

May 9, 2007

Michael J. Hinton, P.E. Division of Environmental Remediation New York State Department of Environmental Conservation 270 Michigan Avenue Buffalo, NY 14203-2999

Subject: 2007 March Quarterly Report

Booth Oil Site

North Tonawanda, New York NYSDEC Site No. 9-32-100

Dear Mr. Hinton:

On behalf of the Booth Oil Site Administrative Group (BOSAG), AMEC Earth and Environmental, Inc. (AMEC) presents this *Quarterly Groundwater Gauging Report* for the above referenced site (**Figure 1**). The groundwater gauging event was performed on March 28, 2007. Work was performed according to the approved site Operations and Maintenance Plan. The following sections of this report discuss the observations and activities completed during the gauging event.

GROUNDWATER GAUGING

Shallow overburden monitoring wells MW-101 through MW-104 were gauged for depth-to-water and light non-aqueous phase liquid (LNAPL) during the March 28, 2007 site visit. A summary of the gauging results is presented in **Table 1**.

The depth-to-water results of the gauging event were utilized to develop a groundwater contour map (Figure 2). As illustrated on Figure 2, groundwater during the March 2007 monitoring event was projected to flow towards the west.

No LNAPL was observed in any of the wells.

SITE SURFACE CONDITIONS

An inspection of the surface conditions at the Site was also conducted during the March 28, 2007 gauging event.

No significant signs of erosion were noted, and the grass was well maintained. A photographic log of the Site conditions has been included as **Attachment 1**.

SUMMARY

The groundwater elevation data indicates groundwater flow is to the west. This is consistent with previous groundwater flow directions which generally range from southwest to northwest. No LNAPL was present in any of the wells gauged. In general, the Site appeared well maintained. During the gauging event, no new erosional features were noted.

Should you have any questions or comments concerning this report, please contact Tim Ahrens at (518) 372-0905 or by e-mail at tim.ahrens@amec.com.

Sincerely,

AMEC Earth and Environmental Inc.

Cristopher J. Schrader Environmental Engineer

Cro & Schrader

Timothy P. Ahrens Project Manager

Tidy! Me

cc: BOSAG Steering Committee

BOSAG Technical Committee Paul J. Kurzanski, CSXT

Matthew J. Forcucci, NYSDOH

TABLES

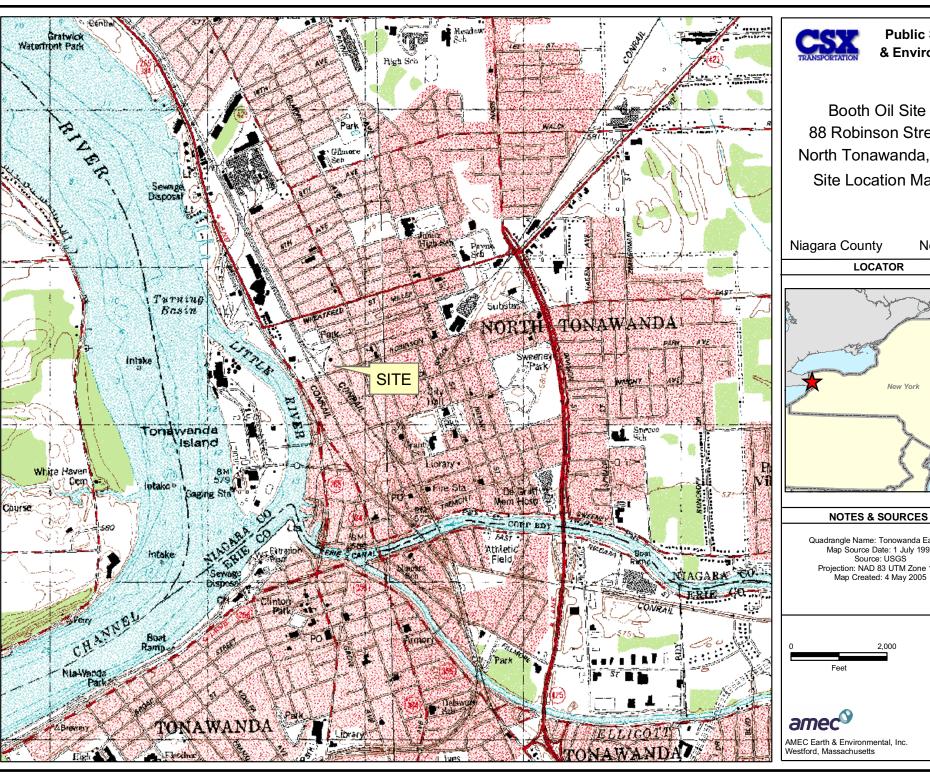
GROUNDWATER GAUGING RESULTS TABLE 1

Units MW-101 MW-102 MW-103 MW-104 S80.6 Ground Surface Elevation ft-msl 579.2 579.66 579.84 580.6 Ground Surface Elevation ft-msl 576.5 576.6 576.9 577.7 Stickup feet 2.72 3.02 2.9						
Ground Surface Elevation		Units	_			MW-104
Stickup						
Depth to Top of Screen	Ground Surface Elevation	ft-msl	576.5	576.6	576.9	577.7
Top of Screen Elevation		feet	2.72	3.02	2.9	2.9
Depth to Top of Clay		ft-bgs	2.5	3		
Top of Clay Elevation	Top of Screen Elevation	ft-msl	574	573.6	572.8	574
Depth to Bottom of Screen ft-bgs 7.5 8 9.1 8.7	Depth to Top of Clay	ft-bgs	4.9	6	6.5	5.9
Bottom of Screen Elevation	Top of Clay Elevation	ft-msl	571.6	570.6	570.4	571.8
Bottom of Screen Elevation	Depth to Bottom of Screen	ft-bgs	7.5	8	9.1	8.7
Depth to Groundwater Gt-toc Dry Dr			569	568.6	567.8	569
Depth to Groundwater Gt-toc Dry Dr	18-Oct-04					
Depth to Groundwater		ft-toc	Dry	Dry	Dry	Dry
Depth to Groundwater	Groundwater Elevation	ft-msl	Dry	Dry	Dry	Dry
Was LNAPL Present? No No No Was Groundwater Table within screened interval? <	Depth to Groundwater	ft-bgs			Dry	Dry
Was Groundwater Table within screened interval? No No <t< td=""><td>Was LNAPL Present?</td><td></td><td></td><td>No</td><td></td><td></td></t<>	Was LNAPL Present?			No		
Saturated Thickness above Clay feet 0 0 0 0 0						
Depth to Groundwater	screened interval?					
Depth to Groundwater	Saturated Thickness above Clay	feet	0	0	0	0
Groundwater Elevation ft-msl 573.86 569.56 571.36 575.12 Depth to Groundwater ft-bgs 2.62 7.08 5.58 2.58 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes No, High Saturated Thickness above Clay feet 2.28 -1.08 0.92 3.32 30-Mar-05 Depth to Groundwater ft-toc 4.51 8.39 Dry Dry <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
Groundwater Elevation ft-msl 573.86 569.56 571.36 575.12 Depth to Groundwater ft-bgs 2.62 7.08 5.58 2.58 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Ves No, High Saturated Thickness above Clay feet 2.28 -1.08 0.92 3.32 30-Mar-05 Depth to Groundwater ft-toc 4.51 8.39 Dry Dry Groundwater Elevation ft-msl 574.69 571.27 Dry Dry Depth to Groundwater ft-bgs 1.79 5.37 Dry Dry Was LNAPL Present? No No No No Saturated Thickness above Clay feet 3.09 0.67 0 0 22-Jun-05 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation	Depth to Groundwater	ft-toc	5.34	10.1	8.48	5.48
Depth to Groundwater ft-bgs 2.62 7.08 5.58 2.58 Was LNAPL Present? No Hold No	Groundwater Elevation		573.86	569.56	571.36	575.12
Was LNAPL Present? No				7.08		
Was Groundwater Table within screened interval? Yes Yes No, High Saturated Thickness above Clay feet 2.28 -1.08 0.92 3.32 30-Mar-05 Depth to Groundwater ft-toc 4.51 8.39 Dry Dry Groundwater Elevation ft-msl 574.69 571.27 Dry Dry Depth to Groundwater ft-bgs 1.79 5.37 Dry Dry Was LNAPL Present? No No No No No Was Groundwater Table within screened interval? No, High Yes Saturated Thickness above Clay feet 3.09 0.67 0 0 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater Table within screened interval? No No No No No Saturated Thickne		•	No	No	No	No
Saturated Thickness above Clay feet 2.28 -1.08 0.92 3.32						
30-Mar-05	screened interval?		Yes	Yes	Yes	No, High
30-Mar-05	Saturated Thickness above Clay	feet	2.28	-1.08	0.92	3.32
Groundwater Elevation ft-msl 574.69 571.27 Dry Dry Depth to Groundwater ft-bgs 1.79 5.37 Dry Dry Was LNAPL Present? No No No No Was Groundwater Table within screened interval? No, High Yes Saturated Thickness above Clay feet 3.09 0.67 0 0 22-Jun-05 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Depth to Groundwater ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29						
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Depth to Groundwater	Groundwater Elevation	ft-msl				,
Was LNAPL Present? No No No No Was Groundwater Table within screened interval? No, High Yes Saturated Thickness above Clay feet 3.09 0.67 0 0 22-Jun-05 6.75 8.5 8.59 Bepth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 4.02 4	Depth to Groundwater	ft-bas			•	Drv
Was Groundwater Table within screened interval? No, High Yes Saturated Thickness above Clay feet 3.09 0.67 0 0 22-Jun-05 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 0.83 2.31 0.94 0.21 Depth to Groundwater ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99<					•	,
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Saturated Thickness above Clay feet 3.09 0.67 0 0 22-Jun-05 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 0.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? No <t< td=""><td>screened interval?</td><td></td><td>No, High</td><td>Yes</td><td></td><td></td></t<>	screened interval?		No, High	Yes		
22-Jun-05 Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 0.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes		feet	3.09	0.67	0	0
Depth to Groundwater ft-toc 6.77 6.75 8.5 8.59 Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 0.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes					_	
Groundwater Elevation ft-msl 572.43 572.91 571.34 572.01 Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 8.76 9.63 Groundwater Elevation ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes		ft-toc	6.77	6.75	8.5	8.59
Depth to Groundwater ft-bgs 4.07 3.69 5.56 5.69 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes						
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Screened interval? Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21						_
Saturated Thickness above Clay feet 0.83 2.31 0.94 0.21 14-Sep-05 Depth to Groundwater ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes			Yes	Yes	Yes	Yes
14-Sep-05 Depth to Groundwater ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes		feet	0.83	2.31	0.94	0.21
Depth to Groundwater ft-toc 6.69 10.37 8.76 9.63 Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes						
Groundwater Elevation ft-msl 572.51 569.29 571.08 570.97 Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes		ft-toc	6.69	10.37	8.76	9,63
Depth to Groundwater ft-bgs 3.99 7.31 5.82 6.73 Was LNAPL Present? No No No No Was Groundwater Table within screened interval? Yes Yes Yes						
Was LNAPL Present? No No No No No Was Groundwater Table within screened interval? Yes Yes Yes Yes						
Was Groundwater Table within screened interval? Yes Yes Yes Yes			_			
screened interval?						
Saturated Thickness above Clay feet 0.91 -1.31 0.68 -0.83			Yes	Yes	Yes	Yes
	Saturated Thickness above Clay	feet	0.91	-1.31	0.68	-0.83

GROUNDWATER GAUGING RESULTS TABLE 1

	Units	MW-101	MW-102	MW-103	MW-104
Top of Casing Elevation	ft-msl	579.2	579.66	579.84	580.6
Ground Surface Elevation	ft-msl	576.5	576.6	576.9	577.7
Stickup	feet	2.72	3.02	2.9	2.9
Depth to Top of Screen	ft-bgs	2.5	3	4.1	3.7
Top of Screen Elevation	ft-msl	574	573.6	572.8	574
Depth to Top of Clay	ft-bgs	4.9	6	6.5	5.9
Top of Clay Elevation	ft-msl	571.6	570.6	570.4	571.8
Depth to Bottom of Screen	ft-bgs	7.5	8	9.1	8.7
Bottom of Screen Elevation	ft-msl	569	568.6	567.8	569
01-Dec-05			-		
Depth to Groundwater	ft-toc	4.55	10.6	8.55	6.35
Groundwater Elevation	ft-msl	574.65	569.06	571.29	574.25
Depth to Groundwater	ft-bgs	1.85	7.54	5.61	3.45
Was LNAPL Present?	11-bgs	No	No	No	No
Was Groundwater Table within		INO	INO	INO	INO
screened interval?		No, High	Yes	Yes	No, High
Saturated Thickness above Clay	feet	3.05	-1.54	0.89	2.45
23-Mar-06	1661	3.03	-1.54	0.09	2.43
Depth to Groundwater	ft-toc	5.36	6.84	8.49	5.42
Groundwater Elevation	ft-msl	573.84	572.82	571.35	575.18
Depth to Groundwater				5.55	2.52
•	ft-bgs	2.66	3.78		
Was LNAPL Present? Was Groundwater Table within		No	No	No	No
screened interval?		Yes	Yes	Yes	No, High
	foot	0.04	0.00	0.05	
Saturated Thickness above Clay	feet	2.24	2.22	0.95	3.38
27-Jun-06				0.50	0.40
Depth to Groundwater	ft-toc	6.92	7.54	8.59	9.12
Groundwater Elevation	ft-msl	572.28	572.12	571.25	571.48
Depth to Groundwater	ft-bgs	4.22	4.48	5.65	6.22
Was LNAPL Present?		No	No	No	No
Was Groundwater Table within		Yes	Yes	Yes	Yes
screened interval?					
Saturated Thickness above Clay	feet	0.68	1.52	0.85	-0.32
26-Sep-06					
Depth to Groundwater	ft-toc	4.68	8.62	8.6	5.66
Groundwater Elevation	ft-msl	574.52	571.04	571.24	574.94
Depth to Groundwater	ft-bgs	1.98	5.56	5.66	2.76
Was LNAPL Present?		No	No	No	No
Was Groundwater Table within		No, High	Yes	Yes	No, High
screened interval?					
Saturated Thickness above Clay	feet	2.92	0.44	0.84	3.14
18-Dec-06					
Depth to Groundwater	ft-toc	5.42	5.42	8.45	5.1
Groundwater Elevation	ft-msl	573.78	574.24	571.39	575.5
Depth to Groundwater	ft-bgs	2.72	2.36	5.51	2.2
Was LNAPL Present?		No	No	No	No
Was Groundwater Table within		V	NI - III - I-	\/	NI - III - I-
screened interval?		Yes	No, High	Yes	No, High
Saturated Thickness above Clay	feet	2.18	3.64	0.99	3.7
28-Mar-07					
Depth to Groundwater	ft-toc	5.91	6.88	8.21	6.79
Groundwater Elevation	ft-msl	573.29	572.78	571.63	573.81
Depth to Groundwater	ft-bgs	3.21	3.82	5.27	3.89
Was LNAPL Present?		No	No	No	No
Was Groundwater Table within					
screened interval?		Yes	Yes	Yes	Yes
Saturated Thickness above Clay	feet	1.69	2.18	1.23	2.01
Cataratou Thiorness above Oldy	ICCL	1.08	2.10	1.20	ا ک.∪ ا

FIGURES



Public Safety & Environment

Booth Oil Site 88 Robinson Street North Tonawanda, NY Site Location Map

New York



Quadrangle Name: Tonowanda East NY Map Source Date: 1 July 1995 Source: USGS Projection: NAD 83 UTM Zone 17N Map Created: 4 May 2005





FIGURE

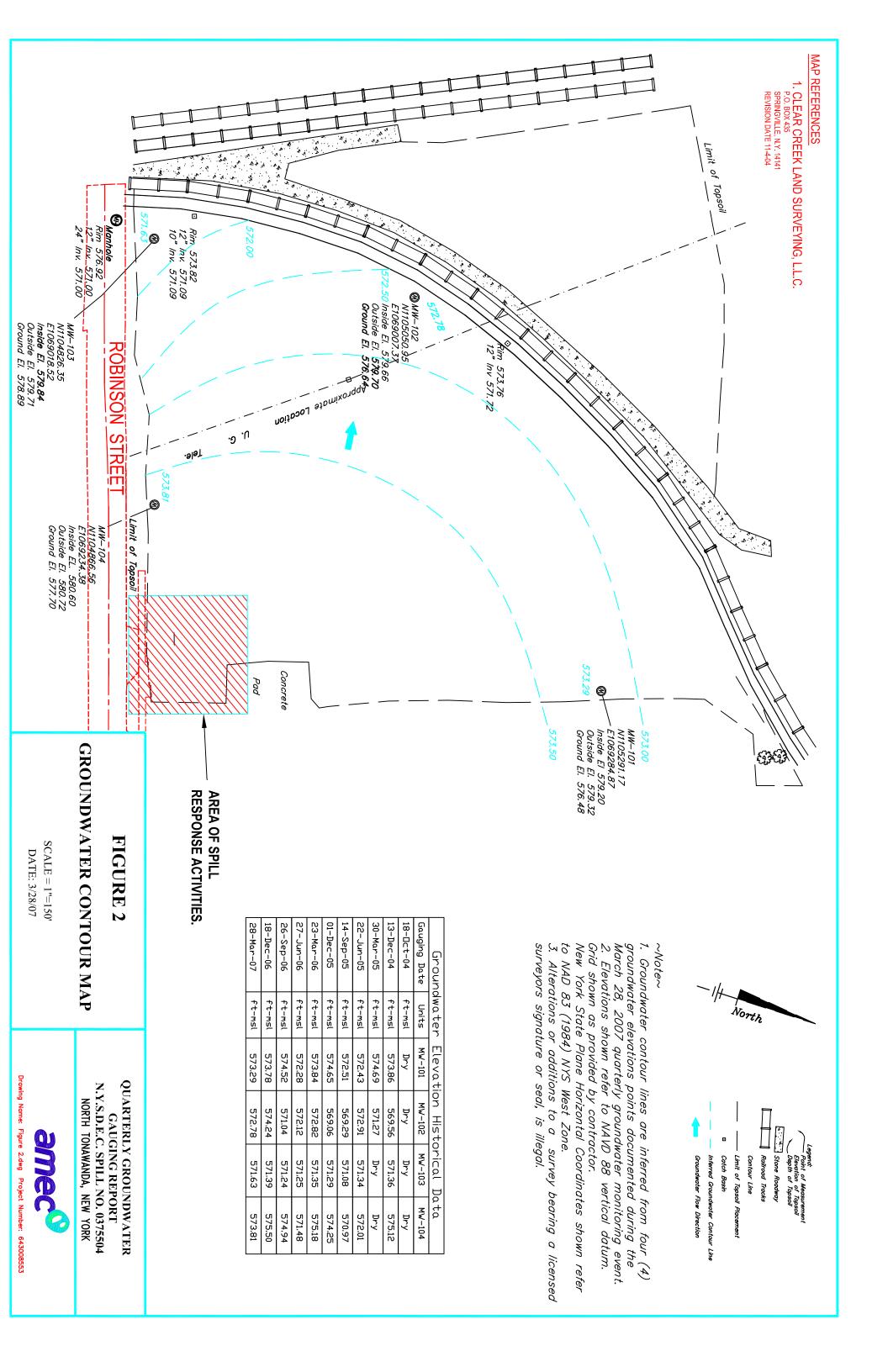






Photo 1

Entering the site Heading north toward MW-101



Photo 2

Facing west looking over the site



155 Erie Blvd. Edison Plaza Schenectady, New York 12305 W.O. 643008553 PROCESSED: CJS

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PAGE

Booth Oil Site North Tonawanda, NY

CSX Transportation, Inc. Jacksonville, FL



Photo 3

Facing northeast toward MW-101



Photo 4

Drainage pipe extending southward from the tracks



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PAGE 2

Booth Oil Site North Tonawanda, NY

CSX Transportation, Inc. Jacksonville, FL



Photo 5

Facing southwest toward MW-103



Photo 6

Facing east toward MW-104



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Booth Oil Site North Tonawanda, NY

CSX Transportation, Inc. Jacksonville, FL