

January 14, 2016
File: 21.0056757.01

Mr. Kevin Schroeder
Kevin.schroeder@nrgenergy.com
Dunkirk Power LLC
106 Point Drive North
Dunkirk, NY 14048



Re: Existing CCR Landfill Annual Inspection
Van Buren Road
Pomfret, New York

Dear Mr. Schroeder:

535 Washington Street
11th Floor
Buffalo, New York
14203
716-685-2300
Fax: 716-685-3629
www.gza.com

GZA GeoEnvironmental of New York (GZA) presents this Annual Landfill Inspection report to Dunkirk Power LLC (Dunkirk) for the existing coal combustion residuals (CCR) landfill units at the Dunkirk Generating Station landfill located in Pomfret, 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 257.84), owners/operators of CCR landfill units are required to be inspected on a periodic basis by a qualified professional engineer to ensure the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards.

Document Review

It should be noted that the required periodic inspections presented in the CCR Rule are for open and active landfills and not required for closed or inactive landfills. As such, the active ash waste cells for the Site area identified as Phase 2, Cells A and B-1. The Site landfill cells identified as Phase 1, Cells A and B (excluding a small portion of the northern Cells A and B) and the eastern portion of Phase 2, Cell A are considered inactive (i.e., closed) and are not included with the annual inspection report. The limits of the active cells requiring this annual inspection report are shown on the attached figure prepared by Wendel for the 2014 fill progression survey.

The Dunkirk Power landfill is currently permitted (ID#9-0658-00021/00008) with the New York State Department of Environmental Conservation (NYSDEC) to accept residual coal ash waste generated from the Dunkirk Power facility through May 22, 2021. A review of the 2014 (most recent) fill progression assessment for the Phase 2 Cells A and B-1 indicates the following information.

| Phase 2 Landfill Cell | Waste Received 2014 (cy) | Current Ash Volume (cy) | Volume Remaining (cy) |
|-----------------------|--------------------------|-------------------------|-----------------------|
| Cell A | 348* | 719,661 | 28,361 |
| Cell B-1 | 2,471 | 194,962 | 284,523 |
| Totals for A & B-1 | 2,819 | 914,623 | 312,884 |

cy = cubic yards

* Includes 197 cy of ash received in northern portion of Phase I Cells A & B.



Site Observations

GZA visited the Site on November 11th, 2015 to make observations of the active landfill cell areas. During our visit, newly delivered piles of ash waste were observed being graded within the upper portions of the active cell. The haul roads leading to the work face were observed in good condition with little to no evidence of erosion or instability. Observations of the work face side slopes and newly graded ash waste did not identify any areas of actual or potential structural weaknesses. Additionally, there was no disruptive or potentially disruptive conditions observed within the waste placement operation areas.

Overall, the active work face areas appeared to be graded 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 for structural instability. Because this annual inspection is the first one as required by the newly required CCR Rule, no comparisons to past annual inspections can be made.

PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of §257.84 and has visited and examined the Huntley Station Landfill 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 §257.84, and that this Report is adequate for the Huntley Station. This certification was prepared as required by §257.84(b)(2).

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

Company: **GZA GEOENVIRONMENTAL OF NEW YORK**

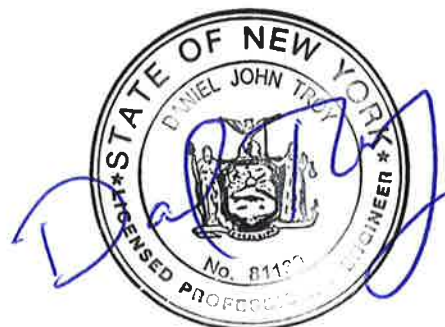
Signature: _____

Date: **January 14, 2016**

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



A handwritten signature in blue ink that reads 'Daniel J. Troy'.

Daniel J. Troy, P.E.
Senior Project Manager
(716) 844-7034
daniel.troy@gza.com

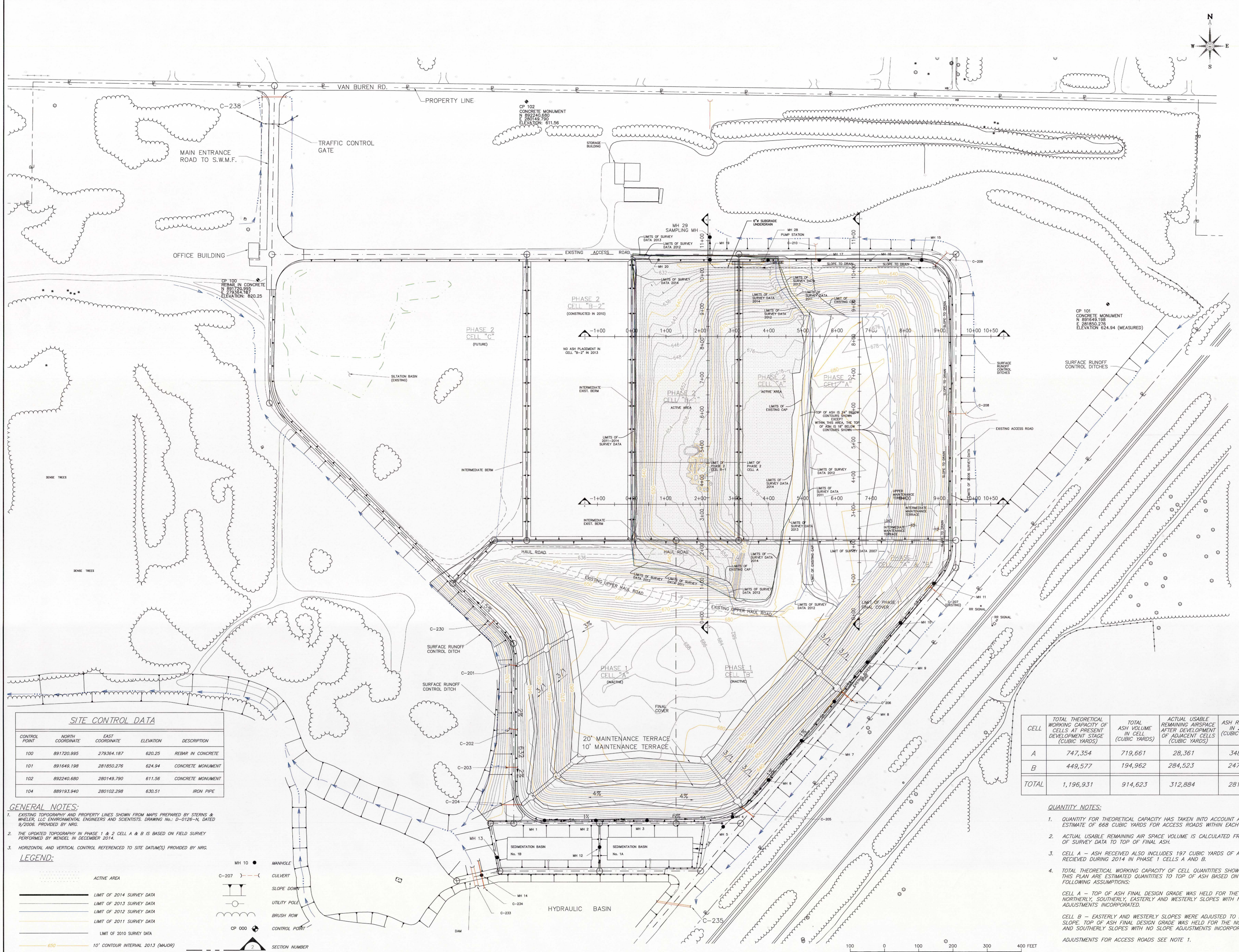
A handwritten signature in blue ink that reads 'Bart A. Klettke'.

Bart A. Klettke, P.E.
Principal
(716) 844-7035
bart.klettke@gza.com

Attachments: Figure 1 - Site Plan for 2014 Fill Progression Survey



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SITE CONTROL DATA

| CONTROL POINT | NORTH COORDINATE | EAST COORDINATE | ELEVATION | DESCRIPTION |
|---------------|------------------|-----------------|-----------|-------------------|
| 100 | 891720.895 | 279364.187 | 620.25 | REBAR IN CONCRETE |
| 101 | 891649.198 | 281850.276 | 624.94 | CONCRETE MONUMENT |
| 102 | 892240.680 | 280149.790 | 611.56 | CONCRETE MONUMENT |
| 104 | 889193.940 | 280102.298 | 630.51 | IRON PIPE |

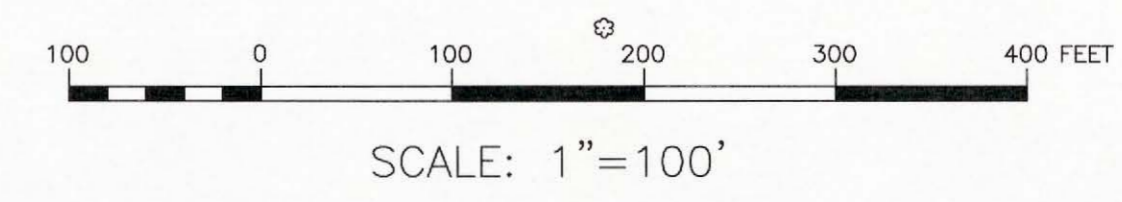
- GENERAL NOTES:**
- EXISTING TOPOGRAPHY AND PROPERTY LINES SHOWN FROM MAPS PREPARED BY STERNS & WHEELER, LLC ENVIRONMENTAL ENGINEERS AND SCIENTISTS, DRAWING No. D-0126-N, DATED 9/2006, PROVIDED BY NRG.
 - THE UPDATED TOPOGRAPHY IN PHASE 1 & 2 CELL A & B IS BASED ON FIELD SURVEY PERFORMED BY WENDEL IN DECEMBER 2014.
 - HORIZONTAL AND VERTICAL CONTROL REFERENCED TO SITE DATUM(S) PROVIDED BY NRG.

LEGEND:

- ACTIVE AREA
- LIMIT OF 2014 SURVEY DATA
- LIMIT OF 2013 SURVEY DATA
- LIMIT OF 2012 SURVEY DATA
- LIMIT OF 2011 SURVEY DATA
- LIMIT OF 2010 SURVEY DATA
- 650 10' CONTOUR INTERVAL 2013 (MAJOR)
- 652 2' CONTOUR INTERVAL 2013 (MINOR)
- MANHOLE
- CULVERT
- SLOPE DOWN
- UTILITY POLE
- BRUSH ROW
- CONTROL POINT
- SECTION NUMBER
- SHEET NUMBER

| CELL | TOTAL THEORETICAL WORKING CAPACITY OF CELLS AT PRESENT DEVELOPMENT STAGE (CUBIC YARDS) | TOTAL ASH VOLUME IN CELL (CUBIC YARDS) | ACTUAL USABLE REMAINING AIRSPACE AFTER DEVELOPMENT OF ADJACENT CELLS (CUBIC YARDS) | ASH RECEIVED IN 2014 (CUBIC YARDS) |
|-------|--|--|--|------------------------------------|
| A | 747,354 | 719,661 | 28,361 | 348 |
| B | 449,577 | 194,962 | 284,523 | 2471 |
| TOTAL | 1,196,931 | 914,623 | 312,884 | 2819 |

- QUANTITY NOTES:**
- QUANTITY FOR THEORETICAL CAPACITY HAS TAKEN INTO ACCOUNT AN ESTIMATE OF 668 CUBIC YARDS FOR ACCESS ROADS WITHIN EACH CELL.
 - ACTUAL USABLE REMAINING AIR SPACE VOLUME IS CALCULATED FROM LIMIT OF SURVEY DATA TO TOP OF FINAL ASH.
 - CELL A - ASH RECEIVED ALSO INCLUDES 197 CUBIC YARDS OF ASH RECEIVED DURING 2014 IN PHASE 1 CELLS A AND B.
 - TOTAL THEORETICAL WORKING CAPACITY OF CELL QUANTITIES SHOWN ON THIS PLAN ARE ESTIMATED QUANTITIES TO TOP OF ASH BASED ON THE FOLLOWING ASSUMPTIONS:
CELL A - TOP OF ASH FINAL DESIGN GRADE WAS HELD FOR THE NORTHERLY, SOUTHERLY, EASTERLY AND WESTERLY SLOPES WITH NO SLOPE ADJUSTMENTS INCORPORATED.
CELL B - EASTERLY AND WESTERLY SLOPES WERE ADJUSTED TO A 2/1 SLOPE. TOP OF ASH FINAL DESIGN GRADE WAS HELD FOR THE NORTHERLY AND SOUTHERLY SLOPES WITH NO SLOPE ADJUSTMENTS INCORPORATED.
ADJUSTMENTS FOR ACCESS ROADS SEE NOTE 1.



| NO. | BY | REVISIONS | DATE |
|-----|----|-----------|------|
| | | | |
| | | | |

DWG. TITLE: **DUNKIRK 2014 FILL PROGRESSION SURVEY SITE PLAN**

DATE: 12/30/2014
SCALE: 1"=100'
DWN: BSS CHK: RNJ
PRD. No. 419413
SHEET No. **1 of 4**