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October 13, 2021
File: 21.0056983.00

Mr. George Streit
George.streit@nrgenergy.com
Huntley Power LLC
Tonawanda, NY 14150

Re: CCR Surface Impoundment Design Criteria Periodic Review
Huntley Generating Station
Tonawanda, New York

Dear Mr. Streit:

GZA GeoEnvironmental of New York (GZA) presents this letter to Huntley Power LLC (Huntley) with respect to the existing coal combustion residuals (CCR) surface impoundment (identified as the South Settling Pond) located at the Huntley Generating Station in Tonawanda, New York (Site). This Surface Impoundment Design Criteria Periodic Review 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 §257.73), owners/operators of existing CCR surface impoundments are required to document the following periodic structural integrity criteria:

§257.73 (a)(2): a periodic hazard potential classification assessment
§257.73 (d): a periodic structural stability assessment, and
§257.73 (e): a periodic initial safety factor assessment

The requested structural integrity criteria for the Huntley plant South Settling Pond was previously evaluated in a report titled "Pond Embankment Evaluation" prepared by GZA GeoEnvironmental of New York, dated February 20, 2015 for NRG-Huntley Power. This report was prepared prior to the EPA CCR Rule and included embankment assessments on multiple surface impoundments (ponds) located at the Site. The ponds evaluated included three ponds in the northern portion of the Site, two asphalt-lined equalization ponds (for non-CCR process water) and the South Settling Pond. Since the CCR rule went into effect, the three northern ponds were closed and removed from service prior to the effective date of the CCR Rule and therefore were not addressed in the initial design criteria document. Additionally, as the two asphalt-lined ponds adjacent to the South Settling Pond never contained or stored CCR associated wastes, these ponds were also not required to be addressed in accordance with the Design Criteria requirements of the CCR Rule.

Since the plant was removed from service on February 29, 2016 and discharge of non-CCR water ceased in March 2021, precipitation is the only contributor to the South Settling pond. As a result, the surface elevation of the pond has decreased to levels below the designated outfall pipe invert elevation resulting in water from the south settling pond no longer regularly discharging into the Niagara River. With the exception of the decrease in pond surface water

elevation, no other changes or modifications have been made to the South Settlement Pond and therefore no changes are anticipated to the initial Design Criteria document from 2016.

- §257.73 (a)(2): The Hazard Potential remains as LOW for the surface impoundment.

- §257.73 (d): The structural stability analysis for the CCR Surface Impoundment remains unchanged.

    - The impoundment foundations and abutments remain stable with no evidence or indication of significant shifting, settling or general instability associated with the embankment.
    - The slope protection has remained unchanged, and this review with ongoing observations identified that the embankment slope protection is providing sufficient protection from surface erosion, wave action and ice flows from the river.
    - The dike compaction has remained unchanged, and the reduction of pond water elevation reduces the potential for embankment failure.
    - Vegetated slopes remain unchanged and similar to the initial reporting.
    - The spillway configuration remains unchanged. Additionally, the termination of plant water into the south settling pond has reduced the pond surface water elevation to be below the outfall pipe invert. This reduction has resulted in negligible to no discharge flows into the Niagara River.
    - Based on the findings of the routine visual inspections, coupled with the observed reduction of pond surface water elevation below the outfall pipe invert elevation, the structural integrity of the embankment continues to remain intact, and the structure is considered to be free of significant deterioration, deformation, distortion, bedding deficiencies, sedimentation and debris.
    - Impacts from down stream waterbodies (i.e., Niagara River) remains unchanged from our initial findings of the 2016 design criteria document which identified that inundation of the pond from overtopping of the embankment berm was not expected. Additionally, the design of the embankment slopes (grouted rip-rap armor and gravel) that comprise the slope face remains unchanged from the initial document and continues to be maintained to minimize impacts to the structural integrity of the embankment from impacts associated with the Niagara River.

  Based on updated information provided by the Huntley Plant, and our understanding and recent observations made at the Site, significant structural deficiencies were not identified at the South Settling Pond Embankment of the Huntley Plant. Therefore, the design, construction, operation and maintenance of the Huntley South Settling Pond are consistent with recognized and generally accepted good engineering practice for the volume of CCR that remains at the Site (previously estimated at 23,000 cy±). We note that the surface impoundment no longer receives either CCR wastes or non-CCR water from the plant. This termination of discharge into the pond has resulted in a reduced pond elevation which is below the outfall pipe invert and therefore no longer regularly discharges into the Niagara River.

- §257.73 (e): The Safety Factor Assessments for the CCR Surface Impoundment remains unchanged. Due to the termination of the plant CCR and non-CCR water into the surface impoundment and based on recent observations of the reduced surface water elevations, GZA considers the South Settling Pond embankment along the Niagara River to remain stable.

PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the CCR Surface Impoundment requirements of §257.73, specifically:

- §257.73(a)(2) – Periodic Hazard Potential Classification,
- §257.73 (d) – Periodic Structural Stability Assessment, and
- §257.73 (e) – Periodic Safety Factor Assessment

and has reviewed available documentation specific to the Huntley Power CCR Surface Impoundment (referred to as the South Settling Pond). Based on the document review, Site observations made, and due to the termination of plant discharged water (both CCR and non-CCR water) into the pond, the undersigned registered professional engineer attests that the requirements of §257.73(a)(2), (d) and (e) continue to be met.

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

Company: GZA GEOENVIRONMENTAL OF NEW YORK

Signature: _____

Date: October 13, 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

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

Bart A. Klettke, P.E.
Principal