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TASK 2 REPORT
FOR THE SITE INVESTIGATION
AT THE FORMER ONEONTA
COAL GASIFICATION PLANT
FOR
NEW YORK STATE ELECTRIC & GAS CORPORATION

OCTOBER 1988

VOLUME II
APPENDICES A - I

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TRC Project No. 3435-N61

October 7, 1988

TRC

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A TRC Company

APPENDIX A

TEST PIT LOGS

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-1
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 22' x 7'
LOCATION: Gas holder pad in southern part of site.

Depth (ft)	Description
0.0 - 3.0	Sand, F to C, and gravel. Gravel includes brick rubble. Dry, no visible contamination.
3.0	Flat concrete pad (base of holder) throughout most of pit.
3.0 - 3.5	Gravel coated with sticky viscous black oily material.
3.5 - 7.0	Silt and fine sand, gray. Contains copper wire, railroad ties and other construction debris.
	Wall of 100,000 cubic foot gas holder extends below base of pit.
	OVA Response -- Pit rim 50 ppm Above pit 10 ppm Disturbed sample 100 ppm
	Sample taken at 3.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-2
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 6' x 8'
LOCATION: Just east of gas holder in south part of site.

Depth (ft)	Description
0.0 - 3.0	Sand, F to C and gravel, dark brown. Includes coal slag and brick fragments.
3.0 - 6.5	Silt and sand, F, light yellowish brown. No visible contamination or odor.
6.5 - 8.0	Sand, F to C, and rounded gravel to 3", greenish gray. Heavily coated with tar, strong tar odor.
	Tar/water seeping into pit at 7.5 ft.
	OVA Response -- Pit rim 20 ppm Above pit 10 ppm Disturbed sample 40 ppm
	Sample taken at 8.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-3
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 5' x 6'
LOCATION: Near tar separators

Depth (ft)	Description
0.0 - 1.5	Sand, F to C, and rounded gravel. No visible contamination.
1.5 - 6.0	Sand, F and silt, black. Contains brick and wood fragments. Heavy tar odor.
	Seepage of water and tar into pit below 3.5 ft.
	Intercepted brick foundation running N-S at depth of 0.5 to 3.0 ft in east end of pit (probably wall of tar separator).
	OVA Response -- Pit rim 50 ppm Above pit 10 ppm Disturbed sample 100 ppm
	Sample taken at 6.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-4
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 15' x 4'
LOCATION: Area of gas generators in front of blower room.

Depth (ft)	Description
0.0 - 1.5	Sand, F to C, and gravel. Some large blocks of construction debris. Dry, no visible tars.
1.5 - 3.0	Sand, M to C, and rounded gravel to 3". Reddish brown, slight tar odor.
3.0 - 4.0	Sand and gravel, black. Saturated with tar and water.
4.0	Flat concrete pad throughout west end of pit.
	Large volume of clear water seeping into pit at 4.0. This water was later found by Mike Naples of the Oneonta Water Dept. to be coming from a leak in a nearby water-supply pipe.

OVA Response --

Pit rim	4 ppm
Above pit	4 ppm
Disturbed sample	6 ppm

Sample taken at 4.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-5
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 6' x 4.5'
LOCATION: Area of gas generators south of blower room.

Depth (ft)	Description
0.0 - 0.5	Gravel and sand, C. Dark whitish brown.
0.5 - 4.5	Sand, F to C, some gravel, black. Contains coal slag and bricks. No visible evidence of tar but sample has a slight tar odor. Water table at 4.0. Water seeping into pit contains no visible contamination but local water table was probably being affected by a leaking water pipe when the pit was dug. OVA Response -- Pit rim 5 ppm Above pit 4.5 ppm Disturbed sample 6 ppm Sample taken at 4.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-6
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/4/86 DATE COMPLETED: 8/4/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 6'
LOCATION: Near outdoor purifiers.

Depth (ft)	Description
0.0 - 2.0	Sand, F to C, trace gravel. Some brick fragments. No visible tar.
2.0 - 3.0	Silt and sand, F, blue gray (purifier waste (?)). Slightly moist.
3.0 - 4.5	Sand and gravel. Trace amount of tar. Slightly moist but not saturated.
4.5 - 6.0	Sand and gravel. Saturated with heavy coating of tar.
	Water table at about 5.5 ft. Water seeping into pit contains large amount of tar.
	OVA Response -- Pit rim 30 ppm Above pit 20 ppm Disturbed sample 600 ppm
	Sample taken at 6.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-7
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/4/86 DATE COMPLETED: 8/4/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 7.5'
LOCATION: North of scrubber, just east of existing garage.

Depth (ft)	Description
0.0 - 3.0	Sand, F to C and gravel to 2", dark brown with yellowish brown patches. No visible tars.
3.0 - 5.5	Sand, F to C, dark brown. Saturated below 4.0 ft.
5.5 - 6.5	Silt and sand, F. Blue gray (purifier waste (?)). Small amount of tar and tar odor.
6.5 - 7.5	Sand and gravel to 1", extremely dark blue to black. Strong tar odor.
	8" Steel pipe elbow intersected at 3.0 ft. Enters S end of pit trending N-S and bends eastward toward Gas Ave.
	OVA Response -- Pit rim 4.5 ppm Above pit 2.0 ppm Disturbed sample 30 ppm
	Sample taken at 7.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG
CONTRACTOR: Morley Const. (John)
DATE STARTED: 8/4/86
PIT DIMENSIONS (W X L X H): 3' x 10' x 5'
LOCATION: Tar tank west of meter room.

TEST PIT NO. TP-8
LOCATION: Oneonta, NY
TRC INSPECTOR: J. Hankins
DATE COMPLETED: 8/4/86

Depth (ft)	Description
0.0 - 0.5	Asphalt underlain by dry sand and gravel, light brown.
0.5 - 1.5	Sand, F to C, and gravel heavily coated by black tarry material. Unsaturated.
1.5 - 3.5	Sand, F to C and gravel to 2", dark brown. Little visible tar. About 20 percent of unit is composed of dark brown woodchips.
3.5 - 5.0	Sand, F to C, and gravel. Heavily coated and saturated with dark green to black tars. Nearly pure phase product seen seeping into pit at 4.5 ft.
	Vertical concrete wall crossing south end of pit.
	OVA Response -- Pit rim 10 ppm Above pit 4 ppm Disturbed sample 20 ppm
	Sample taken at 4.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-9
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/4/86 DATE COMPLETED: 8/4/86
PIT DIMENSIONS (W X L X H): 3' x 20' x 9'
LOCATION: Through west side of relief holder wall

Depth (ft)	Description
0.0 - 2.0	Sand, F to C and gravel to 3", light brown. No visible tars.
2.0 - 7.0	Silt and fine sand, blue-gray. Some tar odor and visible tars. Appears saturated but is too tight for water to flow into pit.
7.0 - 9.0	Sand, F to C and gravel. Somewhat coated by tars.
	Relief holder wall intercepted in middle of pit at depth of 0.5 ft extending beyond the base of the pit (9 ft). Wall is 4-5 bricks (24") thick. Above description is for zone outside of holder wall. Material within holder wall is primarily brick rubble.
	OVA Response -- Pit rim 10 ppm Above pit 5 ppm Disturbed sample 30 ppm
	Sample taken at 7.0 ft, outside of holder wall but above zone of heaviest contamination

TEST PIT LOG

PROJECT NO.: 3435-N61
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG
CONTRACTOR: Morley Const. (John)
DATE STARTED: 8/4/86
PIT DIMENSIONS (W X L X H): 3' x 7' x 5'
LOCATION: Within relief holder

TEST PIT NO. TP-10

LOCATION: Oneonta, NY
TRC INSPECTOR: J. Hankins
DATE COMPLETED: 8/4/86

Depth (ft)	Description
0.0 - 1.0	Sand, F to C, and gravel, light brown. Common brick fragments.
1.0 - 5.0	Sand, F to C, and gravel, black. Contains large amount of building debris including bricks, boards, pipe. Heavily coated by tars below 3.0 ft. Large amount of tar/water seeping into pit 4 ft from west end.
	Note: This pit appears to be totally within the relief holder. See TP-9 for description of holder wall and material outside of the holder wall.
	OVA Response -- Pit rim 70-120 ppm Above pit 30- 90 ppm Disturbed sample 1000+ ppm
	Sample taken at 5.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-11
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 4' x 8.5'
LOCATION: Near 20,000 gallon oil holder

Depth (ft)	Description
0.0 - 1.5	Sand, F to C, and gravel to 3", dark brown. Includes brick and concrete fragments. Dry. No visible tar or odor.
1.5 - 4.0	Same as above but darker with tar odor.
4.0 - 8.5	Silt and sand, F, blue-gray with orange mottles. Very strong tar odor (see OVA) but no free tars.

Vertical concrete foundation in west end of pit.

OVA Response --

Pit rim	1000+ ppm
Above pit	30 ppm
Disturbed sample	1000+ ppm

Sample taken at 8.5 ft.

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-12
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 5'
LOCATION: Near 100,000 gallon oil tank

Depth (ft)	Description
0.0 - 1.0	Sand, F to C, and gravel to 4". Includes brick and some other building debris. No visible tars.
1.0 - 3.0	Same as above but darker with tar odor.
3.0 - 4.5	Gravel and sand, C. Saturated with water and tar below 4.0 ft. Water seeping into pit has definite tar/oil sheen.
4.5 - 5.0	Silt and fine sand, blue-gray. Tight (fairly impermeable). Tar odor but no visible tar.

OVA Response --

Pit rim	60 ppm
Above pit	10 ppm
Disturbed sample	400 ppm

Sample taken at 3.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-13
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/5/86 DATE COMPLETED: 8/5/86
PIT DIMENSIONS (W X L X H): 3' x 5' x 6'
LOCATION: West of gas holder by southern property boundary.

Depth (ft)	Description
0.0 - 1.0	Dark brown topsoil.
1.0 - 4.5	Sand, F to M, and silt, light brown. Moist. No visible contamination or odor.
4.5 - 6.0	Sand, F to C, and rounded gravel to 10". Oily odor. Greenish discoloration. Very wet to saturated but no standing water in pit.

OVA Response --

Pit rim	12 ppm
Above pit	10 ppm
Disturbed sample	25 ppm

Sample taken at 6.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-14
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/6/86 DATE COMPLETED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 6' x 8'
LOCATION: In asphalt road near tar tank location east of Gas Ave.

Depth (ft)	Description
0.0 - 0.5	Asphalt road.
0.5 - 2.0	Road base. Sand F to C, and rounded gravel, dark brown. Slightly moist.
2.0 - 3.0	Rounded gravel to 10". Few bricks.
3.0 - 8.0	Sand, F, some silt, blue-gray. Tar odor with some free tar. Slight amount of tar/water seeping into pit at 8 ft. Tar is greenish yellowish brown. OVA Response -- Pit rim 25 ppm Above pit 1 ppm Disturbed sample 100 ppm Sample and duplicate taken at 8.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG
CONTRACTOR: Morley Const. (John)
DATE STARTED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 8.5'
LOCATION: Due east of gas holder, across Gas Ave.

TEST PIT NO. TP-15
LOCATION: Oneonta, NY
TRC INSPECTOR: J. Hankins
DATE COMPLETED: 8/6/86

Depth (ft)	Description
0.0 - 1.0	Topsoil. Sand, F to M, and rounded gravel, dry.
1.0 - 1.5	Sand, F, light brown. Slightly moist. No odor or visible contamination.
1.5 - 3.0	Sand, C, and fine gravel, black. Slightly moist. Contains coal slag.
3.0 - 4.0	Sand, F to C, and fine gravel, white-gray. 2 old beer bottles. Ash layer (?).
4.0 - 8.5	Silt, some fine sand, trace clay, gray with orange-brown mottling. Saturated. No visible contamination or odor.

OVA Response --

Pit rim	1 ppm
Above pit	1 ppm
Disturbed sample	1 ppm

Sample taken at 8.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-16
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/6/86 DATE COMPLETED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 6' x 8'
LOCATION: In asphalt road near tar tank location east of Gas Ave.

Depth (ft)	Description
0.0 - 0.5	Asphalt road.
0.5 - 2.0	Road base. Sand F to C, and rounded gravel, dark brown. Slightly moist.
2.0 - 3.0	Rounded gravel to 10". Few bricks.
3.0 - 8.0	Sand, F, some silt, blue-gray. Tar odor with some free tar.
	Tar/water seepage at 4.0 ft and from base of pit.
	OVA Response -- Pit rim 8 ppm Above pit 5 ppm Disturbed sample 100 ppm
	Sample taken at 8.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-17
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/6/86 DATE COMPLETED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 6.5'
LOCATION: Northwest of tar tanks east of Gas Ave.

Depth (ft)	Description
0.0 - 1.0	Sand, F, and gravel, black. Extremely firm, dry.
1.0 - 2.5	Sand, F to C, and rounded gravel, orange-brown. Loose, dry. No visible tars.
2.5 - 6.5	Sand, F to M, and silt, blue-gray. Slight amount of free tar with slight petroleum (?) odor. Moist to saturated but no seepage into pit.

OVA Response --

Pit rim	30 ppm
Above pit	5 ppm
Disturbed sample	100 ppm

Sample taken at 6.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG
CONTRACTOR: Morley Const. (John)
DATE STARTED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 8' x 8'
LOCATION: Near storage shed, east of Gas Ave.

TEST PIT NO. TP-18

LOCATION: Oneonta, NY
TRC INSPECTOR: J. Hankins
DATE COMPLETED: 8/6/86

Depth (ft)	Description
0.0 - 1.5	Sand, F to C, and gravel, medium brown. Dry.
1.5 - 3.5	Sand, F to C, and gravel, black. Moist. Tar odor.
3.5 - 7.0	Silt, some sand, F, yellowish brown. Tar odor but no visible tars.
7.0 - 8.0	Sand, F to C, and gravel to 3". Saturated and heavily coated with tars.
	Large amount of free tar/water flowing into base of pit.
	OVA Response -- Pit rim 20 ppm; Above pit 5 ppm; Disturbed sample 100 ppm
	Sample taken at 8.0 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-19
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/6/86 DATE COMPLETED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 15' x 5'
LOCATION: East of existing red shed, east of original purifiers.

Depth (ft)	Description
0.0 - 1.5	Sand, F to C, and rounded gravel to 3". Includes building debris (glass, timbers).
1.5 - 1.7	Sand, M to C, and gravel to 1", black. Coated with extremely viscous sticky asphaltic material.
1.7 - 4.0	Sand, F to C, and rounded gravel, black. Slightly moist. Includes fragments of glass, brick, timber. Strong tar odor. Flat cement pads at 3.0, 4.5, and 5 ft in various parts of the pit. Intersected two 1" steel pipes running E-W in south end of pit 11' from old gas house bldg. Vertical concrete walls which taper outward exist in NE and SE corners of pit. These appear to be some type of footing. OVA Response -- Pit rim 25 ppm Above pit 1 ppm Disturbed sample 500 ppm Sample taken at 2.5 ft

TEST PIT LOG

PROJECT NO.: 3435-N61 TEST PIT NO. TP-20
PROJECT: Oneonta Gas Plant
CLIENT: NYSEG LOCATION: Oneonta, NY
CONTRACTOR: Morley Const. (John) TRC INSPECTOR: J. Hankins
DATE STARTED: 8/6/86 DATE COMPLETED: 8/6/86
PIT DIMENSIONS (W X L X H): 3' x 9' x 9.5'
LOCATION: Background pit, 258 ft east of Gas Ave., adjacent to Creek

Depth (ft)	Description
0.0 - 1.0	Grassed topsoil. Sand, F to M, and gravel, medium brown.
1.0 - 8.0	Silt and sand, F, dark brown. Contains fragments of brick and wood. Saturated below 5.0 ft. Slight tar odor but no visible tars.
8.0 - 9.5	Sand, F to C, and rounded gravel to 5".
	Water seeping rapidly upward into pit from gravel.
	OVA Response - Pit rim 1.6 ppm Above pit 1.4 ppm Disturbed sample 1.4 ppm
	Sample taken at 9.5 ft

APPENDIX B

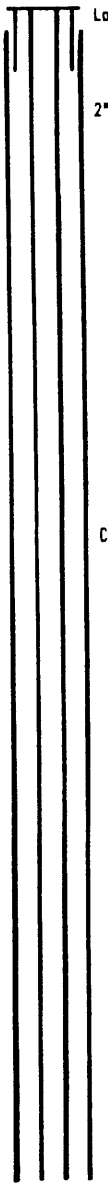
BORING LOGS

BORING NO.:	MW-1D	BORING DEPTH:	80.0 FT	DATE STARTED:	8/7/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/12/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	8.79 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-1D

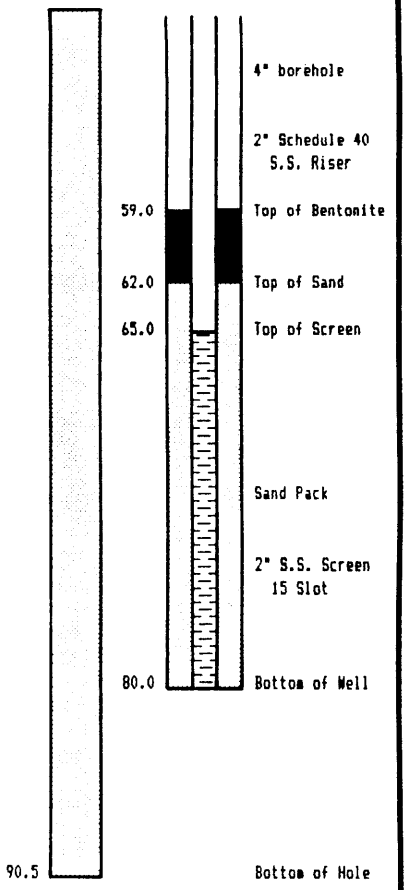
DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2	6 10 8 6	2.2	FILL
2-4	3 3 5 7	3.9	Dark brown fine-medium SAND, little silt, moist
4-6	10 9 8 7	5.3	
6-8	4 2 6 8	2.8	Grayish-blue medium SAND, wet, coal tar odor WATER TABLE AT 8.0 FT
8-10	12 8 6 5	2.8	Grayish-blue GRAVEL, some sand, wet, coal tar
10-12	9 8 4 1	3.3	
12-14	1 1 6 7	2.8	
14-16	10 11 10 12	4.7	
16-18	11 4 4 5	4.7	Black fine SAND, some silt, wet, coal tar odor
18-20	2 3 4 4	2.2	
20-22	9 12 7 7	2.7	Dark gray fine SAND, some silt, wet, no coal tar odor
22-24	3 4 5 5	4.6	Light gray fine SAND, some silt, wet
24-26	6 10 11 14		Same as above, with 2" light gray silt and clay layer
26-28	6 10 11 14		
28-30	6 16 16 20		
34-36	5 4 3	2.3	
39-41		2.2	
44-46	6 6 7	2.0	
49-51	4 4 4	1.8	Light gray fine SAND, some silt, wet, 9" silt and clay layer

LITHOLOGY

WELL CONSTRUCTION



DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
54-56	4 4 7	1.5	Light gray fine SAND and SILT, wet, 8" clay-silt layer
59-61		3.2	Light gray fine SAND, some silt, wet
64-66	6 10 13	3.2	
69-71	5 6 11	2.2	
74-76		1.7	Light brown fine SAND, some silt, wet, 2" clay layer
79-81	7 6 10	1.7	Light gray fine SAND, some silt, wet
84-86	6 6 11	1.9	
89-90.5		3.0	

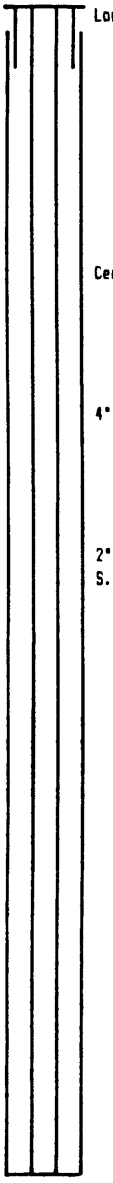


BORING NO.:	MW-2D	BORING DEPTH:	81.0 FT	DATE STARTED:	8/14/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/18/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	6.19 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-2D

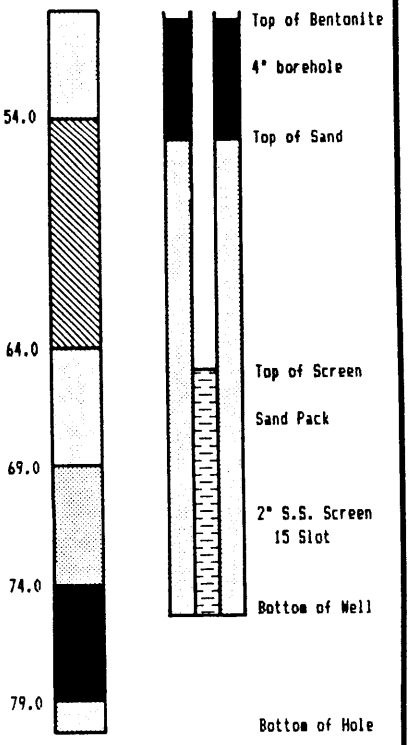
DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2	10 12 9 7	1.6	FILL
2-4	6 4 6 4	2.2	
4-6	7 4 3 1	6.5	Black-brown medium SAND, wet , coal tar odor
6-8	4 2 1 1	105.0	Blue-black GRAVEL, some sand, wet, visible coal tar WATER TABLE at 7 FT
8-10			NO RECOVERY
10-12			SPOON REFUSAL, Drilled through 7" cement slab
12-14	10 9 11	43.0	Blue-black GRAVEL, some sand, wet, coal tar sheen and odor
14-16	11 3 1 1	805.0	Gray-black fine SAND, some silt, wet, visible coal tar and odor
16-18	2 2 2 2	700.0	
18-20			NO RECOVERY
20-22	5 5 5 3	26.0	Light gray fine SAND, some silt, wet, visible coal tar and odor
22-24	4 4 3 4	4.4	
24-26	4 4 3 4	4.8	SAME AS ABOVE, clay lenses within sample
26-28	4 4 4 3	3.0	Light brown fine SAND, some silt, wet
28-30	4 4 5 6	2.9	SAME AS ABOVE, 2" clay lense
34-36	4 5 6 7	8.3	
39-41	5 6 5 7	3.9	
44-46	5 6 8 9	3.0	

LITHOLOGY

WELL CONSTRUCTION

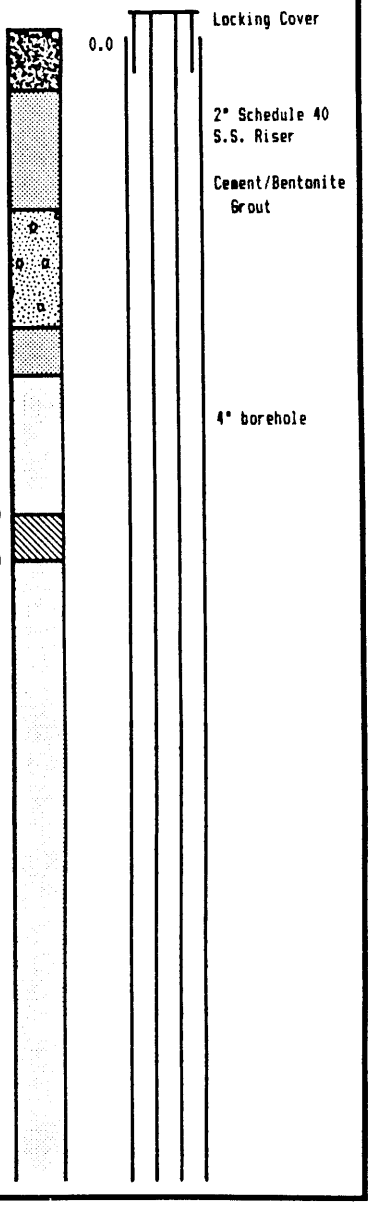


DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
49-51	9 8 8 7	8.2	
54-56	4 5 5 8	3.5	Light brown SILT, some sand, trace clay, wet
59-61	9 8 6 7	4.9	
64-66	4 7 10 9	6.2	Light brown medium-fine SAND, little silt, wet
69-71	7 5 9 2	3.6	Light brown SILT and fine SAND, trace clay, wet
74-76	5 3 5 8	2.9	Light brown CLAY, little silt, wet
79-81		2.8	Brown fine SAND, little silt, wet

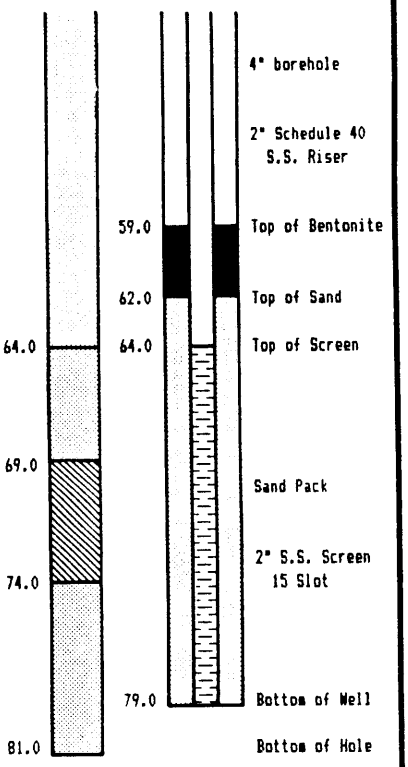


BORING NO.:	MW-3D	BORING DEPTH:	81.0 FT	DATE STARTED:	8/13/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/14/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	7.24 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-3D

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2	4 7 4 3	1.4	FILL
2-4	4 4 4 4	35.0	Light brown medium SAND, little silt, dry
4-6	2 2 3 3	1.1	
6-8	2 16 19 16	4.0	Black GRAVEL, some sand, wet
8-10	10 15 18 16	12.0	Blue-black medium to coarse SAND and GRAVEL, wet, visible contamination strong coal tar odor
10-12	8 16 5 5	42.0	Light brown-gray medium to coarse SAND, some gravel, wet strong coal tar odor
12-14	2 3 5 5	120.0	Brown-black medium SAND, trace silt, wet, strong coal tar odor
14-16	5 6 4 4	85.0	Light brown-gray fine SAND, little silt, wet, moderate coal tar odor
16-18	2 4 3 5	3.0	SAME AS ABOVE, 2" clay layer at 17.5'
18-20	2 2 4 5	7.2	SAME AS ABOVE, 2" clay layer at 19.5'
20-22	2 3 4 4	2.1	Light brown-gray SILT, some fine sand, trace clay, wet 2" clay layer, slight coal tar odor
22-24	3 6 7 8	2.0	Light brown-gray fine SAND and SILT, wet
24-26	5 2 3 3	1.7	
26-28	3 4 4 5	1.9	
28-30	4 3 4 3	1.7	
34-36	7 5 2 3	1.6	
39-41	5 3 4 4		NO RECOVERY
44-46	6 6 6 8	2.3	Light brown-gray fine SAND and SILT, wet



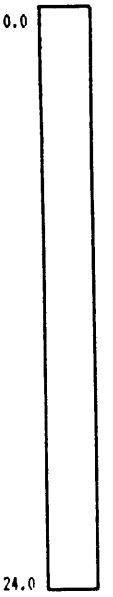
DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
49-51	6 7 6 9	2.7	Light brown-gray fine SAND and SILT, wet
54-56	9 9 9 7	2.6	
59-61	6 7 12 13	4.6	
64-66	4 6 10 13	3.0	Light brown-gray medium to fine SAND, little silt, wet two 2" clay layers
69-71	8 3 3 7	1.6	Light brown-gray SILT, some clay, wet
74-76		2.5	Light brown-gray SILT and fine SAND, some clay, wet
79-81	3 4 7 6	1.7	



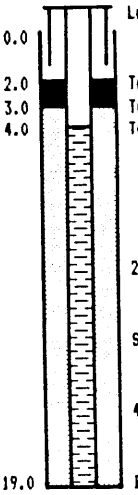
BORING NO.:	MW-1S	BORING DEPTH:	24.0 FT	DATE STARTED:	8/5/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/5/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	6.80 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-1S

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2			NOTE: Soil description is given in MW-1D boring log
2-4			
4-6			
6-8			
8-10			
10-12			
12-14			
14-16			
16-18			
18-20			
20-22			
22-24			

LITHOLOGY



WELL CONSTRUCTION

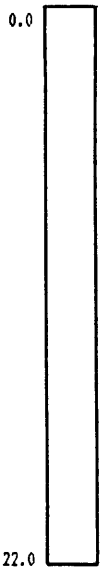


Locking Cover
Top of Bentonite
Top of Sand
Top of Screen
2" S.S. Screen
15 Slot
Sand Pack
4" borehole
Bottom of Well
Bottom of Hole

BORING NO.:	MW-2S	BORING DEPTH:	22.0 FT	DATE STARTED:	8/6/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/7/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	7.13 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-2S

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2			NOTE: Soil description is given in MW-2D boring log
2-4			
4-6			
6-8			
8-10			
10-12			
12-14			
14-16			
16-18			
18-20			
20-22			

LITHOLOGY



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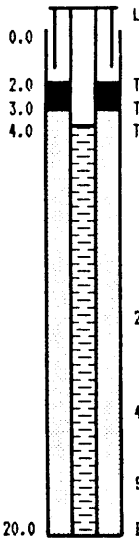
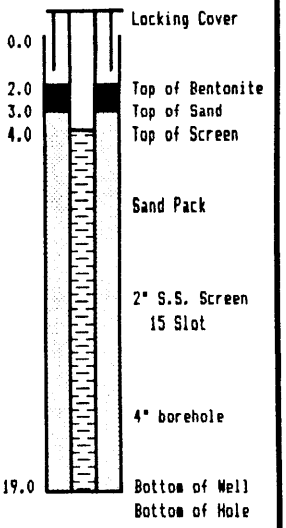


BORING NO.:	MW-3S	BORING DEPTH:	20.0 FT	DATE STARTED:	8/18/86
PROJECT NO.:	3435-M61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/19/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	8.47 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-3S

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2			NOTE: Soil description is given in MW-3D boring log
2-4			
4-6			
6-8			
8-10			
10-12			
12-14			
14-16			
16-18			
18-20			

LITHOLOGY

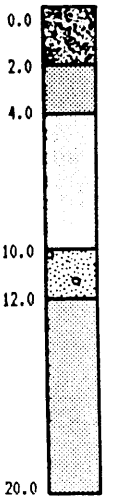
WELL CONSTRUCTION



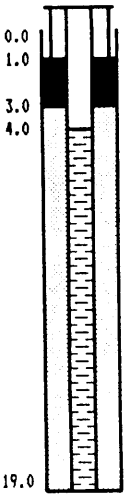
BORING NO.:	MW-4S	BORING DEPTH:	20.0 FT	DATE STARTED:	8/19/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/19/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	9.96 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-4S

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2	5 12 9 17	16.0	FILL
2-4	7 5 6 5	8.0	Brown with black spots medium to coarse SAND, little gravel trace silt, dry
4-6	5 3 3 4	7.0	Brown medium to fine SAND, little silt, little clay, moist
6-8	3 2 2 2	>10.0	
8-10	3 2 1 6	26.0	SAME AS ABOVE, strong coal tar odor
10-12	8 9 3 3	26.0	Brown-gray fine to coarse SAND and GRAVEL, trace silt, wet
12-14	3 2 4 7	6.0	Gray fine SAND and SILT, wet
14-16	5 5 5 5		NO RECOVERY
16-18	3 2 4 4	44.0	
18-20	7 5 5 4	24.0	

LITHOLOGY



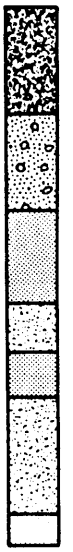
WELL CONSTRUCTION



BORING NO.:	MW-5S	BORING DEPTH:	20.0 FT	DATE STARTED:	8/6/86
PROJECT NO.:	3435-N61	CONTRACTOR:	EMPIRE SOILS	DATE COMPLETED:	8/6/86
PROJECT:	NYSEG - ONEONTA	DRILLERS:		WATER TABLE LEVEL:	9.50 FT
CLIENT:	NYSEG	TRC INSPECTOR:	LISA STEWART		
LOCATION:	ONEONTA, NY	DRILLING METHOD:	4.0" FLUSH JOINT CASING	LOCATION:	MW-5S

DEPTH (FT)	BLOWS	OVA (PPM)	SOIL DESCRIPTION
0-2	3 3 6 7	1.8	FILL
2-4	2 2 3 6	2.2	
4-6	5 5 6 7	3.4	Brown SAND and GRAVEL, dry
6-8	6 3 2 1	70.0	SAME AS ABOVE, wet, moderate coal tar odor
8-10	2 2 2 2	170.0	Brown-black SAND and SILT, wet, visible coal tar, strong odor
10-12	2 10 12 15	118.0	Blue-black medium SAND, little Silt, wet, wood chips and purifier waste, weak coal tar odor
12-14	18 12 14 17	7.2	Blue-black GRAVEL, some Sand, wet
14-16	9 8 7 7	40.0	Blue-gray SAND, some Silt, wet, 2" pure product, moderate coal tar odor
16-18	8 12 12 8	120.0	Black GRAVEL, wet, pure coal tar product, moderate odor
18-20	8 4 2 1	45.0	
20-22	4 3 4 3	23.0	Dark gray fine SAND, some Silt, wet, seams of contamination, slight coal tar odor

LITHOLOGY



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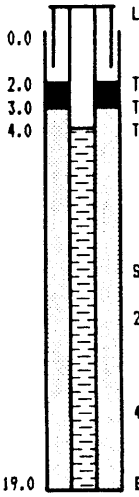


APPENDIX C

WESTON GEOPHYSICAL ELECTRIC RESISTIVITY SURVEY REPORT

Weston Geophysical
CORPORATION

December 8, 1987
WGC - 15871-03

Mr. Curt Kraemer
TRC ENVIRONMENTAL CONSULTANTS, INC.
800 Connecticut Boulevard
East Hartford, CT 06108

Dear Mr. Kraemer:

In accordance with your authorization Weston Geophysical has completed a program of electrical resistivity measurements at a former coal gasification site in Oneonta, New York. Preliminary results have been provided through telephone conversations; this report constitutes a formal presentation of our methods and results.

Please contact me if you have any questions regarding this report. We appreciate the opportunity to provide you with these professional geoscience services.

Sincerely,

WESTON GEOPHYSICAL CORPORATION

M. Blackey

Mark Blackey

MB:cap-1589J

Enclosure

Lyons Street • Post Office Box 550 • Westboro, Massachusetts 01581
Tel. (617) 366-9191 • FAX (617) 366-9197 • Telex No. 920491

ELECTRICAL RESISTIVITY MEASUREMENTS
FORMER COAL GASIFICATION SITE
ONEONTA, NEW YORK

Prepared for

TRC ENVIRONMENTAL CONSULTANTS, INC.

DECEMBER 1987

Weston Geophysical
CORPORATION

TABLE OF CONTENTS

LIST OF FIGURES

1.0 INTRODUCTION

Electrical resistivity measurements were performed at the former coal gasification site in Oneonta, New York as part of TRC Environmental's site investigation. The purpose of the resistivity measurements was to determine whether a silt layer identified in nearby soil borings was continuous across the site. Field work was accomplished October 21 and 22, 1987 with the assistance of TRC personnel Jeff Smith and Andy Lord. Weston Geophysical personnel and their primary responsibilities were Mark Blackey for data acquisition and interpretation, and Peter Giger as assistant for data acquisition.

2.0 METHOD OF INVESTIGATION

The area of investigation and specific locations of resistivity soundings are shown on Figures 1 and 2. Each sounding location was staked in the field and was referenced to TRC's soil gas grid (inside Damaschke Field) or observed cultural features.

Resistivity data were acquired using a Soiltest resistivity meter, copper-plated steel electrodes, and associated connecting cables. Electrode locations were determined using a non-conductive fiberglass measuring tape. Numerical modelling of the resistivity data was accomplished using Weston's VAX computer and proprietary software.

Additional background information regarding resistivity measurements is included in Appendix A.

3.0 PRESENTATION OF RESULTS

Field data and modelling results for each of the ten Wenner soundings are shown on Figures 3 and 4. Field data are represented by the solid curves on these figures, and the modelling results are represented by dashed curves. Layer thicknesses and resistivities are tabulated in the explanation box shown on each sounding.

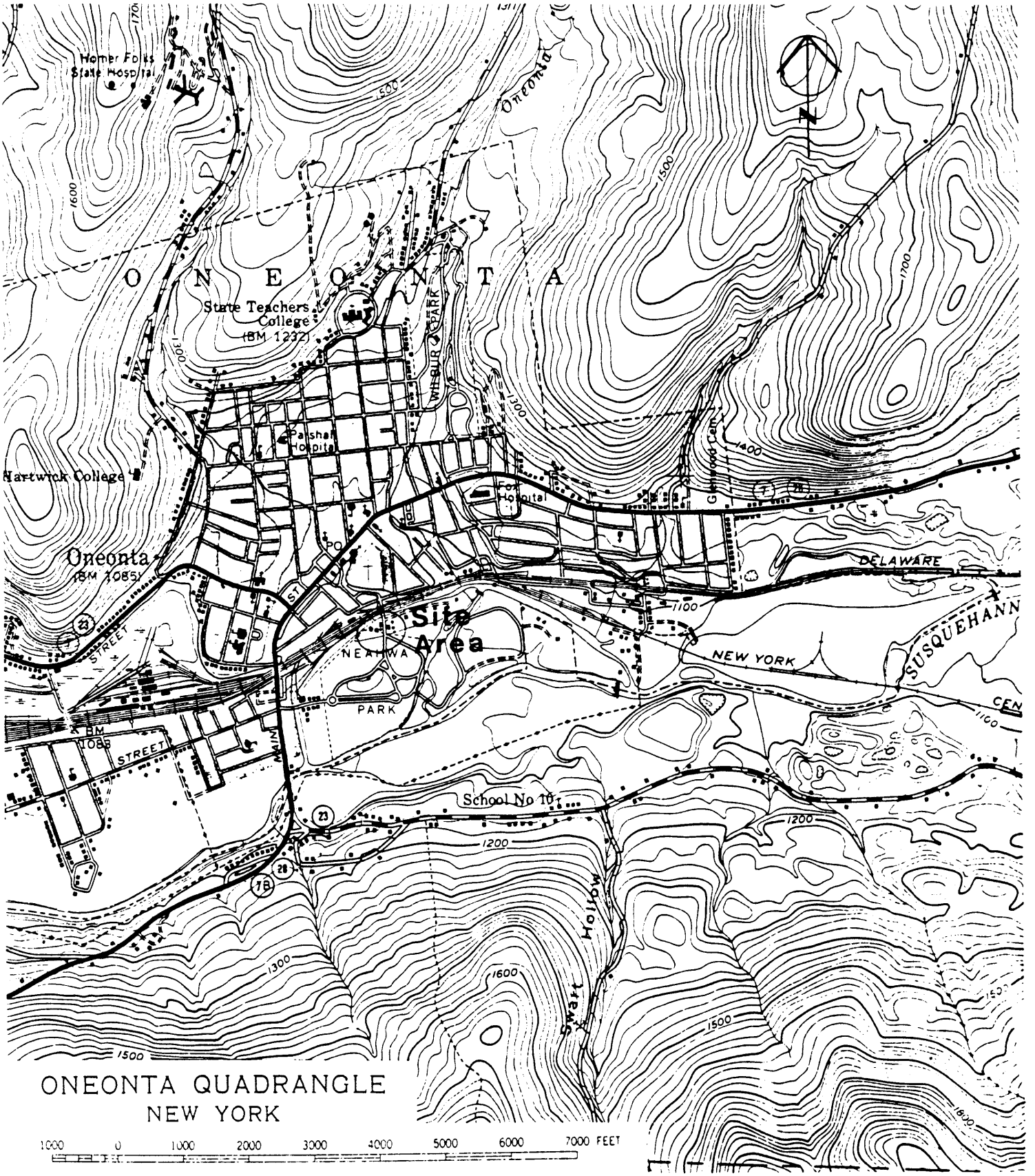
Figure 5 shows the modelled layer thicknesses and resistivities in the form of geoelectrical cross-sections. In general, resistivity values less than 100 ohm-feet probably represent clayey materials or possibly conductive contamination in sandy or silty overburden. Conductive contamination might be associated with either coal tar products on-site or road salt leaching from storage facilities northwest of Damaschke Field. Although coal tars alone are electrically resistive, by-products associated with the tars are typically highly conductive. Based on correlation with nearby borehole logs provided by TRC, resistivity values greater than 100 ohm-feet represent a combination of sandy/silty materials, with the higher values associated with greater sand content.

Soundings PT-1 and PT-6 were located in the vicinity of buried utilities, thus depth computations from these soundings may have been adversely affected. Variability in the other electrical soundings probably represents changes in overburden conditions across the site. In general, the modelled resistivities indicate that near-surface overburden is likely to contain a mixture of sand, silt, and clay or conductive contamination. Below depths of 5 to 15 feet the data indicate sands and silts that are probably continuous across the site.

Soundings PT-2 and PT-9 detected conductive material, possibly a clay layer, below depths of approximately 55 to 70 feet.

A thin layer of conductive material was detected by soundings PT-2, PT-9, PT-3 and PT-4, as shown on Figure 5. Possible origins for this layer include saline leachate from the road salt storage area, conductive contamination from buried coal tar, and/or a clay layer. Low resistivity values near ground surface at soundings PT-7 and PT-8 may have similar origins.

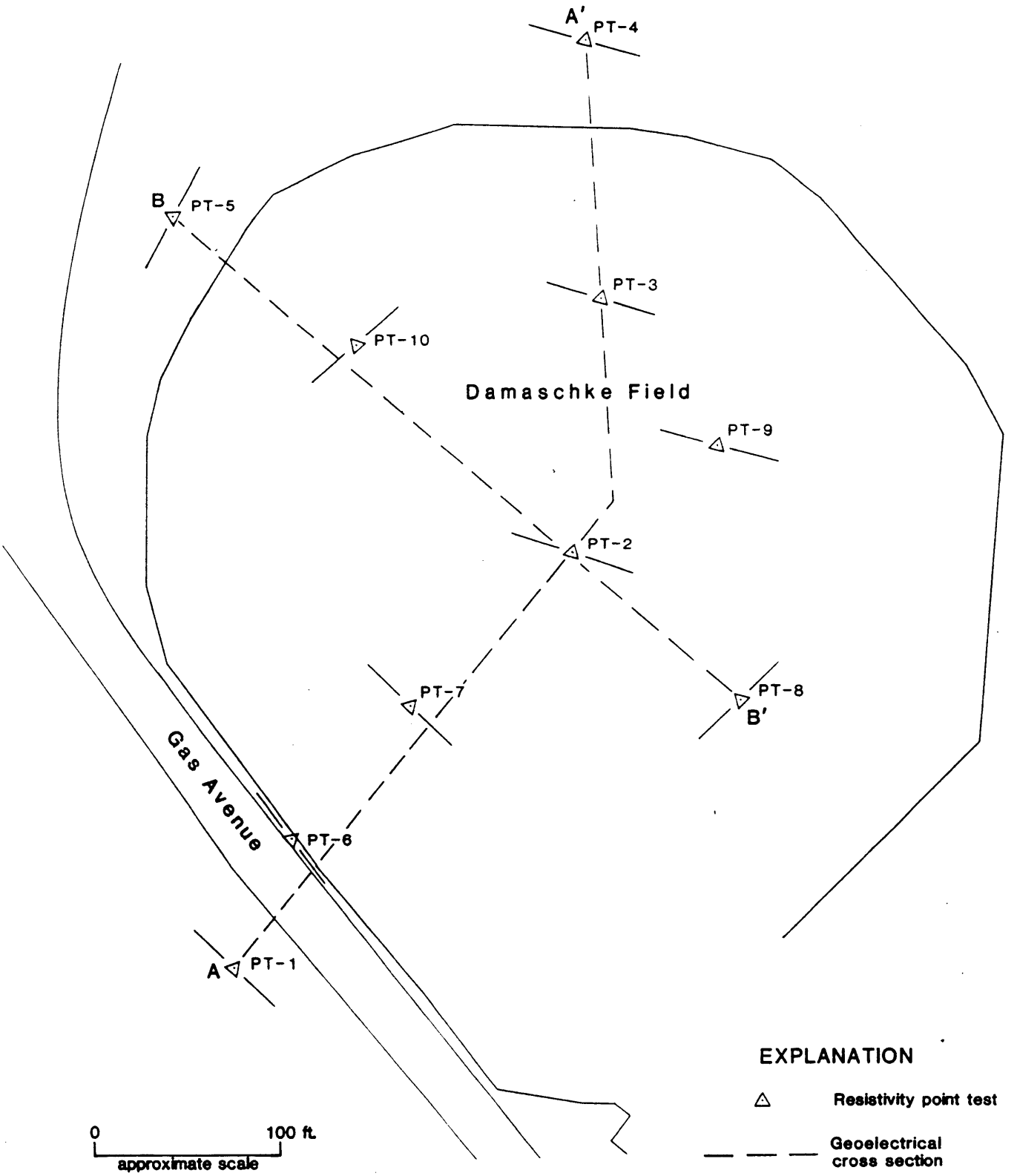
FIGURES



ONEONTA QUADRANGLE
NEW YORK

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

ELECTRICAL RESISTIVITY MEASUREMENTS FORMER COAL GASIFICATION SITE ONEONTA, NEW YORK prepared for TRC ENVIRONMENTAL CONSULTANTS, INC.	AREA OF INVESTIGATION
	Weston Geophysical — FIG. 1



ELECTRICAL RESISTIVITY MEASUREMENTS FORMER COAL GASIFICATION SITE ONEONTA, NEW YORK prepared for TRC ENVIRONMENTAL CONSULTANTS, INC.	PLAN MAP
	Weston Geophysical — FIG. 2

APPENDIX A

ELECTRICAL RESISTIVITY SURVEY
METHOD OF INVESTIGATION

INTRODUCTION

Electrical resistivity measurements obtained at ground surface may be used to evaluate subsurface materials. The resistivity of earth materials is inversely proportional to their temperature, permeability, porosity, water content, and salinity or ion content. Dry sands, gravels, and massive unweathered rock exhibit relatively high resistivities whereas clays, water-saturated sediments or weathered rock have lower resistivities. Therefore, resistivity surveying is a good technique for mapping the water table, tracing ground water contaminant plumes, delineating zones of weathered bedrock, fractures or solution cavities, determining depth to bedrock, and locating bedrock and sediment lithologic contacts [particularly mineralized zones].

The "apparent" resistivity value of a particular material, as measured in the field, is a function of the material's true resistivity, the thickness of the unit, thicknesses and resistivities of adjacent layers, and the electrode spacing. Apparent resistivity values are calculated based on the configuration of current and potential [Figure 1] electrodes. Interpretation of electrical resistivity data is based upon either comparison of field derived apparent resistivity values with an appropriate theoretical case or inverse modeling performed by a computer.

FIELD PROCEDURES

Two field techniques, point tests [vertical sounding] and [lateral] profiling, are conducted during most resistivity surveys. A resistivity point test is analogous to drilling; the results of a point test consist of a vertical profile of units defined by resistivity characteristics, similar to a lithologic sequence developed from drilling data. Resistivity profiling is used to trace the lateral extent of a particular condition, such as a contaminant plume, water table, mineralized zone, etc.

A point test is conducted by incrementally increasing the spacing between electrodes, maintaining the chosen configuration about a single point

[Figure 1]. Resistivity measurements obtained at greater electrode separations are sampling deeper in the earth. Resistivity profiling requires moving a fixed array of electrodes along a prearranged traverse. Three of the most commonly used electrode configurations are described and discussed in the following sections and shown on Figure 1.

WENNER CONFIGURATION

The Wenner Configuration, one of the most widely used electrode arrangements, consists of four equally spaced electrodes [Figure Ia]. An electric current is applied across the outer electrodes and the change in voltage is measured between the inner pair of potential electrodes. The Wenner Configuration has less penetration than a Schlumberger or dipole-dipole array and is more sensitive to lateral changes. It is a reasonable compromise between the various electrode arrays for detecting both vertical and horizontal changes if used with Lee Partitioning Configuration.

- LEE PARTITIONING CONFIGURATION

  A third potential electrode is added to the center of the Wenner Configuration to create the Lee Partitioning Configuration [Figure Ib]. Three measurements of the change in voltage are taken at each positioning of the array; readings are made between P_1-P_2, P_0-P_1 and P_0-P_2.

SCHLUMBERGER CONFIGURATION

The Schlumberger Configuration is a four electrode array [Figure 1-II] in which the distance between the outer current electrodes is at least five times the distance between the inner potential electrodes. A single measurement of voltage change is taken between the potential electrodes, similar to the Wenner method. Penetration is better than Wenner and the method is much less affected by horizontal [lateral] changes. It is almost exclusively used for vertical sounding.

DIPOLE-DIPOLE

The dipole-dipole configuration of electrodes [Figure 1-III] allows deep penetration with a distinct logistical advantage in that the current electrodes can remain fixed while only the potential electrodes need be moved.

The choice of configuration depends on the type of survey, point test and/or profiling, as well as the projected target. The Wenner Configuration is useful for both point test and profiling surveys in a variety of settings. If local, lateral variations in resistivity between potential electrodes are expected, the Lee Partitioning Configuration should be used. The Schlumberger Configuration is employed for vertical soundings or in conjunction with Wenner soundings or constant spacing to discriminate between lateral and vertical variations in resistivity.

The dipole-dipole configuration is best adapted to detecting such anomalies as ore bodies at depth.

DATA INTERPRETATION

The interpretation of resistivity sounding data by Weston Geophysical is accomplished by computer modeling of the field data curves. Wenner and Schlumberger soundings are interpreted by a numerical inversion process which models subsurface structure, in terms of resistivity variation with depth, by varying an initial trial model until the theoretical resistivity values accurately fit the field data. Weston interprets dipole-dipole data by forward modeling using a two-dimensional finite-element program; the two-dimensional geo-electric model is varied by the interpreter to match the dipole-dipole field data.

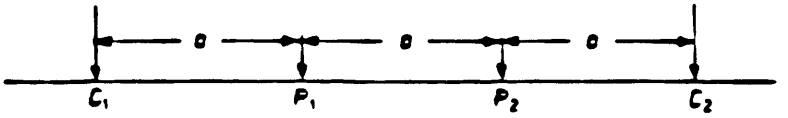
An example of Wenner field data and a computer-generated theoretical curve is shown in Figure 2.

ELECTRICAL RESISTIVITY ELECTRODE CONFIGURATIONS

Ia WENNER

$\rho_a = 2\pi a \Delta V / I$

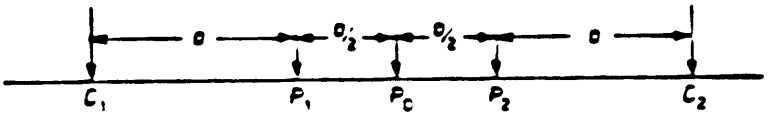
ΔV taken between $P_1 P_2$



Ib LEE MODIFICATION OF WENNER

$\rho_a = 4\pi a \Delta V / I$

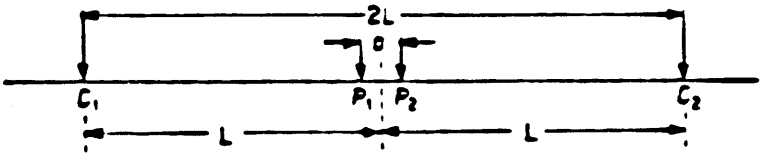
ΔV taken between $P_1 P_C$ and $P_C P_2$



II SCHLUMBERGER

$\rho_a = \frac{\pi L^2}{a} \frac{\Delta V}{I}$

ΔV taken between $P_1 P_2$



III DIPOLE-DIPOLE

$\rho_a = \pi (a^3/b^2 - a) \Delta V / I$

ΔV taken between $P_1 P_2$

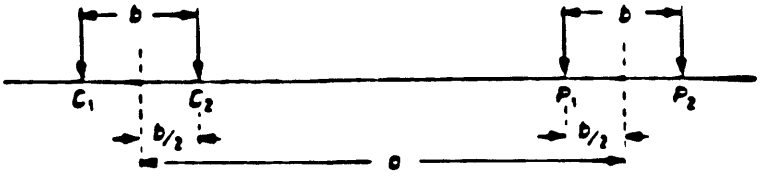
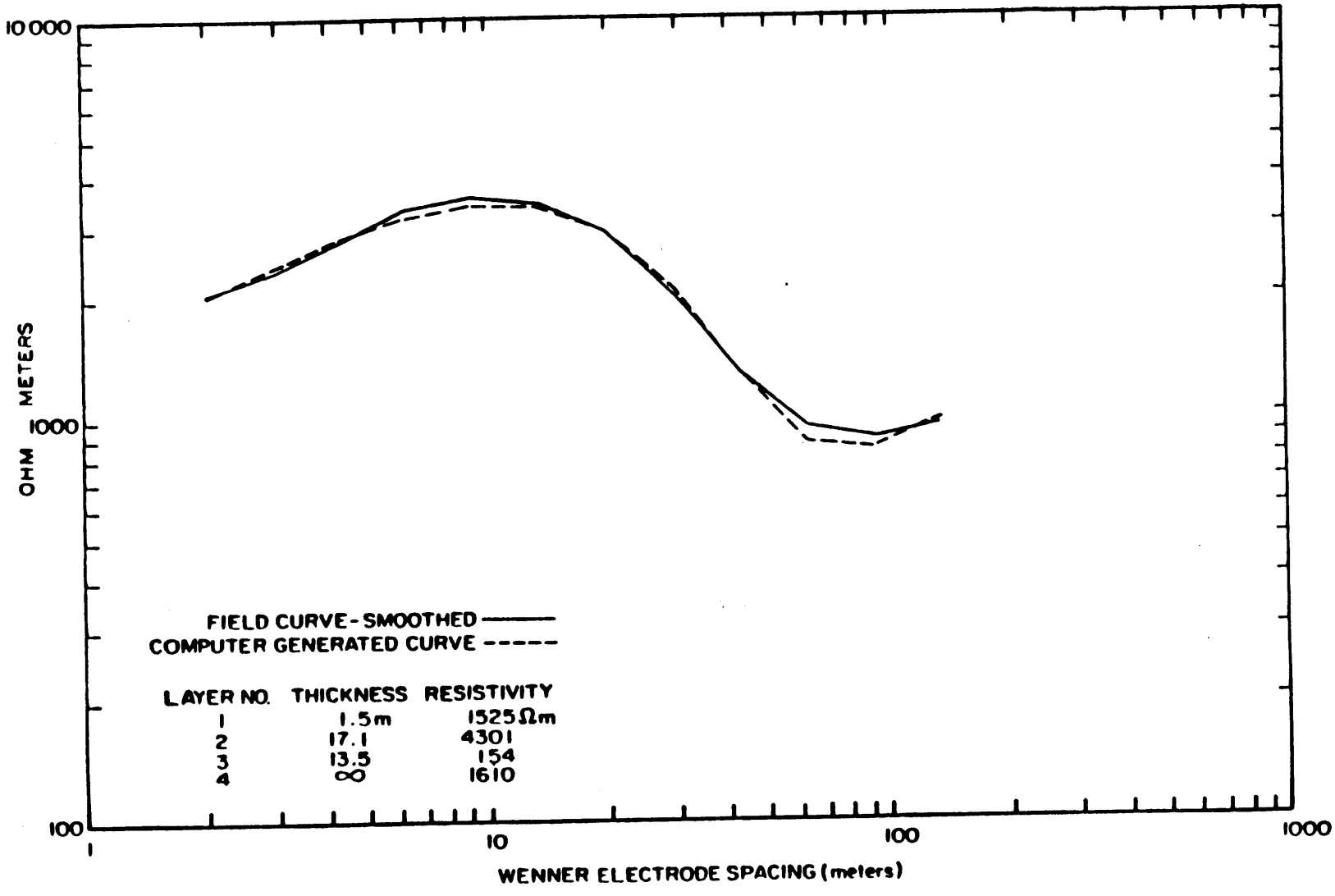


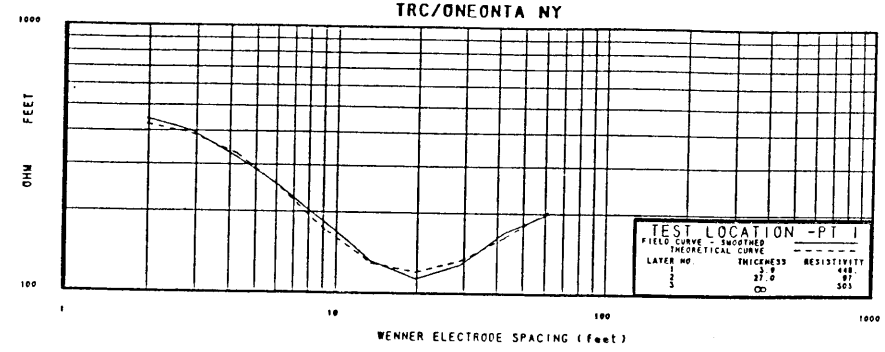
FIGURE 1

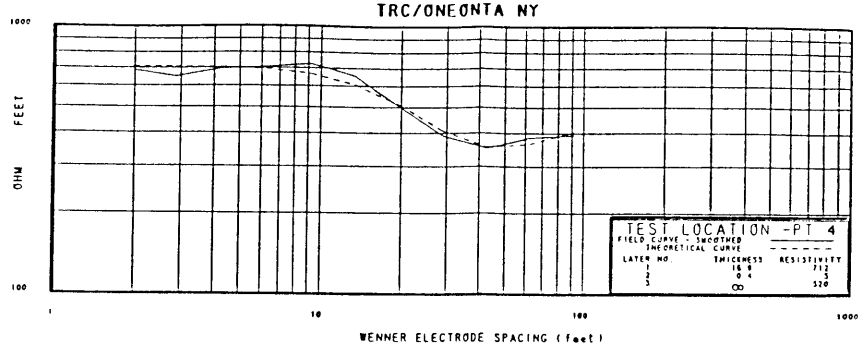
Weston Geophysical

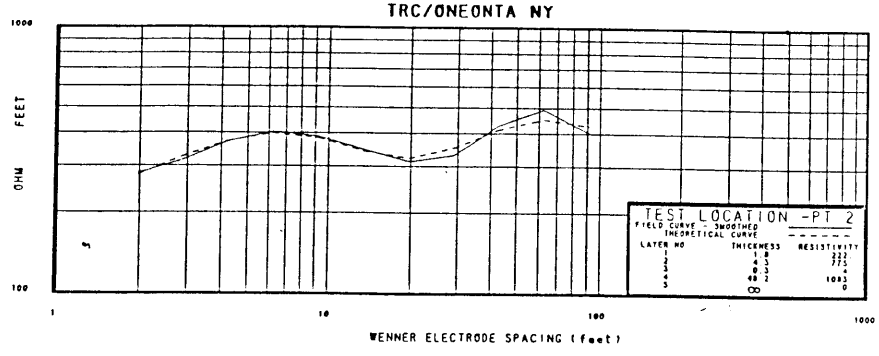


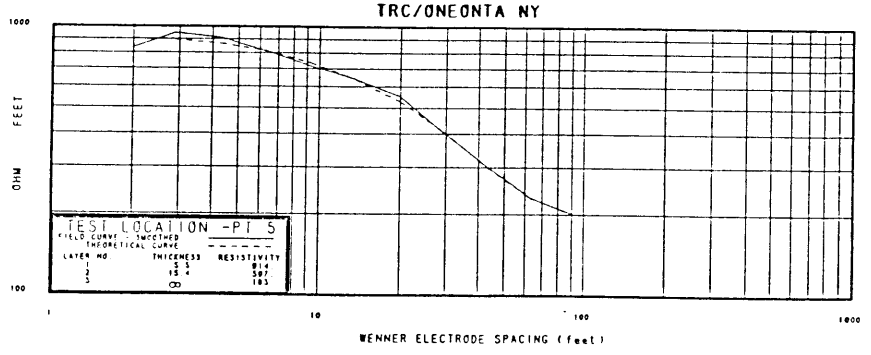
RESISTIVITY MODEL
FIGURE 2

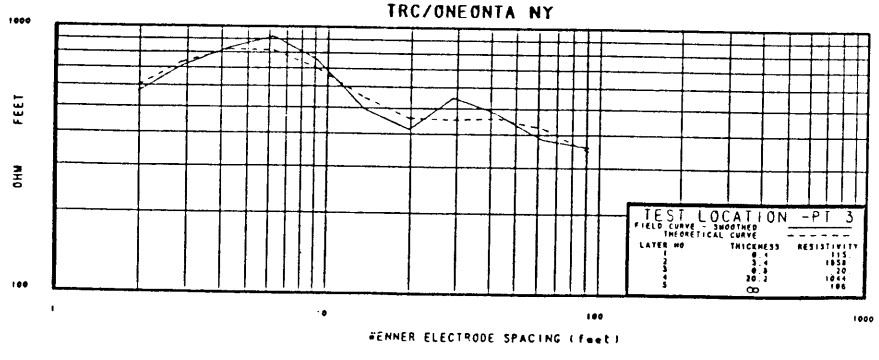
Weston Geophysical



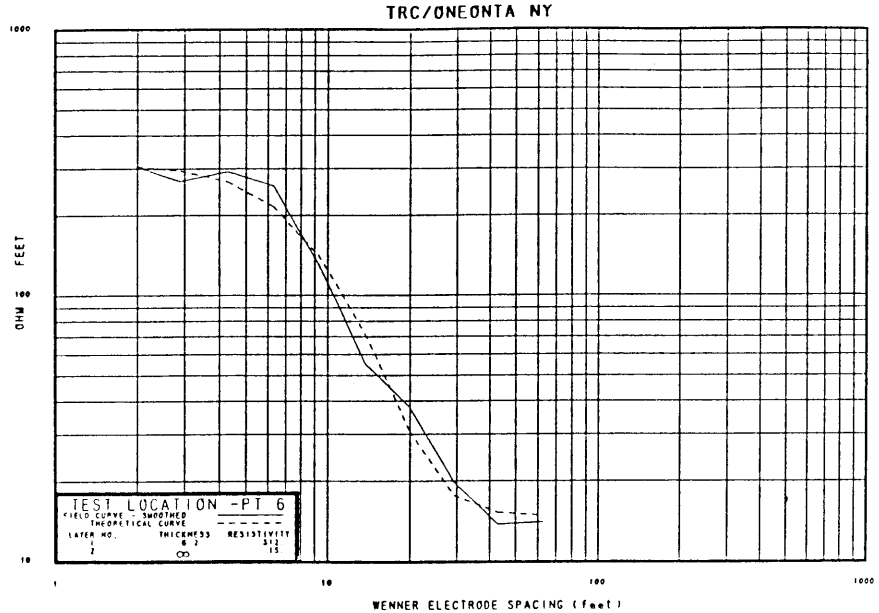


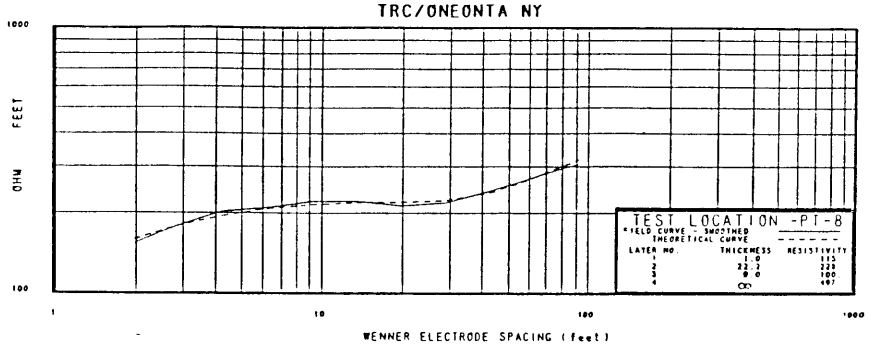


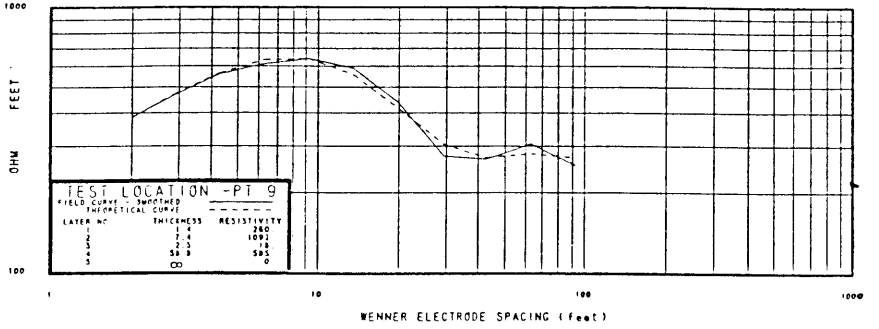


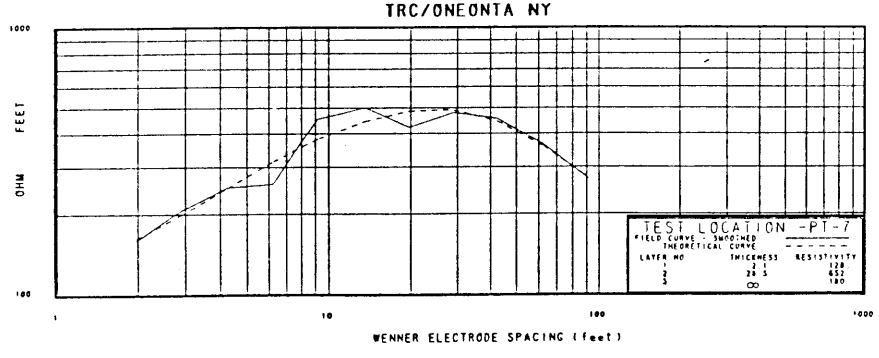


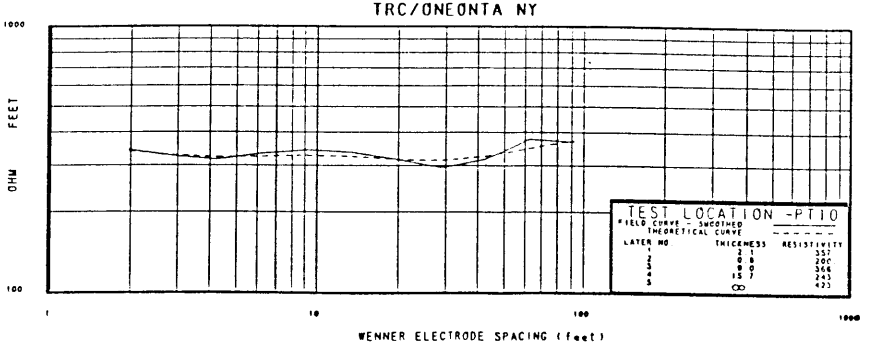
ELECTRICAL RESISTIVITY MEASUREMENTS FORMER COAL GASIFICATION SITE ONEONTA, NEW YORK prepared for TRC ENVIRONMENTAL CONSULTANTS, INC.	WENNER RESISTIVITY SOUNDINGS PT-1 through PT-5
	Weston Geophysical — FIG. 3



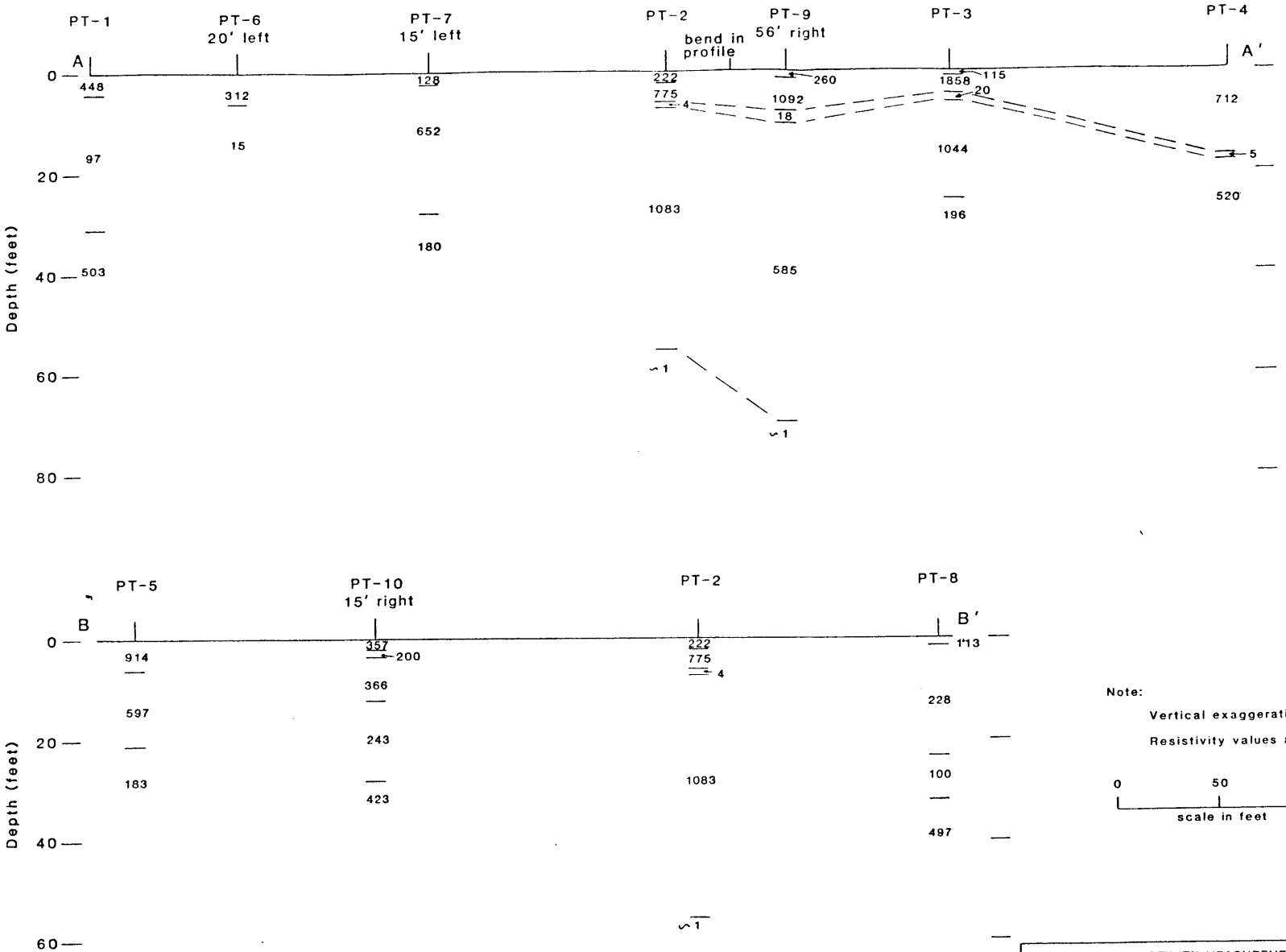








ELECTRICAL RESISTIVITY MEASUREMENTS FORMER COAL GASIFICATION SITE ONEONTA, NEW YORK prepared for TRC ENVIRONMENTAL CONSULTANTS, INC.	WENNER RESISTIVITY SOUNDINGS PT-6 through PT-10
	Weston Geophysical — FIG. 4



Note:

Vertical exaggeration 2.5

Resistivity values are in ohm-feet

0 50 100

scale in feet

ELECTRICAL RESISTIVITY MEASUREMENTS FORMER COAL GASIFICATION SITE ONEONTA, NEW YORK prepared for TRC ENVIRONMENTAL CONSULTANTS, INC.	GEOELECTRICAL CROSS-SECTIONS
	Weston Geophysical — FIG. 5

APPENDIX D

E.C. JORDAN AND TARGET ENVIRONMENTAL SOIL GAS SURVEY REPORTS

SOIL GAS SURVEY

DAMASCHKE FIELD

ONEONTA, NEW YORK

PREPARED FOR

TRC ENVIRONMENTAL CONSULTANTS

800 CONNECTICUT BLVD.

EAST HARTFORD, CONNECTICUT 06108

PREPARED BY

TARGET ENVIRONMENTAL SERVICES, INC.

OAKLAND CENTER

8940-A ROUTE 108

COLUMBIA, MARYLAND 21045

OCTOBER 1987

Field Procedures

Soil gas samples were collected at a total of 85 locations at the site, as shown in Figure 1. To collect the soil gas samples a 1/2 inch hole was produced to a depth of four feet by using a slide hammer. The entire sampling system was purged with ambient air, and a specially designed stainless steel probe was inserted to the full depth of the hole and packed off. A sample of in-situ soil gas was then withdrawn through the probe and used to purge atmospheric air from the sampling system. A second sample of soil gas was withdrawn through the probe and encapsulated in a pre-evacuated glass vial at two atmospheres of pressure (15 psig). The self-sealing vial was detached from the sampling system and stored for laboratory analysis.

Prior to each day's field activities all sampling equipment, slide hammer rods, and probes were decontaminated internally and externally by washing with soapy distilled water and rinsing with distilled water. Internal surfaces were flushed dry using ultra-zero grade nitrogen, and external surfaces were wiped clean using clean paper towels.

Field control samples were collected at the onset of each day's field activities, after every twentieth soil gas sample, and at the end of each day's field activities to assure that carryover contamination was not occurring. These QA/QC samples were obtained by inserting the probe tip into a tube flushed by a 20 psi flow of ultra-zero grade nitrogen and collecting in the same manner as described above.

Laboratory Procedures

Forty-five of the samples collected during the field phase of the survey were selected by the client for analysis. The analyses were performed on a gas chromatograph equipped with a flame ionization detector by a method similar to EPA 602, but using direct injection instead of purge and trap. Analytes selected for standardization were benzene, toluene, ethyl benzene, meta- and para- xylenes, and ortho-xylene. These compounds were chosen because of their utility in evaluating the presence of fuel and tar products. FID Total Volatiles values were generated by summing the areas of all integrated chromatogram peaks, and calculating using the instrument response factor for toluene. Injection peaks, which also contain the light hydrocarbons methane through butane, were excluded to avoid the skewing of Total Volatiles values due to injection variations and biogenic methane.

Calibration of the analytical equipment was performed on a daily basis using an instrument-response curve and injection of standards of known concentrations. Retention times of the compounds in the standards were used to identify the unknown compounds in the samples. For QA/QC purposes, one out of every ten samples was a duplicate analysis of a field sample. Laboratory syringe blanks were also analyzed to assure that carryover between samples was not occurring.

TABLE 1

LABORATORY RESULTS
FLAME IONIZATION DETECTOR ANALYSIS
CONCENTRATIONS IN PARTS-PER-BILLION

SAMPLE	BENZENE	TOLUENE	ETHYL BENZENE	m- & p- XYLENES	o- XYLENE	TOTALS*
A1	ND	.58	ND	.44	ND	18
A2	ND	.39	ND	.50	.29	7.0
A3	ND	.98	ND	ND	.88	12
B1	ND	.74	ND	1.8	ND	89
B2	ND	.56	ND	.87	.91	39
B3	ND	.70	.34	1.1	.79	60
B4	ND	.60	ND	ND	.61	17
B5	ND	.40	ND	ND	1.1	17
B6	ND	.64	ND	.80	.99	21
B7	ND	.52	ND	.56	.51	27
B8	.07	.72	ND	ND	.42	40
B9	ND	.51	ND	ND	ND	31
B10	.15	.57	ND	.90	ND	21
B11	ND	.49	.69	ND	ND	16
C1	ND	.50	ND	.80	.35	18
C2	ND	.39	ND	ND	.39	23
C3	ND	.47	ND	ND	.69	21
C4	ND	.63	ND	ND	ND	18
C5	ND	.36	ND	ND	ND	18
C6	ND	.67	ND	ND	.32	16
C7	ND	.57	ND	.36	.38	29
C8	ND	.43	ND	ND	.32	22
C9	ND	.42	ND	ND	.46	16
C10	ND	.46	ND	ND	ND	15
C11	ND	.51	.89	ND	ND	18
C12	ND	.47	ND	ND	ND	18
C13	ND	.50	ND	ND	.35	15
C14	ND	.43	ND	ND	ND	10
D2	ND	.48	ND	ND	ND	13
D4	ND	.64	ND	.97	ND	14
D6	ND	.44	.92	.63	.33	14
D8	ND	.41	.82	.62	ND	11

* CALCULATED USING THE SUM OF THE AREAS OF ALL INTEGRATED CHROMATOGRAM PEAKS, AND THE INSTRUMENT RESPONSE FACTOR FOR TOLUENE

ND = Non-Detected

TABLE 1 (cont)

LABORATORY RESULTS
FLAME IONIZATION DETECTOR ANALYSIS
CONCENTRATIONS IN PARTS-PER-BILLION

SAMPLE	BENZENE	TOLUENE	ETHYL BENZENE	m- & p- XYLENES	o- XYLENE	TOTALS*
F2	ND	.48	ND	.70	ND	19
F4	ND	.35	ND	ND	ND	14
F6	ND	.53	ND	ND	ND	11
F8	ND	.37	ND	.82	.36	19
H2	ND	.49	ND	ND	ND	15
H4	ND	.46	ND	ND	ND	9
H6	ND	.47	ND	.51	ND	5
K1	ND	.35	ND	.68	ND	17
K3	ND	.68	.47	ND	ND	18
M1	ND	.48	ND	ND	ND	8
M2	.16	.44	.78	ND	ND	12
N1	ND	.41	ND	.91	ND	10
N2	ND	.75	ND	.85	.55	25
DUPLICATE ANALYSES						
B10	.15	.57	ND	.90	ND	21
B10R	.13	.45	ND	ND	ND	10
C1	ND	.50	ND	.80	.35	18
C1R	ND	.76	ND	.60	.35	21
C10	ND	.46	ND	ND	ND	15
C10R	ND	.42	ND	ND	ND	14
H2	ND	.49	ND	ND	ND	15
H2R	ND	ND	ND	ND	ND	6

* CALCULATED USING THE SUM OF THE AREAS OF ALL INTEGRATED CHROMATOGRAM PEAKS, AND THE INSTRUMENT RESPONSE FACTOR FOR TOLUENE

ND = Non-Detected

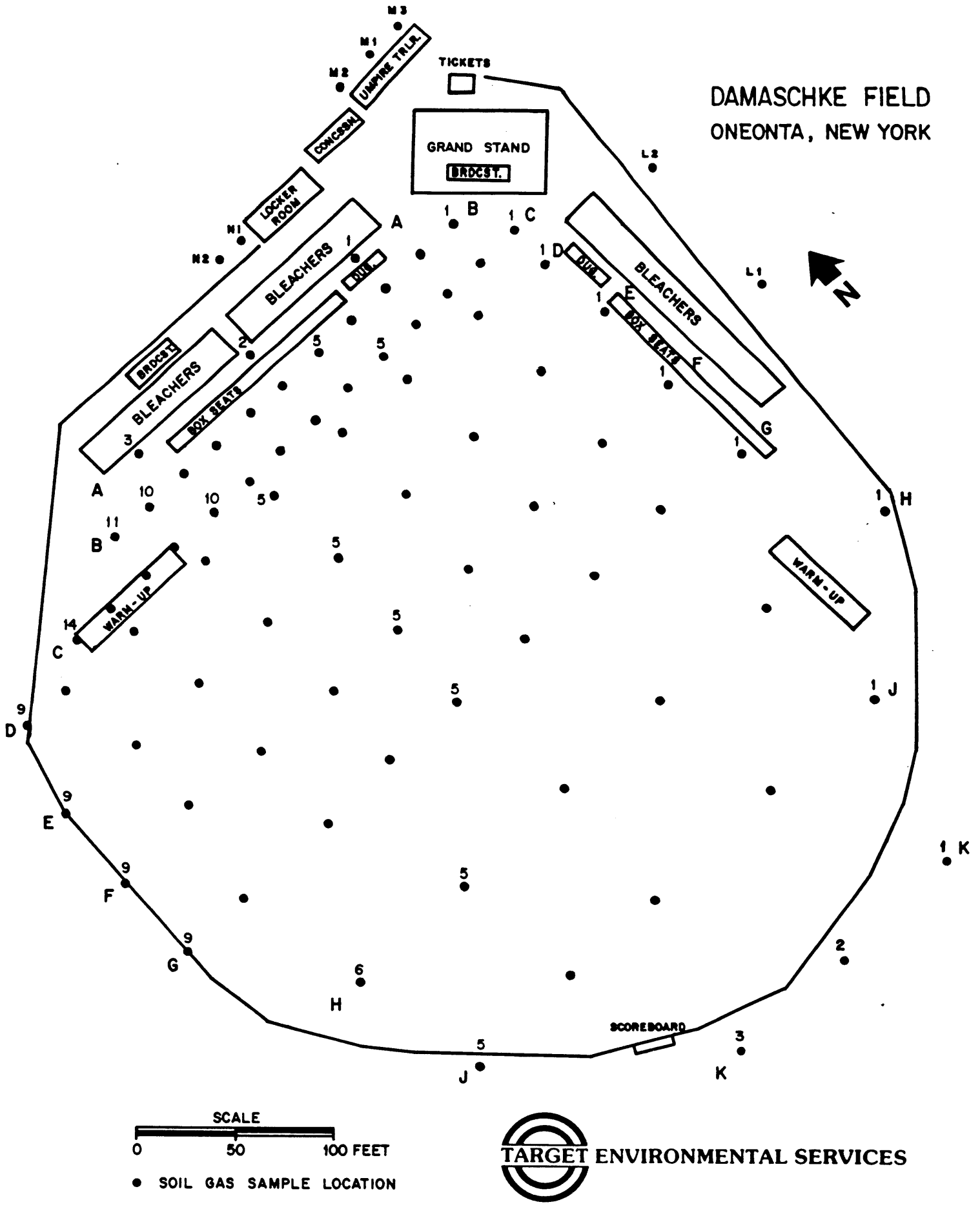


FIGURE 1. Sample Locations

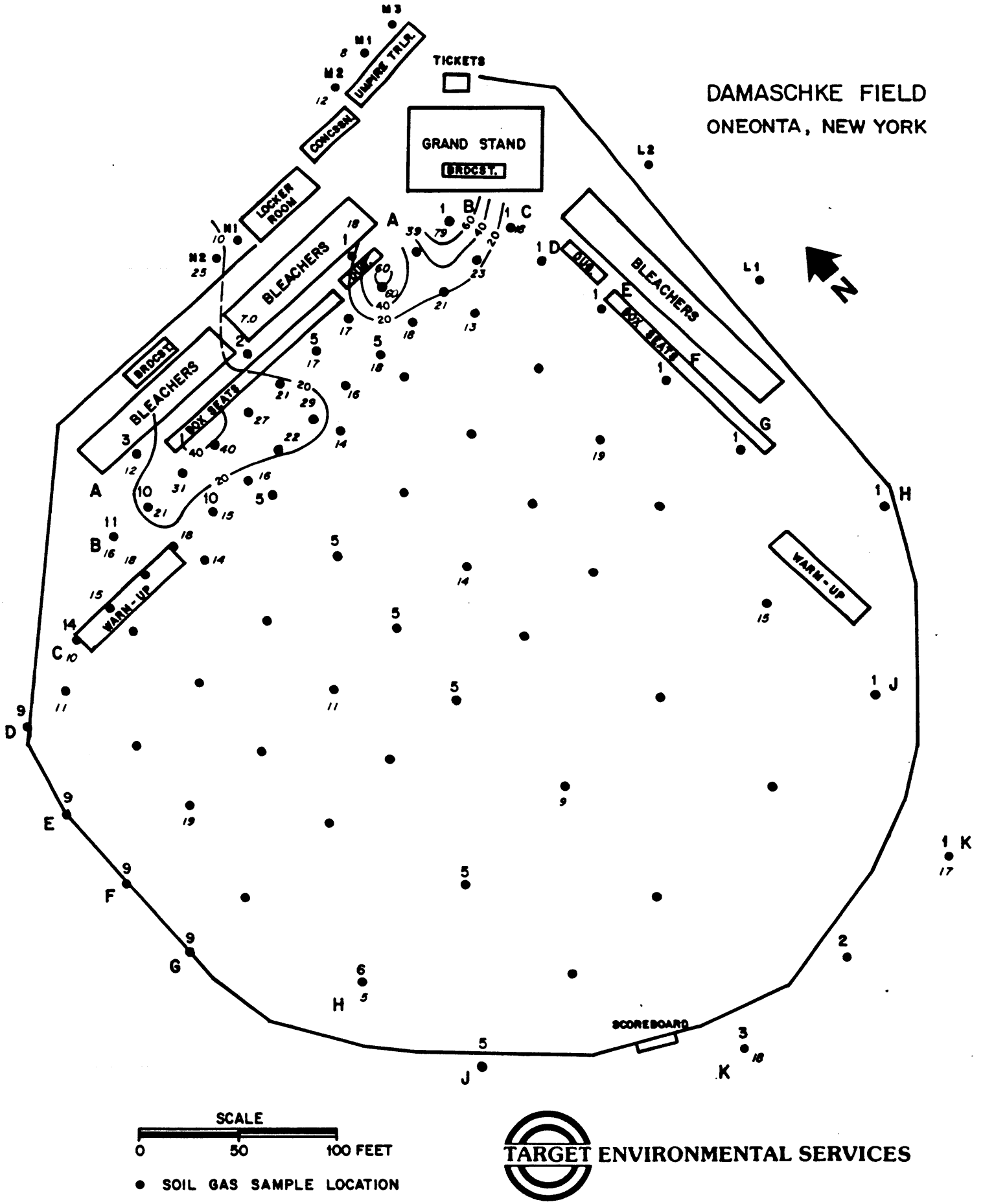


FIGURE 2. Total Volatiles (calc'd ppb)

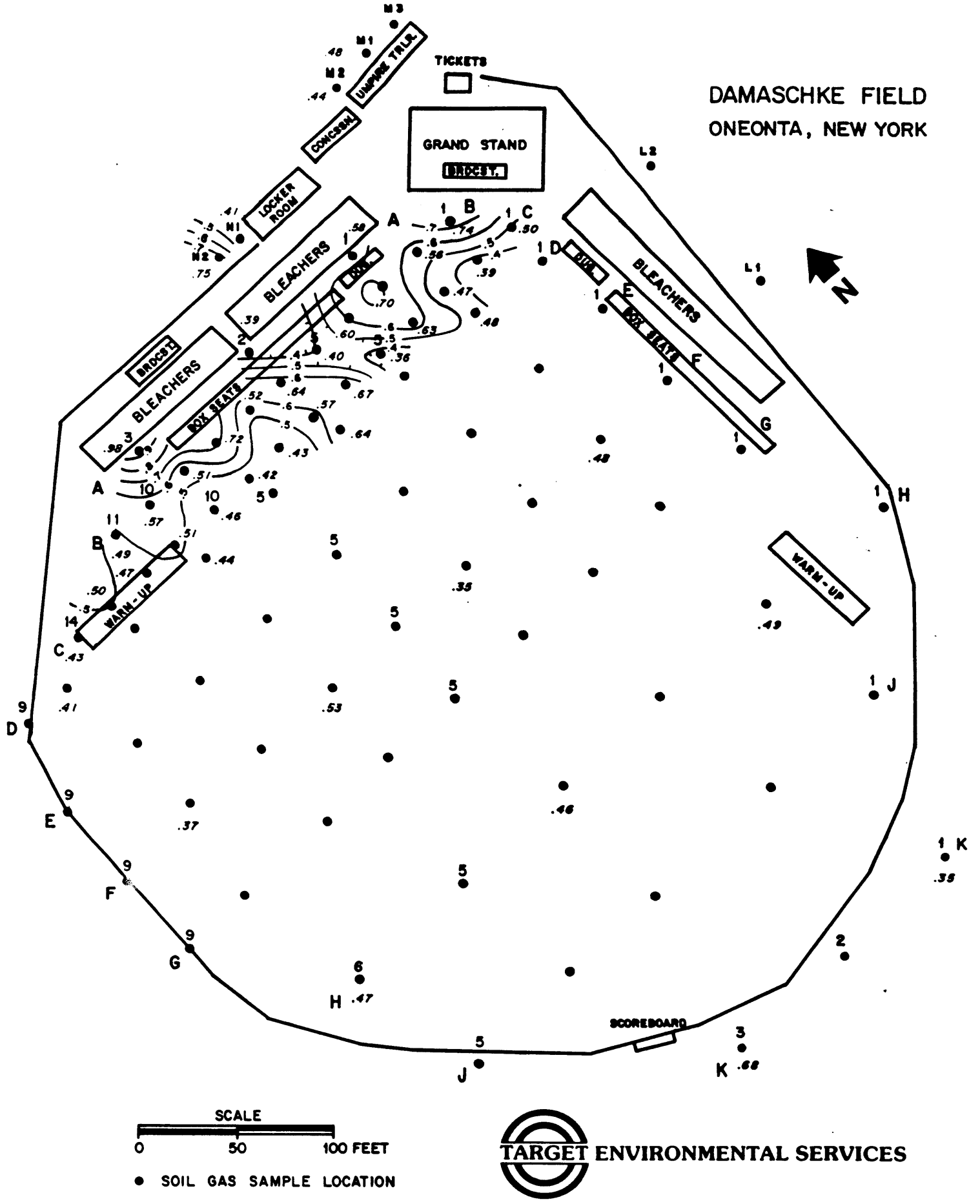


FIGURE 3. Toluene (ppb)

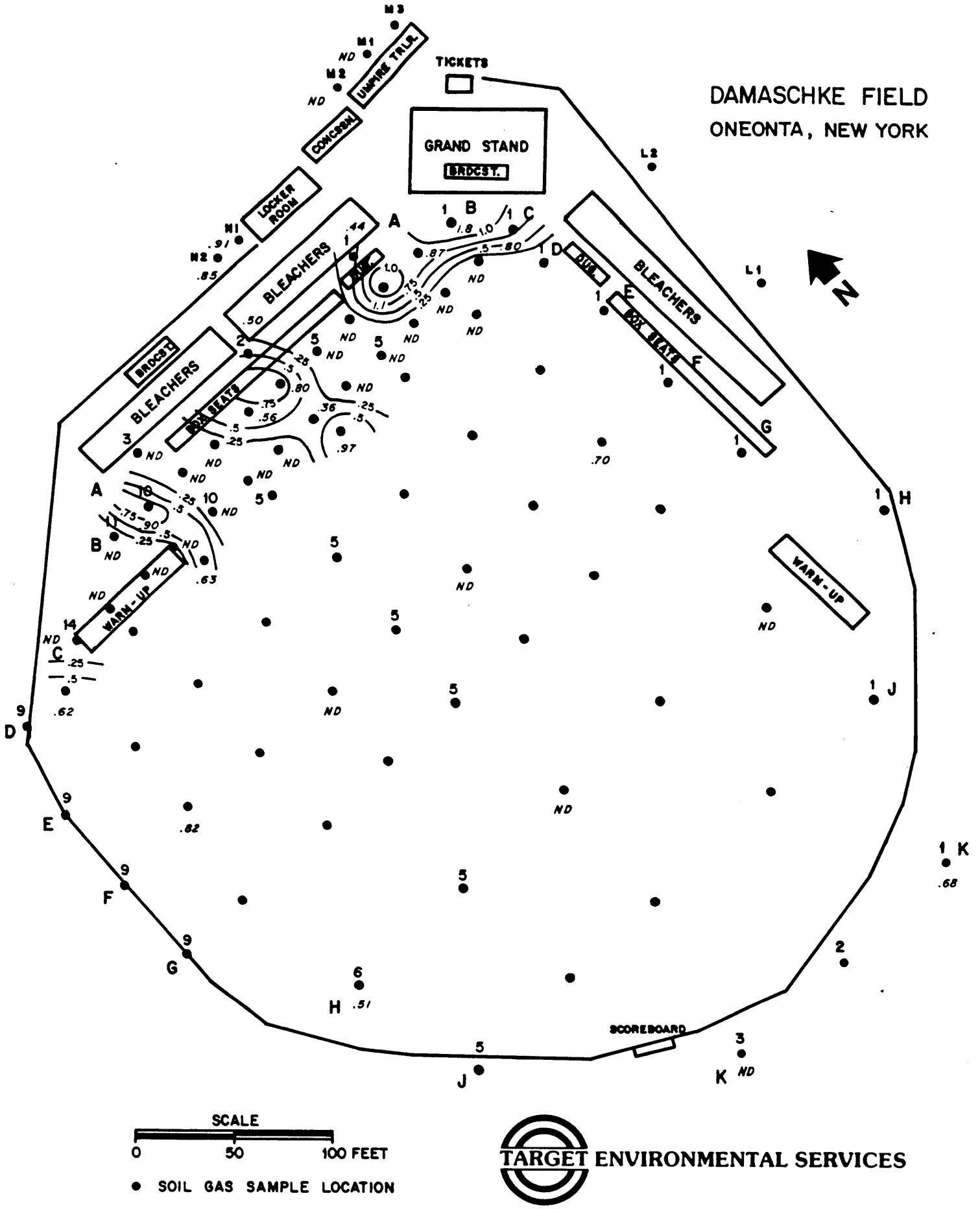


FIGURE 4. m- and p-Xylenes (ppb)

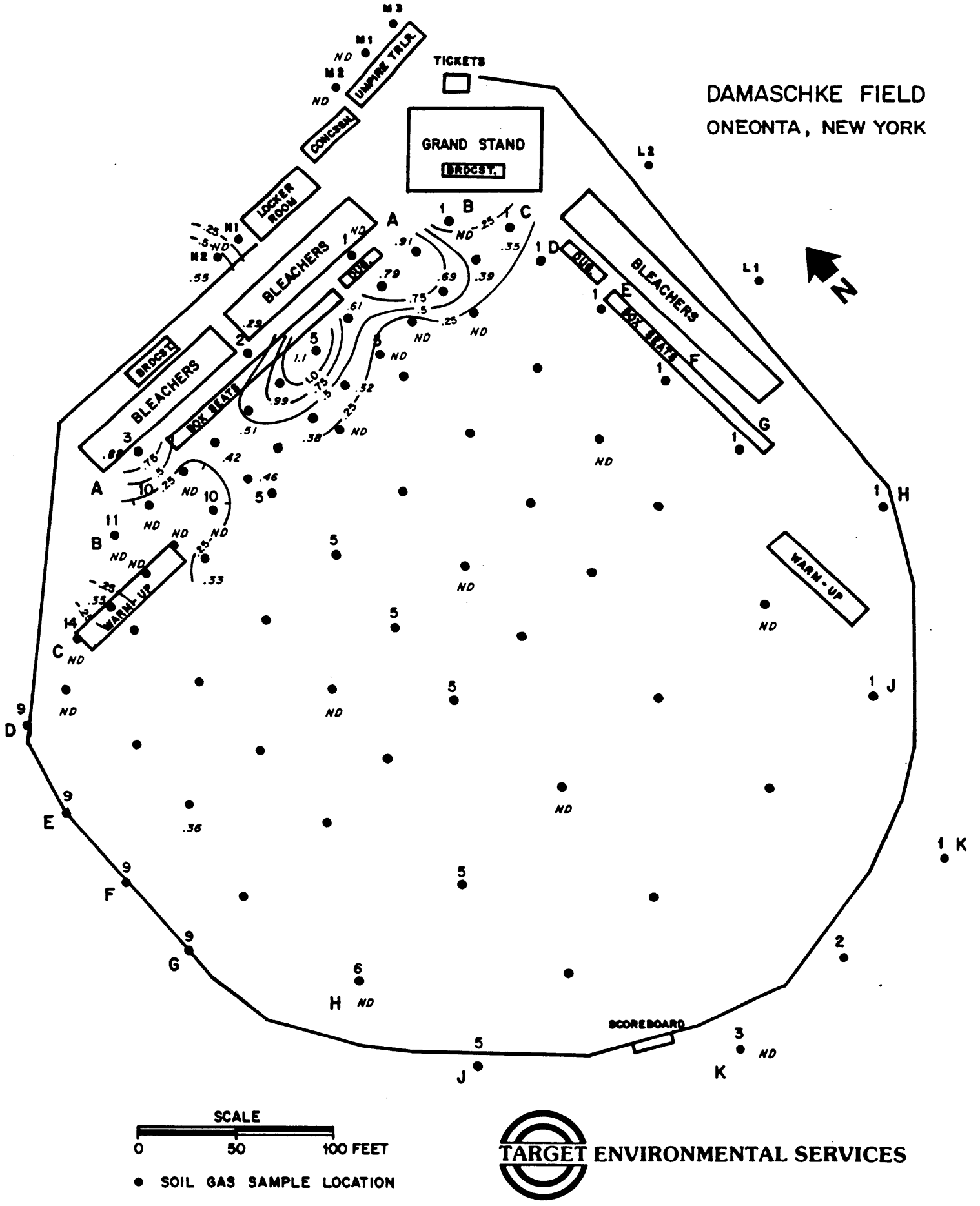
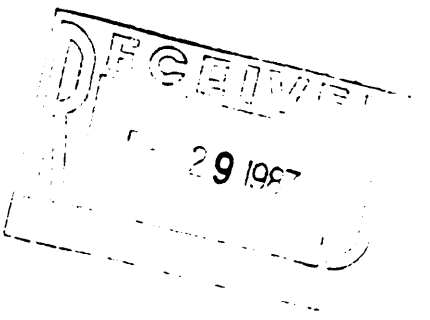


FIGURE 5. o-Xylene (ppb)

E.C. JORDAN CO. ENGINEERS & SCIENTISTS

261 Commercial Street P.O. Box 7050
Portland, Maine 04112
(207) 775-5401 Telex 94-4399



5443-00

December 22, 1987

Mr. James B. Marean
New York State Electric and Gas Corporation
87-89 Chenango Street
Binghamton, NY 13903

Subject: Report on soil gas survey at the Oneonta Site

Dear Mr. Marean:

Enclosed is a copy of the report of our soil gas survey at the Oneonta site. We have taken care to utilize the same base map as that used by Tracer Research so that you may compare the results of the two studies. We look forward to receiving the Tracer report so that we may also compare the two data sets.

Please call me or Jim Wallace if you have any questions.

Sincerely,

E.C. JORDAN CO.

Richard P. Allen
Senior Geophysicist

James R. Wallace, P.E.
Project Manager

Enclosures

INTRODUCTION

An experimental soil gas survey was conducted by E.C. Jordan (Jordan) at the Oneonta former coal gasification site on November 4 and 5, 1987. The purpose of the survey was to determine the effectiveness of a sampling methodology described by Jordan in a proposal to New York State Electric and Gas (NYSEG). The proposal is entitled "Soil Gas Investigation - Coal Tar Sites" and is dated August 1986. In that proposal, Jordan proposed the use of a photoionization detector (PID) such as a Photovac TIP or HNU for use as a screening tool at various of the NYSEG former coal tar facilities. Jordan's approach was to acquire many PID readings (the order of one hundred or more) in a single field day over the study area in shallow bar-driven holes. The presence and relative concentrations of volatile organic chemicals in the shallow (18 to 24 inches) soil column could be determined with such a survey by two technicians. No chemists or upper level technical personnel would be required, nor would any elaborate and/or expensive sampling equipment be necessary. Because a rather extensive data base exists for this site, it should be possible to evaluate the effectiveness of this technique and methodology in this application.

PERSONNEL

Jordan's field party supervisor was Richard Allen, a Senior Geophysicist who has been involved with several soil gas studies and prepared the proposal referenced above. He was assisted by Peter Kay, a Project Engineer. Jordan is grateful to NYSEG's Mr. Keith White for the assistance he provided in both the logistics and implementation of the field study.

FIELD SURVEY AND RESULTS

The area of primary interest is Damaschke Field, the home of the Oneonta Yankees, particularly where the field is adjacent to the former coal gasification facility along the right field line (Figure 1). In this portion of the study area, sample locations were established along a 15-foot grid. Further to the south (toward left field), the grid was relaxed to either a 15- by 30-foot grid or to a 30-foot grid. Figure 1 shows the measurement locations.

A total of 293 measurement locations were established at Damaschke Field during the two-day field survey. Thirty five measurements made on November 4 were repeated on November 5 for quality control. Differences in the repeated values were observed; however, this could be due to rain during the period of the evening of November 4 and the early morning hours of November 5. The observed differences made it necessary to "normalize" the values taken on the two different days. The normalization procedure is described in detail in Appendix A, which contains all of the raw data values, as well as the values which were used in the data analysis.

The field measurements were taken in accordance with the proposal referenced above. Bar-driven holes were made along a traverse with pointed stainless steel stakes (5/8-inch diameter) to a depth of approximately 18 inches. The holes were allowed to

equilibrate for a period of from three to four minutes prior to insertion of a 12 inch teflon tube attached to the sampling port of a Photovac TIP photoionization meter. The recorded value at each sampling location represents the highest value observed during the sampling episode which generally was 10 to 15 seconds in duration.

The field values were then normalized (as described in Appendix A) and contoured with SURFER, a contouring program from Golden Software in Denver, CO. The contour map is presented as Figure 2. A corresponding surface representation of Figure 2 is presented as Figure 3. There are 10 data points with values greater than 50 ppm, and these data points control, to a large degree, the pattern of contours shown in Figure 2 (contour interval is 10 ppm). If a contaminant plume exists under Damaschke Field, one would be guided by Figure 2 to look for it in a west-southwesterly direction from the right field bleachers toward right-center field.

The only other anomalous feature is a partial "ring" of higher values which occur around the base paths (values in the 30's to 50's). The source of these elevated values is not known but is believed to be related in some way to the presence of the infield dirt surface (use of herbicides by the maintenance crew?).

Jordan is most interested in learning how these results correlate with a recent Tracer Research soil gas survey. We appreciate the opportunity to have participated in this demonstration program with NYSEG and hope that the various methodologies used by Jordan and other consultants will be valuable in future NYSEG decisions at other coal gasification sites.

PLAN MAP FOR SOIL GAS SURVEY – ONEONTA, NY

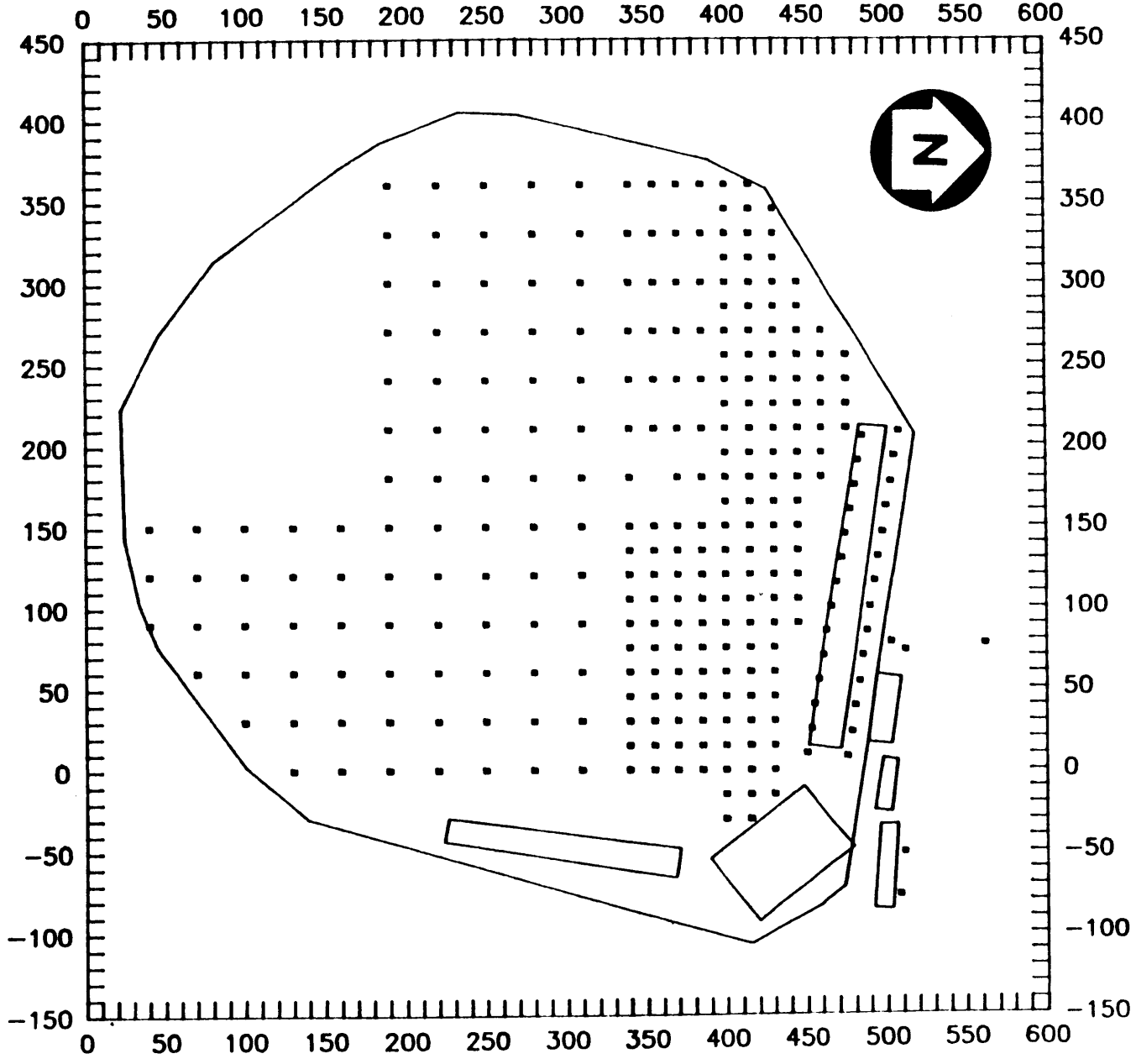


FIGURE 1

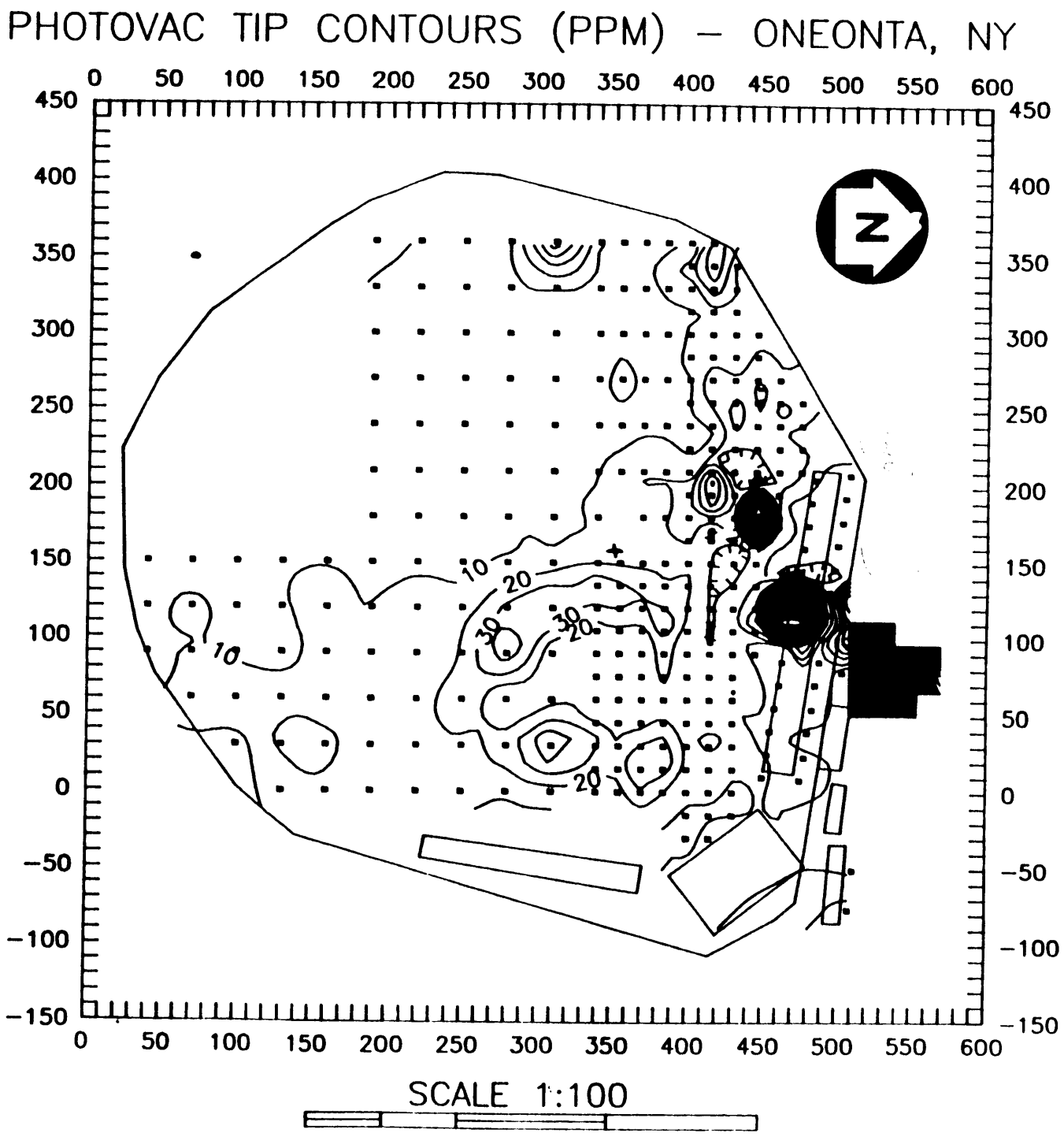

PHOTOVAC TIP CONTOURS (PPM) – ONEONTA, NY
0 50 100 150 200 250 300 350 400 450 500 550 600
450 400 350 300 250 200 150 100 50 0 −50 −100 −150
N
10
20
30
SCALE 1:100

FIGURE 2

PHOTOVAC TIP CONTOURS (PPM) - ONEONTA, NY

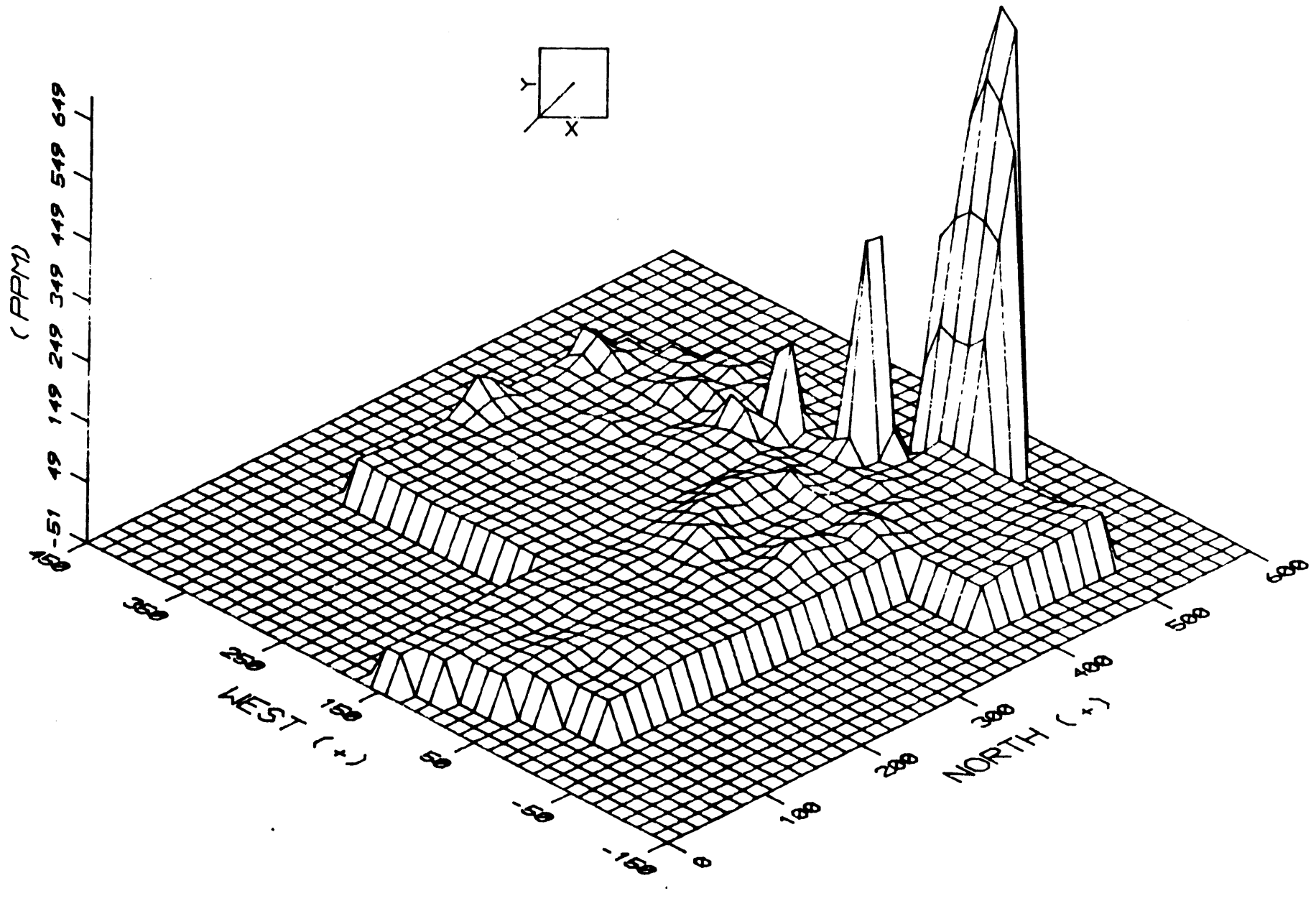


FIGURE 3

APPENDIX A
PHOTOVAC TIP READINGS
ONEONTA, NY

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
40	90	3	3		0
40	120	10	10		0
40	150	3		8	3
70	60	16	16		0
70	90	11	12	27	9
70	120	12	12		0
70	150	5		13	5
100	30	3	3		0
100	60	22	22		0
100	90	5	5		0
100	120	9	9		0
100	150	3	2	13	5
130	0	13	13		0
130	30	24	24		0
130	60	17	17		0
130	90	4	2	20	7
130	120	9	9		0
130	150	9	11	22	8
160	0	19	19		0
160	30	22	22		0
160	60	16	16		0
160	90	16	25	18	6
160	120	16	16		0
160	150	9	11	22	8
190	0	13	13		0
190	30	17	17		0
190	60	16	16		0
190	90	15	23	18	6
190	120	8	8		0
190	150	9	14	12	4
190	180	8		24	8
190	210	10		29	10
190	240	7		21	7
190	270	5		13	5
190	300	6		18	6
190	330	9		25	9
190	360	15		43	15
220	0	11	11		0
220	30	19	19		0
220	60	13	13		0
220	90	11	15	21	7
220	120	19	19		0
220	150	6	5	19	7
220	180	8	6	26	9
220	210	8		24	8
220	240	7		20	7
220	270	5		14	5
220	300	5		14	5

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
220	330	3		10	3
220	360	9		26	9
250	0	14	14		0
250	30	18	18		0
250	60	29	29		0
250	90	19	27	31	11
250	120	14	14		0
250	150	6	6	20	7
250	180	6	4	22	8
250	210	10		30	10
250	240	6		17	6
250	270	6		18	6
250	300	8		23	8
250	330	9		26	9
250	360	6		17	6
280	0	10	10		0
280	30	26	26		0
280	60	6	6		0
280	90	55	90	60	21
280	120	32	32		0
280	150	11	12	26	9
280	180	9	4	39	14
280	210	7		21	7
280	240	5		15	5
280	270	5		14	5
280	300	10		30	10
280	330	6		16	6
280	360	7		21	7
310	0	15	15		0
310	30	56	56		0
310	60	13	13		0
310	90	9	11	19	7
310	120	47	47		0
310	150	13	20	15	5
310	180	8	9	19	7
310	210	9		26	9
310	240	7		20	7
310	270	7		19	7
310	300	8		22	8
310	330	9		26	9
310	360	61		175	61
340	0	14	14		0
340	15	20	20		0
340	30	41	41		0
340	45	13	13		0
340	60	22	22		0
340	75	14	14		0
340	90	7	8	20	7

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
340	105	18	18		0
340	120	19	19		0
340	135	47	67	75	26
340	150	12	10	42	15
340	180	12	11	35	12
340	210	9		27	9
340	240	7		21	7
340	270	3		10	3
340	300	4		11	4
340	330	5		14	5
340	360	8		23	8
355	0	15	15		0
355	15	24	24		0
355	30	22	22		0
355	45	8	8		0
355	60	19	19		0
355	75	12	12		0
355	90	9	8	30	10
355	105	18	18		0
355	120	31	31		0
355	135	39	53	70	24
355	150	12	2	62	22
355	210	14		39	14
355	240	5		15	5
355	270	19		55	19
355	300	6		18	6
355	330	6		18	6
355	360	10		28	10
370	0	31	31		0
370	15	39	39		0
370	30	36	36		0
370	45	10	10		0
370	60	14	14		0
370	75	11	11		0
370	90	13	15	31	11
370	105	13	13		0
370	120	27	27		0
370	135	33	41	73	26
370	150	12	10	38	13
370	180	20	19	59	21
370	210	20		56	20
370	240	8		22	8
370	270	5		15	5
370	300	5		15	5
370	330	7		20	7
370	360	6		18	6
385	0	16	16		0
385	15	40	40		0

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
385	30	36	36		0
385	45	25	25		0
385	60	11	11		0
385	75	36	36		0
385	90	9	10	22	8
385	105	55	55		0
385	120	24	24		0
385	135	20	26	39	14
385	150	17	20	42	15
385	180	17	17		0
385	210	24		70	24
385	240	7		19	7
385	270	6		16	6
385	300	5		14	5
385	330	13		36	13
385	360	9		25	9
400	-30	6	6		0
400	-15	9	9		0
400	0	11	11		0
400	15	16	16		0
400	30	13	13		0
400	45	16	16		0
400	60	12	12		0
400	75	10	10		0
400	90	13	13		0
400	105	14	14		0
400	120	19	19		0
400	135	25	25		0
400	150	18	18		0
400	165	16	16		0
400	180	42	42		0
400	195	12	12		0
400	210	15	15		0
400	225	6	6		0
400	240	4	4		0
400	255	12	12		0
400	270	5	5		0
400	285	14	14		0
400	300	11	11		0
400	315	10	10		0
400	330	10	10		0
400	345	29	29		0
400	360	7	7		0
415	-30	14	14		0
415	-15	6	6		0
415	0	17	17		0
415	15	11	11		0
415	30	30	30		0

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
415	45	11	11		0
415	60	11	11		0
415	75	13	13		0
415	90	9	9		0
415	105	7	7		0
415	120	8	8		0
415	135	6	6		0
415	150	11	11		0
415	165	11	11		0
415	180	7	7		0
415	195	95	95		0
415	210	50	50		0
415	225	13	13		0
415	240	8	8		0
415	255	22	22		0
415	270	33	33		0
415	285	15	15		0
415	300	11	11		0
415	315	11	11		0
415	330	40	40		0
415	345	51	51		0
415	360	48	48		0
430	-15	10	10		0
430	0	8	8		0
430	15	10	10		0
430	30	21	21		0
430	45	4	4		0
430	60	25	25		0
430	75	14	14		0
430	90	20	20		0
430	105	16	16		0
430	120	18	18		0
430	135	10	10		0
430	150	5	5		0
430	165	4	4		0
430	180	4	4		0
430	195	9	9		0
430	210	16	16		0
430	225	10	10		0
430	240	41	41		0
430	255	36	36		0
430	270	22	22		0
430	285	11	11		0
430	300	11	11		0
430	315	15	15		0
430	330	20	20		0
430	345	15	15		0
445	90	9	9		0

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
445	105	10	10		0
445	120	11	11		0
445	135	10	10		0
445	150	26	26		0
445	165	16	16		0
445	180	300	300		0
445	195	16	16		0
445	210	15	15		0
445	225	20	20		0
445	240	28	28		0
445	255	11	11		0
445	270	20	20		0
445	285	28	28		0
445	300	14	14		0
460	180	8	8		0
460	195	13	13		0
460	210	33	33		0
460	225	26	26		0
460	240	20	20		0
460	255	42	42		0
460	270	16	16		0
475	210	26	26		0
475	225	20	20		0
475	240	17	17		0
475	255	27	27		0
450	10	12		35	12
453	25	9		25	9
455	40	8		22	8
458	55	6		16	6
461	70	6		17	6
463	85	7		20	7
466	100	5		13	5
469	115	699		2000	699
472	130	5		13	5
474	145	4		12	4
477	160	4		12	4
480	175	5		13	5
482	190	3		10	3
485	205	8		23	8
475	8	8		24	8
478	23	7		20	7
480	39	14		41	14
483	54	5		13	5
485	70	6		16	6
488	85	5		14	5
490	100	4		11	4
493	116	3		10	3
495	131	1		4	1

PHOTOVAC TIP READINGS - ONEONTA, NY

Note: See last page for explanation of derivation of "z"-values (PPM).

(1) "X"	(2) "Y"	(3) "Z" (PPM)	(4) RAW DATA PPM(11/4)	(5) RAW DATA PPM(11/5)	(6) NORMALIZED PPM(11/5)
498	146	6			
500	162	3		17	6
503	177	4		9	3
505	193	1		11	4
508	208	8		4	1
503	78	12		24	8
512	73	17		33	12
562	77	699		50	17
511	-51	17		2000	699
508	-77	35		50	17
				100	35
		2.86	(5)/(4) Average		
		0.67	Minimum value of (5)/(4)		
		10.00	Maximum value of (5)/(4)		

Note: "Z"- values were derived as follows: (1) obtained mean value of the ratio of the values of repeat data points taken on 11/5 and 11/4, respectively; (2) divided 11/5 data by that mean ratio to normalize data to that taken on 11/4; (3) if 11/4 data had no corresponding 11/5 value, that is the value used for "Z". If 11/5 data had no corresponding 11/4 value, the 11/5 value was divided by the mean value of the ratio of values in (1), and that is the value used for "Z". If the 11/4 value has a corresponding 11/5 value then the 11/4 value is averaged with the normalized 11/5 value, and that is the value used for "Z".

APPENDIX E

TEST PIT AND SURFACE SOIL SAMPLES CHEMICAL RESULTS

ONEONTA TEST PIT SAMPLES
COMPARATIVE RESULTS

	SAMPLE ID	TP-1	TP-2	TP-3	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8	TP-9	TP-10
	DATE	8/5/86	8/5/86	8/4/86	8/4/86	8/4/86	8/5/86	8/4/86	8/4/86	8/4/86	8/4/86	8/4/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNIT											
PURGEABLE AROMATICS												
Benzene	UG/G DRY	38.00	0.15	51.00	47.00	<0.13	<0.06	<0.12	2.00	7.00	54.00	59.00
Chlorobenzene	UG/G DRY	<0.05	<0.05	<0.08	<0.10	<0.13	<0.06	<0.12	<0.07	<0.09	<0.05	<0.07
1,2-Dichlorobenzene	UG/G DRY	0.60	<0.09	3.10	<0.15	0.85	<0.12	<0.24	<0.15	<0.19	0.65	0.48
1,3-Dichlorobenzene	UG/G DRY	<0.11	<0.09	<0.17	<0.15	<0.26	<0.12	<0.24	<0.15	<0.19	<0.11	<0.13
1,4-Dichlorobenzene	UG/G DRY	<0.11	<0.09	<0.17	<0.15	<0.26	16.00	<0.24	<0.15	<0.19	<0.11	<0.13
Ethylbenzene	UG/G DRY	12.00	<0.05	31.00	28.00	<0.13	<0.06	<0.12	3.10	6.60	6.20	4.00
Toluene	UG/G DRY	67.00	<0.05	36.00	31.00	<0.13	<0.06	<0.12	<0.07	<0.09	52.00	45.00
Total Volatiles	UG/G DRY	117.60	0.15	121.10	106.00	0.85	16.00	<0.24	5.10	13.60	112.85	108.48
POLYNUCLEAR AROMATIC HYDROCARBONS												
Acenaphthene	UG/G DRY	<5.00	<3.40	<3.10	<6.00	<3.60	<3.10	<3.70	150.00	<3.30	<3.00	<0.02
Acenaphthylene	UG/G DRY	<8.90	7.50	4800.00	5300.00	5.30	<5.60	2700.00	3.40	5600.00	800.00	140.00
Anthracene	UG/G DRY	2.00	2.50	52.00	48.00	<0.75	<0.66	22.00	<0.62	<0.70	6.80	4.80
Benzo (A) Anthracene	UG/G DRY	39.00	14.00	140.00	120.00	0.91	<0.72	34.00	2.00	<0.76	12.00	14.00
Benzo (A) Pyrene	UG/G DRY	7.00	1.20	9.60	6.50	<0.21	<0.19	3.00	<0.17	66.00	0.76	1.20
Benzo (B) Fluoranthene	UG/G DRY	14.00	4.50	29.00	23.00	<1.90	<1.60	9.60	1.30	260.00	2.20	2.50
Benzo (K) Flouranthene	UG/G DRY	11.00	2.90	24.00	19.00	<0.94	<0.82	6.70	<0.78	150.00	1.90	1.90
Benzo (GHI) Perylene	UG/G DRY	7.70	3.40	14.00	8.80	<0.82	<0.72	3.30	<0.68	59.00	3.80	0.98
Chrysene	UG/G DRY	18.00	4.50	38.00	32.00	<0.35	<0.31	11.00	0.44	<0.33	3.30	3.60
Dibenzo (A,H) Anthracene	UG/G DRY	<0.15	<0.10	0.95	<0.19	<0.11	<0.10	<0.13	<0.10	5.90	<0.10	0.07
Fluoranthene	UG/G DRY	60.00	41.00	470.00	430.00	2.10	<1.60	150.00	7.00	<1.70	50.00	43.00
Fluorene	UG/G DRY	0.50	0.51	24.00	23.00	<0.16	<0.14	11.00	0.45	58.00	4.40	2.30
Indeno (1,2,3-CD) Pyrene	UG/G DRY	11.00	2.10	16.00	9.90	<1.10	<1.00	4.50	<0.95	78.00	1.30	1.10
Naphthalene	UG/G DRY	140.00	<98.00	<87.00	<170.00	<100.00	<89.00	<110.00	<86.00	<97.00	<88.00	<0.68
Phenanthrene	UG/G DRY	0.35	<0.23	5.00	4.10	<0.25	<0.22	1.30	1.00	130.00	0.53	0.16
Pyrene	UG/G DRY	7.00	6.20	83.00	74.00	<1.30	<1.20	33.00	1.60	2300.00	11.00	6.40
Total PAH's		317.55	90.31	5705.55	6098.30	8.31	<89.00	2989.40	166.19	8706.9	897.99	222.01

ONEONTA TEST PIT SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	TP-1	TP-2	TP-3	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8	TP-9	TP-10
	DATE	8/5/86	8/5/86	8/4/86	8/4/86	8/4/86	8/5/86	8/4/86	8/4/86	8/4/86	8/4/86	8/4/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNIT											
NON-CHLORINATED PHENOLS												
2,4-Dimethylphenol	UG/G DRY	28.00	<2.50	<2.30	6.50	<2.90	<2.30	<2.90	<2.30	<2.60	<2.30	<0.55
2,4-Dinitrophenol	UG/G DRY	<250.00	<69.00	<63.00	<66.00	<80.00	<64.00	<79.00	<62.00	<71.00	<63.00	<0.84
Methyl-4,6-Dinitrophenol	UG/G DRY	<70.00	<19.00	<18.00	<18.00	<22.00	<18.00	<22.00	<17.00	<20.00	<18.00	<0.99
2-Nitrophenol	UG/G DRY	<26.00	<7.10	<6.50	<6.80	<8.20	<6.50	<8.20	<6.40	<7.30	<6.50	<0.87
4-Nitrophenol	UG/G DRY	<6.20	<1.70	<1.60	<1.60	<2.00	<1.60	4.20	<1.50	<1.70	<1.60	3.60
Phenol	UG/G DRY	27.00	<1.00	<0.96	<1.00	<1.20	<0.96	6.60	<0.96	<1.10	<0.96	2.10
INORGANIC COMPOUNDS												
Iron, Total	UG/G DRY	19300.00	30100.00	20200.00	20100.00	17700.00	22600.00	7790.00	42700.00	34300.00	24700.00	22000.00
Zinc, Total	UG/G DRY	61.60	47.40	95.60	89.90	268.00	58.60	19.60	68.80	114.00	54.10	114.00
Cyanide-Total	UG/G DRY	1.04	0.27	13.70	2.95	3.06	1.01	19.70	0.72	79.10	1.04	8.02
Cyanide-Iron	UG/G DRY	0.64	<0.20	12.40	1.73	2.12	0.65	19.30	0.28	65.30	0.93	6.77
Sulfate	UG/G DRY	121.00	212.00	2480.00	<69.80	327.00	524.00	134.00	1590.00	1700.00	91.70	<67.10
Organic Nitrogen	UG/G DRY	869.00	711.00	822.00	1090.00	776.00	1480.00	785.00	527.00	1720.00	414.00	688.00

NA - NOT ANALYZED
- - DETECTION LIMIT NOT RECORDED

ONEONTA TEST PIT SAMPLES
COMPARATIVE RESULTS (Continued)

SAMPLE ID		TP-11	TP-12	TP-13	TP-14	TP-14	TP-15	TP-16	TP-17	TP-18	TP-19	TP-20
DATE		8/5/86	8/5/86	8/5/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86
SAMPLE TYPE	UNIT	GRAB	GRAB	GRAB	GRAB	DUPLICATE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
PURGEABLE AROMATICS												
Benzene	UG/G DRY	56.00	22.00	0.06	48.00	39.00	<0.08	9.80	-	3.70	12.00	<0.07
Chlorobenzene	UG/G DRY	0.10	<0.05	<0.04	0.37	0.31	<0.08	0.41	-	<0.06	-	<0.07
1,2-Dichlorobenzene	UG/G DRY	6.90	1.40	1.50	3.90	5.40	0.64	7.10	-	3.00	-	<0.15
1,3-Dichlorobenzene	UG/G DRY	<0.17	<0.09	0.08	<0.16	<0.13	<0.15	<0.16	-	<0.13	-	<0.15
1,4-Dichlorobenzene	UG/G DRY	<0.17	2.10	0.81	0.50	<0.13	<0.15	0.29	-	<0.13	-	<0.15
Ethylbenzene	UG/G DRY	39.00	5.90	0.88	14.00	11.00	<0.08	21.00	-	4.60	36.00	<0.07
Toluene	UG/G DRY	65.00	<0.05	0.39	5.30	4.50	<0.08	4.00	-	2.90	83.00	<0.07
Total Volatiles	UG/G DRY	167.00	31.40	3.72	72.07	60.21	0.64	42.60		14.20	131.00	<0.15
POLYNUCLEAR AROMATIC HYDROCARBONS												
Acenaphthene	UG/G DRY	<3.30	<2.70	<2.50	840.00	1100.00	<3.00	4700.00	-	<3.20	-	<3.30
Acenaphthylene	UG/G DRY	3100.00	170.00	448.80	120.00	510.00	<5.40	2400.00	-	10.00	450.00	<5.90
Anthracene	UG/G DRY	42.00	28.00	8.80	4.50	16.00	<0.65	39.00	0.47	1.60	590.00	<0.70
Benzo (A) Anthracene	UG/G DRY	69.00	76.00	25.00	11.00	42.00	<0.70	43.00	0.47	3.50	740.00	<0.75
Benzo (A) Pyrene	UG/G DRY	3.70	7.40	0.91	0.65	2.60	<0.18	3.80	1.00	0.38	310.00	<0.19
Benzo (B) Fluoranthene	UG/G DRY	18.00	25.00	3.00	1.70	6.60	<1.60	11.00	0.69	<1.70	390.00	<1.70
Benzo (K) Flouranthene	UG/G DRY	11.00	15.00	2.50	1.30	5.50	<0.08	9.40	0.69	<0.84	390.00	<0.87
Benzo (GHI) Perylene	UG/G DRY	4.20	8.80	2.00	0.95	3.40	<0.70	3.50	0.21	<0.73	-	<0.76
Chrysene	UG/G DRY	19.00	24.00	4.80	3.30	12.00	<0.30	18.00	0.51	1.20	350.00	<0.32
Dibenzo (A,H) Anthracene	UG/G DRY	<0.10	0.83	<0.08	<0.09	<0.10	<0.09	0.90	-	<0.10	-	<0.10
Fluoranthene	UG/G DRY	380.00	250.00	79.00	35.00	140.00	<1.60	190.00	-	12.00	770.00	<1.70
Fluorene	UG/G DRY	16.00	8.00	1.90	1.60	5.40	<0.14	8.10	-	0.32	-	<0.15
Indeno (1,2,3-CD) Pyrene	UG/G DRY	5.40	11.00	1.50	1.10	4.20	<0.98	5.40	0.17	<1.00	-	<1.10
Naphthalene	UG/G DRY	170.00	<78.00	<72.00	87.00	130.00	<89.00	<85.00	-	<93.00	10000.00	<96.00
Phenanthrene	UG/G DRY	31.00	0.46	0.43	2.20	8.90	<0.21	30.00	2.20	0.55	1700.00	<0.23
Pyrene	UG/G DRY	76.00	44.00	24.00	5.70	26.00	<1.10	62.00	-	1.80	1200.00	<1.20
Total PAH's	UG/G DRY	3945.30	668.49	602.64	1116.00	2012.60	<89.00	7524.10	6.41	31.35	16890.00	(96.00

ONEONTA TEST PIT SAMPLES
COMPARATIVE RESULTS (Continued)

	SAMPLE ID	TP-11	TP-12	TP-13	TP-14	TP-14	TP-15	TP-16	TP-17	TP-18	TP-19	TP-20
	DATE	8/5/86	8/5/86	8/5/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86	8/6/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	GRAB	DUPLICATE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNIT											
NON-CHLORINATED PHENOLS												
2,4-Dimethylphenol	UG/G DRY	<2.50	<2.20	<2.00	<2.30	<2.40	<2.40	<2.40	-	<2.30	0.55	<2.30
2,4-Dinitrophenol	UG/G DRY	<69.00	<59.00	<54.00	<62.00	<64.00	<65.00	<64.00	-	<62.00	-	<63.00
Methyl-4,6-Dinitrophenol	UG/G DRY	<19.00	<16.00	<15.00	<17.00	<20.00	<18.00	32.00	-	25.00	-	<18.00
2-Nitrophenol	UG/G DRY	<7.10	<6.10	<5.50	<6.30	<6.60	<6.70	<6.60	-	<6.40	-	<6.50
4-Nitrophenol	UG/G DRY	6.50	8.50	<1.30	<1.50	<1.60	<1.60	<1.60	-	<1.50	-	<1.60
Phenol	UG/G DRY	<1.00	13.00	<0.82	<0.93	<0.98	<0.98	<0.97	-	<0.94	0.48	<0.96
INORGANIC COMPOUNDS												
Iron, Total	UG/G DRY	24400.00	23300.00	33900.00	36400.00	30700.00	24700.00	32200.00	-	2300.00	-	25800.00
Zinc, Total	UG/G DRY	78.20	72.60	52.00	106.00	59.40	58.40	64.90	44.00	98.60	23.00	61.80
Cyanide-Total	UG/G DRY	10.50	7.83	6.62	0.31	<0.02	0.241	<0.02	NA	<0.02	NA	<0.02
Cyanide-Iron	UG/G DRY	9.00	6.39	3.10	<0.02	<0.02	0.241	<0.02	NA	<0.02	NA	<0.02
Sulfate	UG/G DRY	66.60	50.20	305.00	151.00	122.00	218.00	109.00	-	521.00	-	654.00
Organic Nitrogen	UG/G DRY	1410.00	863.00	374.00	533.00	555.00	840.00	486.00	-	241.00	-	937.00

NA - NOT ANALYZED
- - DETECTION LIMIT NOT RECORDED

ONEONTA SURFACE SOIL SAMPLES

COMPARATIVE RESULTS

	SAMPLE ID	SS-1	SS-2a	SS-2b	SS-03	SS-04
	DATE	8/4/86	8/4/86	8/4/86	8/4/86	8/4/86
	SAMPLE TYPE	COMPOSITE	COMPOSITE	DUPLICATE	COMPOSITE	COMPOSITE
	UNITS					
PURGEABLE AROMATICS						
Benzene	ug/g Dry	<0.10	<0.16	<0.15	<0.13	<0.16
Chlorobenzene	ug/g Dry	<0.10	<0.16	<0.15	<0.13	<0.16
1,2-Dichlorobenzene	ug/g Dry	<0.20	<0.32	<0.31	<0.26	<0.32
1,3-Dichlorobenzene	ug/g Dry	<0.20	<0.32	<0.31	<0.26	<0.32
1,4-Dichlorobenzene	ug/g Dry	<0.20	<0.32	<0.31	<0.26	<0.32
Ethylbenzene	ug/g Dry	<0.10	<0.16	<0.15	<0.13	<0.16
Toluene	ug/g Dry	<0.10	<0.16	<0.15	<0.13	<0.16
POLYNUCLEAR AROMATIC HYDROCARBONS						
Acenaphthene	ug/g Dry	2.6	<0.01	<0.01	<0.01	<0.02
Acenaphthylene	ug/g Dry	69.0	<0.22	2.9	0.24	<0.23
Anthracene	ug/g Dry	3.4	0.05	0.57	<0.03	<0.05
Benzo (A) Anthracene	ug/g Dry	9.5	2.0	12.0	1.8	<0.09
Benzo (A) Pyrene	ug/g Dry	1.1	0.55	1.5	0.31	<0.02
Benzo (B) Fluoranthene	ug/g Dry	2.4	0.92	3.9	0.48	<0.13
Benzo (K) Fluoranthene	ug/g Dry	1.6	0.38	1.6	0.27	<0.07
Benzo (GHI) Perylene	ug/g Dry	0.94	0.90	2.0	0.37	<0.07
Chrysene	ug/g Dry	3.0	0.54	3.4	0.46	<0.03
Dibenzo (A,H) Anthracene	ug/g Dry	0.15	<0.01	0.05	<0.01	<0.01
Fluoranthene	ug/g Dry	32.0	1.1	15.0	0.63	<0.16
Fluorene	ug/g Dry	1.3	0.02	0.09	0.01	<0.01
Indeno (1,2,3-CD) Pyrene	ug/g Dry	1.0	0.91	1.9	0.36	<0.07
Naphthalene	ug/g Dry	<0.60	<0.65	<0.66	<0.61	<0.69
Phenanthrene	ug/g Dry	0.07	<0.01	0.04	<0.01	<0.01
Pyrene	ug/g Dry	4.4	0.08	1.0	0.07	<0.08

ONEONTA SURFACE SOIL SAMPLES

COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID DATE SAMPLE TYPE UNITS	SS-1 8/4/86 COMPOSITE	SS-2a 8/4/86 COMPOSITE	SS-2b 8/4/86 DUPLICATE	SS-03 8/4/86 COMPOSITE	SS-04 8/4/86 COMPOSITE
NON-CHLORINATED PHENOLS						
2,4-Dimethylphenol	ug/g Dry	<0.46	<0.50	<0.51	<0.48	<0.54
2,4-Dinitrophenol	ug/g Dry	<0.72	<0.78	<0.78	<0.74	<0.83
2-Methyl-4,6-Dinitrophenol	ug/g Dry	<0.84	<0.91	<0.91	<0.86	<0.97
2-Nitrophenol	ug/g Dry	<0.74	<0.80	<0.80	<0.76	<0.85
4-Nitrophenol	ug/g Dry	<0.28	<0.30	<0.31	<0.29	<0.32
Phenol	ug/g Dry	<0.28	<0.31	<0.31	<0.29	<0.33
INORGANIC COMPOUNDS						
Iron, Total	ug/g Dry	35500.0	24300.0	33100.0	21900.0	26500.0
Zinc, Total	ug/g Dry	79.2	169.0	165.0	43.1	61.0
Cyanide - Total	ug/g Dry	0.47	36.7	30.7	13.7	1.88
Cyanide - Iron	ug/g Dry	0.38	22.1	17.1	12.4	1.52
Sulfate	ug/g Dry	<122.0	175.0	169.0	60.1	<69.3
Organic Nitrogen	ug/g Dry	483.0	912.0	1340.0	1190.0	1370.0

APPENDIX F

GROUND WATER SAMPLES CHEMICAL RESULTS

ONEONTA GROUND WATER SAMPLES

COMPARATIVE SUMMARY OF RESULTS

	UNITS	MW-1S 9/22/86 GRAB	MW-1S 12/10/86 GRAB	MW-1S 3/18/87 GRAB	MW-1S 6/8/87 GRAB	MW-2S 9/23/86 GRAB	MW-2S 12/10/86 GRAB	MW-2S 3/18/87 GRAB	MW-2S 6/9/87 GRAB	MW-3S 9/23/86 GRAB	MW-3S 12/11/86 GRAB	MW-3S 3/18/87 GRAB	MW-3S 6/8/87 GRAB
PURGEABLE AROMATICS													
BENZENE	MG/L	0.033	<0.005	-	<0.005	6.2	0.170	4.29	5.53	0.5	0.0807	0.0524	0.700
CHLOROBENZENE	MG/L	0.003	<0.005	-	<0.005	<0.010	0.250	-	<0.500	<0.010	<0.005	-	<0.050
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.020	<0.200	-	<50.0	<0.020	<0.010	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.020	<0.200	-	<50.0	<0.020	<0.010	-	<0.010
1,4-DICHLOROBENZENE	MG/L	0.037	-	-	<0.010	3.5	<0.200	-	<50.0	0.53	<0.010	-	<0.010
ETHYLBENZENE	MG/L	<0.001	<0.005	-	<0.005	4.9	3.61	3.45	4.57	0.91	0.204	0.0738	1.010
STYRENE	MG/L	NA	<0.005	-	<0.005	NA	0.429	-	<0.50	NA	<0.005	-	<0.050
TOLUENE	MG/L	0.007	<0.005	-	<0.005	4.1	3.48	3.31	<0.005	0.26	0.0357	0.0184	0.275
TOTAL XYLENES	MG/L	NA	<0.005	0.0074	0.021	NA	1.58	3.45	2.63	NA	0.091	0.0332	0.483
OTHER VOLATILE ORGANICS													
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
METHYLENE CHLORIDE	MG/L	NA	0.002	-	0.005	NA	<0.25	-	0.70	NA	<0.005	-	0.096
ACETONE	MG/L	NA	0.022	0.010	<0.010	NA	<0.50	-	<1.0	NA	0.010	-	<0.100
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
CHLOROFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.500
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
VINYL ACETATE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.50	-	<1.0	NA	<0.010	-	<0.100
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.25	-	<0.50	NA	<0.005	-	<0.050

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-1S 9/22/86 GRAB	MW-1S 12/10/86 GRAB	MW-1S 3/18/87 GRAB	MW-1S 6/8/87 GRAB	MW-2S 9/23/86 GRAB	MW-2S 12/10/86 GRAB	MW-2S 3/18/87 GRAB	MW-2S 6/9/87 GRAB	MW-3S 9/23/86 GRAB	MW-3S 12/11/86 GRAB	MW-3S 3/18/87 GRAB	MW-3S 6/8/87 GRAB
POLYNUCLEAR AROMATIC HYDROCARBONS													
ACENAPHTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	<0.200	6.72	79.50	0.232	0.016	0.035	0.054
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	<0.200	13.0	80.0	0.298	0.013	0.0345	0.054
ANTHRACENE	MG/L	<0.0003	-	-	<0.010	0.2683	<0.200	9.37	88.3	0.446	0.042	0.0135	0.012
BENZO (A) ANTHRACENE	MG/L	<0.0004	-	-	<0.010	0.0214	<0.200	4.22	<50.0	0.0435	0.020	0.023	0.021
BENZO (A) PYRENE	MG/L	<0.0003	-	-	<0.010	0.0194	<0.200	2.79	<50.0	<0.0003	0.013	0.0123	<0.010
BENZO (B) FLUORANTHENE	MG/L	0.0021	-	-	<0.010	<0.002	<0.200	2.62	<50.0	<0.002	0.013	0.0117	<0.010
BENZO (K) FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	0.0132	<0.200	-	<50.0	0.0192	0.011	-	<0.010
BENZO (GHI) PERYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	<0.200	-	<50.0	<0.0003	<0.010	-	<0.010
CHRYSENE	MG/L	<0.0004	-	-	<0.010	0.0219	<0.200	4.67	<50.0	<0.0004	0.019	0.0218	0.023
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010	0.0012	<0.200	-	<50.0	0.0017	<0.010	-	<0.010
FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	0.0025	<0.200	7.82	89.2	<0.0003	0.030	0.0233	0.017
FLUORENE	MG/L	<0.0003	-	-	<0.010	0.0203	<0.200	7.80	110.0	<0.0003	<0.010	-	0.024
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	-	-	<0.010	0.0066	<0.200	-	<50.0	0.0086	<0.010	-	<0.010
NAPHTHALENE	MG/L	0.0011	-	-	<0.010	<0.0003	5.70	96.8	1080.0	1.90	0.011	0.595	0.950
PHENANTHRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	<0.200	24.6	88.3	<0.0003	0.037	0.0353	0.012
PYRENE	MG/L	<0.0003	-	-	<0.010	0.081	<0.200	19.3	135.0	0.0135	0.040	0.0348	0.025
OTHER BASE/NEUTRAL EXTRACTABLES													
BENZIDINE	MG/L	NA	-	-	<0.080	NA	<1.60	-	<400.0	NA	<0.080	-	<0.080
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
1,2-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
1,3-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
1,4-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	.0.010	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
ISOPHORONE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
NITROBENZENE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	0.030	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	-	0.012	0.066	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
DI-n-BUTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	<0.010	-	<0.010

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-1S 9/22/86 GRAB	MW-1S 12/10/86 GRAB	MW-1S 3/18/87 GRAB	MW-1S 6/8/87 GRAB	MW-2S 9/23/86 GRAB	MW-2S 12/10/86 GRAB	MW-2S 3/18/87 GRAB	MW-2S 6/9/87 GRAB	MW-3S 9/23/86 GRAB	MW-3S 12/11/86 GRAB	MW-3S 3/18/87 GRAB	MW-3S 6/8/87 GRAB
NON-CHLORINATED PHENOLS													
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	0.0176	<0.200	-	<50.0	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	<1.0	-	<250.0	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	<1.0	-	<250.0	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	<1.0	-	<250.0	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	<1.0	-	<250.0	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	-	<0.010	0.0315	<0.200	-	<50.0	<0.007	-	-	<0.010
OTHER ACID EXTRACTABLES													
2,4,6-TRICHLOROPHENOL	MG/L	NA	-	-	<0.050	NA	<1.0	-	<250.0	NA	-	-	<0.050
p-CHLORO-m-CRESOL	MG/L	NA	-	-	<0.050	NA	<0.20	-	<250.0	NA	-	-	<0.050
2-CHLOROPHENOL	MG/L	NA	-	-	<0.010	NA	<0.20	-	<50.0	NA	-	-	<0.010
2,4-DICHLOROPHENOL	MG/L	NA	-	-	<0.050	NA	<1.0	-	<250.0	NA	-	-	<0.050
4,6-DINITRO-o-CRESOL	MG/L	<0.003	-	-	<0.050	NA	<1.0	-	<250.0	NA	-	-	<0.050
INORGANIC COMPOUNDS													
IRON, TOTAL	MG/L	18.2	9.1	22.1	28.3	11.6	6.5	10.8	15.5	7.55	6.9	12.3	9.82
ZINC, TOTAL	MG/L	<0.019	0.009	0.02	0.05	<0.019	0.006	0.06	0.26	<0.019	0.019	0.02	0.03
ARSENIC, TOTAL	MG/L	NA	0.002	<0.005	<0.005	NA	0.005	0.007	0.011	NA	0.029	0.01	0.009
CADMIUM, TOTAL	MG/L	NA	<0.001	<0.001	<0.001	NA	<0.001	<0.001	0.013	NA	<0.001	<0.001	<0.001
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	0.002	<0.01	0.01	NA	0.006	<0.01	0.02	NA	0.002	<0.01	<0.01
CYANIDE, TOTAL	MG/L	<0.007	<0.01	<0.01	0.02	<0.007	0.20	0.08	0.14	<0.007	0.14	0.16	0.10
SULFATE	MG/L	16.7	24.8	6.0	NA	5.4	14.7	36.0	NA	3.3	NA	10.0	NA
GENERAL ORGANIC PARAMETERS													
TOTAL ORGANIC CARBON	MG/L	NA	20	7.7	10.0	NA	31.0	21.6	27.0	NA	21.0	4.9	7.1
ORGANIC NITROGEN	MG/L	0.575	1.4	1.7	NA	0.468	1.1	1.4	NA	0.40	1.2	1.7	NA

NA - NOT ANALYZED
- - BELOW DETECTION LIMITS

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS

	UNITS	MW-4S 9/23/86 GRAB	MW-4S 12/11/86 GRAB	MW-4S 3/19/87 GRAB	MW-4S 6/8/87 GRAB	MW-5S 9/22/86 GRAB	MW-5S 12/11/86 GRAB	MW-5S 3/19/87 GRAB	MW-5S 6/9/87 GRAB
PURGEABLE AROMATICS									
BENZENE	MG/L	0.53	0.264	0.419	0.682	0.026	0.358	0.165	0.291
CHLOROBENZENE	MG/L	<0.010	<0.005	-	<0.005	<0.001	<0.005	-	<0.050
1,2-DICHLOROBENZENE	MG/L	<0.002	<0.010	-	<0.010	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.020	<0.010	-	<0.010	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	0.18	<0.010	-	<0.010	0.035	-	-	<0.010
ETHYLBENZENE	MG/L	0.09	0.108	0.105	0.035	0.019	0.029	0.0187	0.063
STYRENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
TOLUENE	MG/L	0.03	0.004	0.004	<0.005	0.004	<0.005	0.0042	<0.050
TOTAL XYLENES	MG/L	NA	0.039	0.0385	0.020	NA	0.022	0.0105	<0.050
OTHER VOLATILE ORGANICS									
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
METHYLENE CHLORIDE	MG/L	NA	0.002	-	0.007	NA	<0.005	-	0.080
ACETONE	MG/L	NA	0.040	-	<0.010	NA	0.018	0.0226	<0.100
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
CHLOROFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
VINYL ACETATE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.100
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.050

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-4S 9/23/86 GRAB	MW-4S 12/11/86 GRAB	MW-4S 3/19/87 GRAB	MW-4S 6/8/87 GRAB	MW-5S 9/22/86 GRAB	MW-5S 12/11/86 GRAB	MW-5S 3/19/87 GRAB	MW-5S 6/9/87 GRAB
POLYNUCLEAR AROMATIC HYDROCARBONS									
ACENAPHTHENE	MG/L	0.0074	<0.010	-	<0.010	0.0268	-	-	0.010
ACENAPHTHYLENE	MG/L	0.0016	<0.010	-	<0.010	<0.0003	-	-	0.010
ANTHRACENE	MG/L	<0.0003	<0.010	-	<0.010	0.0016	-	-	<0.010
BENZO (A) ANTHRACENE	MG/L	<0.0004	0.010	-	<0.010	<0.0004	-	-	<0.010
BENZO (A) PYRENE	MG/L	<0.0003	<0.010	-	<0.010	0.0003	-	-	<0.010
BENZO (B) FLUORANTHENE	MG/L	<0.002	0.010	-	<0.010	<0.002	-	-	<0.010
BENZO (K) FLUORANTHENE	MG/L	<0.0003	<0.010	-	<0.010	<0.0003	-	-	<0.010
BENZO (GHI) PERYLENE	MG/L	<0.0003	<0.010	-	<0.010	<0.0003	-	-	<0.010
CHRYSENE	MG/L	<0.0004	<0.010	-	<0.010	<0.0004	-	-	<0.010
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	<0.010	-	<0.010	<0.0003	-	-	<0.010
FLUORANTHENE	MG/L	0.0014	0.013	-	<0.010	0.0019	-	-	<0.010
FLUORENE	MG/L	0.0073	<0.010	-	<0.010	0.0112	-	-	<0.010
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	<0.010	-	<0.010	0.0005	-	-	<0.010
NAPHTHALENE	MG/L	0.139	<0.010	-	0.014	0.0054	-	-	<0.010
PHENANTHRENE	MG/L	0.0058	<0.010	-	<0.010	0.0085	-	-	<0.010
PYRENE	MG/L	0.0014	0.020	0.024	<0.010	0.0026	-	-	<0.010
OTHER BASE/NEUTRAL EXTRACTABLES									
BENZIDINE	MG/L	NA	<0.080	-	<0.080	NA	-	-	<0.080
1,2,4-TRICHLOROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
HEXACHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
1,2-DICHLOROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
ISOPHORONE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
NITROBENZENE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	<0.010	-	<0.010	NA	-	-	0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	<0.010	-	0.036	NA	-	-	<0.010
BUTYL BENZYL PHTHALATE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
DI-n-BUTYL PHTHALATE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	<0.010	-	<0.010	NA	-	-	<0.010

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-4S 9/23/86 GRAB	MW-4S 12/11/86 GRAB	MW-4S 3/19/87 GRAB	MW-4S 6/8/87 GRAB	MW-5S 9/22/86 GRAB	MW-5S 12/11/86 GRAB	MW-5S 3/19/87 GRAB	MW-5S 6/9/87 GRAB
NON-CHLORINATED PHENOLS									
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	-	<0.010	<0.007	-	-	<0.010
OTHER ACID EXTRACTABLES									
2,4,6-TRICHLOROPHENOL	MG/L	NA	-	-	<0.050	NA	-	-	<0.050
p-CHLORO-m-CRESOL	MG/L	NA	-	-	<0.050	NA	-	-	<0.050
2-CHLOROPHENOL	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
2,4-DICHLOROPHENOL	MG/L	NA	-	-	<0.050	NA	-	-	<0.050
4,6-DINITRO-o-CRESOL	MG/L	NA	-	-	<0.050	NA	-	-	<0.050
INORGANIC COMPOUNDS									
IRON, TOTAL	MG/L	11.3	6.4	12.2	23.3	7.65	2.6	4.44	4.37
ZINC, TOTAL	MG/L	<0.019	0.013	<0.01	0.05	<0.019	0.028	0.21	0.13
ARSENIC, TOTAL	MG/L	NA	0.001	<0.005	<0.005	NA	0.005	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	0.002	<0.001	<0.001	NA	<0.001	<0.001	0.001
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	0.001	<0.01	0.01	NA	0.002	<0.01	<0.01
CYANIDE, TOTAL	MG/L	<0.007	0.37	0.24	0.14	0.011	0.01	0.13	0.29
SULFATE	MG/L	3.3	39.6	69.0	23.3	13.6	63.3	39.0	NA
GENERAL ORGANIC PARAMETERS									
TOTAL ORGANIC CARBON	MG/L	NA	43.0	5.3	9.1	NA	35.0	10.1	7.6
ORGANIC NITROGEN	MG/L	0.268	0.90	1.70	NA	0.425	1.1	2.4	NA

NA - NOT ANALYZED
- - BELOW DETECTION LIMITS

ONEONTA GROUND WATER SAMPLES

COMPARATIVE SUMMARY OF RESULTS

	UNITS	MW-1D 9/22/86 GRAB	MW-1D 12/10/86 GRAB	MW-1D 3/18/87 GRAB	MW-1D 6/8/87 GRAB	MW-2D 9/23/86 GRAB	MW-2D 12/10/86 GRAB	MW-2D 3/18/87 GRAB	MW-2D 6/9/87 GRAB	MW-3D 9/22/86 GRAB	MW-3D 12/10/86 GRAB	MW-3D 3/18/87 GRAB	MW-3D 6/8/87 GRAB
PURGEABLE AROMATICS													
BENZENE	MG/L	0.002	<0.005	-	<0.005	<0.001	<0.005	-	-	0.001	NA	-	<0.005
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	NA	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	NA	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	NA	<0.002	-	-	<0.010
ETHYLBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	<0.005	-	-	<0.001	NA	-	<0.005
TOLUENE	MG/L	0.001	<0.005	-	<0.005	<0.001	<0.005	-	-	<0.001	NA	-	<0.005
OTHER VOLATILE ORGANICS													
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
METHYLENE CHLORIDE	MG/L	NA	<0.005	-	0.014	NA	<0.005	-	0.015	NA	NA	-	0.009
ACETONE	MG/L	NA	0.027	0.083	<0.010	NA	0.009	0.025	<0.010	NA	NA	-	<0.010
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
CHLOROFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
VINYL ACETATE	MG/L	NA	<0.010	-	<0.005	NA	<0.010	-	<0.005	NA	NA	-	<0.005
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	NA	-	<0.010
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	NA	-	<0.005

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-1D 9/22/86 GRAB	MW-1D 12/10/86 GRAB	MW-1D 3/18/87 GRAB	MW-1D 6/8/87 GRAB	MW-2D 9/23/86 GRAB	MW-2D 12/10/86 GRAB	MW-2D 3/18/87 GRAB	MW-2D 6/9/87 GRAB	MW-3D 9/22/86 GRAB	MW-3D 12/10/86 GRAB	MW-3D 3/18/87 GRAB	MW-3D 6/8/87 GRAB
POLYNUCLEAR AROMATIC HYDROCARBONS													
ACENAPHTHENE	MG/L	<0.0003	-	-	<0.010	0.0027	-	-	-	<0.0003	-	-	<0.010
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010	0.0033	-	-	-	<0.0003	-	-	<0.010
ANTHRACENE	MG/L	<0.0003	-	-	<0.010	0.0018	-	-	-	<0.0003	-	-	<0.010
BENZO (A) ANTHRACENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	-	<0.0004	-	-	<0.010
BENZO (A) PYRENE	MG/L	<0.0003	-	-	<0.010	0.0005	-	-	-	<0.0003	-	-	<0.010
BENZO (B) FLUORANTHENE	MG/L	<0.002	-	-	<0.010	0.0030	-	-	-	<0.002	-	-	<0.010
BENZO (K) FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	-	<0.0003	-	-	<0.010
BENZO (GHI) PERYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	-	<0.0003	-	-	<0.010
CHRYSENE	MG/L	<0.0004	-	-	<0.010	0.0006	-	-	-	<0.0004	-	-	<0.010
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	-	<0.0003	-	-	<0.010
FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	0.0019	-	-	-	<0.0003	-	-	<0.010
FLUORENE	MG/L	<0.0003	-	-	<0.010	0.0011	-	-	-	<0.0003	-	-	<0.010
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	-	-	<0.010	0.0003	-	-	-	0.0004	-	-	<0.010
NAPHTHALENE	MG/L	<0.0003	-	0.0098	<0.010	0.0014	-	-	-	<0.0003	-	-	<0.010
PHENANTHRENE	MG/L	<0.0003	-	-	<0.010	0.0078	-	-	-	0.0004	-	-	<0.010
PYRENE	MG/L	<0.0003	-	-	<0.010	0.0027	-	-	-	0.0004	-	-	<0.010
OTHER BASE/NEUTRAL EXTRACTABLES													
BENZIDINE	MG/L	NA	-	-	<0.080	NA	-	-	-	NA	-	-	<0.010
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	-	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	-	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	-	<0.002	-	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
ISOPHORONE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
NITROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	0.014
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	-	0.019	0.056	NA	-	0.016	-	NA	-	-	<0.010
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
DI-n-BUTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	-	NA	-	-	

ONEONTA GROUND WATER SAMPLES
COMPARATIVE SUMMARY OF RESULTS
(CONTINUED)

	UNITS	MW-1D 9/22/86 GRAB	MW-1D 12/10/86 GRAB	MW-1D 3/18/87 GRAB	MW-1D 6/8/87 GRAB	MW-2D 9/23/86 GRAB	MW-2D 12/10/86 GRAB	MW-2D 3/18/87 GRAB	MW-2D 6/9/87 GRAB	MW-3D 9/22/86 GRAB	MW-3D 12/10/86 GRAB	MW-3D 3/18/87 GRAB	MW-3D 6/8/87 GRAB
NON-CHLORINATED PHENOLS													
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	<0.004	-	-	NA	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	-	-	NA	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	-	-	NA	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	-	-	NA	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	-	-	NA	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	-	<0.010	<0.007	-	-	NA	<0.007	-	-	<0.010
INORGANIC COMPOUNDS													
IRON, TOTAL	MG/L	<0.12	<0.03	<0.05	<0.05	<0.12	0.13	0.06	<0.05	<0.12	0.04	<0.05	<0.05
ZINC, TOTAL	MG/L	<0.019	0.008	<0.01	0.04	<0.019	0.039	<0.01	0.03	<0.019	0.01	<0.01	0.04
ARSENIC, TOTAL	MG/L	NA	0.001	<0.005	<0.005	NA	0.001	<0.005	<0.005	NA	0.002	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	NA	0.001	<0.001	0.003
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	0.001	<0.01	<0.01	NA	<0.001	<0.01	<0.01	NA	<0.001	0.01	0.03
CYANIDE, TOTAL	MG/L	<0.0066	<0.01	<0.01	0.01	<0.007	0.02	<0.01	<0.01	<0.007	<0.01	<0.01	<0.01
SULFATE	MG/L	7.1	7.0	9.0	NA	11.3	13.4	9.0	NA	11.5	16.5	14.0	NA
GENERAL ORGANIC PARAMETERS													
TOTAL ORGANIC CARBON	MG/L	NA	3.0	1.0	1.5	NA	3.0	0.27	1.9	NA	3.0	0.42	1.6
ORGANIC NITROGEN	MG/L	0.350	0.2	<0.08	NA	0.15	0.6	0.82	NA	0.525	0.5	<0.08	NA

NA - NOT ANALYZED
- - BELOW DETECTION LIMIT

COMPUCHEM GROUND WATER ANALYSIS

COMPARATIVE RESULTS

ONEONTA

	SAMPLE ID DATE SAMPLE TYPE UNITS	MW-1S 9/22/86 GRAB	MW-2S 9/22/86 GRAB	MW-3S 12/10/86 GRAB	MW-5S 12/10/86 GRAB
PURGEABLE AROMATICS					
Benzene	mg/l	<0.010	3.0	<0.010	0.140
Chlorobenzene	mg/l	<0.010	<0.010	<0.010	<0.010
1,2-Dichlorobenzene	mg/l	<0.010	<0.010	<0.010	<0.010
1,3-Dichlorobenzene	mg/l	<0.010	<0.010	<0.010	<0.010
1,4-Dichlorobenzene	mg/l	<0.010	<0.010	<0.010	<0.010
Ethylbenzene	mg/l	<0.010	3.9	<0.010	0.013
Toluene	mg/l	<0.010	3.0	<0.010	0.007(J)
OTHER VOLATILES					
Chloromethane	mg/l	<0.010	<0.010	<0.010	<0.010
Vinyl Chloride	mg/l	<0.010	<0.010	<0.010	<0.010
Chloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
Bromomethane	mg/l	<0.010	<0.010	<0.010	<0.010
Acrolein	mg/l	<0.10	<0.10	<0.10	<0.10
Acrylonitrile	mg/l	<0.10	<0.10	<0.10	<0.10
Methylene Chloride	mg/l	0.008 (J)	0.024	0.006(J)	0.009(J)
1,1-Dichloroethylene	mg/l	<0.010	<0.010	<0.010	<0.010
1,1-Dichloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
Trans-1,2-dichloroethylene	mg/l	<0.010	<0.010	<0.010	<0.010
Chloroform	mg/l	<0.010	<0.010	<0.010	<0.010
1,2-Dichloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
1,1,1-Trichloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
Carbon Tetrachloride	mg/l	<0.010	<0.010	<0.010	<0.010
Bromodichloromethane	mg/l	<0.010	<0.010	<0.010	<0.010
1,2-Dichloropropane	mg/l	<0.010	<0.010	<0.010	<0.010
Trichloroethylene	mg/l	<0.010	<0.010	<0.010	<0.010
Cis-1,3-Dichloropropene	mg/l	<0.010	<0.010	<0.010	<0.010
1,1,2-Trichloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
Dibromochloromethane	mg/l	<0.010	<0.010	<0.010	<0.010
Bromoform	mg/l	<0.010	<0.010	<0.010	<0.010
1,1,2,2-Tetrachloroethylene	mg/l	<0.010	<0.010	<0.010	<0.010
1,1,2,2-Tetrachloroethane	mg/l	<0.010	<0.010	<0.010	<0.010
2-Chloroethyl Vinyl Ether	mg/l	<0.010	<0.010	<0.010	<0.010
POLYNUCLEAR AROMATIC HYDROCARBONS					
Acenaphthene	mg/l	<0.010	<0.40	0.052(J)	0.014
Acenaphthylene	mg/l	<0.010	0.310(J)	<0.10	<0.010
Antracene	mg/l	<0.010	<0.40	<0.10	<0.010
Benzo (A) Anthracene	mg/l	<0.010	<0.40	<0.10	<0.010
Benzo (A) Pyrene	mg/l	<0.010	<0.40	<0.10	<0.010
Benzo (B) Fluoranthene	mg/l	<0.010	<0.40	<0.10	<0.010
Benzo (K) Fluoranthene	mg/l	<0.010	<0.40	<0.10	<0.010
Benzo (GHI) Perylene	mg/l	<0.010	<0.40	<0.10	<0.010
Chrysene	mg/l	<0.010	<0.40	<0.10	<0.010
Dibenzo (A,H) Anthracene	mg/l	<0.010	<0.40	<0.10	<0.010
Fluoranthene	mg/l	<0.010	<0.40	<0.10	<0.010
Fluorene	mg/l	<0.010	<0.40	<0.10	0.006(J)
Indeno (1,2,3-CD) Pyrene	mg/l	<0.010	<0.40	<0.10	<0.010
Naphthalene	mg/l	<0.010	7.1	0.850	0.011
Phenanthrene	mg/l	<0.010	<0.40	<0.10	<0.010
Pyrene	mg/l	<0.010	<0.40	<0.10	<0.010

COMPUCHEM GROUND WATER ANALYSIS

COMPARATIVE RESULTS
ONEONTA
(CONTINUED)

	SAMPLE ID	MW-1S	MW-2S	MW-3S	MW-5S
	DATE	9/22/86	9/22/86	12/10/86	12/10/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	GRAB
	UNITS				
BASE NEUTRAL EXTRACTABLES					
N-Nitrododimethylamine	mg/l	<0.010	<0.40	<0.10	<0.010
Bis (2-Chloroethyl) Ether	mg/l	<0.010	<0.40	<0.10	<0.010
Bis (2-Chloroisopropyl) Ether	mg/l	<0.010	<0.40	<0.10	<0.010
N-Nitrosodi-N-Propylamine	mg/l	<0.010	<0.40	<0.10	<0.010
Hexachloroethane	mg/l	<0.010	<0.40	<0.10	<0.010
Nitrobenzene	mg/l	<0.010	<0.40	<0.10	<0.010
Isophorone	mg/l	<0.010	<0.40	<0.10	<0.010
Bis (2-Chloroethoxy) Methane	mg/l	<0.010	<0.40	<0.10	<0.010
1,2,4-Trichlorobenzene	mg/l	<0.010	<0.40	<0.10	<0.010
Hexachlorobutadiene	mg/l	<0.010	<0.40	<0.10	<0.010
Hexachlorocyclopentadiene	mg/l	<0.010	<0.40	<0.10	<0.010
2-Chloronaphthalene	mg/l	<0.010	<0.40	<0.10	<0.010
Dimethylphthalate	mg/l	<0.010	<0.40	<0.10	<0.010
2,6-Dinitrotoluene	mg/l	<0.010	<0.40	<0.10	<0.010
2,4-Dinitrotoluene	mg/l	<0.010	<0.40	<0.10	<0.010
Diethylphthalate	mg/l	<0.010	<0.40	<0.10	<0.010
4-Chlorophenyl Phenyl Ether	mg/l	<0.010	<0.40	<0.10	<0.010
Diphenylamine (N-Nitroso)	mg/l	<0.010	<0.40	<0.10	<0.010
1,2-Diphenylhydrazine	mg/l	<0.010	<0.40	<0.10	<0.010
4-Bromophenyl Phenyl	mg/l	<0.010	<0.40	<0.10	<0.010
Hexachlorobenzene	mg/l	<0.010	<0.40	<0.10	<0.010
Di-N-Butylphthalate	mg/l	<0.010	<0.40	<0.10	<0.010
Benzidine	mg/l	<0.050	< 2.0	<0.50	<0.050
Butylbenzylphthalate	mg/l	<0.010	<0.40	<0.10	<0.010
3,3-Dichlorobenzidine	mg/l	<0.020	<0.40	<0.50	<0.020
Bis (2-Ethylhexyl Phthalate	mg/l	<0.010	<0.40	<0.10	<0.010
Di-N-Octylphthalate	mg/l	<0.010	<0.40	<0.10	<0.010
NON-CHLORINATED PHENOLS					
Phenol	mg/l	0.31	0.21	<0.010	<0.010
2-Chlorophenol	mg/l	NA	<0.010	<0.010	<0.010
2-Nitrophenol	mg/l	NA	<0.010	<0.010	<0.010
2,4-Dimethyphenol	mg/l	NA	<0.010	<0.010	<0.010
2,4-Dichlorophenol	mg/l	NA	<0.010	<0.010	<0.010
P-Chloro-M-Cresol	mg/l	NA	<0.010	<0.010	<0.010
2,4,6-Trichlorophenol	mg/l	NA	<0.010	<0.010	<0.010
2,4-Dinotrophenol	mg/l	NA	<0.050	<0.050	<0.050
4-Nitrophenol	mg/l	NA	<0.050	<0.050	<0.050
4,6-Dinitro-O-Cresol	mg/l	NA	<0.050	<0.050	<0.050
Pentachlorophenol	mg/l	NA	<0.050	<0.050	<0.050
INORGANIC COMPOUNDS					
Antimony, Total	mg/l	<0.050	<0.050	<0.035	<0.035
Arsenic, Total	mg/l	<0.050	<0.050	0.011	0.0039(J)
Beryllium, Total	mg/l	<0.020	<0.020	<0.001	<0.001
Cadmium, Total	mg/l	<0.010	<0.010	<0.005	<0.005
Chromium, Total	mg/l	<0.050	<0.050	<0.006	<0.006
Copper, Total	mg/l	<0.10	<0.10	0.013(J)	0.013(J)
Lead, Total	mg/l	<0.050	<0.050	<0.0034	<0.0034
Mercury, Total	mg/l	<0.0002	0.0039	<0.0002	<0.0002
Nickel, Total	mg/l	<0.10	<0.10	<0.031	<0.031
Selenium, Total	mg/l	<0.010	<0.010	0.0043(J)	<0.0028
Silver, Total	mg/l	<0.050	<0.050	<0.005	<0.005
Thallium, Total	mg/l	<0.050	<0.050	<0.0074	<0.0074
Zinc, Total	mg/l	<0.030	<0.020	0.018(J)	0.029
Cyanide	mg/l	<0.27	<0.25	NA	NA

NA - NOT ANALYZED

APPENDIX G

SURFACE WATER AND STREAM SEDIMENT SAMPLES CHEMICAL RESULTS

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS

	UNITS	SW-1 9/22/86 GRAB	SW-1 12/10/86 GRAB	SW-1 3/18/87 GRAB	SW-1 6/8/87 GRAB	SW-2 9/22/86 GRAB	SW-2 12/10/86 GRAB	SW-2 3/18/87 GRAB	SW-2 6/8/87 GRAB	SW-3 9/22/86 GRAB	SW-3 12/10/86 GRAB	SW-3 3/18/87 GRAB	SW-3 6/8/87 GRAB
PURGEABLE AROMATICS													
BENZENE	MG/L	0.002	<0.005	-	<0.005	0.003	-	-	<0.005	0.001	<0.005	-	<0.005
CHLOROBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	-	-	<0.005	<0.001	<0.005	-	<0.005
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	0.004	-	-	<0.010
ETHYLBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	-	-	<0.005	<0.001	<0.005	-	<0.005
TOLUENE	MG/L	0.003	<0.005	-	<0.005	<0.001	-	-	<0.005	<0.001	<0.005	-	0.005
OTHER VOLATILE ORGANICS													
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
METHYLENE CHLORIDE	MG/L	NA	0.008	-	0.008	NA	0.008	0.007	0.008	NA	<0.005	0.011	0.008
ACETONE	MG/L	NA	0.012	0.015	<0.010	NA	0.015	-	<0.010	NA	<0.010	0.072	<0.010
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRANS-1,2-DICHLGROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CHLOROFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
VINYL ACETATE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
TETRACHLOROETHENE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	UNITS	SW-1 9/22/86 GRAB	SW-1 12/10/86 GRAB	SW-1 3/18/87 GRAB	SW-1 6/8/87 GRAB	SW-2 9/22/86 GRAB	SW-2 12/10/86 GRAB	SW-2 3/18/87 GRAB	SW-2 6/8/87 GRAB	SW-3 9/22/86 GRAB	SW-3 12/10/86 GRAB	SW-3 3/18/87 GRAB
POLYNUCLEAR AROMATIC HYDROCARBONS												
ACENAPHTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
BENZO (A) ANTHRACENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	0.010	<0.0004	-	-
BENZO (A) PYRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
BENZO (B) FLUORANTHENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	_	-
BENZO (K) FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	0.0004	-	-
BENZO (GHI) PERYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
CHRYSENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	<0.010	<0.0004	-	-
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
FLUORENE	MG/L	<0.0003	-	-	<0.010	0.0006	-	-	<0.010	<0.0003	-	-
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
NAPHTHALENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	0.034	<0.0003	-	-
PHENANTHRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	0.010	<0.0003	-	-
PYRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	-	-
OTHER BASE/NEUTRAL EXTRACTABLES												
BENZIDINE	MG/L	NA	-	-	<0.080	NA	-	-	<0.080	NA	-	-
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
1,2-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
1,3-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
1,4-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
ISOPHORONE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
NITROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
DI-n-BUTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-
DIMETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	-	-

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	UNITS	SW-1 9/22/86 GRAB	SW-1 12/10/86 GRAB	SW-1 3/18/87 GRAB	SW-1 6/8/87 GRAB	SW-2 9/22/86 GRAB	SW-2 12/10/86 GRAB	SW-2 3/18/87 GRAB	SW-2 6/8/87 GRAB	SW-3 9/22/86 GRAB	SW-3 12/10/86 GRAB	SW-3 3/18/87 GRAB	SW-3 6/8/87 GRAB
NON-CHLORINATED PHENOLS													
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	<0.004	-	-	<0.010	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	-	-	<0.050	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	-	-	<0.050	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	-	-	<0.050	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	-	-	<0.050	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	-	<0.010	<0.007	-	-	<0.010	<0.007	-	-	<0.010
INORGANIC COMPOUNDS													
IRON, TOTAL	MG/L	<0.12	0.19	0.08	0.13	<0.12	0.26	0.09	0.34	2.23	NA	0.10	<0.05
ZINC, TOTAL	MG/L	<0.019	<0.005	<0.01	<0.01	<0.019	0.007	<0.01	<0.01	<0.019	NA	<0.01	<0.01
ARSENIC, TOTAL	MG/L	NA	0.001	<0.005	<0.005	NA	<0.001	<0.005	<0.005	NA	NA	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	NA	NA	<0.001	<0.001
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	<0.001	<0.01	<0.01	NA	<0.001	0.02	0.01	NA	NA	<0.01	0.01
CYANIDE, TOTAL	MG/L	<0.007	<0.01	<0.01	<0.01	<0.007	0.05	<0.01	<0.01	<0.007	<0.01	<0.01	<0.01
SULFATE	MG/L	18.3	9.0	9.0	NA	21.9	9.4	13.0	NA	17.8	9.9	40.0	NA
GENERAL ORGANIC PARAMETERS													
TOTAL ORGANIC CARBON	MG/L	NA	4.0	2.3	5.2	NA	4.0	1.7	4.2	NA	5.0	1.5	5.2
ORGANIC NITROGEN	MG/L	0.425	0.6	0.39	NA	0.40	0.10	0.68	NA	0.45	0.50	<0.08	NA

NA - NOT ANALYZED
- - DETECTION LIMIT NOT RECORDED

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS

	UNITS	SW-4 9/22/86 GRAB	SW-4 12/10/86 GRAB	SW-4 3/18/87 GRAB	SW-4 6/8/87 GRAB	SW-2 9/22/86 DUPLICATE	SW-2 12/10/86 DUPLICATE	SW-2 3/18/87 DUPLICATE	SW-2 6/8/87 DUPLICATE
PURGEABLE AROMATICS									
BENZENE	MG/L	0.004	<0.005	-	<0.005	0.003	<0.005	-	<0.005
CHLOROBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	<0.005	-	<0.005
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010
ETHYLBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	<0.005	-	<0.005
TOLUENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	<0.005	-	<0.005
OTHER VOLATILE ORGANICS									
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
METHYLENE CHLORIDE	MG/L	NA	<0.005	0.006	0.009	NA	<0.005	0.014	0.009
ACETONE	MG/L	NA	0.018	0.019	<0.010	NA	0.011	0.009	<0.010
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CHLOROFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
VINYL ACETATE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	-	<0.010
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	-	<0.005

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	UNITS	SW-4 9/22/86 GRAB	SW-4 12/10/86 GRAB	SW-4 3/18/87 GRAB	SW-4 6/8/87 GRAB	SW-2 9/22/86 DUPLICATE	SW-2 12/10/86 DUPLICATE	SW-2 3/18/87 DUPLICATE	SW-2 6/8/87 DUPLICATE
POLYNUCLEAR AROMATIC HYDROCARBONS									
ACENAPHTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
BENZO (A) ANTHRACENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	<0.010
BENZO (A) PYRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
BENZO (B) FLUORANTHENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010
BENZO (K) FLUORANTHENE	MG/L	0.0007	-	-	<0.010	0.0004	-	-	<0.010
BENZO (GHI) PERYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
CHRYSENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	<0.010
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
FLUORENE	MG/L	0.0011	-	-	<0.010	0.0009	-	-	<0.010
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010
NAPHTHALENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	0.010
PHENANTHRENE	MG/L	0.0027	-	-	<0.010	0.0006	-	-	<0.010
PYRENE	MG/L	0.0005	-	-	<0.010	<0.0003	-	-	<0.010
OTHER BASE/NEUTRAL EXTRACTABLES									
BENZIDINE	MG/L	NA	-	-	<0.080	NA	-	-	<0.080
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
1,2-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
ISOPHORONE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
NITROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
DI-n-BUTYL PHTHALATE	ÅG/L	NA	-	-	<0.010	NA	-	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010

ONEONTA SURFACE WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	UNITS	SW-4 9/22/86 GRAB	SW-4 12/10/86 GRAB	SW-4 3/18/87 GRAB	SW-4 6/8/87 GRAB	SW-2 9/22/86 DUPLICATE	SW-2 12/10/86 DUPLICATE	SW-2 3/18/87 DUPLICATE	SW-2 6/8/87 DUPLICATE
NON-CHLORINATED PHENOLS									
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	0.0094	<0.010	<0.007	-	-	<0.010
INORGANIC COMPOUNDS									
IRON, TOTAL	MG/L	0.69	0.18	0.12	0.12	<0.12	0.17	<0.05	0.77
ZINC, TOTAL	MG/L	<0.019	0.01	<0.01	0.01	<0.019	0.007	<0.01	0.10
ARSENIC, TOTAL	MG/L	NA	0.002	<0.005	<0.005	NA	<0.001	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	<0.001	<0.01	<0.01	NA	0.017	0.01	-
CYANIDE, TOTAL	MG/L	<0.007	<0.01	<0.01	<0.01	<0.007	<0.01	<0.01	<0.01
SULFATE	MG/L	15.7	9.7	10.0	NA	19.8	9.4	9.0	NA
GENERAL ORGANIC PARAMETERS									
TOTAL ORGANIC CARBON	MG/L	NA	5.0	3.0	5.8	NA	4.0	15.0	4.3
ORGANIC NITROGEN	MG/L	1.68	0.9	<0.08	NA	0.425	<0.1	0.99	NA

NA - NOT ANALYZED
- - DETECTION LIMIT NOT RECORDED

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS

	SAMPLE ID	ZZ-1	ZZ-1	ZZ-2	ZZ-2	ZZ-3
	DATE	9/22/86	12/15/86	9/22/86	9/22/86	9/22/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB
	UNIT					
PURGEABLE AROMATIC						
Benzene	ug/g Dry	<0.07	<0.011	<0.07	<0.07	<0.08
Chlorobenzene	ug/g Dry	<0.07	<0.011	<0.07	<0.07	<0.08
1,2-Dichlorobenzene	ug/g Dry	<0.15	<0.83	<0.14	<0.11	<0.16
1,3-Dichlorobenzene	ug/g Dry	<0.15	<0.83	<0.14	<0.11	<0.16
1,4-Dichlorobenzene	ug/g Dry	<0.15	<0.83	<0.14	<0.11	<0.16
Ethylbenzene	ug/g Dry	<0.07	<0.011	<0.07	<0.07	<0.08
Toluene	ug/g Dry	<0.07	<0.011	<0.07	<0.07	<0.08
Styrene	ug/g Dry	NA	<0.011	NA	NA	NA
Total Xylenes	ug/g Dry	NA	<0.011	NA	NA	NA
OTHER VOLATILE ORGANICS						
Chloromethane	ug/g Dry	NA	<0.022	NA	NA	NA
Bromomethane	ug/g Dry	NA	<0.022	NA	NA	NA
Vinyl Chloride	ug/g Dry	NA	<0.022	NA	NA	NA
Chloroethane	ug/g Dry	NA	<0.022	NA	NA	NA
Methylene Chloride	ug/g Dry	NA	<0.011	NA	NA	NA
Acetone	ug/g Dry	NA	<0.022	NA	NA	NA
Carbon Disulfide	ug/g Dry	NA	<0.011	NA	NA	NA
1,1-Dichloroethene	ug/g Dry	NA	<0.011	NA	NA	NA
1,1-Dichloroethane	ug/g Dry	NA	<0.011	NA	NA	NA
Trans-1,2-Dichloroethene	ug/g Dry	NA	<0.011	NA	NA	NA
Chloroform	ug/g Dry	NA	<0.011	NA	NA	NA
1,2-Dichloroethane	ug/g Dry	NA	<0.011	NA	NA	NA
2-Butanone	ug/g Dry	NA	<0.022	NA	NA	NA
1,1,1-Trichloroethane	ug/g Dry	NA	<0.011	NA	NA	NA
Carbon Tetrachloride	ug/g Dry	NA	<0.011	NA	NA	NA
Vinyl Acetate	ug/g Dry	NA	<0.022	NA	NA	NA
Bromodichloromethane	ug/g Dry	NA	<0.011	NA	NA	NA
1,2-Dichloropropane	ug/g Dry	NA	<0.011	NA	NA	NA
Trans-1,3-Dichloropropene	ug/g Dry	NA	<0.011	NA	NA	NA
Trichloroethene	ug/g Dry	NA	<0.011	NA	NA	NA
Dibromochloromethane	ug/g Dry	NA	<0.011	NA	NA	NA
1,1,2-Trichloroethane	ug/g Dry	NA	<0.011	NA	NA	NA
cic-1,3-Dichloropropene	ug/g Dry	NA	<0.011	NA	NA	NA
2-Chloroethylvinylether	ug/g Dry	NA	<0.012	NA	NA	NA
Bromoform	ug/g Dry	NA	<0.011	NA	NA	NA
4-Methyl-2-Pentanone	ug/g Dry	NA	<0.022	NA	NA	NA
2-Hexanone	ug/g Dry	NA	<0.022	NA	NA	NA
Tetrachloroethane	ug/g Dry	NA	<0.011	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/g Dry	NA	<0.011	NA	NA	NA

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	ZZ-1	ZZ-1	ZZ-2	ZZ-2	ZZ-3
	DATE	9/22/86	12/15/86	9/22/86	9/22/86	9/22/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB
	UNIT					
POLYNUCLEAR AROMATIC HYDROCARBONS						
Acenaphthene	ug/g Dry	<0.41	0.10(J)	<0.39	0.84	0.80
Acenaphthylene	ug/g Dry	<0.41	<0.83	<0.39	1.69	0.97
Anthracene	ug/g Dry	<0.43	0.36(J)	<0.40	0.12	<0.50
Benzo (A) Anthracene	ug/g Dry	<0.50	0.78(J)	1.79	1.55	6.37
Benzo (A) Pyrene	ug/g Dry	<0.47	0.70(J)	1.92	1.23	5.86
Benzo (B) Fluoranthene	ug/g Dry	<1.55	1.10	<1.47	<1.36	3.28
Benzo (GHI) Perylene	ug/g Dry	<0.50	0.35(J)	<0.47	<0.44	3.12
Benzo (K) Fluoranthene	ug/g Dry	0.45	1.10	<0.28	0.66	4.22
Chrysene	ug/g Dry	<0.41	0.83	2.47	1.33	5.98
Dibenzo (A,H) Anthracene	ug/g Dry	<0.53	0.10(J)	<0.51	0.17	1.05
Fluoranthene	ug/g Dry	1.35	1.70	<0.26	3.43	12.20
Fluorene	ug/g Dry	<0.41	0.16(J)	<0.39	<0.36	1.78
Indeno (1,2,3-CD) Pyrene	ug/g Dry	<0.47	0.42(J)	1.19	1.11	2.78
Naphthalene	ug/g Dry	<0.56	<0.83	<0.53	1.48	1.65
Phenanthrene	ug/g Dry	<0.31	1.30	3.2	1.71	6.38
Pyrene	ug/g Dry	1.18	1.10	5.49	2.80	10.99
OTHER SEMI-VOLATILES						
bis (2-Chloroethyl) Ether	ug/g Dry	NA	<0.83	NA	NA	NA
2-Chlorophenol	ug/g Dry	NA	<0.83	NA	NA	NA
Benzyl Alcohol	ug/g Dry	NA	<0.83	NA	NA	NA
2-Methylphenol	ug/g Dry	NA	<0.83	NA	NA	NA
bis (2-Chloroisopropyl) Ether	ug/g Dry	NA	<0.83	NA	NA	NA
4-Methylphenol	ug/g Dry	NA	<0.83	NA	NA	NA
N-Nitroso-Di-n-Propylamine	ug/g Dry	NA	<0.83	NA	NA	NA
Hexachloroethane	ug/g Dry	NA	<0.83	NA	NA	NA
Nitrobenzene	ug/g Dry	NA	<0.83	NA	NA	NA
Isophorone	ug/g Dry	NA	<0.83	NA	NA	NA
Benzoic Acid	ug/g Dry	NA	<4.20	NA	NA	NA
bis (2-Chloroethoxy) Methane	ug/g Dry	NA	<0.83	NA	NA	NA
2,4-Dichlorophenol	ug/g Dry	NA	<0.83	NA	NA	NA
1,2,4-Trichlorobenzene	ug/g Dry	NA	<0.83	NA	NA	NA
4-Chloroaniline	ug/g Dry	NA	<0.83	NA	NA	NA
Hexachlorobutadiene	ug/g Dry	NA	<0.83	NA	NA	NA
4-Chloro-3-Methylphenol	ug/g Dry	NA	<0.83	NA	NA	NA
2-Methylnaphthalene	ug/g Dry	NA	<0.83	NA	NA	NA
Hexachlorocyclopentadiene	ug/g Dry	NA	<0.83	NA	NA	NA
2,4,6-Trichlorophenol	ug/g Dry	NA	<0.83	NA	NA	NA

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	ZZ-1	ZZ-1	ZZ-2	ZZ-2	ZZ-3
	DATE	9/22/86	12/15/86	9/22/86	9/22/86	9/22/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB
	UNIT					
OTHER SEMI-VOLATILES (CONTINUED)						
2,4,5-Trichlorophenol	ug/g Dry	NA	<4.20	NA	NA	NA
2-Chloronaphthalene	ug/g Dry	NA	<0.83	NA	NA	NA
2-Nitroaniline	ug/g Dry	NA	<0.83	NA	NA	NA
Dimethyl Phthalate	ug/g Dry	NA	<0.83	NA	NA	NA
3-Nitroaniline	ug/g Dry	NA	<4.20	NA	NA	NA
Dibenzofuran	ug/g Dry	NA	<0.83	NA	NA	NA
2,4-Dinitrotoluene	ug/g Dry	NA	<0.83	NA	NA	NA
2,6-Dinitrotoluene	ug/g Dry	NA	<0.83	NA	NA	NA
Diethylphthalate	ug/g Dry	NA	<0.83	NA	NA	NA
4-Chlorophenyl-phenylether	ug/g Dry	NA	<0.83	NA	NA	NA
4-Nitroaniline	ug/g Dry	NA	<4.20	NA	NA	NA
4,6-Dinitro-2-Methylphenol	ug/g Dry	NA	<4.20	NA	NA	NA
N-Nitrosodiphenylamine	ug/g Dry	NA	<0.83	NA	NA	NA
4-Bromophenyl-phenylether	ug/g Dry	NA	<0.83	NA	NA	NA
Hexachlorobenzene	ug/g Dry	NA	<0.83	NA	NA	NA
Pentachlorophenol	ug/g Dry	NA	<4.20	NA	NA	NA
Di-n-Butylphthalate	ug/g Dry	NA	0.15(JB)	NA	NA	NA
Butybenzylphthalate	ug/g Dry	NA	<0.83	NA	NA	NA
3,3-Dichlorobenzidine	ug/g Dry	NA	<1.70	NA	NA	NA
bis (2-Ethylhexyl) Phthalate	ug/g Dry	NA	0.22(JB)	NA	NA	NA
Di-n-Octyl Phthalate	ug/g Dry	NA	<0.83	NA	NA	NA
NON-CHLORINATED PHENOLS						
2,4-Dimethylphenol	ug/g Dry	<4.8	<0.83	<5.1	<4.5	<6.2
2,4-Dinitrophenol	ug/g Dry	<95	<4.20	<99	<89	<120
2-Methyl-4,6-Dinitrophenol	ug/g Dry	<5.4	NA	<5.7	<5.1	<7.6
2-Nitrophenol	ug/g Dry	<6.0	<0.83	<6.2	<5..6	<6.0
4-Nitrophenol	ug/g Dry	<4.7	<4.20	<4.9	<4.4	<6.0
Phenol	ug/g Dry	<5.4	<0.83	<5.6	<5.0	<6.8

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	ZZ-1	ZZ-1	ZZ-2	ZZ-2	ZZ-3
	DATE	9/22/86	12/15/86	9/22/86	9/22/86	9/22/86
	SAMPLE TYPE	GRAB	GRAB	GRAB	DUPE	GRAB
	UNIT					
INORGANIC COMPOUNDS						
Arsenic	ug/g Dry	NA	25.3	NA	NA	NA
Cadmium	ug/g Dry	NA	<1.30	NA	NA	NA
Chromium	ug/g Dry	NA	17.4	NA	NA	NA
Cyanide-Total	ug/g Dry	<0.20	<0.63	<0.20	<0.20	<0.21
Cyanide-Iron	ug/g Dry	<0.20	NA	<0.20	<0.20	<0.21
Iron	ug/g Dry	37100	23300	40500	32200	26700
Lead	ug/g Dry	NA	43.8	NA	NA	NA
Mercury	ug/g Dry	NA	<0.10	NA	NA	NA
Zinc	ug/g Dry	129	112	132	174	159
Sulfate	ug/g Dry	168	NA	<135	141	667
Organic Nitrogen	ug/g Dry	256	NA	222	213	1054
Total Organic Carbon	ug/g Dry	NA	12200	NA	NA	NA

NA - Not Analyzed
J - indicates an estimated value
B - constituent found in blank also

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS

	SAMPLE ID	ZZ-3	ZZ-3	ZZ-4	ZZ-5	ZZ-6
	DATE	12/15/86	12/15/86	9/22/86	12/15/86	12/15/86
	SAMPLE TYPE	GRAB	DUPE	GRAB	GRAB	GRAB
	UNIT					
PURGEABLE AROMATIC						
Benzene	ug/g Dry	<0.0095	<0.009	<0.06	<0.009	<0.012
Chlorobenzene	ug/g Dry	<0.0095	<0.009	<0.06	<0.009	<0.012
1,2-Dichlorobenzene	ug/g Dry	<0.78	<0.81	<0.12	<0.80	<3.10
1,3-Dichlorobenzene	ug/g Dry	<0.78	<0.81	<0.12	<0.80	<3.10
1,4-Dichlorobenzene	ug/g Dry	<0.78	<0.81	<0.12	<0.80	<3.10
Ethylbenzene	ug/g Dry	<0.0095	<0.009	<0.06	<0.009	<0.012
Toluene	ug/g Dry	<0.0095	<0.009	<0.06	<0.009	<0.012
Styrene	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Total Xylenes	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
OTHER VOLATILE ORGANICS						
Chloromethane	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
Bromomethane	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
Vinyl Chloride	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
Chloroethane	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
Methylene Chloride	ug/g Dry	<0.0095	0.0041(JB)	NA	<0.009	0.0039(JB)
Acetone	ug/g Dry	<0.019	<0.018	NA	<0.018	0.073
Carbon Disulfide	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,1-Dichloroethene	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,1-Dichloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Trans-1,2-Dichloroethene	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Chloroform	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,2-Dichloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
2-Butanone	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
1,1,1-Trichloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Carbon Tetrachloride	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Vinyl Acetate	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
Bromodichloromethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,2-Dichloropropane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Trans-1,3-Dichloropropene	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Trichloroethene	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
Dibromochloromethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,1,2-Trichloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
cic-1,3-Dichloropropene	ug/g Dry	<0.0095	<0.009	NA	<0.018	<0.012
2-Chloroethylvinylether	ug/g Dry	<0.019	<0.018	NA	<0.009	<0.024
Bromoform	ug/g Dry	<0.0095	<0.009	NA	<0.018	<0.012
4-Methyl-2-Pentanone	ug/g Dry	<0.019	<0.018	NA	<0.018	<0.024
2-Hexanone	ug/g Dry	<0.019	<0.018	NA	<0.009	<0.024
Tetrachloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012
1,1,2,2-Tetrachloroethane	ug/g Dry	<0.0095	<0.009	NA	<0.009	<0.012

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	ZZ-3	ZZ-3	ZZ-4	ZZ-5	ZZ-6
	DATE	12/15/86	12/15/86	9/22/86	12/15/86	12/15/86
	SAMPLE TYPE	GRAB	DUPE	GRAB	GRAB	GRAB
	UNIT					
POLYNUCLEAR AROMATIC HYDROCARBONS						
Acenaphthene	ug/g Dry	0.79(J)	0.52(J)	0.57	0.28(J)	2.40(J)
Acenaphthylene	ug/g Dry	0.12(J)	<0.81	<0.43	0.12(J)	<3.10
Anthracene	ug/g Dry	0.63(J)	0.34(J)	<0.43	1.10	7.00
Benzo (A) Anthracene	ug/g Dry	1.60	0.84	1.27	2.60	17.00
Benzo (A) Pyrene	ug/g Dry	1.20	0.85	0.49	2.30	15.00
Benzo (B) Fluoranthene	ug/g Dry	2.20	1.40	2.40	3.60	23.0
Benzo (GHI) Perylene	ug/g Dry	0.41(J)	0.23(J)	0.51	0.73(J)	4.50
Benzo (K) Fluoranthene	ug/g Dry	2.20	1.40	0.31	3.60	23..0
Chrysene	ug/g Dry	1.50	1.00	1.02	2.90	19.0
Dibenzo (A,H) Anthracene	ug/g Dry	0.29(J)	0.081(J)	2.26	0.45(J)	2.50(J)
Fluoranthene	ug/g Dry	3.90	1.60	2.21	5.60	34.00
Fluorene	ug/g Dry	<3.90	0.24(J)	<0.43	0.44(J)	5.60
Indeno (1,2,3-CD) Pyrene	ug/g Dry	0.59(J)	0.28(J)	2.82	0.94	6.50
Naphthalene	ug/g Dry	<0.78	0.16(J)	1.48	<0.80	0.96(J)
Phenanthrene	ug/g Dry	2.80	1.10	1.79	4.00	37.0
Pyrene	ug/g Dry	2.30	1.20	2.64	4.10	25.0
OTHER SEMI-VOLATILES						
bis (2-Chloroethyl) Ether	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2-Chlorophenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Benzyl Alcohol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2-Methylphenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
bis (2-Chloroisopropyl) Ether	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
4-Methylphenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
N-Nitroso-Di-n-Propylamine	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Hexachloroethane	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Nitrobenzene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Isophorone	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Benzoic Acid	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.00
bis (2-Chloroethoxy) Methane	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2,4-Dichlorophenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
1,2,4-Trichlorobenzene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
4-Chloroaniline	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Hexachlorobutadiene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
4-Chloro-3-Methylphenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2-Methylnaphthalene	ug/g Dry	<0.78	<0.81	NA	<0.80	0.78(J)
Hexachlorocyclopentadiene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2,4,6-Trichlorophenol	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2,4,5-Trichlorophenol	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.00
2-Chloronaphthalene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2-Nitroaniline	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.00
Dimethyl Phthalate	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
3-Nitroaniline	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.00
Dibenzofuran	ug/g Dry	<0.78	<0.81	NA	0.19(J)	1.0(J)
2,4-Dinitrotoluene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
2,6-Dinitrotoluene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Diethylphthalate	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
4-Chlorophenyl-phenylether	ug/g Dry	0.52(JB)	<0.81	NA	<0.80	<3.10
4-Nitroaniline	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.0
4,6-Dinitro-2-Methylphenol	ug/g Dry	<0.78	<4.00	NA	<4.00	<15.0
N-Nitrosodiphenylamine	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
4-Bromophenyl-phenylether	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Hexachlorobenzene	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
Pentachlorophenol	ug/g Dry	<3.90	<4.00	NA	<4.00	<15.0
Di-n-Butylphthalate	ug/g Dry	1.80(JB)	0.37(JB)	NA	0.09(JB)	<3.10
Butybenzylphthalate	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10
3,3-Dichlorobenzidine	ug/g Dry	<1.60	<1.60	NA	<1.60	<6.20
bis (2-Ethylhexyl) Phthalate	ug/g Dry	0.35(JB)	0.28(JB)	NA	0.23(JB)	0.84(JB)
Di-n-Octyl Phthalate	ug/g Dry	<0.78	<0.81	NA	<0.80	<3.10

ONEONTA STREAM SEDIMENTS
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	ZZ-3	ZZ-3	ZZ-4	ZZ-5	ZZ-6
	DATE	12/15/86	12/15/86	9/22/86	12/15/86	12/15/86
	SAMPLE TYPE	GRAB	DUPE	GRAB	GRAB	GRAB
	UNIT					
NON-CHLORINATED PHENOLS						
2,4-Dimethylphenol	ug/g Dry	<0.78	<0.81	<5.0	<0.80	<3.10
2,4-Dinitrophenol	ug/g Dry	<3.90	<4.00	<97	<4.00	<15.00
2-Methyl-4,6-Dinitrophenol	ug/g Dry	NA	NA	<5.6	NA	NA
2-Nitrophenol	ug/g Dry	<0.78	<0.81	<6.1	<0.80	<3.10
4-Nitrophenol	ug/g Dry	0.19(J)	<4.00	<4.9	<4.00	<15.00
Phenol	ug/g Dry	<0.78	<0.81	<5.5	<0.80	<3.10
INORGANIC COMPOUNDS						
Arsenic	ug/g Dry	14.6	11.4	NA	15.0	13.5
Cadmium	ug/g Dry	<1.30	<1.20	NA	<1.10	1.70
Chromium	ug/g Dry	13.6	13.7	NA	14.0	16.6
Cyanide-Total	ug/g Dry	<0.66	<0.60	<0.20	<0.57	0.87
Cyanide-Iron	ug/g Dry	NA	NA	<0.20	NA	NA
Iron	ug/g Dry	27100	28800	27800	25800	22000
Lead	ug/g Dry	50.5	296	NA	32.2	100
Mercury	ug/g Dry	<0.10	<0.10	NA	<0.10	0.30
Zinc	ug/g Dry	110	93.3	123	113	154
Sulfate	ug/g Dry	NA	NA	690	NA	NA
Organic Nitrogen	ug/g Dry	NA	NA	632	NA	NA
Total Organic Carbon	ug/g Dry	17100	6690	NA	3970	37800

NA - Not Analyzed
J - indicates an estimated value
B - constituent also found in blank

APPENDIX H

SEWER WATER SAMPLES CHEMICAL RESULTS

ONEONTA SEWER WATER SAMPLES
COMPARATIVE RESULTS

	SAMPLE ID	SR-2	SR-2	SR-2	SR-2	SR-3	SR-3	SR-3	SR-3	SR-4	SR-4	SR-4	SR-4
	DATE	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87
	SAMPLE TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNITS												
PURGEABLE AROMATICS													
BENZENE	MG/L	0.004	<0.005	-	<0.005	<0.001	<0.005	NA	<0.005	0.004	<0.005	-	<0.005
CHLOROBENZENE	MG/L	<0.001	<0.005	-	<0.005	<0.001	<0.005	NA	<0.005	<0.001	<0.005	-	<0.005
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	<0.010	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	<0.010	-	<0.010
1,4-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	0.002	<0.010	-	<0.010
ETHYLBENZENE	MG/L	0.001	<0.005	-	<0.005	<0.001	<0.005	NA	<0.005	<0.001	<0.005	-	<0.005
TOLUENE	MG/L	0.004	<0.005	0.004	0.007	0.004	<0.005	NA	0.006	0.003	<0.005	-	0.005
OTHER VOLATILE ORGANICS													
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
METHYLENE CHLORIDE	MG/L	NA	0.007	0.041	0.017	NA	0.005	NA	0.013	NA	0.059	0.009	0.010
ACETONE	MG/L	NA	0.021	5.110	<0.010	NA	0.020	NA	0.027	NA	0.714	0.191	0.035
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
CHLOROFORM	MG/L	NA	<0.005	0.008	<0.005	NA	<0.005	NA	0.012	NA	0.009	-	0.011
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
2-BUTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	0.007	<0.005
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
VINYL ACETATE	MG/L	NA	<0.010	-	<0.005	NA	<0.010	NA	<0.005	NA	<0.010	-	<0.005
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
BROMOFORM	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
2-HEXANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010	NA	<0.010	NA	<0.010	NA	<0.010	-	<0.010
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	-	<0.005

ONEONTA SEWER WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	SR-2	SR-2	SR-2	SR-2	SR-3	SR-3	SR-3	SR-3	SR-4	SR-4	SR-4	SR-4
	DATE	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87
	SAMPLE TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNITS												
POLYNUCLEAR AROMATIC HYDROCARBONS													
ACENAPHTHENE	MG/L	0.0032	-	-	<0.010	0.0033	-	-	<0.010	<0.0003	<0.010	-	<0.010
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	<0.010	-	<0.010
ANTHRACENE	MG/L	0.0004	-	-	0.010	0.0024	-	-	<0.010	<0.0003	<0.010	-	<0.010
BENZO (A) ANTHRACENE	MG/L	<0.0004	-	-	<0.010	<0.0004	-	-	<0.010	<0.0004	<0.010	-	<0.010
BENZO (A) PYRENE	MG/L	0.0173	-	-	<0.010	0.0054	-	-	<0.010	0.0003	<0.010	-	<0.010
BENZO (B) FLUORANTHENE	MG/L	0.0318	-	-	<0.010	<0.002	-	-	<0.010	<0.002	<0.010	-	<0.010
BENZO (K) FLUORANTHENE	MG/L	<0.0003	-	-	<0.010	0.0078	-	-	<0.010	0.0174	<0.010	-	<0.010
BENZO (GHI) PERYLENE	MG/L	0.0007	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	<0.010	-	<0.010
CHRYSENE	MG/L	0.0103	-	-	<0.010	0.0061	-	-	<0.010	<0.0004	<0.010	-	<0.010
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010	<0.0003	-	-	<0.010	<0.0003	<0.010	-	<0.010
FLUORANTHENE	MG/L	0.0115	-	-	<0.010	0.135	-	-	<0.010	0.108	<0.010	-	<0.010
FLUORENE	MG/L	0.0023	-	-	<0.010	<0.0003	-	-	<0.010	0.0116	<0.010	-	<0.010
INDENO (1,2,3-CD) PYRENE	MG/L	0.171	-	-	<0.010	<0.0003	-	-	<0.010	0.125	<0.010	-	<0.010
NAPHTHALENE	MG/L	0.120	-	-	0.034	0.115	-	-	<0.010	<0.0003	<0.010	-	<0.010
PHENANTHRENE	MG/L	<0.0003	-	-	0.010	<0.0003	-	-	<0.010	0.0221	<0.010	-	<0.010
PYRENE	MG/L	<0.0003	-	-	<0.010	0.0006	-	-	<0.010	0.0012	<0.010	-	<0.010
OTHER BASE/NEUTRAL EXTRACTABLES													
BENZIDINE	MG/L	NA	-	-	<0.080	NA	-	-	<0.080	NA	<0.080	-	<0.080
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	<0.010	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010	<0.002	-	-	<0.010	<0.002	<0.010	-	<0.010
1,4-DICHLOROBENZENE	MG/L	0.002	-	-	<0.010	<0.002	-	-	<0.010	0.002	<0.010	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
ISOPHORONE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
NITROBENZENE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	0.023	<0.010	NA	-	0.041	0.016	NA	0.027	0.017	0.012
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
DI-n-BUTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	-	-	0.010	NA	-	-	<0.010	NA	<0.010	-	<0.010

ONEONTA SEWER WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	SAMPLE ID	SR-2	SR-2	SR-2	SR-2	SR-3	SR-3	SR-3	SR-3	SR-4	SR-4	SR-4	SR-4
	DATE	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87	9/23/86	12/10/86	3/18/87	6/9/87
	SAMPLE TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
	UNITS												
NON-CHLORINATED PHENOLS													
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010	<0.004	-	-	<0.010	<0.004	<0.010	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050	<40.0	-	-	<0.050	<40.0	<0.050	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050	<0.003	-	-	<0.050	<0.003	<0.050	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050	<0.004	-	-	<0.050	<0.004	<0.050	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050	<0.007	-	-	<0.050	<0.007	<0.050	-	<0.050
PHENOL	MG/L	<0.007	-	-	<0.010	0.0132	-	0.023	<0.010	<0.007	0.014	0.0094	<0.010
INORGANIC COMPOUNDS													
IRON, TOTAL	MG/L	5.32	0.46	0.18	0.97	NA	0.52	0.15	0.56	5.52	0.76	0.15	0.78
ZINC, TOTAL	MG/L	0.449	0.055	0.04	0.08	0.139	0.073	0.03	0.09	0.093	0.097	0.040	0.22
ARSENIC, TOTAL	MG/L	NA	<0.001	<0.005	<0.005	NA	0.001	<0.005	<0.005	NA	0.001	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	<0.001	0.001	<0.001	NA	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001
CHROMIUM, TOTAL	MG/L	NA	0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	0.004	<0.01	<0.01	NA	0.011	<0.01	0.01	NA	0.01	0.01	0.01
CYANIDE, TOTAL	MG/L	<0.007	<0.01	<0.01	<0.01	<0.007	<0.01	<0.01	0.01	<0.007	<0.01	<0.01	<0.01
SULFATE	MG/L	11.6	33.1	31.0	NA	9.8	15.4	9.0	NA	<2.5	28.5	41.0	NA
GENERAL ORGANIC PARAMETERS													
TOTAL ORGANIC CARBON	MG/L	NA	59.0	0.24	NA	NA	71.0	39.1	NA	NA	55.0	39.1	NA
ORGANIC NITROGEN	MG/L	13.3	8.8	3.0	8.5	16.3	5.5	5.9	45.0	21.0	8.1	7.0	59.0

NA - NOT ANALYZED
- - BELOW DETECTION LIMITS

ONEONTA SEWER WATER SAMPLES
COMPARATIVE RESULTS

	UNITS	SR-5 9/23/86 GRAB	SR-5 12/10/86 GRAB	SR-5 3/18/87 GRAB	SR-5 6/9/87 GRAB
PURGEABLE AROMATICS					
BENZENE	MG/L	0.002	<0.005	-	<0.005
CHLOROBENZENE	MG/L	<0.001	<0.005	-	<0.005
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	0.002	-	-	<0.010
ETHYLBENZENE	MG/L	<0.001	<0.005	-	<0.005
TOLUENE	MG/L	0.003	0.006	-	0.005
OTHER VOLATILE ORGANICS					
CHLOROMETHANE	MG/L	NA	<0.010	-	<0.010
BROMOMETHANE	MG/L	NA	<0.010	-	<0.010
VINYL CHLORIDE	MG/L	NA	<0.010	-	<0.010
CHLOROETHANE	MG/L	NA	<0.010	-	<0.010
METHYLENE CHLORIDE	MG/L	NA	0.006	0.005	0.015
ACETONE	MG/L	NA	0.025	0.086	0.035
CARBON DISULFIDE	MG/L	NA	<0.005	-	<0.005
1,1-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005
1,1-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005
TRANS-1,2-DICHLOROETHENE	MG/L	NA	<0.005	-	<0.005
CHLOROFORM	MG/L	NA	0.007	0.008	0.010
1,2-DICHLOROETHANE	MG/L	NA	<0.005	-	<0.005
2-BUTANONE	MG/L	NA	<0.010	-	<0.010
1,1,1-TRICHLOROETHANE	MG/L	NA	<0.005	0.007	<0.005
CARBON TETRACHLORIDE	MG/L	NA	<0.005	-	<0.005
VINYL ACETATE	MG/L	NA	<0.010	-	<0.010
BROMODICHLOROMETHANE	MG/L	NA	<0.005	-	<0.005
1,2-DICHLOROPROPANE	MG/L	NA	<0.005	-	<0.005
TRANS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005
TRICHLOROETHENE	MG/L	NA	<0.005	-	<0.005
DIBROMOCHLOROMETHANE	MG/L	NA	<0.005	-	<0.005
1,1,2-TRICHLOROETHANE	MG/L	NA	<0.005	-	<0.005
CIS-1,3-DICHLOROPROPENE	MG/L	NA	<0.005	-	<0.005
2-CHLOROETHYL VINYL ETHER	MG/L	NA	<0.010	-	<0.010
BROMOFORM	MG/L	NA	<0.005	-	<0.005
2-HEXANONE	MG/L	NA	<0.010	-	<0.010
4-METHYL-2-PENTANONE	MG/L	NA	<0.010	-	<0.010
TETRACHLOROETHENE	MG/L	NA	<0.005	-	<0.005
1,1,2,2-TETRACHLOROETHANE	MG/L	NA	<0.005	-	<0.005

ONEONTA SEWER WATER SAMPLES
COMPARATIVE RESULTS
(CONTINUED)

	UNITS	SR-5 9/23/86 GRAB	SR-5 12/10/86 GRAB	SR-5 3/18/87 GRAB	SR-5 6/9/87 GRAB
POLYNUCLEAR AROMATIC HYDROCARBONS					
ACENAPHTHENE	MG/L	0.006	-	-	<0.010
ACENAPHTHYLENE	MG/L	<0.0003	-	-	<0.010
ANTHRACENE	MG/L	0.0026	-	-	<0.010
BENZO (A) ANTHRACENE	MG/L	0.883	-	-	<0.010
BENZO (A) PYRENE	MG/L	0.0026	-	-	<0.010
BENZO (B) FLUORANTHENE	MG/L	<0.002	-	-	<0.010
BENZO (K) FLUORANTHENE	MG/L	0.0036	-	-	<0.010
BENZO (GHI) PERYLENE	MG/L	<0.0003	-	-	<0.010
CHRYSENE	MG/L	0.0014	-	-	<0.010
DIBENZO (A,H) ANTHRACENE	MG/L	<0.0003	-	-	<0.010
FLUORANTHENE	MG/L	<0.0003	-	-	<0.010
FLUORENE	MG/L	0.0088	-	-	<0.010
INDENO (1,2,3-CD) PYRENE	MG/L	<0.0003	-	-	<0.010
NAPHTHALENE	MG/L	0.0171	-	-	0.010
PHENANTHRENE	MG/L	0.0154	-	-	<0.010
PYRENE	MG/L	0.0038	-	-	<0.010
OTHER BASE/NEUTRAL EXTRACTABLES					
BENZIDINE	MG/L	NA	-	-	<0.080
1,2,4-TRICHLOROBENZENE	MG/L	NA	-	-	<0.010
HEXACHLOROBENZENE	MG/L	NA	-	-	<0.010
HEXACHLOROETHANE	MG/L	NA	-	-	<0.010
BIS (2-CHLOROETHYL) ETHER	MG/L	NA	-	-	<0.010
2-CHLORONAPHTHALENE	MG/L	NA	-	-	<0.010
1,2-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010
1,3-DICHLOROBENZENE	MG/L	<0.002	-	-	<0.010
1,4-DICHLOROBENZENE	MG/L	0.002	-	-	<0.010
3,3-DICHLOROBENZIDINE	MG/L	NA	-	-	<0.010
2,4-DINITROTOLUENE	MG/L	NA	-	-	<0.010
2,6-DINITROTOLUENE	MG/L	NA	-	-	<0.010
1,2-DIPHENYLHYDRAZINE	MG/L	NA	-	-	<0.010
4-CHLOROPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010
4-BROMOPHENYL PHENYL ETHER	MG/L	NA	-	-	<0.010
BIS (2-CHLOROISOPROPYL) ETHER	MG/L	NA	-	-	<0.010
BIS (2-CHLOROETHOXY) METHANE	MG/L	NA	-	-	<0.010
HEXACHLOROBUTADIENE	MG/L	NA	-	-	<0.010
HEXACHLOROCYCLOPENTADIENE	MG/L	NA	-	-	<0.010
ISOPHORONE	MG/L	NA	-	-	<0.010
NITROBENZENE	MG/L	NA	-	-	<0.010
n-NITROSODIMETHYLAMINE	MG/L	NA	-	-	<0.010
n-NITROSODIPHENYLAMINE a	MG/L	NA	-	-	<0.010
n-NITROSODI-n-PROPYLAMINE	MG/L	NA	-	-	<0.010
BIS (2-ETHYLHEXYL) PHTHALATE	MG/L	NA	0.025	0.024	0.020
BUTYL BENZYL PHTHALATE	MG/L	NA	-	-	<0.010
DI-n-BUTYL PHTHALATE	MG/L	NA	-	-	<0.010
DI-n-OCTYL PHTHALATE	MG/L	NA	-	-	<0.010
DIETHYL PHTHALATE	MG/L	NA	-	-	<0.010
DIMETHYL PHTHALATE	MG/L	NA	-	-	0.070

ONEONTA SEWER WATER SAMPLES

COMPARATIVE RESULTS

(CONTINUED)

	UNITS	SR-5 9/23/86 GRAB	SR-5 12/10/86 GRAB	SR-5 3/18/87 GRAB	SR-5 6/9/87 GRAB
NON-CHLORINATED PHENOLS					
2,4-DIMETHYLPHENOL	MG/L	<0.004	-	-	<0.010
2,4-DINITROPHENOL	MG/L	<40.0	-	-	<0.050
2-METHYL-4,6-DINITROPHENOL	MG/L	<0.003	-	-	<0.050
2-NITROPHENOL	MG/L	<0.004	-	-	<0.050
4-NITROPHENOL	MG/L	<0.007	-	-	<0.050
PHENOL	MG/L	<0.007	-	0.012	<0.010
INORGANIC COMPOUNDS					
IRON, TOTAL	MG/L	0.84	0.83	0.19	0.38
ZINC, TOTAL	MG/L	0.079	0.11	0.04	0.01
ARSENIC, TOTAL	MG/L	NA	<0.001	<0.005	<0.005
CADMIUM, TOTAL	MG/L	NA	<0.001	<0.001	<0.001
CHROMIUM, TOTAL	MG/L	NA	<0.005	<0.01	<0.01
LEAD, TOTAL	MG/L	NA	<0.001	<0.01	<0.01
CYANIDE, TOTAL	MG/L	<0.007	<0.01	<0.01	<0.01
SULFATE	MG/L	8.2	22.4	37.0	NA
GENERAL ORGANIC PARAMETERS					
TOTAL ORGANIC CARBON	MG/L	NA	51.0	36.3	NA
ORGANIC NITROGEN	MG/L	7.75	9.5	8.1	60.0

NA - NOT ANALYZED

- - BELOW DETECTION LIMITS

APPENDIX I

AIR SAMPLES CHEMICAL RESULTS

AIR QUALITY RESULTS

POLYNUCLEAR AROMATIC HYDROCARBONS

ONEONTA

COMPOUNDS	UNIT	ONAI 86-02	ONAU 86-03	ONAU 86-04	ONAI 86-05	ONAD 86-06	ONAU 86-07	ONAI 86-08	ONAD 86-09	ONAX 86-10
Naphthalene	ug/filter	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.045	NDLT* 0.010	NDLT* 0.010	NDLT* 0.014
Methylennaphthalenes (as naphthalene)	ug/filter	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.045	NDLT* 0.010	NDLT* 0.010	NDLT* 0.014
2-chloronaphthalene (as naphthalene)	ug/filter	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.010	NDLT* 0.045	NDLT* 0.010	NDLT* 0.010	NDLT* 0.014
Acenaphthylene	ug/filter	NDLT* 0.017	NDLT* 0.010	NDLT* 0.010	NDLT* 0.011	NDLT* 0.010	NDLT* 0.073	NDLT* 0.010	NDLT* 0.010	NDLT* 0.023
Acenaphthene	ug/filter	NDLT* 0.015	NDLT* 0.012	NDLT* 0.011	NDLT* 0.014	NDLT* 0.010	NDLT* 0.092	NDLT* 0.012	NDLT* 0.010	NDLT* 0.029
Fluorene	ug/filter	NDLT* 0.021	NDLT* 0.017	NDLT* 0.015	NDLT* 0.020	NDLT* 0.014	NDLT* 0.131	NDLT* 0.017	NDLT* 0.013	NDLT* 0.041
Phenathrene	ug/filter	NDLT* 0.022	NDLT* 0.018	NDLT* 0.016	NDLT* 0.021	NDLT* 0.015	NDLT* 0.138	NDLT* 0.018	NDLT* 0.014	NDLT* 0.043
Anthracene	ug/filter	NDLT* 0.020	NDLT* 0.016	NDLT* 0.014	NDLT* 0.019	NDLT* 0.013	NDLT* 0.123	NDLT* 0.016	NDLT* 0.012	NDLT* 0.039
Fluoranthene	ug/filter	NDLT* 0.019	NDLT* 0.016	NDLT* 0.014	NDLT* 0.019	NDLT* 0.013	NDLT* 0.123	NDLT* 0.016	NDLT* 0.012	NDLT* 0.039
Pyrene	ug/filter	NDLT* 0.019	NDLT* 0.016	NDLT* 0.014	NDLT* 0.018	NDLT* 0.013	NDLT* 0.120	NDLT* 0.015	NDLT* 0.012	NDLT* 0.038
Benzo(a)Anthracene	ug/filter	NDLT* 0.022	NDLT* 0.019	NDLT* 0.016	NDLT* 0.021	NDLT* 0.015	NDLT* 0.141	NDLT* 0.018	NDLT* 0.014	NDLT* 0.044
Chrysene	ug/filter	NDLT* 0.020	NDLT* 0.017	NDLT* 0.015	NDLT* 0.019	NDLT* 0.014	NDLT* 0.127	NDLT* 0.016	NDLT* 0.013	NDLT* 0.040
Benzo(b)Fluoranthene	ug/filter	NDLT* 0.039	NDLT* 0.032	NDLT* 0.028	NDLT* 0.037	NDLT* 0.026	NDLT* 0.245	NDLT* 0.063	NDLT* 0.025	NDLT* 0.077
Benzo(k)Fluoranthene	ug/filter	NDLT* 0.022	NDLT* 0.019	NDLT* 0.016	NDLT* 0.021	NDLT* 0.015	NDLT* 0.139	NDLT* 0.036	NDLT* 0.014	NDLT* 0.044
Benzo(a)Pyrene	ug/filter	NDLT* 0.026	NDLT* 0.022	NDLT* 0.019	NDLT* 0.025	NDLT* 0.017	NDLT* 0.082	NDLT* 0.021	NDLT* 0.017	NDLT* 0.052
Indeno(1,2,3-cd)Pyrene	ug/filter	NDLT* 0.034	NDLT* 0.028	NDLT* 0.025	NDLT* 0.033	NDLT* 0.023	NDLT* 0.214	NDLT* 0.028	NDLT* 0.022	NDLT* 0.067
Dibenzo(a,h)Anthracene	ug/filter	NDLT* 0.043	NDLT* 0.036	NDLT* 0.031	NDLT* 0.041	NDLT* 0.029	NDLT* 0.272	NDLT* 0.035	NDLT* 0.027	NDLT* 0.085
Benzo(g,h,i)Perylene	ug/filter	NDLT* 0.044	NDLT* 0.037	NDLT* 0.032	NDLT* 0.043	NDLT* 0.030	NDLT* 0.280	NDLT* 0.036	NDLT* 0.028	NDLT* 0.088

*None detected at less than values

AIR QUALITY RESULTS

VOLATILE ORGANIC COMPOUNDS

ONEONTA

COMPOUNDS	UNIT	ONAD 86-01	ONAI 86-02	ONAU 86-03	ONAU 86-04	ONAI 86-05	ONAD 86-06	ONAU 86-07	ONAI 86-08	ONAD 86-09
N,N-Dimethylformamide	mg/m3	8.24E-04	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	1.99E-01	2.17E-01	1.63E-02
Toluene	mg/m3	3.63E-03	1.34E-01	N.D.*	7.90E-02	4.00E-02	5.55E-03	6.95E-03	7.70E-03	1.00E+00
Benzene	mg/m3	N.D.*	1.61E-02	N.D.*	N.D.*	1.03E-02	1.62E-03	N.D.*	N.D.*	N.D.*
Ethyl Benzene**	mg/m3	N.D.*	2.30E-02	N.D.*	7.15E-02	1.13E-02	1.04E-01	N.D.*	7.58E-04	N.D.*
2-Propyl Furan**	mg/m3	N.D.*	N.D.*	4.16E-02	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*
2-Methyl-2-Propenoic Acid** (Methacrylic Acid)	mg/m3	N.D.*	N.D.*	7.08E-03	6.83E-03	N.D.*	9.95E-03	N.D.*	9.32E-03	N.D.*
3-Methyl Pentane**	mg/m3	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*
Benzaldehyde**	mg/m3	N.D.*	N.D.*	N.D.*	N.D.*	2.05E-03	N.D.*	N.D.*	N.D.*	N.D.*
Xylene	mg/m3	N.D.*	N.D.*	N.D.*	N.D.*	6.15E-03	4.63E-01	N.D.*	1.62E-02	N.D.*
Methyl Methacrylate**	mg/m3	N.D.*	N.D.*	N.D.*	N.D.*	7.28E-02	N.D.*	1.54E-03	N.D.*	N.D.*
Tetrachloroethylene	mg/m3	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	3.36E-03	N.D.*

* N.D. = Not detected at levels above background
** Calculated against the response of a similar compound
*** Sample was lost during analysis. There was insufficient sample remaining for a repeat analysis.