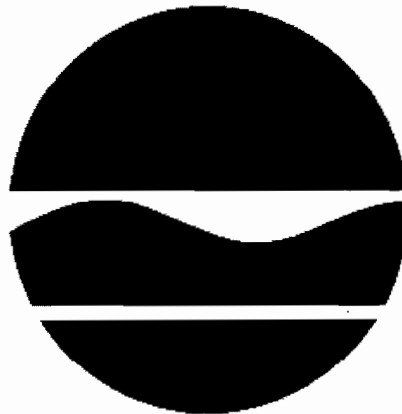


REVISED DECISION DOCUMENT

Greif Bros. Corporation
Voluntary Cleanup Program
Operable Unit 01B - Former Varnish UST Soil
Tonawanda, Erie County
Site No. V00334
September 2010



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Greif Bros. Corporation
Voluntary Cleanup Program
Operable Unit 01B - Former Varnish UST Soil
Tonawanda, Erie County
Site No. V00334
September 2010

Statement of Purpose and Basis

This document presents the revised remedy for the Greif Bros. Corporation site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law, and applicable guidance.

This revised decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Greif Bros. Corporation and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy


The elements of the selected remedy are as follows:

Excavation and off-site disposal of soil in area of former varnish pit within active and operating plant building.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

9/27/10
Date


Robert Knizek, Director
Remedial Bureau E

REVISED DECISION DOCUMENT

GRIEF BROS. SITE

Operable Unit 01B - Former Varnish UST Soil

Town of Tonawanda / Erie County / Site #V-00334-9 / September 2010

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

The purpose of this document is to describe the progress of the cleanup at the Grief Bros. Site and to describe a change in the Site remedy. The Grief Bros. site is located at 2122 Colvin Blvd in the Town of Tonawanda, Erie County. In January 2010, the New York State Department of Environmental Conservation issued a Decision Document which selected a remedy to clean up the Site. The original remedy identified in the Decision Document included:

1. **In-Situ thermal treatment of former Varnish UST soil,**
2. Preparation and implementation of a Site Management Plan (SMP) including an environmental easement to restrict site use to commercial,
3. Sub-slab de-pressurization of building,
4. Low vacuum enhancement of DNAPL recovery,
5. Monitored Natural Attenuation (MNA) of groundwater, and
6. IRMs of the former drum storage area, DNAPL and Varnish Pit removal –
Completed

Item 1, In-Situ thermal treatment of former Varnish UST soil is the subject of this explanation of fundamental difference. The remaining remedial activities are unchanged and are being implemented. The future use of the site will remain restricted commercial as indicated in the January 2010 Decision Document.

During the pre-remediation investigation to facilitate the installation of equipment and facilities necessary for the thermal heating equipment significant difference in field conditions (level of contamination and depth of contamination) was found. This indicated that the selected remedial measure, In-Situ thermal treatment for the soil, would not provide the treatment necessary to achieve the remedial goals. Additional soil and groundwater samples were collected and it was proposed that the remedy for former Varnish UST soil be changed to excavation with off-site disposal at an approved disposal facility. A report titled "**Technical Memorandum: Proposed Change in Selected Remedy in the Former Varnish UST Area**" was prepared and submitted to the New York State Department of Environmental Conservation in August 2010.

This Revised Decision Document (RDD) will become part of the Administrative Record for this Site. The information here is a summary of what can be found in greater detail in documents that have been placed in the following repositories:

Town of Tonawanda Public Library OR
160 Delaware Road
Kenmore, NY 14217
Telephone: 716-873-2842

NYSDEC Region 9 Office
270 Michigan Avenue
Buffalo, NY 14203
Telephone: 716-851-7220
(Please call for an appointment)

Although this is not a request for comments, interested persons are invited to contact the Department's Project Manager for this site to obtain more information or have questions answered.

2.0 SITE DESCRIPTION AND ORIGINAL REMEDY

2.1 Site History, Contamination, and Selected Remedy

This site (see Figure 1) includes a one-story industrial building located on approximately 25 acres in a mixed industrial and residential area in the Town of Tonawanda, Erie County. The site is located on Colvin Blvd approximately one-quarter mile south of I-290. This site is an active manufacturing facility that Greif Bros. acquired from Sonoco in 1998 and continued the manufacture of fiber drums. The surrounding parcels are used for a mixed commercial, recreational and residential uses. To the north of the site is vacant land once used as a railroad siding and residential apartments. To the east, directly across the street from the site on Colvin Blvd are single family residential homes. To the south is a commercial office building and a local park with sport fields, and to the west is a business park and railroad sidings. Operations began on this site in 1948. The facility was used to produce fiber drums, some with metal lids and rims. Use of metal lids and rims was discontinued in 1995. Environmental investigations of the site were initially performed in connection with the purchase of the site by Greif Bros. A Phase II site investigation was performed in April 1998 and followed up by a Phase III investigation in December 1998. Metal degreasing and varnishing operations for the lids and rims led to releases of contaminants. Soils and groundwater are contaminated with Volatile Organic Compounds (VOCs), primarily trichloroethene (TCE) and 1,1,1-trichloroethane (1,1,1-TCA). Semi-Volatile Organic Compounds (SVOCs) and Total Petroleum Hydrocarbons (TPH) have also been found. Significant amounts of Dense Non Aqueous Phase Liquid (DNAPL) were found under the building slab in the former varnish pit area (Figure 2). Grief Bros and the former owner Sonoco entered into a Voluntary Cleanup Agreement to investigate and remediate the site. A remedial investigation was conducted in 2001 followed by a data gap investigation in December 2002. Interim remedial Measures (IRMs) have been implemented to address soil contamination and to remove DNAPL from the subsurface. In the fall of 2005, an IRM to remove grossly affected soil in the former drum storage area was implemented. Approximately 1767 tons of contaminated soil were removed and disposed off site. Soil confirmation sampling indicated that the remaining soil meets the Part 375 Soil Cleanup Objectives (SCOs) for commercial use. Also, approximately 1600 gallons of DNAPL have been removed from the environment since August 2005 thru a DNAPL removal IRM system. Operation of the DNAPL recovery system and low-vac vapor recovery enhancement is continuing. Former Varnish Pit removal IRM began in August 2009. An additional 120 gallons of DNAPL was removed from below the pit floor as part of the varnish pit removal project. The Varnish Pit Removal IRM was completed in October 2009, and a completion report will be submitted. A Remedial Action Work Plan (RAWP) Design was approved in January 2010.

Nature of Contamination

Contamination was identified during the Remedial Investigation of this site. The contamination present on site represents a threat to public health and the environment, requiring a remedial program to address the contamination identified below. Investigations have determined that soil and groundwater contamination is present on site. The main contaminant is TCE with its associated breakdown products. DNAPL was also found in the area of the former varnish pit located inside the building.

The soil and groundwater contamination is limited to the plant property. There are no indications of any off-site migration of site related contaminants.

Extent of Contamination

Source areas/Waste disposal - Soil and groundwater contamination including DNAPL resulted from the operation of the former varnish pit inside the building, associated former underground storage tanks and a drum storage area.

Surface soil - Surface soil in the former drum storage area was contaminated with VOCs and SVOCs .

Subsurface soil - Sub-surface soil in the former varnish pit area, UST area and drum storage area was contaminated with VOCs and SVOCs .

Groundwater- VOC groundwater contamination and DNAPL is present in the former varnish pit and UST area. Groundwater contamination is limited to the building footprint. No offsite groundwater contamination has been identified.

Sediment -No sediment contamination was identified on site

Surface water - No surface water was present on site

The proposed remedy will address subsurface soil contamination due to VOC and SVOC contamination in the former varnish pit and UST area (See Figure 2). Previous IRM's have removed 1767 tons of surface and subsurface soil contamination in the drum storage area as well as removing approx 1600 gallons of DNAPL from the varnish pit area (See Figure 2).

Description of the Remedy

Based on the results of the Focused Feasibility Study and the criteria identified for evaluation of alternatives, the NYSDEC has selected a remedy for this VCP site. The components of the remedy set forth in the Remedial Work Plan and shown on the attached Figure #2, are as follows:

1. **In-Situ thermal treatment of former Varnish UST soil**, (subject of this RDD)
2. Preparation and implementation of a SMP including an environmental easement to restrict site use to commercial,
3. Sub-slab de-pressurization of building,
4. Low vacuum enhancement of DNAPL recovery,
5. Monitored Natural Attenuation (MNA) of groundwater, and
6. IRMs of the former drum storage area, DNAPL and Varnish Pit removal - **Completed**

3.0 CURRENT STATUS

Remedial construction of the In-Situ Thermal Treatment portion of the remedy began in January 2010. An asphalt cap was installed over the Former Varnish UST area to provide a stable work area, act as a barrier to vapor migration and increase the effectiveness of the planned soil vapor extraction component of the In-Situ thermal treatment remedy. Eight remediation wells were installed to facilitate placement of the radio frequency antennas for heating the two planned treatment cells. Soil and groundwater samples were collected from the new wells to characterize pre-remediation sub-surface conditions in the Varnish UST area. Review of the data generated during the pre-remediation characterization effort indicates that the area requiring remediation is shallower and lower in volatile organic contamination than originally thought. Therefore, remedial construction activities in the Former Varnish UST area are currently on hold pending review and approval of the proposed changes presented in the Technical Memorandum.

The other elements of the selected remedy are being implemented as described in the January 2010 Decision Document.

4.0 DESCRIPTION OF FUNDAMENTAL DIFFERENCE

4.1 New Information

Pre-remediation soil and groundwater samples were collected in the Former Varnish UST area from the eight new monitoring wells installed as part of the original remedial program. The locations of these wells are shown on Figures 3 thru 9.

Soil samples were collected at various depths during the well installation process. The results of the pre-remediation soil testing are summarized in Table 1. Data indicates that VOC concentrations are below the NYSDEC Part 375 Restricted Commercial Soil Cleanup Objectives (SCOs). However, the detected concentrations of VOC contaminants indicate that the soil in the Former Varnish UST area is a source of potential groundwater contamination.

The additional number of samples collected during the pre-remedial characterization effort has facilitated a more thorough mapping of the depth and extent of affected soil in the Former Varnish UST Area. In addition, based on the results of the soil sampling, groundwater evaluation was performed in April 2010 to evaluate groundwater gradient and concentration of VOCs in the Former Varnish UST area, refer Figures 10 and 11, including the adjacent area beneath the building. Laboratory analysis of the April 2010 groundwater sampling data is summarized in Table 3, and confirms the presence of VOC contamination in the groundwater.

An updated remedial assessment of the In-Situ Thermal Treatment pre-remediation characterization results and the additional groundwater data has been performed. Review of the new data confirms that the area requiring remediation is shallower and lower in VOC concentration than originally thought. Therefore, implementation of the originally proposed remedy in the Former Varnish UST area would result in treatment of an area which does not require treatment and would not address the area of highest concentrations. Revision of the proposed remedial approach is required to facilitate protection of human health and the environment.

It is recommended that the excavation and off-site disposal (Alternative 2) see Figure 12, of the contaminated soil in the Former Varnish UST area, as described in the Focused Feasibility Study report dated 2009, be implemented.

4.2 Comparison of Changes with Original Remedy

The fundamental difference of the new proposed remedy for the Former Varnish UST Area compared to the remedy selected in the 2009 Remedial Action Work Plan (RAWP) is that the scope of the remedial technology will be modified from the In-Situ Thermal Treatment to excavation and off-site disposal. Confirmation samples will be collected from the walls and floor after excavation followed by a chemical amendment consisting of calcium peroxide and sodium persulfate, or equivalent, will be applied to treat any residual soil contamination. Refer to Table 4 for a comparison of the original remedy and the proposed change.

The excavation and off-site disposal remedy will remove the contaminant source and thus reduce the toxicity, mobility and volume of contaminants in the Former Varnish UST area similar to the In-Situ Thermal Treatment technology. The difference is that the contaminant source will be removed as opposed to treated in place.

Excavation and off-site disposal will result in a significant decrease in the cost of the remedy and the estimated time frame to complete the remediation in the former Varnish Pit UST area. Previous concerns with the building structural stability due to the depth of the suspected contamination, which led to the selection of the In-Situ Thermal Treatment technology, are no longer valid. With the shallower contamination zone, methods to protect the building foundation are no longer necessary; Along with the reduced volume of contaminated soil will be a significant reduction in overall cost to remediate the Varnish UST area. It is estimated that approximately 700 CY of contaminated soil will be excavated and disposed off site with this revised remedy which represents an approximate 43% reduction in contaminated soil volume as compared to the original estimate.

The proposed change in remedy in the Former Varnish UST area is protective of human health and the environment and meets the remedial action objectives defined in the previously approved RAWP.

5.0 SCHEDULE AND MORE INFORMATION

It is estimated that mobilization for the remedial soil excavation will begin in October 2010, refer Figure 13. Soil excavation, off-site transport and disposal, confirmation samples, chemical amendment to treat residual contamination, backfilling and site restoration including replacement monitoring wells will take approximately 4 weeks to complete. The first round of post remedial groundwater sampling is anticipated for December 2010. The results of the remedial activity at the Grief Bros site will be presented in a Final Engineering Report expected to be available by June 2011.

During the Public comment period for the RAWP, two comments were received expressing concern with disposal of waste at an off-site facility and the associated truck traffic on local streets. It was explained at that time that the selected remedy, In-Situ Thermal Treatment, would not generate a significant amount of waste for off-site disposal. This would no longer be the case with the proposed revised remedy for excavation and off-site disposal. An estimated 700 CY of contaminated soil will be removed with an equal amount brought back on site for restoration. Additional comments and objections to this change could be expected from the community. If you have questions or need additional information you may contact any of the following:

NYSDEC Project Manager

Michael Hinton, P.E.
NYSDEC Region 9
270 Michigan Avenue
Buffalo, New York 14203
Telephone: 716-851-7220
E-mail: mjhinton@gw.dec.state.ny.us

NYSDOH Project Manager

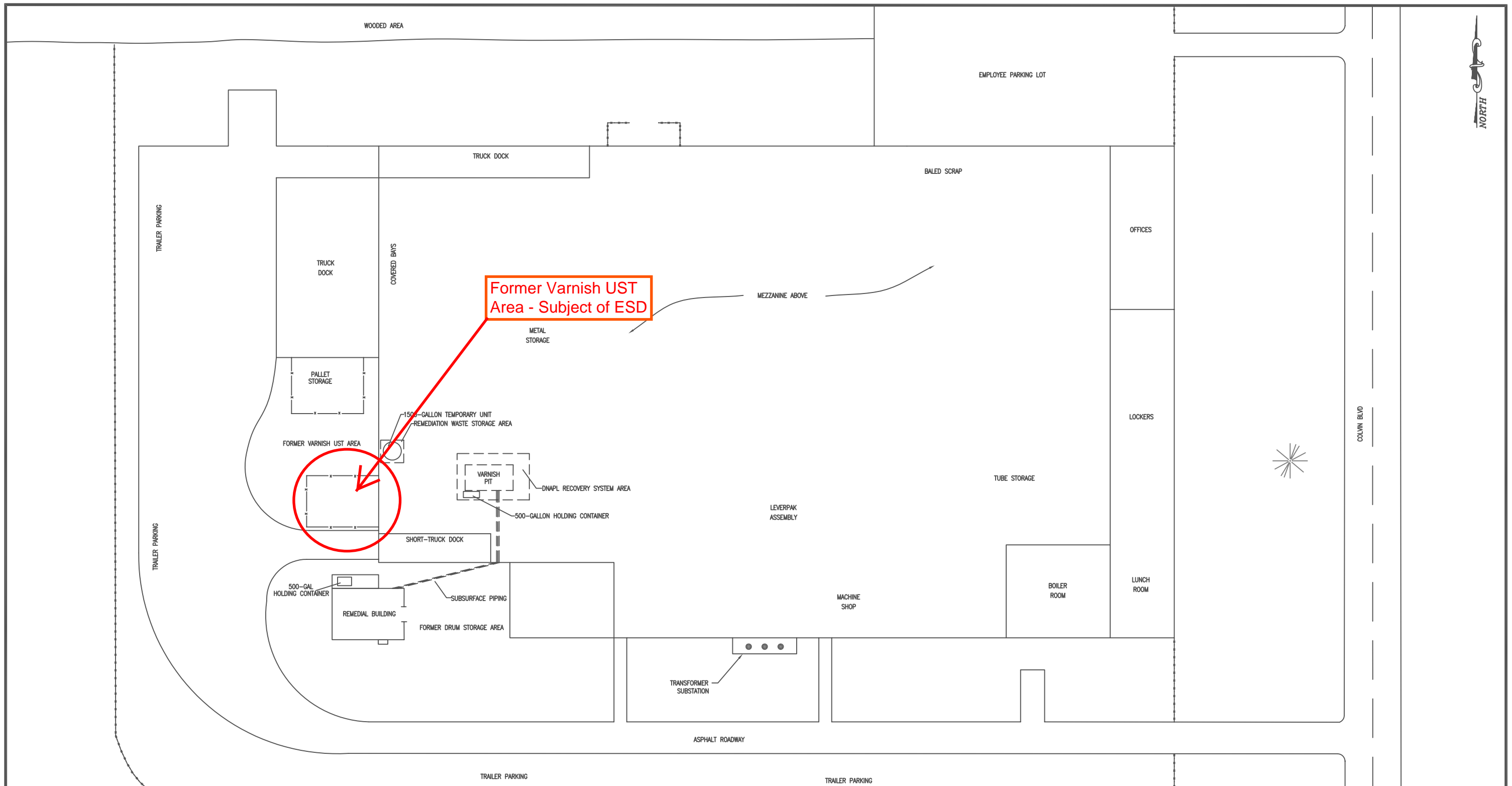
Matthew Forcucci
NYSDOH Western Regional Office
584 Delaware Avenue
Buffalo, NY 14202-1295
Telephone: 716-847-4501
E-Mail: mjf13@health.state.ny.us

NYSDEC Citizen Participation Specialists

Mark Baetzhold
NYSDEC Region 9
270 Michigan Avenue
Buffalo, New York 14203
Telephone: 716-851-7220
E-mail: mjhinton@gw.dec.state.ny.us

9/27/10
Date


Robert Knizek P.E. Director Remedial Bureau E
Division of Environmental Remediation - Albany



Former Varnish UST Area - Subject of ESD

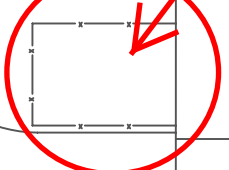


Figure 1

Site Layout Map
Greif Facility
Tonawanda, New York
NYSDEC VCP# V00334-9

PREPARED FOR
Sonoco Products Company

 ERM 5788 WIDEWATERS PARKWAY DEWITT, NEW YORK 13214	SCALE 1"=60'	FIGURE 1
	DATE 5/07	

PROJECT #051293

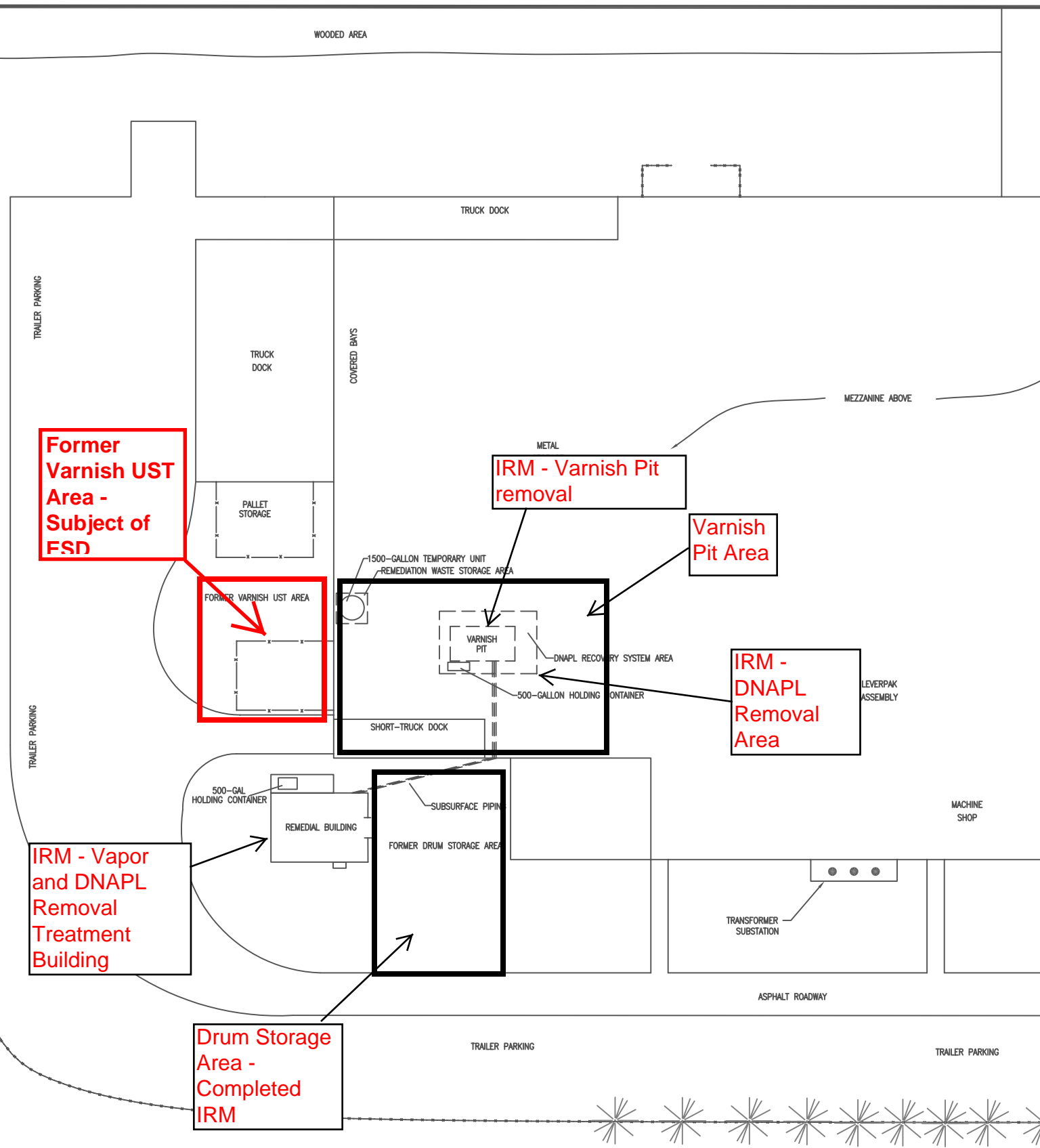
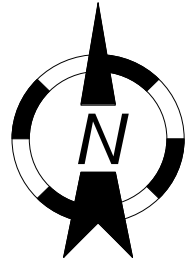
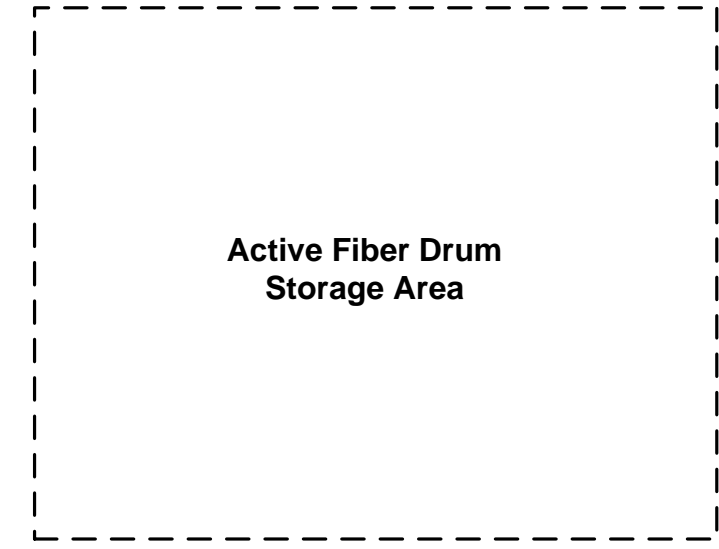


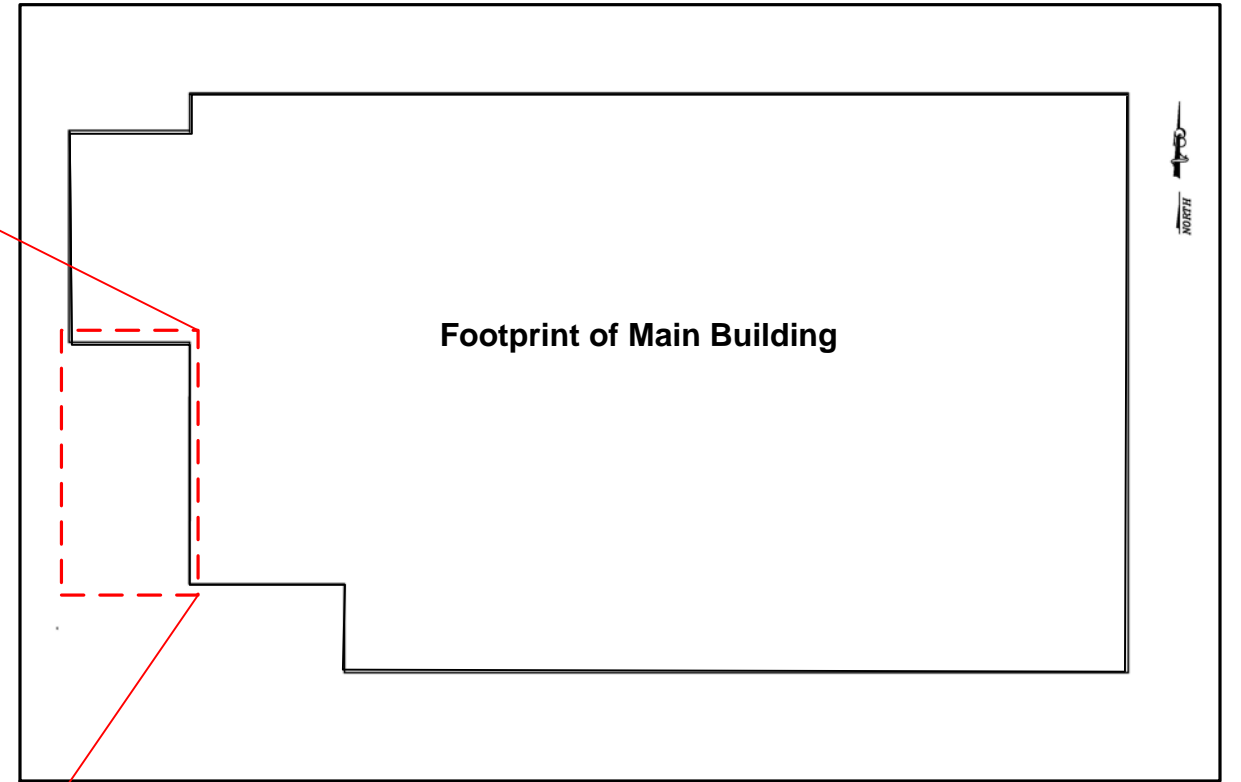
Figure 2



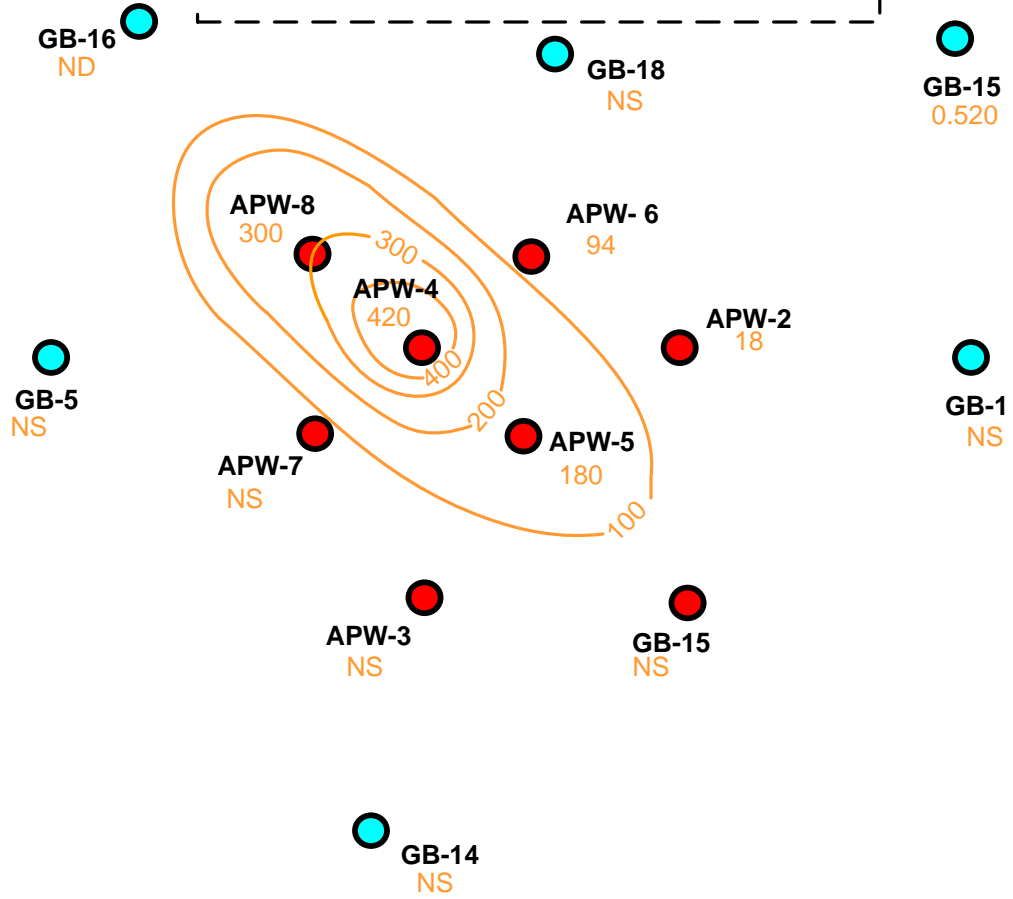
Concentration of total xylenes in soil 4 to 8 ft bgs.



Active Fiber Drum Storage Area

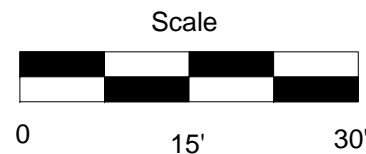


Footprint of Main Building

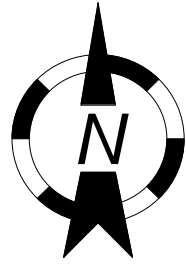


Legend

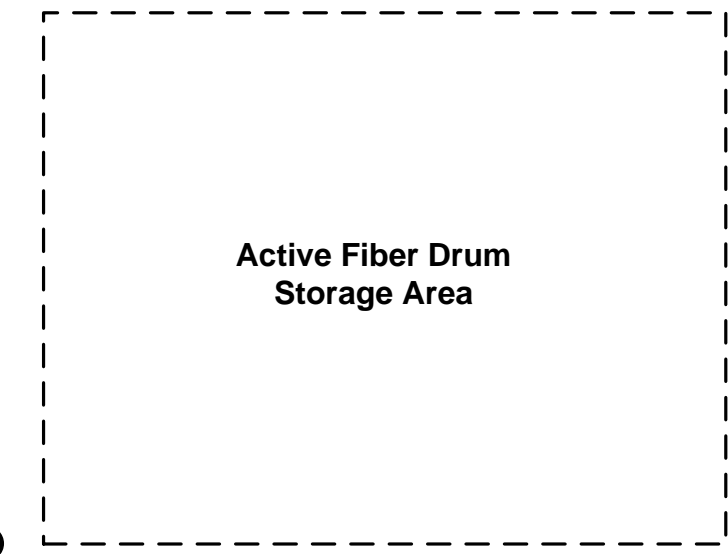
- APW-2 Antenna Placement Well
- GB-15 Soil boring from previous investigations
- 300 Concentration of total xylenes (mg/kg)
- - - Fence
- Isoconcentration of total xylenes, contour interval 100 mg/kg; dashed where inferred
- (ND) Not Detected above laboratory reporting limit of 10 µg/L
- (NS) Interval not sampled due to lower detections of VOC during field screen with a calibrated photoionization detector, or a different interval was sampled.



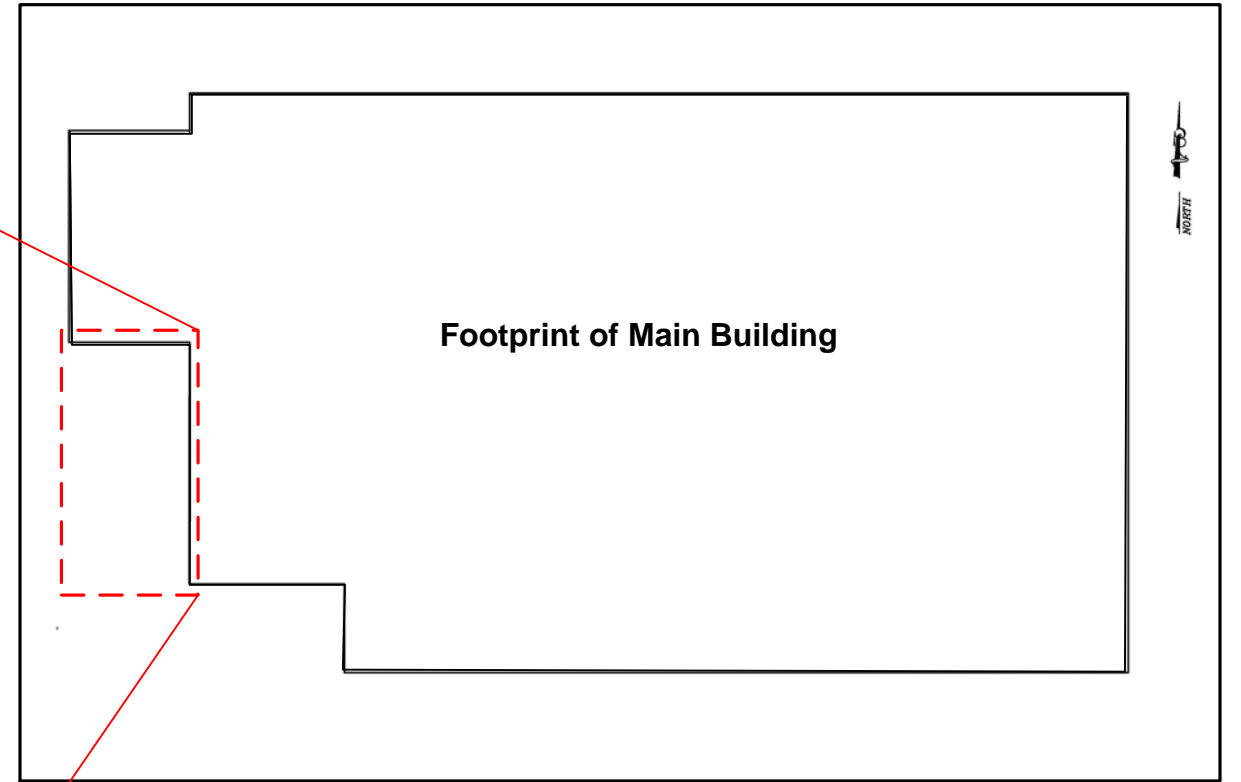
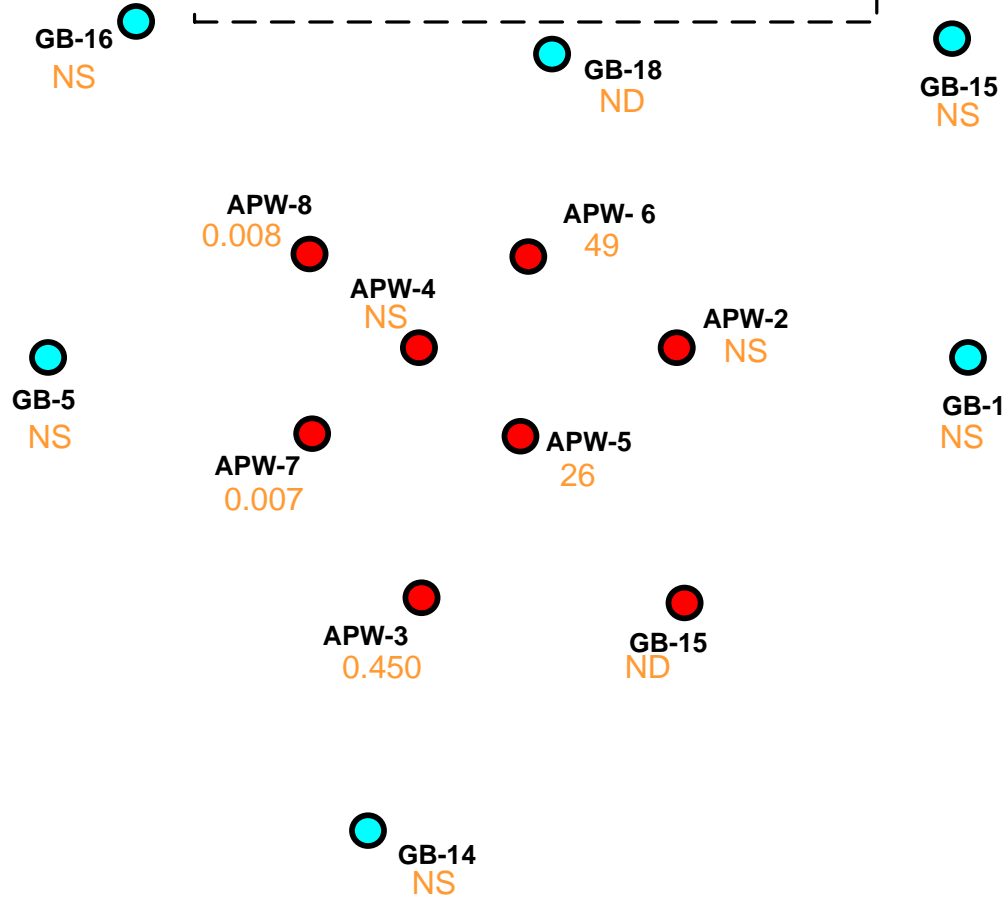
Total Xylenes in Soil 4 to 8 ft bgs- Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
	Scale	Figure
	See Bar Scale	3
	Date	
	10 Mar 2010	



Concentration of total xylenes in soil 9 to 12 ft bgs.



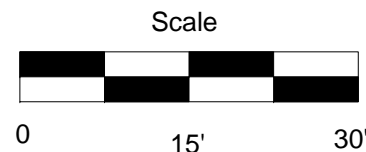
Active Fiber Drum Storage Area



Footprint of Main Building

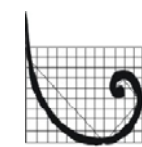
Legend

- APW-2 Antenna Placement Well
- GB-15 Soil boring from previous investigations
- 300 Concentration of total xylenes (mg/kg)
- Fence
- Isoconcentration of total xylenes, contour interval 100 mg/kg; dashed where inferred
- (ND) Not Detected above laboratory reporting limit of 10 µg/L
- (NS) Not sample as a shallower sample was collected at an interval with higher VOC concentration detected during field screening.



Total Xylenes in Soil 9 to 12 ft bgs- Former Varnish UST Area
Greif Facility- Tonawanda, New York

Prepared For: Sonoco Products Company

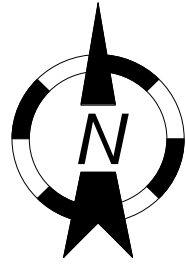


ERM

Scale
See Bar Scale

Date
10 Mar 2010

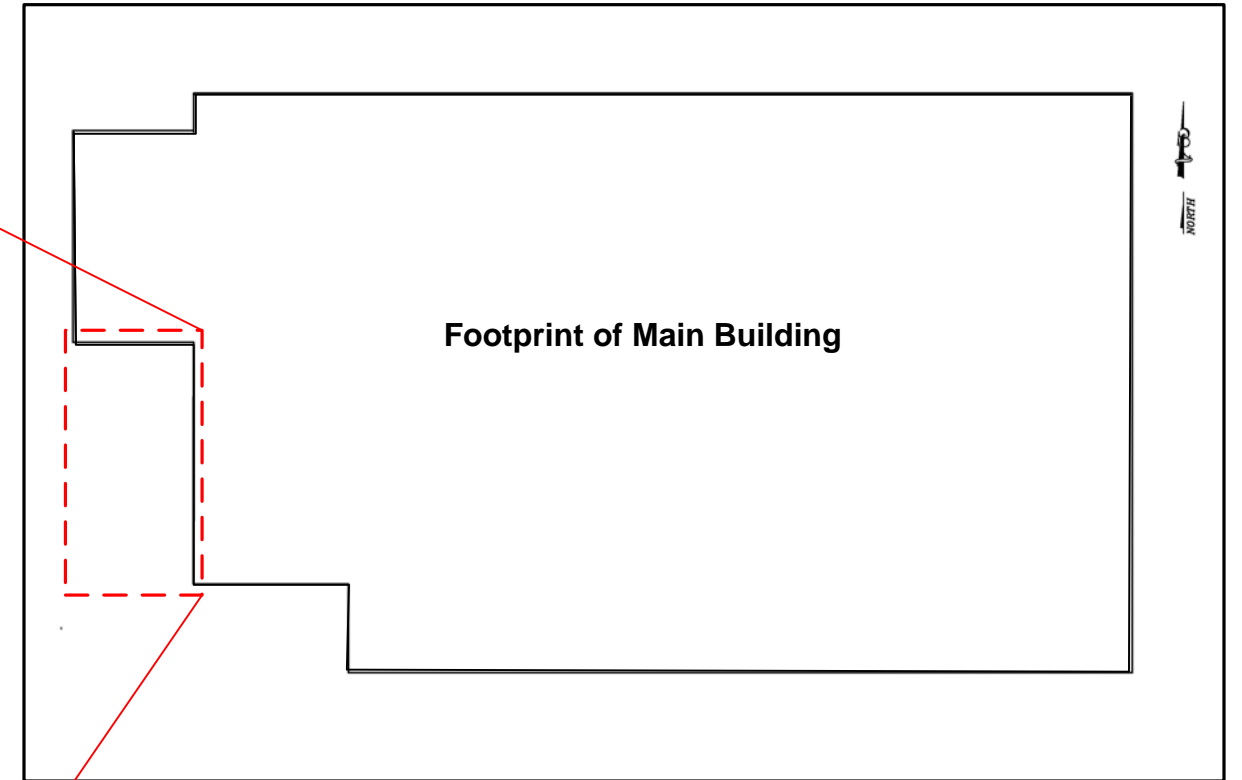
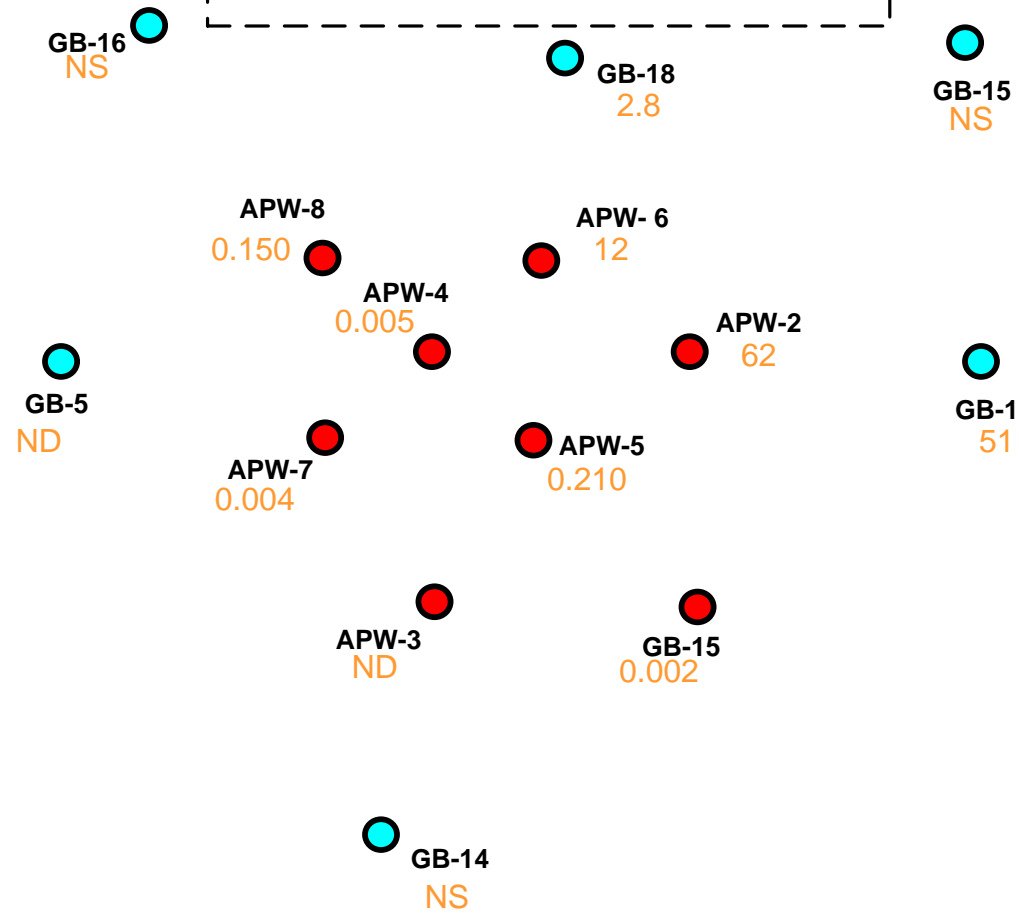
Figure
4



Concentration of total xylenes in soil 14-17 ft bgs.



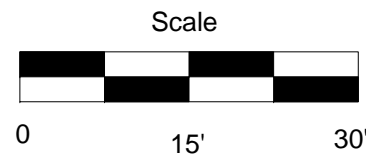
Active Fiber Drum Storage Area



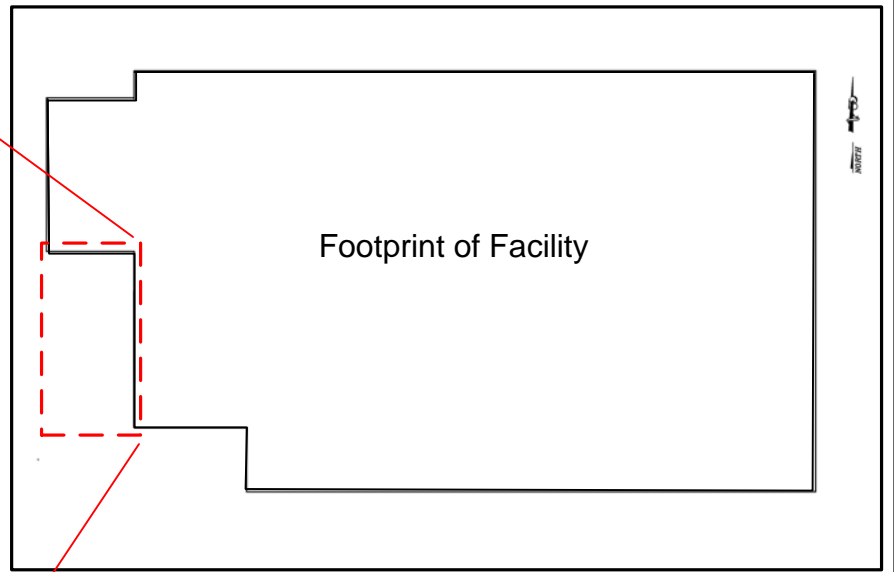
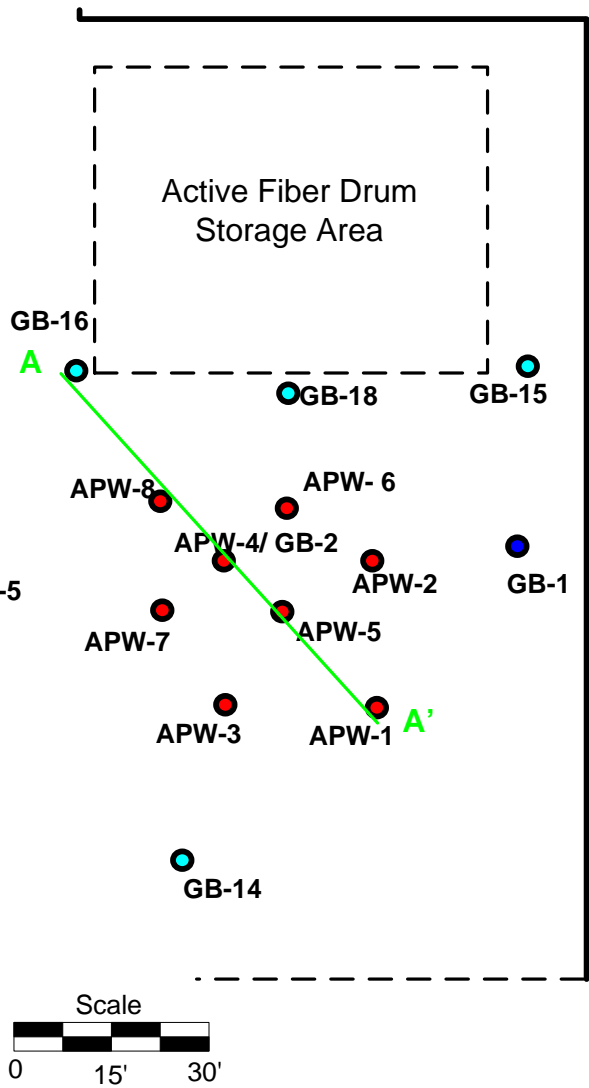
Footprint of Main Building

Legend

- APW-2 Antenna Placement Well
- GB-15 Soil boring from previous investigations
- 300 Concentration of total xylenes (mg/kg)
- Fence
- Isoconcentration of total xylenes, contour interval 100 mg/kg; dashed where inferred
- ND Not Detected above laboratory reporting limit of 10 µg/L
- NS Interval not sampled due to lower detections of VOC during field screen with a calibrated photoionization detector, or a different interval was sampled.

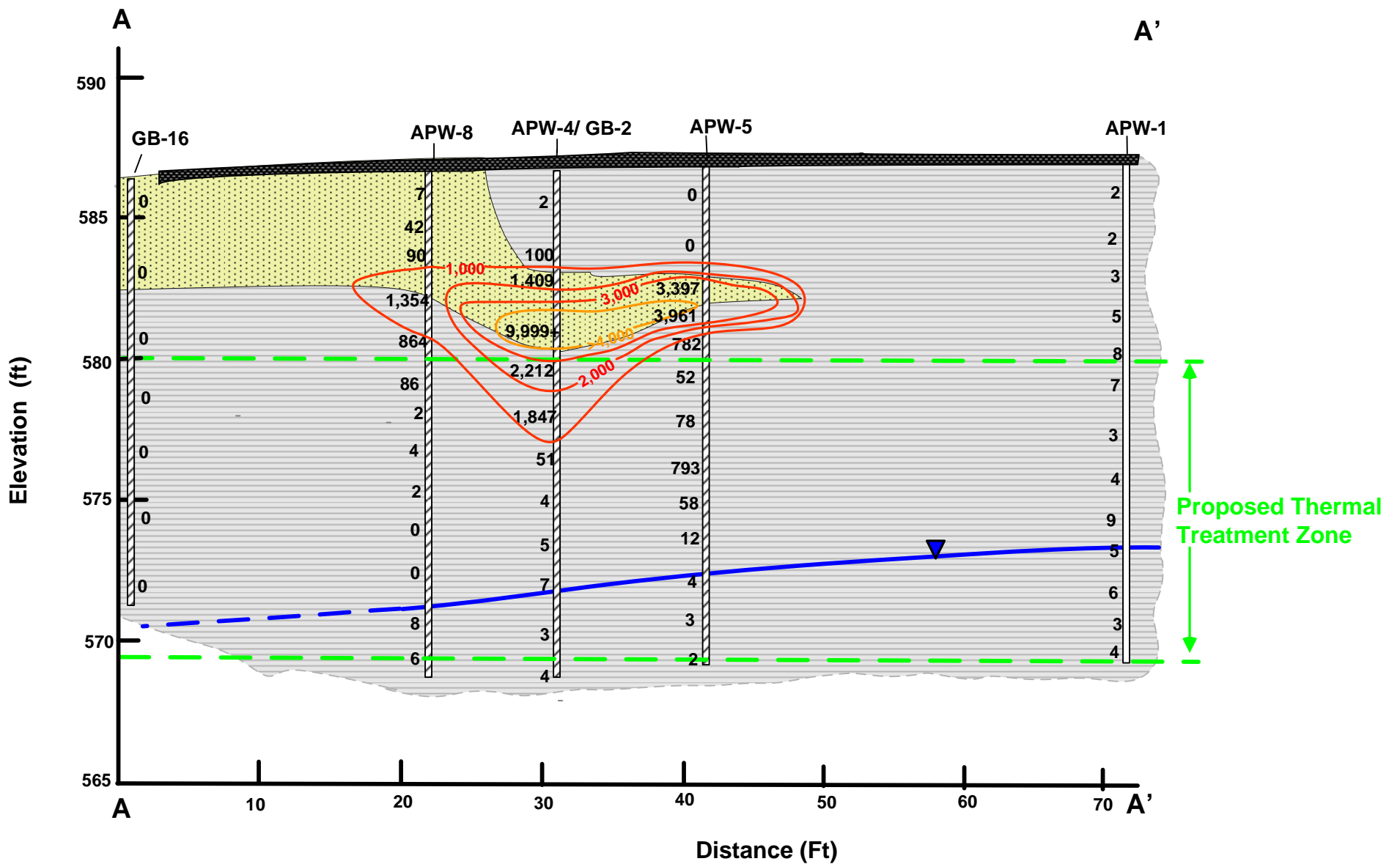


Total Xylenes in Soil 14 to 17 ft bgs- Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
	Scale	Figure
	See Bar Scale	6
	Date	
	10 Mar 2010	



Legend

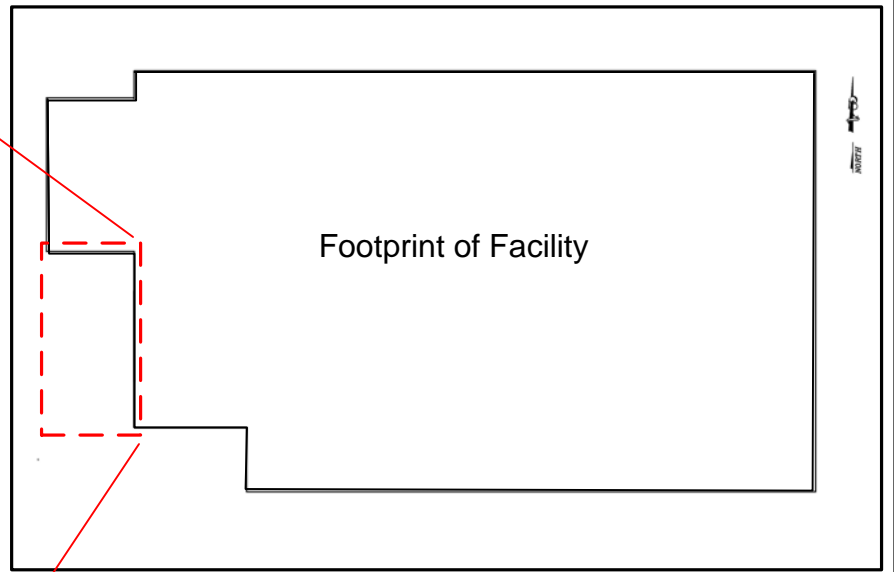
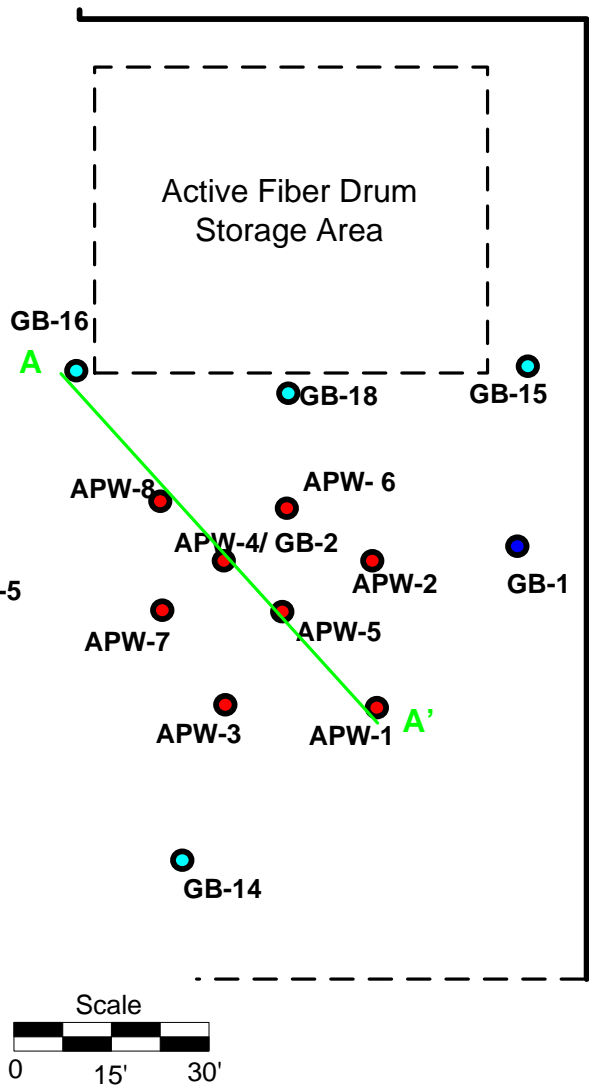
- Antenna Placement Well
APW-1
- Soil Boring from Phase II Investigation
GB-1
- Soil Boring from Phase III Investigation
GB-15
- - - Fence



Legend

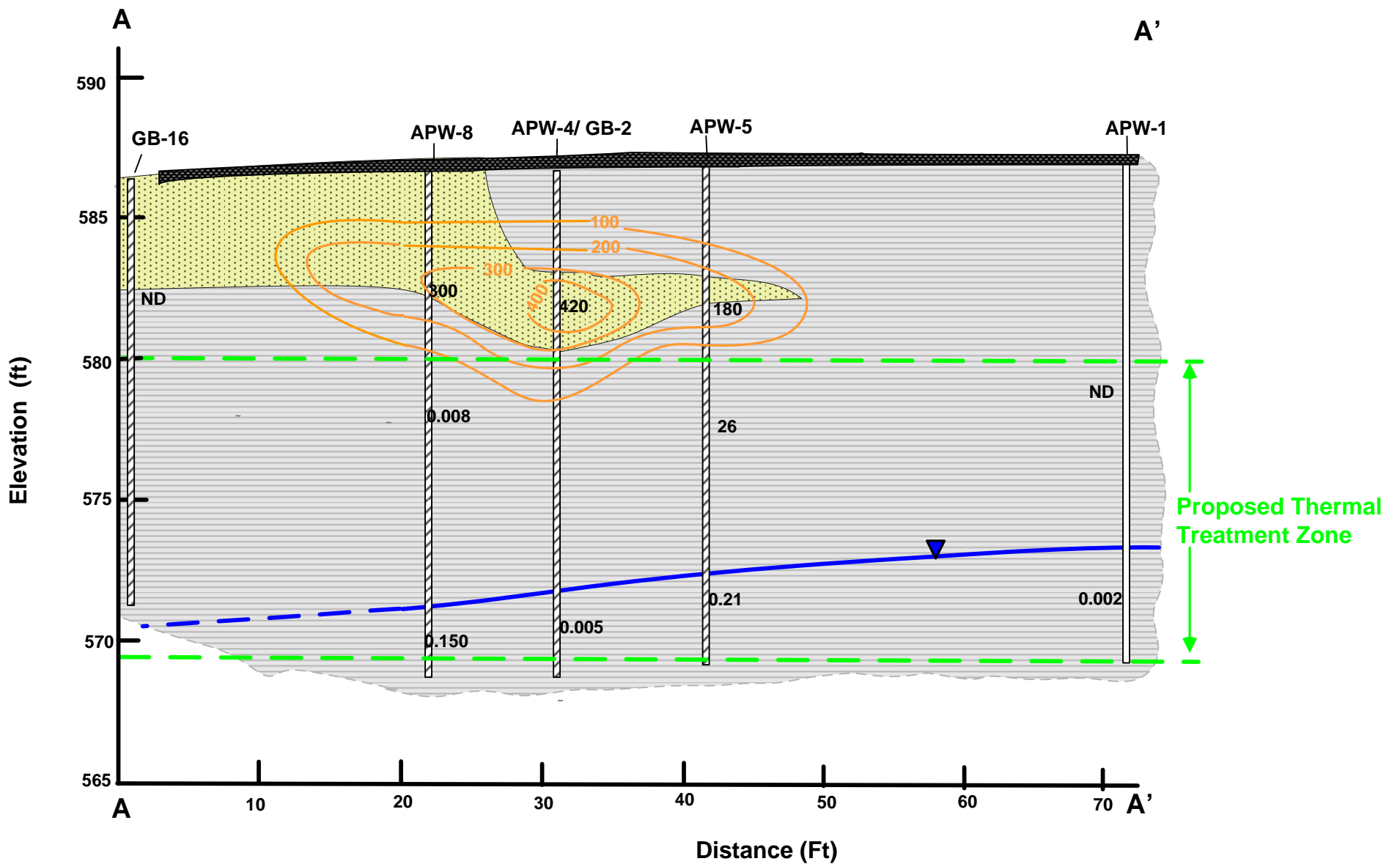
- Asphalt cap
- Silt and fine sand, with clay
- Clay and silt
- Vertical Exaggeration 2X
- ▼ Static ground water- 16 Feb 2010; inferred where dashed
- 4.9 VOC concentration detected during field screening of soil (ppm)
- Isoconcentration of VOCs detected during field screen of soil; contour interval=1,000 ppm
- Isoconcentration of VOCs detected during field screen of soil; contour interval= >4,000 ppm

PID Field Screening Results Cross Section A-A'-Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
	Scale As Shown	Figure 7
	Date 19 July 2010	



Legend

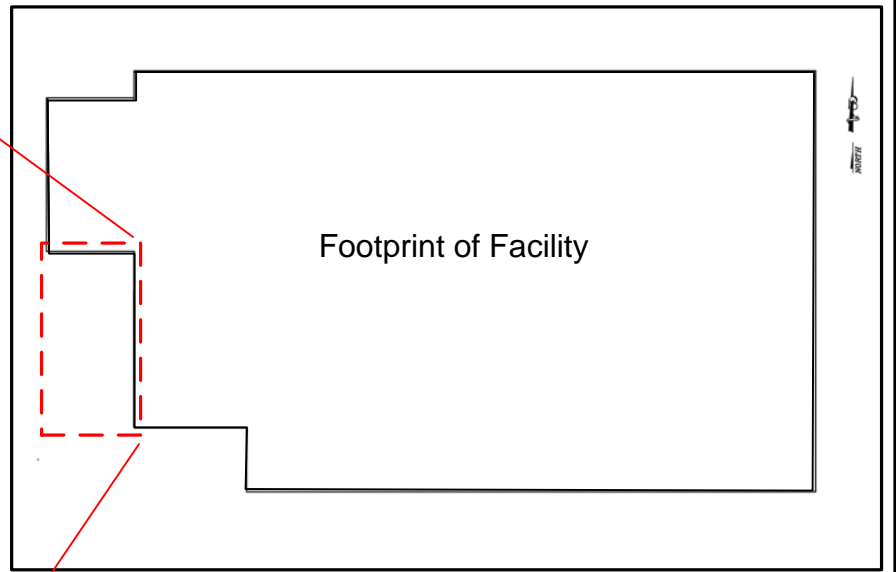
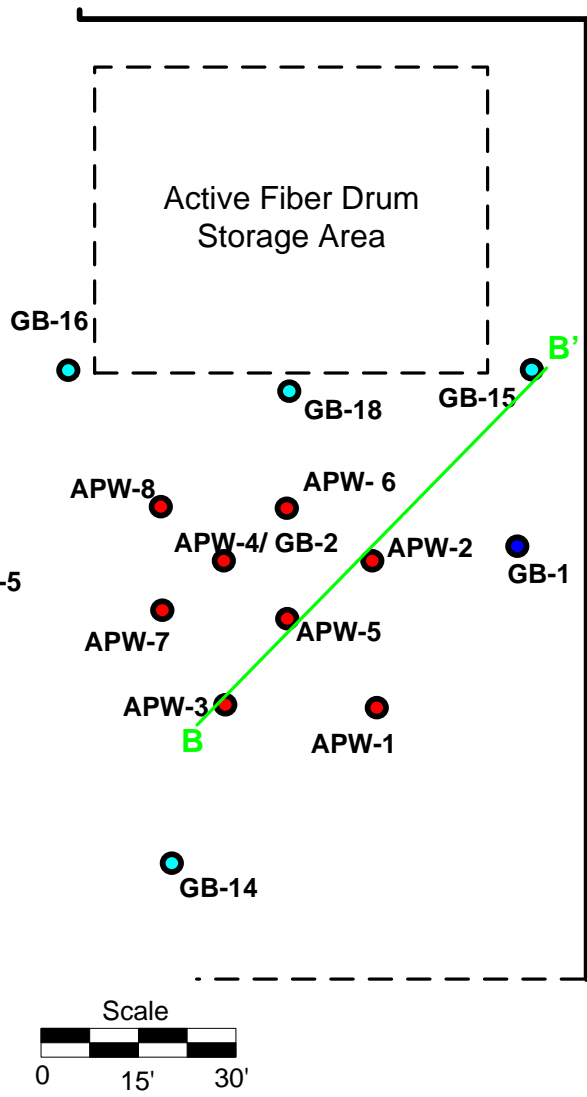
- Antenna Placement Well
APW-1
- Soil Boring from Phase II Investigation
GB-1
- Soil Boring from Phase III Investigation
GB-15
- - Fence



Legend

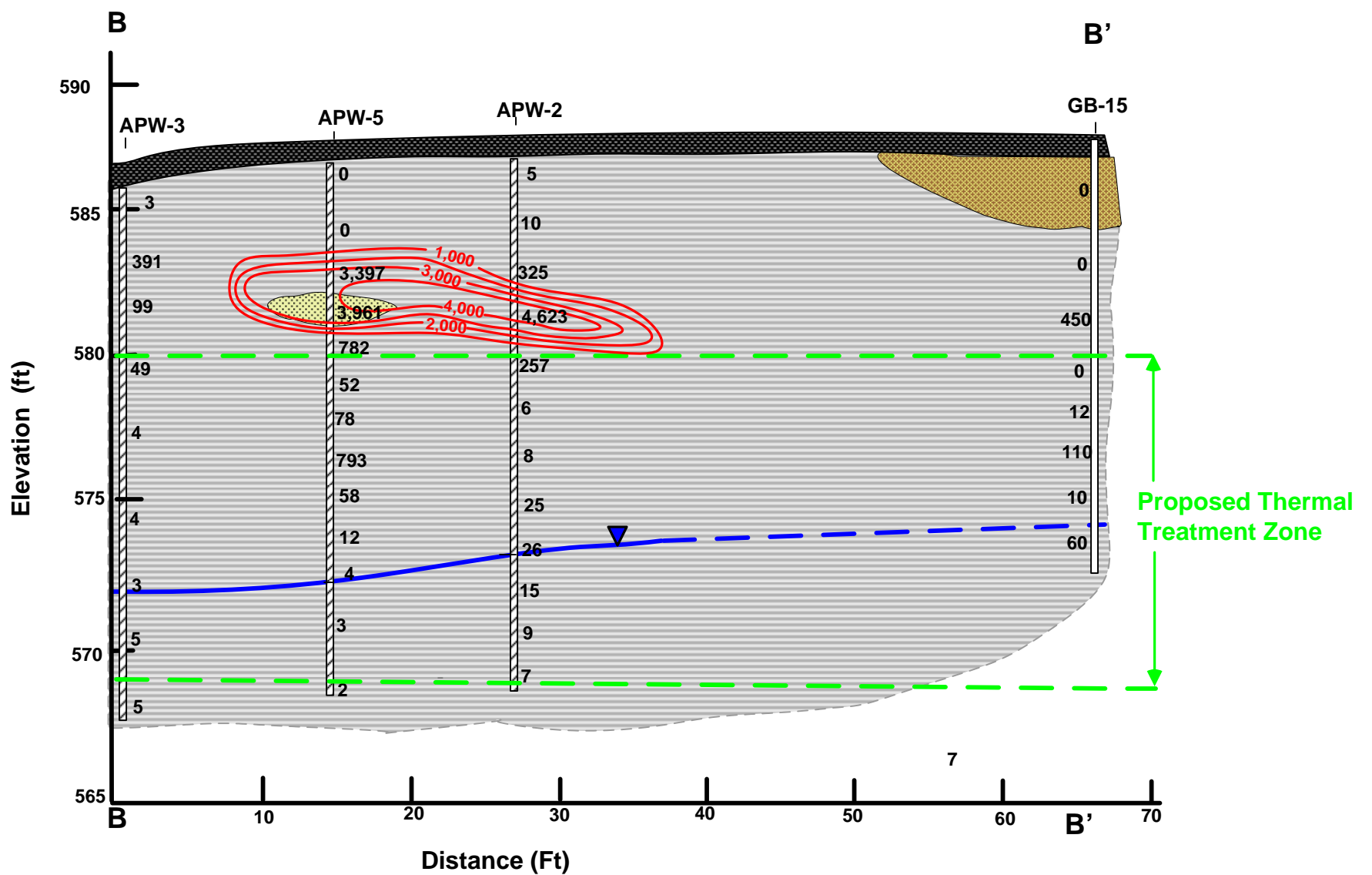
- Asphalt cap
 - Silt and fine sand, with clay
 - Clay and silt
 - ND Total xylenes not detected above the laboratory reporting limit
 - ▼ Static ground water- 16 Feb 2010; inferred where dashed
 - 4.9 Total xylenes concentration detected in soil sample (mg/kg)
 - Isoconcentration of total xylenes detected in soil; contour interval= 100 mg/kg
- Vertical Exaggeration 2X

Laboratory Analytical Results Cross Section A-A'-Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
ERM	Scale As Shown	Figure 8
	Date 19 July 2010	



Legend

- Antenna Placement Well
APW-1
- Soil Boring from Phase II Investigation
GB-1
- Soil Boring from Phase III Investigation
GB-15
- Fence

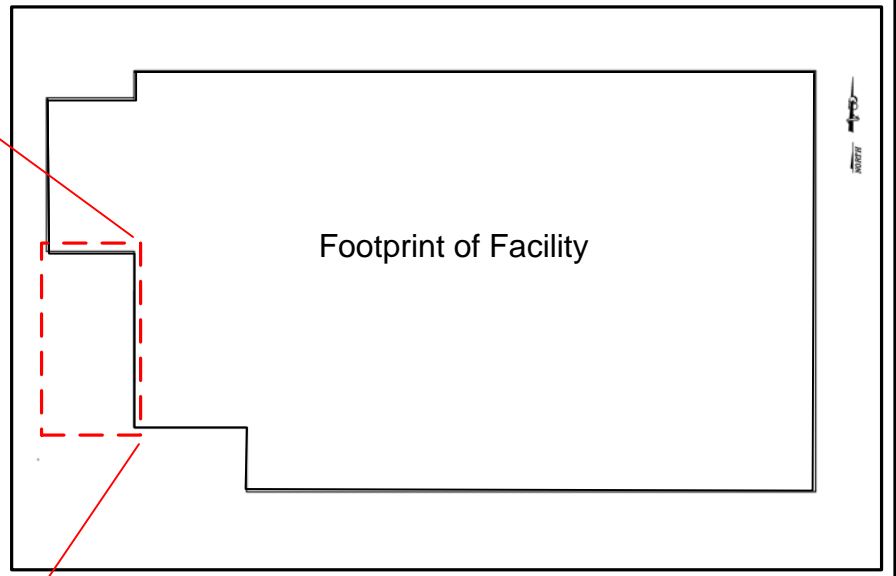
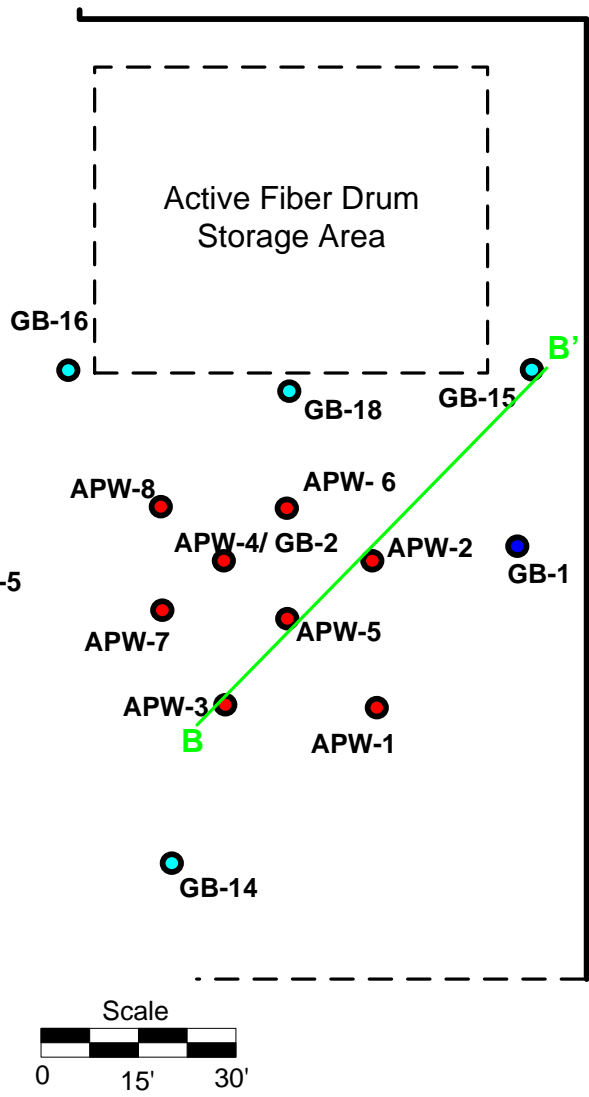


4

Legend

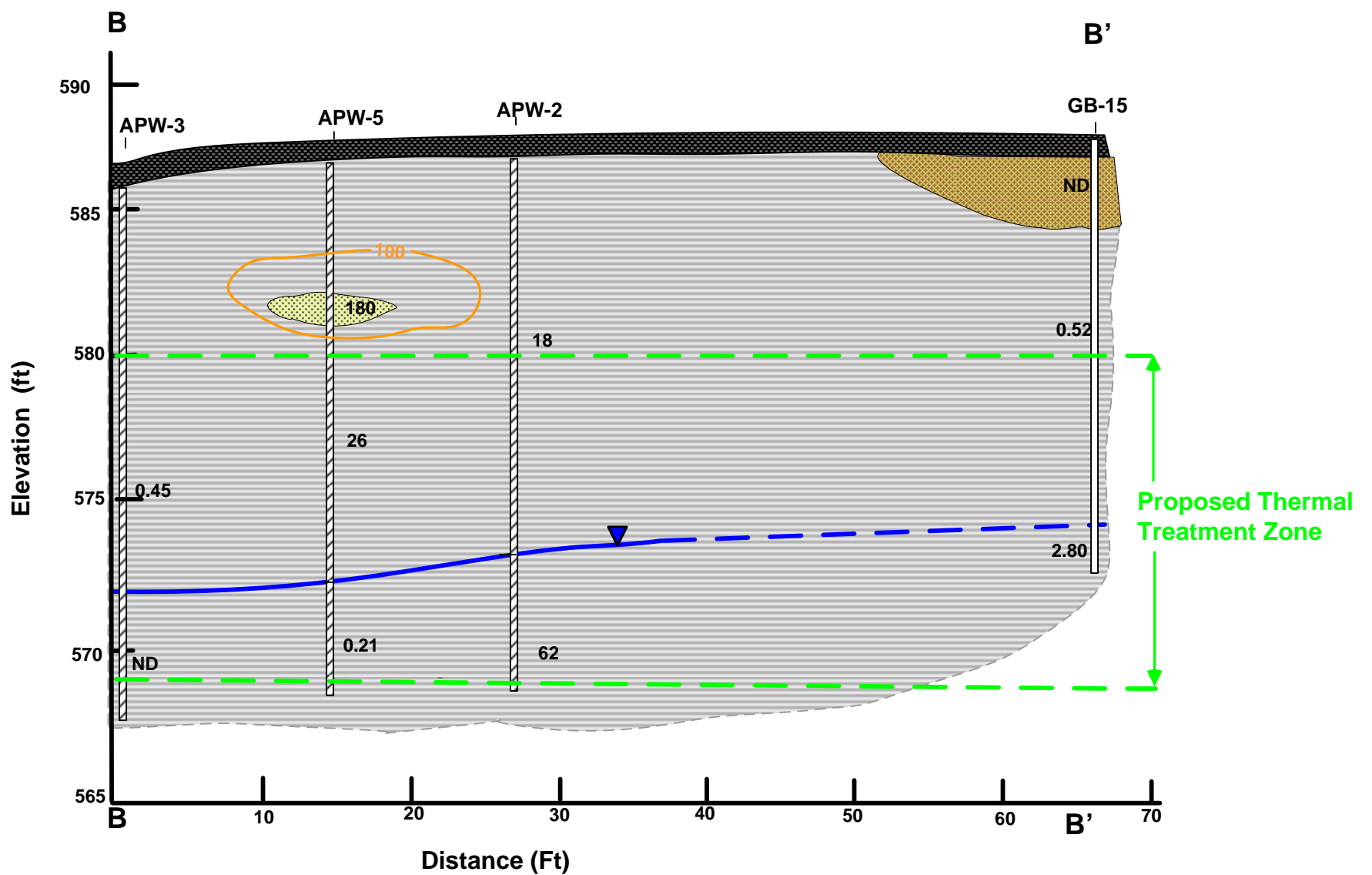
- Asphalt cap
 - Silt and fine sand, with clay
 - Clay and silt
 - Sand, some silt
 - ▼ Static ground water- 16 Feb 2010
dashed where inferred.
 - 4.9 VOC concentration detected
during field screening of soil (ppm)
 - Isoconcentration of VOCs
detected during field screen of soil;
contour interval=1,000 ppm
- Vertical exaggeration 2X

PID Field Screening Results Cross Section B-B'-Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
	Scale As Shown	Figure 9
	Date 19 July 2010	



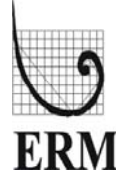
Legend

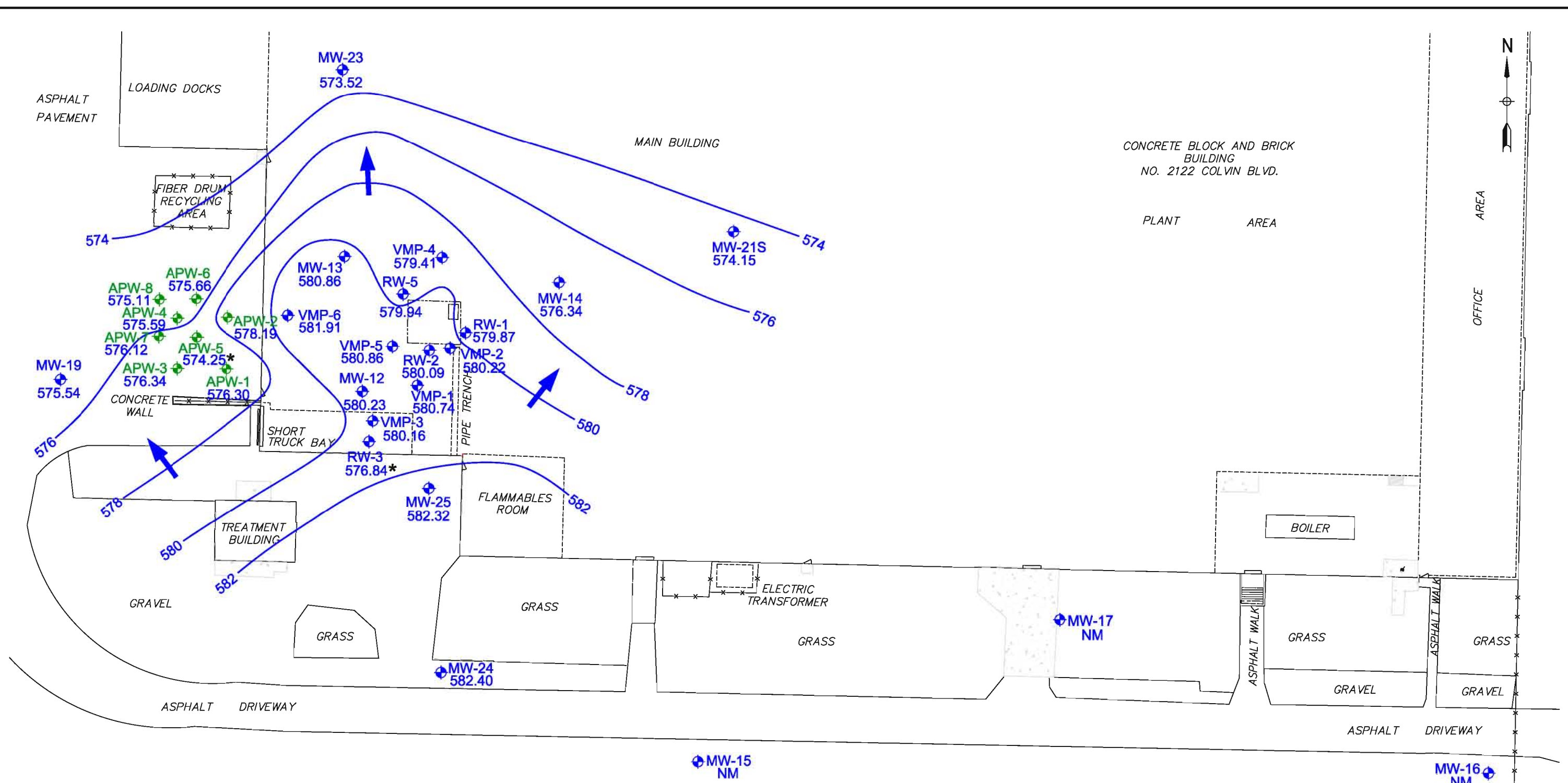
- Antenna Placement Well
APW-1
- Soil Boring from Phase II Investigation
GB-1
- Soil Boring from Phase III Investigation
GB-15
- Fence



Legend

- Asphalt cap
 - Silt and fine sand, with clay
 - Clay and silt
 - Sand, some silt
 - ▼ Static ground water- 16 Feb 2010
dashed where inferred.
 - 4.9 Total xylenes concentration detected
in soil sample (mg/kg)
 - Isoconcentration of total xylenes detected
in soil, contour interval 100 mg/kg;
dashed where inferred.
- Vertical exaggeration 2X

Laboratory Analytical Results Cross Section B-B'-Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For: Sonoco Products Company		
	Scale As Shown	Figure 10
	Date 19 July 2010	



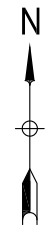
- LEGEND**
- Monitoring or Recovery Well Location
 - Antenna Placement Well Location
 - Possible Anomalous Ground Water Elevations not Considered in Contouring
 - Not Measured
 - Ground Water Contour (feet amsl)
 - Ground Water Flow Direction



Source: ERM, TOC elevations done by Wm. Schutt & Associates, P.C., 37 Central Ave, Lancaster, NY. Survey File: D:\01351\03, WSA Proj.#01351.

TITLE		SHALLOW GROUND WATER CONTOURS	
		20 APRIL 2010	
		GREIF FACILITY-TONAWANDA, NEW YORK	
		NYSDEC VCP NUMBER V00334-9	
PREPARED FOR			
SONOCO PRODUCTS COMPANY			
Environmental Resources Management DRAWN: EMF	SCALE	FIGURE	11
	1"=40'		
JOB NO.: 0112477.01	FILE NAME: 0112477-01-006	DATE: 8/3/10	

R:\projects\Sonoco\Tonawanda\CAD\0112477-01-006 Shallow GW.dwg (08/04/2010 - 11:32am Melville)



APW-8	
1,1,1-TCA	<4.1
TCE	<2.3
Xylenes	13

APW-6	
1,1,1-TCA	<4.1
TCE	2.6 J
Xylenes	9400

APW-2	
1,1,1-TCA	<4.1
TCE	<2.3
Xylenes	27,000

MW-23	
1,1,1-TCA	68,000
TCE	100,000
Xylenes	220

MW-13	
1,1,1-TCA	55,000
TCE	79,000
Xylenes	<3.3

APW-4	
1,1,1-TCA	4.4 J
TCE	3.8 J
Xylenes	9500

RW-5	
1,1,1-TCA	140,000
TCE	47,000
Xylenes	210

APW-7	
1,1,1-TCA	<4.1
TCE	<2.3
Xylenes	<3.3

VMP-6	
1,1,1-TCA	<4.1
TCE	<2.3
Xylenes	11,000

MW-19	
1,1,1-TCA	<4.1
TCE	<2.3
Xylenes	<3.3

VMP-5	
1,1,1-TCA	120,000
TCE	30,000
Xylenes	190

APW-5	
1,1,1-TCA	8.2
TCE	180
Xylenes	8.2 J

APW-3	
1,1,1-TCA	1100
TCE	<2.3
Xylenes	<3.3

APW-1	
1,1,1-TCA	2200
TCE	<2.3
Xylenes	<3.3

MW-12	
1,1,1-TCA	1900
TCE	1300
Xylenes	<3.3

ASPHALT PAVEMENT

LOADING DOCKS

FIBER DRUM RECYCLING AREA

MAIN BUILDING

CONCRETE WALL

SHORT TRUCK BAY

FLAMMABLES ROOM

ELECTRIC TRANSFORMER

GRAVEL



GRASS

GRASS

GRASS

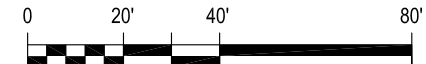
TREATMENT BUILDING

LEGEND


-  Monitoring or Recovery Well Location
-  Antenna Placement Well Location
- NS Not Sampled

NOTE

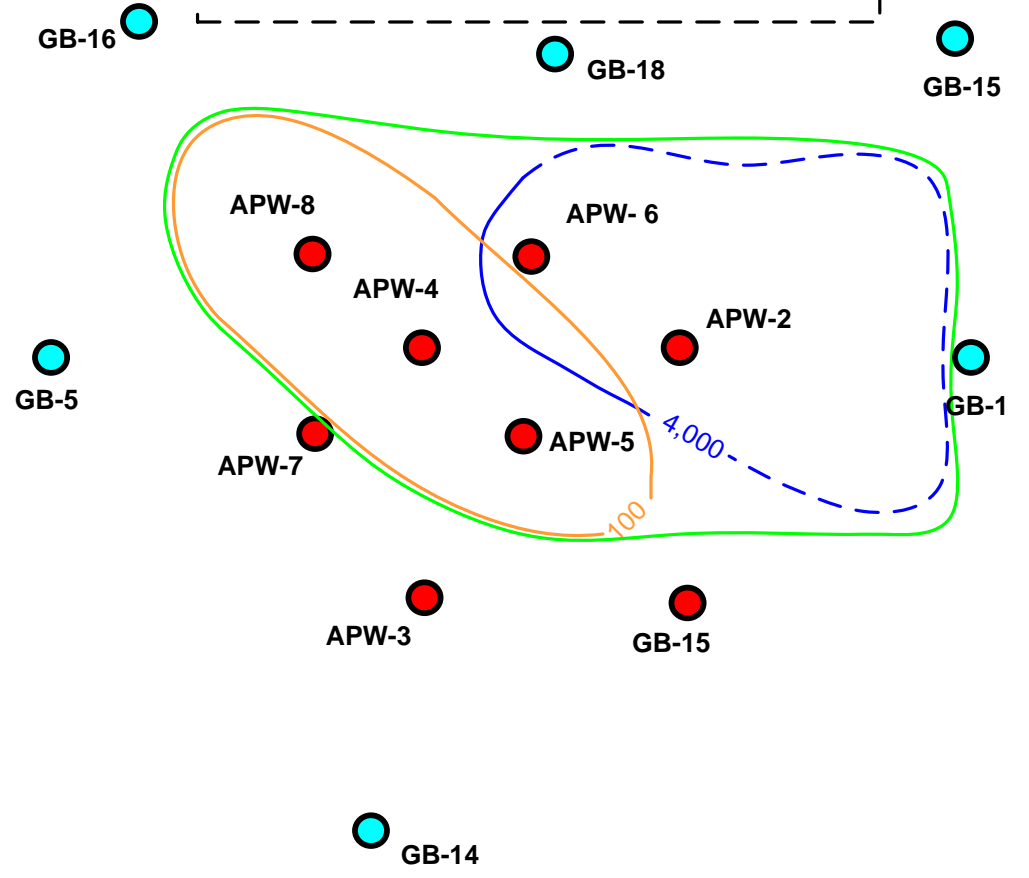
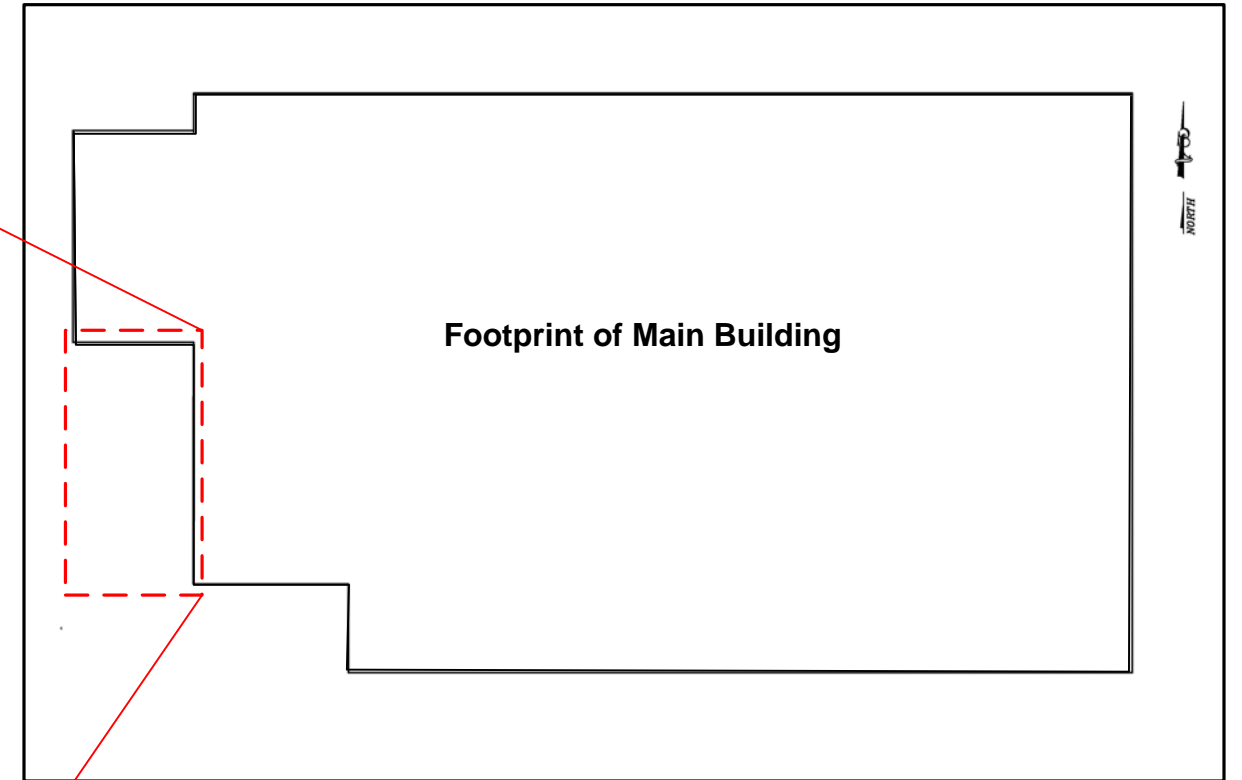
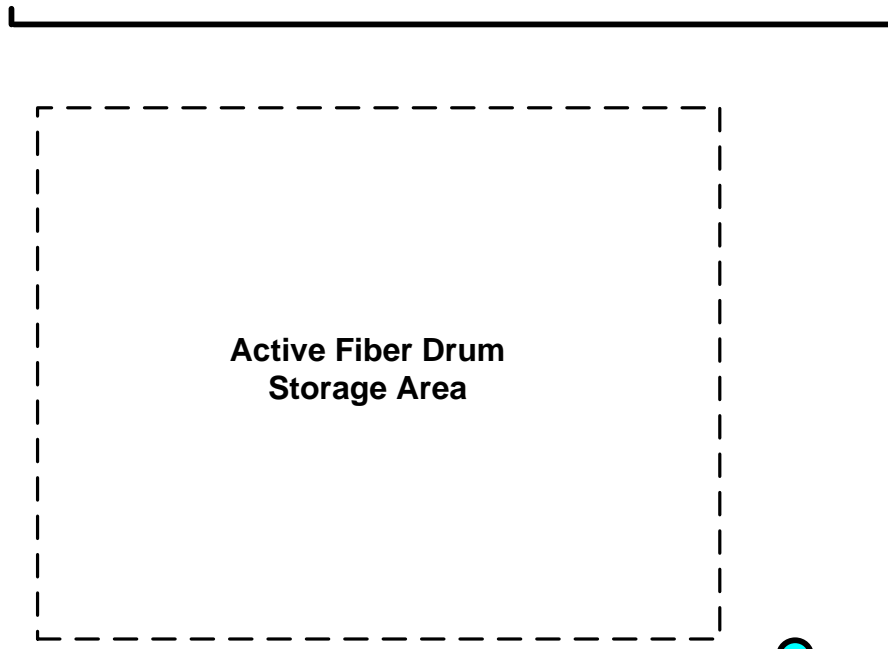
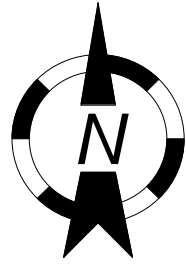
All concentrations are in ug/L









GRAPHIC SCALE IN FEET

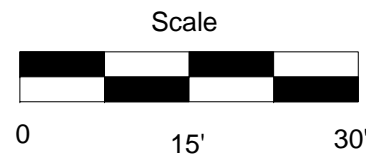
<p>TITLE 1,1,1-TCA, TCE & XYLENES IN GROUND WATER SELECTED WELLS - APRIL 2010 GREIF FACILITY-TONAWANDA, NEW YORK NYSDEC VCP NUMBER V00334-9</p>			
<p>PREPARED FOR SONOCO PRODUCTS COMPANY</p>			
 Environmental Resources Management	SCALE	FIGURE	12
	DATE		
DRAWN: EMF	JOB NO.: 0112477.01	FILE NAME: 0112477-01-005	DATE: 8/3/10

Source: ERM, TOC Elevations done by Wm. Schutt & Associates, P.C., 37 Central Ave, Lancaster, NY. Survey File: D/01351/03, WSA Proj.#01351.



Legend

-  APW-2 Antenna Placement Well
-  GB-15 Soil boring from previous investigations
-  Fence
-  Isoconcentration of total xylenes in soil collected between 4-8 ft bgs, contour interval 4,000 mg/kg; dashed where inferred
-  Isoconcentration of total xylenes in Ground water, contour interval 4,000 µg/L; dashed where inferred
-  Proposed excavation area between 3-9 ft bgs, based on available analytical and field data.



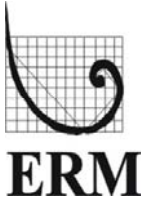
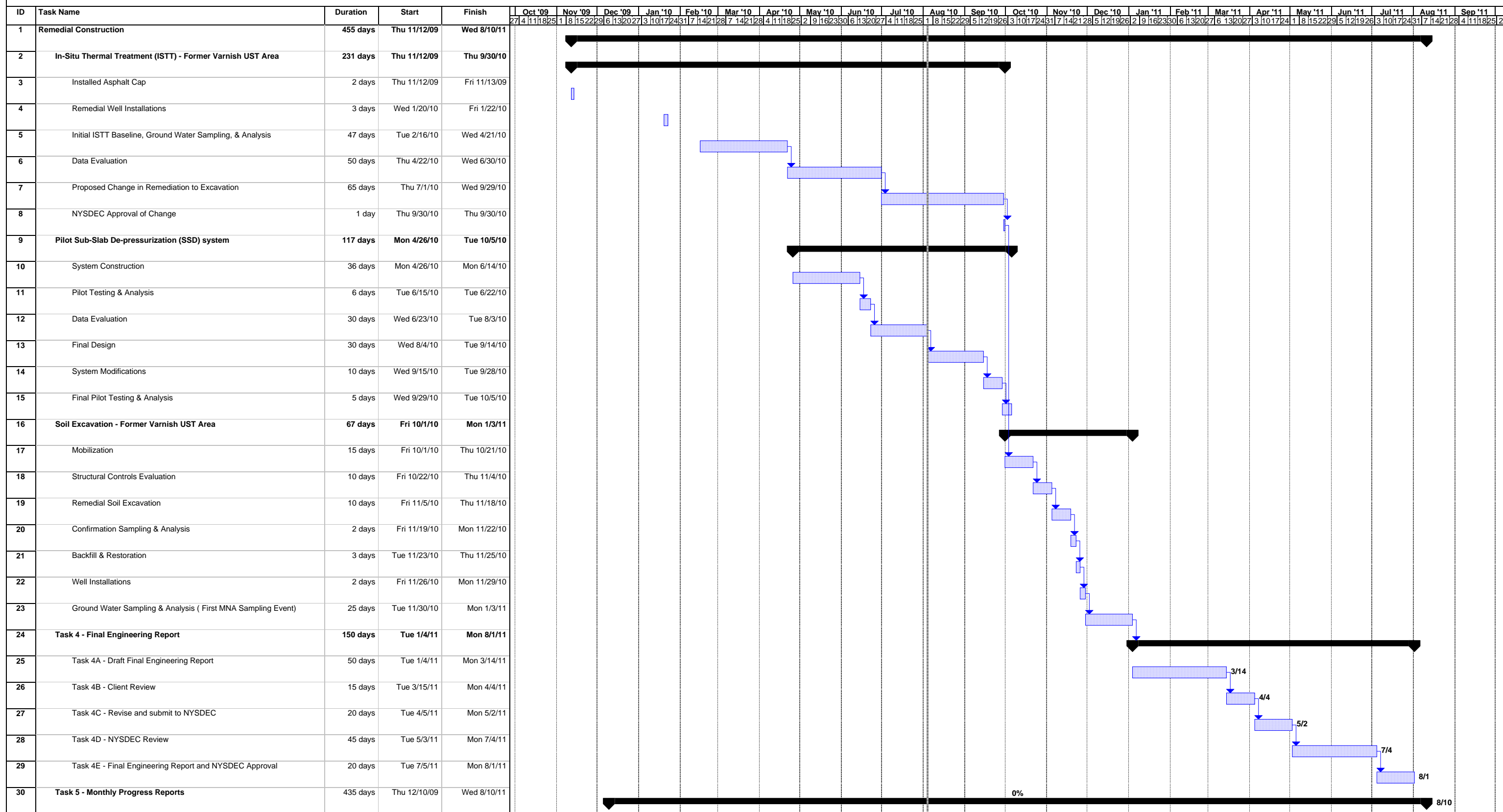
Proposed Excavation Area Based on Available Data Former Varnish UST Area Greif Facility- Tonawanda, New York		
Prepared For:		Sonoco Products Company
	Scale	Figure
	See Bar Scale	13
	Date	
	10 Mar 2010	

Figure 14 - Estimated Project Schedule
Remedial Construction - Greif Facility, Tonawanda, New York
NYSDEC VCP # V00334-9



Project: EVEPH2_0298drft.MPP
 Date: Wed 8/4/10

Task [Blue Box] Milestone [Black Diamond] Rolled Up Task [Thick Blue Box] Rolled Up Progress [Thick Black Box] Project Summary [Thin Black Box] Rolled Up Split [Thin Blue Box] Deadline [Green Arrow]

Progress [Thick Black Box] Summary [Thin Black Box] Rolled Up Milestone [Thin Blue Box] External Tasks [Thin Grey Box] Split [Thin Blue Box] External Milestone [Black Diamond]

TABLE 1
SUMMARY OF VOCS IN SOIL
FORMER VARNISH UST AREA
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9

Sample Location	APW-1		APW-2		APW-3		APW-4		APW-5			APW-6			APW-7		APW-8			NYSDEC Restricted Commercial SCO
	9-11	15-17	6-8	15-17	9-11	15-17	4-6	15-17	4-6	9-11	15-17	4-6	9-11	15-17	9-11	15-17	4-6	9-11	15-17	
VOCs (mg/kg)																				
Acetone	----	0.043	----	0.12	----	----	0.43	0.01	0.069	----	0.014	0.024	----	----	----	0.0075	0.023	----	0.64	500
Benzene	----	----	----	----	----	----	----	----	0.0022	----	----	----	----	----	----	----	0.32	----	----	44
2-Butanone	----	----	----	----	----	----	0.0073	----	----	----	----	----	----	----	----	----	----	----	----	500
Chloroethane	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	NA
Chloroform	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	350
1,1-Dichloroethane	0.22	----	----	----	0.32	14	----	----	0.0069	----	----	----	----	----	----	----	----	----	----	240
1,2-Dichloroethane	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	30
1,1-Dichloroethene	4	----	----	----	1.6	----	----	----	0.0059	----	----	----	----	----	----	----	----	----	----	500
1,2-Dichloroethene (total)	----	----	----	----	----	----	0.017	----	1.0022	----	0.0083	0.0071	----	----	----	----	----	----	----	NA
cis-1,2-Dichloroethene	----	----	----	----	----	----	0.017	----	1	----	0.0083	0.0071	----	----	----	----	----	----	----	500
trans-1,2-Dichloroethene	----	----	----	----	----	----	----	----	0.0022	----	----	----	----	----	----	----	----	----	----	500
Ethylbenzene	----	----	3.9	18	0.12	----	69	0.0015	34	9.3	0.043	13	18	6.8	0.0015	----	83	0.0019	0.034	390
Methylene chloride	----	0.011	----	0.0059	----	----	0.0053	0.0052	0.0055	----	0.0044	0.005	----	----	0.0048	0.0053	0.0044	0.0056	0.0059	500
4-Methyl-2-pentanone	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	NA
Tetrachloroethene	----	----	----	----	----	----	0.0022	----	0.0017	----	----	0.0016	----	----	----	----	----	----	----	150
Toluene	----	----	----	0.065	----	----	0.1	----	0.29	----	0.0032	0.0091	----	----	----	----	0.024	----	----	500
1,1,1-Trichloroethane	12	----	----	----	5.8	----	0.0038	----	0.04	----	----	----	----	----	----	----	----	----	----	500
1,1,2-Trichloroethane	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	NA
Trichloroethene	0.15	----	----	----	----	----	----	----	3	----	0.011	----	----	----	----	----	0.0021	----	----	200
1,2,4-Trimethylbenzene	----	----	3.2	0.22	0.089	----	110	----	35	12	0.017	42	14	2.3	----	----	110	----	0.029	190
Vinyl Chloride	----	----	----	----	----	----	----	----	0.0016	----	----	----	----	----	----	----	----	----	----	13
Xylenes (total)	----	0.0023	18	62	0.45	----	420	0.0054	180	26	0.21	94	49	12	0.007	0.0041	300	0.0079	0.15	500

NOTES:

- All concentrations are reported in milligrams-per-kilogram (parts-per-million).
- Compounds listed include all compounds on the Site-specific VOC list contained in the NYSDEC-approved Remedial Action Work Plan.
- ---- = the compound was not detected at a concentration above the laboratory reporting limit for the analysis.
- SCO = Soil Cleanup Objective

TABLE 2
SUMMARY OF VOCs IN GROUND WATER- 16 FEBRUARY 2010
FORMER VARNISH UST AREA BASELINE GROUND WATER MONITORING
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9

Sample Designation	APW-1	APW-2	APW-3	APW-4	APW-DUP	APW-5	APW-6	APW-7	APW-8	Standard
VOCs (µg/L)										
Acetone	13 J	52	12 J	58 J	42	26	76	15 J	27	50
Benzene	----	5	----	----	----	----	----	----	----	1
2-Butanone	----	13 J	----	----	7.2	----	15 J	----	----	5
Chloroethane	----	----	9.0	----	----	----	----	----	----	5
Chloroform	----	----	----	----	----	----	----	----	----	7
1,1-Dichloroethane	52	----	12,000	----	----	3.0 J	----	----	----	5
1,2-Dichloroethane	----	----	2.8 J	----	----	----	----	----	----	0.6
1,1-Dichloroethene	140	----	51	----	----	----	----	----	----	5
cis-1,2-Dichloroethene	13	32	----	13 J	13	75	4.0 J	----	----	5
trans-1,2-Dichloroethene	----	----	----	----	----	----	----	----	----	5
Ethylbenzene	----	2,400	----	500	460	16	360	----	17	5
Methylene chloride	----	----	2.5 J	----	----	----	----	----	----	5
4-Methyl-2-pentanone	----	14 J	----	----	----	----	11 J	----	----	NS
Tetrachloroethene	----	----	----	----	----	----	----	----	----	0.7
Toluene	----	36	----	54	50	----	6.8	----	----	5
1,1,1-Trichloroethane	660	----	350	----	----	----	----	----	----	5
1,1,2-Trichloroethane	----	----	----	----	----	----	----	----	----	5
Trichloroethene	----	----	----	----	----	29	----	----	----	5
1,2,4-Trimethylbenzene	----	570	----	27	32	7.6	180	----	----	5
Vinyl chloride	----	----	5	----	----	----	----	----	----	2
Xylene (total)	----	14,000	----	2,200	2,100	130	4,800	----	56	5

NOTES:

All concentrations are reported in micrograms per liter (parts per billion) unless otherwise noted.

---- = Compound was not detected above the laboratory reporting limit for this analysis.

Bold = Represents an exceedance of standard for non-estimated data.

J = Indicates an estimated value.

NS = Not Specified

TABLE 3
SUMMARY OF VOCs IN GROUND WATER - 20 APRIL 2010
FORMER VARNISH UST AREA AND ADJACENT AREA BENEATH BUILDING
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9

Sample Designation	APW-1	APW-2	APW-3	APW-4	APW-5	APW-6	APW-7	APW-8	MW-12	MW-13	MW-19	MW-23	RW-5	VMP-5	VMP-6	Standard
VOCs (µg/L)																
Acetone	----	----	----	----	----	30	----	----	----	----	----	350	6,700 J	490	----	50
Benzene	----	----	----	2.6 J	----	4.2 J	----	----	----	----	----	----	----	----	----	1
2-Butanone	----	----	----	----	----	----	----	----	----	----	----	18 J	1,600	220	----	5
Chloroethane	----	----	----	----	----	----	----	----	4.1	----	----	----	28	7.8	----	5
Chloroform	----	----	----	----	----	----	----	----	1.4	----	----	27	86	44	----	7
1,1-Dichloroethane	180	----	10,000	4.6 J	8.8	----	----	----	2,300	13,000	----	23,000	12,000	2,700	46 J	5
1,2-Dichloroethane	----	----	----	----	----	----	----	----	5.4	----	----	5.2	280	130	----	0.6
1,1-Dichloroethene	610	----	130	----	----	----	----	----	940	24,000	----	10,000	35,000	12,000	----	5
cis-1,2-Dichloroethene	53	----	----	40	460	10	----	----	3,300	15,000	----	2,600	86,000	6,300	----	5
trans-1,2-Dichloroethene	----	----	----	----	4.6 J	----	----	----	52	500	----	34	54	13	----	5
Ethylbenzene	----	2,900	----	460	----	960	----	----	----	----	----	63	47	34	4,200	5
Methylene chloride	----	----	----	----	----	----	----	----	----	----	----	3.0 J	20	7.8	----	5
4-Methyl-2-pentanone	----	----	----	----	----	----	----	----	----	----	----	----	62	19 J	----	NS
Tetrachloroethene	----	----	----	----	----	----	----	----	----	----	----	14	16	14	----	0.7
Toluene	----	----	----	68	----	13	----	----	----	----	----	130	37	21	----	5
1,1,1-Trichloroethane	2,200	----	1,100	4.4 J	8.2	----	----	----	1,900	55,000	----	68,000	140,000	120,000	----	5
1,1,2-Trichloroethane	----	----	----	----	----	----	----	----	1.1	----	----	3.2 J	26	20	----	5
Trichloroethene	----	----	----	3.8 J	180	2.6 J	----	----	1,300	79,000	----	100,000	47,000	30,000	----	5
1,2,4-Trimethylbenzene	----	1,000	----	380	----	400	----	----	----	----	----	280	17	15	450	5
Vinyl chloride	----	----	----	----	7.0	----	----	----	39	490 J	----	34	32	14	----	2
Xylene (total)	----	27,000	----	9,500	8.2 J	9,400	----	13	----	----	----	220	210	190	11,000	5

NOTES:

All concentrations are reported in micrograms per liter (parts per billion) unless otherwise noted.

---- = Compound was not detected above the laboratory reporting limit for this analysis.

Bold = Represents an exceedance of standard for non-estimated data.

J = Indicates an estimated value.

NS = Not Specified

TABLE 4
COMPARISON OF THE ORIGINAL REMEDY AND THE PROPOSED CHANGE IN REMEDY
FORMER VARNISH UST AREA
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9

ORIGINAL REMEDY (In-Situ Thermal Treatment)	PROPOSED CHANGE IN REMEDY (Excavation and Off-Site Disposal)
Estimated time to complete the remediation - 7 months	Estimated time to complete the remediation - 2 months
Mobilization of personnel, equipment, and supplies to the Site.	
Installation of antennae placement wells, vapor extraction wells, and asphalt vapor cap.	Installation of soil erosion and sedimentation control measures.
Pre-remediation soil and ground water sampling and analysis.	Installation of soil staging areas.
Installation of radiofrequency heating equipment, soil vapor extraction system, and vapor-phase treatment equipment.	
On Site training on operation of heat and soil gas treatment equipment; testing of telemetry and monitoring equipment.	
Start up of in situ heating, monitoring, operation and maintenance during heat of the treatment cell until the target temperature is achieved. Conduct confirmation soil sampling around the first treatment cell. Heat a second treatment cell if required.	Excavation of affected soil.
	Off-Site disposal of affected soil.
Post-remediation soil sampling and analysis.	
Dismantling and demobilization of heating equipment, soil vapor extraction system, and vapor-phase treatment equipment.	Backfill excavation and restoration of excavation area.
	Installation of monitoring wells in and hydraulically down gradient of the source area.
Ground water sampling and analysis for Site-specific VOC and MNA parameters.	
Preparation and submittal of a Final Engineering Report including an OM&M Plan.	