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GZA GeoEnvironmental of NY
300 Pearl Street
Suite 700
Buffalo, NY 14202
T: 716.685.2300
F: 716.248.1472
www.gza.com



October 8, 2021
File: 21.0056983.00

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

Re: 2021 CCR Surface Impoundment Annual Inspection Report
Huntley Generating Station
Tonawanda, New York

Dear Mr. Streit:

GZA GeoEnvironmental of New York (GZA) presents this 2021 Annual Inspection Report to Huntley Power LLC (Huntley) for the existing coal combustion residuals (CCR) surface impoundment at the Huntley Generating Station located in Tonawanda, New York (Site). This annual inspection is required by the United States Environmental Protection Agencies (USEPA) 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 §257.83), CCR surface impoundments are required to be inspected on a periodic basis by a qualified professional engineer to check the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards.

The required periodic inspections presented in the CCR Rule apply to the existing CCR surface impoundment at the Site which is identified as the South Settling Pond. We note that two asphalt-lined containment basins (identified as North and South Equalization Basins) located adjacent to the South Settling Pond to the west do not receive CCR and no longer discharge into the south settling pond and therefore are not included as part of the annual inspection. The limits of the South Settling Pond are shown on the attached **Figure 1**.

Site Observations

GZA visited the Huntley Power Plant to make observations of the South Settling Pond on September 8, 2021. We note that the Huntley Plant ceased electrical generation operations and as a result, CCR sluice water was eliminated from being discharged into the pond by late March 2016. Additionally, all remaining non-CCR water from the plant that discharged into the pond (e.g., plant storm water, plant sump water, water associated with plant fire suppression, etc.) was ceased in March 2021. We note the



original discharge rate into the pond when the plant was operational was estimated at about 6,800± gpm of combined CCR sluice water and non-CCR water. After the removal of the discharges to the South Pond, the South Pond no longer routinely discharges to the Niagara River. In general, our observations of the Huntley South Settling Pond were similar to those made during our previous 2020 inspection although the termination of plant sump water (non-CCR water) into the pond has resulted with a significant reduction on pond water elevation below the Outfall 008 pipe invert and therefore significantly reducing pond water discharge into the Niagara River.

The following discussion addresses the requirements for the annual inspection report by a qualified professional engineer as indicated by the CCR Rule section §257.83 (b)(2) (i) through (vii).

- (i) No changes to the overall geometry of the South Settling Pond (including sidewalls and outfall structures) were observed during our recent Site visit as compared to our previous observations of 2020.
- (ii) GZA observed instrumentation equipment consisting of a measurement rod at the South Settling Pond outlet (Outfall 008) which is used to measure outflow volume. The rod was reportedly installed in September 2015 and was set to record water levels above the outfall invert elevation (568.92 feet above mean sea-level) to calculate the flow rate based on the outfall pipe specifics (e.g., diameter, slope, wetted perimeter, etc.). Since its installation, flow rates were periodically determined based on the measured surface water levels. Because the CCR and non-CCR water no longer discharges to the impoundment, the current flow rate has been significantly reduced and as of recent, is solely dependent on precipitation events (e.g., snow and rain). During our 2021 site observations, the pond surface water was observed to be about 0.3± feet below the Outfall 008 pipe invert elevation. Thus, no pond water was observed discharging into the Niagara River.
- (iii) As part of historic operations when the Huntley Plant was actively generating electricity, typical O&M practices included routinely dredging accumulated CCR from the northern portion of the pond for eventual off-Site disposal. However, depth measurements of accumulated CCR were not routinely made within the extents of the pond. Because the plant significantly reduced and eventually eliminated CCR sluice water discharge into the pond in 2016, elevational changes pertaining to the accumulated CCR are anticipated to be unchanged from that of recent years. The surface water elevation correspondingly appears to have decreased from previous years due to this reduced flow rate and the termination of plant derived non-CCR water. Previous records indicated water elevation (el.) of 570± for the South Settling Pond when CCR sluice water was being discharged as compared to the recent approximate measurements of el. 568.6± which is below the outfall pipe invert, measured at 568.92 ft.



- (iv) Based on the elimination of CCR and non-CCR sluice water into the South Settling Pond, the storage capacity is not anticipated to have changed significantly from the previous year. As previously indicated, routine measurements or surveys of the pond were not made to determine storage capacity although previous studies have estimated an approximate design storage capacity of about 35± acre-feet.
- (v) The facility had historically dredged accumulated CCR from the northern portion of the pond on a weekly basis. The recovered CCR was stockpiled adjacent to the pond to drain free liquids prior to final disposal at the facilities off-site ash landfill. This process generally resulted in a negligible net gain of CCR within the South Settling Pond. CCR accumulation in the pond is assumed to have ceased once the facility eliminated the CCR sluice water discharging into the Pond in 2016. A review of available documentation indicated the entire pond area was last dredged in December 2008 in which a reported volume of 20,177 cy of CCR was removed for disposal. The dredging reportedly used a bottom-scrape target elevation of 564.5 feet. Based on the approximate 200,000 sf area of the pond and the anticipated volume of CCR waste accumulation since the December 2008 dredging, the anticipated volume of water remaining in the pond during our inspection was estimated at about 2.4 million gallons and about 23,000 cubic yards of CCR (similar to the 2020 estimate).
- (vi) During the time of our Site observations, no indication of actual or potential structural weaknesses of the surface water impoundment were observed that would be considered disruptive or having the potential to disrupt the operation and safety of the CCR unit.
- (vii) During this 2021 annual inspection, we identified no changes that may affect the stability or operation on the impoundment structure within the past year. In general, the South Settling Pond appears to have been generally unchanged, with the exception of a reduced surface elevation due to the termination of non-CCR water discharge from the plant.

Overall, the South Settling Pond, the only remaining surface impoundment located at the Huntley Power Plant, was observed to be constructed, operated and maintained in general accordance with the proposed design configurations, and the side slopes and other areas were observed in good condition with no evidence of actual or potential structural instability.

Because the surface impoundment is currently located within a larger portion of the plant property that is in the NYSDEC Brownfield program, the final closure/remediation design plan for the pond will be completed in accordance with the requirements of both the EPA's CCR Rule and NYSDEC's Brownfield program.



PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of §257.83 and has visited and examined the Huntley Station South Settling Pond surface impoundment or has supervised examination of the facilities by appropriately qualified personnel. The undersigned registered professional engineer attests that this Annual Inspection Report has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and meets the requirements of §257.83, and that this Report is adequate for the Huntley Station. This certification was prepared as required by §257.83(b)(2).

Name of Professional Engineer: Daniel J. Troy, P.E.

Company: GZA GEOENVIRONMENTAL OF NEW YORK

Signature: Dal Troy

Date: October 8, 2021

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

Dal Troy
Daniel J. Troy, P.E.

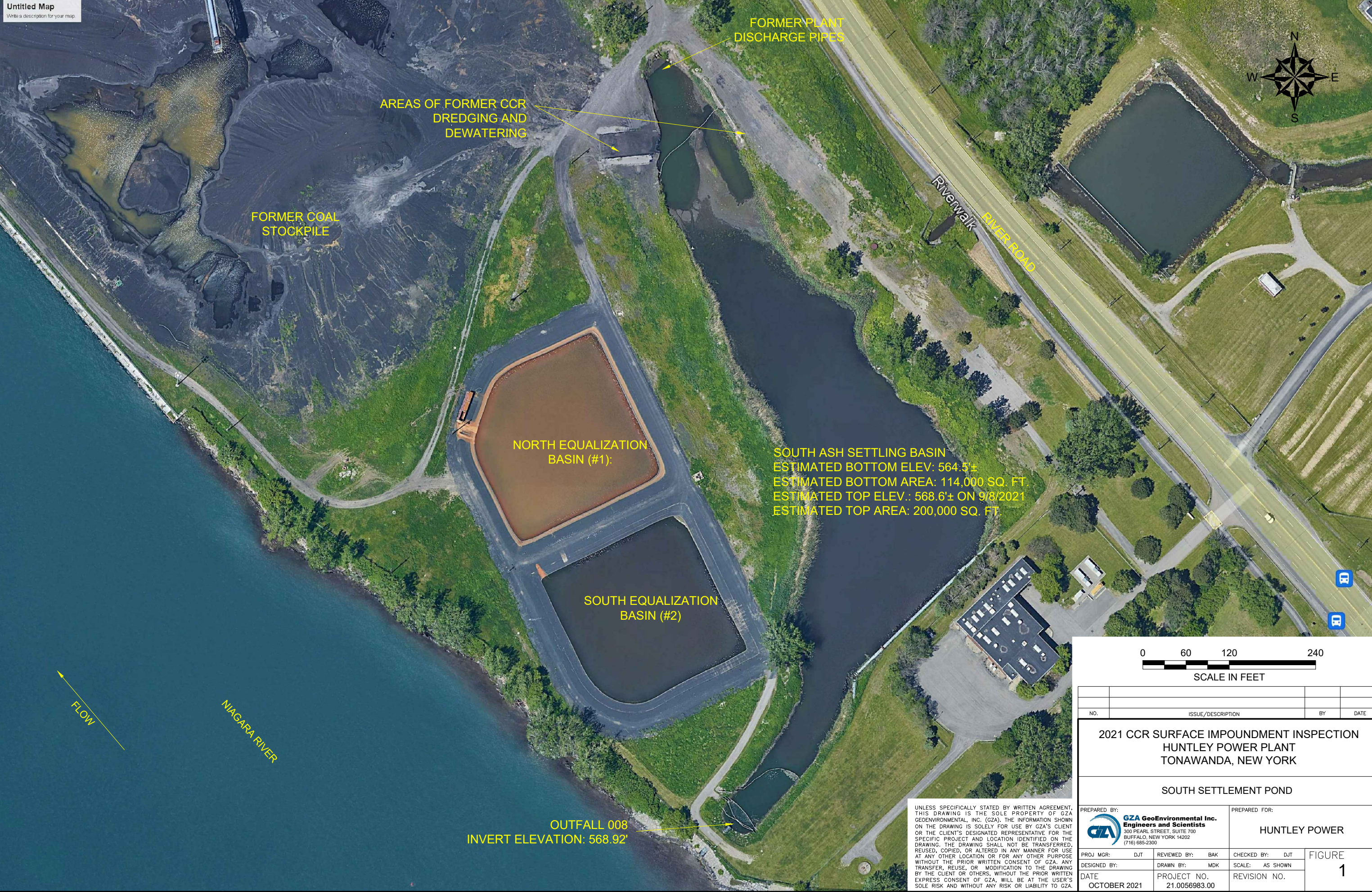
Senior Project Manager

Bart A. Klettke

Bart A. Klettke, P.E.

Principal

Attachments: Figure 1 – Huntley Power South Settling Pond



FORMER PLANT DISCHARGE PIPES

AREAS OF FORMER CCR DREDGING AND DEWATERING

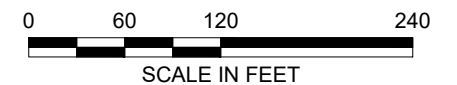
FORMER COAL STOCKPILE

NORTH EQUALIZATION BASIN (#1):

SOUTH ASH SETTLING BASIN
ESTIMATED BOTTOM ELEV: 564.5'±
ESTIMATED BOTTOM AREA: 114,000 SQ. FT.
ESTIMATED TOP ELEV.: 568.6'± ON 9/8/2021
ESTIMATED TOP AREA: 200,000 SQ. FT.

SOUTH EQUALIZATION BASIN (#2)

OUTFALL 008
INVERT ELEVATION: 568.92'



NO.	ISSUE/DESCRIPTION	BY	DATE

**2021 CCR SURFACE IMPOUNDMENT INSPECTION
HUNTLEY POWER PLANT
TONAWANDA, NEW YORK**

SOUTH SETTLEMENT POND

PREPARED BY: GZA GeoEnvironmental Inc. Engineers and Scientists 300 PEARL STREET, SUITE 700 BUFFALO, NEW YORK 14202 (716) 855-2300		PREPARED FOR: HUNTLEY POWER	
PROJ MGR:	DJT	REVIEWED BY:	BAK
DESIGNED BY:		DRAWN BY:	MDK
DATE:	OCTOBER 2021	PROJECT NO.:	21.0056983.00
CHECKED BY:	DJT	SCALE:	AS SHOWN
		REVISION NO.:	

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