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June 20, 2013

To: Diane Carlton, NYSDEC, Region 7 (1 CD)
Holly Sammon, Onondaga County Public Library (1 bound)
Samuel Sage, Atlantic States Legal Foundation (1 bound)
Joseph J. Heath, Esq., Onondaga Nation (cover letter)
Cara Burton, Solvay Public Library (1 bound)

Re: Letter of Transmittal – Wastebeds 1-8 Site Repository Addition

The below document has been approved by the New York State Department of Environmental Conservation (NYSDEC) and is enclosed for your document holdings:

- Wastebeds 1-8 Integrated IRM: Start-Up Plan dated June 13, 2013

Sincerely,

John P. McAuliffe
by CCC

John P. McAuliffe, P.E.
Program Director, Syracuse

Enc.

cc: Tracy A. Smith- Project Manager

New York State Department of Environmental Conservation

Division of Environmental Remediation

Remedial Bureau D, 12th Floor

625 Broadway, Albany, New York 12233-7013

Phone: (518) 402-9676 • Fax: (518) 402-9020

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Joe Martens
Commissioner

January 25, 2013

Mr. John P. McAuliffe, P.E.
Honeywell International, Inc.
301 Plainfield Road
Suite 330
Syracuse, NY 13212

Re: Wastebeds 1-8 Integrated IRM: Additional Investigation Work Plan

Dear Mr. McAuliffe:

The New York State Department of Environmental Conservation has reviewed the "Wastebeds 1-8 Integrated IRM: Additional Investigation Work Plan" (work plan) letter dated January 18, 2013 and the revised pages submitted via email from Brad Kubiak of O'Brien & Gere on January 25, 2013 (attached).

Based on our review the work plan is approved conditioned on the revised pages to the work plan reference above being inserted into all copies of the work plan that are distributed by Honeywell, to its agents (including all contractors working on the work plan), and to the public, if any. If you have any questions, please contact me at 518-402-9796.

Sincerely,

Tracy A. Smith
Project Manager

ecc: J. Gregg, NYSDEC
H. Kuhl
T. Joyal, Esq.
C. Waterman
T. Larson, NYSDEC
M. Spera, AECOM

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January 18, 2013

Mr. Tracy A. Smith
 Project Manager
 NYSDEC Div. of Environmental Remediation
 Remedial Bureau D
 625 Broadway, 12th Floor
 Albany, NY 12233-7016

**RE: Wastebeds 1-8 Integrated IRM: Additional Investigation Work Plan
 Town of Geddes, Onondaga County, New York
 Order on Consent: Index # D-7-0002-02-08**

Dear Mr. Smith:

The purpose of this letter is to provide the Additional Investigation Work Plan for the Wastebeds 1-8 Integrated Interim Remedial Measure, Mitigation Wetlands, and Remediation Area A Hydraulic Control System (Integrated IRM) Project for the Department's review. This work plan was developed by O'Brien & Gere in conjunction with input with NYSDEC, in response to NYSDEC's comments letter, dated November 21, 2012, on the Integrated IRM 100% Design.

As discussed, this work is scheduled to commence on Monday, January 21, 2013.

Please contact Doug Crawford at O'Brien & Gere (315-956-6442; doug.crawford@obg.com) or me should you have any questions regarding these documents.

Sincerely,

John P. McAuliffe

John P. McAuliffe, P.E.
 Program Director, Syracuse

by CCC

Enc. (2 copies, 1 CD)

cc:	Robert Nunes	USEPA (2 copies, 1 CD)
	Harry Warner	NYSDEC Region 7 (1 copy, 1 CD)
	Mark Sergott	NYSDOH (1 copy, 1 CD)
	Margaret A. Sheen, Esq.	NYSDEC, Region 7 (ltr only)
	Argie Cirillo, Esq.	USEPA (ltr only)
	Brian D. Israel, Esq.	Arnold & Porter (ec or CD)
	David Coburn	O.C. Office of the Environment (1 copy, 1 CD)
	Joseph Heath, Esq.	Onondaga Nation (ec or ec ltr only)
	Thane Joyal, Esq.	Onondaga Nation (ec or CD)
	Fred Kirschner	AESE, Inc. (ec or CD)
	Jeanne Shenandoah	Onondaga Nation (1 copy and ec ltr only)

Mr. Tracy A. Smith
January 18, 201
Page 2

Curtis Waterman	Onondaga Nation (ec or ec ltr only)
Alma Lowry	Onondaga Nation (ec or ec ltr only)
Michael Spera	AECOM (1 copy, 1 CD)
David Scheuing	AECOM (1 copy, 1 CD)
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Steve Miller	Honeywell (CD/ltr only)
Thomas Conklin	O'Brien & Gere (ec and 1 copy)
Bradley Kubiak	O'Brien & Gere (ec or ec ltr only)
Douglas M. Crawford	O'Brien & Gere (ec or ec ltr only)
Christopher C. Calkins	O'Brien & Gere (ec or ec ltr only)

This Work Plan presents the proposed scope of work for the additional investigation for the Wastebeds 1-8 (WB1-8) Integrated Interim Remedial Measure (IRM). This scope of work is based on NYSDEC's November 21, 2012 comments on the 100% Design Submittal and subsequent discussions pertaining to the passive well depth and verification of the silt and clay confining unit. The goal of this work is to verify the depth of the silt and clay confining unit that the passive wells for the three (Eastern Shoreline, Northern Shoreline, and Ninemile Creek) groundwater collection trenches will be keyed into.

PROJECT BACKGROUND

WB 1-8 Site (Site) is located along the southwestern shore of Onondaga Lake. A Site plan is included as **Figure 1**. The irregularly shaped wastebeds extend roughly 1.5 miles along the shoreline, with a maximum width of 0.5 mile, and cover approximately 315 acres. The Site, in its entirety, and inclusive of the wastebeds, covers approximately 404 acres. The Site elevation ranges from approximately 363 to 430 ft above mean sea level. Ninemile Creek (NMC) borders the Site along the northwest side to where it flows into Onondaga Lake.

WASTEBEDS 1-8 INTEGRATED IRM ADDITIONAL FIELD INVESTIGATION AND SAMPLING PLAN

The NYSDEC-approved site specific Health and Safety Plan (HASP) for the Wastebeds 1-8 site dated January 2004 will be used to support this work. The proposed tasks and methods for the investigation at WB 1-8 are presented below.

ACCESS AGREEMENTS

Access agreements with Onondaga County, the New York State Department of Agriculture and Markets, and the NYSDOT have been established.

MARKING OF SUBSURFACE UTILITIES

Dig Safely New York will be contacted prior to the initiation of intrusive work at the project area. A date and time will be established for the various utility companies to meet an O'Brien & Gere representative and mark the locations of subsurface utilities in the areas of proposed work.

MARKING OF FINAL SAMPLING LOCATIONS IN THE FIELD

Subsequent to the marking of subsurface utilities, the placement of the final boring locations will be performed by an O'Brien & Gere representative. Proposed investigation locations are presented on **Figure 2**.

SOIL BORINGS

Objective: Up to twenty soil borings will be advanced to a depth of approximately one foot into the silt and clay confining unit (where present) along the three groundwater collection trench alignments to document the elevation of the silt and clay layer.

Approach: Soil borings will be advanced within the proposed alignment of the three groundwater collection trenches. The proposed locations may be adjusted based on access and site conditions. The proposed boring locations are presented on **Figures 2, 2A, 3 and 4**.

Soil borings will be installed using conventional 3 ¼ inch hollow stem auger drilling techniques. Soil borings will be advanced without sampling to approximately 4 feet above the anticipated depth of the silt and clay unit at each location. Once that depth is reached the soil boring will be advanced utilizing continuous split spoon samples until the silt and clay unit is encountered (**Table 1**). Samples will be collected in accordance with ASTM Method D1586-84 using a 140-lb hammer and 2 inch diameter split barrel samplers. When the terminal depth of the borehole is reached, the borehole will be filled with a mixture of auger cuttings from the soil boring and a Portland cement/bentonite grout. A boring log will be prepared for each boring by the O'Brien & Gere geologist overseeing the boring installation.

Eastern Shoreline Soil Borings

A total of nine soil borings (WB18-SB-262 through WB18-SB-270) will be installed along the proposed Eastern Shoreline collection trench alignment (**Figure 2 and Figure 2A**). As discussed above, soil borings will be advanced without sampling to approximately 4 feet above the anticipated depth of the silt and clay unit at each location. Once that depth is reached the soil boring will be advanced utilizing continuous split spoon samples until the silt and clay unit is encountered (**Table 1**).

Northern Shore Soil Borings

A total of four soil borings (WB18-SB-271 through WB18-SB-274) will be installed along the proposed Northern Shore collection trench (**Figure 3**). As discussed above, soil borings will be advanced without sampling to approximately 4 feet above the anticipated depth of the silt and clay unit at each location. Once that depth is reached the soil boring will be advanced utilizing continuous split spoon samples until the silt and clay unit is encountered (**Table 1**).

Ninemile Creek Soil Borings

A total of six soil borings (WB18-SB-275 through WB18-SB-280) will be installed along the proposed Ninemile Creek collection trench (**Figure 4**). An additional soil boring (WB18-SB-281) may be installed based on the observations from WB18-SB-278. As discussed above, soil borings will be advanced without sampling to approximately 4 feet above the anticipated depth of the silt and clay unit at each location. Once that depth is reached the soil boring will be advanced utilizing continuous split spoon samples until the silt and clay unit is encountered (**Table 1**). If the silt and clay unit is not encountered at WB18-SB-278 at the expected elevation of 349 feet above mean sea level (amsl) then the soil boring will be advanced (with continuous split spoon samples) approximately 20 feet deeper to an approximate elevation of 329 feet amsl and WB18-SB-281 will be installed.

SAMPLE COLLECTION

No analytical or geotechnical samples will be collected during this investigation. However a representative sample of each split spoon will be collected and archived in driller's jars on Site for future review.

SITE SURVEY

A sample location survey will be performed by a NYS-licensed surveyor following the completion of the soil boring installations. The New York State Plane coordinates (NAD 83) will be determined, and the ground surface elevation will be surveyed to a vertical of 0.01 ft using NAVD-88 at sampling locations.

REPORT

Subsequent to completion of the field program described above, the boring logs and proposed revisions in passive well bottom elevations, if appropriate, will be submitted to the NYSDEC.

**TABLE 1
WASTEBEDS 1-8 ADDITIONAL INTEGRATED IRM INVESTIGATION
ESTIMATED DEPTHS OF SOIL BORINGS**

Eastern Shore							
Boring Number	Passive Well Number	Location (Alignment G Station)	Assumed Ground Elevation (feet)	Estimated Elevation of Top of Silt and Clay (feet)	Proposed Boring Bottom Elevation (feet)	Proposed Boring Bottom Depth (feet)	Depth Continuous Sampling Starts (feet)
WB18-SB-262	WB18-RW-10	2+85	370	334	333	37	33
WB18-SB-263	WB18-RW-18	5+25	370	330	329	41	37
WB18-SB-264	WB18-RW-26	7+65	370	333	332	38	34
WB18-SB-265	WB18-RW-46	13+65	370	338	337	33	29
WB18-SB-266	WB18-RW-105	31+35	370	328	327	43	39
WB18-SB-267	WB18-RW-110	32+85	370	332	331	40	36
WB18-SB-268	WB18-RW-194	58+05	370	320	319	51	47
WB18-SB-269	WB18-RW-204	61+05	370	311	310	61	57
WB18-SB-270	WB18-RW-214	64+05	370	309	308	62	58
Northern Shore							
Boring Number	Passive Well Number	Location (Alignment L Station)	Assumed Ground Elevation (ft)	Estimated Elevation of Top of Silt and Clay (ft.)	Proposed Boring Bottom Elevation (feet)	Proposed Boring Bottom Depth (feet)	Depth Continuous Sampling Starts (feet)
WB18-SB-271	WB18-RW-281	9+45	370	291	290	80	76
WB18-SB-272	WB18-RW-291	7+05	370	304	303	68	64
WB18-SB-273	WB18-RW-303	4+17	370	316	315	56	52
WB18-SB-274	WB18-RW-315	1+29	370	326	325	45	41
Ninemile Creek							
Boring Number	Passive Well Number	Location (Alignment J Station)	Assumed Ground Elevation (ft)	Estimated Elevation of Top of Silt and Clay (ft.)	Proposed Boring Bottom Elevation (feet)	Proposed Boring Bottom Depth (feet)	Depth Continuous Sampling Starts (feet)
WB18-SB-275	WB18-RW-226	0+50	375	357	335	40	36
WB18-SB-276	WB18-RW-238	3+30	375	354	335	40	36
WB18-SB-277	WB18-RW-245	5+70	375	349	348	28	24
WB18-SB-281	WB18-RW-252	8+50	375	344	343	33	29
WB18-SB-278	WB18-RW-256	10+10	375	343	342	33	29
WB18-SB-279	WB18-RW-263	12+90	375	349	348	27	23
WB18-SB-280	WB18-RW-268	14+90	375	345	344	32	28

Notes:

Optional boring if the silt/clay elevation is not what is expected.



FIGURE 1

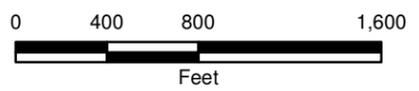


LEGEND

-  APPROXIMATE WASTE BED BOUNDARY
-  WASTE BEDS 1-8 SITE
- PROPERTY BOUNDARY**
-  STATE OF NEW YORK
-  COUNTY OF ONONDAGA

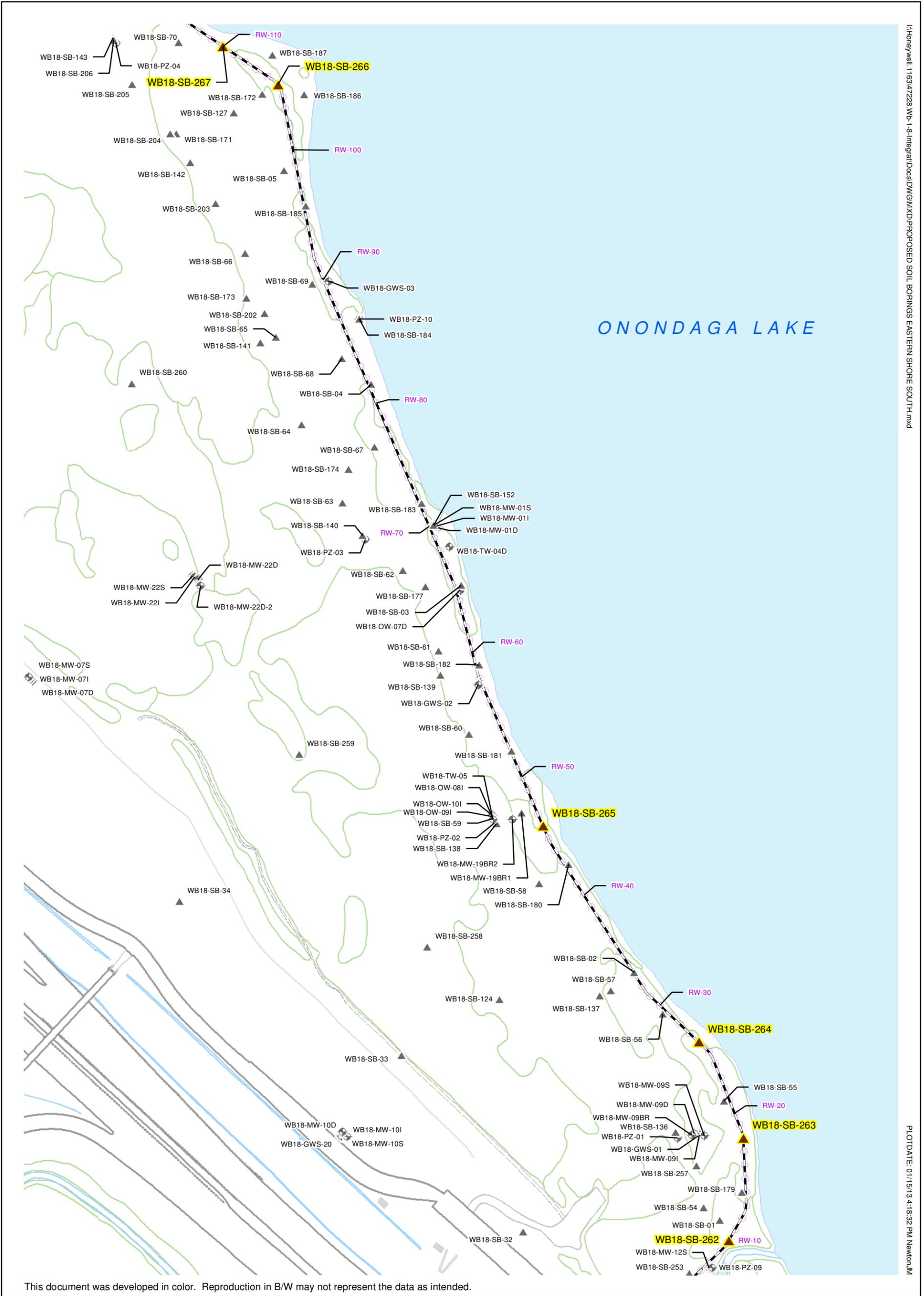
HONEYWELL
WASTE BEDS 1 - 8
GEDDES, NEW YORK

SITE PLAN



JANUARY 2012
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- LEGEND**
- ▲ PREVIOUS SOIL BORING
 - ⊕ EXISTING WELL
 - ▲ PROPOSED SOIL BORING
 - PROPOSED PASSIVE WELL
 - PROPOSED COLLECTION TRENCH

**EASTERN SHORE SOUTH
PROPOSED SOIL BORINGS**

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GEDDES, NEW YORK

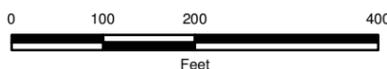


FIGURE 2

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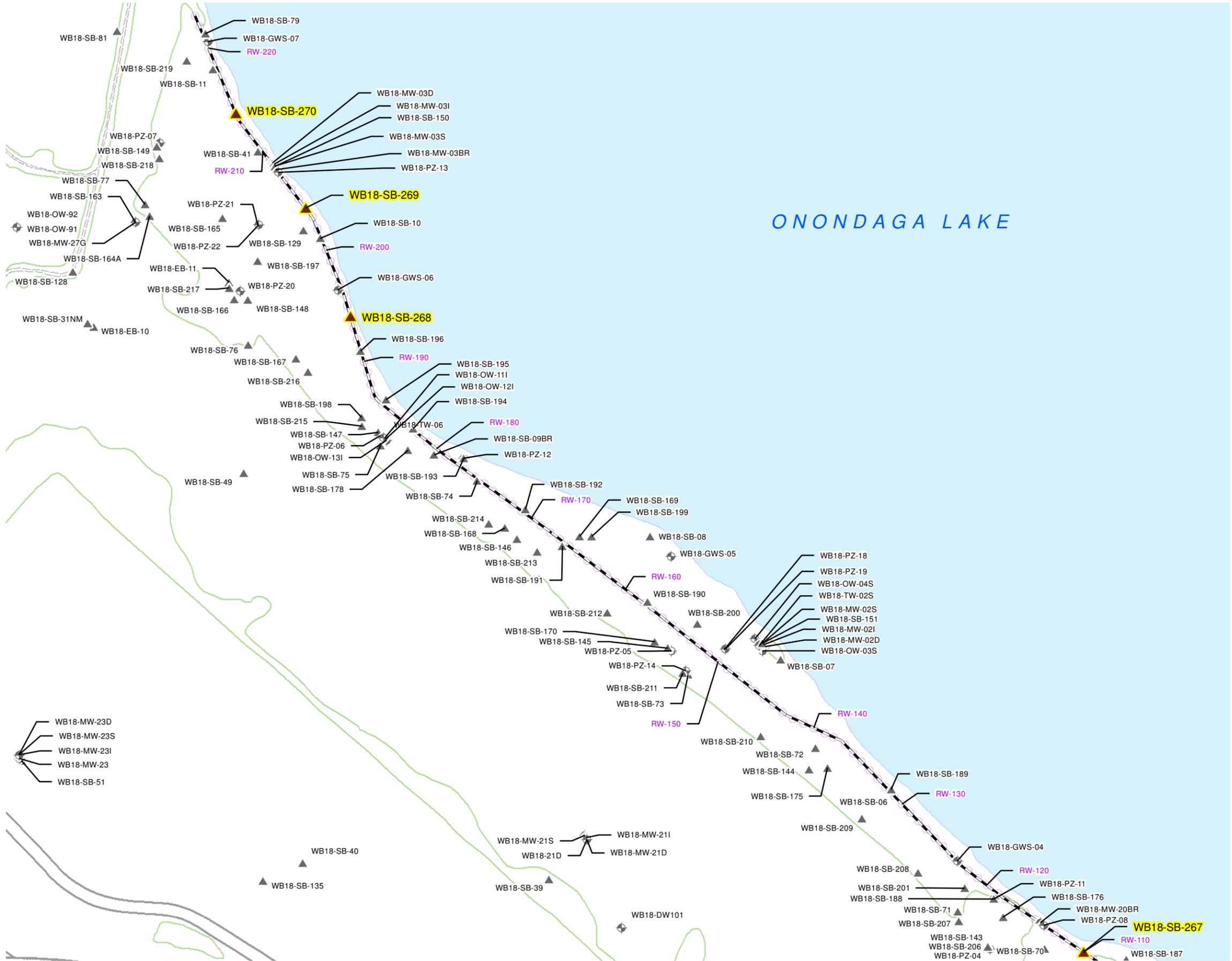


FIGURE 2a

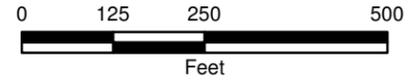


LEGEND

- ▲ PREVIOUS SOIL BORING
- ◆ EXISTING WELL
- ▲ PROPOSED SOIL BORING
- PROPOSED PASSIVE WELL
- PROPOSED COLLECTION TRENCH

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EASTERN SHORE
NORTH
PROPOSED
SOIL BORINGS



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FIGURE 3

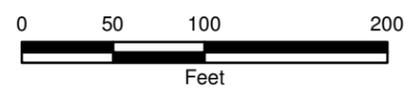


LEGEND

- ▲ PREVIOUS SOIL BORING
- ⊕ EXISTING WELL
- ▲ PROPOSED SOIL BORING
- PROPOSED PASSIVE WELL
- PROPOSED COLLECTION TRENCH

**HONEYWELL
WASTEBEDS 1-8
GEDDES, NEW YORK**

**NORTH SHORE
PROPOSED
SOIL BORINGS**



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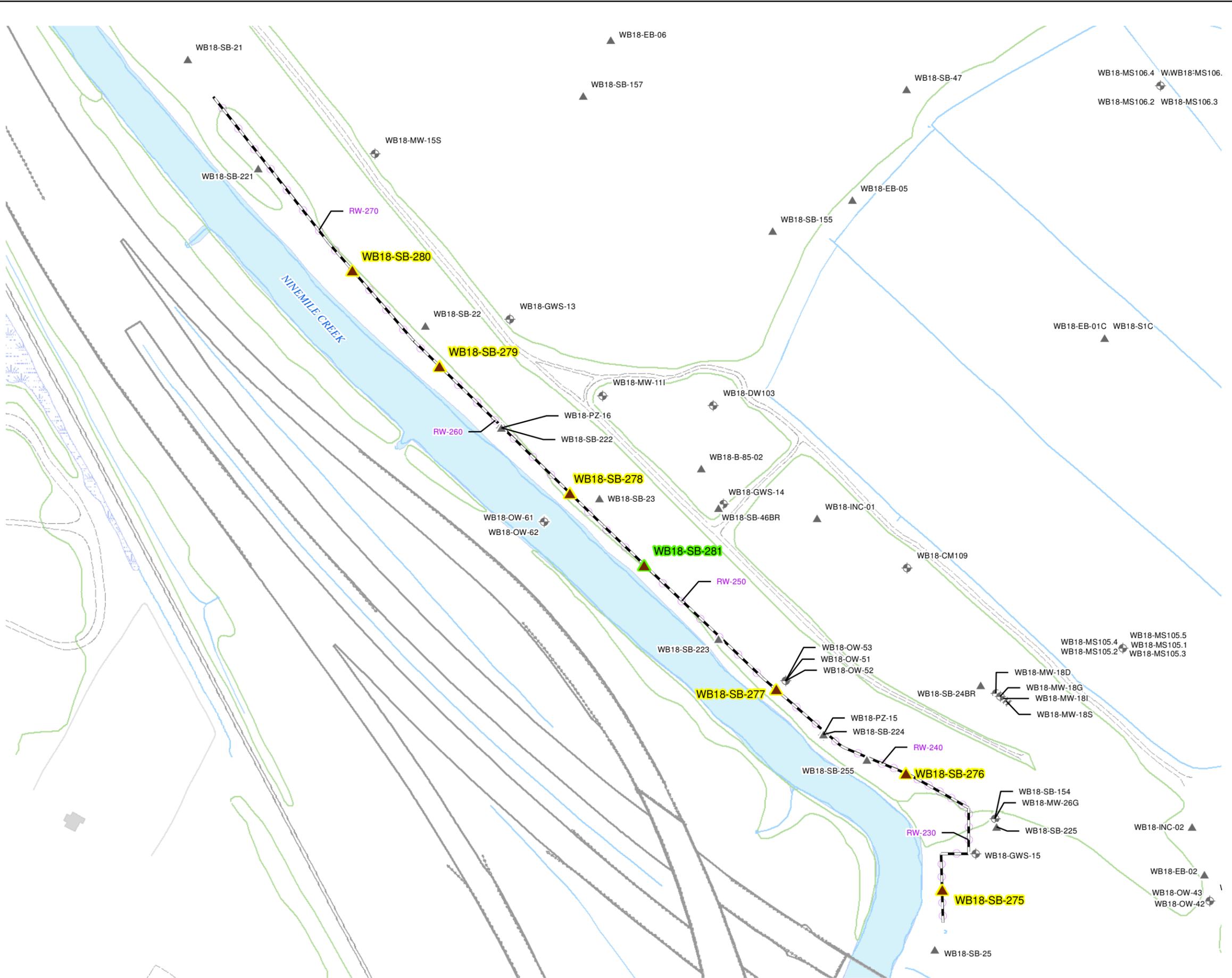


FIGURE 4

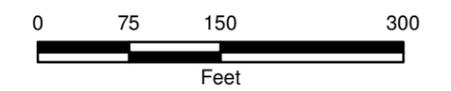


LEGEND

- ▲ PREVIOUS SOIL BORING
- ⊕ EXISTING WELL
- ▲ (Green) OPTIONAL PROPOSED SOIL BORING
- ▲ (Yellow) PROPOSED SOIL BORING
- (Pink) PROPOSED PASSIVE WELL
- PROPOSED COLLECTION TRENCH

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**NINEMILE CREEK
PROPOSED
SOIL BORINGS**



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