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October 15, 2021
File: 21.0056983.00

Mr. George Streit
george.streit@nrgenergy.com
Huntley Power LLC
3500 River Road
Tonawanda, New York 14150

Re: Five Year Plan Review for CCR Landfill Run-on & Run-off Control Plan
Huntley Generating Station Ash Landfill
Tonawanda, New York

Dear Mr. Streit:

GZA GeoEnvironmental of New York (GZA) presents this five year plan review for the Run-On and Run-Off Control System Plan to Huntley Power LLC (Huntley) for the existing coal combustion residuals (CCR) landfill located at the Huntley Power facility in Tonawanda, New York (Site). This revised Run-On and Run-Off Control System Plan review 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 §257.81(c)(4)), owners/operators of CCR units must prepare periodic run-on and run-off control system plans required by paragraph 40 CFR §257.81(c)(1) every five years. The initial Run-On and Run-Off Control System Plan was completed on October 17, 2016. The information in this report is subjected to the limitations in **Attachment 1**.

In accordance with §257.81, the owner or operator of an existing CCR landfill must design, construct, operate and maintain the landfill in accordance with the following:

- A run-on control system to prevent stormwater flow onto the active portion of the CCR unit during the peak discharge from a 24-hr, 25-year storm; and
- A run-off control system from the active portion of the CCR unit to collect and control at least the stormwater volume resulting from a 24-hr, 25-year storm. The run-off from the active portion of the CCR unit must be handled in accordance with surface water requirements under §257.3-3.



1.0 SITE BACKGROUND

Huntley landfill cells included in this updated plan review are identified as Cells A, C and D. The remaining landfill cells at the Site are already closed and, similar to 2016 plan review, they are not applicable in this run-on and run-off control system plan. Portions of the side slopes of Cells A and D have previously been closed with a final cover system and only Cell C and the upper tiers of cells A and D are considered active. The active portions of Cells A, C and D now have a temporary cover system consisting of an approximate 12-inch-thick layer of grassy soil covering all previously exposed CCR waste. An area designated as future Cells B and E, located between Cells A and C, and south of A, respectively, were never constructed. The limits of the active cells included in this five-year closure plan review are shown on the attached figures.

The Huntley facility's CCR landfill is currently permitted (ID#9-1464-00089/00002) with the New York State Department of Environmental Conservation (NYSDEC) to accept CCR and associated waste generated from the Huntley Power facility through January 3, 2023. The Site Location Map (**Figure 1**) shows the location of the landfill within western New York.

2.0 RUN-ON CONTROL SYSTEM

The run-on control system for the Huntley Landfill consists of a combination of perimeter roads, ditches and grading that is sloped away from the disposal area to prevent and minimize stormwater run-on. As a practical matter, the majority of the previously closed portions of the landfill (i.e., designated "SB" areas) are at high points and surrounded by closed, covered cell areas. Thus, there is no appreciable opportunity for storm water run-on to the active cells. As shown in **Figure 2**, surface grades around the Site are sloped towards River Road and the associated Town of Tonawanda Storm water collection system. Cell A is comprised of an "active" top portion and "Closed" side slopes. As shown in **Figure 3**, the recently covered top portion of Cell A is higher than the surrounding grades. Cell A side slope portions and other surrounding features are lower in elevation and therefore do not present a potential for stormwater run-on to the "active" portion. Shown in **Figure 4**, the active portion of Cell D is also higher in elevation from the surrounding features and does not present a potential for stormwater run-on. The surrounding grades of the active portion of Cell D will direct stormwater towards the adjacent active Cell C before reaching the perimeter ditches.

Shown in **Figure 4**, Cell C is bounded by an on-Site perimeter road and ditches along the north and south sides, a berm along the western side, and the ground surface generally slopes away from the disposal area along the east side. Perimeter ditches intercept the minimal run-on from the roadway embankments. Storm water run-on around the cell will flow west along the Perimeter Road and into surface body discharge points. Therefore, in-place run-on control systems prevent the flow of stormwater onto the portion of the CCR unit. Additionally, some temporary controls were observed, including an earthen berm and an area of the temporary road was lowered to direct storm water from the northern ditch into the west ditch. As part of normal maintenance of the cells, the ditch on the north side is being restored and dredged and an approximate 12-inch diameter culvert is being added under



the Cell C haul road to allow for improved storage and more permanent and definitive controls of the storm water.

3.0 RUN-OFF CONTROL SYSTEM

Surface storm water generated from within the cells of the landfill is collected and conveyed in a manner that does not allow contact water to discharge to an off-site surface water body under the design storm conditions. Stormwater that is mixed with contact water is considered contact water. The Run-off control system for the Active Cell Landfills will consist of separation of clean stormwater from contact with water from the CCR. Contact water is rainfall that interacts with exposed CCR waste on the active landfills and is to remain within the confines of the active landfill (not to comingle with the clean storm water). Runoff associated with the active portions of the landfill will be captured and transported with generated leachate to the Town of Tonawanda sanitary sewer system for eventual treatment. The final cover for the closed portions of the landfill are equipped with sufficient cover (vegetated topsoil over barrier protection/clay soil over the CCR waste). The stormwater generated from the closed, covered sections of the landfill is allowed to discharge off the site, as it has not been in contact with the exposed CCR ash. Stormwater runoff from Huntley landfills will be considered non-contact water after the last final cover system is installed at a later date on previously active Cells A, C and, D.

Stormwater generated from the 25-year, 24-hour design storm is collected, controlled, and conveyed via temporary berms to small storage areas distributed in sub-areas of the covered portions of the landfill. Rainfall/runoff calculations and management of stormwater run-off from the covered portions of the Cells are further described in the following sections.

4.0 HYDROLOGIC & HYDRAULIC CALCULATIONS

The inputs for this analysis were based on the information gathered by GZA, upon reviewing historical drawings, updated topography, and other design documents made available to GZA by NRG Energy. The computer software HEC-HMS (v.4.8) developed by US Army Corps of Engineers Hydrologic Engineering Center was utilized by GZA for the analysis. GZA performed some cursory ground-truthing of the surface topography but did not attempt to independently verify these topo surveys conducted by others.

GZA re-delineated the landfill and updated the contributing drainage area of each subbasin based on the revised topographic maps provided by NRG. Cell A topographic maps indicated a slight change in elevation near the cell top compared to 2016 maps. Cell C&D contours changed notably as intermediate berms were removed and recent remediation of the perimeter ditches (including installation of a culvert pipe in the northwest corner of Cell C beneath the designated haul road) to increase drainage storage, infiltration to the subsurface leachate collection system and to allow for drainage to the southwestern storage basin of Cell C.



All elevations refer to the vertical datum of IGLD 1955 to be consistent with previous design drawings and documents, unless otherwise noted.

4.1 25-YEAR 24-HOUR DESIGN STORM

The 25-year 24-hour design storm is required for the run-off analysis for the CCR landfills. The 25-year 24-hour design storm was obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Volume 10 precipitation frequency (PF) estimates. **Table 1** provides the precipitation frequency estimates for the 2-, 5-, 10-, 25-, 50-, and 100-year 24-hour storm event. Similar to 2016 plan review, a design storm of 3.97 inches was used to develop a rainfall distribution. The Natural Resources Conservation Service (NRCS), standard rainfall distribution type III curve was used in this analysis to develop the Site’s hyetograph.

Table 1: NOAA Atlas 14 Rainfall Depths

Recurrence Interval	24 Hours Rainfall Depth (in)
2-year	2.23
5-year	2.82
10-year	3.30
25-year	3.97
50-year	4.47
100-year	5.01

4.2 HEC-HMS ANALYSIS

The active portions of Cell A, and Cells C and D were analyzed as two independent hydrologic systems in HEC-HMS. The setup for the two landfill models is included in **Attachment 2**. A summary of the hydrologic elements used for the analysis and the outputs are included below.

4.2.1 Inputs and Outputs for Huntley Active Cell A

Cell A has not been utilized since 2016 and latest topographic maps provided by NRG indicated slight change in overall landscape and therefore re-delineation of the cell was similar to 2016 plan review. Cell A consists of three sub-basins which contain the stormwater runoff within a 1.5-foot high earthen berm around the cell. The berm dimensions are provided in **Attachment 2** and the contributing drainage area of each subbasin at Cell A is provided in **Table 2**. Cell A has a temporary soil cover with heavy vegetation growth, therefore a Curve Number of 61 was used for the runoff potential. Runoff volumes are expected to decrease as Cell A surface developed vegetated cover over the five years. The landfill Cell A parameters are identified below in **Table 2**. The parameters from **Table 2** and the specified hyetograph were run through the HEC-HMS model. Outputs from the model are summarized in **Table 3**. The total volume in cubic feet is calculated from the total direct runoff over the sub-basin area.



❖ Key elevations are as follows:

<u>Subbasin Storage Area</u>	<u>Top Elevation at maximum storage volume (ft, IGLD 1955)</u>
SB-1 Berm	635.5
SB-2 Berm	629.5
SB-3 Berm	649.5

Table 2: HEC-HMS Watershed Input – Active Cell A

HEC-HMS Model	Subbasin	Drainage Area		Runoff Potential (SCS Curve Number)*	Watershed Lag Time (min)	Storage Capacity (cu.ft.)
		(sq mi)	Acres			
Active Cell A	SB-1	0.001605	1.1	61	3.4	4,777
	SB-2	0.002507	1.6	61	4.3	12,862
	SB-3	0.001232	0.8	61	2.1	4,680

* For the hydrologic analysis a curve runoff number (CN) of 61 was used for vegetated landfill slopes with good grass cover.

Table 3: HEC-HMS Watershed Output – Active Cell A

HEC-HMS Model	Subbasin	Peak Discharge (cfs)	Time of Peak (hr:min)	Total Direct Runoff (in)	Total Runoff Volume (cu.ft.)
Active Cell A	SB-1	0.5	12:30	0.79	2,946
	SB-2	0.8	12:30	0.79	4,601
	SB-3	0.4	12:30	0.79	2,260

The total stormwater runoff from the Site is approximately 20% of the total precipitation from the 25-year, 24-hour storm. The storage volume that is provided by the 1.5-foot high berms appear to provide sufficient storage to contain the Active Cell A stormwater runoff on site, allowing it to percolate into the existing leachate collection system.

4.2.2 Inputs and outputs for Huntley Active Cell C&D

Active Cells C and D were divided into three sub-basins (“SB”). Similarly, potential stormwater runoff is contained on-site using small earthen “training” berms and perimeter ditches/storage areas at topographic low points around the north, south and west sides. Those storage areas are shown on **Figure 4**. Cell C and D observed notable change in topography and storage capacity from 2016 plan review as on-site earthen berms were regraded with silty clay soil and experienced wash-off from historical rainfall events. GZA re-delineated the subbasins based on the latest topographic maps provided by NRG. Runoff from SB-1 discharges into a recently improved ditch along the north side of the cell. Stormwater from SB-2 is contained within small berms on top of the CCR landfill (elevation 638) within the northeast corner of Cell C. Overflow from SB-2 discharges down the side slope, travels along the west ditch, and



is captured in the SB-3 ditch/storage area in the southwest corner of the landfill. Runoff from SB-3 discharges into the ditch along the southwest side of the cell. Revised storage calculations and dimensions of ditches based on the updated topographic maps and site observations are provided in **Attachment A. Table 4** below, summarizes the available storage within each Subbasin. Active portions of Cell C and D surface was regraded with a silty clay soil for use as a temporary grassy cover soil and to promote sheet flow to the perimeters and therefore a SCS Curve Number of 80 was used for estimating the runoff potential. The Active Cell C and D updated parameters are identified below in **Table 4**. The parameters from **Table 4** and the specified hyetograph are ran through the HEC-HMS model. Outputs from the model are then summarized in **Table 5**. The total volume in cubic feet is calculated from the total direct runoff over the Subbasin area.

❖ Key elevations are as follows:

<u>Subbasin Storage Area</u>	<u>Top Elevation at maximum storage volume (ft, IGLD 1955)</u>
SB-1 Ditch	606.0
SB-2 Berm	643.5
SB-3 Ditch	600.0

Table 4: HEC-HMS Watershed Input – Active Cell C&D

HEC-HMS Model	Subbasin	Drainage Area		Runoff Potential (SCS Curve Number)*	Watershed Lag Time (min)	Storage Capacity (cu.ft.)
		(sq mi)	Acres			
Active Cell C&D	SB-1	0.004567	2.9	80	2.33	6,600
	SB-2	0.002269	1.5	80	7.17	1,591
	SB-3	0.011076	7.1	80	2.79	129,254

Table 5: HEC-HMS Watershed Output – Active Cell C&D

HEC-HMS Model	Subbasin	Peak Discharge (cfs)	Time of Peak (hr:min)	Total Direct Runoff (in)	Total Runoff Volume (cu.ft.)
Active Cell C&D	SB-1	3.4	12:30	2.01	21,328
	SB-2	1.6	12:30	2.01	10,596
	SB-3	8.1	12:30	2.01	51,722

The total runoff from the Site is approximately 51% of the total precipitation from the 25-year, 24-hour storm event. The volume that is provided by the perimeter ditches and berms provides enough storage for the total direct runoff.



5.0 RESULTS

The results for the Active Cells A, C, & D are summarized in **Table 6** and **7** below. The table below compares the storage capacity for each Subbasin and the volume of storage needed from the 25year, 24hour storm event.

Table 6: Active Cell A Storage

HEC-HMS Model	Subbasin	Storage Capacity (cft)	Storage Needed (cft)	Excess Storage Capacity (cft)	Water Elevation
Active Cell A	SB-1	4,777	2,946	1,831	634.99
	SB-2	12,862	4,601	8,260	628.60
	SB-3	4,680	2,260	2,419	648.96

Table 7: Active Cell C & D Storage

HEC-HMS Model	Subbasin	Storage Capacity (cft)	Storage Needed (cft)	Excess Storage Capacity (cft)	Water Elevation
Active Cell C&D	SB-1	6,600	21,328	(14,728)	607.78
	SB-2	1,591	10,596	(9,006)	648.71
	SB-3	129,254	51,722	77,532	598.11

The storage volume of the Active Cell A has the capacity to safely contain the stormwater from the 25-yr, 24-hr storm event within the 1.5-ft high berms. No stormwater overflow from the active portions to the perimeter ditches is expected from Huntley Cell A. The storage capacity of the Active Cell C&D SB-1 and SB-2 does not have the storage capacity to contain the stormwater from the 25-year, 24-hour storm. Overflow from SB-2 will travel along the surrounding slopes and discharge into the Active Cell C&D SB-3 ditch. The Active Cell C&D SB-3 ditch does have the extra storage to contain the overflow from the Active Cell C&D SB-1 and SB-2.

NRG has recently expanded the SB-1 ditch to increase the storage capacity and safely contain stormwater runoff from SB-1 slopes. The ditch is currently being modified, and final dimensions are not yet available. To estimate the effectiveness of these modifications, the ditch was modeled as a 4 ft deep and 7 ft wide rectangular channel to increase containment of stormwater runoff from SB-1. **Table 8** below summarizes the approximate new dimensions of SB-1 ditch. A culvert is also being added under the temporary haul road to better hydraulically connect the north and west drainage ditches. A 12-inch diameter corrugated plastic culvert pipe was included in the model to hydraulically connect and reroute excess runoff from SB-1 to SB-3 ditch. The approximate culvert dimensions used in the model along with the hydrologic storage routing input variables are provided in **Attachment 2**. As part of this work, GZA re-modeled Cell C&D including the new rectangular ditch and 12-in diameter culvert. There will be approximately 2.8 and 1.1 ft of freeboard at SB-1 and SB-3 ditch, respectively. GZA’s updated analysis



indicates that no stormwater runoff from the 25-yr 24-hr design storm is expected to overtop SB-3 berm at Elev. 600.0 ft (SB-3 outflow = 0.00 cfs). **Table 9** below demonstrates the results for SB-1 and SB-3 ditches from the updated HEC-HMS model.

The results indicated that the Active Cells A, C, and D have the ability to safely prevent run-off from the active portion of the CCR unit to the surrounding landscape. The stormwater is collected and controls the water volume resulting from the 25-year, 24-hour storm.

Table 8: New Dimensions of SB-1 Ditch

Subbasin	b (ft)	y (ft)	z	Length (ft)	Containment Volume (cf)
SB-1	7	4	0	553	15484

Table 9: Updated HEC-HMS Results for SB-1 and SB-3 Ditches (25-yr, 24-hr Rainfall Event)

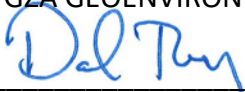
Ditch	Watershed Runoff (in)	Peak Inflow (cfs)	Peak Outflow (cfs)	Max WSEL (ft)	Top of Berm (ft)	Freeboard (ft)
SB-1	2.01	3.4	2.7	603.20	606.00	2.80
SB-3	2.01	12.5	0.0	598.90	600.00	1.10



PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of §257.81(c)(4) Periodic review for *Run-on and run-off controls for CCR landfills*. The undersigned registered professional engineer attests that this CCR Landfill Plan Review has been prepared in accordance with good engineering practice, including consideration of applicable state regulatory requirements and meets the requirements of §257.81(c), and that this plan is adequate for the NRG - Huntley Power. This certification was prepared as required by §257.81(c)(5).

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

Signature: 

Date: October 15, 2021
PE Registration State: New York
PE Registration Number: 081139-1



Professional Engineer Seal:

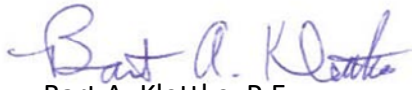
We trust this information satisfies your needs for this project.

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK



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



Bart A. Klettke, P.E.
Principal



Firas M. Rababaa
Engineer I



Peter H. Baril, P.E.
Consultant Reviewer

- Attachments: Attachment 1 – Limitations
Attachment 2 – Hydrologic Routing Input to HECHMS
Figure 1 - Site Location Map
Figure 2 - Area Topography
Figure 3 – Huntley Active Cell A
Figure 4 – Huntley Active Cells C and D



ATTACHMENT 1 - LIMITATIONS

USE OF REPORT

1. GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of the Client for the stated purpose(s) and location(s) identified in the Report. Use of this Report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. Our findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. The interpretations and conclusions presented in the Report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of the described services. The work described in this report was carried out in accordance with the agreed upon Terms and Conditions of Engagement.
4. GZA's flood evaluation was performed in accordance with generally accepted practices of qualified professionals performing the same type of services at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. The findings of the risk characterization are dependent on numerous assumptions and uncertainties inherent in the risk assessment process. The findings of the flood evaluation are not an absolute characterization of actual risks, but rather serve to highlight potential sources of risk at the site(s).
5. Unless specifically stated otherwise, the flood evaluations performed by GZA and associated results and conclusions are based upon evaluation of historic data, trends, references, and guidance with respect to the current climate and sea level conditions. Future climate change may result in alterations to inputs which influence flooding at the site (*e.g.* rainfall totals, storm intensities, mean sea level, *etc.*). Such changes may have implications on the estimated flood elevations, wave heights, flood frequencies and/or other parameters contained in this report.

RELIANCE ON INFORMATION FROM OTHERS

6. In conducting our work, GZA has relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Any inconsistencies in this information which we have noted are discussed in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations with codes and regulations by other parties are beyond our control.



ADDITIONAL INFORMATION

8. In the event that the Client or others authorized to use this report obtain information on conditions at the site(s) not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the opinions stated in this report.

ADDITIONAL SERVICES

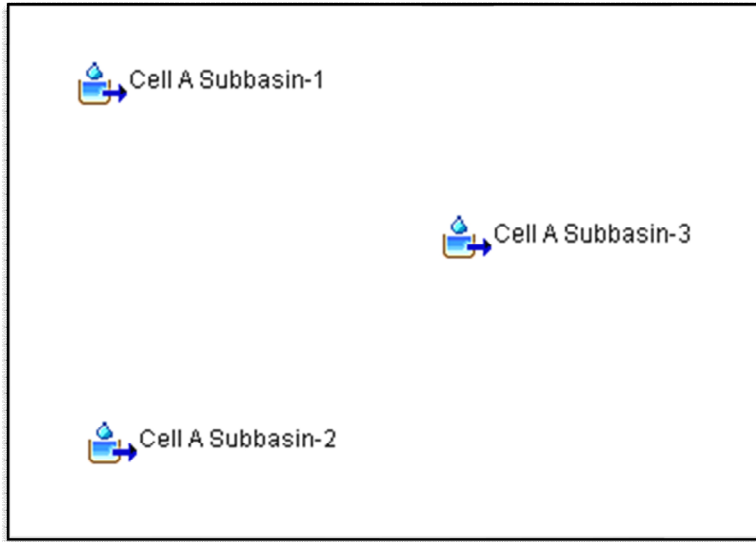
9. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



ATTACHMENT 2 - HEC-HMS BASIN MODEL [CELLS A, C & D]

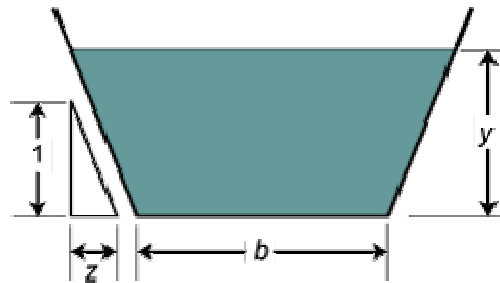
- **CELL A**

HEC-HMS Basin Model [Cell A]



Cell A Subbasin Storage Calculations

HEC-HMS Model	Subbasin	b (ft)	y (ft)	z	Length	Containment Volume (cu.ft)
Active Cell A	SB-1	20	1.50	3	130	4,777
	SB-2	20	1.5	3	350	12,862
	SB-3	2	1.5	3	480	4,680

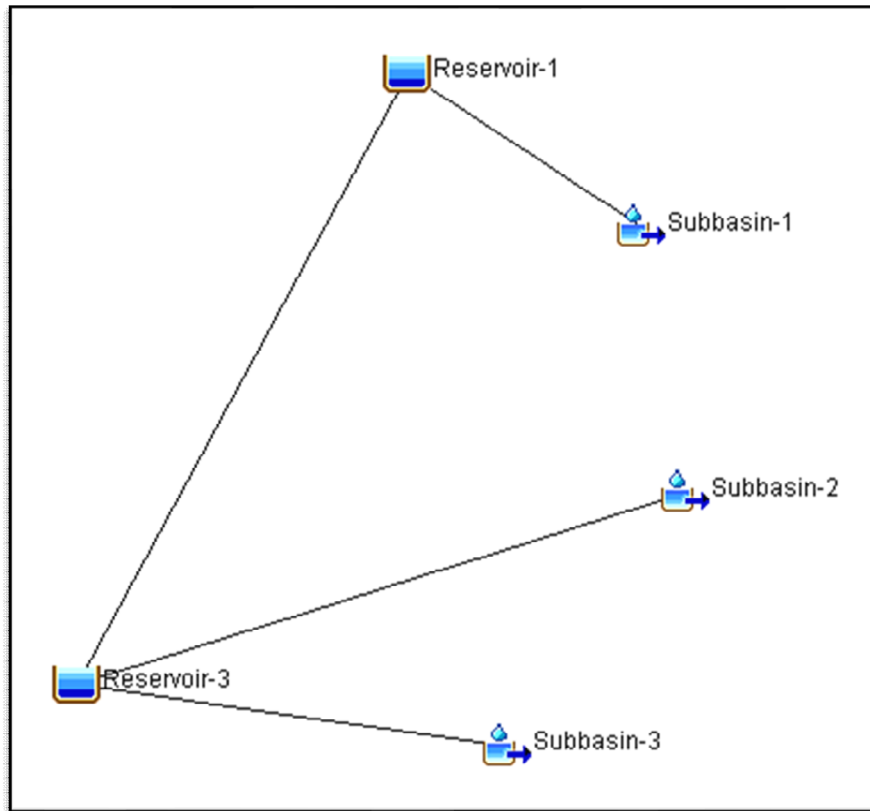




ATTACHMENT 2 - HEC-HMS BASIN MODEL [CELLS A, C & D] (Cont'd)

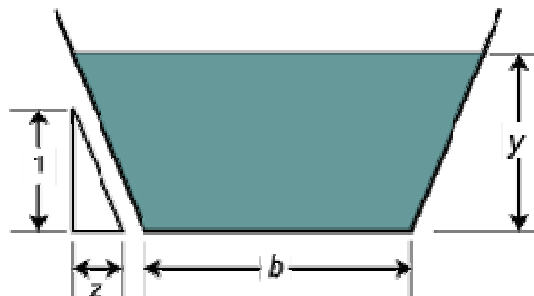
- CELLS C&D

HEC-HMS Basin Model [Cell C&D]



Cell C&D SB-1 Existing Ditch Storage Calculations

HEC-HMS Model	Subbasin	b (ft)	y (ft)	z	Length (ft)	Volume (cf)
Active Cell C & D	SB-1	1.5	2.00	3	440	6600





ATTACHMENT 2 - HEC-HMS BASIN MODEL [CELLS A, C & D] (Cont'd)

Cell C&D Subbasin 2&3 Storage Calculations from Contours

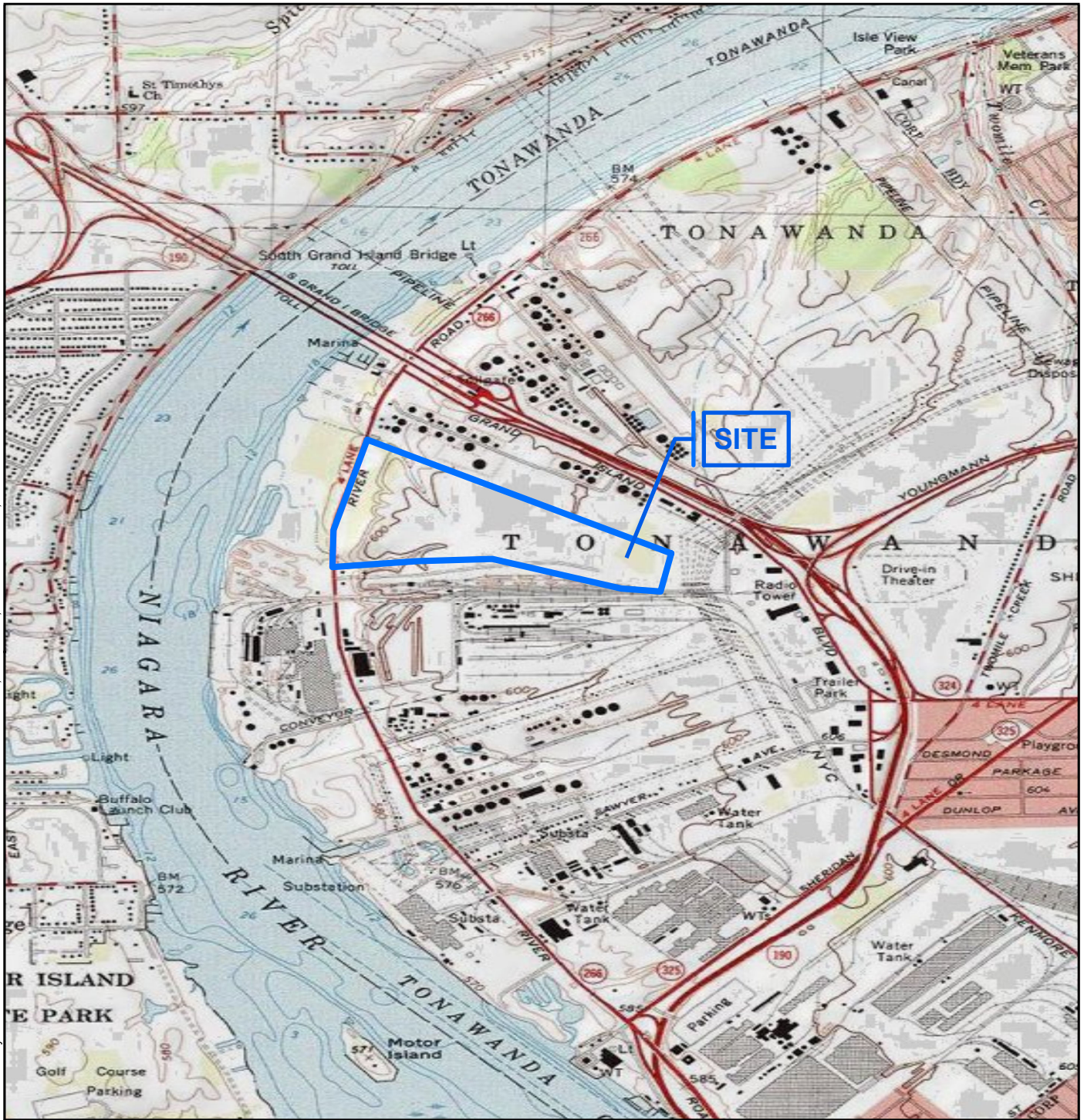
Active Cell C & D Subbasin 2	
Elevation (ft)	Volume (cu- ft)
642.5	232
643	494
643.5	865
Total	1,591

Active Cell C & D Subbasin 3	
Elevation (ft)	Volume (cu- ft)
593	224
594	982
595	1,727
596	2,906
597	12,587
598	29,096
599	37,449
600	44,285
Total	129,254

Proposed SB-1 Plastic Corrugated Pipe Culvert

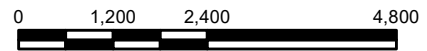
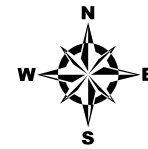
From	To	No. of Barrels	Diameter (in)	Length (ft)	Inlet Elev. (ft)	Outlet Elev. (ft)
SB-1	SB-3	1	12	30	602.0	601.0

© 2021 - GZA GeoEnvironmental, Inc. \\GZABuffalo\Jobs\569000s\56983 NRG Huntley CCR-Landfill Services 2021\GIS\MXD\LANDILL-SITEPLAN.mxd, October 01, 2021 - 3:30:26 PM, Firas.Rababaa



NOTE:

1. DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV
2. CONTOUR ELEVATIONS REFERENCE NAVD 88, CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS.



SCALE IN FEET

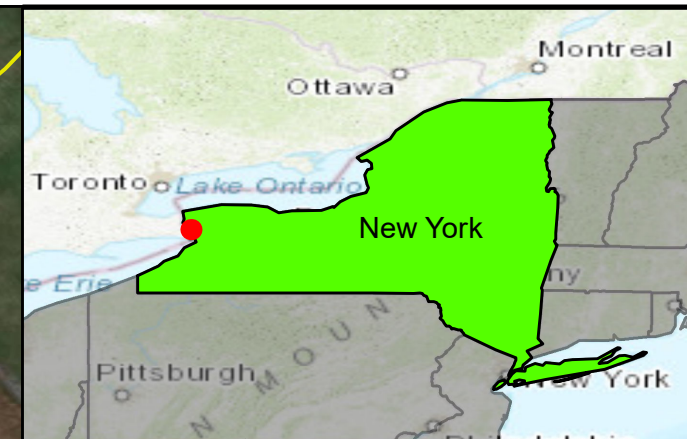
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENTS DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

NO.	ISSUE / DESCRIPTION	BY	DATE

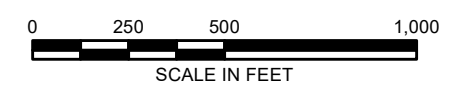
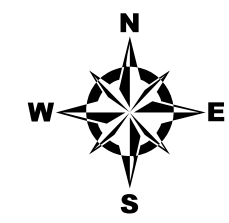
5-YR Plan Review for CCR Landfill Run-on/Run-off Control Plan NRG HUNTLEY PLANT TONAWANDA, NEW YORK		PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: HUNTLEY POWER, LLC 3500 RIVER ROAD TONAWANDA, NEW YORK
PROJ MGR: DJT DESIGNED BY: DJT DATE: SEPTEMBER 2021	REVIEWED BY: BAK DRAWN BY: FMR PROJECT NO: 21.0056983.00	CHECKED BY: DJT SCALE: AS SHOWN REVISION NO	FIG/DWG 1 SHEET NO: 01 OF 02

SITE LOCATION MAP

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- Legend**
- APPROXIMATE FLOW PATH
 - APPROXIMATE SURFACE CONTOURS
 - APPROXIMATE PROPERTY BOUNDARY
 - APPROXIMATE ACTIVE CELL BOUNDARY



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX,

NO.	ISSUE / DESCRIPTION	BY	DATE
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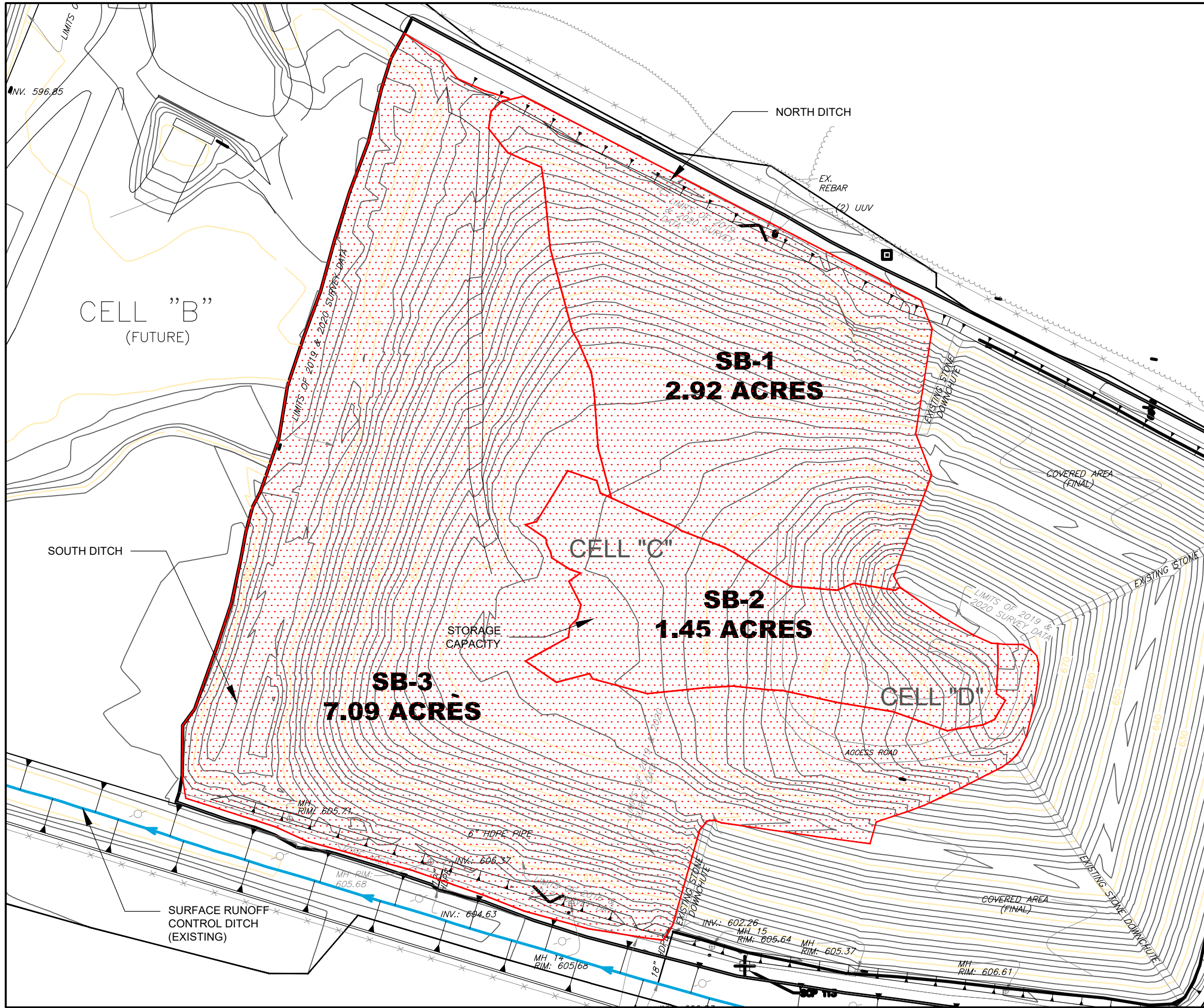
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5-YR PLAN REVIEW FOR CCR LANDFILL RUN-ON/RUN-OFF CONTROL PLAN
NRG HUNTLEY PLANT
TONAWANDA, NEW YORK

AREA TOPOGRAPHY

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: HUNTLEY POWER, LLC 3500 RIVER ROAD TONAWANDA, NY	
PROJ MGR: DJT	REVIEWED BY: BAK	CHECKED BY: DJT	FIGURE
DESIGNED BY: DJT	DRAWN BY: FMR	SCALE: AS SHOWN	2
DATE: SEPTEMBER 2021	PROJECT NO: 21.0056983.00	REVISION NO:	SHEET NO: 02 OF 04

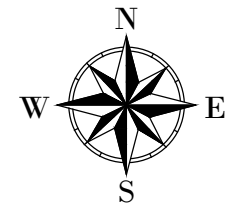
© 2021 - GZA GeoEnvironmental, Inc. GZA \\GZABUFFALO\Jobs\56900\569883 NRG Huntley CCR Landfill Services 2021\Huntley Documents\CAD Files\2020 Progression Survey.dwg [Cell C&D] October 04, 2021 - 2:00pm Firas Rababaa



LEGEND:

- ▨ ACTIVE CELL AREA
- 10' CONTOUR INTERVAL (MAJOR)
- 2' CONTOUR INTERVAL (MINOR)
- SURFACE RUNOFF CONTROL DITCH
- DITCH
- ⊕ MH 10 MANHOLE
- CULVERT
- SLOPE DOWN
- BRUSH ROW
- UTILITY POLE
- UUV UNKNOWN UTILITY VALVE
- SCP 000/WCP 000 CONTROL POINT

- NOTES:**
- BASE MAP WAS OBTAINED FROM DRAWINGS PROVIDED BY NRG ENERGY
 - ALL ELEVATIONS REFER TO THE VERTICAL DATUM OF IGLD 1955.



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HUNTLEY POWER LLC 3500 RIVER RD TONAWANDA, NY			
ACTIVE CELL C & D			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: NRG ENERGY LLC	
PROJ MGR: DJT DESIGNED BY: FMR DATE: SEP 2021	REVIEWED BY: BAK DRAWN BY: FMR PROJECT NO. 21.0056983.00	CHECKED BY: DJT SCALE: SEE ABOVE REVISION NO.	FIGURE <div style="font-size: 24px; font-weight: bold; text-align: center;">4</div> SHEET NO. 4 OF 4