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July 18, 2024
File: 21.0056983.00

Mr. George Streit
George.streit@nrg.com
Huntley Power LLC
3500 River Road
Tonawanda, NY 14150

Re: CCR Surface Impoundment Closure Plan – Revision 1
Huntley Generating Station South Settling Pond
Tonawanda, New York

Dear Mr. Streit:

GZA GeoEnvironmental of New York (GZA) presents this updated Surface Impoundment closure plan to Huntley Power LLC (Huntley) for the existing coal combustion residuals (CCR) surface impoundment located at the Huntley facility in Tonawanda New York (Site). This closure plan is a revision to the original closure plan filed in 2015 that is required by the United States Environmental Protection Agencies (USEPAs) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, as presented in the Federal Register Volume 80 No 74 dated April 17, 2015. In accordance with the CCR Rule (40 CFR §257.102(b)), owners/operators of a CCR unit must prepare a written closure plan that describes the steps necessary to close the CCR unit at any point during the active life of the CCR unit consistent with recognized and generally good engineering practices. This plan is considered Revision 1 and is the most current closure plan for the surface impoundment at the Site.

As specified in §257.102(b)), the closure plan must include, at a minimum, the information specified in paragraphs (b)(1)(i) through (vi) of section 257.102 and are addressed below.

Site Background

The CCR surface impoundment for the Site is identified as the South Settling Pond that was used for discharge of plant generated process water including CCR sluice water and non-CCR water associated from sump pumps, non-contact cooling water, storm water and other various sources. As of February 29, 2016, the facility eliminated discharge of the CCR sluice water into the South Pond; and discharging of plant-associated non-CCR water into the South Pond was eliminated in March 2021. The outfall for the South Pond is identified as Outfall 008 and is regulated under the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) permit #9-1464-00130/00003.

Additionally, the southern portion of the inactive Huntley Power Plant facility (including the southern settling pond) is currently enrolled in the NYSDEC Brownfield Cleanup Program (BCP) as Site# C915337. The Brownfield remedial remedy for the Site is currently being evaluated and will be done in conjunction with the requirements of this CCR closure plan.

The limits of the South Settling Pond are shown on the attached **Figure 1 – Site Plan**.
Information required by 40 CFR §257.102(b)(i) through (vi) for the required closure plan is as follows.

1. Narrative of Closure - §257.102(b)(1)(i)

The Huntley CCR surface impoundment (identified as the South Settling Pond) will be closed by removal of the CCR and decontamination of the CCR unit. The closure will be performed in accordance with §257.102(c) that will also comply with its NYSDEC permit specific requirements (e.g., SPDES, BCP, etc.). Specifically, §257.102(c) states that "*CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to § 257.95(h) for constituents listed in appendix IV to this part*".

As the Site outfall #008 will be removed and backfilled with appropriate fill material, the final ground surface of the remediated pond area will be sloped in a direction to allow surface runoff drainage to flow towards one of the other permitted SPDES outfalls at the Site. The closure activities will include grading fill material to acceptable grades for closure. In accordance with 257.102(b)(3) this plan will be amended to provide additional details after the final closure design has been completed as this initial plan is based on the best available information to date.

2. CCR Removal and Decontamination – §257.102(b)(1)(ii)

CCR from the Huntley surface impoundment will be removed in accordance with §257.102(c). A description of the proposed procedures to remove the CCR and decontaminate the CCR unit is presented below. We note that the potential exists for legacy CCR materials (i.e., those materials placed at the Site prior to the construction of the settlement pond) to be present beyond the limits of the existing CCR impoundment banks. Therefore, the remediation of legacy CCR materials beyond the limits of the pond embankments will be addressed under the legacy cleanup activity requirements and will not be done as part of the CCR impoundment closure, as specified by §257.102(c).

Per 40 CFR §257.102, CCR removal and decontamination of a CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed, and groundwater monitoring concentrations do not exceed the groundwater protection standard (GPS) established pursuant to § 257.95(h) for constituents established by the CCR Rule.

To meet this requirement at the South Settling Pond, wet mechanical dredging would be employed with visual confirmation of removal of material to native soil or to the extents of legacy CCR material beyond the banks of the pond. Based on an assumed average dept bottom-cut elevation of 545 feet AMSL, dredging would remove approximately 116,00 cy of CCR impacted material. After completion of the dredging, the impoundment would be backfilled to approximate elevation of about 575 feet AMSL using a clean imported fill material (e.g., clean soil available from nearby construction sites, recycled/crushed concrete, etc.). The process would involve removal of sediment-free pond water via displacement during backfilling activities. The water would be discharged in accordance with discharge SPDES limits through the permitted outfall 008, after which the outfall would be decommissioned and removed/backfilled.

Mechanical dredging involves the removal of sediment with equipment that penetrates and accumulates the sediment in a bucket or scoop-like device, then removes the sediment without adding excess water. It is performed using clamshell, dragline or other types of buckets suspended from cables and from hydraulically operated arms/booms that have varying ranges of articulation and movement (e.g., land-or barge mounted cranes). After the sediment is scooped from the bed of the water body, it is lifted by the bucket through the water column. Mechanical dredging may result in entrainment of water during the process, but addition of water is generally limited by the size and construction of the bucket.

Mechanical dredging is favored at sites that seek to limit water generation and management, and at sites with large quantities of debris that can impede the operation of hydraulic dredging equipment. Due to the potential for accumulation of storm water and possible infiltration of groundwater, it is not considered feasible to dewater the South Pond for purposes of dredging.

Dewatering of dredged material can be accomplished via a variety of methods, the least complex of which is gravity drainage using temporary drainage pads. With this approach, water drains from stockpiled dredged material and is either captured in a sump for management or allowed to free drain back into the adjacent pond. Gravity drainage requires that the dredged material have adequate permeability and a low water sorptive capacity to resist retaining liquids. It can be enhanced by turning dredged material over in the stockpile to create new drainage pathways, and by removing liquids via collection sumps, drainage lines or sheet flow drainage back into the pond. Cohesive sediment retains more water than granular sediment. Typically, the coarse-grained particles are expected to settle or accumulate closer to the pond inlet with the fine-grained sediments accumulating further downstream in the pond. Consideration for the use of dewatering admixtures, such as Portland cement, kiln dust, lime, clay minerals, and other commercially available additives or absorbent materials could be used to stabilize, solidify or reduce the liquid content so that the dredged material passes a paint filter test prior to transportation for off-site disposal.

Assumed backfill used to fill the pond is either crushed stone and/or recycled concrete. A source of crushed concrete is located proximate to the Site (between the Site and the facilities ash landfill). Other clean fill will be considered based on availability and cost.

3. Final Cover Requirements – §257.102(b)(1)(iii)

As the CCR will be removed and the CCR Unit will be decontaminated, discussion of an engineered final cover system is not applicable for this closure plan.

4. Maximum CCR Inventory - §257.102(b)(1)(iv)

The maximum CCR inventory at the bottom of the surface impoundment has been estimated at about 116,000 cubic yards.

5. Maximum Area Requiring Final Cover – §257.102(b)(1)(v)

Based on a review of the area of the surface impoundment, the eventual ground disturbance area of the pond remediation has been estimated to be about 200,000 square feet (or about 4.6 acres).

6. Closure Schedule – §257.102(b)(1)(vi)

Final closure of the ponds must commence 30 days after the ash filter ponds receive the known final receipt of CCR or any non-CCR waste stream. However, it should be noted that, to date, remedy selection has not yet taken place and is inter-dependent with other activities currently ongoing under the NYSDEC BCP. Ultimately, remedy selection under the CCR Rule and the BCP will be a coordinated effort in order to arrive at a remedial strategy that is jointly responsive and compliant with the objectives of both programs. Prior to commencing closure construction, permit-level design drawings, technical specifications and QA/QC plan documents may be prepared to support applications for required local, state, and federal permits. Closure construction design documents will include construction-level design drawings, technical specifications, QA/QC plan, and contract bid documents, and required notifications to NYSDEC. At this time, the closure of the south settling pond is anticipated to commence in the Spring of 2025 however we note that the actual timing/scheduling of the closure activities may be impacted by numerous factors including regulatory approvals, contractor/equipment availability, weather, etc. The following closure activities must be completed within five years of commencing closure activities [§257.102(e) and (f)].

- Apply for and receive the appropriate permits needed to commence closure activities (including preparing construction bid specifications and contract work);
- Prepare the site to comply with applicable regulations;
- Dewater and remove CCR and sediment;
- Backfill pond area with clean fill (e.g., stone, crushed concrete, clean soil, etc.) and fine-grade the ground surface to provide positive drainage to a permitted outfall/stormwater collection system; and
- Install final cover system (e.g., grass, pavement, etc.).

Redirecting Non-CCR Water from South Pond (Completed)	March 2021
Contractor Specifications and Construction Plans	January 2025 to March 2025
Mobilization and Dewatering	April 2025 to May 2025
Removal/Decontamination of CCR	June 2025 to August 2027
Final Cover Grading of Former Pond	August 2027 to November 2027
NYSDEC Approval of Closure	January 2028

PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of §257.102 *Criteria for conducting the closure or retrofit of CCR Units*. The undersigned registered professional engineer attests that this CCR Surface Impoundment Closure Plan has been prepared in accordance with good engineering practice, including consideration of applicable state regulatory requirements and meets the requirements of §257.102(b), and that this plan is adequate for NRG - Huntley Power. This certification was prepared as required by §257.102(b)(4).

Name of Professional Engineer: Daniel J. Troy, P.E.
Company: GZA GEOENVIRONMENTAL OF NEW YORK

Signature: _____
Date: July 18, 2024
PE Registration State: New York
PE Registration Number: 081139-1

Professional Engineer Seal:

We trust this information satisfies your needs for this project.

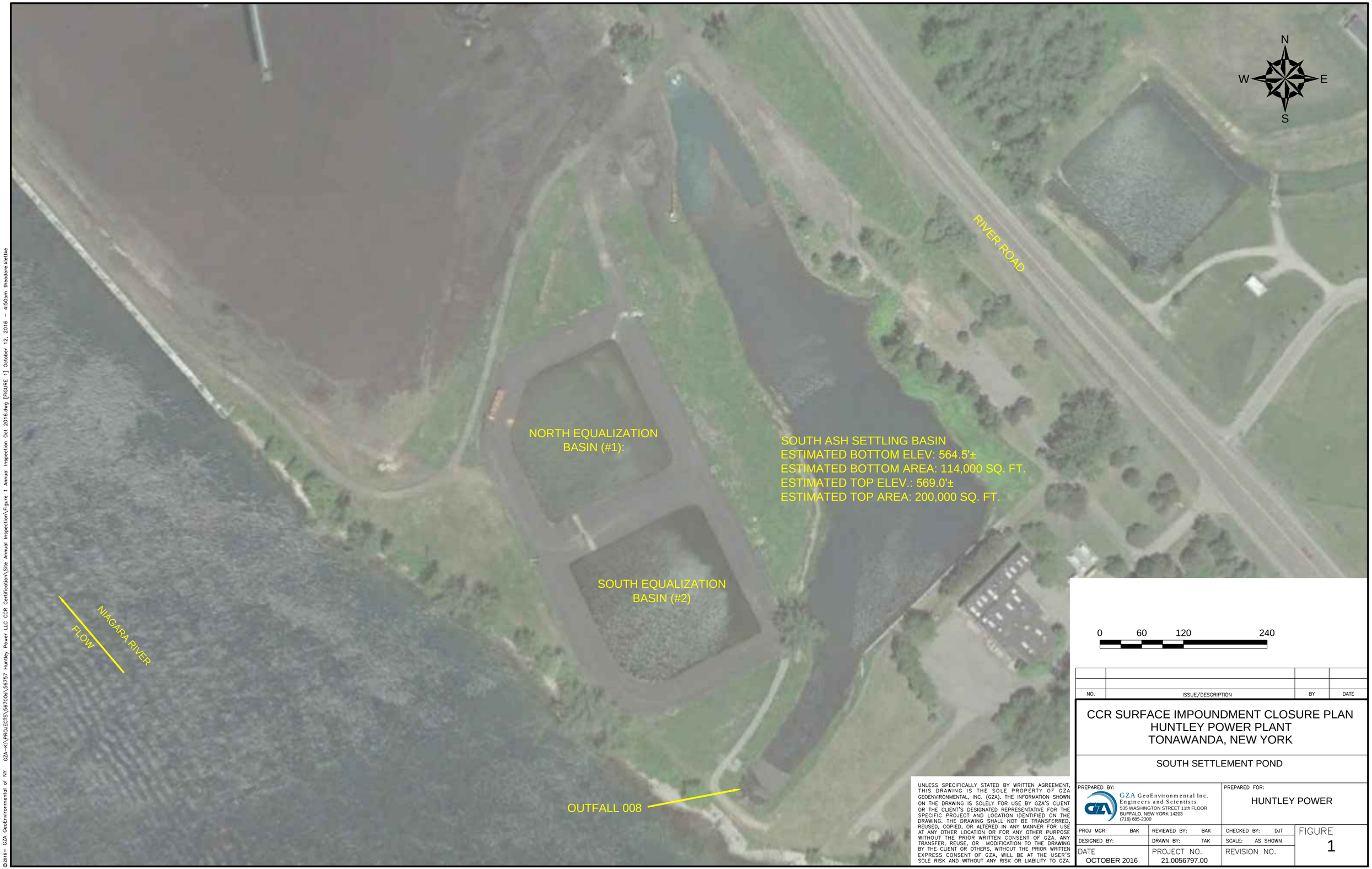
Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

Daniel J. Troy, P.E.
Senior Project Manager

Bart A. Klettke, P.E.
Principal

Attachments: Figure 1 - Site Plan



NO.	ISSUE/DESCRIPTION	BY	DATE

CCR SURFACE IMPOUNDMENT CLOSURE PLAN
HUNTLEY POWER PLANT
TONAWANDA, NEW YORK

SOUTH SETTLEMENT POND

PREPARED BY:
GZA GeoEnvironmental Inc.
Engineers and Scientists
535 WASHINGTON STREET 11th FLOOR
BUFFALO, NEW YORK 14203
(716) 685-2300

PREPARED FOR:
HUNTLEY POWER

PROJ MGR: BAK	REVIEWED BY: BAK	CHECKED BY: DJT	FIGURE 1
DESIGNED BY:	DRAWN BY: TAK	SCALE: AS SHOWN	
DATE OCTOBER 2016	PROJECT NO. 21.0056797.00	REVISION NO.	