Agency review. It would therefore be inequitable, and unnecessary, to require IPRG to pay two separate fees for the Duck Creek GMF Recycle Pond and continue doing so until post-closure care is complete.

While IPRG contests the allegations of the Notice, it also seeks a cooperative resolution to this matter and proposes that the meeting requested by this letter include discussion of a potential Compliance Commitment Agreement. Specifically, as previously agreed with IEPA, IPRG is willing to submit a bathymetric study to demonstrate that the Duck Creek GMF Recycle Pond contains no meaningful amount of CCR. A proposal for such a study is attached as Exhibit 1 to this letter. In the event that the bathymetric study identifies meaningful amounts of sediments, IPRG will perform sampling to determine whether that sediment is CCR.

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<sup>2</sup> R20-19, Statement of Reasons at 35 (Mar. 30, 2020) (“[T]he fee system is designed to support the Illinois EPA’s administrative work for the review of documents and permitting associated with CCR surface impoundment operation, corrective action, and, if necessary, closure and post-closure care. . . .”).

<sup>3</sup> R20-19, First Supplement to IEPA’s Pre-Filed Answers, Response to Dynegey Question 27(a)-(c), pp. 42-43 (Aug. 5, 2020).



Andrea Rhodes  
September 14, 2020  
Page 3

In the event that this study and sampling process demonstrates that a meaningful amount of CCR exists in the GMF Recycle Pond, as suggested for other similarly situated units, IPRG will agree to pay the contested initial fees for the GMF Recycle Pond, if the Agency agrees that the entire GMF Pond system will be treated as a single impoundment for purposes of assessing annual fees under 415 ILCS 22.59(j)(2). Such an agreement would be consistent with the definition of CCR surface impoundment, the way the unit will be closed and managed in post-closure care, and the goal of ensuring that IEPA has sufficient resources to administer the Part 845 program.

We look forward to meeting with you to discuss a resolution to this matter. Please contact me at your convenience to suggest a meeting time.

Sincerely,

/s/ Joshua R. More

# **Exhibit 1**



502 Earth City Expressway, Suite 120, St. Louis, Missouri 63045  
Phone 314-739-0906 ♦ Fax 314-739-0910 ♦ E-mail mgraminski@ingenae.com

April 20, 2020

Mr. Collin Carson  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

RE: Revised Proposal for Professional Survey Services  
Duck Creek Gypsum Recycle Pond (Approximately 10 Acres)  
Fulton County, Illinois

Dear Mr. Carson:

IngenAE appreciates the opportunity to prepare this proposal. The following proposed scope of services and Compensation are based on the Request for Proposal (RFP), received by emails dated April 9, 2020 regarding Duck Creek Gypsum Recycling Pond volume surveys as described below.

Scope of services:

IngenAE will survey existing conditions of the area within the containment banks of the Gypsum Recycle pond including the containment banks themselves to develop an existing conditions surface and perform a volume calculation between the existing conditions surface and the estimated bottom of gypsum within that pond based on the construction plan grades and/or As-builts supplied by Vistra. The expected task will include the following:

- Perform topographic ground survey by use of GPS and/or a Robotic Total Station of the perimeter containment berms and materials within the same to the ponding waters edge.
- Perform bathymetric surveys of the area beneath the ponded water to determine the existing surface and subsurface hardpan by use of two separate systems.
- Combine surveys to establish overall existing conditions surface and the subsurface hardpan.
- Prepare a surface that represents the design containment pond based on construction drawings/as-built data as supplied by Vistra. This task will involve translating data from Microsoft to CAD and updating/reworking multiple contours and layers to create a workable surface
- Calculate the approximate volume of sediment within the holding area by comparing the multiple surfaces.

#### Topographic Ground Survey

- Topographic Ground Surveying will be done by use of Trimble G-8 GPS equipment and/or a Trimble S-5 Robotic Total Station.

### Bathymetric Survey Procedure

- IngenAE proposes to perform Bathymetric Surveys of the areas with ponded water using a Trimble Hydrolite-TM portable hydrographic survey system which incorporates GPS equipment with a Sonarmite system echosounder, which uses a single frequency transducer, on a remote-controlled boat in areas where the water is deep enough to keep from stranding the boat in shallow areas or vegetation. The radio-controlled boats use a single frequency transducer, so a single string of points every 1 to 2 feet at designated transects is collected to make the data set as dense as necessary. A typical sample survey transect will have an approximate 25 foot spacing between survey lines. The navigation of the survey lines is performed via hydro software programmed to collect data along each transect at approximate 2-foot intervals. The bottom elevation data survey is then processed to overlap the data for quality control. For the ponds that have shallow bottoms or vegetation growing into the ponded water, a two-man boat will be used to collect data in a similar fashion as the radio-controlled boats.
- A second Bathymetric survey will be performed using similar equipment with a dual frequency transducer which emits two different frequency sound waves simultaneously. The first frequency sound waves will reflect off the bottom of the pond surface, record that depth and establish a coordinate and elevation for each sounding basically the same as the above single frequency transducer. The second sound wave will penetrate the siltation surface and reflect off the harder pan earth below the silt, then establish a second point by which a separate surface can be created. This deeper surface will represent the as-constructed pre-use basin and will provide another tool to estimate the amount of sediment that has accumulated.
- The purpose of utilizing both the single and the dual frequency equipment is that the dual frequency echosounder is larger than the single and requires more depth to operate efficiently. The dual frequency echosounder requires a minimum of three foot of water depth. If the side slope is at three to one slope, then as much as 10 foot of the perimeter of the pond can not be covered. The hard pan surface in this gap will be interpolated based on the single frequency data and the asbuilt drawings.
- IngenAE will collect conventional topographic survey shots along the perimeter of the ponded water beginning at a depth of approximately 2 feet below the water up through any vegetation on the banks to a crest or clear area. The bathymetric data will then be merged with the conventional survey shots collected along the perimeters and tied to the acquired aerial digital topographic data to provide a master topographic map of the selected CCR impoundments.

We require a minimum of two IngenAE surveyors when performing bathymetric surveying and all surveying near ponded areas for safety and all persons must wear a USCG-approved personal floatation device (PFD) for safety.

#### Deliverables:

1. XL raw survey files.
2. Drawings depicting both surface and the calculated volume.
3. Brief Survey Report of procedures and results.

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 9**



Schiff Hardin LLP  
233 South Wacker Drive  
Suite 7100  
Chicago, IL 60606

---

T 312.258.5500  
F 312.258.5600

---

[schiffhardin.com](http://schiffhardin.com)

December 9, 2020

**Joshua R. More**  
(312) 258.5769  
[jmore@schiffhardin.com](mailto:jmore@schiffhardin.com)

**VIA E-MAIL AND CERTIFIED MAIL**

Andrea Rhodes  
Illinois EPA – Division of Water Pollution Control  
P.O. Box 19276  
Springfield, IL 62794-9276  
[Andrea.Rhodes@illinois.gov](mailto:Andrea.Rhodes@illinois.gov)

**Re: Violation Notice No. W-2020-00034**

Dear Ms. Rhodes:

I write on behalf of Illinois Power Resources Generating, LLC (“IPRG”) with respect to Violation Notice No. W-2020-00034, received on July 30, 2020 (the “Notice”). This letter provides the written response required by 415 ILCS 5/31(a)(5). IPRG previously responded in writing on September 14, 2020, and incorporates that response here. IPRG continues to respectfully deny the factual and legal allegations of the Notice. However, as discussed during the October 28, 2020 meeting between IPRG and the Illinois Environmental Protection Agency (“IEPA” or “Agency”), IPRG seeks a cooperative resolution of the Notice. Therefore, as outlined further below, a proposed Compliance Commitment Agreement is enclosed.

As IPRG explained in its prior communications and during the October 28 meeting, the GMF Recycle Pond is not designed to contain CCR. The GMF Recycle Pond is designed to capture water from the GMF Pond *after* the CCR has settled in the GMF Pond. Accordingly, the GMF Recycle Pond is not “designed to hold an accumulation of CCR and liquids” and therefore is not a “CCR surface impoundment” and is not subject to fees under Section 22.59(j).

In its September 14 response, IPRG proposed a bathymetric study protocol, to be used to determine the volume of any sediment present in the GMF Recycle Pond. IPRG has now completed the proposed bathymetric study. As shown in Exhibit 1, comparing the survey results to as-built drawings of the unit, IPRG’s consultant, Geosyntec Consultants, Inc. (“Geosyntec”), has determined that sediments account for less than 500 cubic yards of the GMF Recycle Pond’s total volume of 160,900 cubic yards. In other words, Geosyntec concluded that sediments (which may or may not include CCR) make up only about 0.3% of the GMF Recycle Pond. As stated in Geosyntec’s report, the GMF Recycle Pond has never been dredged—so this is the most sediment that has ever been present in the unit during its operational life. Further, Geosyntec found no delta near the discharge channel inlet from the GMF Pond, meaning that inlet is not a source of sediment. Based on these facts, Geosyntec concluded that the GMF Recycle Pond was



Andrea Rhodes  
December 9, 2020  
Page 2

not designed to hold an accumulation of CCR and it does not treat, store, or dispose of CCR. Therefore, the unit is not a CCR surface impoundment, as defined in 415 ILCS 5/3.143.

While IPRG previously discussed sampling and laboratory analysis of sediment in the GMF Recycle Pond, given the extremely minor amounts of sediment identified by the bathymetric survey, and the lack of a delta near the GMF Pond's outfall, no such sampling or analysis is required. The lack of any appreciable sediments in the unit, particularly at the outfall point, clearly demonstrates that the GMF Recycle Pond was not designed to receive, contain, or store CCR. Thus, the GMF Recycle Pond is not a "CCR surface impoundment" and is not subject to fees under 415 ILCS 22.59(j).

The GMF Recycle Pond does not pose the types of risks that the Illinois Legislature sought to address when it passed P.A. 101-171. The GMF Recycle Pond is lined, has never received CCR directly, and contains no meaningful amounts of sediment. Geosyntec reviewed groundwater monitoring data for wells downgradient of the GMF Recycle Pond and determined that the unit does not present a reasonable probability of an adverse effect on human health or the environment. It is therefore inappropriate—as a matter of policy—to subject the GMF Recycle Pond to fees under 415 ILCS 22.59(j) and the onerous monitoring, permitting, and closure requirements of proposed 35 Ill. Adm. Code Part 845.

IPRG's steps to prove that the Duck Creek GMF Recycle Pond is not a "CCR surface impoundment" and is not subject to fees under Section 22.59(j), are described in IPRG's proposed Compliance Commitment Agreement, which is attached as Exhibit 2 to this letter. Because the unit is not a CCR surface impoundment, no further action is required to resolve the Notice.<sup>1</sup> IPRG looks forward to working with the Agency to close the GMF Recycle Pond, which it intends to do following approval of a closure plan for the CCR surface impoundments at the Duck Creek station under proposed Part 845.

Please contact me if the Agency has any questions regarding Geosyntec's report or IPRG's proposed CCA. We look forward to continued dialog with the Agency regarding this matter and remain committed to achieving a cooperative resolution of the Notice.

---

<sup>1</sup> As explained in IPRG's September 14 correspondence, should IEPA maintain that the GMF Recycle Pond is a CCR surface impoundment, subject to fees, it should be considered part of the larger GMF Recycle Pond system. Accordingly, in such a scenario, IEPA should treat the GMF Recycle Pond system consistently with other multi-unit impoundments currently subject to fee disputes under Section 22.59(j).



Andrea Rhodes  
December 9, 2020  
Page 3

Sincerely,

/s/ Joshua R. More

# **Exhibit 1**



134 N. La Salle Street, Suite 300  
Chicago, Illinois 60602  
PH 312.658.0500  
FAX 312.416.3919  
[www.geosyntec.com](http://www.geosyntec.com)

December 9, 2020

Mr. Victor Modeer, PE, D.GE  
Consulting Engineer  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

**Subject: *De minimis* Certification Letter for GMF Recycle Pond  
Duck Creek Power Station, Canton, Illinois**

Dear Mr. Modeer:

This letter summarizes Geosyntec's findings regarding whether the Gypsum Management Facility (GMF) Recycle Pond (Recycle Pond) at the Duck Creek Power Station ("DC Station"): (i) is designed to hold an accumulation of coal combustion residuals ("CCR"), (ii) assess the amount of sediment in the Recycle Pond, and (iii) assess whether the Recycle Pond presents a reasonable probability of an adverse effect on human health or the environment. In summary, it was found that the Recycle Pond is not designed to contain CCR, contains a *de minimis* amount of sediment, and does not present a reasonable probability of an adverse effect on human health or the environment.

John Seymour, P.E., of Geosyntec Consultants (Geosyntec), has reviewed several documents detailing the design, operations, construction, and environmental impacts of the Recycle Pond and applicable regulations. The following provides his understanding of the Recycle Pond and the reasoning to exclude the Recycle Pond from the proposed Part 845 regulations based upon pertinent proposed definitions, a site inspection conducted on December 1, 2020 by a Geosyntec Senior Civil Engineer, interviews with knowledgeable DC Station personnel, a bathymetric survey, and relevant documentation.

## **REGULATORY CRITERIA**

The Illinois Environmental Protection Agency (IEPA) proposed Part 845 "Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments" (IEPA, 2020) does not define "*de minimus*". Consequently, this analysis looks to United States Environmental Protection Agency (USEPA) guidance provided in the preamble to the federal CCR rule issued in 2015. In the preamble to the final rule, USEPA stated the following:

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 2

*... EPA agrees with commenters that units containing only truly “de minimis” levels of CCR are unlikely to present the significant risks this rule is intended to address.<sup>1</sup>*

And,

*EPA agrees with commenters that relying solely on the criterion from the proposed rule that the unit be designed to accumulate CCR could inadvertently capture units that present significantly lower risks, such as process water or cooling water ponds, because, although they will accumulate any trace amounts of CCR that are present, they will not contain the significant quantities that give rise to the risks modeled in EPA’s assessment.<sup>1</sup>*

The federal CCR rule’s definition of the term “CCR surface impoundment,” which Part 845 incorporates, sets forth the following three criteria<sup>2</sup>:

- (1) The unit is a natural topographic depression, manmade excavation or diked area;*
- (2) the unit is designed to hold an accumulation of CCR and liquid; and*
- (3) the unit treats, stores or disposes of CCR.*

## **RECYCLE POND BACKGROUND**

The DC Station is located southeast of Canton, Illinois. The Recycle Pond is located approximately 2.5 miles north of the generating station. Design drawings for the Recycle Pond were prepared by Hanson Professional Services, Inc. (Hanson), dated 2007. The Recycle Pond is 8.5-acres in plan area and is lined with a 60-mil HDPE geomembrane. The Recycle Pond is adjacent and hydraulically connected to the GMF Stack Pond via an overflow channel. It was constructed following the construction drawings, specifications and the construction quality assurance program prepared by Hanson.

## **DESIGN AND OPERATIONS**

The Recycle Pond was designed to receive “clear water” from the GMF Stack Pond<sup>2</sup> according to the History of Construction (HoC) Report for the GMF Stack Pond (AECOM, 2016). Appended to the HoC Report is the Operations and Maintenance Manual (O&MM), (Hanson, 2014). The O&MM supports this conclusion through the following statement in *italic font*:

---

<sup>1</sup> 81 Fed. Reg. 21,302, 21,357(April 17, 2015).

<sup>2</sup> AECOM HoC Report, Page 8.

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 3

*Clarified process water will then be siphoned or decanted to the recycle pond and returned to the Plant for reuse via pipeline. (Section 4.1, Operations Activities, Site Operations)*

And,

*The major components of the GMF consist of:*

- *The gypsum stack;*
- *The recycle pond;*
- *The HDPE-lined earthen transfer channel that connects the two structures, and through which clarified process water will be decanted from the gypsum stack into the recycle pond; and*
- *The recycle pond decant system and pump-house, through which process water will be returned to the Plant for reuse.*

From Section 4.4, Gypsum Management Facility Startup (Hanson, 2014). (underline emphasis added)

And,

*...clarified return water will be siphoned into the recycle pond using one of two redundant 10-inch diameter siphon pipelines. Water that flows from the gypsum stack to the recycle pond will be pumped back to the Plant for reuse, or recirculated to the top of the gypsum stack during periods when the plant is shutdown. (Section 4.5, Gypsum Management Facility operations, Hanson, 2014)*

*Clarified water will be transferred from the rim ditch to the perimeter ditch where it will be carried to the transfer channel for discharge to the recycle pond. (Section 4.5.2 Gypsum Dike and Cell Construction, Hanson, 2014)*

Water from the Recycle Pond was pumped to the station for use in the wet scrubber system. This water could not be used in the scrubber system at the plant if it contained undesirable sediment or CCR materials.

The Recycle Pond has never had to be dredged or cleaned out because of buildup of materials that could cause operational issues at the plant according to station personnel interviewed during the December 1, 2020 site inspection (Trip Report included in Attachment A).

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 4

## **BATHYMETRIC SURVEY RESULTS**

A bathymetric survey was conducted of the Recycle Pond in November of 2020 by IngenAE. Pond bottom surface elevation data was collected over the entire pond area including the slopes and bottom. Figure 1 displays the grades of the bathymetric survey. Figure 2 presents cross sections that show the 2020 grades. The grades on the bottom are very regular and flat with minor anomalies around the edges of the bottom.

A review of Figures 1 and 2 also indicates no significant sediment accumulation around the discharge channel inlet where the most sedimentation would have occurred if the unit was designed to receive CCR from the GMF Stack Pond. A slight flattening was found at the base of the slope opposite the discharge inlet and was estimated to be approximately 50 cuyd. Several other similar features (slope flattening or higher elevations of the bottom) occur around the perimeter of the base of the pond.

During the site inspection on December 1<sup>st</sup>, the water was clear and still, and a “dusting” of sediment could be observed on the floor and sides of the Recycle Pond. Significant accumulation was not seen.

The results of the bathymetric survey and site inspection indicate less than 500 cuyd of sediment that could have been caused by atmospheric dust accumulation.

Figure 3 is a calculation of the Recycle Pond water volume based on the water elevation of 607.35 ft. The pond volume is 160,900 cuyd. Therefore, the amount of possible sediment in the bottom of the Recycle Pond is approximately 0.3% of the total volume.

## **GROUNDWATER IMPACT**

The Recycle Pond is part of the on-going ground water monitoring program for the GMF Stack Pond. Monitoring wells are placed upstream and downstream of both ponds and monitored. The water collected from the sampling events is evaluated for various parameters and compared against the proposed Part 845 ground water protection standards (GWPS). Monitoring wells that are located downstream of the Recycle Pond were first sampled in January 2019 and the latest samples were collected in August 2020. The last quarterly groundwater monitoring report was provided to IEPA in November 2020 (Luminant, 2020) and displayed time series graphs of all of the data from 2018 through August 2020.

The results for over the past year show that the maximum concentrations of the dataset are below the GWPS. Only one sample (G72S) had an exceedance of pH on one occasion (July 2019).

Mr. Victor Modeer, PE, D.GE  
December 9, 2020  
Page 5

### CERTIFICATION

The observations and opinions presented herein are based on the information gathered by Geosyntec and others, using the due diligence ordinarily exercised under similar circumstances by competent members of the engineering profession. Based upon the review of documentation, a site inspection, interviews with DC Plant personnel, the bathymetric survey, and groundwater monitoring data, I have concluded the following:

1. The Recycle Pond was not designed to hold an accumulation of CCR.
2. The Recycle Pond does not treat, store nor is used for disposal of CCR.
3. The Recycle Pond is lined and there are no impacts above the maximum GWPS
4. The Recycle Pond does not present a reasonable probability of an adverse effect on human health or the environment.

Therefore, it should not be characterized as a CCR surface impoundment under the federal CCR rule and Part 845.

John Seymour, P.E., Senior Principal Engineer

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

  
December 9, 2020

Illinois P.E. 062.040562

cc: Joshua More, Schiff Hardin  
Collin Carson, Vistra Energy



Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 6

## REFERENCES

AECOM, History of Construction, USEPA Final CCR Rule, 40 CFR 257.73(s), Duck Creek Power Station, Canton, Illinois, 2016.

Hanson Professional Services, Inc., Operation and Maintenance Manual, Duck Creek Energy Center, Gypsum Management Facility, Fulton County, Illinois, Revised 2014.

Illinois Environmental Protection Agency Proposed “Part 845 “Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments”, March 30, 2020.

Luminant, Letter to Illinois Environmental Protection Agency, Duck Creek Power Plant, Gypsum Management Facility, Permit 2017-EO-62640, 3<sup>rd</sup> Quarter 2020 Groundwater Monitoring Report, November 25, 2020.

United States Environmental Protection Agency, “40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule”, April 17, 2015.

## FIGURES

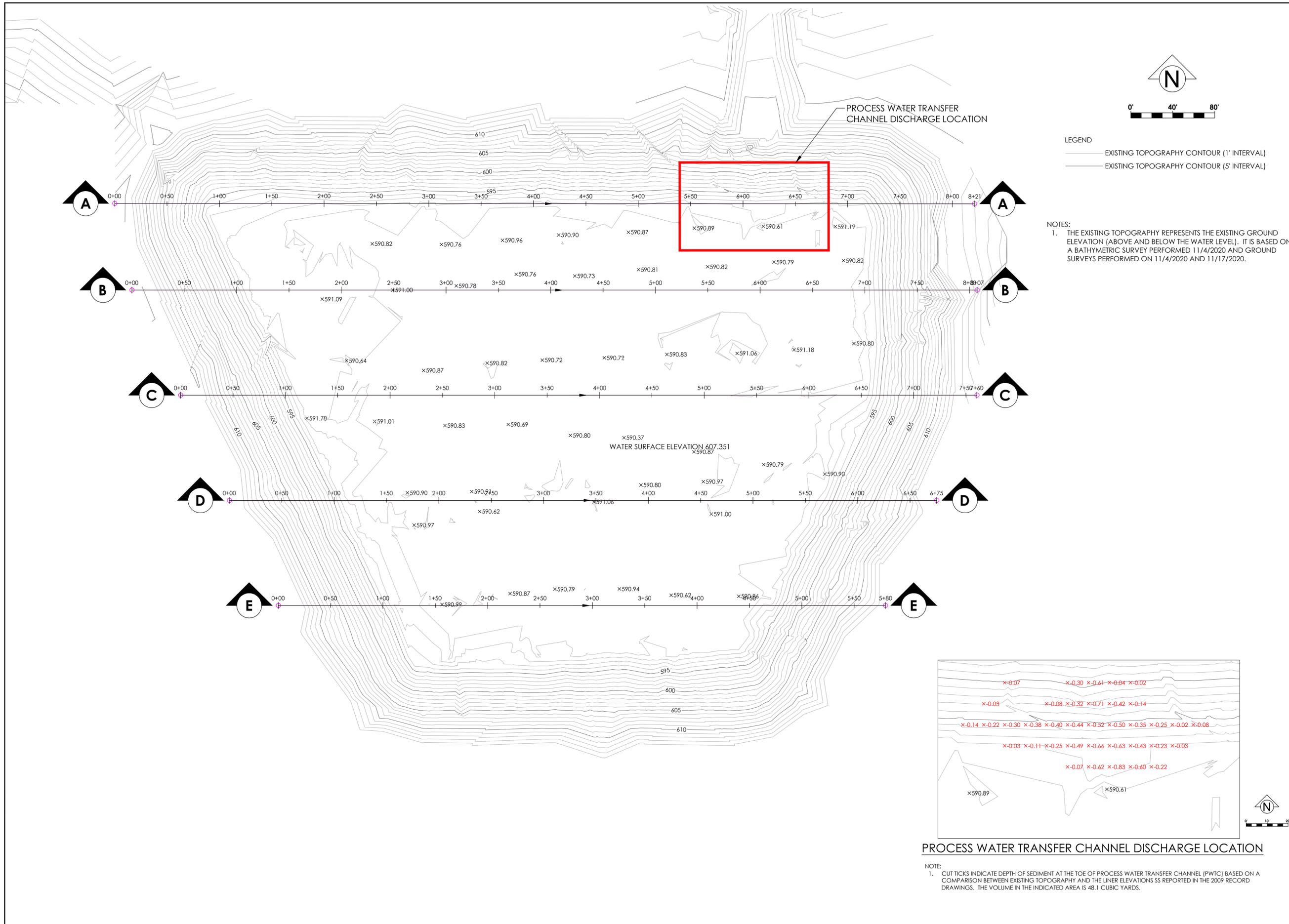
Figure 1: Existing Recycle Pond Topography

Figure 2: Recycle Pond Sections

Figure 3: Recycle Pond Water Volume Calculation



502 Earth City Plaza, Suite 120  
 Earth City, MO 63045  
 www.ingenae.com



Submissions / Revisions:	Date:
1	
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11	
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13	

Project Name & Location:  
**DUCK CREEK  
 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 EXISTING  
 TOPOGRAPHY**

Date:  
 12/8/2020

Project No.:

Type:  
 SITE

Drawing No.:

Drawn By:  
 CB

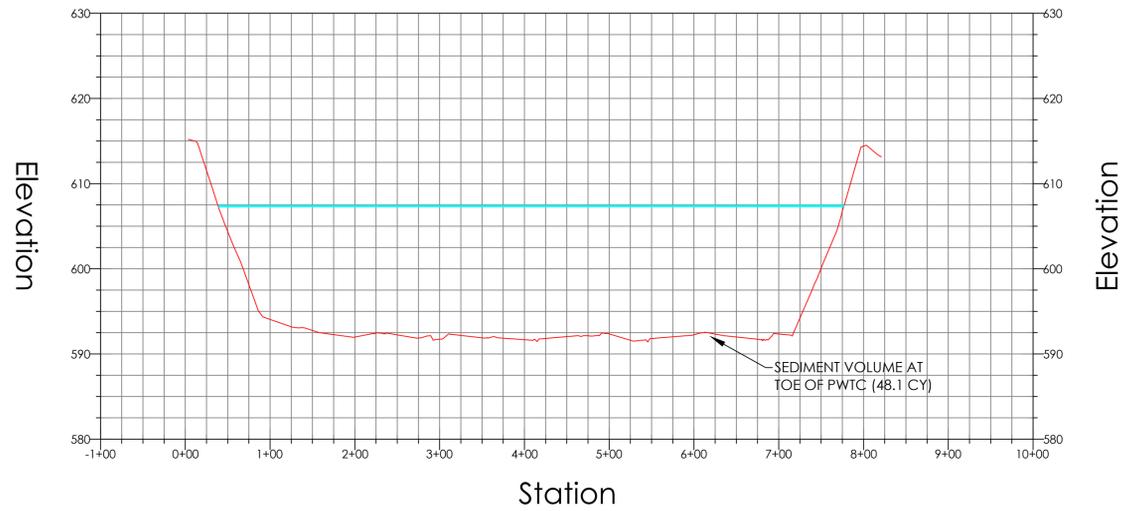
Approved By:  
 BH

Scale:  
 AS NOTED

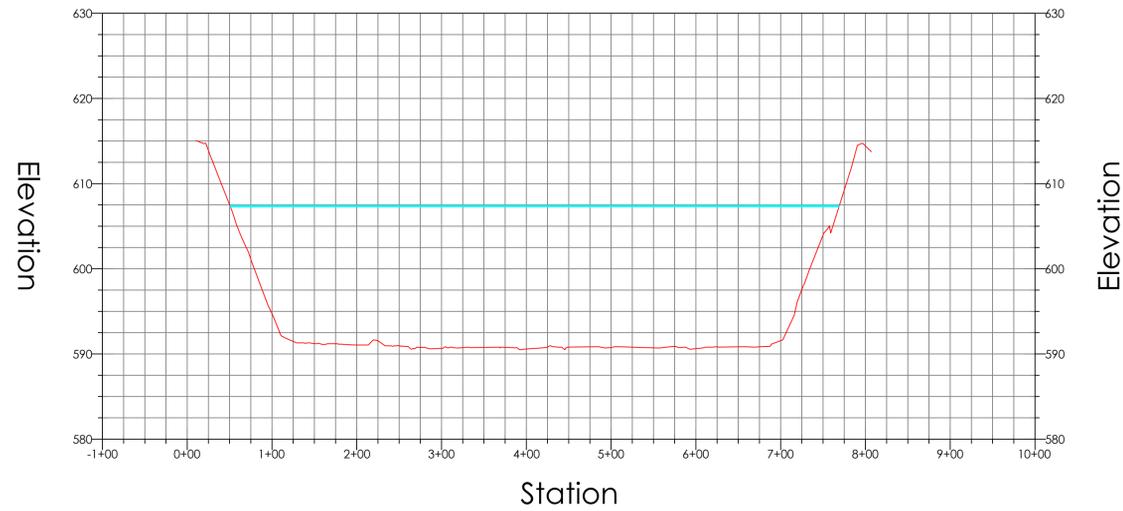


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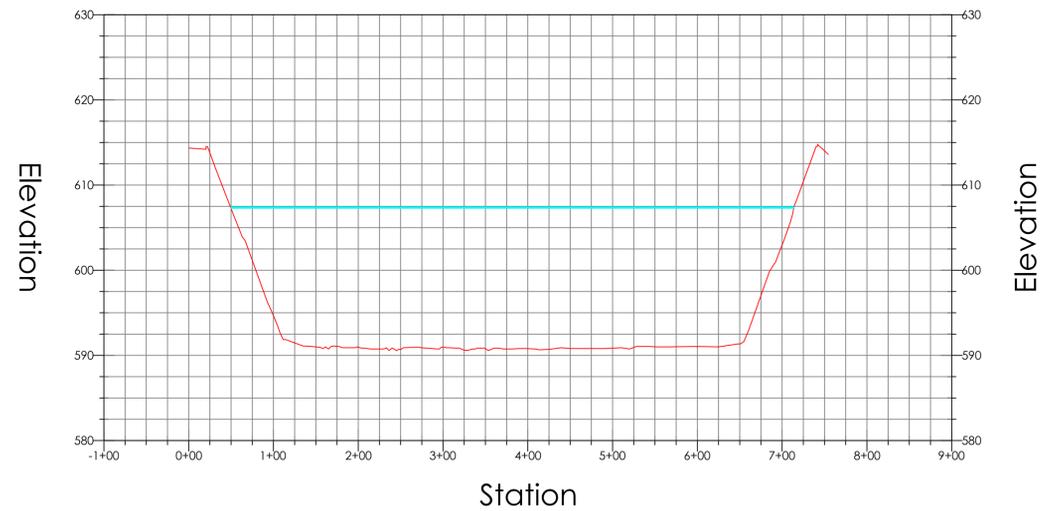
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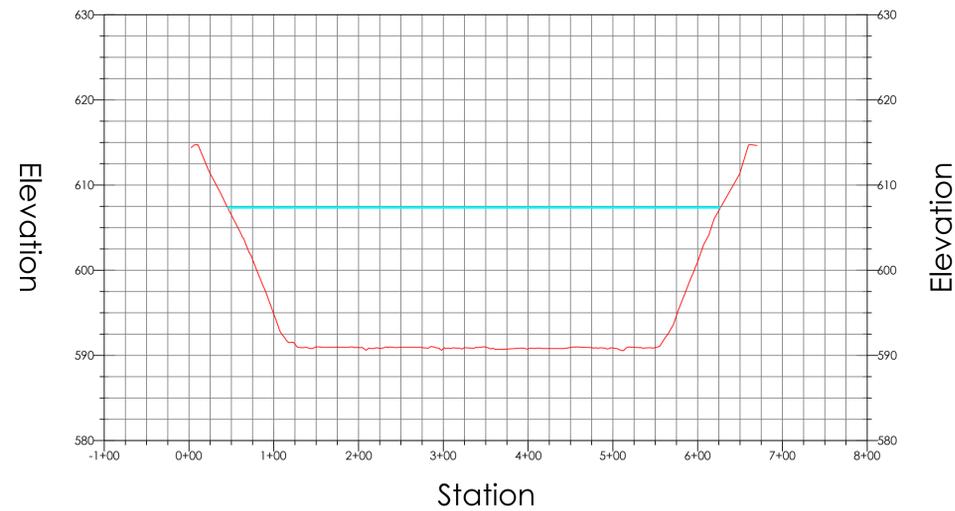
SECTION B (1,397,400N)



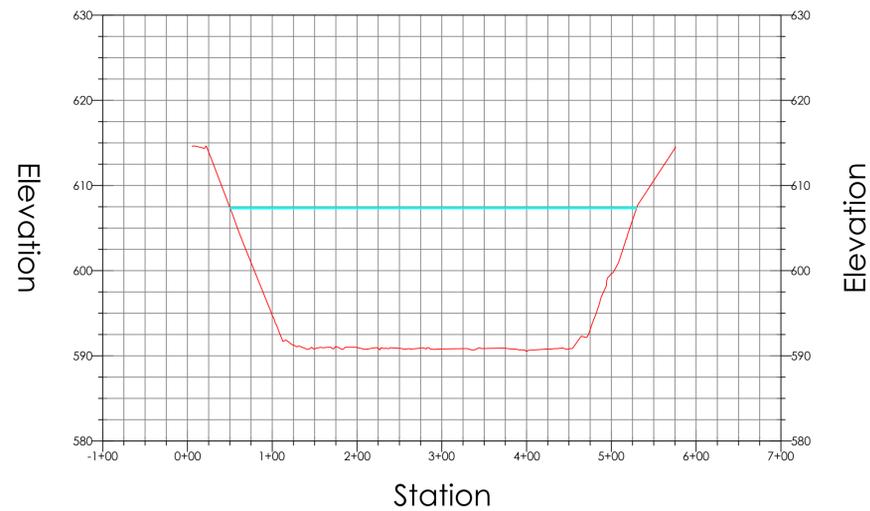
SECTION C (1,397,300N)



SECTION D (1,397,200N)



SECTION E (1,397,100N)



LEGEND

- EXISTING TOPOGRPAHY
- WATER ELEVATION

Submissions / Revisions:	Date:
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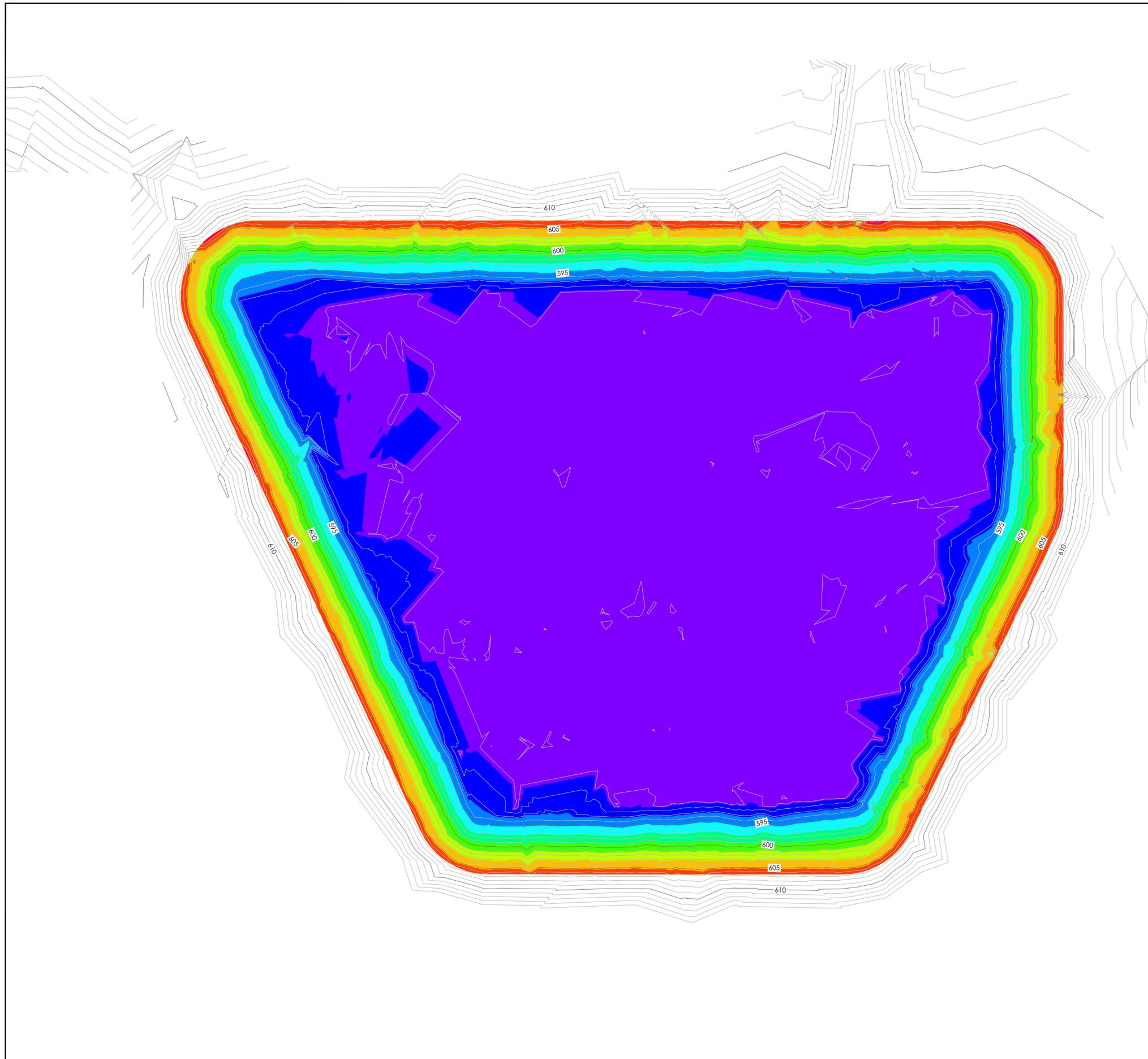
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 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 SECTIONS**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No.
Drawn By: CB	<b>2</b>
Approved By: BH	
Scale: AS NOTED	



LEGEND  
 ——— EXISTING TOPOGRAPHY CONTOUR (1' INTERVAL)  
 ——— EXISTING TOPOGRAPHY CONTOUR (5' INTERVAL)

NOTES:  
 1. VOLUME SUMMARY:  
 BASE SURFACE RECYCLE POND SURVEY  
 COMPARISON SURFACE WATER ELEVATION  
 CUT VOLUME 1.71 CU. YD.  
 FILL VOLUME 160,918.01 CU. YD.  
 NET VOLUME 160,916.29 CU. YD.<FILL>

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-2.000	0.000	Red
2	0.000	2.000	Orange
3	2.000	4.000	Yellow
4	4.000	6.000	Light Green
5	6.000	8.000	Green
6	8.000	10.000	Light Blue
7	10.000	12.000	Blue
8	12.000	14.000	Dark Blue
9	14.000	16.000	Indigo
10	16.000	18.000	Purple

NOTE: THE VOLUME OF WATER IN RECYCLE POND IS APPROXIMATELY 99.7 AC-FT BASED ON CURRENT WATER ELEVATION OF 607.35.



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Submissions / Revisions:	Date:
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 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 WATER VOLUME  
 CALCULATION**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No.
Drawn By: CB	<b>3</b>
Approved By: BH	
Scale: AS NOTED	

## **Exhibit 2**

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF: )  
 )  
 ) ILLINOIS EPA VN W-2020-00034  
 )  
 ILLINOIS POWER RESOURCE )  
 GENERATING, LLC )  
 )  
 ) BUREAU OF WATER  
 )

---

**COMPLIANCE COMMITMENT AGREEMENT**

**I. Jurisdiction**

1. This Compliance Commitment Agreement (“CCA”) is entered into voluntarily by the Illinois Environmental Protection Agency (“Illinois EPA”) and Illinois Power Generating Company (“Respondent”) (collectively, the “Parties”) under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/31(a)(7)(i).

**II. Alleged Violations**

2. Respondent operates the subject property located in Fulton County, Illinois.
3. Pursuant to Violation Notice No. W-2020-00034, issued on July 28, 2020 (the “VN”), the Illinois EPA contends that Respondent has violated the following provisions of the Act:
  - a. 415 ILCS 22.59(j)(1)

**III. Compliance Activities**

4. On September 14, 2020, the Illinois EPA received Respondent’s initial response to VN W-2020-00034. On December 9, 2020 Illinois EPA received Respondent’s supplemental response to VN W-2020-00034, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent’s responses and proposed CCA terms and considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations set forth in the VN.
5. Respondent has completed a bathymetric survey of the Duck Creek GMF Recycle Pond and has provided the Illinois EPA a De Minimis Certification Letter provided by Geosyntec Consultants, Inc. By signing this CCA, Respondent certifies that this investigation has determined that the GMF Recycle Pond is not designed to hold an accumulation of CCR.

6. The Illinois EPA agrees that the GMF Recycle Pond is not subject to fees under 415 ILCS 22.59(j).

#### **IV. Terms and Conditions**

7. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(1), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations alleged in VN W-2020-00034.
8. This CCA is solely intended to address the violations alleged in VN W-2020-00034. The Illinois EPA reserves, and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state, or local laws or regulations, including but not limited to the Act, the Board Regulations, or conditions of Respondent's Permit.
9. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of \$2,000 for violation of any of the terms or conditions of this CCA.
10. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's business or property.
11. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA and agrees not to contest the validity of this CCA or its terms and conditions.
12. This CCA shall become effective:

- a. If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to:

Mary F. Reed  
Manager, Compliance Assurance Section  
Illinois EPA, Division of Public Water Supplies  
1021 North Grand Ave. East  
Springfield, Illinois 62794

- b. Upon execution by all Parties.

If Respondent fails to execute and submit this CCA to the Illinois EPA by certified mail within 30 days of receipt, this CCA shall be deemed rejected by operation of law.

13. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

**[SIGNATURES APPEAR ON THE FOLLOWING PAGE]**

**AGREED:**

**FOR RESPONDENT:**

BY: \_\_\_\_\_  
Signature of Respondent or  
Authorized Representative

DATE: \_\_\_\_\_

\_\_\_\_\_  
Print or Type Name of Respondent  
or Authorized Representative and Title

**FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

BY: \_\_\_\_\_  
Signature of Respondent or  
Authorized Representative

DATE: \_\_\_\_\_

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 10**



Schiff Hardin LLP  
233 South Wacker Drive  
Suite 7100  
Chicago, IL 60606

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T 312.258.5500  
F 312.258.5600

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[schiffhardin.com](http://schiffhardin.com)

March 24, 2021

**Bina Joshi**  
(312) 258.5605  
[bjoshi@schiffhardin.com](mailto:bjoshi@schiffhardin.com)

**VIA E-MAIL AND CERTIFIED MAIL**

Andrea Rhodes  
Illinois EPA – Division of Water Pollution Control  
P.O. Box 19276  
Springfield, IL 62794-9276  
[Andrea.Rhodes@illinois.gov](mailto:Andrea.Rhodes@illinois.gov)

**Re: Violation Notice No. W-2020-00074**

Dear Ms. Rhodes:

I write on behalf of Illinois Power Resources Generating, LLC (“IPRG”) with respect to Violation Notice No. W-2020-00074 (the “Notice”). This letter provides the written response required by 415 ILCS 5/31(a)(5). For the reasons outlined below, in my February 8, 2021 letter, and on the call with the Illinois Environmental Protection Agency (“IEPA”) on March 3, 2021, IPRG respectfully continues to deny the factual and legal allegations of the Notice. IPRG also continues to seek a cooperative resolution of the Notice, and remains willing to resolve this matter through the Compliance Commitment Agreement enclosed with its February 8, 2021 letter or through other appropriate means mutually acceptable to IEPA and IPRG.

During our March 3, 2021 call, IEPA requested some additional information from IPRG related to the Bathymetric study conducted by Geosyntec Consultants, Inc. (“Geosyntec”) for the Duck Creek GMF Recycle Pond. The information sought includes (1) a copy of the trip report referenced in Geosyntec’s Bathymetric study findings, (2) information regarding whether the study included a comparison to the original or designed bottom of the pond, and (3) information regarding the margin of error / accuracy of equipment used for the study. Item (1) is included as Exhibit A to this letter. Items (2) and (3) are included in the March 9, 2021 letter from IngenAE, LLC, attached as Exhibit B to this letter.

If IEPA has any questions related to the additional information provided with this letter, please feel free to reach out. We hope this provides you with the information you need with respect to the GMF Recycle Pond and look forward to resolving this Notice amicably.



Sincerely,

*Bina Joshi*

/s/ Bina Joshi

cc: Josh More

## **Exhibit A**



134 N. La Salle Street, Suite 300  
Chicago, Illinois 60602  
PH 312.658.0500  
FAX 312.416.3919  
[www.geosyntec.com](http://www.geosyntec.com)

December 9, 2020

Mr. Victor Modeer, PE, D.GE  
Consulting Engineer  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

**Subject: *De minimis* Certification Letter for GMF Recycle Pond  
Duck Creek Power Station, Canton, Illinois**

Dear Mr. Modeer:

This letter summarizes Geosyntec's findings regarding whether the Gypsum Management Facility (GMF) Recycle Pond (Recycle Pond) at the Duck Creek Power Station ("DC Station"): (i) is designed to hold an accumulation of coal combustion residuals ("CCR"), (ii) assess the amount of sediment in the Recycle Pond, and (iii) assess whether the Recycle Pond presents a reasonable probability of an adverse effect on human health or the environment. In summary, it was found that the Recycle Pond is not designed to contain CCR, contains a *de minimis* amount of sediment, and does not present a reasonable probability of an adverse effect on human health or the environment.

John Seymour, P.E., of Geosyntec Consultants (Geosyntec), has reviewed several documents detailing the design, operations, construction, and environmental impacts of the Recycle Pond and applicable regulations. The following provides his understanding of the Recycle Pond and the reasoning to exclude the Recycle Pond from the proposed Part 845 regulations based upon pertinent proposed definitions, a site inspection conducted on December 1, 2020 by a Geosyntec Senior Civil Engineer, interviews with knowledgeable DC Station personnel, a bathymetric survey, and relevant documentation.

## **REGULATORY CRITERIA**

The Illinois Environmental Protection Agency (IEPA) proposed Part 845 "Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments" (IEPA, 2020) does not define "*de minimus*". Consequently, this analysis looks to United States Environmental Protection Agency (USEPA) guidance provided in the preamble to the federal CCR rule issued in 2015. In the preamble to the final rule, USEPA stated the following:

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 2

*... EPA agrees with commenters that units containing only truly “de minimis” levels of CCR are unlikely to present the significant risks this rule is intended to address.<sup>1</sup>*

And,

*EPA agrees with commenters that relying solely on the criterion from the proposed rule that the unit be designed to accumulate CCR could inadvertently capture units that present significantly lower risks, such as process water or cooling water ponds, because, although they will accumulate any trace amounts of CCR that are present, they will not contain the significant quantities that give rise to the risks modeled in EPA’s assessment.<sup>1</sup>*

The federal CCR rule’s definition of the term “CCR surface impoundment,” which Part 845 incorporates, sets forth the following three criteria<sup>2</sup>:

- (1) The unit is a natural topographic depression, manmade excavation or diked area;*
- (2) the unit is designed to hold an accumulation of CCR and liquid; and*
- (3) the unit treats, stores or disposes of CCR.*

## **RECYCLE POND BACKGROUND**

The DC Station is located southeast of Canton, Illinois. The Recycle Pond is located approximately 2.5 miles north of the generating station. Design drawings for the Recycle Pond were prepared by Hanson Professional Services, Inc. (Hanson), dated 2007. The Recycle Pond is 8.5-acres in plan area and is lined with a 60-mil HDPE geomembrane. The Recycle Pond is adjacent and hydraulically connected to the GMF Stack Pond via an overflow channel. It was constructed following the construction drawings, specifications and the construction quality assurance program prepared by Hanson.

## **DESIGN AND OPERATIONS**

The Recycle Pond was designed to receive “clear water” from the GMF Stack Pond<sup>2</sup> according to the History of Construction (HoC) Report for the GMF Stack Pond (AECOM, 2016). Appended to the HoC Report is the Operations and Maintenance Manual (O&MM), (Hanson, 2014). The O&MM supports this conclusion through the following statement in *italic font*:

---

<sup>1</sup> 81 Fed. Reg. 21,302, 21,357(April 17, 2015).

<sup>2</sup> AECOM HoC Report, Page 8.

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 3

*Clarified process water will then be siphoned or decanted to the recycle pond and returned to the Plant for reuse via pipeline. (Section 4.1, Operations Activities, Site Operations)*

And,

*The major components of the GMF consist of:*

- *The gypsum stack;*
- *The recycle pond;*
- *The HDPE-lined earthen transfer channel that connects the two structures, and through which clarified process water will be decanted from the gypsum stack into the recycle pond; and*
- *The recycle pond decant system and pump-house, through which process water will be returned to the Plant for reuse.*

From Section 4.4, Gypsum Management Facility Startup (Hanson, 2014). (underline emphasis added)

And,

*...clarified return water will be siphoned into the recycle pond using one of two redundant 10-inch diameter siphon pipelines. Water that flows from the gypsum stack to the recycle pond will be pumped back to the Plant for reuse, or recirculated to the top of the gypsum stack during periods when the plant is shutdown. (Section 4.5, Gypsum Management Facility operations, Hanson, 2014)*

*Clarified water will be transferred from the rim ditch to the perimeter ditch where it will be carried to the transfer channel for discharge to the recycle pond. (Section 4.5.2 Gypsum Dike and Cell Construction, Hanson, 2014)*

Water from the Recycle Pond was pumped to the station for use in the wet scrubber system. This water could not be used in the scrubber system at the plant if it contained undesirable sediment or CCR materials.

The Recycle Pond has never had to be dredged or cleaned out because of buildup of materials that could cause operational issues at the plant according to station personnel interviewed during the December 1, 2020 site inspection (Trip Report included in Attachment A).

Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 4

## **BATHYMETRIC SURVEY RESULTS**

A bathymetric survey was conducted of the Recycle Pond in November of 2020 by IngenAE. Pond bottom surface elevation data was collected over the entire pond area including the slopes and bottom. Figure 1 displays the grades of the bathymetric survey. Figure 2 presents cross sections that show the 2020 grades. The grades on the bottom are very regular and flat with minor anomalies around the edges of the bottom.

A review of Figures 1 and 2 also indicates no significant sediment accumulation around the discharge channel inlet where the most sedimentation would have occurred if the unit was designed to receive CCR from the GMF Stack Pond. A slight flattening was found at the base of the slope opposite the discharge inlet and was estimated to be approximately 50 cuyd. Several other similar features (slope flattening or higher elevations of the bottom) occur around the perimeter of the base of the pond.

During the site inspection on December 1<sup>st</sup>, the water was clear and still, and a “dusting” of sediment could be observed on the floor and sides of the Recycle Pond. Significant accumulation was not seen.

The results of the bathymetric survey and site inspection indicate less than 500 cuyd of sediment that could have been caused by atmospheric dust accumulation.

Figure 3 is a calculation of the Recycle Pond water volume based on the water elevation of 607.35 ft. The pond volume is 160,900 cuyd. Therefore, the amount of possible sediment in the bottom of the Recycle Pond is approximately 0.3% of the total volume.

## **GROUNDWATER IMPACT**

The Recycle Pond is part of the on-going ground water monitoring program for the GMF Stack Pond. Monitoring wells are placed upstream and downstream of both ponds and monitored. The water collected from the sampling events is evaluated for various parameters and compared against the proposed Part 845 ground water protection standards (GWPS). Monitoring wells that are located downstream of the Recycle Pond were first sampled in January 2019 and the latest samples were collected in August 2020. The last quarterly groundwater monitoring report was provided to IEPA in November 2020 (Luminant, 2020) and displayed time series graphs of all of the data from 2018 through August 2020.

The results for over the past year show that the maximum concentrations of the dataset are below the GWPS. Only one sample (G72S) had an exceedance of pH on one occasion (July 2019).

Mr. Victor Modeer, PE, D.GE  
December 9, 2020  
Page 5

### CERTIFICATION

The observations and opinions presented herein are based on the information gathered by Geosyntec and others, using the due diligence ordinarily exercised under similar circumstances by competent members of the engineering profession. Based upon the review of documentation, a site inspection, interviews with DC Plant personnel, the bathymetric survey, and groundwater monitoring data, I have concluded the following:

1. The Recycle Pond was not designed to hold an accumulation of CCR.
2. The Recycle Pond does not treat, store nor is used for disposal of CCR.
3. The Recycle Pond is lined and there are no impacts above the maximum GWPS
4. The Recycle Pond does not present a reasonable probability of an adverse effect on human health or the environment.

Therefore, it should not be characterized as a CCR surface impoundment under the federal CCR rule and Part 845.

John Seymour, P.E., Senior Principal Engineer

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

*John Seymour*  
December 9, 2020

Illinois P.E. 062.040562

cc: Joshua More, Schiff Hardin  
Collin Carson, Vistra Energy



Mr. Victor Modeer, PE, D.GE

December 9, 2020

Page 6

## REFERENCES

- AECOM, History of Construction, USEPA Final CCR Rule, 40 CFR 257.73(s), Duck Creek Power Station, Canton, Illinois, 2016.
- Hanson Professional Services, Inc., Operation and Maintenance Manual, Duck Creek Energy Center, Gypsum Management Facility, Fulton County, Illinois, Revised 2014.
- Illinois Environmental Protection Agency Proposed “Part 845 “Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments”, March 30, 2020.
- Luminant, Letter to Illinois Environmental Protection Agency, Duck Creek Power Plant, Gypsum Management Facility, Permit 2017-EO-62640, 3<sup>rd</sup> Quarter 2020 Groundwater Monitoring Report, November 25, 2020.
- United States Environmental Protection Agency, “40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule”, April 17, 2015.

## FIGURES

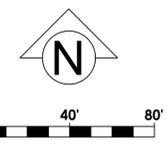
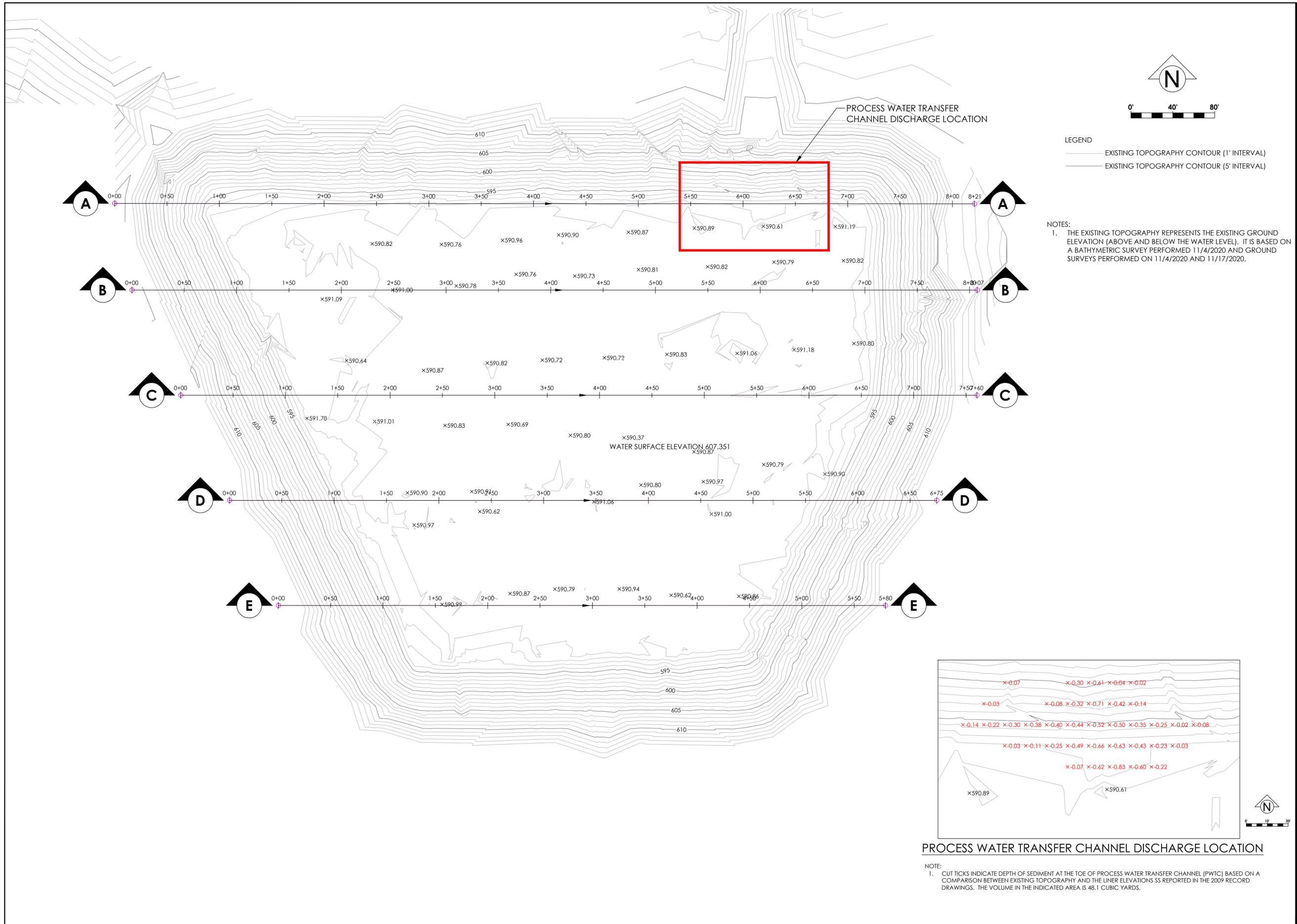
Figure 1: Existing Recycle Pond Topography

Figure 2: Recycle Pond Sections

Figure 3: Recycle Pond Water Volume Calculation



502 Earth City Plaza, Suite 120  
 Earth City, MO 63045  
 www.ingenae.com



LEGEND  
 — EXISTING TOPOGRAPHY CONTOUR (1' INTERVAL)  
 — EXISTING TOPOGRAPHY CONTOUR (5' INTERVAL)

NOTES:  
 1. THE EXISTING TOPOGRAPHY REPRESENTS THE EXISTING GROUND ELEVATION (ABOVE AND BELOW THE WATER LEVEL). IT IS BASED ON A BATHYMETRIC SURVEY PERFORMED 11/4/2020 AND GROUND SURVEYS PERFORMED ON 11/4/2020 AND 11/17/2020.

Submissions / Revisions:	Date:
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Project Name & Location:  
**DUCK CREEK  
 POWER PLANT**

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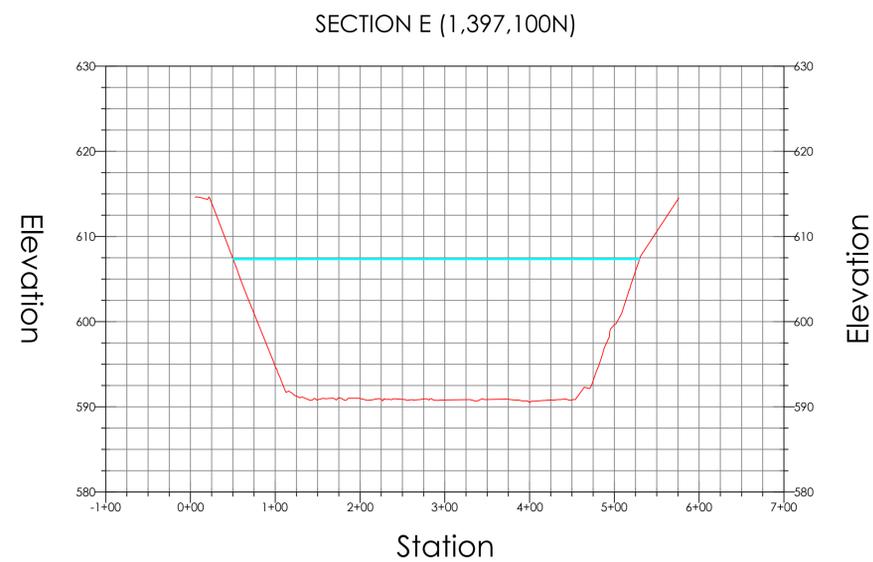
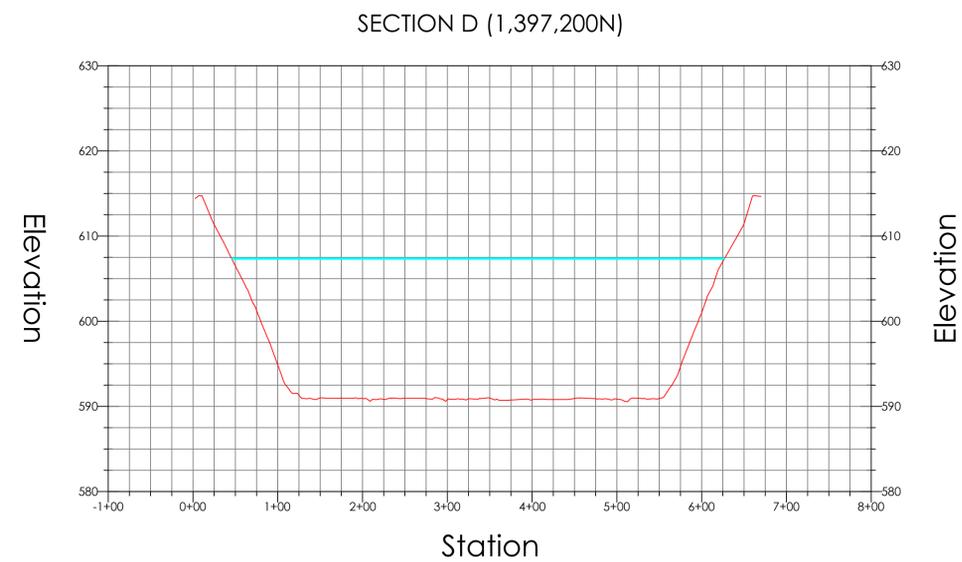
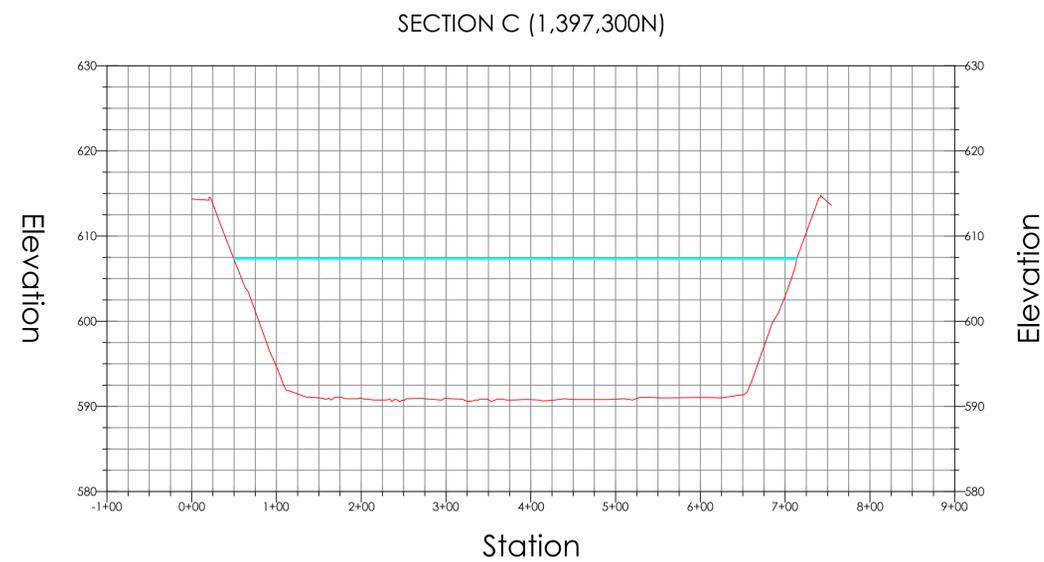
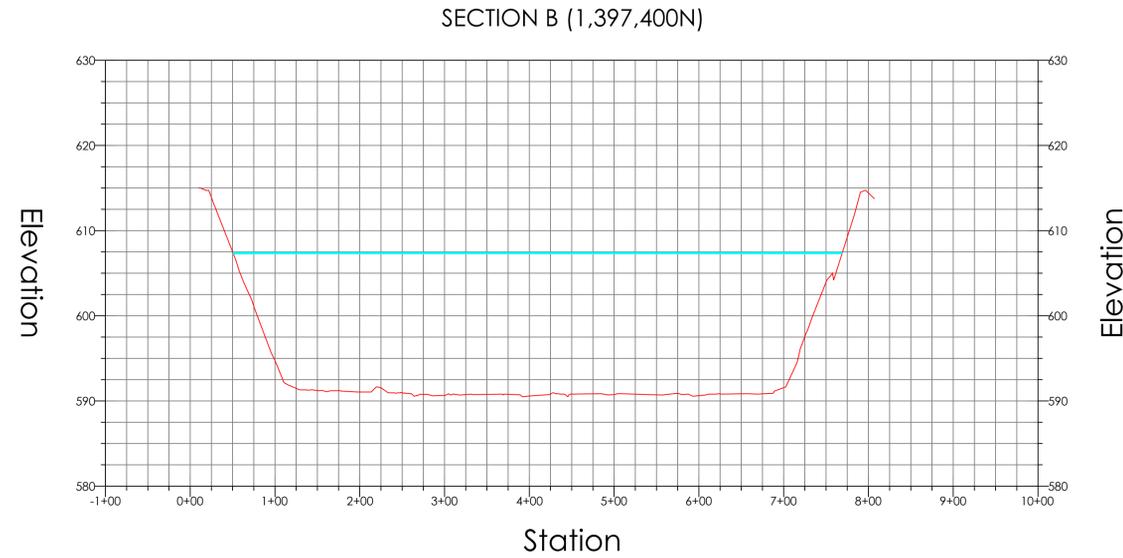
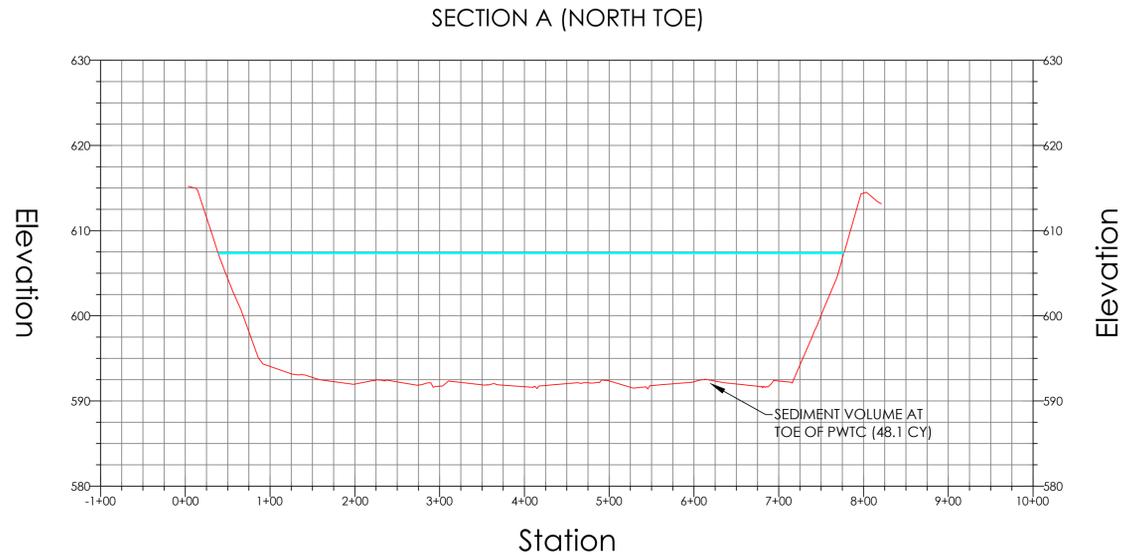
Drawing Name:  
**RECYCLE POND  
 EXISTING  
 TOPOGRAPHY**

Date: 12/8/2020  
 Project No.:  
 Type: SITE  
 Drawing No.:  
 Drawn By: CB  
 Approved By: BH  
 Scale: AS NOTED

NOTE:  
 1. CUT TICKS INDICATE DEPTH OF SEDIMENT AT THE TOE OF PROCESS WATER TRANSFER CHANNEL (PWTC) BASED ON A COMPARISON BETWEEN EXISTING TOPOGRAPHY AND THE LINER ELEVATIONS SS REPORTED IN THE 2009 RECORD DRAWINGS. THE VOLUME IN THE INDICATED AREA IS 48.1 CUBIC YARDS.



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 Earth City, MO 63045  
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**LEGEND**  
— EXISTING TOPOGRPAHY  
— WATER ELEVATION

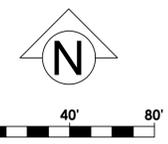
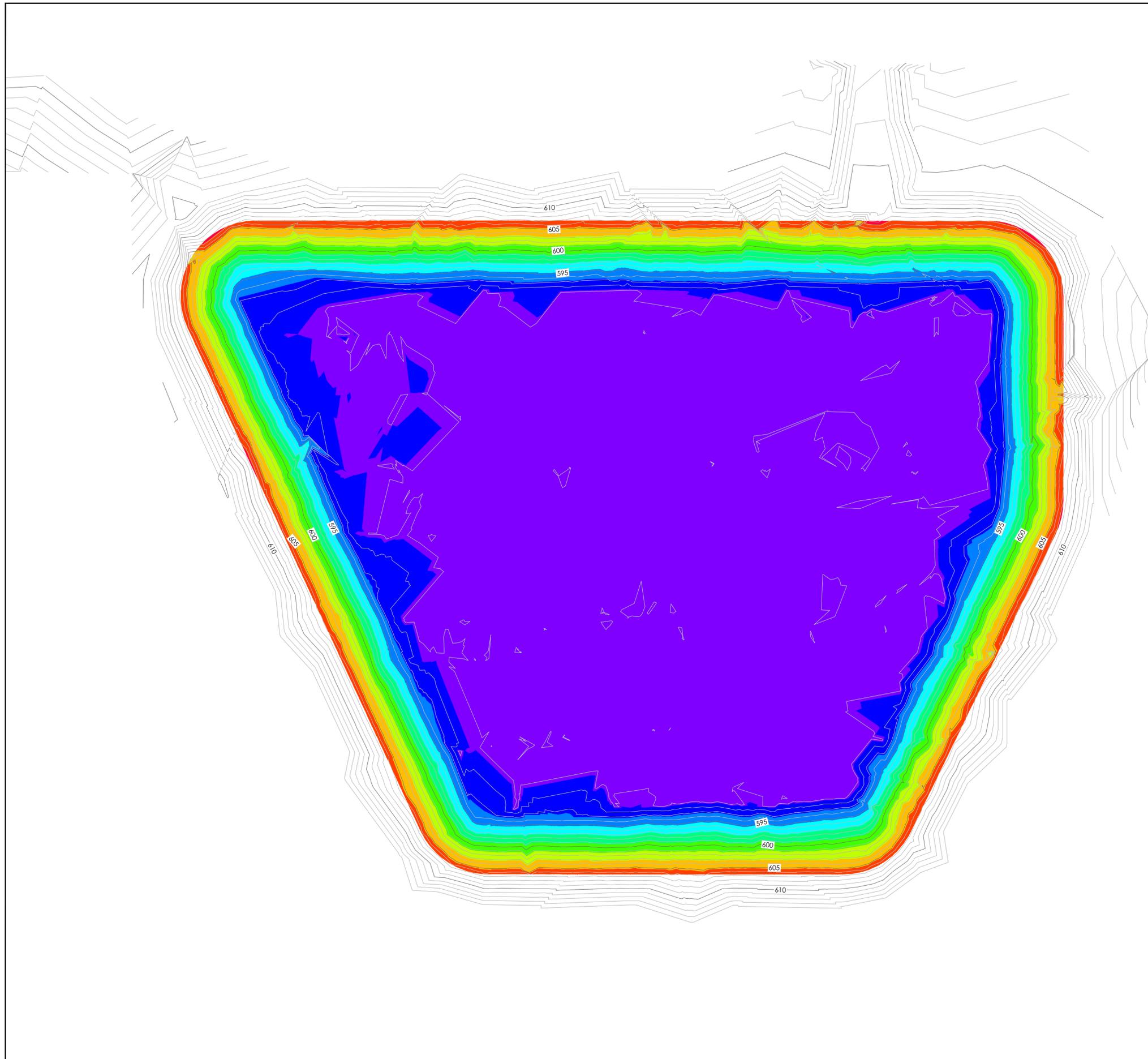
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Project Name & Location:  
**DUCK CREEK  
 POWER PLANT**

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Drawing Name:  
**RECYCLE POND  
 SECTIONS**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No.
Drawn By: CB	<b>2</b>
Approved By: BH	
Scale: AS NOTED	



LEGEND  
 ——— EXISTING TOPOGRAPHY CONTOUR (1' INTERVAL)  
 ——— EXISTING TOPOGRAPHY CONTOUR (5' INTERVAL)

NOTES:  
 1. VOLUME SUMMARY:  
 BASE SURFACE RECYCLE POND SURVEY  
 COMPARISON SURFACE WATER ELEVATION  
 CUT VOLUME 1.71 CU. YD.  
 FILL VOLUME 160,918.01 CU. YD.  
 NET VOLUME 160,916.29 CU. YD.<FILL>

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-2.000	0.000	Red
2	0.000	2.000	Orange
3	2.000	4.000	Yellow
4	4.000	6.000	Light Green
5	6.000	8.000	Green
6	8.000	10.000	Light Blue
7	10.000	12.000	Cyan
8	12.000	14.000	Blue
9	14.000	16.000	Dark Blue
10	16.000	18.000	Purple

NOTE: THE VOLUME OF WATER IN RECYCLE POND IS APPROXIMATELY 99.7 AC-FT BASED ON CURRENT WATER ELEVATION OF 607.35.

**IngenAE**  
 502 Earth City Plaza, Suite 120  
 Earth City, MO 63045  
 www.ingenae.com

Submissions / Revisions:	Date:
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Project Name & Location:  
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Drawing Name:  
**RECYCLE POND  
 WATER VOLUME  
 CALCULATION**

Date: 12/8/2020	Project No.
Type: SITE	Drawing No. <b>3</b>
Drawn By: CB	
Approved By: BH	
Scale: AS NOTED	

<b>Daily Field Report</b>		
<b>Project and Site Information</b>		
<b>Project:</b> Duck Creek Power Station	<b>Date:</b> December 1, 2020	<b>Report No.:</b> 001
<b>Description:</b> Recycle Pond Support	<b>Project No.:</b> GLP8016	<b>Task No.:</b> 01
<b>Client:</b> Schiff Hardin, Vistra Energy	<b>Location:</b> Canton, Illinois	
<b>General Contractor (GC):</b> N/A	<b>GC Superintendent:</b> N/A	
<b>Onsite Specialty Contractors:</b> None		
<b>CQA Officer:</b> N/A	<b>Onsite Representative:</b> Nathan Higgerson (Geosyntec)	
<b>Weather:</b> Clear, 40s	<b>Rain Gauge Reading:</b> N/A <b>Staff Gauge Reading:</b> N/A	
<b>Distribution List:</b> Project File		

<b>Geosyntec Onsite Personnel</b>				
<b>Name</b>	<b>Position</b>	<b>Arrival</b>	<b>Departure</b>	<b>Hours</b>
Nathan Higgerson	Project Manager	12:30 PM	02:30 PM	2.0

<b>Vistra Personnel</b>				
<b>Name</b>	<b>Position</b>	<b>Arrival</b>	<b>Departure</b>	<b>Hours</b>
Collin Carson	PM		01:00 PM	
Brandon Potter	Supervisor			
Daryl Johnson	Supervisor			

<b>Equipment List</b>			
<b>Description</b>	<b>Qty.</b>	<b>Model No.</b>	<b>Comments</b>

<b>Description of Work</b>
<p>1230 – Arrived on site and met with Daryl, Brandon, and Collin. We discussed the GMF Recycle Pond current operational status and how it has been used over the last few years. Currently the GMF stack pond is not receiving any gypsum material since the plant is shut down. The Recycle Pond receives water from the Gypsum Stack pond that has decanted and contains no gypsum. During the operational life of the pond that Daryl and Brandon were around for they don't recall anytime that the Recycle Pond directly or indirectly received and gypsum or CCR materials. Both recalled that the Recycle Pond supply water to the plant during its life and had no issues delivering the clean water required by the AQCS system's in the plant. They both recalled that the Recycle Pond had never been cleaned or dredged out during its operational life.</p> <p>1300 – Drove to the Recycle Pond and walked the perimeter berm. During the walk around I notice the water was clear in the Recycle Pond and there appeared to be no evidence of CCR materials being placed in the pond. The HDPE liner was in good shape on the interior slopes of the pond. There was no flow coming into the Recycle Pond from the GMF Stack Pond. A photo log is attached.</p> <p>1420 – Offsite</p>

<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8016	<b>Page No.:</b> 2 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

<b>Review and Approval</b>		
<b>Report Prepared By</b>	<b>Signature</b>	<b>Date</b>
<u>Nathan Higgerson</u> <u>Project Manager</u>		December 1, 2020
<b>Reviewed by</b> John Seymour, PE		

Attachments: Photo Log

<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8019	<b>Page No.:</b> 3 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

**Photo 1** Duck Creek Recycle Pond Discharge Line Valves, pump house and Recycle Pond in the background (looking east)



**Photo 2** Duck Creek Recycle Pond (looking east).



<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8019	<b>Page No.:</b> 4 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

**Photo 3** Duck Creek Recycle Pond on the left and GMF Stack Pond on the right (looking east)



**Photo 4** Duck Creek Recycle Pond Pump House and haul road on right (looking south)



<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8019	<b>Page No.:</b> 5 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

**Photo 5** Duck Creek Recycle Pond north interior slope (looking south)



**Photo 6** Duck Creek Recycle Pond Fill Pipes in the northwest corner (looking southeast)



<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8019	<b>Page No.:</b> 6 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

**Photo 7** Duck Creek Recycle Pond North Interior Slope (looking south)



**Photo 8** Duck Creek Recycle Pond North Interior slope (looking west)

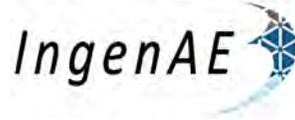


<b>Project:</b> Recycle Pond Support	<b>Project No.:</b> GLP8019	<b>Page No.:</b> 7 of 7
<b>Onsite Representative:</b> Nathan Higgerson	<b>Report No.:</b> 001	<b>Date:</b> December 1, 2020

**Photo 9** Duck Creek Recycle Pond Waterline on the North Slope



## **Exhibit B**



502 Earth City Expressway, Suite 120, St. Louis, Missouri 63045  
Phone 314-739-0906 ♦ Fax 314-739-0910 ♦ E-mail mgraminski@ingenae.com

March 9, 2021

Mr. Collin Carson  
Vistra Energy  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

RE: Survey Report of November 2020 Data Collection Activities  
Duck Creek Gypsum Recycle Pond Bathymetric survey  
Fulton County, Illinois

Dear Mr. Carson:

On November 4 and 5, 2020, IngenAE performed a Topographic and Bathymetric survey of the Gypsum Recycle Pond at the Duck Creek Power Station. This letter will serve as a brief procedural report for that event.

IngenAE surveyed the existing conditions of the area within the containment banks of the Gypsum Recycle Pond, including the containment banks themselves, to develop an existing conditions surface and perform a volume calculation between the existing conditions surface and the bottom of gypsum within the pond as denoted by the as-built liner topography supplied by Vistra. The tasks included the following:

- Perform topographic ground survey of the perimeter containment berms and materials by use of a Trimble R8 GNSS System GPS unit.
- Perform a Bathymetric survey of the area beneath the ponded water to determine the existing surface of the bottom of the ponded area using a Trimble Hydrolite-TM portable hydrographic system attached to the R8 Receiver.
- Combine surveys to establish overall existing conditions surface of the overall pond.
- Calculate the approximate volume of sediment within the pond by comparing the existing conditions surface to the design containment pond bottom based on as-built data as supplied by Vistra.

A description of the data collection activities, including performance tolerances, is provided below. The topographic surfaces and volume calculations were previously transmitted in drawing format.

On the days of data collection, the weather was clear with winds less than 10 mph. The ambient temperature ranged from 46°F to 72°F. The Topographic Ground Surveying was performed with a Trimble R8 GNSS System GPS unit mounted on a range pole. To perform the Bathymetric Survey, the Trimble R8 was mounted on a Trimble Hydrolite-TM portable hydrographic survey system, which incorporates GPS equipment with a Sonarmite system echosounder. The unit was mounted on a remote-controlled boat. IngenAE also collected conventional topographic survey shots along the perimeter of the ponded water beginning at a depth of approximately 2 feet below the water up to the

crest of the pond berm. The bathymetric data was then merged with the conventional survey shots collected along the perimeters and acquired aerial digital topographic data to provide a master topographic map of the Gypsum Recycle Pond.

### **Trimble R8 GNSS System**

The Trimble R8 GNSS (Global Navigation Satellite System) System has a static surveying precision of 3mm for a 3 second static observation. When operated in real time kinetics (RTK) the reported possible horizontal variant is 8mm and vertical variant is 15mm, which equates to approximately 0.03' horizontally and 0.06' vertically (See attached specifications). RTK was used for this project because it offers an instantaneous report and is typically used for topographic work and is ideal for use with the sonar equipment.

Besides equipment capabilities, there are environmental factors that may impact the accuracy of the collected data, namely, the availability of global navigation satellites, weather conditions, and presence of vegetative growth or man-made obstructions. Conditions on November 4 and 5, 2020 were very favorable for accurate data collection. During field collection activities, the GPS unit locked in to 16 to 18 satellites, which is at the upper end of the typical range of 13 to 18. Weather conditions were clear with winds less than 10 mph. The pond is located in an open area and unobstructed by vegetative growth, trees or manmade objects, which provided clear observation of the skies.

### **Trimble Hydrolite-TM Portable Hydrographic Survey System**

A Trimble Hydrolite-TM portable hydrographic survey system was used to perform a Bathymetric Survey of the areas with ponded water. The system incorporates the Trimble R8 with a Sonarmite system single frequency echosounder mounted on a remote-controlled boat. This setup collected a single string of points every 1 to 2 feet at designated transects to make the data set as dense as necessary. A typical sample survey transect has an approximate 25-foot spacing between survey lines. The navigation of the survey lines is performed via hydro software programmed to collect data along each transect at approximate 2-foot intervals. The bottom elevation data survey is then processed to overlap the data for quality control. The reported accuracy of the Echosounder is 1 cm (three-hundredths of a foot) at the encountered pond depths (see attached datasheet). As stated previously, environmental conditions were very favorable for accurate data collection: the skies were clear, and winds were light, which led to calm water conditions during the survey.

Should you have any questions concerning this report, please do not hesitate to contact the undersigned at (314) 705-0039.

Sincerely,

**IngenAE, LLC**



Michael J. Graminski  
Director of Land Surveying



Brian Horvath  
Vice President

# TRIMBLE R8 GNSS SYSTEM

## KEY FEATURES

Advanced satellite tracking with **Trimble 360 receiver technology**

Includes Trimble Maxwell 6 chips with **440 channels**

**Unmatched GNSS tracking performance**

**Web user interface** and remote configuration

Base and rover communications **options to suit any application**



## THE INDUSTRY LEADING TOTAL GNSS SOLUTION

The Trimble® R8 GNSS system has long set the bar for advanced GNSS surveying systems. Through advanced Trimble 360 tracking technology and a comprehensive set of communication options integrated into a flexible system design, this integrated GNSS system delivers industry-leading performance. For surveyors facing demanding RTK applications, the Trimble R8 is an invaluable GNSS partner.

## TRIMBLE 360 RECEIVER TECHNOLOGY

### Future-proof your investment

Powerful Trimble 360 receiver technology integrated in the Trimble R8 supports signals from all existing and planned GNSS constellations and augmentation systems providing unmatched GNSS tracking performance. With this leading-edge technology, it is now possible for surveyors to expand the reach of their GNSS rovers into areas that were previously too obscured, such as under trees and in dense urban areas.

With two integrated Trimble Maxwell™ 6 chips, the Trimble R8 offers an unparalleled 440 GNSS channels. Also capable of tracking carrier signals from a wide range of satellite systems, including GPS, GLONASS, Galileo, BeiDou (COMPASS), and QZSS, the Trimble R8 provides a robust solution for surveyors.

The CMRx communications protocol in the Trimble R8 provides unprecedented correction compression for optimized bandwidth and full utilization all of the satellites in view, giving you the most reliable positioning performance.

Designed with the future in mind, Trimble 360 technology is optimized to receive future planned signals as the number of available satellites continues to grow. With Trimble 360 technology, the Trimble R8 delivers business confidence with a sound GNSS investment for today and long into the future.

## FLEXIBLE SYSTEM DESIGN

The Trimble R8 combines the most comprehensive feature set into an integrated and flexible system design for demanding surveying applications. Connect directly to the controller, receive RTK network corrections, and connect to the Internet via comprehensive communication options. With a built-in transmit/receive UHF radio, the Trimble R8 enables ultimate flexibility for rover or base operation. As a base station, the internal NTRIP caster provides you customized access<sup>1</sup> to base station corrections via the Internet.

Trimble's exclusive Web UI™ eliminates travel requirements for routine monitoring of base station receivers. Now you can assess the health and status of base receivers and perform remote configurations from the office. Likewise, you can download post-processing data through Web UI and save additional trips out to the field.

## AN INDUSTRY LEADING FIELD SOLUTION

If you're seeking the industry leading field solution, pair the Trimble R8 GNSS receiver with one of our powerful Trimble controllers, such as the Trimble TSC3, Trimble CU or Trimble Tablet Rugged PC featuring Trimble Access™ field software. These rugged controllers bring the power of the office to the field through an intuitive Windows-based interface.

Trimble Access field software offers numerous features and capabilities to streamline the flow of everyday surveying work. Streamlined workflows such as Roads, Monitoring, Mines, and Tunnels—guide crews through common project types and allows crews to get the job done faster with less distractions. Survey companies can also implement their unique workflows by taking advantage of the customization capabilities available in the Trimble Access Software Development Kit (SDK).

Need to get data back to the office immediately? Benefit from real-time data sharing via Trimble Access Services, now available with any valid Trimble Access maintenance agreement.

Back in the office, seamlessly transfer your field data using Trimble Business Center. Edit, process, and adjust collected data with confidence.

The Trimble R8 GNSS system—the industry leader for GNSS surveying applications.

<sup>1</sup> Cellular modem required.



# Seafloor™ datasheet

## HydroLite™ Single Frequency Echosounder Kit

### About

The HydroLite-TM™ should be included in every survey and engineering company's standard equipment kit for hydrographic surveying. Developed to meet requirements for the U.S. Army Tactical Dive Teams, the rugged, wireless HydroLite-TM™ looks and feels like your traditional survey instrument. It quickly measures and logs depths more accurately than standard systems, making fast work of ponds, rivers, lakes and more.



Bathymetric Image using single beam Echosounder Image

### Benefits

- ▶ Portable, integrated hydrographic survey solution
- ▶ Adaptable to any vessel
- ▶ Wireless data transfer direct to data collector
- ▶ Meets IP-65 standards
- ▶ Quickly export XYZ data



HydroLite-TM™ in lake.



HydroLite-TM mounted on HyDrone-ASV



Rugged Shipping Case



### Scope of Supply

- ▶ HydroLite-TM Echosounder Kit
- ▶ HydroLite Boat Mount/Pole Kit
- ▶ Rugged Shipping Case
- ▶ User Manual/ Training Manual
- ▶ 1 year support and warranty

### Options

- ▶ GNSS Receiver
- ▶ Data Collector/Software
- ▶ PC Data Acquisition
- ▶ Digital Bar Check/Sound Velocity
- ▶ Tide Gauge
- ▶ Telemetry - Vehicle to Shore

### Echosounder

- ▶ Frequency: 200 KHz
- ▶ Beam Width: 9°
- ▶ Ping Rate: 6 Hz w/ 2Hz output
- ▶ Depth Accuracy: 1cm/ 0.1% of depth
- ▶ Output formats: NMEA, ASCII, ODOM, ATLAS
- ▶ Range: 0.3m - 75m
- ▶ I/O: Serial, Bluetooth
- ▶ Power: Rechargeable 12V Battery
- ▶ Compatibility: Trimble, Leica, Topcon, Sokkia, Epoch, Carlson, HYPACK, QPS, EIVA, PDS 2000.

# Seafloor™ datasheet

## HydroLite-DFX™ Dual Frequency Echosounder Kit

### About

The HydroLite-DFX™ is a portable dual frequency echosounder. The system combines both low frequency (30 kHz) and high frequency (200 kHz) transducers in one unit enabling penetration through soft sediments to detect hard bottom classification as well as detection of the surface layer. The unique design is also a helpful tool for bottom classification.

### Benefits

- ▶ Portable, integrated hydrographic survey solution
- ▶ Dual frequency
- ▶ Adaptable to any vessel
- ▶ Bluetooth and serial data transfer
- ▶ Meets IP-65 standards
- ▶ Quickly export XYZ data

### Scope of Supply

- ▶ HydroLite-DFX Echosounder Kit
- ▶ HydroLite Boat Mount/Pole Kit
- ▶ Rugged Shipping Case
- ▶ User Manual/ Training Manual
- ▶ 1 year support and warranty

### Options

- ▶ GPS/GNSS Receiver
- ▶ Digital bar check
- ▶ Tide Gauge
- ▶ Motion Sensor

### Echosounder

- ▶ Frequency: 200/30 kHz
- ▶ Beam Width: 9°/20°
- ▶ Ping Rate: 6 Hz w/ 2Hz output
- ▶ Depth Accuracy: 1cm/ 0.1% of depth
- ▶ Output formats: NMEA, ASCII, ODOM, ATLAS
- ▶ Range: 0.3 m - 200 m
- ▶ Transducer Cable: 5 m
- ▶ Power: External 12-18 vdc
- ▶ Compatibility: All Data Collectors & Acquisition Software



Sonarmite™ DFX Echosounder



Rugged Peli-type shipping case

**Seafloor Systems, Incorporated**

4415 Commodity Way | Shingle Springs, CA 95682 | USA

530-677-1019 | [info@seafloorsystems.com](mailto:info@seafloorsystems.com) | [www.seafloorsystems.com](http://www.seafloorsystems.com)

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 11**



**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217-785-0561

April 6, 2021

CERTIFIED MAIL # 7019 1120 0001 3038 7511  
RETURN RECEIPT REQUESTED

Illinois Power Resource Generating, LLC  
c/o Phil Morris  
1500 Eastport Plaza Drive  
Collinsville, IL 62234

**Re: Notice of Non-Issuance of Compliance Commitment Agreement**  
**Violation Notice: W-2020-00074**  
**Facility ID.: 6376; ILLINOIS POWER RESOURCE GENERATING, LLC –**  
**DUCK CREEK STATION**

Dear Mr. Morris:

The Illinois Environmental Protection Agency (“Illinois EPA”) has reviewed the proposed Compliance Commitment Agreement (“CCA”) terms submitted by Illinois Power Resource Generating, LLC – Duck Creek Station in letters dated February 8, 2021 and March 24, 2021, in response to the Violation Notice dated December 16, 2020, and has decided not to issue a proposed CCA for these violations. Due to the nature and seriousness of the violations, the Illinois EPA has determined that these violations may not be able to be resolved without the involvement of the Office of the Attorney General or the State’s Attorney.

Because the violations remain the subject of disagreement between the Illinois EPA and Illinois Power Resource Generating, LLC – Duck Creek Station, this matter will be considered for referral to the above-referenced prosecutorial authorities for formal enforcement action and the imposition of penalties.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to Illinois EPA, Attn. Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702.

Sincerely,

Mary F. Reed  
Manager, Compliance Assurance Section  
Division of Public Water Supplies  
Bureau of Water

cc: Bina Joshi  
Joshua R. More

BOW ID: W0578010001

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 12**

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

**NOTICE OF FILING**

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board a **NOTICE OF FILING** and **PRE-FILED ANSWERS** on behalf of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

Respectfully submitted,

Dated: August 3, 2020

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY,

Christine Zeivel  
Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276  
(217) 782-5544

Petitioner,

BY: /s/ Christine Zeivel  
Christine Zeivel

**THIS FILING IS SUBMITTED ELECTRONICALLY**

5. **How does Illinois EPA distinguish between "inactive CCR surface impoundments at active and inactive electric utilities or independent power producers" and landfills that contain CCR at these same facilities? See: Proposed Sections 845.100(c) and 845. 100(h).**

Response: CCR surface impoundments, by definition, are designed to hold liquids and CCR, landfills are not.

6. **Does the Coal Ash Pollution Prevention Act include the same exclusion for " landfills that receive CCR" that is in Illinois EPA's proposed Section 845.100(h)? If not, what is Illinois EPA's legal authority for this exclusion?**

Response: Section 22.59 of the Act is titled "CCR surface impoundments", contains requirements to which CCR surface impoundments are subject and makes no mention of landfills that receive CCR. Section 845.100(h) is a clarification that the Board rules mandated by Section 22.59 of the Act also pertain only to CCR surface impoundments.

7. **Do Illinois EPA's Proposed Regulations apply to all natural topographical depressions and man-made excavations where coal combustion residual has been disposed at power generating facilities?**

Response: No, Part 845 applies to CCR surface impoundments at electric utilities and independent power producers.

8. **Is Illinois EPA aware of any CCR surface impoundments not located at the 23 power generating facilities identified on pages 37 and 38 of its Statement of Reasons? If so, where are these off-site surface impoundments?**

Response: There are 10 CCR surface impoundments of which the Agency is aware that are off-site from the power generating facility they serve. These CCR surface impoundments are off-site from the Joliet 9 Station, south of Joliet, City Water Light and Power in Springfield and Southern Illinois Power Cooperative, south of Marion, by Lake of Egypt.

9. **If a CCR surface impoundment is outside of the property boundaries of a power generating facility (for example, on an adjacent or nearby property), will Illinois EPA's Proposed Regulations apply to this off-site surface impoundment?**

Response: If the hypothetical CCR surface impoundment is owned or operated by an electric utility or an independent power producer, Part 845 would be applicable.

- a. **If not, how is this exclusion consistent with the statutory mandate that "environmental laws should be supplemented to ensure consistent, responsible regulation of all existing CCR surface impoundments (415 ILCS 5/22.59(a)(4), emphasis added)?**

Response: Not applicable. Please see Response 9.

- b. **What steps has Illinois EPA taken to identify CCR surface impoundments that are not located at the 23 power generating facilities identified on pages 37 and 38 of its Statement of Reasons?**

Response: The Agency has not taken steps to identify CCR surface impoundments at facilities which are not utilities or independent power producers. According to USEPA in its Federal Registry entry for Part 257, located at 80 Fed. Reg. 21340, (Apr. 17, 2015), industries using coal to generate electricity and heat for their own use, consumed less than one percent of the coal burned. Hence, these industries would produce less than one percent of the CCR generated.

Section 22.59(a)(3) of the Act states, as a finding of the General Assembly, that the electrical generating industry has caused groundwater contamination at active and inactive plants throughout Illinois. Further, Section 22.59(g)(1) of the Act requires that the rules adopted pursuant to Section 22.59(g), be as protective and comprehensive as Subpart D of 40 CFR 257 governing CCR surface impoundments. It is the Agency's position that the same universe of CCR surface impoundments is intended to be regulated by Part 845. Based on this information, as drafted, Part 845 would regulate approximately 99% of the CCR generated and is consistent with the General Assembly's findings.

**10. How will Illinois EPA identify the CCR surface impoundments with the highest risk to public health and the environment, as required by 415 ILCS 5/22.59(g)(9)? Is this process set forth in the Proposed Regulations?**

Response: The required closure or retrofit of CCR surface impoundments is generally addressed in Section 845.700, with the specific prioritization in Section 845.700(g).

**11. Why are decisions about implementing interim measures delegated to owners and operators? Proposed Section 845.680(a)(3). Why isn't this an Illinois EPA authority and responsibility?**

Response: The Agency is responsible for reviewing and approving an overall corrective action plan. The interim measures being described here are actions expected of owners and operators to mitigate a situation prior to the completion of the formal approval process. For example: if an active CCR surface impoundment received damage to a liner system. The owner or operator could begin dewatering the impoundment prior to approval of the corrective action plan and permitting process to reduce the amount of leachate that could potentially impact groundwater.

**12. 415 ILCS 5/22.59(b)(1) prohibits the discharge of any contaminants from CCR surface impoundments into the environment" ... so as to cause, directly or indirectly, a violation of this Section or any regulations or standards adopted by the Board under this Section, either alone or in combination with contaminants from other sources." Dust control is specifically mandated by 415 ILCS 5/22.59(g)(10).**

**a. Under Illinois EPA's Proposed Regulations, does this provision apply to dust that originates from CCR surface impoundments in combination with other on-site and off- site sources that are also discharging dust?**

Response: No. CCR surface impoundments are separate from the other particles released to the air by surrounding facilities or other sources where the CCR surface impoundment

**a. Does the Agency consider existing groundwater quality standards under 35 Ill. Adm. Code pt. 620 to be “applicable state...water quality standard[s]?”**

Response: Yes

**b. Does the Agency consider existing groundwater protection standards under 40 C.F.R. Part 257 to be “applicable. . . federal water quality standard[s]?”**

Response: Yes

**c. Could you please identify all standards that the Agency considers to be “applicable state or federal water quality standard[s]?”**

Response: The Owner/Operator must comply with Sections 307 and 404 of the Clean Water Act, the Interagency Wetlands Policy Act of 1989, and the Rivers, Lakes, and Streams Act, 35 IAC Part 302 and 303, Part 620 and 40 CFR Part 257, as applicable. (Agency Response)

**d. Will the Agency take into account existing groundwater monitoring data from CCR surface impoundments covered by the Federal CCR Rule in determining whether “the construction and operation” of the impoundment “will not cause or contribute to any violation of any applicable state or federal water quality standard?”**

Response: Existing groundwater quality data would be taken into account for determining if a CCR surface impoundment already at that location meets the requirements of Section 845.310. For the construction of a new CCR surface impoundment, which is compliant with the proposed requirements of Part 845, Subpart D, existing groundwater water quality may not be relevant, because the design of the new CCR surface impoundment may be significantly different than a CCR surface impoundment not designed pursuant to Part 845, Subpart D. (Agency Response)

**i. If so, what monitoring results would lead the Agency to determine that operation of the impoundment “will not cause or contribute to any violation of any applicable state or federal water quality standard?”**

Response: Monitoring results of water quality will determine whether operation will not cause or contribute to any violation to an applicable standard. (Agency Response)

**e. Will the Agency take into account existing groundwater monitoring data from CCR surface impoundments not covered by the Federal CCR Rule in determining whether “the construction and operation” of the impoundment “will not cause or contribute to any violation of any applicable state or federal water quality standard?”**

Response: CCR surface impoundments not subject to Part 257, are not subject to the requirements of Part 845. (Agency Response)

**i. If so, what monitoring results would lead the Agency to determine that operation of the impoundment “will not cause or contribute to any violation of any applicable state or federal water quality standard?”**

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 13**

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
 ) No. R20-19  
 ) (Rulemaking-Land)  
 Standards for the Disposal )  
 of Coal Combustion )  
 Residuals in Surface )  
 Impoundments: Proposed new )  
 35 Ill. Adm. Code 845 )

REPORT OF THE PROCEEDINGS held in the  
 above entitled cause before Hearing Officer  
 Vanessa Horton, called by the Illinois Pollution  
 Control Board, taken by Steven Brickey, CSR, RMR,  
 for the State of Illinois, 1021 North Grand Avenue  
 East, Springfield, Illinois, on the 11th day of  
 August, 2020, commencing at the hour of 9:03 a.m.

1 MR. BONEBRAKE: In the units -- CCR  
2 units that are subject to the requirements of  
3 proposed Part 845, are they identified in  
4 Subsection's B and C of 845.100?

5 MR. DUNAWAY: Lynn Dunaway. Those  
6 CCR surface impoundments are identified in 100(b),  
7 (C) and (D).

8 MR. BONEBRAKE: I'm sorry. Did you  
9 say (D) as well?

10 MR. DUNAWAY: Yes.

11 MR. BONEBRAKE: Okay. Thank you.  
12 Are there any CCR units other than those  
13 identified in Subsection's B, C and D of 845.100  
14 that would be subject to any requirement under  
15 Part 845 as proposed?

16 MR. DUNAWAY: Lynn Dunaway. No.

17 MR. BONEBRAKE: Let's move first to  
18 Subsection B. Subsection B refers to new and  
19 existing CCR surface impoundments. Subsection C  
20 refers to inactive CCR surface impoundments and  
21 Subsection D refers to inactive CCR surface  
22 impoundments.

23 So all three subsections refer  
24 to CCR surface impoundments. So is it correct

1 MR. BONEBRAKE: So is it correct  
2 that the Illinois CCR Act in proposed Part 845  
3 defines CCR surface impoundment in identical ways?

4 MR. DUNAWAY: Lynn Dunaway. Yes.

5 MR. BONEBRAKE: And you are familiar  
6 with the federal CCR rule Part 257, which is the  
7 driver for this rulemaking and is it correct that  
8 that Part 257 also defines the term CCR surface  
9 impoundment?

10 MR. DUNAWAY: Lynn Dunaway. Yes.

11 MR. BONEBRAKE: And does Part 257  
12 define surface impoundment in a manner identical  
13 to the definition included in proposed Part 845,  
14 Section 120?

15 MR. DUNAWAY: Lynn Dunaway. Yes.

16 MR. BONEBRAKE: So is it IEPA's  
17 intent that its proposed Part 845 rules, like the  
18 Illinois CCR Act, will define CCR surface  
19 impoundments all in the same way?

20 MR. DUNAWAY: Lynn Dunaway. All CCR  
21 surface impoundments will be defined the same way.

22 MR. BONEBRAKE: And is it also  
23 correct then that IEPA's view is that the federal  
24 rules in Part 257 and the proposed state rules in

1 Part 845 will apply to the same CCR surface  
2 impoundments?

3 MR. DUNAWAY: Lynn Dunaway. Section  
4 22.59 of the act identifies two types of CCR  
5 surface impoundments and those are existing and  
6 those are new ones. Existing ones under 22.59 of  
7 the act is any CCR surface impoundment created  
8 after the executive date of the act and new ones  
9 are any created after the --

10 THE COURT REPORTER: Created what?

11 HEARING OFFICER HORTON: Would you  
12 repeat that, just the last part. Create what?

13 MR. DUNAWAY: New -- new CCR surface  
14 impoundments or any CCR surface impoundment  
15 created after the executive date of 22.59 of the  
16 act.

17 MR. BONEBRAKE: I think my question  
18 was a little different in that my question was is  
19 Part 845 intended to apply to the same ponds that  
20 are subject to requirements under Part 257 given  
21 that they both define CCR surface impoundments in  
22 an identical fashion?

23 MR. DUNAWAY: Lynn Dunaway. In the  
24 Agency's opinion, they will be the same ones.

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 14**

OFFICE OF THE ATTORNEY GENERAL  
STATE OF ILLINOIS

KWAME RAOUL  
ATTORNEY GENERAL

April 7, 2021

Kim Schultz  
Executive Director  
Joint Committee on Administrative Rules  
700 Stratton Building  
Springfield, IL 62706  
jcar@ilga.gov

Dear Director Schultz:

We are writing to further express the opposition of the Office of the Attorney General (“Office” or “AGO”) to Ameren’s proposed modifications of the Illinois Pollution Control Board’s (“Board”) Second Notice Proposed Regulations for Standards for the Disposal of Coal Combustion Residuals (“CCR”) in Surface Impoundments (35 Ill. Adm. Code 845) (“Part 845”). Ameren’s proposed modifications, previously submitted to the Joint Committee on Administrative Rules (“JCAR”) and filed with the Board on March 30, 2021, are attached hereto as Exhibit A. These comments supplement our earlier comment letter, sent to you on March 2, 2021, and attached hereto as Exhibit B. Specifically, these comments address Ameren’s unfounded legal argument that application of Part 845 to its closed impoundments would constitute an impermissible retroactive application of Section 22.59 of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/22.59.<sup>1</sup> To the contrary, Ameren’s proposed modifications would violate the Act’s plain language.

The “primary objective in construing a statute is to ascertain and give effect to the intent of the legislature, bearing in mind that the best evidence of such intent is the statutory language, given its plain and ordinary meaning.” *People v. Eppinger*, 2013 IL 114121, ¶ 21. “In addition to the statutory language, legislative intent can be ascertained from consideration of the statute in its entirety, its nature and object, and the consequences of construing it one way or the other.” *Id.*

These principles extend to issues of retroactivity. A statute may operate retroactively if that is what the General Assembly intended. *Landgraf v. USI Film Products*, 511 U.S. 244, 280 (1994); *Commonwealth Edison Co. v. Will Cty. Collector*, 196 Ill. 2d 27, 39 (2001) (adopting *Landgraf*

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<sup>1</sup> Section 22.59 of the Environmental Protection Act was created by Public Act 101-171, § 5, and became effective on July 30, 2019.

The only way for the Board to ensure that Part 845 is as “comprehensive and protective” as the federal regulations—as is plainly required by Section 22.59(g)(1) of the Act—is to reject Ameren’s proposed modifications, and to adopt Part 845 as proposed at second notice.

**2. Applying Part 845 to Ameren’s Impoundments is Not Retroactive, Let Alone Impermissibly So.**

Ameren has argued that Part 845 should not be fully applied to its closed impoundments because it would have a retroactive impact. Part 845’s prospective requirements for monitoring presently-contaminated groundwater, and providing appropriate post-closure care to impoundments closed in place, are not retroactive in effect. Moreover, even if Part 845’s requirements were considered retroactive as to previously-closed impoundments, they would be permissible because the General Assembly’s clear intent was that the State’s regulations have at least the same temporal scope as the federal regulations. *See People ex rel. Madigan v. J.T. Einoder, Inc.*, 2015 IL 117193, ¶ 29.

First, application of Part 845 to Ameren’s closed impoundments is not retroactive. “An amended statute will be deemed to have retroactive impact if application of the new statute would impair rights a party possessed when he acted, increase a party’s liability for past conduct, or impose new duties with respect to transactions already completed.” *Id.* at ¶ 30. The Part 845 regulations do not impair any rights of Ameren’s, because no party has a right to maintain groundwater contaminated by coal ash constituents from inadequately-lined impoundments. *See Tri-County Landfill Co. v. Illinois Pollution Control Bd.*, 41 Ill. App. 3d 249, 257 (2d Dist. 1976) (“No one even in the pursuit of an otherwise lawful business ever acquires a vested right to create or maintain a nuisance in connection therewith”). The regulations do not impose any liability for Ameren’s past conduct; rather, liability would be imposed only for a failure to comply with the regulations going forward. The regulations do not impose any new duties with respect to a completed “transaction” because, as demonstrated by the scope of requirements under the federal Part 257 regulations, the “transactions” here are not completed until all contaminated groundwater has met applicable groundwater quality standards.

Ameren has focused on “closure” as ending regulatory obligations for its impoundments. This is wrong factually and legally. Simply closing an impoundment by capping in place, or removing CCR from an impoundment, does not by itself immediately address already-contaminated groundwater. Neither does it fulfill all the requirements of the federal Part 257 regulations.

Second, even if applying Part 845 to Ameren’s closed impoundments were considered retroactive, it would not be impermissible. It would be required. The presumption against retroactivity in *Landgraf* and the Illinois cases that follow it is just that—a presumption of legislative intent. On the other hand, “if the legislature has clearly indicated the temporal reach of the amended statute, that expression of legislative intent must be given effect . . . .” *Einoder*, 2015 IL 117193, ¶ 29.

As discussed above, the General Assembly in Section 22.59(g)(1) clearly expressed its intent that the Board’s regulations have the same temporal scope as the federal Part 257 regulations. That means that any CCR surface impoundment in existence as of October 19, 2015 must be fully

regulated under Part 845. Ameren's proposed modifications to remove that date from Part 845 must be rejected.

Sincerely,



Andrew Armstrong  
Chief, Springfield Environmental Bureau  
500 South Second Street  
Springfield, IL 62706  
(217) 782-7968  
aarmstrong@atg.state.il.us

Stephen J. Sylvester  
Chief, Chicago Environmental Bureau  
69 West Washington Street, Suite 1800  
Chicago, IL 60602  
(312) 814-5396  
ssylvester@atg.state.il.us

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 15**

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

**FIRST SUPPLEMENT TO ILLINOIS EPA’S PRE-FILED ANSWERS**

NOW COMES the Illinois Environmental Protection Agency (Illinois EPA or Agency), by and through one of its attorneys, and submits the following information with respect to this first supplement to its pre-filed answers.

1. On March 30, 2020, the Illinois EPA filed a rulemaking, proposing new rules at 35 Ill. Adm. Code 845 concerning coal combustion residual surface impoundments at power generating facilities in the State.

2. Public Act 101-171, effective July 30, 2019, amended the Illinois Environmental Protection Act, by among other things, adding a new Section 22.59 (415 ILCS 5/22.59). Public Act 101-171 includes a rulemaking mandate in Section 22.59(g) which directs the Board to adopt rules “establishing construction permit requirements, operating permit requirements, design standards, reporting, financial assurance, and closure and post-closure care requirements for CCR surface impoundments.” 415 ICLS 5/22.59(g). The Board is required is adopt new rules for 35 Ill. Adm. Code part 845 by March 30, 2021.

3. The Agency timely filed pre-filed testimony for eight witnesses.

4. Based on the pre-filed testimony, Illinois EPA received over 1000 questions counting subparts.

5. On June 30, 2020, the Agency asked that it be granted until August 3, 2020 to respond to the pre-filed questions.

- a. **The preamble to the 2015 CCR Rule states that the CCR Rule must meet RCRA's requirement that there be "no reasonable probability of adverse effects on health or the environment" from the disposal of CCR in CCR surface impoundments, correct? (81 Fed. Reg. at 21,311).**

Response: Yes.

- b. **To be "at least as protective" as the CCR Rule, does Part 845 also need to ensure that CCR surface impoundments subject to Part 845 will not present a "reasonable probability of adverse effects on health or the environment"?**

Response: Part 845 must be at least as protective and comprehensive as Part 257.

3. **Is IEPA aware that U.S. EPA used a 2014 risk assessment (*Human and Ecological Risk Assessment of Coal Combustion Residuals*, Reg. ID No. 2050-AE81 (Dec. 2014)) to "estimate the resulting risks to human and ecological receptors" from CCR units? (See 80 Fed. Reg. at 21,433).**

Response: Yes.

- a. **Has IEPA reviewed that risk assessment?**

Response: No. The Agency is aware this document exists.

- b. **Did IEPA rely upon U.S. EPA's risk assessment to support its Part 845 proposal?**

Response: Only to the extent that USEPA's risk assessment was used by USEPA to develop the requirements of Part 257.

- c. **Does IEPA view U.S. EPA's risk assessment as sufficiently conservative? In other words, does the Agency believe that U.S. EPA adequately assessed and quantified the potential risks associated with CCR surface impoundments?**

Response: The Agency did not review the U.S. EPA's risk assessment.

- d. **If so, are there any risks that IEPA does not believe were adequately assessed in U.S. EPA's risk assessment?**

Response: See Response 3(c).

- e. **Has IEPA performed its own risk assessment to identify risks associated**

**with surface impoundments warranting regulation?**

Response: No.

**f. Are there any other risk assessments that IEPA relied on in developing its Part 845 proposal?**

Response: No.

**4. In its 2015 preamble for the CCR Rule, U.S. EPA stated that it “reviewed the risk assessment and the damage cases to determine the characteristics of the surface impoundments that are the source of the risks the rule seeks to address. Specifically, these are units that contain a large amount of CCR managed with water, under a hydraulic head that promotes the rapid leaching of contaminants.” (80 Fed. Reg. at 21,357.) Does IEPA agree that “units that contain a large amount of CCR managed with water, under a hydraulic head” are the “source of the risks” that Part 845 seeks to address? If not, why not?**

Response: Part 845 addresses CCR surface impoundments.

**5. How did IEPA identify the 73 surface impoundments listed in the Statement of Reasons? (Statement of Reasons at 37-38).**

Response: The Agency utilized Agency and publicly available records.

**6. Are Illinois landfills containing CCR subject to the Board’s rules governing landfills (e.g., 35 Ill. Adm. Code 810 – 815)?**

Response: They are; however, landfills are not proposed for regulation by Part 845.

**a. Do those rules include provisions to prevent and correct groundwater contamination?**

Response: Yes, but landfills are not proposed for regulation by Part 845.

**7. Are Illinois landfills containing CCR also subject to the requirements of the CCR Rule?**

Response: CCR landfills owned or operated by utilities and independent power producers are regulated by Part 257.

**a. Do those rules include provisions to prevent and correct groundwater contamination?**

Response: While the Agency is aware that certain provisions of Part

**Petition of Illinois Power Resources Generating, Inc.  
for an Adjusted Standard under  
35 Ill. Admin. Code Part 845**

**EXHIBIT 16**

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

<b>IN THE MATTER OF:</b>	)	
	)	
	)	
<b>STANDARDS FOR THE DISPOSAL OF</b>	)	<b>R20-19</b>
<b>COAL COMBUSTION RESIDUALS</b>	)	<b>(Rulemaking – Land)</b>
<b>IN SURFACE IMPOUNDMENTS:</b>	)	
<b>PROPOSED NEW 35 ILL. ADM. CODE 845</b>	)	

**Dynergy’s Prefiled Testimony**

1. Prefiled Testimony of Cynthia Vodopivec, Vice President, Environmental Health and Safety, Dynergy Midwest Generation, LLC & IPH, LLC
2. Prefiled Testimony of Lisa Bradley, Ph.D., DABT, Principal Toxicologist, Haley & Aldrich, Inc.
3. Prefiled Testimony of Melinda Hahn, Ph.D, Senior Managing Consultant, Ramboll
4. Prefiled Testimony of David Hagen, Principal Consultant, Haley & Alrich, Inc.
5. Prefiled Testimony of Andrew Bittner, P.E., Principal, Gradient
6. Prefiled Testimony of Mark Rokoff, P.E., Senior Vice President, AECOM
7. Prefiled Testimony of Rudolph Bonaparte, Ph.D, P.E., NAE, Senior Principal, Geosyntec Consultants, Inc.

Respectfully submitted,

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*Attorneys for Dynegy*

**Testimony 1:**  
**Cynthia Vodopivec**

**Prefiled Testimony of Cynthia Vodopivec**

**I. Introduction.**

My name is Cynthia Vodopivec and I am presenting testimony in this matter on behalf of Dynegy Midwest Generation, LLC; Electric Energy Inc.; Illinois Power Generating Company; Illinois Power Resources Generating, LLC; and Kincaid Generation, LLC (collectively, “Dynegy”). I am Vice President, Environmental Health and Safety at Dynegy Midwest Generation, LLC and IPH, LLC (the indirect corporate parent of Illinois Power Generating Company and Illinois Power Resources Generating, LLC). As part of my duties, I oversee permitting and regulatory development and compliance for air, water, and waste issues at Dynegy’s Illinois generating stations.

Dynegy supports the broad outlines of the Illinois Environmental Protection Agency’s (“IEPA” or the “Agency”) proposed regulations for CCR surface impoundments, to be codified at 35 Ill. Adm. Code Part 845 (“Part 845”). Specifically, Dynegy supports that, like the U.S. Environmental Protection Agency’s (“U.S. EPA”) regulations concerning the Disposal of Coal Combustion Residuals From Electric Utilities (“CCR Rule”),<sup>1</sup> the Agency’s Part 845 proposal allows for site-specific determinations for corrective action and closure of CCR surface impoundments. A site-specific approach—such as that provided under the CCR Rule at 40 C.F.R. § 257.96 and proposed by the Agency at Section 845.660 and 845.710—allows for both regulated entities and IEPA to take advantage of their substantial existing knowledge and prior study of CCR surface impoundments within the state to craft the closure and/or corrective action plan best suited for the unique characteristics of each site.

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<sup>1</sup> Initially adopted at 80 Fed. Reg. 21,302 (Apr. 17, 2015), codified at 40 C.F.R. §§ 257.50 – 257.107 & App’x I – IV.

My testimony addresses the following topics: (1) a summary of Dynegy's operations in Illinois; (2) background on the factual and regulatory context to which Part 845 will apply; (3) the status of the West Ash Pond at Dynegy's Joppa Steam Generating Plant; and (4) the ways in which IEPA's proposed Part 845 exceeds the requirements of the federal CCR Rule, imposing costly or impracticable requirements, often without associated environmental benefits.

In addition to my testimony, Dynegy is also presenting testimony from a number of outside experts, which provide general and specific comments on IEPA's Part 845 proposal and suggest a number of revisions:

Lisa Bradley – Dr. Bradley is a toxicologist and risk assessor at Haley & Aldrich whose testimony covers topics including CCR's regulation as a non-hazardous, non-toxic waste; the conservative and overly-protective nature of both the federal CCR Rule and Part 845; and some ways in which IEPA's Part 845 proposal goes beyond the CCR Rule.

Melinda Hahn – Dr. Hahn is a consultant with Ramboll focusing on site investigation and remediation. Dr. Hahn's testimony focuses on the scope of the impacts associated with impoundments in Illinois and their lack of risk to potable water sources.

David Hagen – Mr. Hagen is a hydrogeologist at Haley & Aldrich, whose testimony covers topics including using groundwater modeling to show how different closure methods may be used to achieve the proposed groundwater protection standards; how closure-in-place can be as protective as closure by removal; and how caps and monitored natural attenuation have been successful at mitigating groundwater contamination from CCR surface impoundments in Illinois.

Andrew Bittner – Mr. Bittner is a professional engineer at Gradient, whose testimony covers topics supporting the Section 845.710 alternatives analysis and the relative protectiveness of closure-in-place vs. closure-by-removal.

Mark Rokoff – Mr. Rokoff is a professional engineer and National Practice Lead for Coal Ash Management at AECOM, whose testimony covers topics including the prevalence of closure-in-place for CCR surface impoundments across the country; a comparison of the closure alternatives analyses under the CCR Rule and Part 845; and the permit application timeline under Part 845.

Rudy Bonaparte – Dr. Bonaparte is a professional civil engineer and Professor of the Practice in the School of Civil and Environmental Engineering at the Georgia Institute of Technology, whose testimony covers topics including the appropriate minimum design

years of data has already been gathered for all of Dynegy's units that are subject to the CCR Rule. There is no basis to disallow the use of this existing data, particularly because allowing its use would save owners/operators the burden and expense of acquiring new data to fulfill the requirements of Part 845.

Further, Dynegy recommends changes to Section 845.650(b)(1)(A), which requires all units—including units that have not previously been regulated by the CCR Rule—to gather eight independent samples in just 180 days following the rule's effective date. This data will be used to establish baseline and background conditions for each unit. By comparison, the CCR Rule allowed for two years to initially gather such data. 40 C.F.R. § 257.94(b). For CCR units that do not have existing groundwater data, because they are not currently regulated by the CCR Rule, (for example, those at Dynegy's Vermilion Power Station) this time period is not sufficient to gather a representative sample of groundwater conditions. Instead, at least eighteen to twenty-four months should be allowed to gather monitoring data at existing, but newly-regulated units, so that this initial data set will reflect normal seasonal variations in groundwater levels and flow patterns.

**c. Corrective Action**

Third, as discussed in Dr. Lisa Bradley's and David Hagen's testimonies, proposed Part 845 is significantly more stringent than the CCR Rule because corrective action under proposed Part 845 can be triggered on just a single exceedance (after confirmation) of a groundwater protection standard.

The CCR Rule employs a two-step process to monitor groundwater: detection monitoring and assessment monitoring. Under the CCR rule, first, a SSI in a monitored constituent triggers assessment monitoring, after which, in "Step 2," a SSL must be observed before corrective

action is triggered. 40 C.F.R. §§ 257.94-96. In contrast, Part 845 outlines a one-step groundwater monitoring process, whereby corrective action may be triggered on the first confirmed exceedance of a groundwater protection standard. Section 845.660(a)(1). As outlined in the testimony of David Hagen, because Part 845 departs from the CCR Rule's two-step process—specifically the use of statistical methods to identify exceedances—there is a high probability that IEPA's proposed groundwater monitoring provisions could trigger corrective action based on erroneous or insufficient sampling. Dynegy anticipates these additional, unwarranted, corrective measures could cost between \$2 million and \$20 million for each site. To ensure corrective action is triggered only where scientifically justified, Dynegy recommends, as outlined in the testimonies of Dr. Lisa Bradley and David Hagen, that corrective action be triggered only when there is a statistically significant level above a groundwater protection standard.

**d. Alternatives Analysis**

Fourth, as explained in Mark Rokoff and Andrew Bittner's expert testimony, proposed Part 845 is more stringent than the requirements in the CCR Rule with respect to evaluating closure options. Unlike the CCR Rule, which allows an owner/operator to select a closure method based on any criteria it chooses, IEPA's Part 845 sets forth the criteria that must be used for considering and evaluating closure options. While many of the criteria are consistent with how Dynegy has historically evaluated closure options, the prescriptive nature of Section 845.710 takes away some of the flexibility afforded under the CCR Rule to select a closure methodology best suited to each site. Each closure alternative analysis performed under Section 845.710 is expected to cost between \$500,000 and \$1 million.

**e. Closure**

Fifth, as explained in Dr. Rudy Bonaparte's testimony, the requirements for final covers for CCR surface impoundments under proposed Part 845 are substantially more stringent than under the CCR Rule. Under both rules, final covers consist of two layers—a low-permeability layer and a protective layer. The CCR Rule requires earthen low permeability layers to be at least 18 inches thick, with a protective layer of at least six inches. 40 C.F.R. § 257.102(d)(3). Part 845, in contrast, requires earthen low permeability layers to be twice as thick—36 inches—and protective layers to be six times as thick—36 inches. Section 845.750(c)(1)(A) & (c)(2)(B). In addition to thickness, IEPA's Part 845 proposal also requires final covers for CCR surface impoundments to be two orders of magnitude less permeable than those allowed under the CCR Rule. *Compare* Section 845.750(c)(1) (requiring final cover system with permeability no greater than  $1 \times 10^{-7}$  cm/sec) *with* 40 C.F.R. § 257.102(d)(3)(i)(A) (requiring final cover system with permeability no greater than  $1 \times 10^{-5}$  cm/sec). Because the majority of its sites lack sufficient native borrow material, Dynegy anticipates that a requirement to use 18-inches of additional earthen material in the cover system could cost up to \$50 – \$100 million, with no associated environmental benefit.

Dynegy therefore recommends—as explained in the testimony of Dr. Rudy Bonaparte—that the Board reduce the required thickness of the earthen low permeability layer and of the protective layer for units that close using a geomembrane. IEPA has previously approved closures with similar cap requirements.<sup>5</sup> For example, on January 30, 2018 IEPA approved a closure plan for Ash Pond 2 at the Coffeen Power Station that called for “40-mil LLDPE

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<sup>5</sup> First Supplement to IEPA's Prefiled Answers, Response to Dynegy Prefiled Question 81, at p. 54 (Aug. 5, 2020).

geomembrane, a geocomposite drainage layer, and a minimum 18-inch protective cover soil layer.” The Agency also approved a similar Closure Plan for the West Ash Pond System at the Hennepin Power Station. As discussed in the testimony of David Hagan, and consistent with prior Agency approvals, Dr. Bonaparte’s proposed revisions to the final cover system requirements are protective of human health and the environment.

**f. Post-Closure & Financial Assurance**

Finally, proposed Part 845 is more stringent than the requirements in the CCR Rule with respect to post-closure care. One example of this is Part 845’s requirement that financial assurance be provided for corrective action and/or closure of CCR surface impoundments in Illinois. The federal rule has no such requirements. Dynege expects to incur 1-2% a year in carrying costs associated with these financial assurance requirements. Across Dynege’s fleet, Part 845 could require hundreds of millions of dollars of financial assurance, meaning that annual carrying costs will likely be millions of dollars.

**VI. CONCLUSION**

As summarized in my testimony, revising IEPA’s Part 845 proposal to adhere more closely to the federal CCR Rule will help create a rule that is technically feasible and economically reasonable, while also ensuring the protection of human health and the environment. Exceeding the requirements of the CCR Rule, without clear scientific justification, is not in the interests of the State of Illinois, particularly the communities surrounding CCR surface impoundments. Unnecessary costs of compliance and burdens of closure could serve to discourage the transfer and redevelopment of closed generating stations, depriving the state and its residents of tax revenue and new jobs. It is imperative, therefore, that additional requirements

be enacted only where a demonstration has been made that the requirements are necessary to protect human health and the environment.

Dynegy has a history of working with the Agency to successfully close CCR surface impoundments in Illinois, and it looks forward to continuing that success under the Part 845 rules, once finalized. Dynegy appreciates the Board's efforts to solicit a complete record in this proceeding and looks forward to answering any questions that the Board and the other rulemaking participants may have.