Known for excellence.
Built on trust.

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

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

October 11, 2019
File: 21.0056811.00

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

Re: 2019 CCR Surface Impoundment Annual Inspection Report
Huntley Generating Station
Tonawanda, New York

Dear Mr. Streit:

GZA GeoEnvironmental of New York (GZA) presents this 2019 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 are intended for 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 13, 2019. 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, with the exception of occasional sump water generated from stormwater collection systems inside the plant building, non-

CCR water (e.g., water associated with fire suppression, HVAC systems, etc.) is no longer discharged into the pond. The rate of current sump water discharge is sporadic or negligible when compared to historic estimated rates of 1,500± gallons per minute (gpm) of non-CCR water discharged prior to 2016. We note the original discharge rate into the pond when the plant was operational was estimated at about 6,800± gpm of CCR sluice water and non-CCR water. In general, our observations of the Huntley South Settling Pond were similar to those made during our previous 2018 inspection where no significant changes or modifications (with the exception of the reduced or negligible sump water flow) were apparent.

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 2018. However, we note that the water level in the pond was observed as slightly higher than observations made the previous year. This slight increase was attributed to recent heavy rainfall resulting in increased trorm water discharge into the pond.

(ii) GZA observed instrumentation equipment consisting of a measurement rod at the South Settling Pond outlet 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 (approximately 569 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 water levels and since the CCR and most non-CCR water no longer flows into the impoundment, the current flow rate has been significantly reduced and reportedly ranges between about 1 to 95 gallons per minute (gpm) and averaging about 40 gpm (similar to 2018).

(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. 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. 569± associated with the reduced/negligible flow rate of occasional non-CCR sump water. The outfall pipe invert was previously measured at 568.92 ft.

(iv) Based on the elimination of CCR and most non-CCR sluice water into the South Settling Pond over the past couple years, 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 43± 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. 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 2018 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 2019 annual inspection, we identified no changes that may affect the stability or operation on the impoundment structure within the past year. With the exception of the discharge flow reduction (due to previous elimination of most non-CCR sluice water and subsequent reduction of the surface water elevation relative to the invert elevation of the outfall pipe) the South Settling Pond appears to have been generally unchanged and in similar condition to the observations made in 2018.

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.

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: _____

Date: October 11, 2019
PE Registration State: New York
PE Registration Number: 081139-1
Professional Engineer Seal:

We trust this information satisfies your needs for this project.

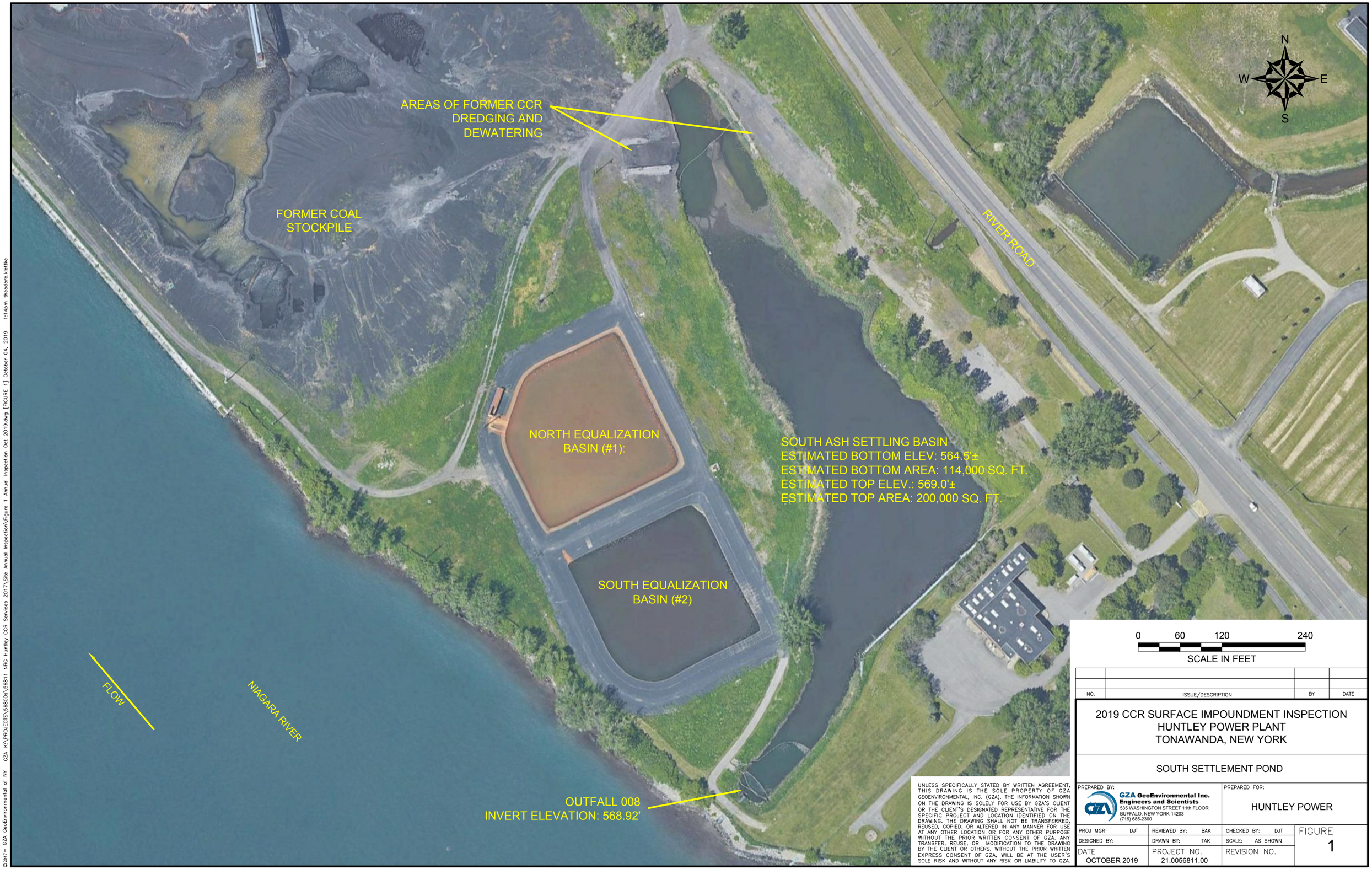
Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

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

Bart A. Klettke, P.E.
Principal

Attachments: Figure 1 – Huntley Power South Settling Pond



NO.	ISSUE/DESCRIPTION	BY	DATE

2019 CCR SURFACE IMPOUNDMENT INSPECTION
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: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	FIGURE
DESIGNED BY:	DRAWN BY: TAK	SCALE: AS SHOWN	1
DATE OCTOBER 2019	PROJECT NO. 21.0056811.00	REVISION NO.	