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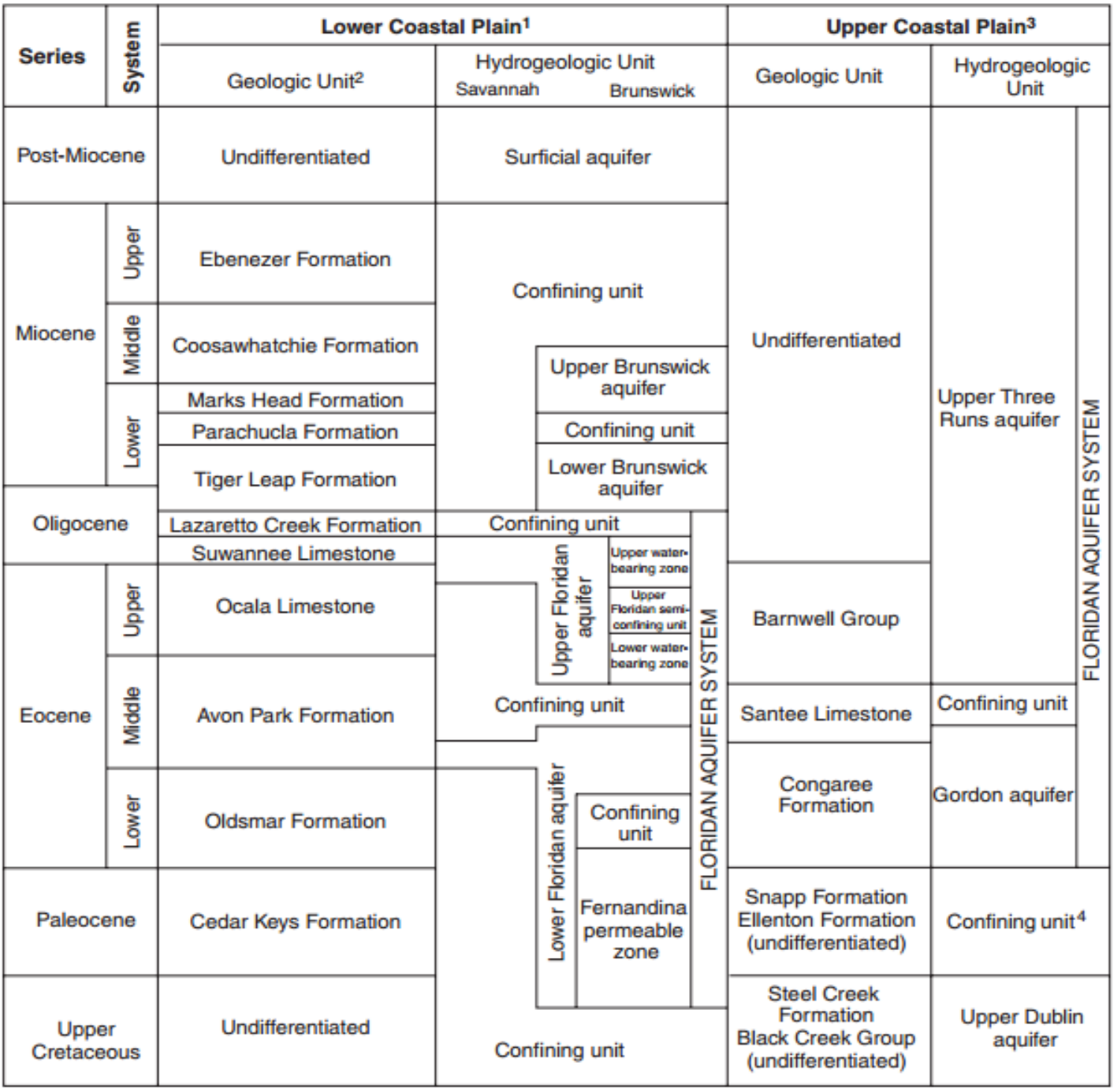


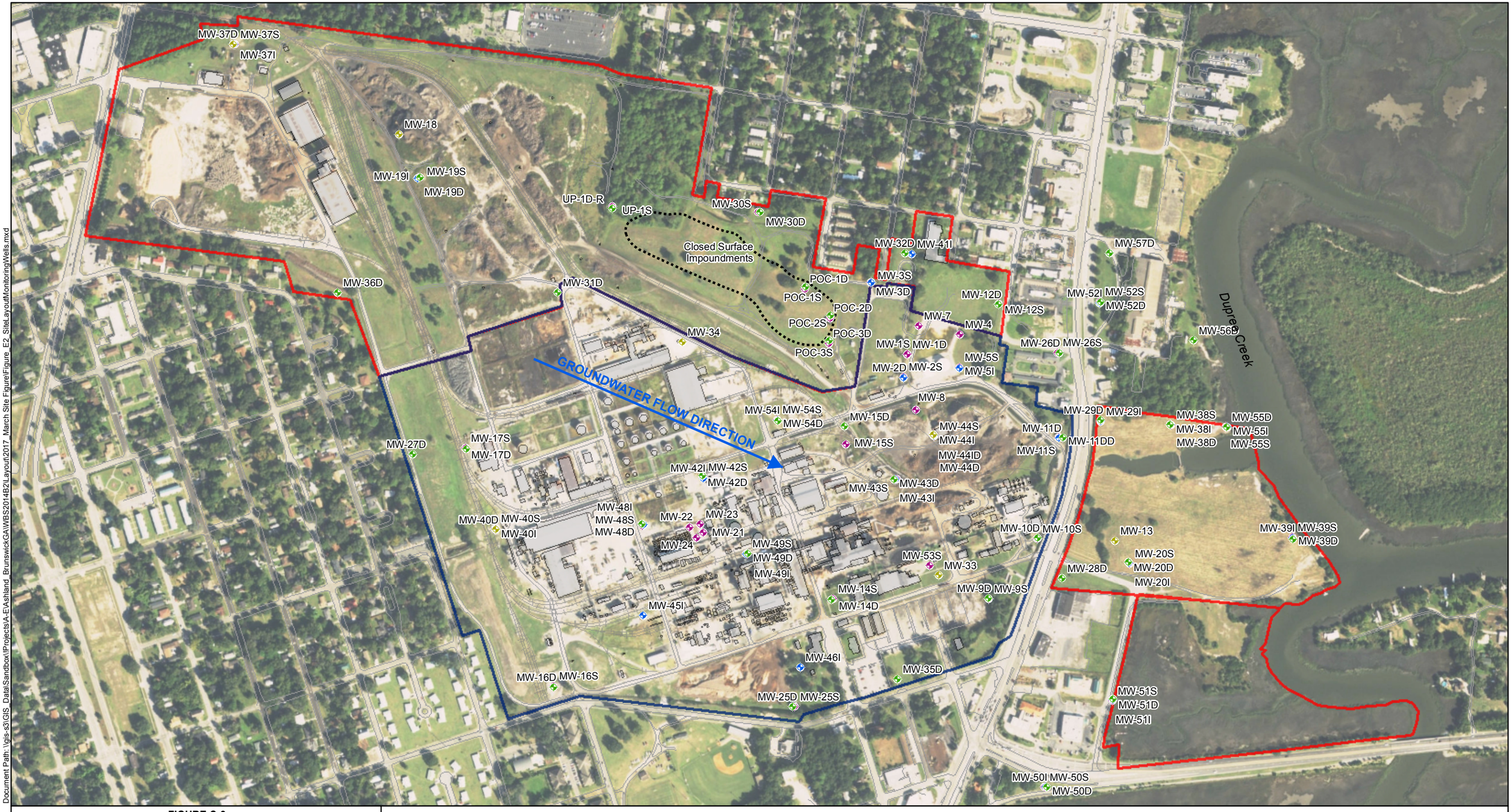
[1]Modified from Randolph and others, 1991; Clarke and Krause, 2000.
[2]Modified from Randolph and others, 1991; Weems and Edwards, 2001.
[3]Modified from Falls and others, 1997.
[4]In local areas includes Millers Pond aquifer.

Source: Clarke, J.S., leeth, D.C., Taylor-Harris, D., Painter, J.A., Labowski, J.L., 2004. Summary of Hydraulic Properties of the Floridan Aquifer System in Coastal Georgia and Adjacent Parts of South Carolina and Florida: United States Geological Survey, Scientific Investigations Report 2004-5264, 54p.

FIGURE C-1
GENERALIZED GEOLOGIC CROSS SECTION
HERCULES LLC AND PINOVA, INC.
2801 COOK STREET
BRUNSWICK, GLYNN COUNTY, GEORGIA

PROJECT NO: 190106854A
DATE: 4/21/2017
SCALE: NTS
DRAWN BY: CW

anteagroup



Document Path: \\gis-s3\GIS_Data\Sandbox\Projects\A-E\Ashland_Brunswick\GA\WBS\2014\B2\Layout\2017_March Site Figure\Figure_E2_SiteLayoutMonitoringWells.mxd

FIGURE C-2

SITE LAYOUT & MONITORING WELLS
HERCULES LLC AND PINOVA, INC
2801 COOK STREET
BRUNSWICK, GLYNN COUNTY, GEORGIA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	CCM	1:6,000
DATE	REVIEWED BY	MAP SCALE
04/20/2017	CW	1 inch = 500 feet

anteagroup

Legend

- Surficial Aquifer- Deep Zone of Upper Unit Wells
- Surficial Aquifer- Intermediate Zone of Upper Unit
- Surficial Aquifer- Lower Zone of Upper Unit
- Surficial Aquifer- Shallow Zone of Upper Unit
- Closed Surface Impoundments
- Pinova Property
- Hercules Property

N

0 250 500 1,000 1,500 2,000 Feet

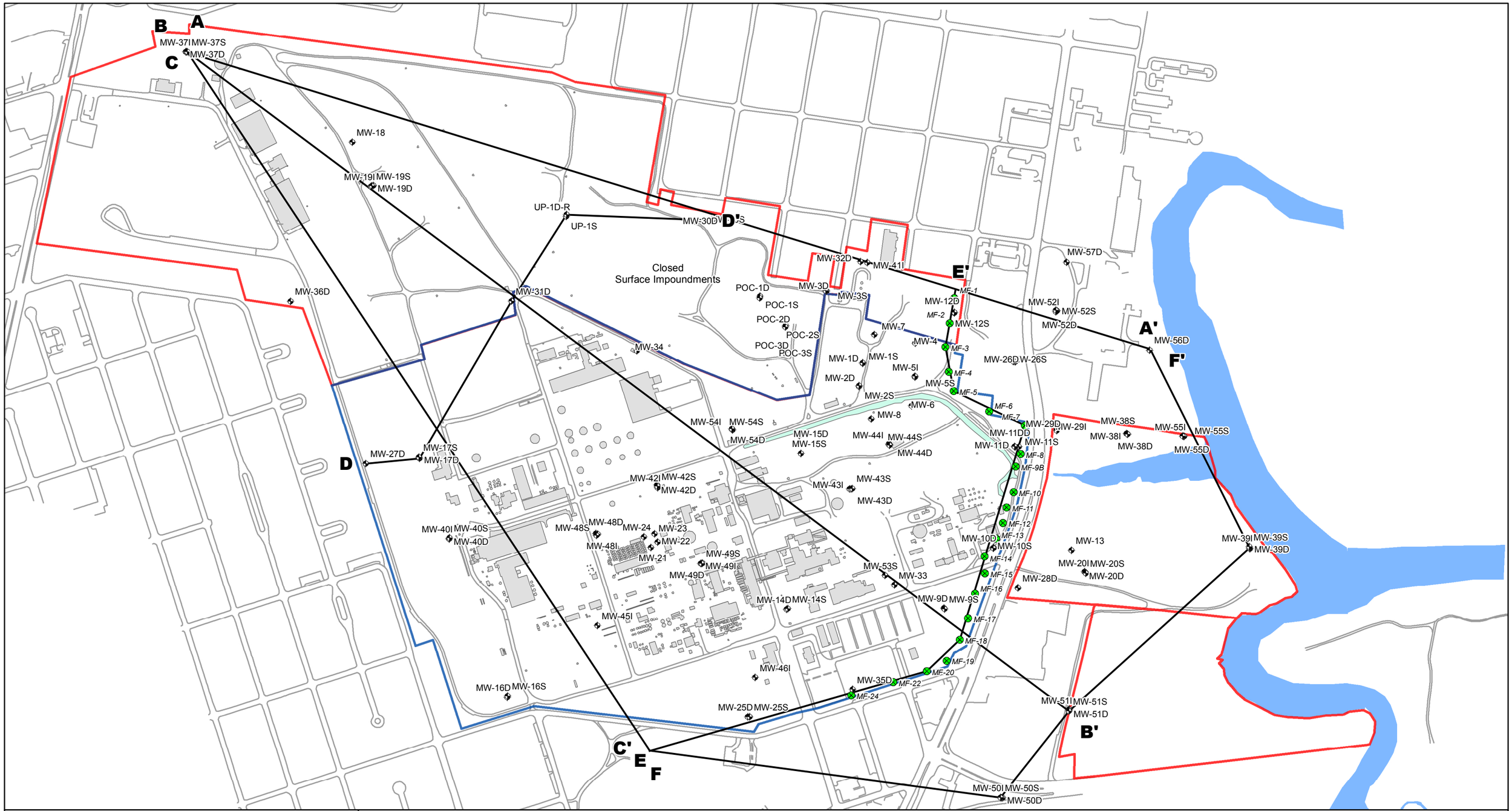


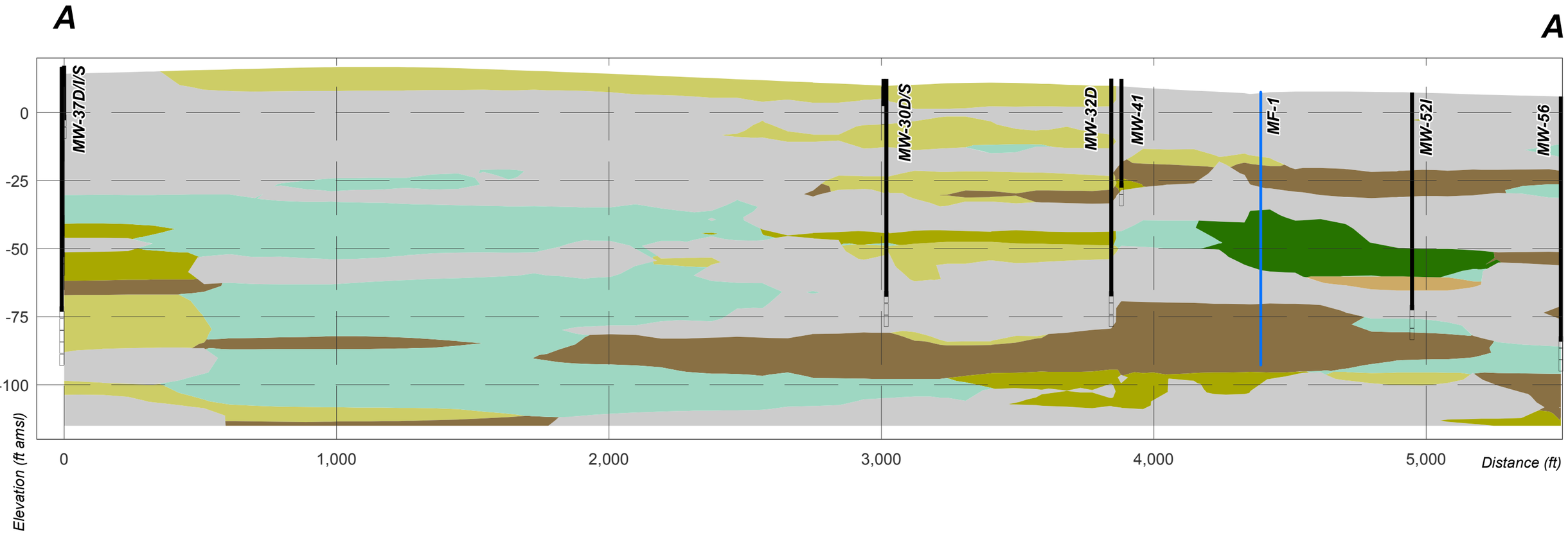
FIGURE C-3
Cross Section Location Map
Former Hercules - Brunswick Facility
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
WBS2016B4	CCM	1:6,000
DATE	REVIEWED BY	MAP SCALE
11/28/2017	CW	1 inch = 500 feet

anteagroup

Legend

- Monitoring Well
- Mass Flux Boring
- Cross Section Line
- N Street Ditch
- Pinova/ Symrise Property
- Hercules Property
- Road
- Site Building
- Creek



Legend

Monitoring Well
Casing
Screen
Mass Flux Boring

SAND
GRAVEL
SILTY SAND
CLAY
SILT
CLAYEY SAND
POORLY CEMENTED SANDSTONE

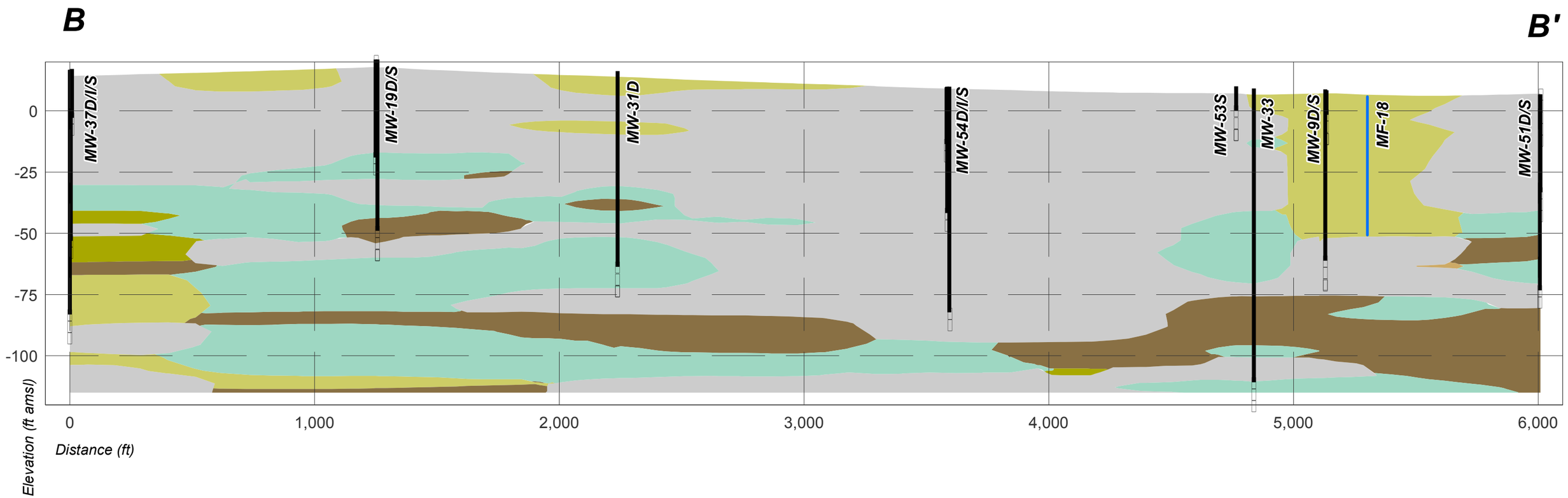
**** vertical distance is exaggerated by a factor of 20***

***** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings***

FIGURE C-4
Cross Section A-A'
Former Hercules - Brunswick Facility
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
WBS2016B4	*CCM*	
DATE	REVIEWED BY	MAP SCALE
01/06/2017		

antea group



Legend

Monitoring Well

- Casing
- Screen
- Mass Flux Boring

- SAND
- GRAVEL
- SILTY SAND
- CLAY
- SILT
- CLAYEY SAND
- POORLY CEMENTED SANDSTONE

**** vertical distance is exaggerated by a factor of 20***

***** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings***

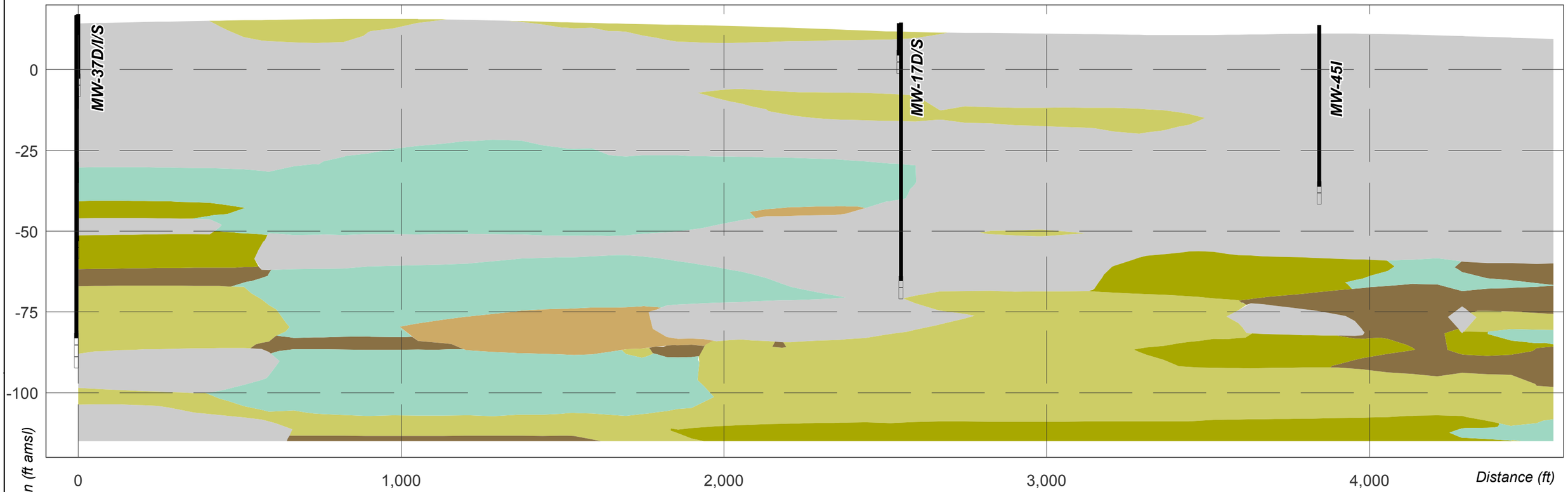
FIGURE C-5
Cross Section B-B'
Former Hercules - Brunswick Facility
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
WBS2016B4	*CCM*	
DATE	REVIEWED BY	MAP SCALE
01/06/2017		

antea group

C

C'



Legend

Monitoring Well
- Casing
- Screen

- SAND
- GRAVEL
- SILTY SAND
- CLAY
- SILT
- CLAYEY SAND
- POORLY CEMENTED SANDSTONE

**** vertical distance is exaggerated by a factor of 20***

***** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings***

FIGURE C-6
Cross Section C-C'
Former Hercules - Brunswick Facility
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE	
WBS2016B4	*CCM*		antea group
DATE	REVIEWED BY	MAP SCALE	
02/24/2017			

D

D'

MW-27D

MW-17D/S

MW-31D

UP-1D-R

UP-1S

MW-30D/S

0

-25

-50

-75

-100

Elevation (ft amsl)

0

500

1,000

1,500

2,000

2,500

Distance (ft)

Legend

Monitoring Well

Casing

Screen

SAND

GRAVEL

SILTY SAND

CLAY

SILT

CLAYEY SAND

POORLY CEMENTED SANDSTONE

***** vertical distance is exaggerated by a factor of 20***

****** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings***

FIGURE C-7

Cross Section D-D'

Former Hercules - Brunswick Facility

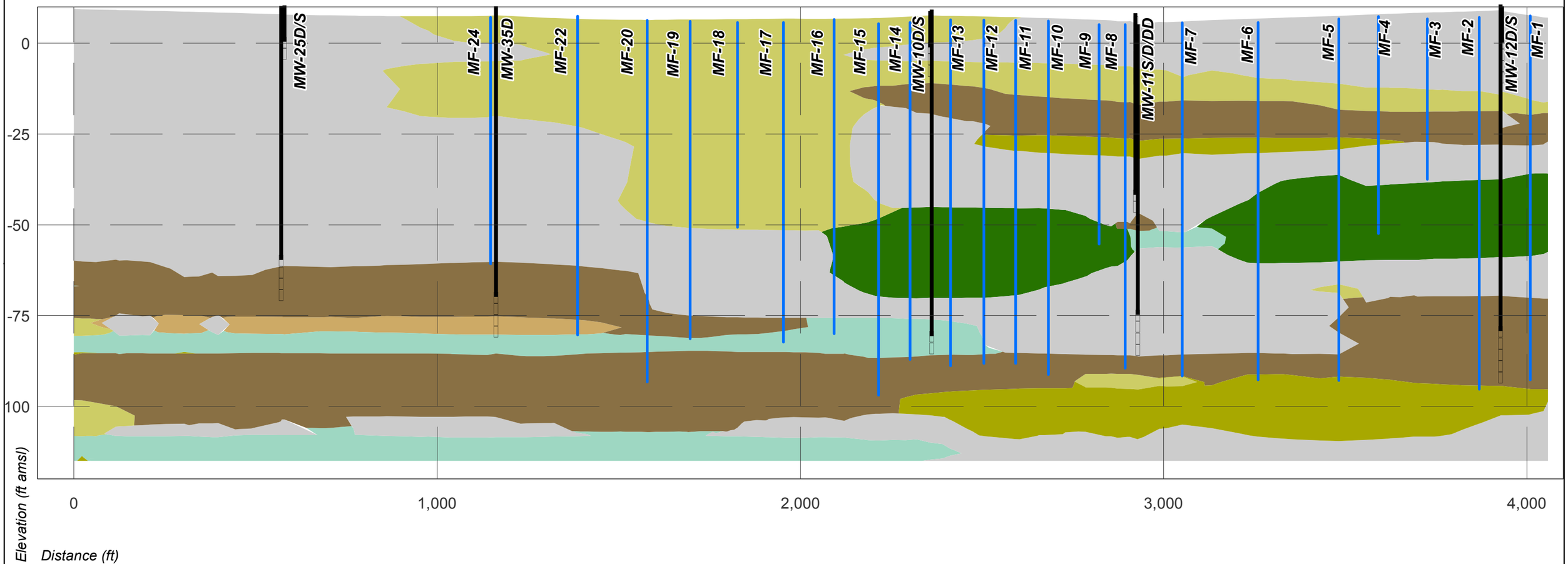
2801 Cook Street

Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE	
WBS2016B4	CCM		antea group
DATE	REVIEWED BY	MAP SCALE	
02/24/2017			

E

E'



Legend

Monitoring Well

- Casing
- Screen
- Mass Flux Boring

- SAND
- GRAVEL
- SILTY SAND
- CLAY
- SILT
- CLAYEY SAND
- POORLY CEMENTED SANDSTONE

***** vertical distance is exaggerated by a factor of 20***

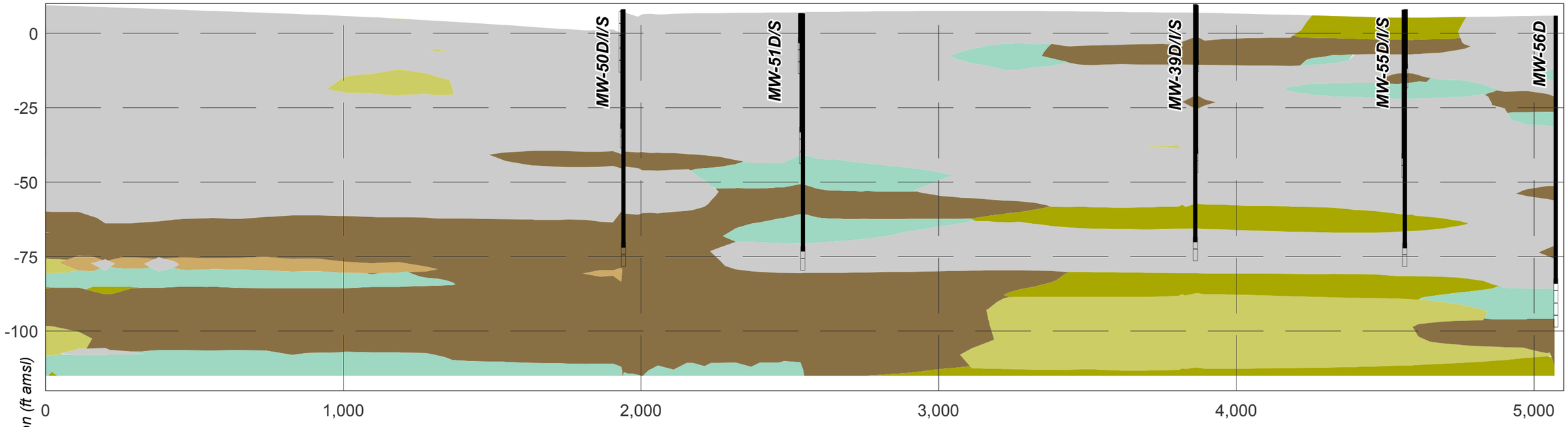
****** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings***

FIGURE C-8
Cross Section E-E'
Former Hercules - Brunswick Facility
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE	
WBS2016B4	CCM		antea group
DATE	REVIEWED BY	MAP SCALE	
02/24/2017			

F

F'



Legend

Monitoring Well

Casing

Screen

SAND

GRAVEL

SILTY SAND

CLAY

SILT

CLAYEY SAND

POORLY CEMENTED SANDSTONE

***** vertical distance is exaggerated by a factor of 20**

****** Soil cross section generated from site wide 3D lithology model, some lithology projected from nearby borings**

FIGURE C-9

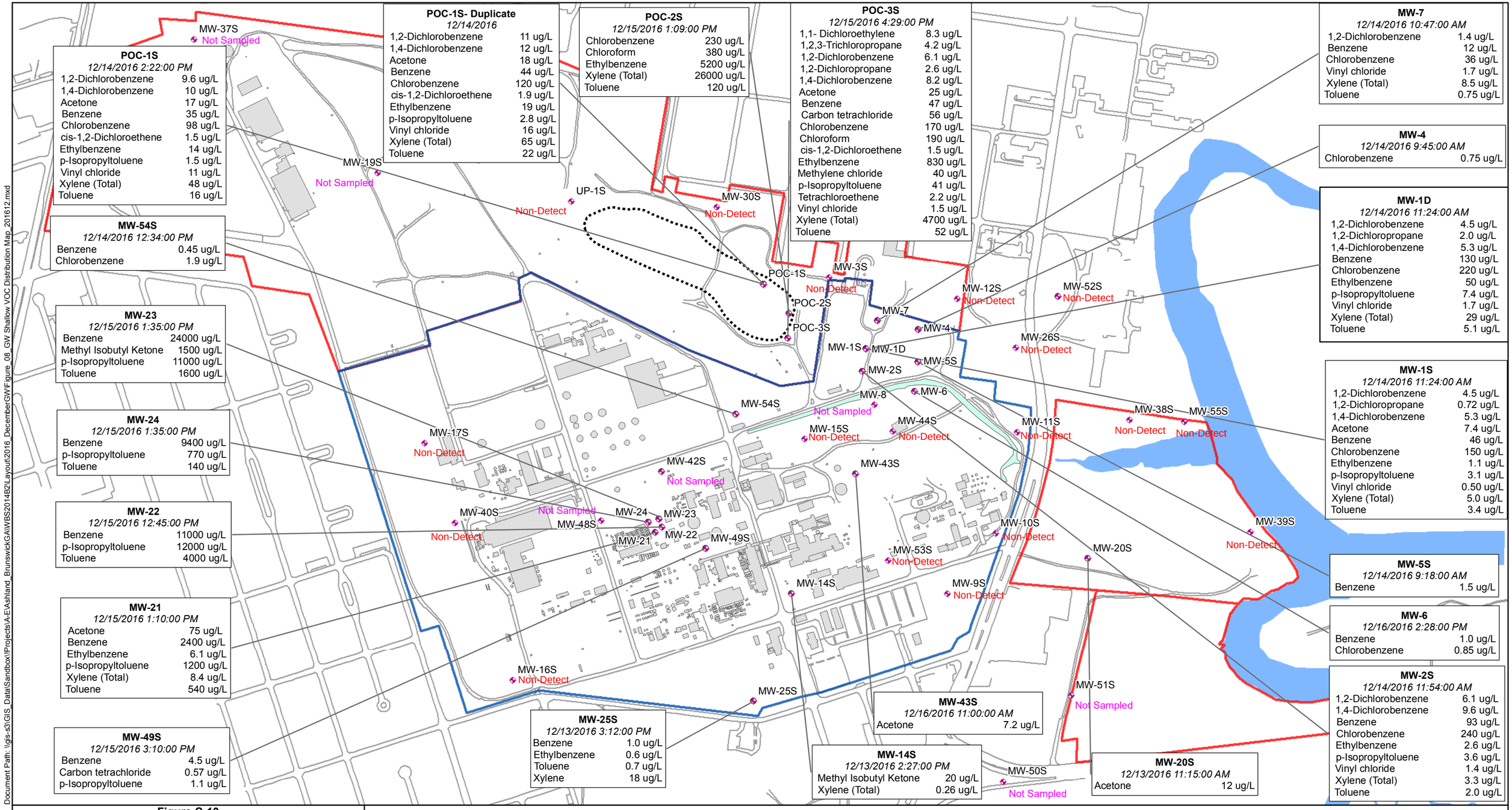
Cross Section F-F'

Former Hercules - Brunswick Facility

2801 Cook Street

Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE	
WBS2016B4	*CCM*		antea group
DATE	REVIEWED BY	MAP SCALE	
02/24/2017			



Document Path: \\gis-s3\GIS_Data\Sandbox\!Projects\A-E\Ashland_BrunswickGA\WBS2014B2\Layout\2016_DecemberGWFigure_08_GW Shallow VOC Distribution Map_201612.mxd

Figure C-10
December 2016 Surficial Aquifer, Shallow Zone of Upper Unit-VOCs Distribution
Hercules LLC and Pinova, Inc.
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
3/8/2017	CW	1 inch = 500 feet

antea group

Legend

- Shallow Zone of Upper Unit Wells
- Closed Surface Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N

MW-54I
12/14/2016 1:10:00 PM

1,1- Dichloroethylene	18 ug/L
1,2-Dichlorobenzene	96 ug/L
1,4-Dichlorobenzene	170 ug/L
Benzene	220 ug/L
Chlorobenzene	390 ug/L
cis-1,2-Dichloroethene	150 ug/L
Ethylbenzene	2000 ug/L
p-Isopropyltoluene	49 ug/L
Xylene (Total)	7300 ug/L
Toluene	48 ug/L

MW-44I
12/16/2016 1:29:00 PM

Benzene	130 ug/L
Chlorobenzene	110 ug/L
Chloroform	33 ug/L

MW-3D
12/14/2016 3:42:00 PM

1,1- Dichloroethylene	0.96 ug/L
1,2-Dichlorobenzene	9.0 ug/L
1,4-Dichlorobenzene	9.1 ug/L
Benzene	60 ug/L
Chlorobenzene	190 ug/L
cis-1,2-Dichloroethene	1.1 ug/L
Ethylbenzene	3.7 ug/L
p-Isopropyltoluene	15 ug/L
Vinyl chloride	3.7 ug/L
Xylene (Total)	15 ug/L
Toluene	7.5 ug/L

MW-2D
12/16/2016 10:32:00 AM

1,2-Dichlorobenzene	7.3 ug/L
1,2-Dichloropropane	1.2 ug/L
1,4-Dichlorobenzene	8.3 ug/L
Benzene	89 ug/L
Chlorobenzene	230 ug/L
Ethylbenzene	45 ug/L
p-Isopropyltoluene	10 ug/L
Xylene (Total)	7.0 ug/L
Toluene	3.2 ug/L

MW-41I
12/16/2016 1:05:00 PM

1,2-Dichloropropane	1.3 ug/L
Benzene	37 ug/L
Chlorobenzene	7.0 ug/L
cis-1,2-Dichloroethene	1.0 ug/L
Ethylbenzene	0.44 ug/L
p-Isopropyltoluene	11 ug/L
Xylene (Total)	3.2 ug/L
Toluene	2.0 ug/L

MW-5I
12/16/2016 9:33:00 AM

p-Isopropyltoluene	0.51 ug/L

MW-11D
12/15/2016 10:09:00 AM

Benzene	0.66 ug/L
Chlorobenzene	2.9 ug/L

MW-38I- Duplicate
12/13/2016

Chlorobenzene	1.2 ug/L

MW-38I
12/13/2016 3:30:00 PM

Chlorobenzene	1.2 ug/L

MW-55I
12/13/2016 4:45:00 PM

Benzene	55 ug/L
Chlorobenzene	12 ug/L
cis-1,2-Dichloroethene	0.51 ug/L

MW-55I Re-sample
3/2/2017 14:46:00 PM

Benzene	29 ug/L
Chlorbenzene	7.7 ug/L

MW-42I
12/15/2016 9:45:00 AM

1,1- Dichloroethylene	9.7 ug/L
1,2-Dichlorobenzene	0.87 ug/L
1,4-Dichlorobenzene	1.4 ug/L
2-Butanone (MEK)	37 ug/L
Acetone	740 ug/L
Benzene	1200 ug/L
Carbon disulfide	190 ug/L
Carbon tetrachloride	9700 ug/L
Chlorobenzene	6.3 ug/L
Chloroform	3100 ug/L
Ethylbenzene	220 ug/L
Methyl Isobutyl Ketone	200 ug/L
Methylene chloride	180 ug/L
p-Isopropyltoluene	4200 ug/L
Tetrachloroethene	16 ug/L
Xylene (Total)	350 ug/L
Toluene	74 ug/L

MW-40I
12/15/2016 2:33:00 PM

Chlorobenzene	0.55 ug/L
cis-1,2-Dichloroethene	0.44 ug/L

MW-43I
12/16/2016 11:20:00 AM

Chlorobenzene	0.51 ug/L
Xylene (Total)	1.0 ug/L

MW-49I
12/15/2016 2:40:00 PM

Benzene	1100 ug/L
Xylene (Total)	1.2 ug/L

MW-45I
12/16/2016 10:15:00 AM

Benzene	1.9 ug/L
Ethylbenzene	2.8 ug/L
Xylene (Total)	1.3 ug/L

MW-46I
12/16/2016 8:35:00 AM

1,2-Dichlorobenzene	0.39 ug/L
Benzene	9.0 ug/L
Carbon disulfide	1.1 ug/L
Ethylbenzene	1.8 ug/L
p-Isopropyltoluene	0.84 ug/L
Xylene (Total)	5.5 ug/L

MW-50I
12/14/2016 3:35:00 PM

Chlorobenzene	0.38 ug/L
Chloroform	1.0 ug/L

MW-39I
12/14/2016 12:50:00 PM

Benzene	0.82 ug/L
Chlorobenzene	15 ug/L

MW-19I
Not Sampled

MW-52I
Non-Detect

MW-29I
Non-Detect

MW-20I
Non-Detect

MW-51I
Non-Detect

MW-50I
Non-Detect

MW-3D
MW-41I
MW-2D
MW-5I
MW-54I
MW-44I
MW-11D
MW-38I
MW-55I
MW-42I
MW-43I
MW-40I
MW-48I
MW-49I
MW-45I
MW-46I
MW-39I

Figure C-11
December 2016 Surficial Aquifer, Intermediate Zone of Upper Unit-VOCs Distribution
Hercules LLC and Pinova, Inc.
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
3/16/2017	CW	1 inch = 500 feet

antea group

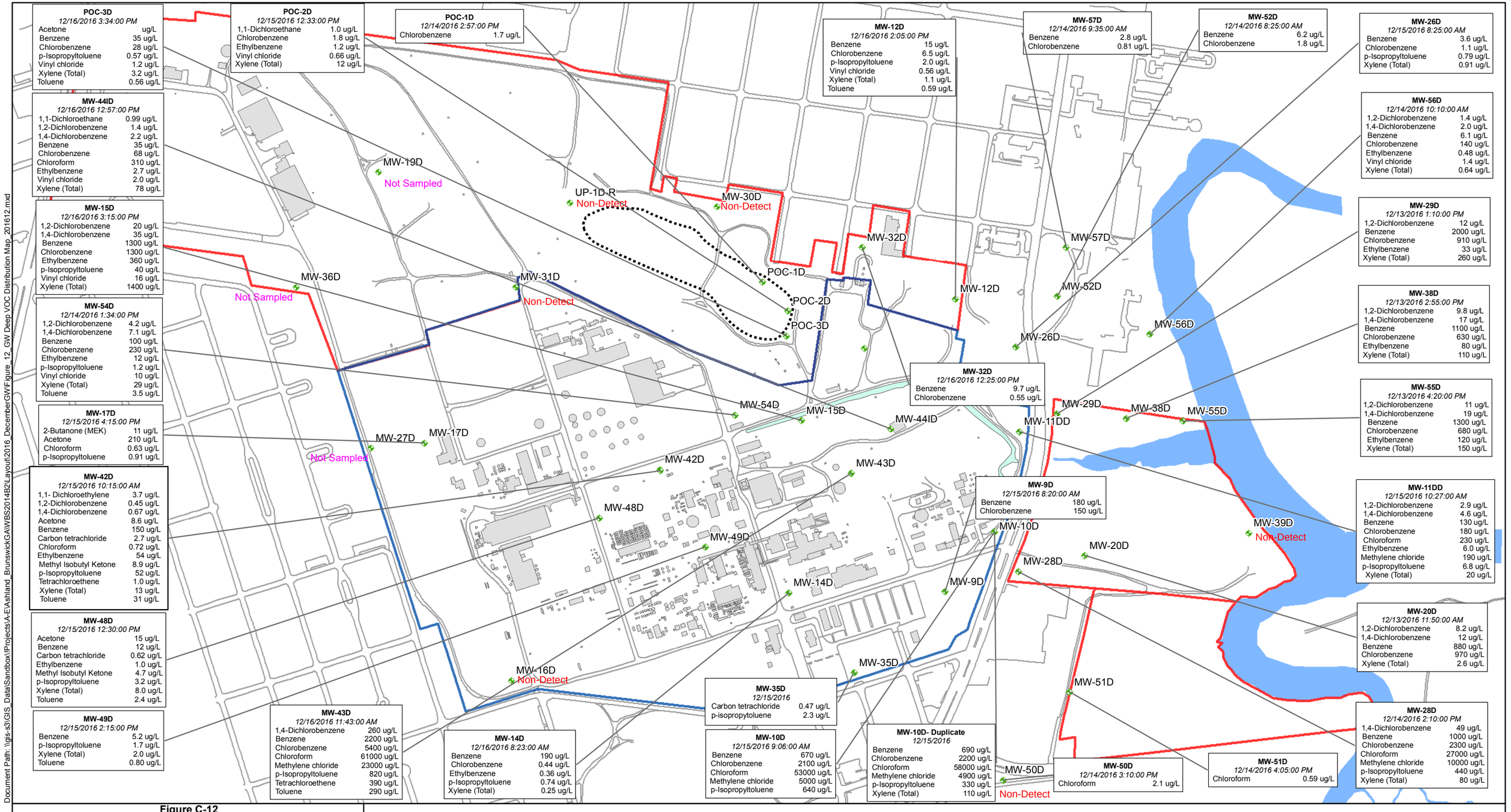
Legend
- Intermediate Zone of Upper Unit
- Closed Surface Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N

Document Path: \\gis-s3\GIS_Data\Sandbox\Projects\A-E\Ashland_BrunswickGA\WBS2014B2\Layout\2016_DecemberGWFigure_10_GW Intermediate VOC Distribution Map_201612.mxd



Document Path: \\gis-s3\GIS_Data\Sandbox\Projects\A-EVashland_BrunswickGAWBS2014B2\Layout\2016_DecemberGWFigure_12_GW Deep VOC Distribution Map_201612.mxd

Figure C-12
December 2016 Surficial Aquifer, Deep Zone of Upper Unit-
VOCs Distribution
Hercules LLC and Pinova, Inc.
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
3/8/2017	CW	1 inch = 500 feet

antea group

Legend

- Deep Zone of Upper Unit Wells
- Closed Surface Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N

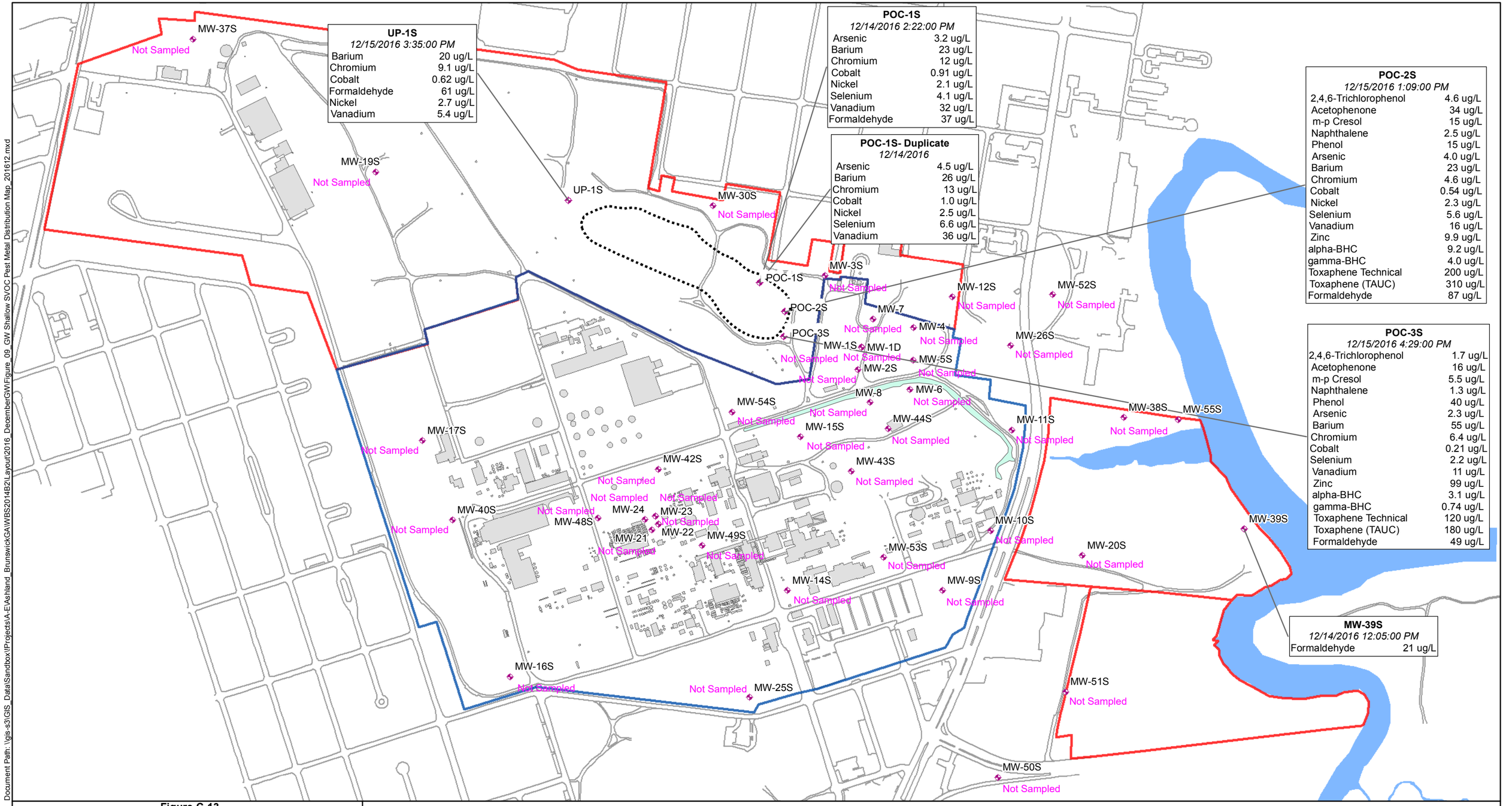


Figure C-13
Shallow Aquifer Zone
SVOCs, Formaldehyde, Pesticides, and Metals Distribution
Hercules LLC and Pinova, Inc
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
11/20/2017	CW	1 inch = 500 feet

antea group

Legend

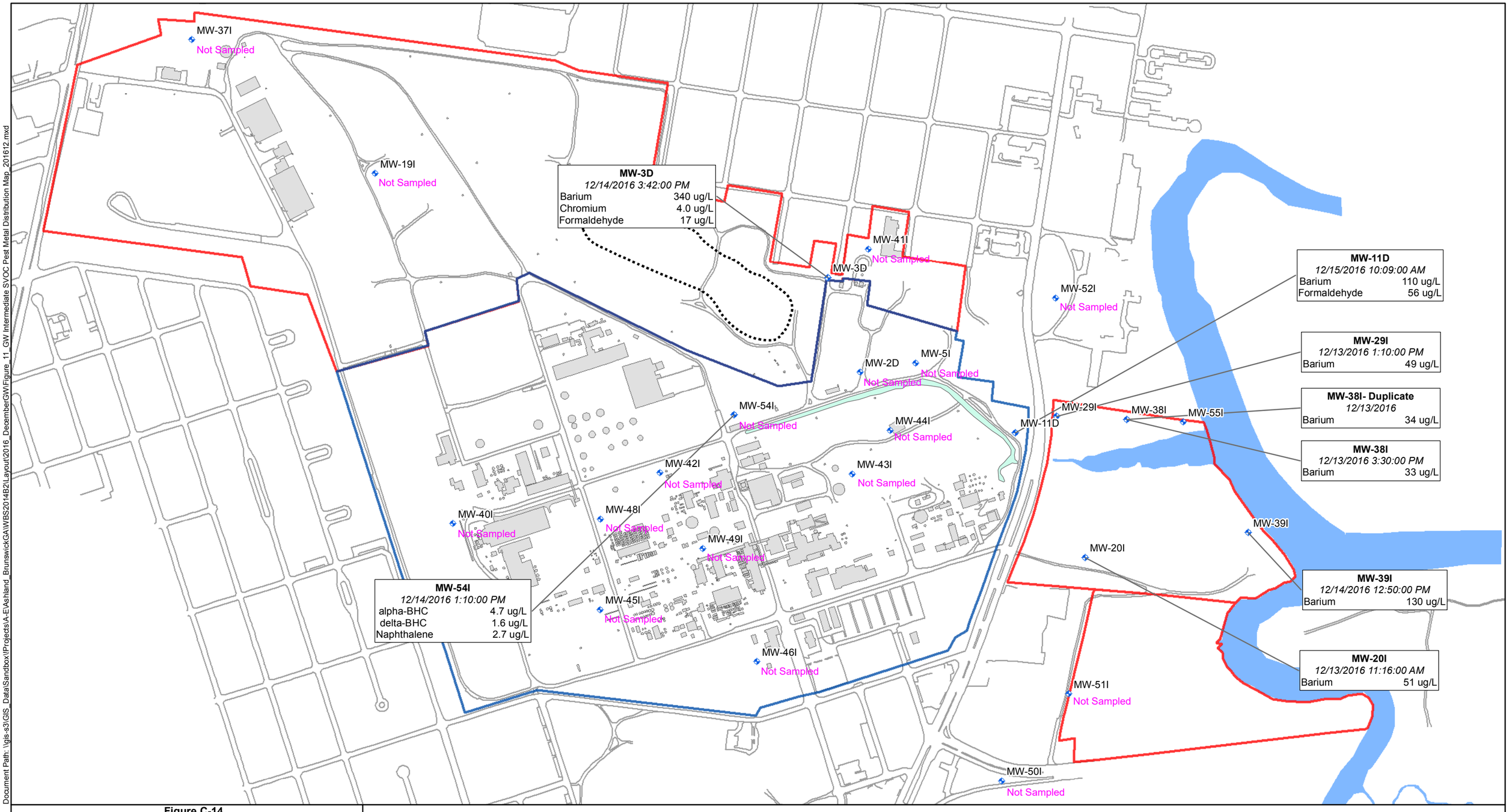
- Shallow Wells
- Former Toxaphene Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N

Document Path: \\gis-s3\GIS_Data\Sandbox\!Projects\A-E\Ashland_BrunswickGA\WBS2014B42\Layout\2016_DecemberGW\Figure_09_GW Shallow SVOC Pest Metal Distribution Map_201612.mxd



Document Path: \\gis-s3\GIS_Data\Sandbox\IProjects\A-E\Ashland_Brunswick\GA\WBS2014B2\Layout\2016_DecemberGW\Figure_11_GW Intermediate SVOC Pest Metal Distribution Map_201612.mxd

Figure C-14
Intermediate Aquifer Zone
SVOCs,Formaldehyde, Pesticides, and Metals Distribution
Hercules LLC and Pinova, Inc
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
11/20/2017	CW	1 inch = 500 feet

antea group

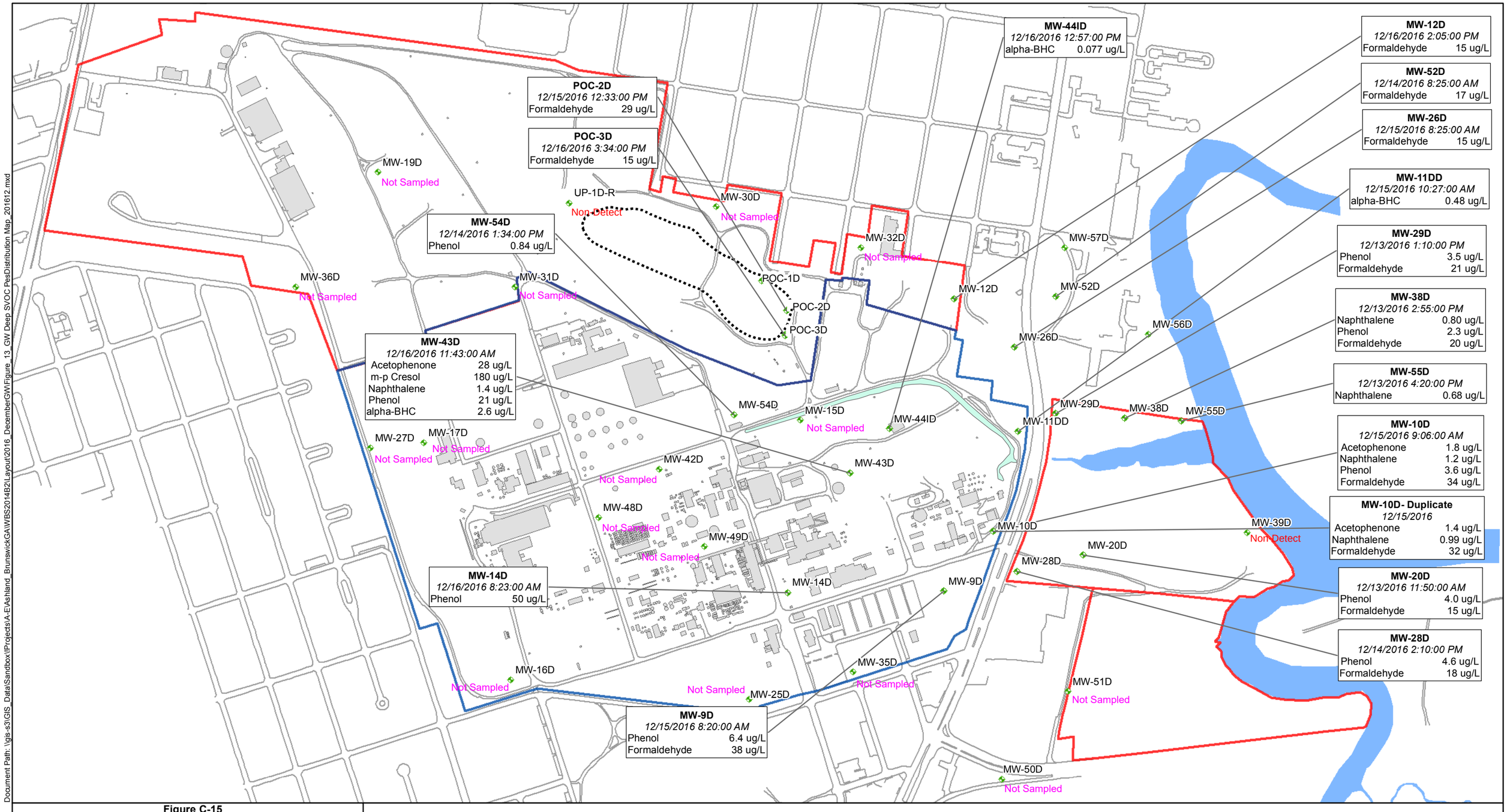
Legend

- Intermediate Wells
- Former Toxaphene Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N



Document Path: \\gis-s3\GIS_Data\Sandbox\Projects\A-E\Ashland_BrunswickGA\WBS2014B2\Layout\2016_DecemberGW\Figure_13_GW Deep_SVOC PesDistribution Map_201612.mxd

Figure C-15
Deep Aquifer Zone
SVOC, Formaldehyde Distribution, and Pesticides
Hercules LLC and Pinova, Inc
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
11/20/2017	CW	1 inch = 500 feet

antea group

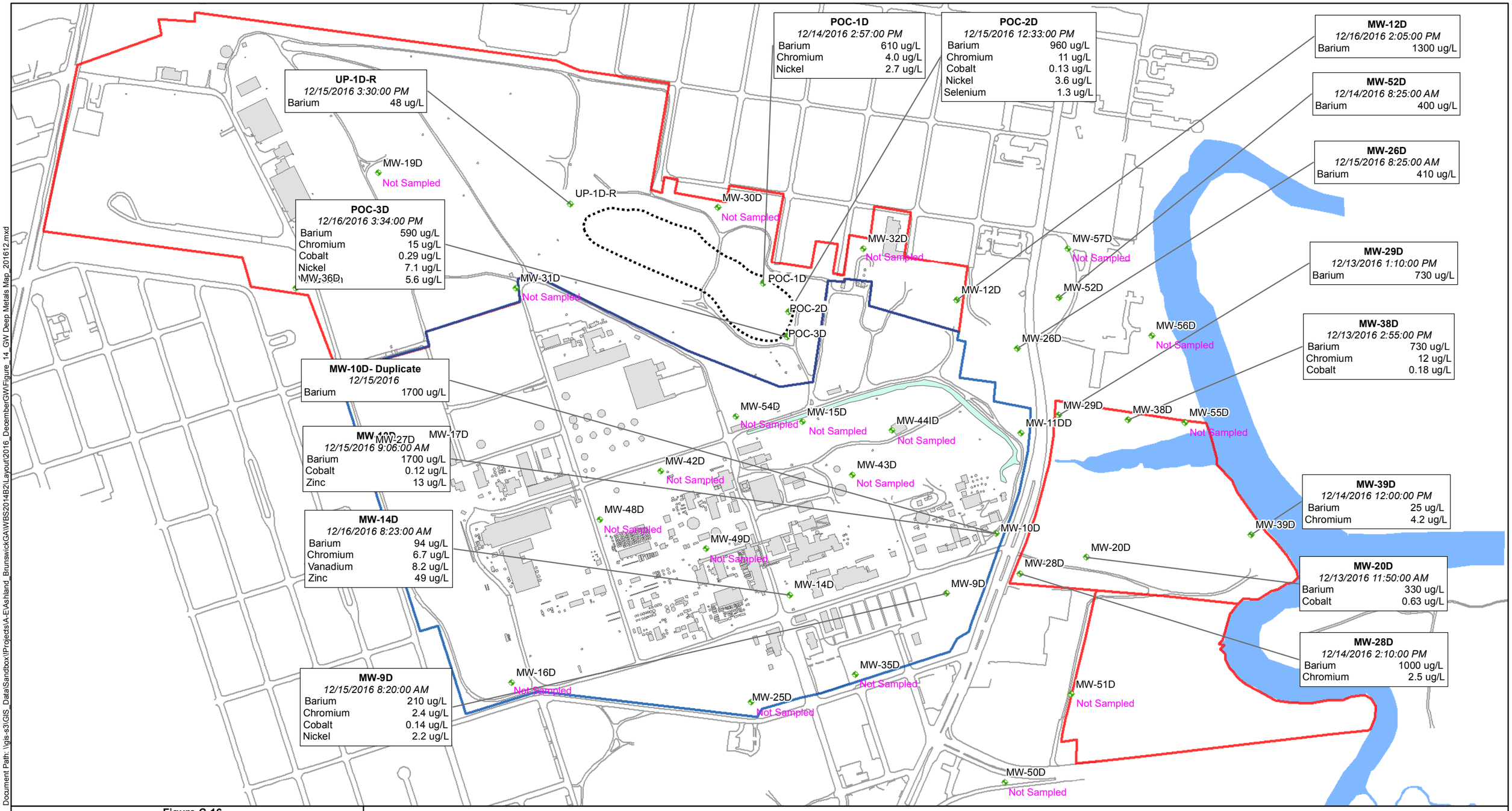
Legend

- Deep Wells
- Former Toxaphene Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N



Document Path: \\gis-s3\GIS_Data\Sandbox\Projects\A-E\Ashland_BrunswickGA\WBS2014B2\Layout\2016_DecemberGW\Figure_14_GW Deep Metals Map_201612.mxd

Figure C-16
Deep Aquifer Zone
Metals Distribution
Hercules LLC and Pinova, Inc
2801 Cook Street
Brunswick, GA

PROJECT NO.	PREPARED BY	REF SCALE
190106854A	SAA	1:6,000
DATE	REVIEWED BY	MAP SCALE
11/20/2017	CW	1 inch = 500 feet

antea group

Legend

- Deep Wells
- Former Toxaphene Impoundments
- N Street Ditch
- Pinova Property
- Hercules Property
- Road
- Site Building
- Creek

Notes:
µg/L - micrograms per liter
Data qualifiers are not included on this figure (see Table 5)
Non-Detect - no target analytes detected during December 2016 groundwater monitoring event.

0 250 500 1,000 1,500 2,000 Feet

N