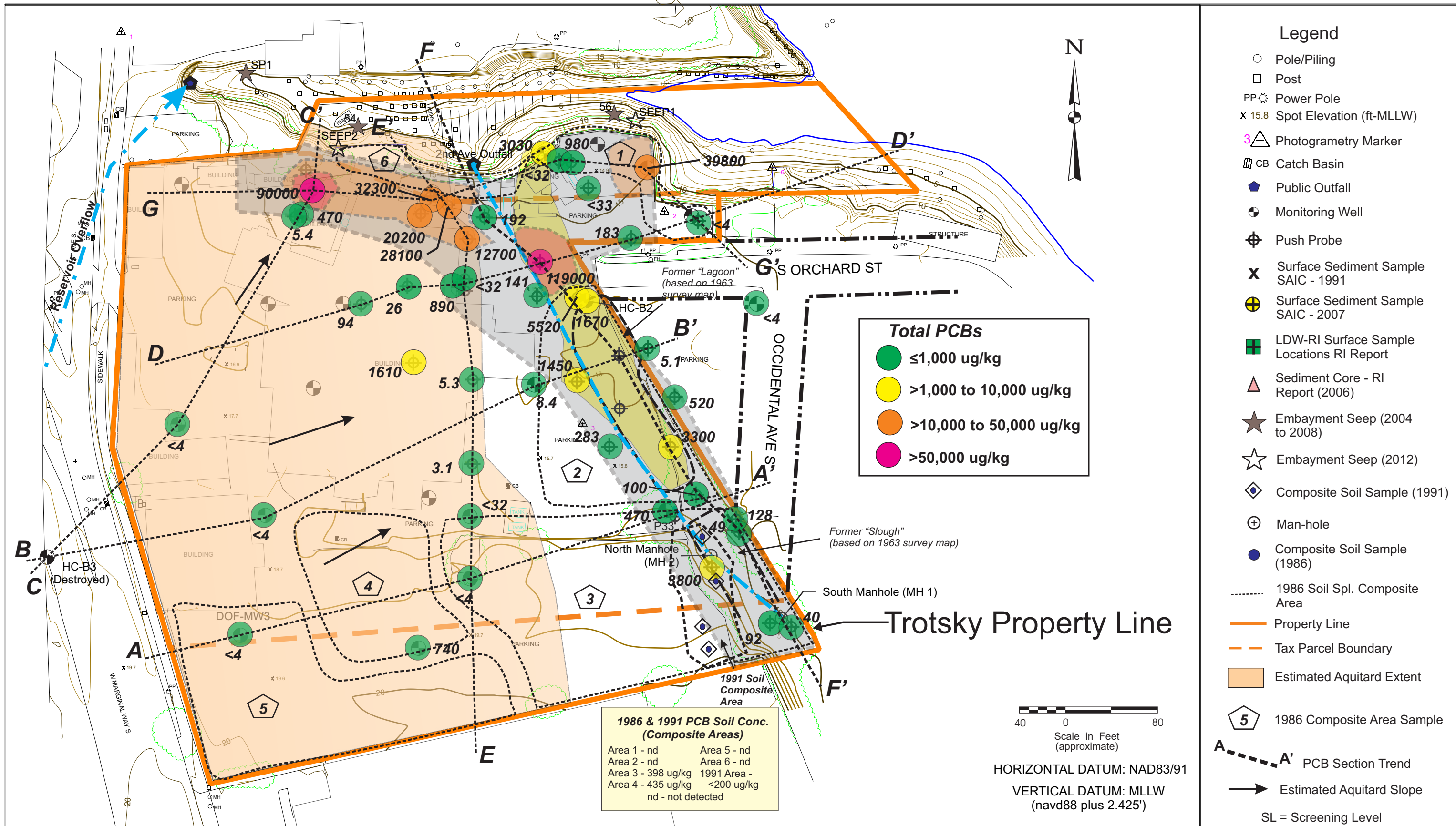


FIGURE 6-1 - Total PCBs In Soil Histograms



Notes: Soil Contact SL = 1,000 ug/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooprage Site

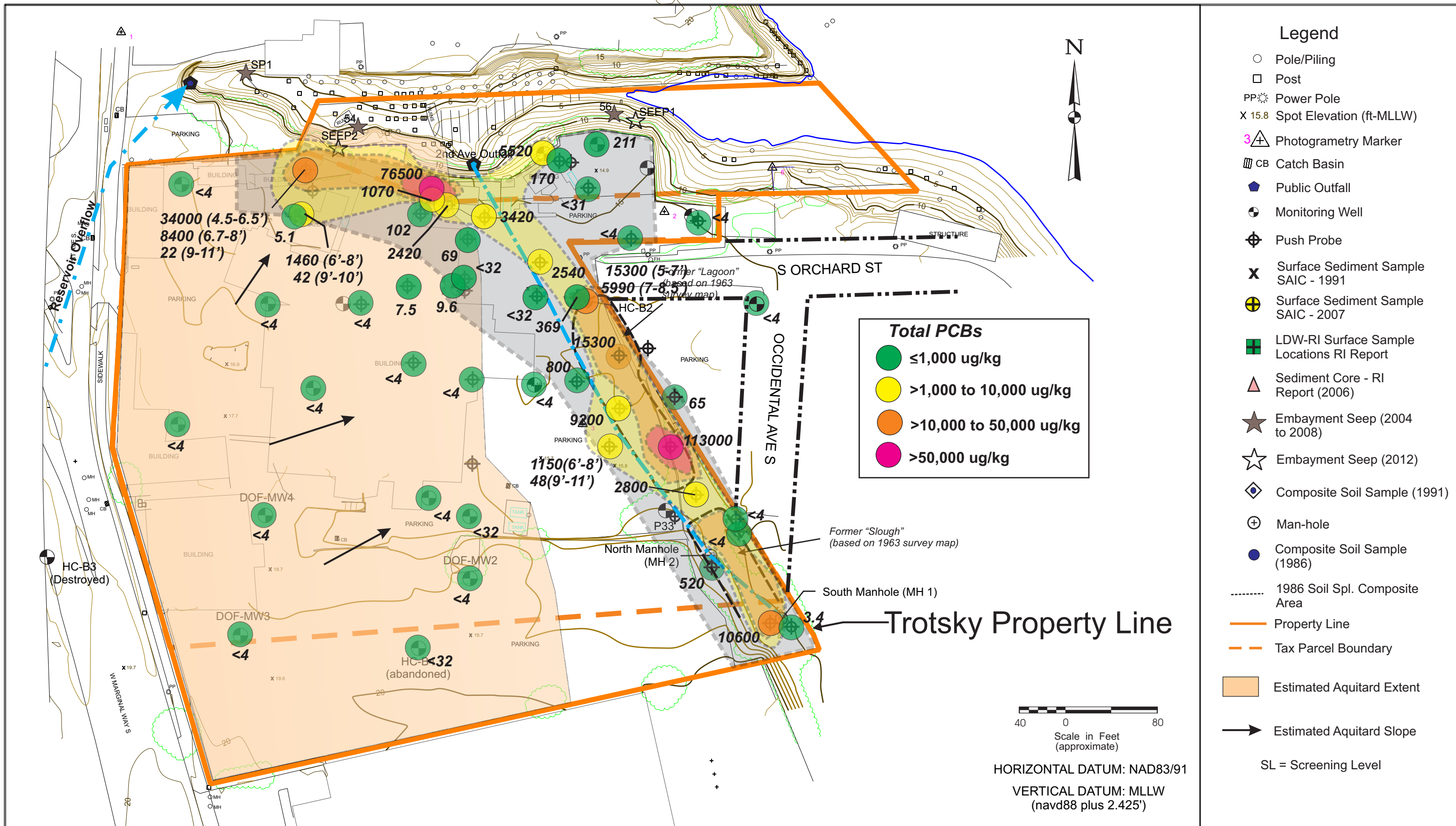
Extent of Total PCBs in Soil Less than Five Feet Deep

SUM-008-00 (ICS) March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-2a

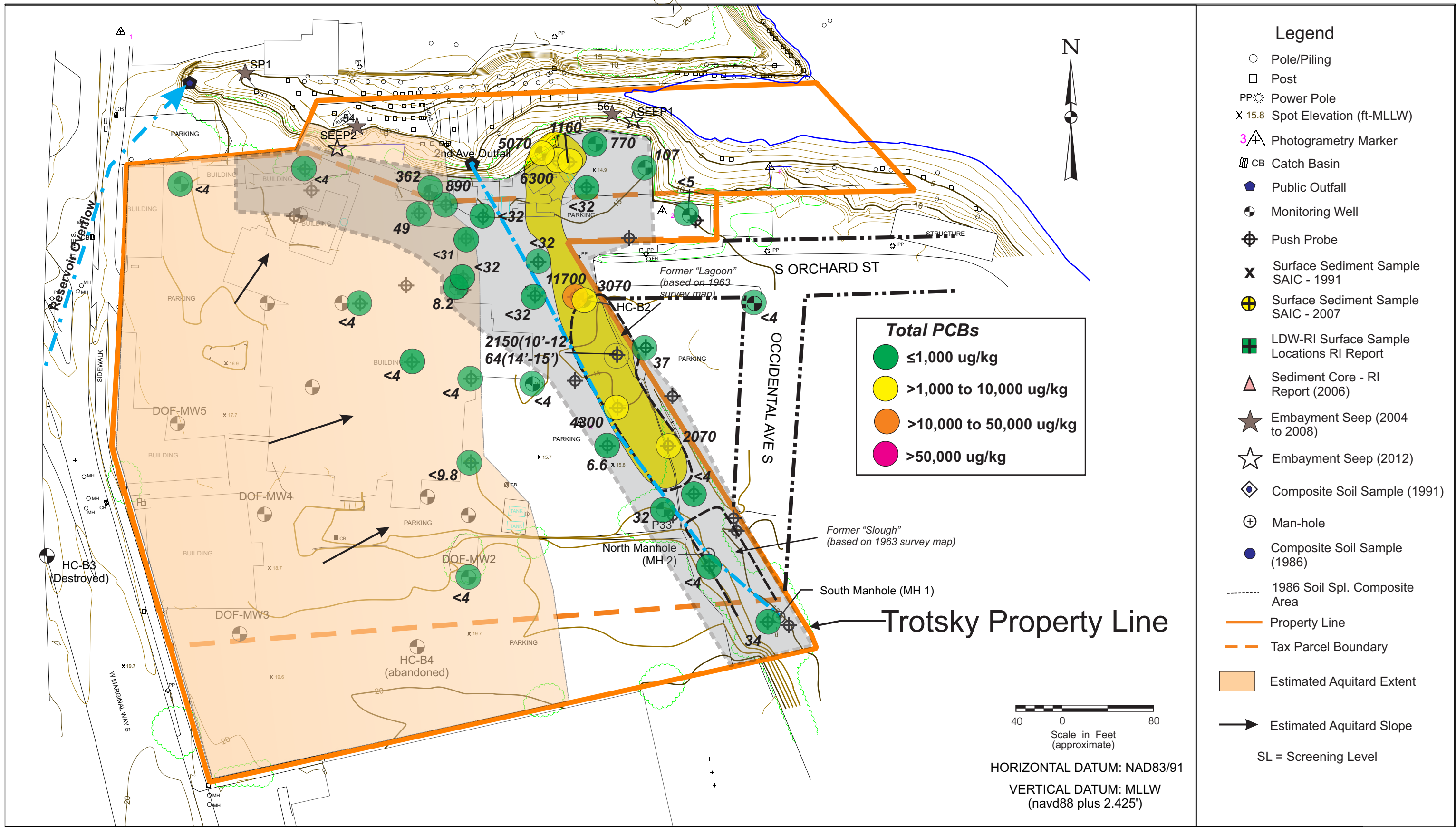
Ref: Upland Phase2a TPCB.cdr



Notes: Soil Contact SL = 1,000 ug/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooprage Site		FIGURE 6-2b
Extent of Total PCBs in Soil Five to Ten Feet Deep		
SUM-008-00 (ICS)	March 2018	
Dalton, Olmsted & Fuglevand, Inc.		



Legend

- Pole/Piling
 - Post
 - PP ⚡ Power Pole
 - X 15.8 Spot Elevation (ft-MLLW)
 - 3 ⚠ Photogrammetry Marker
 - ▤ CB Catch Basin
 - ⬇ Public Outfall
 - ⊕ Monitoring Well
 - ⊕ Push Probe
 - X Surface Sediment Sample SAIC - 1991
 - ⊕ Surface Sediment Sample SAIC - 2007
 - ⊕ LDW-RI Surface Sample Locations RI Report
 - △ Sediment Core - RI Report (2006)
 - ★ Embayment Seep (2004 to 2008)
 - ☆ Embayment Seep (2012)
 - ⊕ Composite Soil Sample (1991)
 - ⊕ Man-hole
 - Composite Soil Sample (1986)
 - ⋯ 1986 Soil Spl. Composite Area
 - Property Line
 - - - Tax Parcel Boundary
 - Estimated Aquitard Extent
 - ➔ Estimated Aquitard Slope
- SL = Screening Level

Total PCBs

- ≤ 1,000 ug/kg
- > 1,000 to 10,000 ug/kg
- > 10,000 to 50,000 ug/kg
- > 50,000 ug/kg

40 0 80
Scale in Feet (approximate)

HORIZONTAL DATUM: NAD83/91
VERTICAL DATUM: MLLW (navd88 plus 2.425')

Notes: Soil Contact SL = 1,000 ug/kg

■ Primary Area With PCB Conc. Greater Than 100 ug/kg

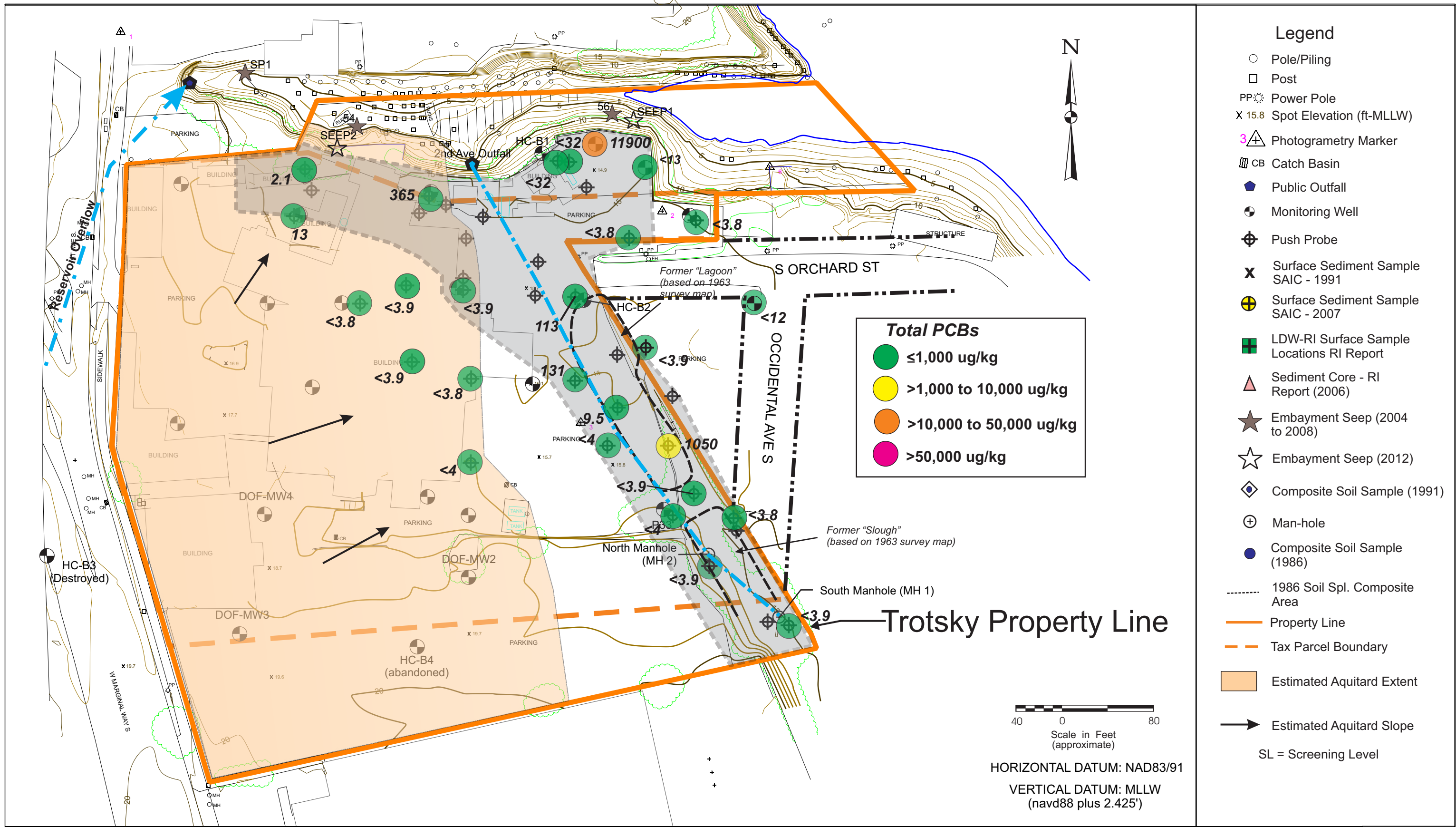
ICS/NW Cooprage Site

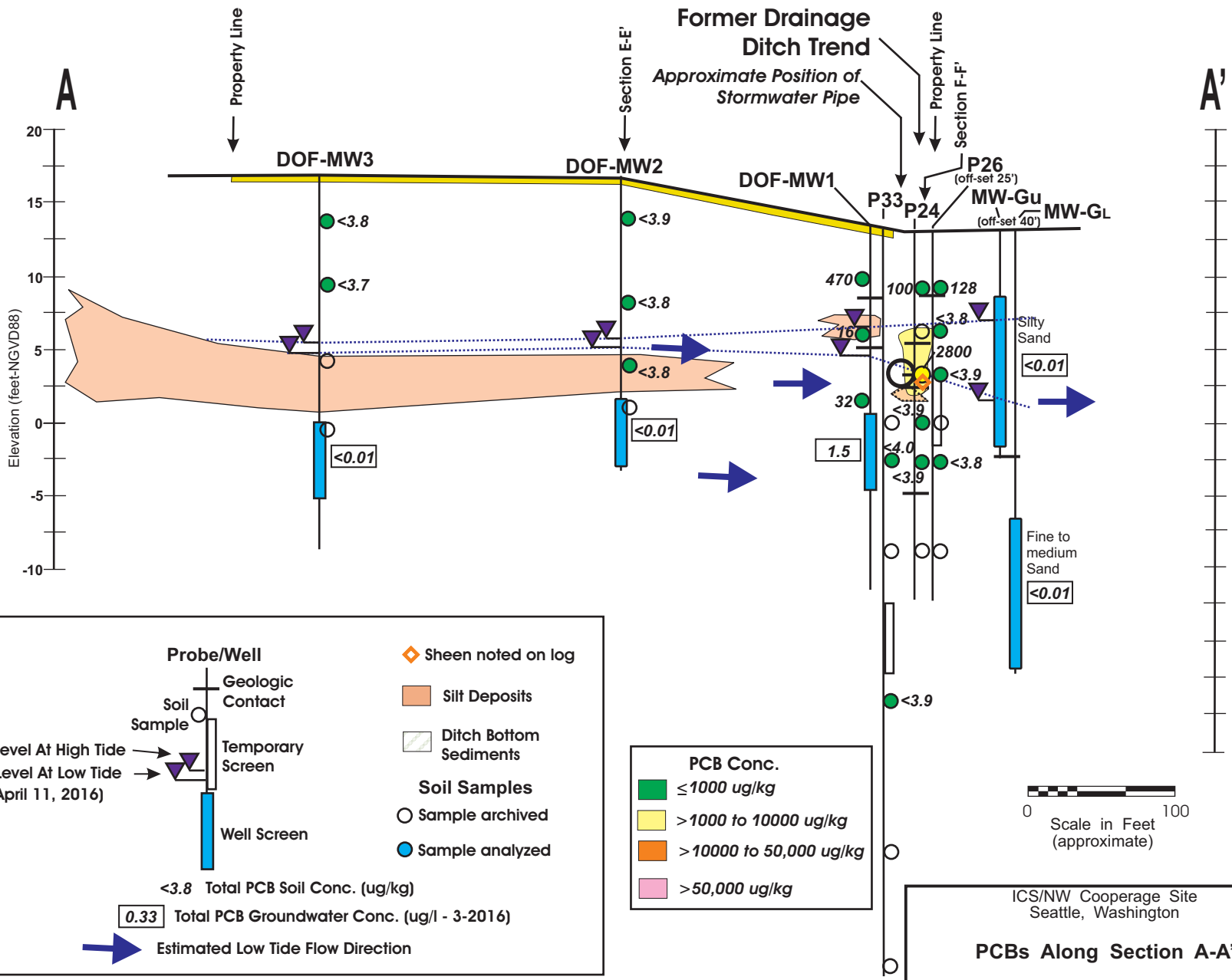
**Extent of Total PCBs in Soil
Ten to Fifteen Feet Deep**

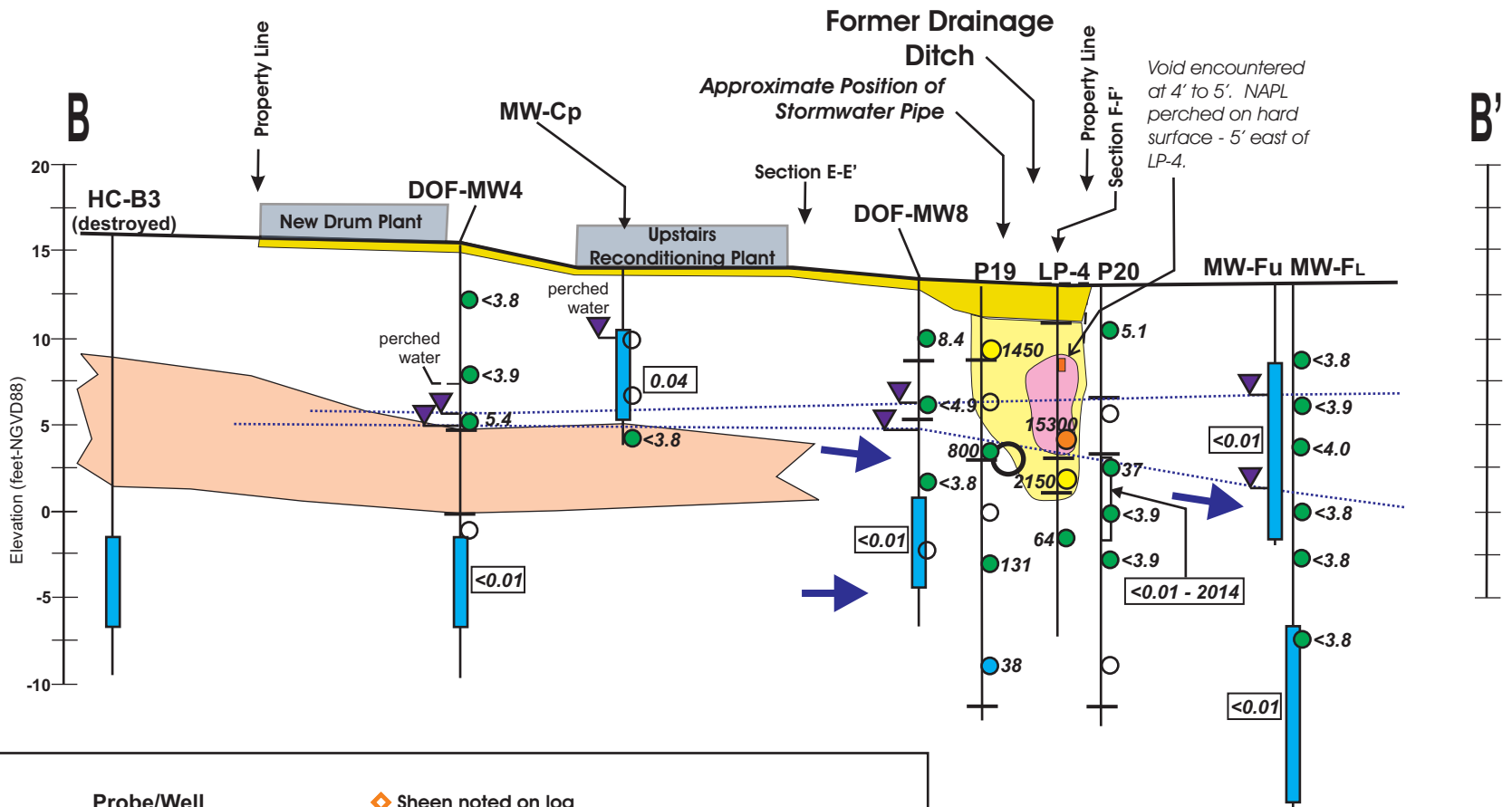
SUM-008-00 (ICS) March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-2c







Probe/Well

- Geologic Contact
- Soil
- Water Level At High Tide
- Water Level At Low Tide (On April 11, 2016)
- Sample
- Temporary Screen
- Well Screen

Legend:

- ◆ Sheen noted on log
- Silt Deposits
- ▨ Ditch Bottom Sediments
- Soil Samples
- Sample archived
- Sample analyzed

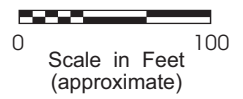
PCB Conc.

- ≤ 1000 ug/kg
- > 1000 to 10000 ug/kg
- > 10000 to 50,000 ug/kg
- > 50,000 ug/kg

Groundwater Data:

- 0.33 Total PCB Groundwater Conc. (ug/l - 3-2016)
- <3.8 Total PCB Soil Conc. (ug/kg)

➔ Estimated Low Tide Flow Direction

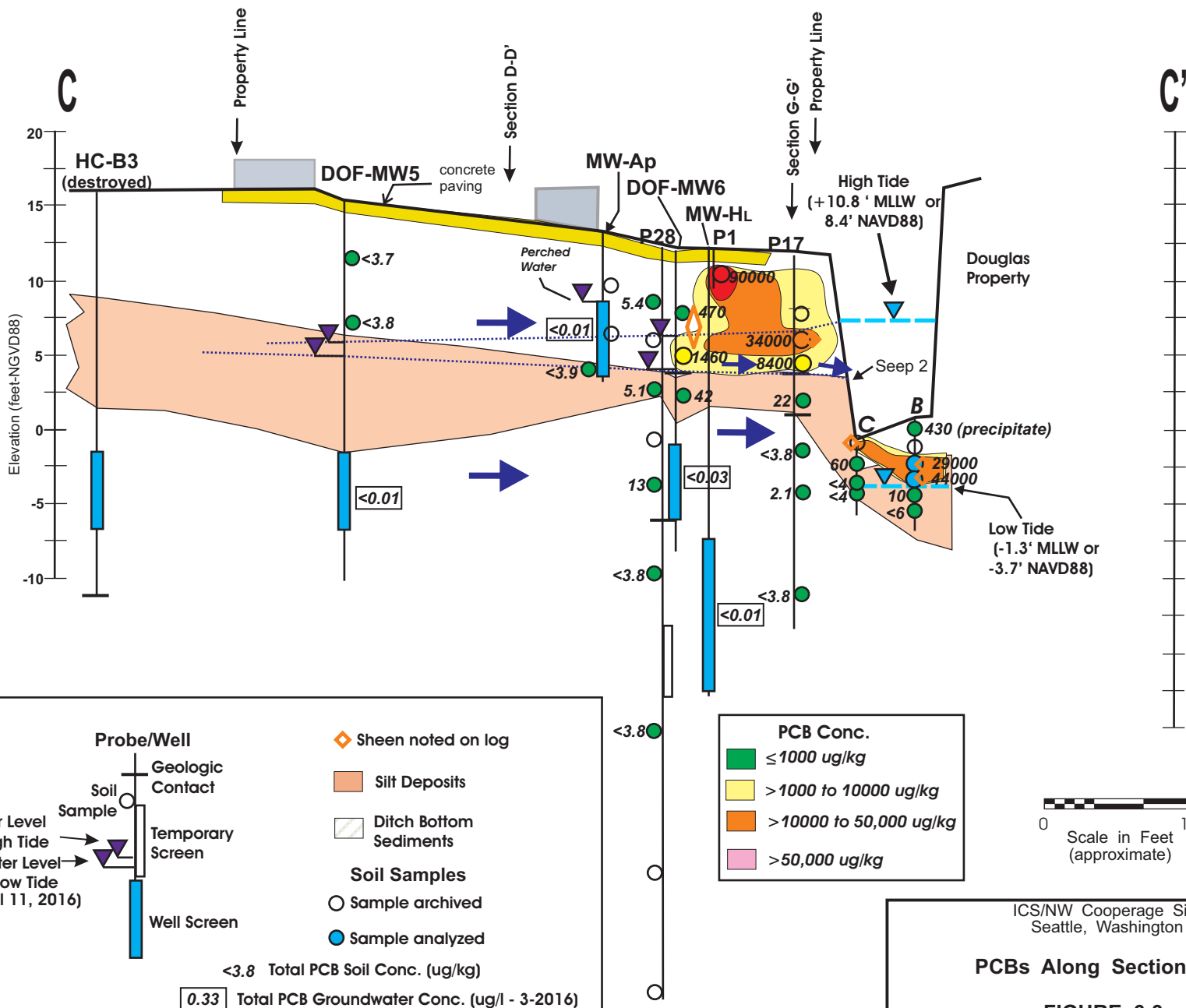


ICS/NW Cooperage Site
Seattle, Washington

PCBs Along Section B-B'

SUM-008-00 **FIGURE 6-3b** April 2018
Dalton, Olmsted & Fuglevand, Inc.

Ref: Section B-B'7-2016.cdr



Probe/Well

- Geologic Contact
- Soil Sample
- Water Level At High Tide
- Water Level At Low Tide (On April 11, 2016)
- Temporary Screen
- Well Screen

◆ Sheen noted on log
 ■ Silt Deposits
 ▨ Ditch Bottom Sediments

Soil Samples

- Sample archived
- Sample analyzed

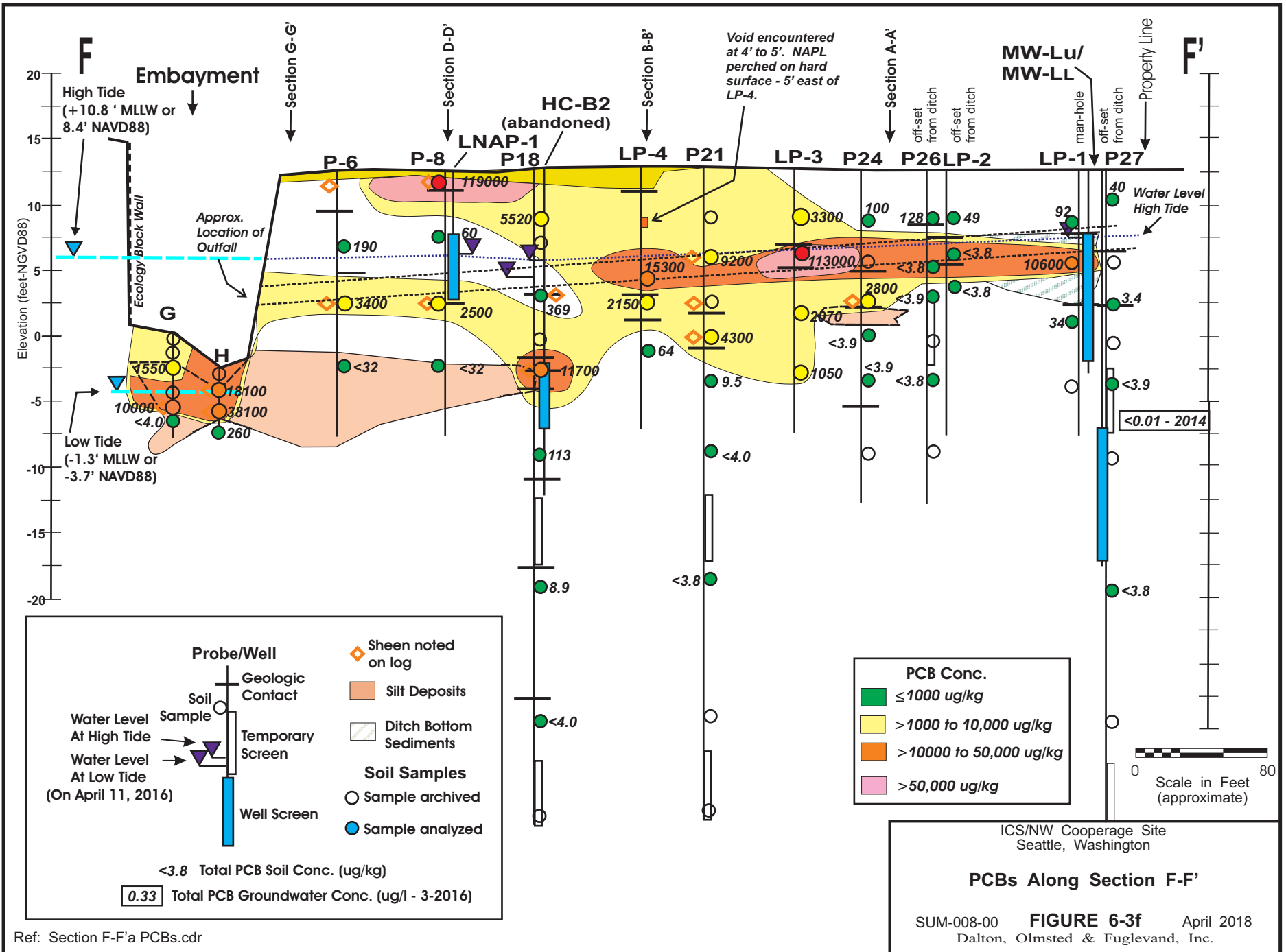
<3.8 Total PCB Soil Conc. (ug/kg)
 0.33 Total PCB Groundwater Conc. (ug/l - 3-2016)

Ref: Section C-C'PCB 7-2016.cdr

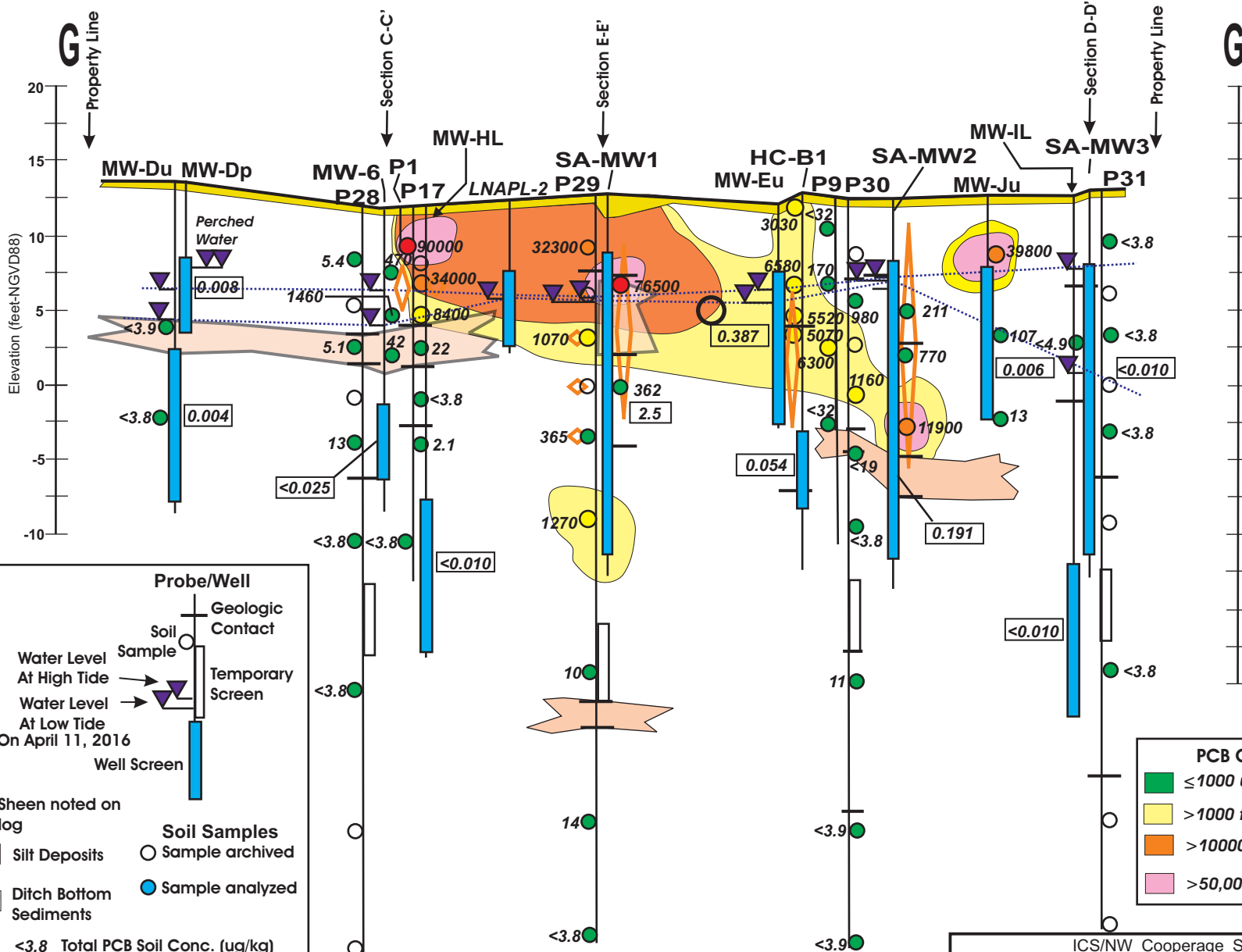
ICS/NW Cooperage Site
Seattle, Washington

PCBs Along Section C-C'

SUM-008-00 **FIGURE 6-3c** April 2018
Dalton, Olmsted & Fuglevand, Inc.



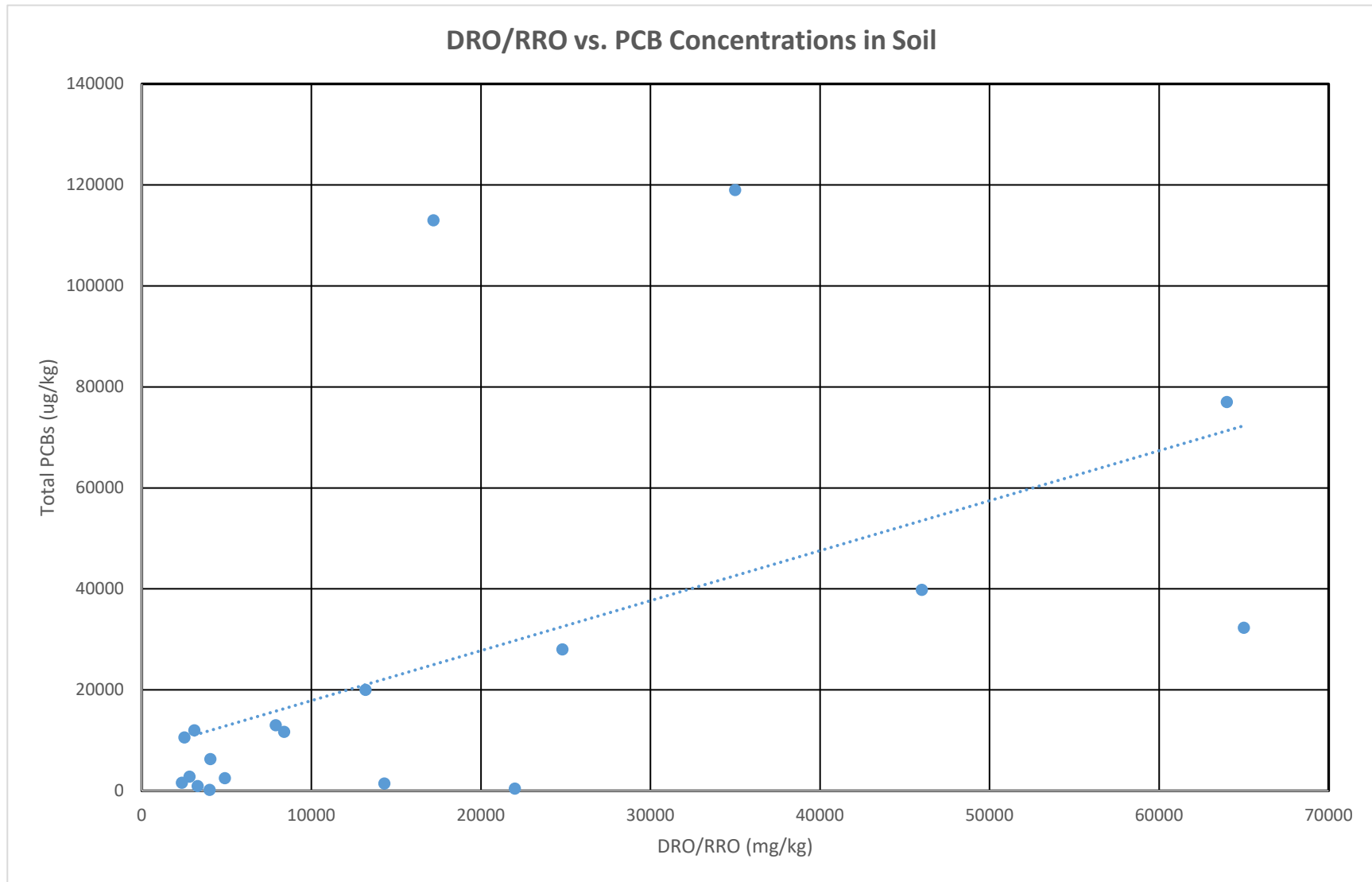
Ref: Section F-F'a PCBs.cdr

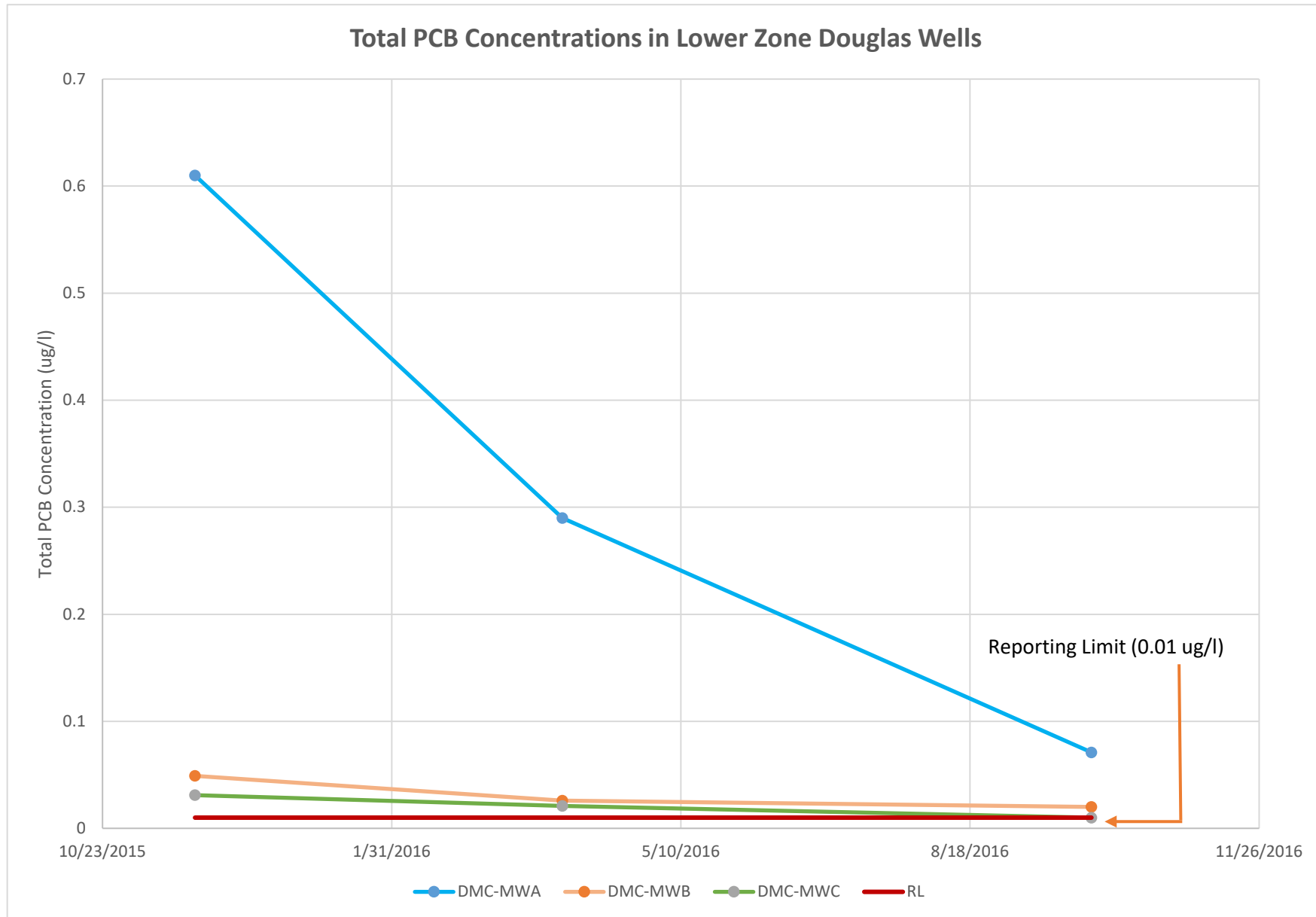


Ref: Section G-G'7-2016 PCBs.cdr

0 80
Scale in Feet (approximate)

ICS/NW Cooperage Site
Seattle, Washington
PCBs Along Section G-G'
SUM-008-00 **FIGURE 6-3g** April 2018
Dalton, Olmsted & Fuglevand, Inc.





**FIGURE 6-5 - PCB Concentration Trends
Lower Zone Douglas Wells**

Location	Aroclor Analyses				Congener Analyses (2017)	
	DOF Analyses (RI - 2012-2016)			Ecology (2017)	Ecology	DOF Split
	Result (ug/l)	No. Spls.	Avg. (ug/l)	Result (ug/l)	Result (ug/l)	Result (ug/l)
DOF- MW3 (background)	nd (<0.010)	3	nd (<0.010)	nd (<0.014)	0.00017	0.00040
DOF-MW1	0.16 to 1.5	4	0.65	0.27	0.197	0.200
SA-MW2	0.12 to 0.40	4	0.20	0.09	0.070	0.070

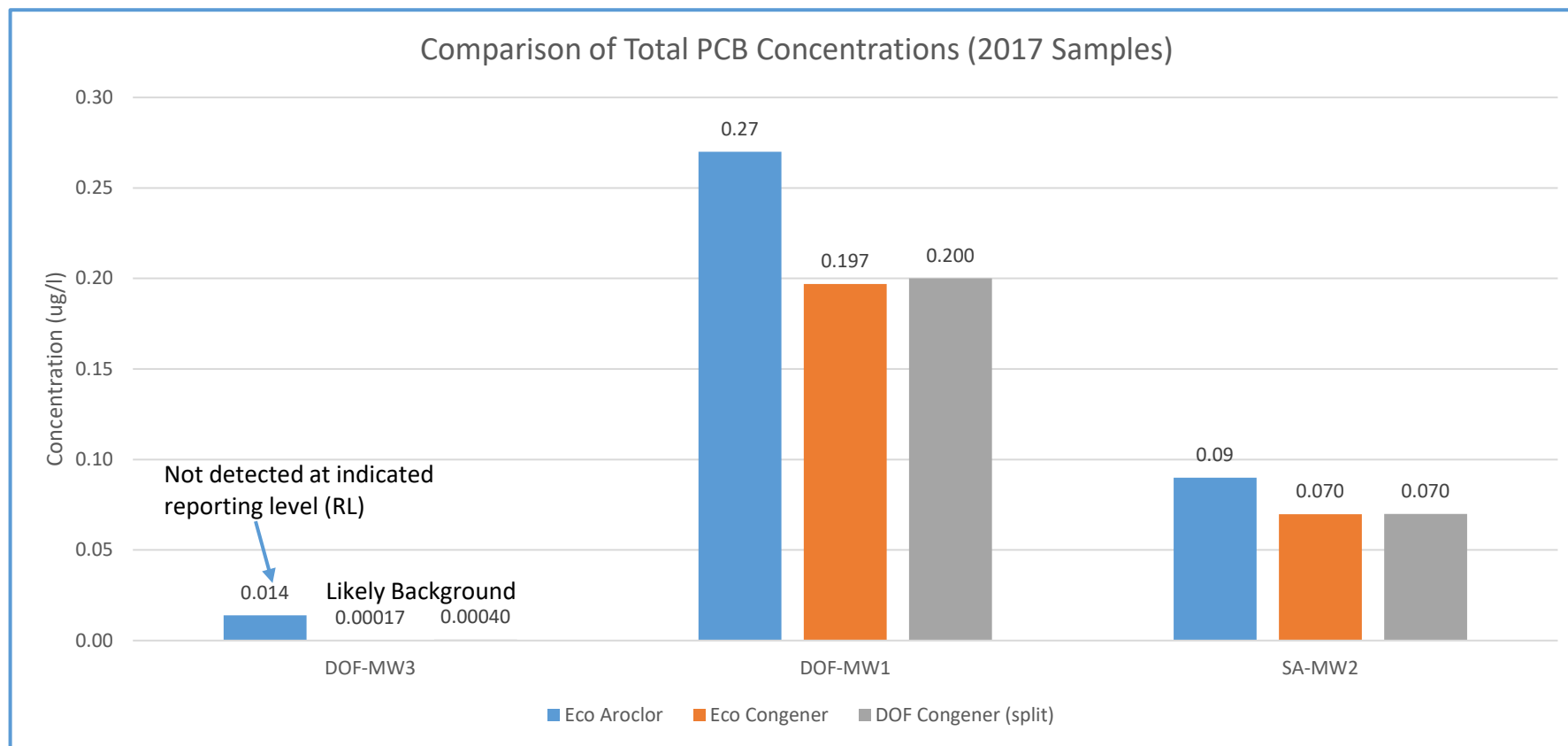
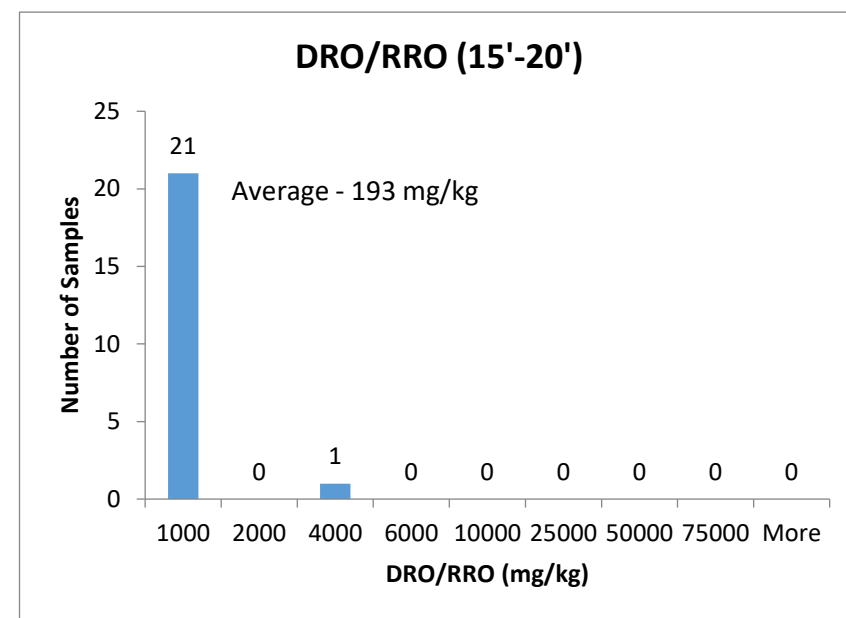
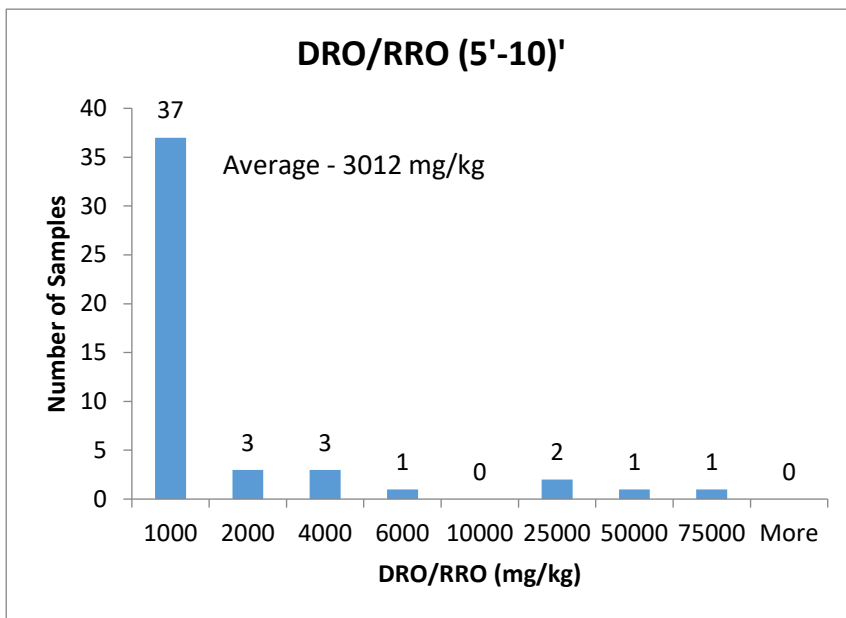
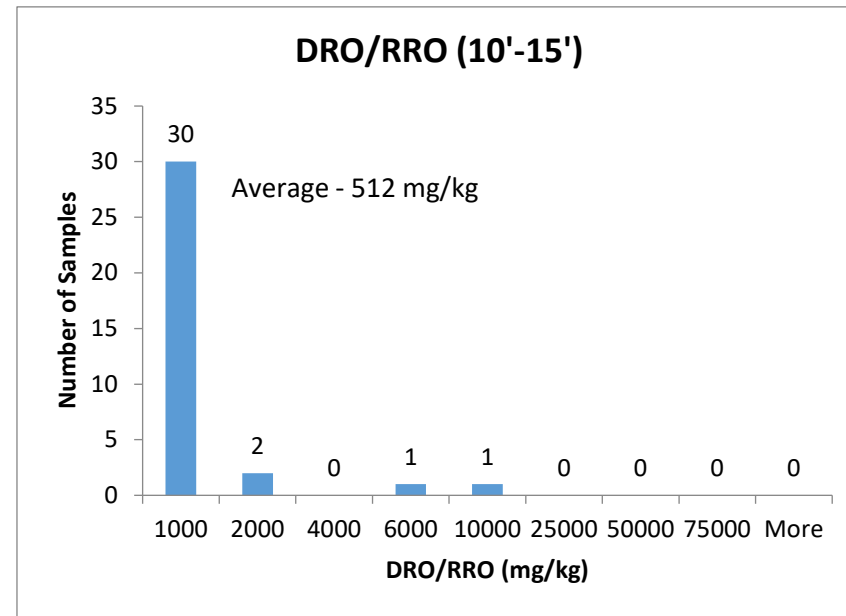
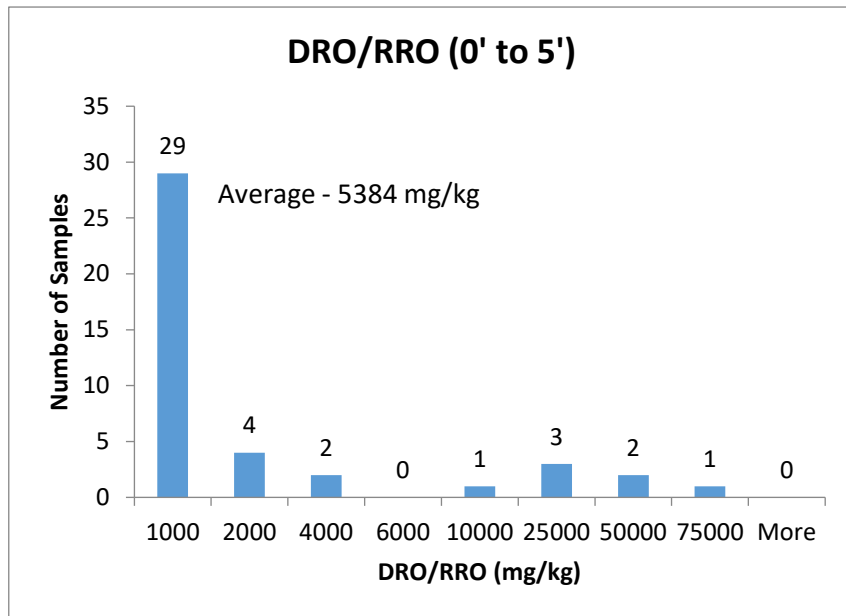
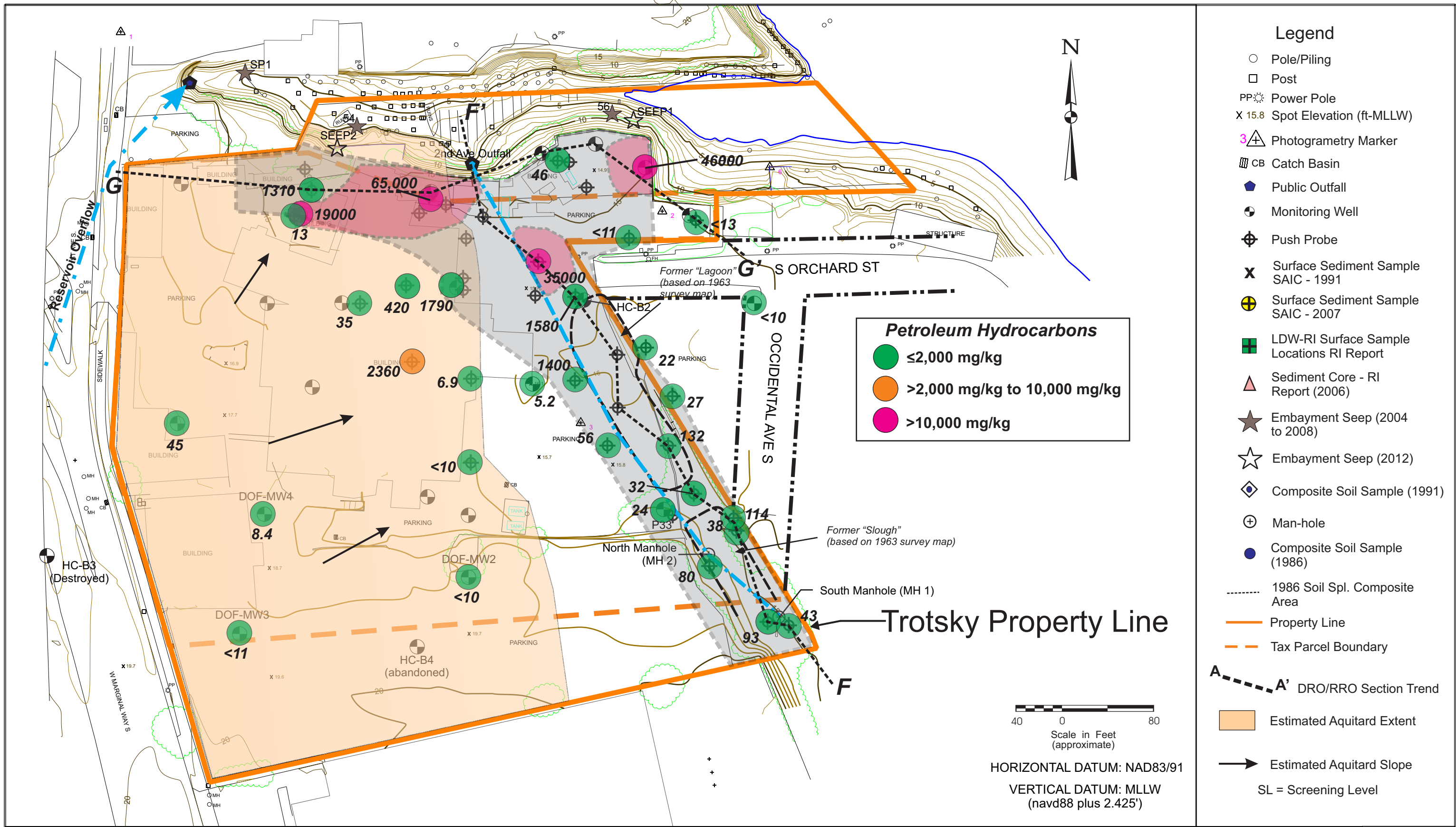


FIGURE 6-6 - Comparison of Aroclor and Congener PCBs in Groundwater





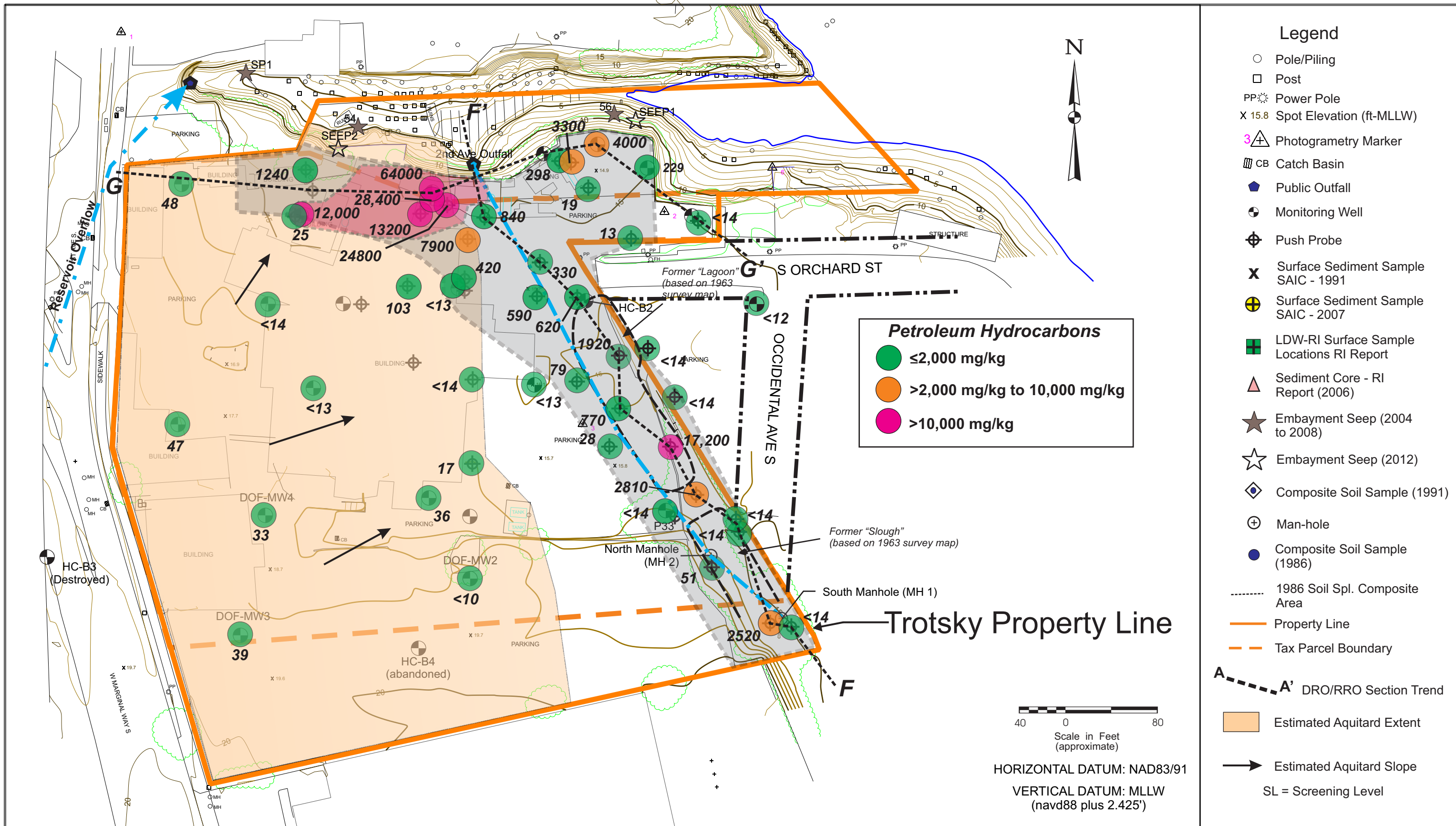
ICS/NW Cooprage Site

Extent of DRO + RRO in Soil Less than Five Feet Deep

SUM-008-00 (ICS) March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-8a



Legend

- Pole/Piling
- Post
- PP Power Pole
- X 15.8 Spot Elevation (ft-MLLW)
- 3+ Photogrammetry Marker
- CB Catch Basin
- Public Outfall
- Monitoring Well
- Push Probe
- X Surface Sediment Sample SAIC - 1991
- ⊕ Surface Sediment Sample SAIC - 2007
- LDW-RI Surface Sample Locations RI Report
- △ Sediment Core - RI Report (2006)
- ★ Embayment Seep (2004 to 2008)
- ☆ Embayment Seep (2012)
- ◇ Composite Soil Sample (1991)
- ⊕ Man-hole
- Composite Soil Sample (1986)
- 1986 Soil Spl. Composite Area
- Property Line
- - - Tax Parcel Boundary
- A - - - A' DRO/RRO Section Trend
- Estimated Aquitard Extent
- Estimated Aquitard Slope
- SL = Screening Level

Petroleum Hydrocarbons

- ≤2,000 mg/kg
- >2,000 mg/kg to 10,000 mg/kg
- >10,000 mg/kg

40 0 80
Scale in Feet (approximate)

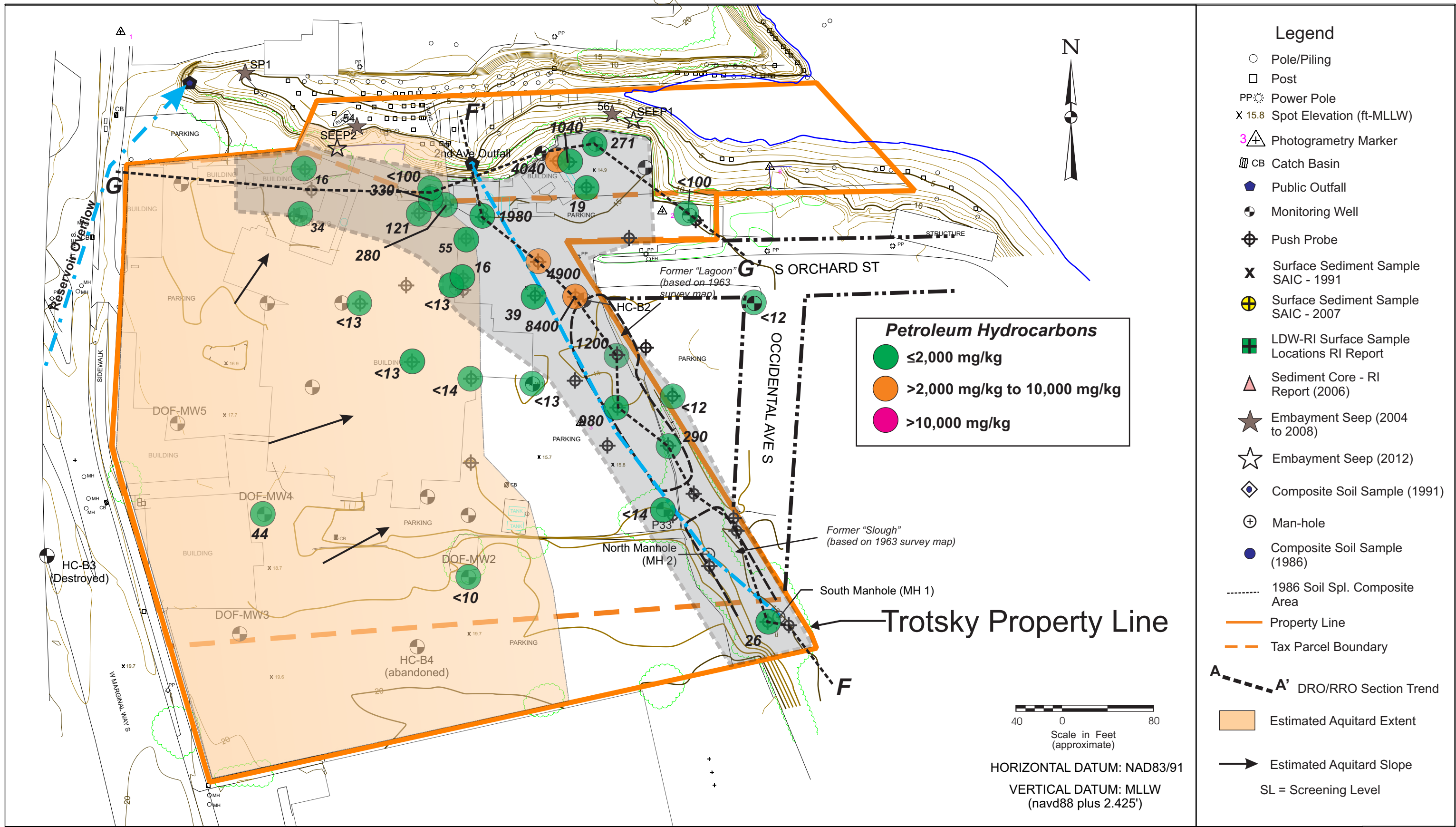
HORIZONTAL DATUM: NAD83/91
VERTICAL DATUM: MLLW (navd88 plus 2.425')

Notes:

- 1) Locations with no analytical data displayed no significant field evidence (sheen or elevated PID vapor concentrations) of TPH contamination during sampling.
- 2) Concentrations = Diesel Range Organics (DRO) + Residual Range Organics (RRO)
- 2) SL = 2000 mg/kg.

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooperage Site		FIGURE 6-8b
Extent of DRO + RRO in Soil Five to Ten Feet Deep		
SUM-008-00 (ICS)	March 2018	
<i>Dalton, Olmsted & Fuglevand, Inc.</i>		



Notes:

- 1) Locations with no analytical data displayed no significant field evidence (sheen or elevated PID vapor concentrations) of TPH contamination during sampling.
- 2) Concentrations = Diesel Range Organics (DRO) + Residual Range Organics (RRO)
- 2) SL = 2000 mg/kg.

Ref: Upland Phase2a TPHrev.cdr

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooperage Site

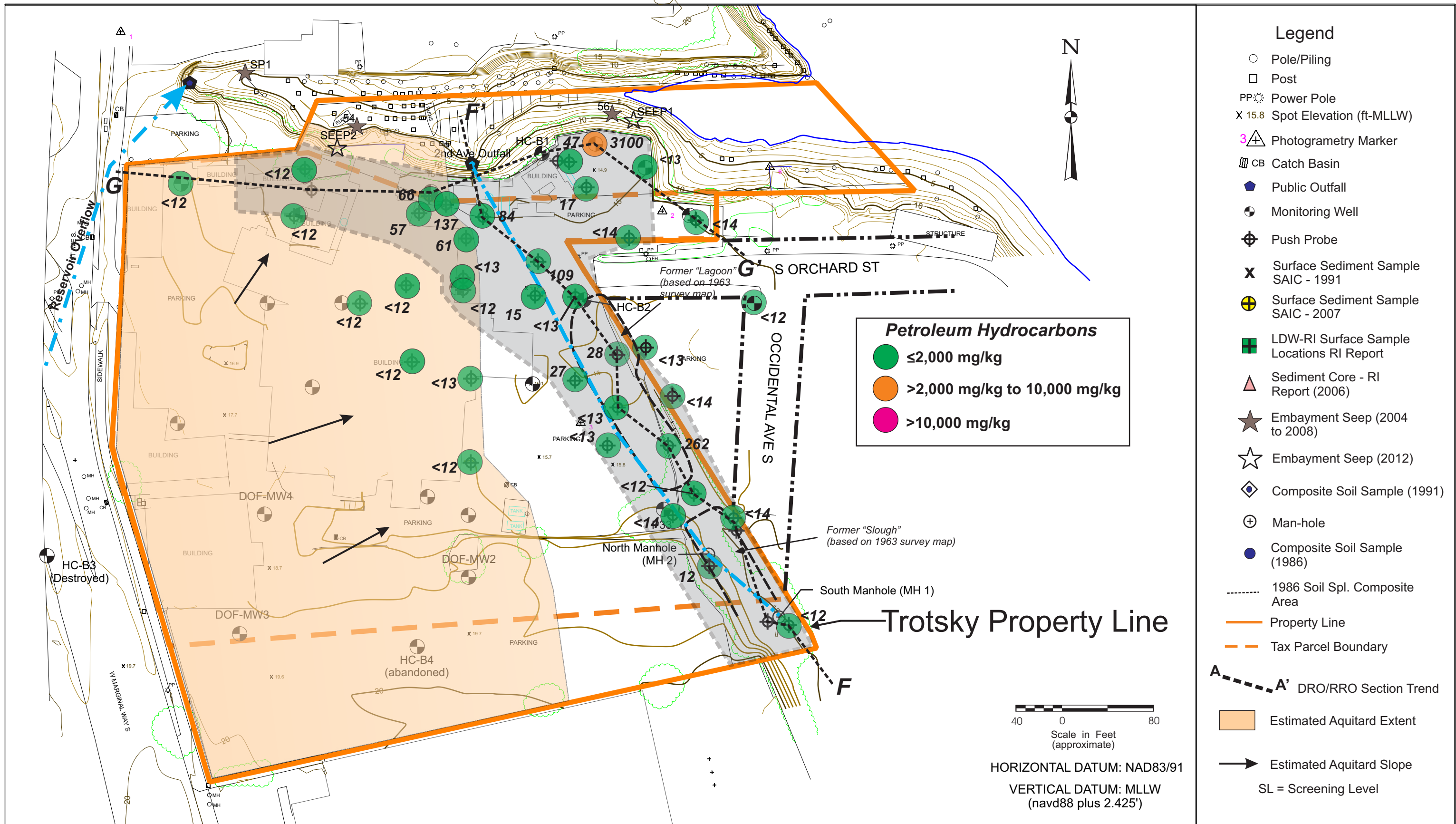
Extent of DRO + RRO in Soil Ten to Fifteen Feet Deep

SUM-008-00 (ICS)

March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-8c



Legend

- Pole/Piling
- Post
- PP Power Pole
- X 15.8 Spot Elevation (ft-MLLW)
- 3+ Photogrammetry Marker
- CB Catch Basin
- Public Outfall
- Monitoring Well
- Push Probe
- X Surface Sediment Sample SAIC - 1991
- ⊕ Surface Sediment Sample SAIC - 2007
- LDW-RI Surface Sample Locations RI Report
- Sediment Core - RI Report (2006)
- ★ Embayment Seep (2004 to 2008)
- ☆ Embayment Seep (2012)
- ◇ Composite Soil Sample (1991)
- ⊕ Man-hole
- Composite Soil Sample (1986)
- 1986 Soil Spl. Composite Area
- Property Line
- - - Tax Parcel Boundary
- A - - - A' DRO/RRO Section Trend
- Estimated Aquitard Extent
- Estimated Aquitard Slope
- SL = Screening Level

Petroleum Hydrocarbons

- ≤2,000 mg/kg
- >2,000 mg/kg to 10,000 mg/kg
- >10,000 mg/kg

40 0 80
Scale in Feet (approximate)

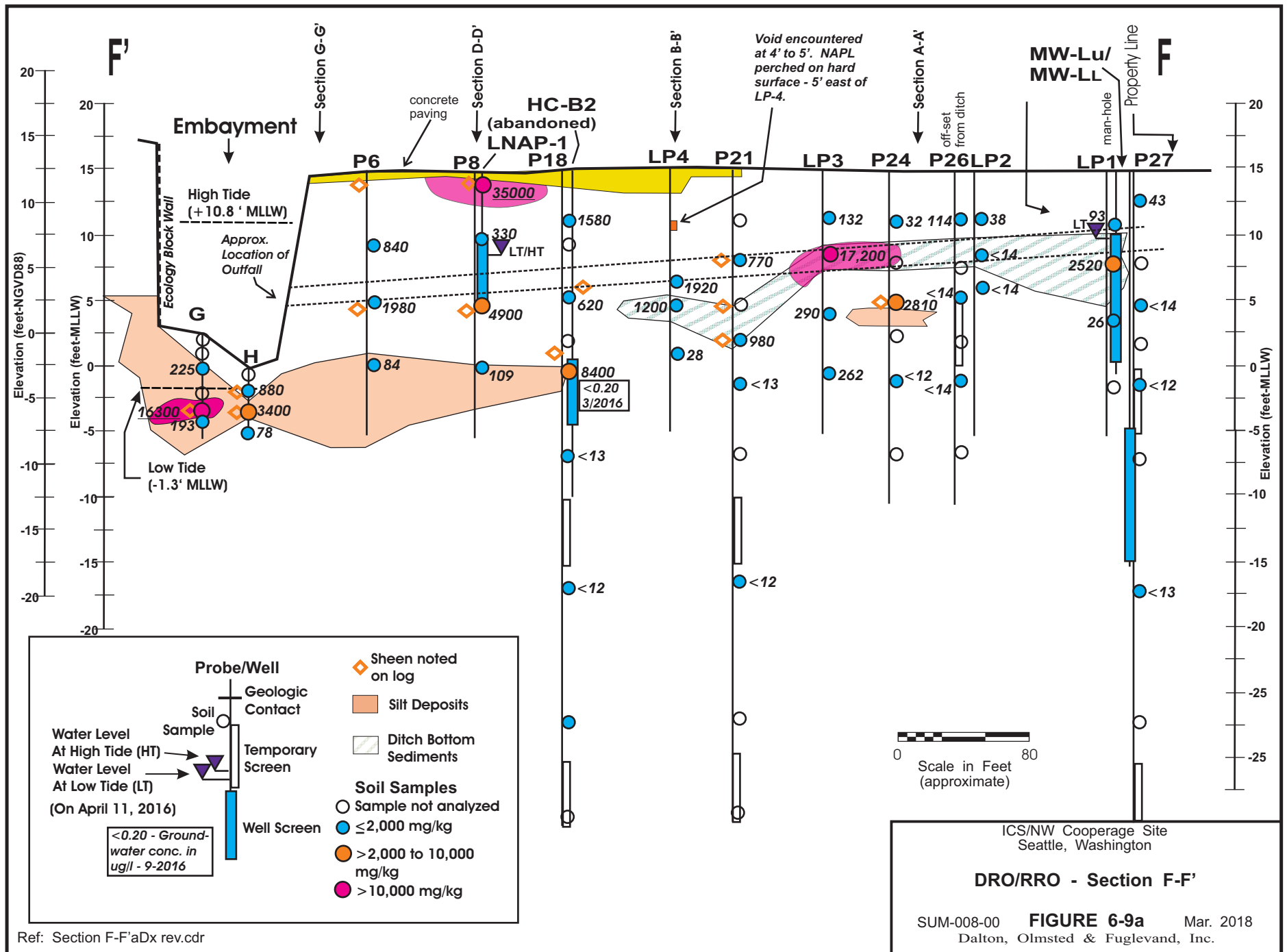
HORIZONTAL DATUM: NAD83/91
VERTICAL DATUM: MLLW (navd88 plus 2.425')

Notes:

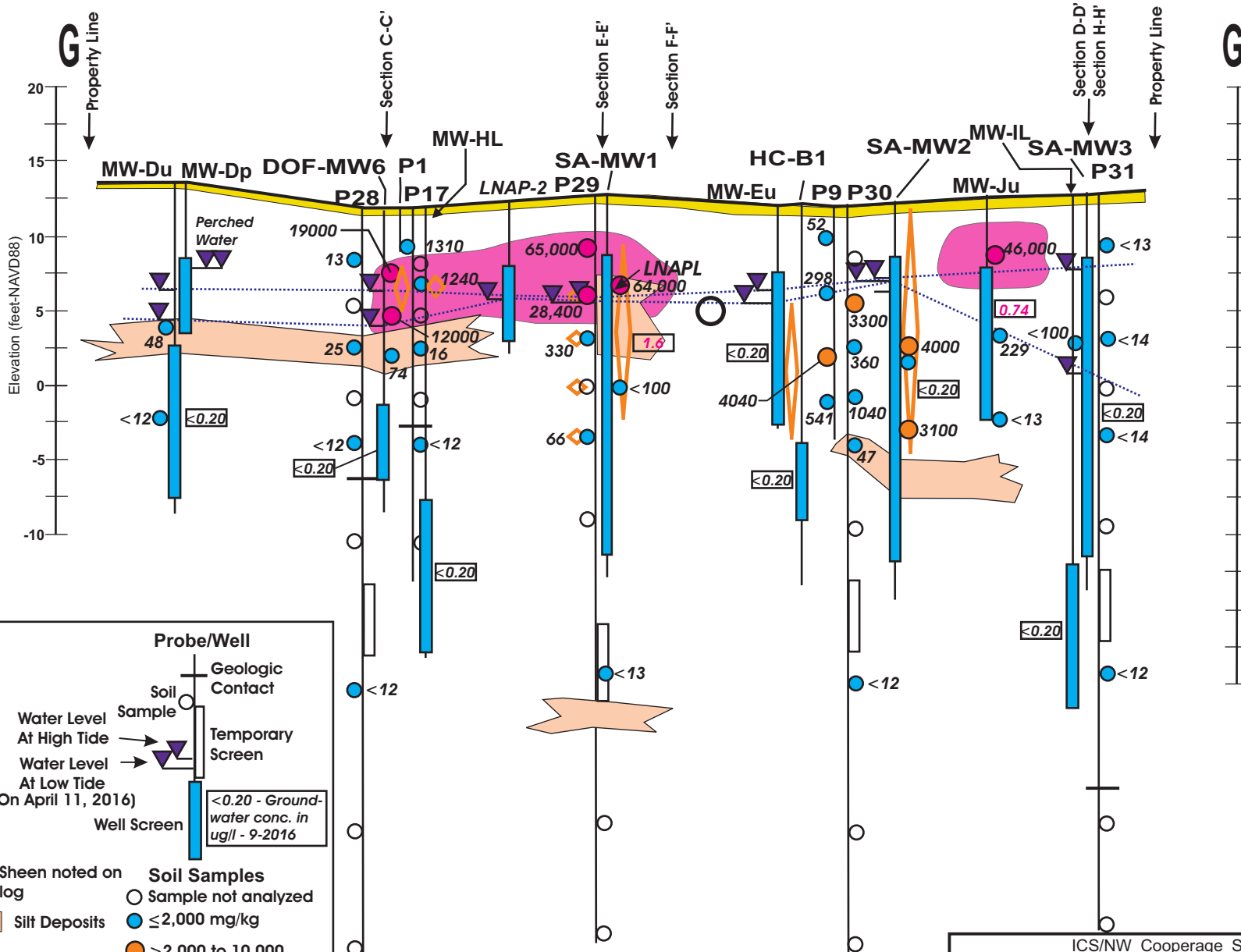
- 1) Locations with no analytical data displayed no significant field evidence (sheen or elevated PID vapor concentrations) of TPH contamination during sampling.
- 2) Concentrations = Diesel Range Organics (DRO) + Residual Range Organics (RRO)
- 2) SL = 2000 mg/kg.

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooperage Site		FIGURE 6-8d
Extent of DRO + RRO in Soil Fifteen to Twenty Feet Deep		
SUM-008-00 (ICS)	March 2018	
Dalton, Olmsted & Fuglevand, Inc.		

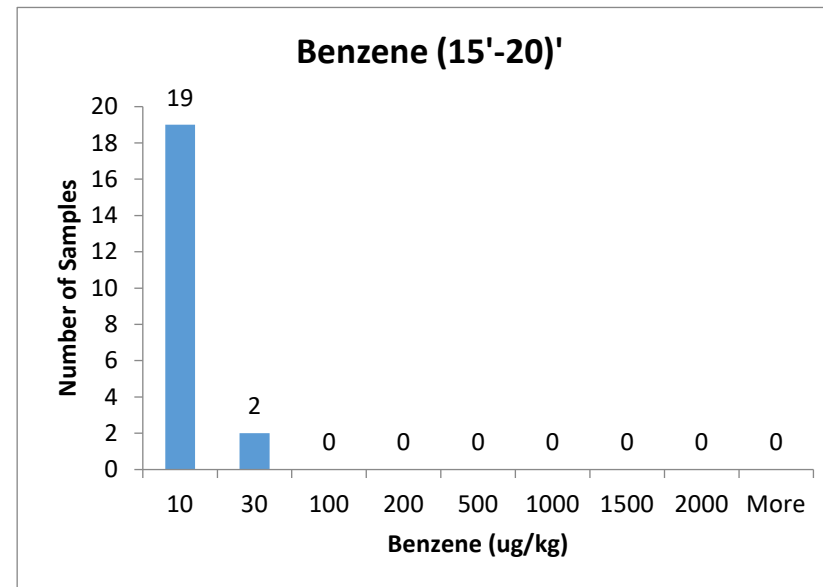
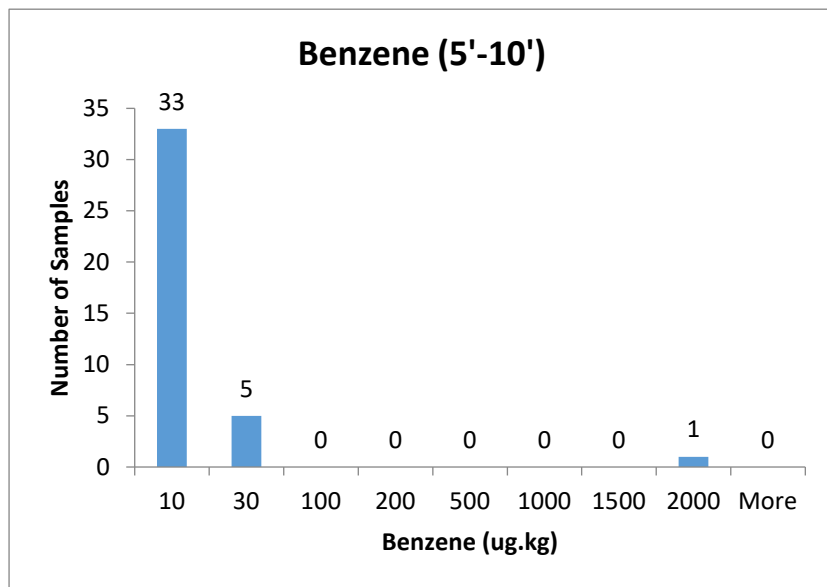
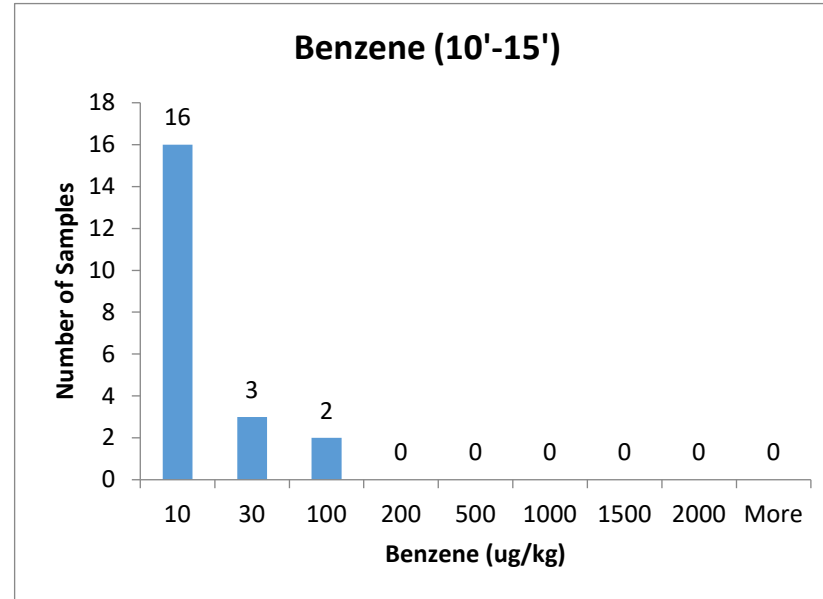
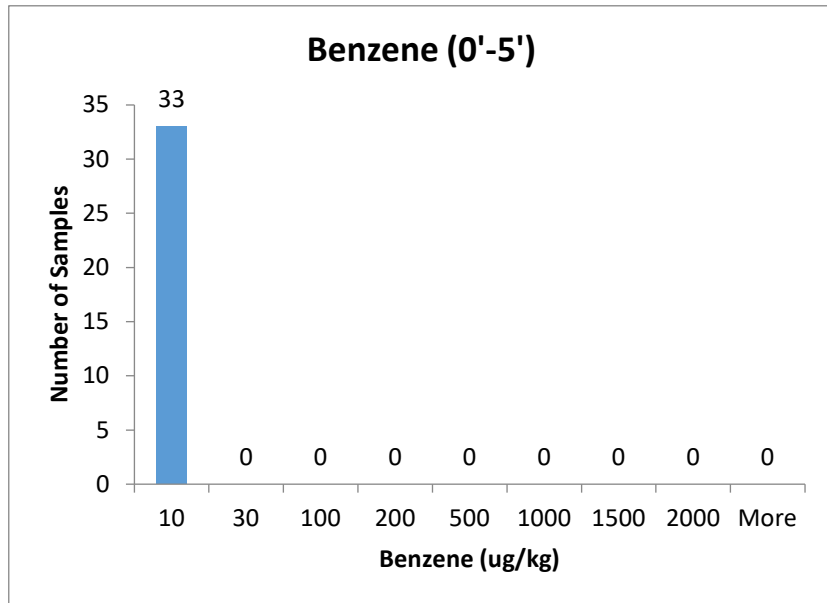


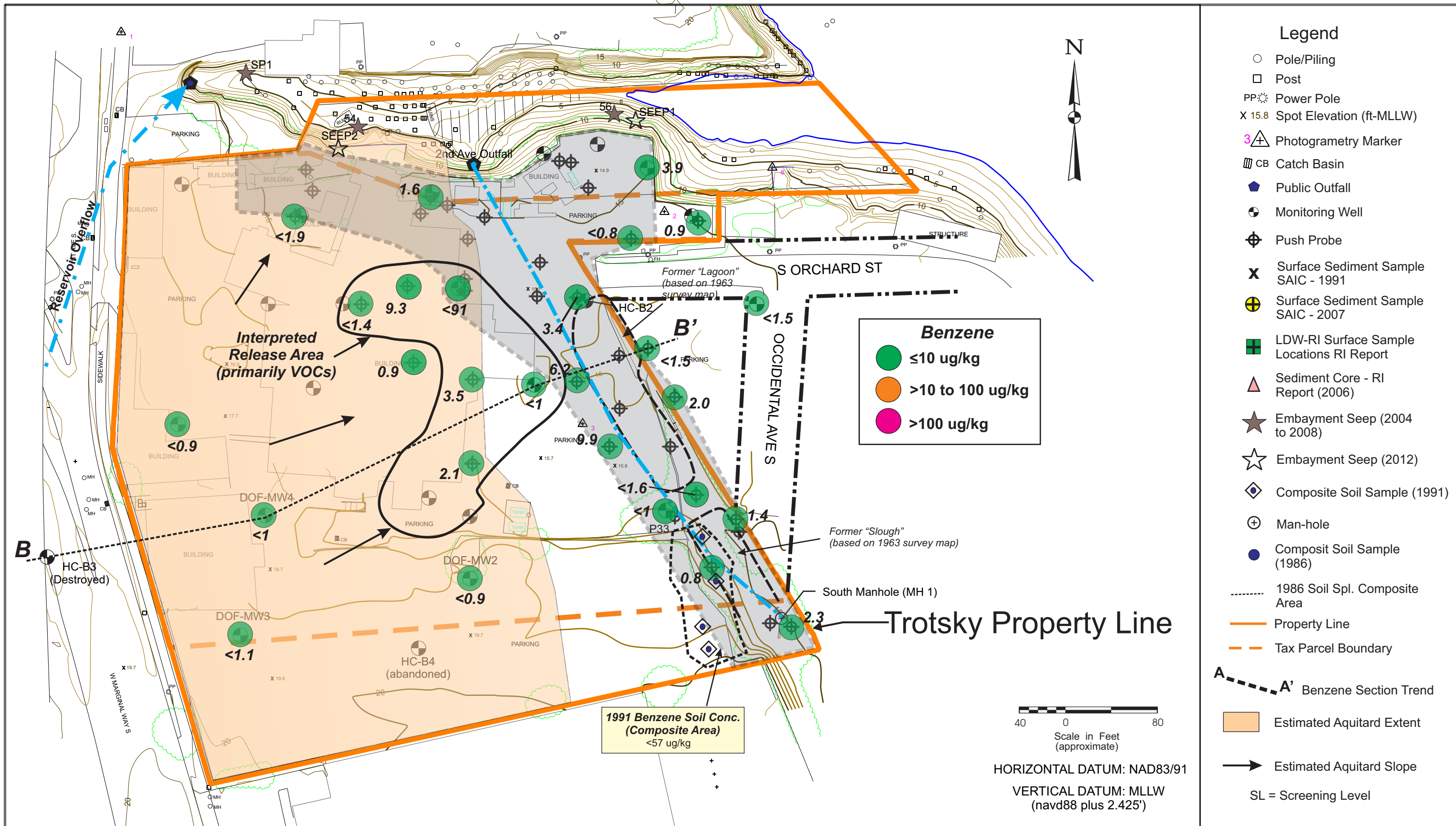
Ref: Section F-F'aDx rev.cdr



Ref: Section G-G'7-2016DX rev.cdr

ICS/NW Cooperage Site
 Seattle, Washington
DRO/RRO Section G-G'
 SUM-008-00 **FIGURE 6-9b** Mar. 2018
 Dalton, Olmsted & Fuglevand, Inc.





Notes:

- 1) Locations with no analytical data displayed no significant field evidence (sheen or elevated PID vapor concentrations) of benzene contamination during sampling.
- 2) Data from the HC borings (HC-B1 to HC-B5) not plotted; benzene concentrations were not detected in soil samples from these locations.
- 3) Soil Contact SL = 18.2 mg/kg.

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooprage Site

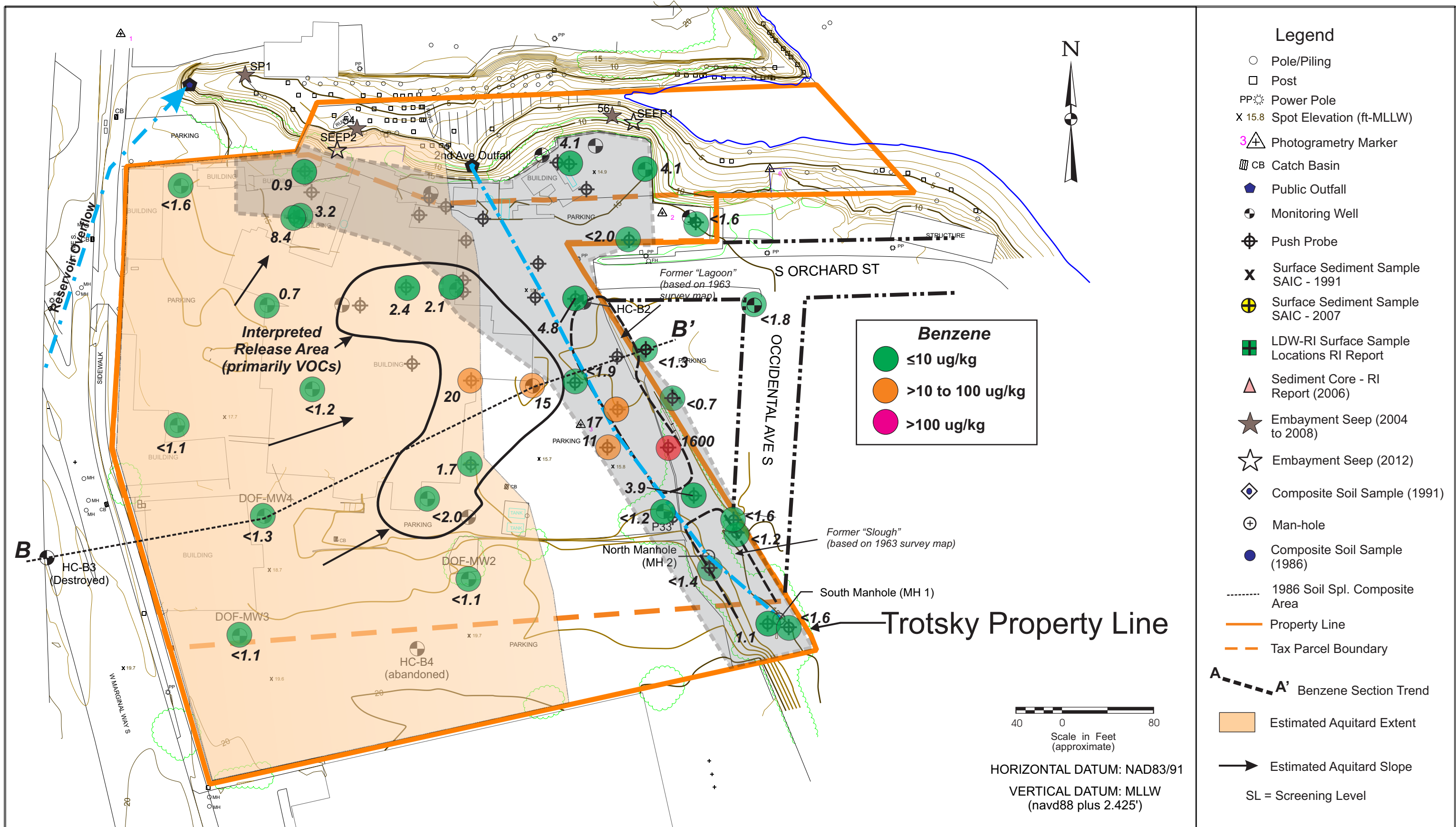
Extent of Benzene in Soil Less than Five Feet Deep

SUM-008-00 (ICS)

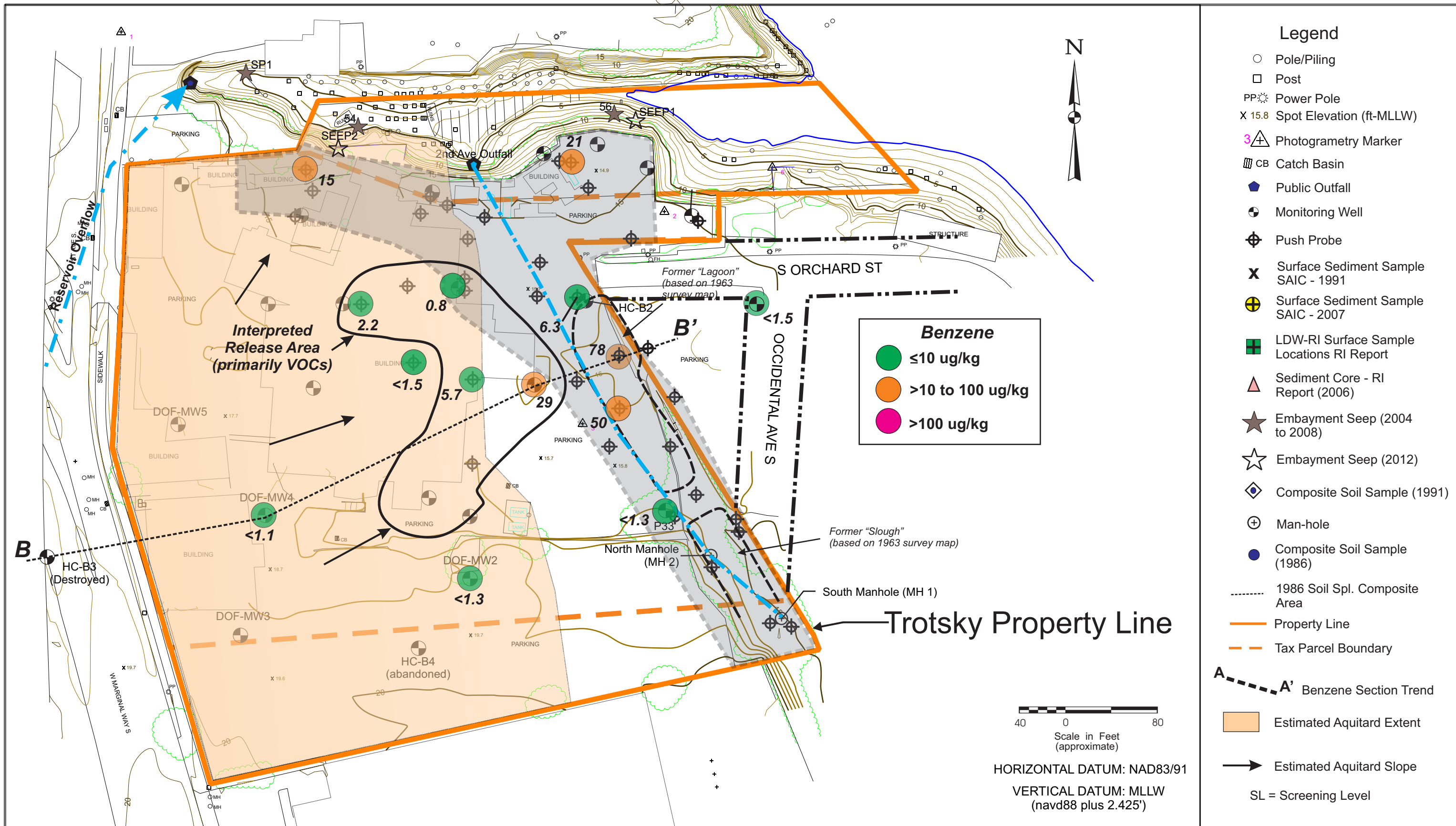
March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-11a



Ref: Upland Phase2a Benrev.cdr



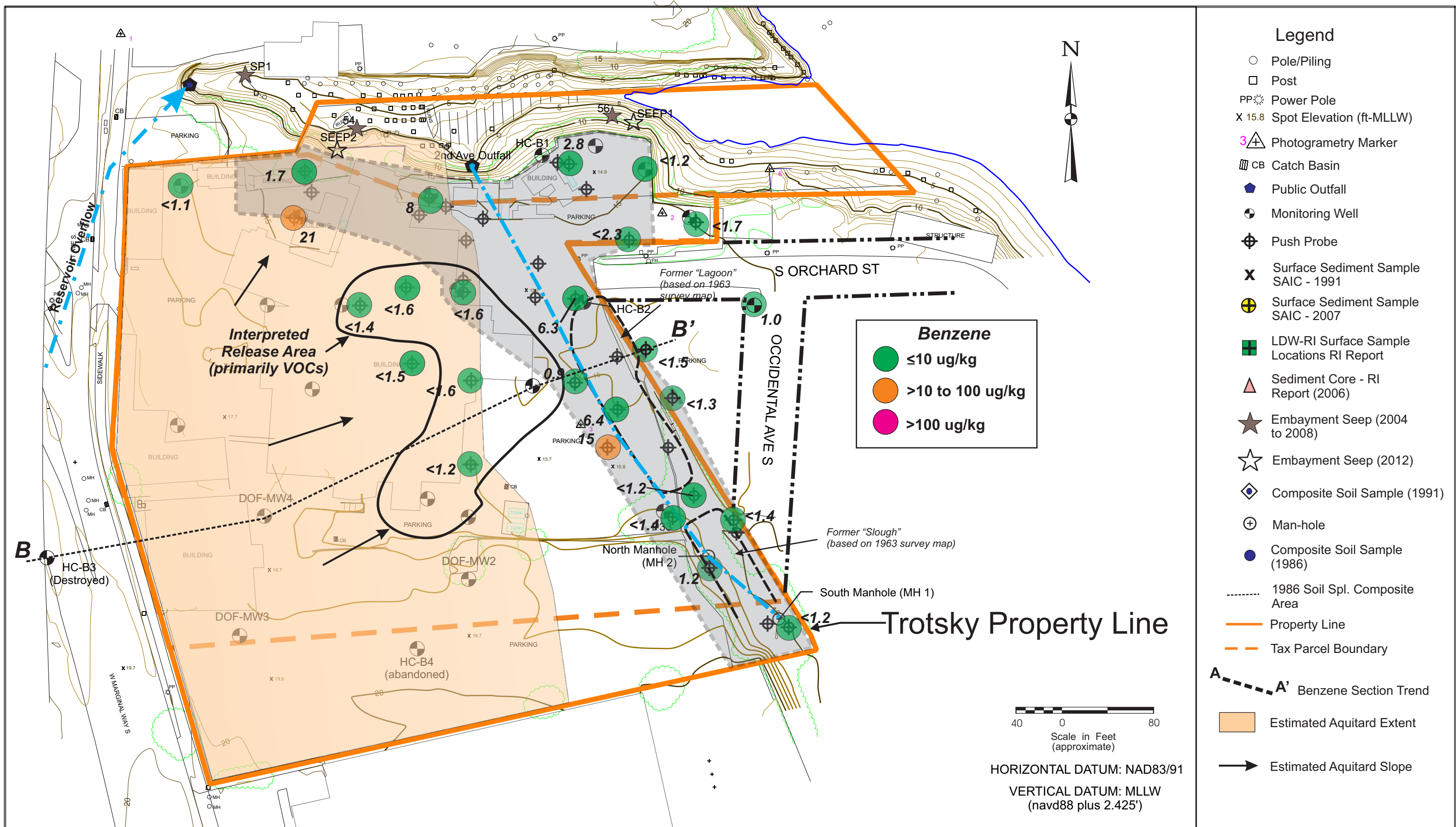
Notes:

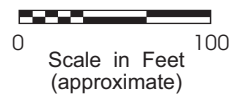
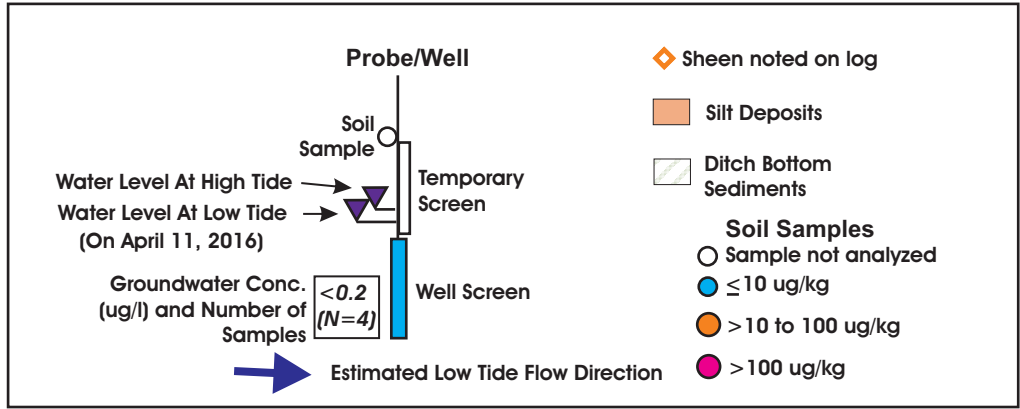
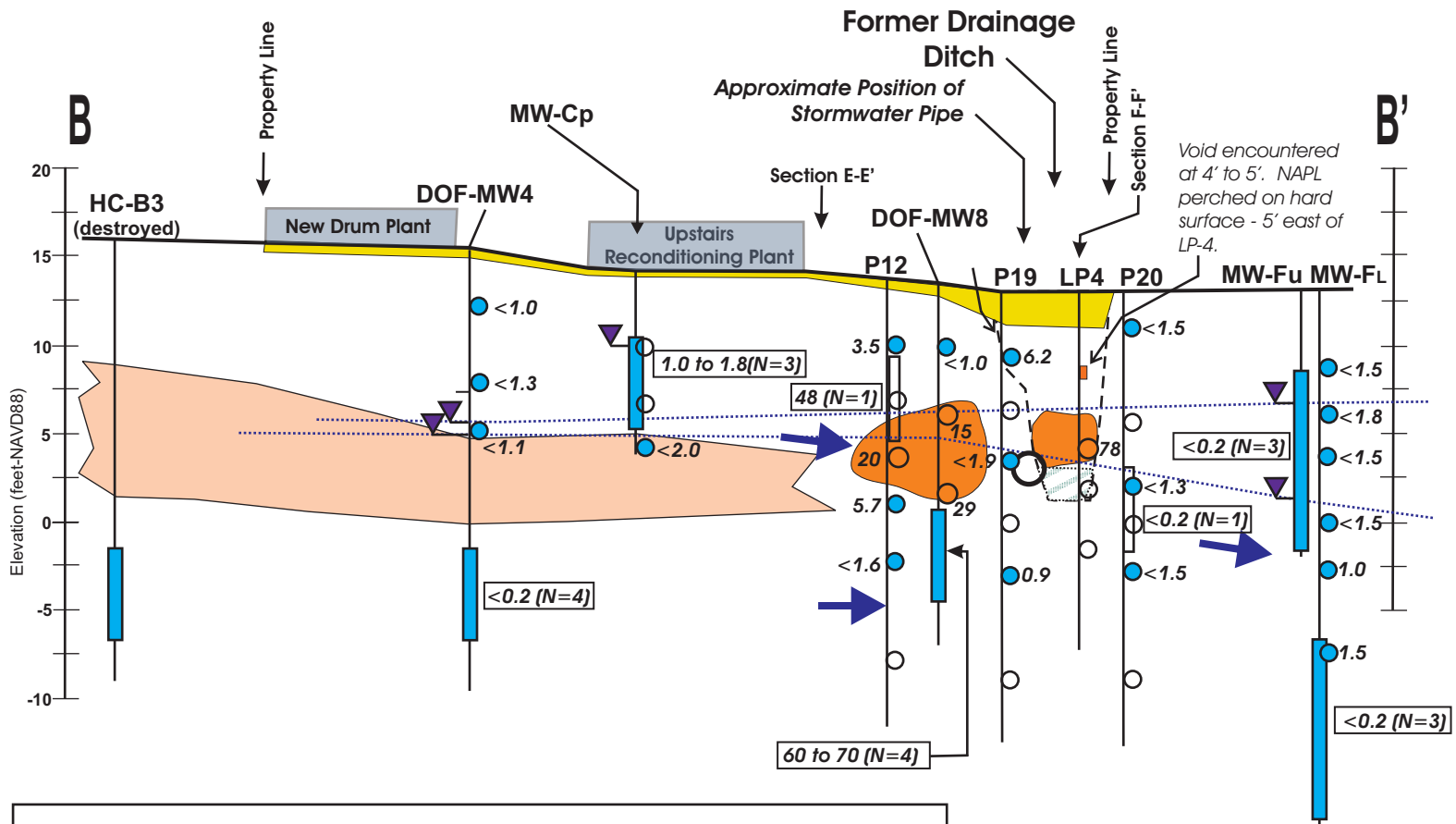
- 1) Locations with no analytical data displayed no significant field evidence (sheen or elevated PID vapor concentrations) of benzene contamination during sampling.
- 2) Data from the HC borings (HC-B1 to HC-B5) not plotted; benzene concentrations were not detected in soil samples from these locations.
- 3) Soil Contact SL = 18.2 mg/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

Ref: Upland Phase2a Benrev.cdr

ICS/NW Cooprage Site		FIGURE 6-11c
Extent of Benzene in Soil Ten to Fifteen Feet Deep		
SUM-008-00 (ICS)	March 2018	
Dalton, Olmsted & Fuglevand, Inc.		



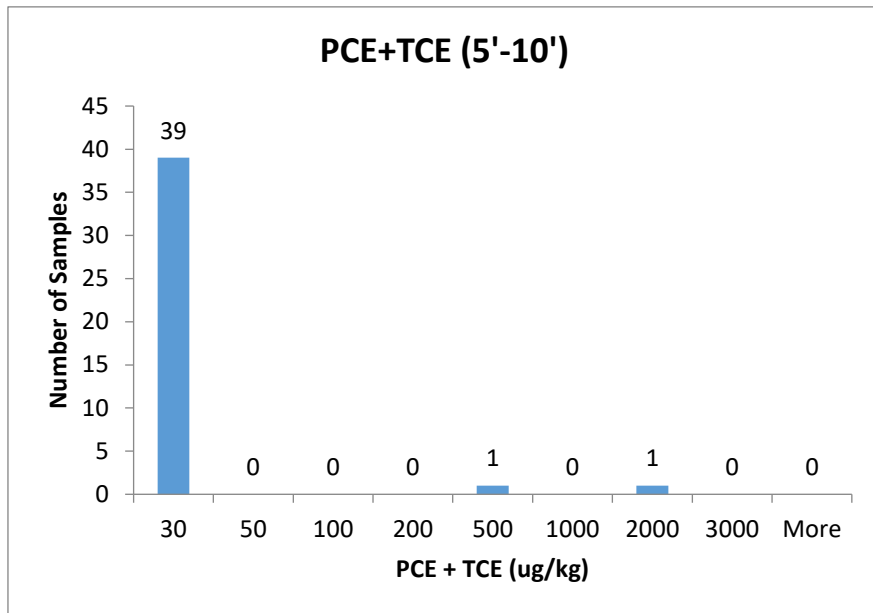
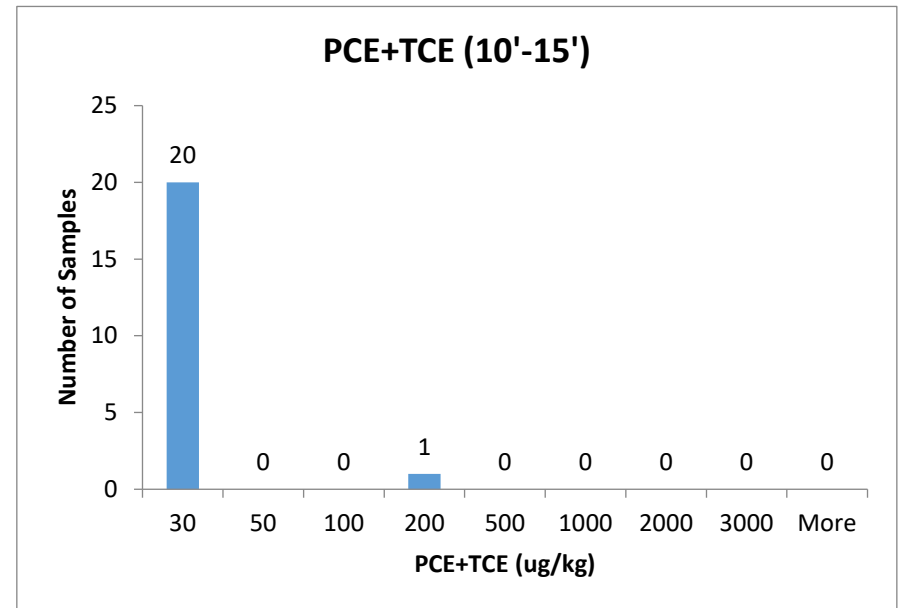
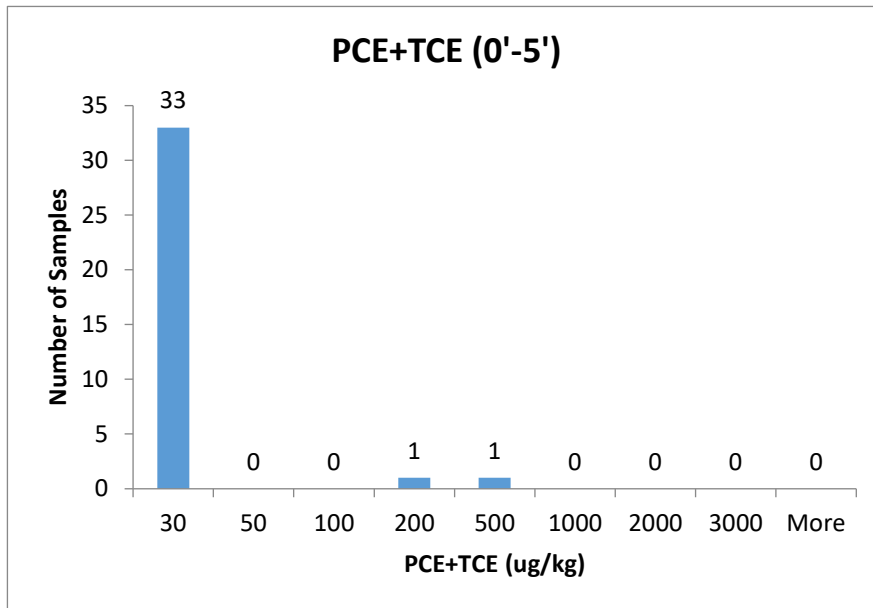


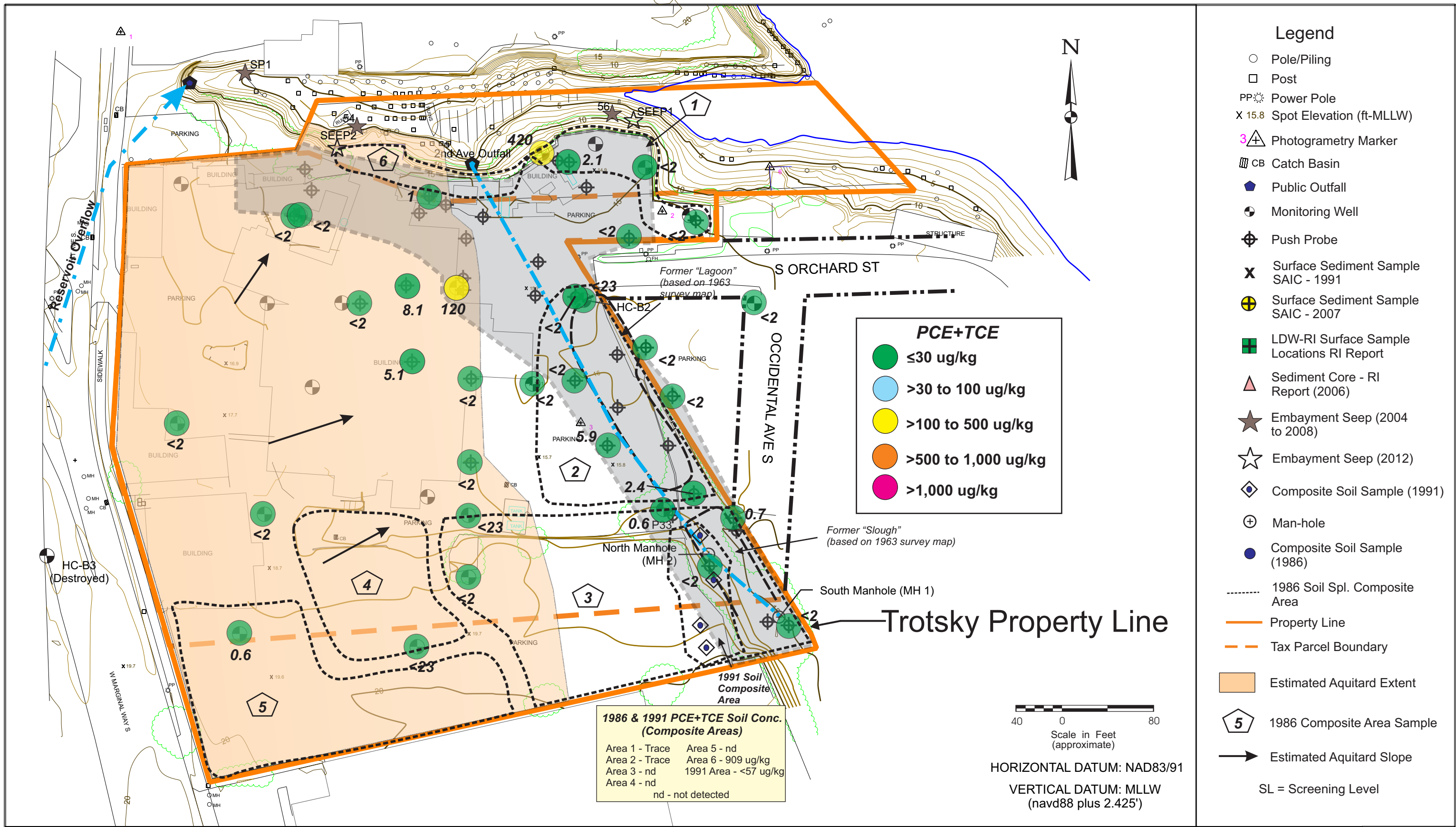
ICS/NW Cooperage Site
Seattle, Washington

Benzene Along Section B-B'

SUM-008-00 **FIGURE 6-12** Mar. 2018
Dalton, Olmsted & Fuglevand, Inc.

Ref: Ben section B-B'7-2016.cdr



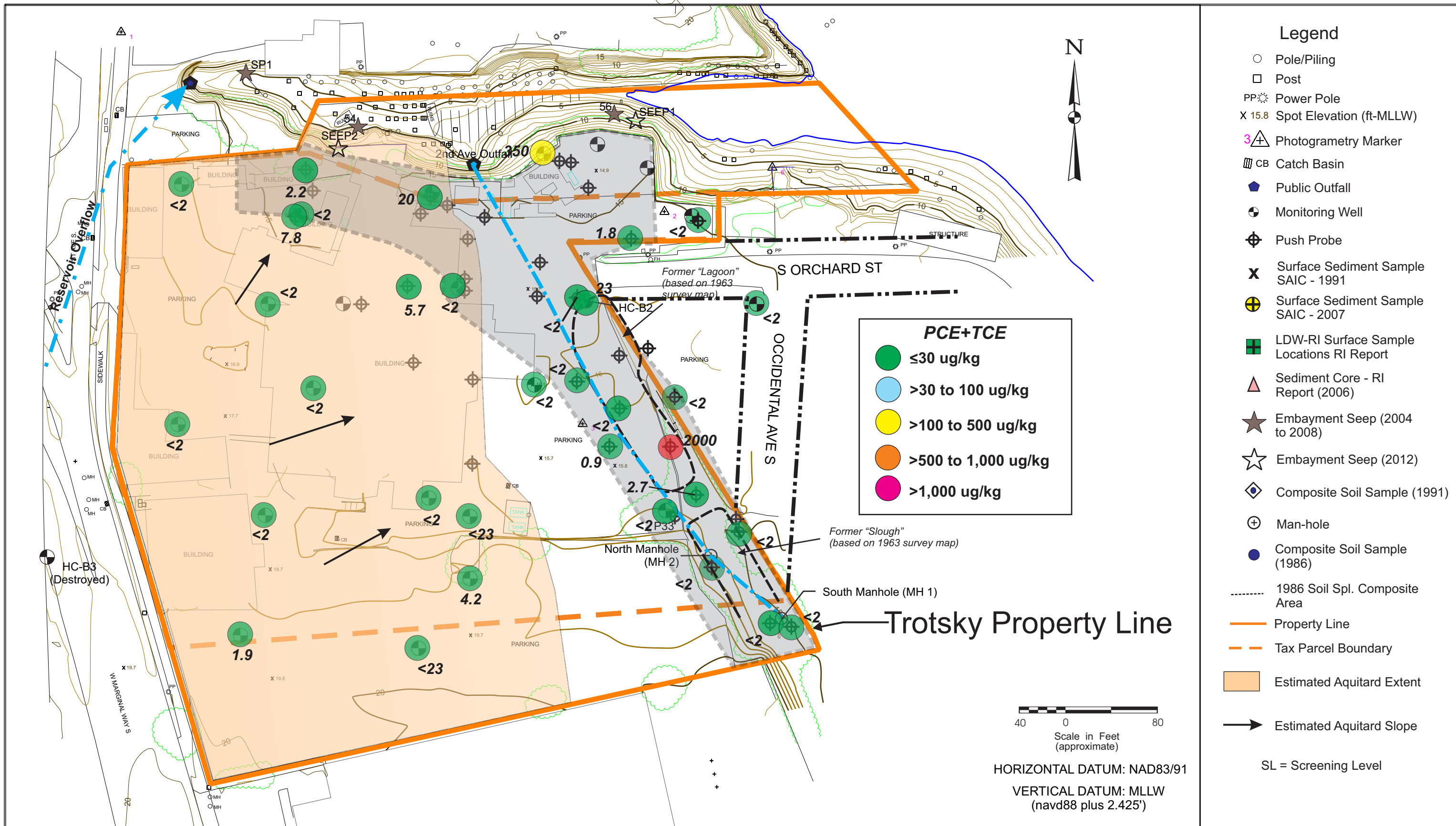


Soil Contact Screening Levels (SLs)
PCE - 21,000,000 ug/kg
TCE - 1,750,000 ug/kg

ICS/NW Cooprage Site
Extent of PCE+TCE in Soil Less than Five Feet Deep
SUM-008-00 (ICS) March 2018
Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-14a

Ref: Upland Phase2a PCE+TCE.cdr



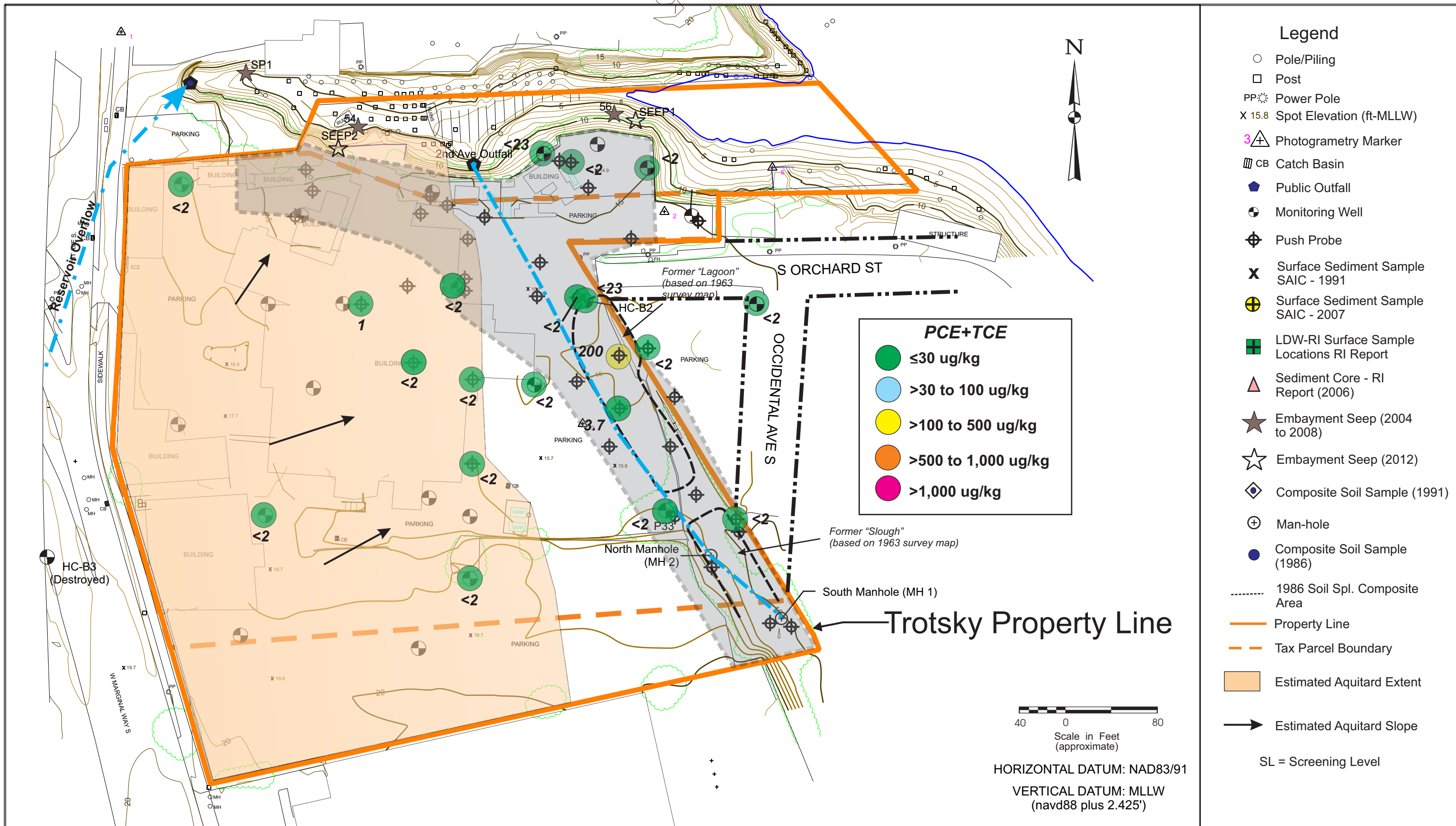
Soil Contact Screening Levels (SLs)
PCE - 21,000,000 ug/kg
TCE - 1,750,000 ug/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooperage Site
Extent of PCE+TCE in Soil
Five to Ten Feet Deep
SUM-008-00 (ICS) March 2018
Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-14b

Ref: Upland Phase2a PCE+TCE.cdr



Legend

- Pole/Piling
 - Post
 - PP Power Pole
 - X 15.8 Spot Elevation (ft-MLLW)
 - 3+ Photogrammetry Marker
 - CB Catch Basin
 - Public Outfall
 - Monitoring Well
 - Push Probe
 - X Surface Sediment Sample SAIC - 1991
 - ⊕ Surface Sediment Sample SAIC - 2007
 - LDW-RI Surface Sample Locations RI Report
 - △ Sediment Core - RI Report (2006)
 - ★ Embayment Seep (2004 to 2008)
 - ☆ Embayment Seep (2012)
 - ◇ Composite Soil Sample (1991)
 - ⊕ Man-hole
 - Composite Soil Sample (1986)
 - 1986 Soil Spl. Composite Area
 - Property Line
 - - - Tax Parcel Boundary
 - Estimated Aquitard Extent
 - Estimated Aquitard Slope
- SL = Screening Level

PCE+TCE

- ≤30 ug/kg
- >30 to 100 ug/kg
- >100 to 500 ug/kg
- >500 to 1,000 ug/kg
- >1,000 ug/kg

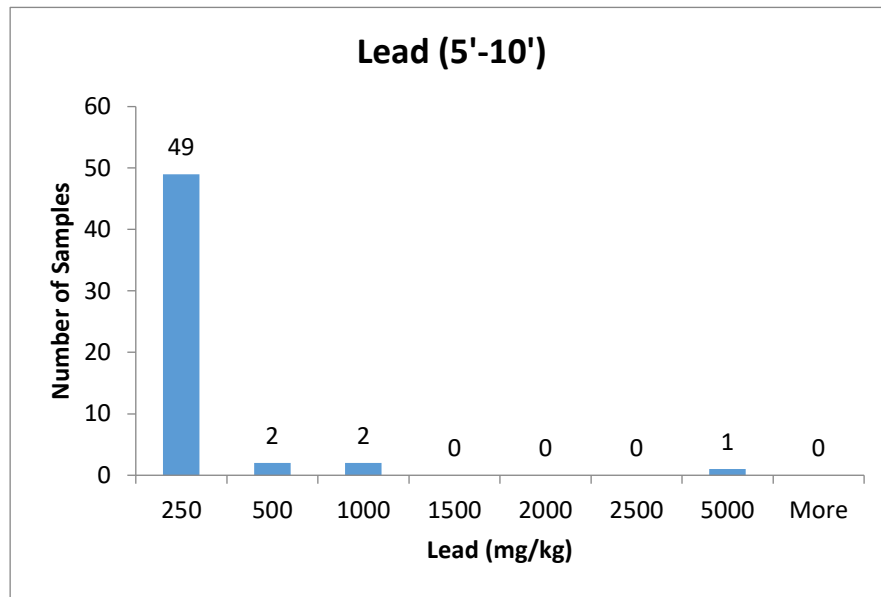
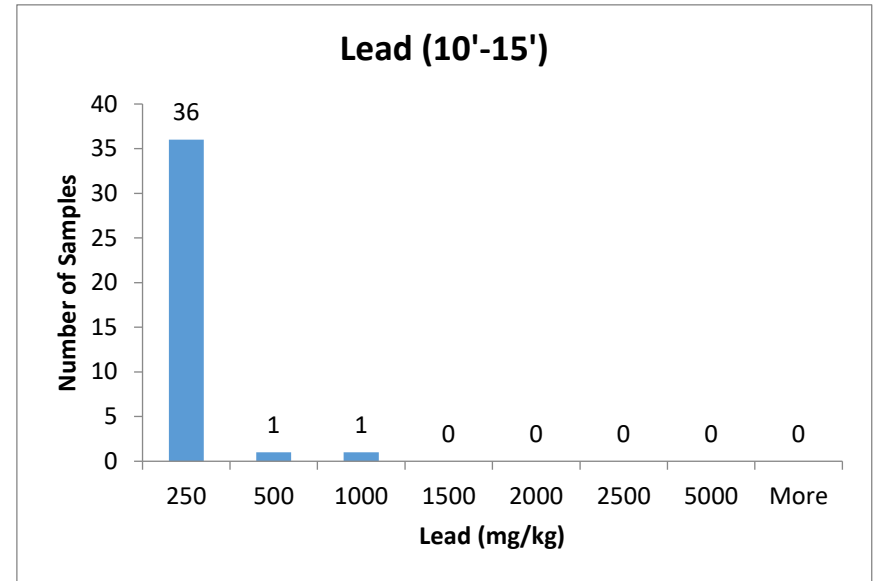
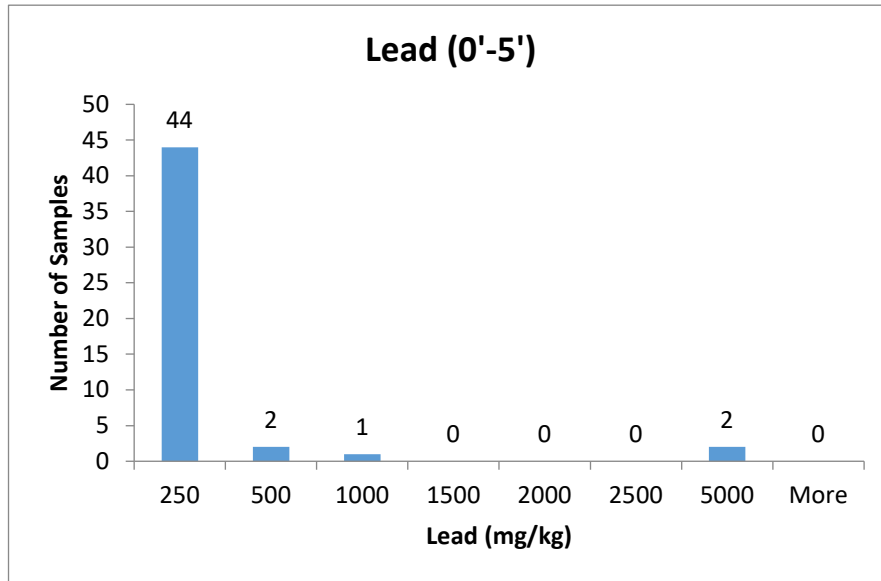
Soil Contact Screening Levels (SLs)
PCE - 21,000,000 ug/kg
TCE - 1,750,000 ug/kg

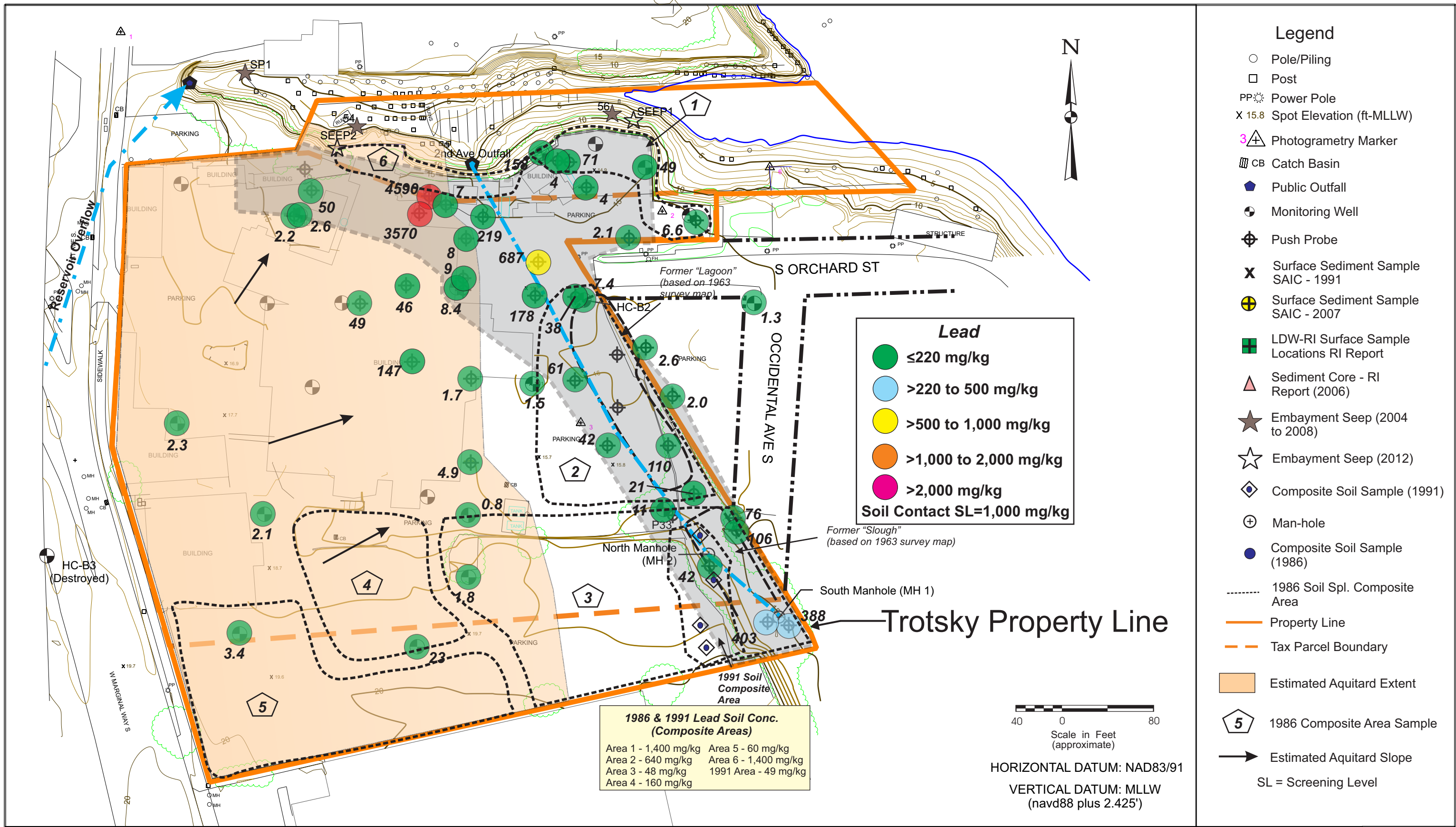
Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooperage Site
Extent of PCE+TCE in Soil Ten to Fifteen Feet Deep
 SUM-008-00 (ICS) March 2018
 Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-14c

Ref: Upland Phase2a PCE+TCE.cdr

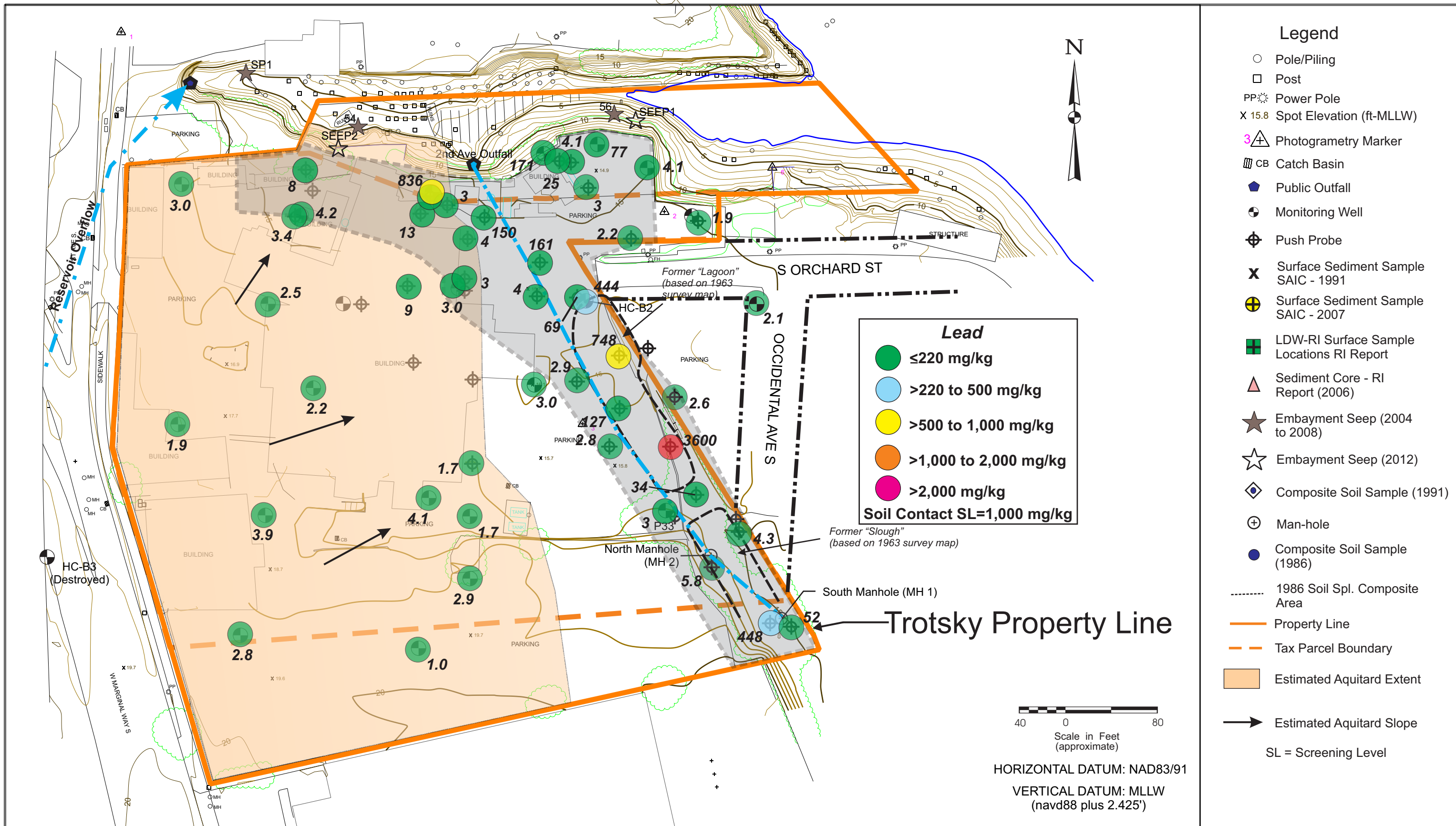




Notes: Soil Contact SL = 220 mg/kg

Ref: Upland Phase2a Lead.cdr

ICS/NW Cooperage Site		FIGURE 6-16a
Extent of Lead in Soil Less than Five Feet Deep		
SUM-008-00 (ICS)	March 2018	
Dalton, Olmsted & Fuglevand, Inc.		



Notes: Soil Contact SL = 220 mg/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooprage Site

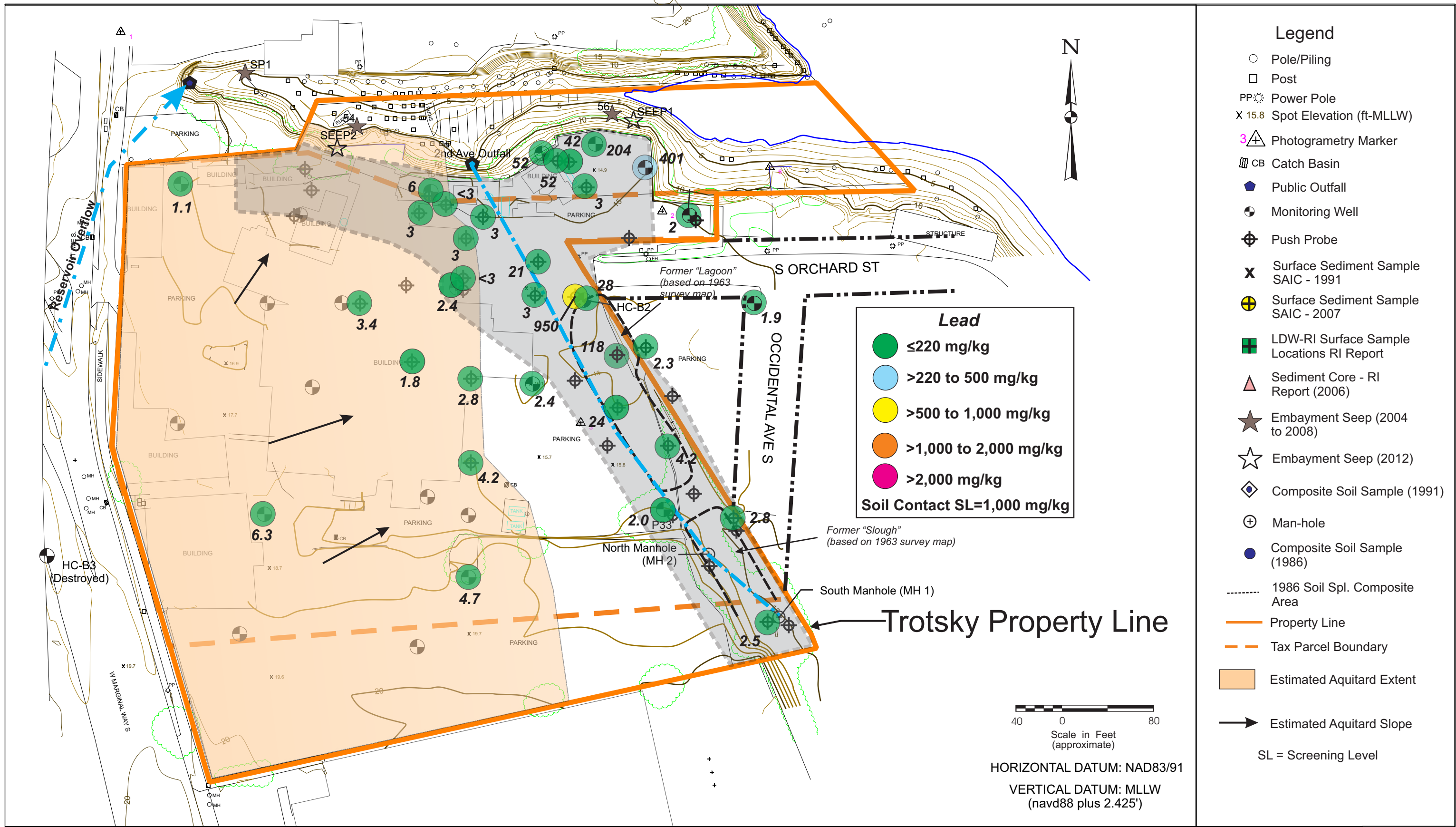
Extent of Lead in Soil
Five to Ten Feet Deep

SUM-008-00 (ICS)

March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE
6-16b



Notes: Soil Contact SL = 220 mg/kg

Primary Area With PCB Conc. Greater Than 100 ug/kg

ICS/NW Cooprage Site

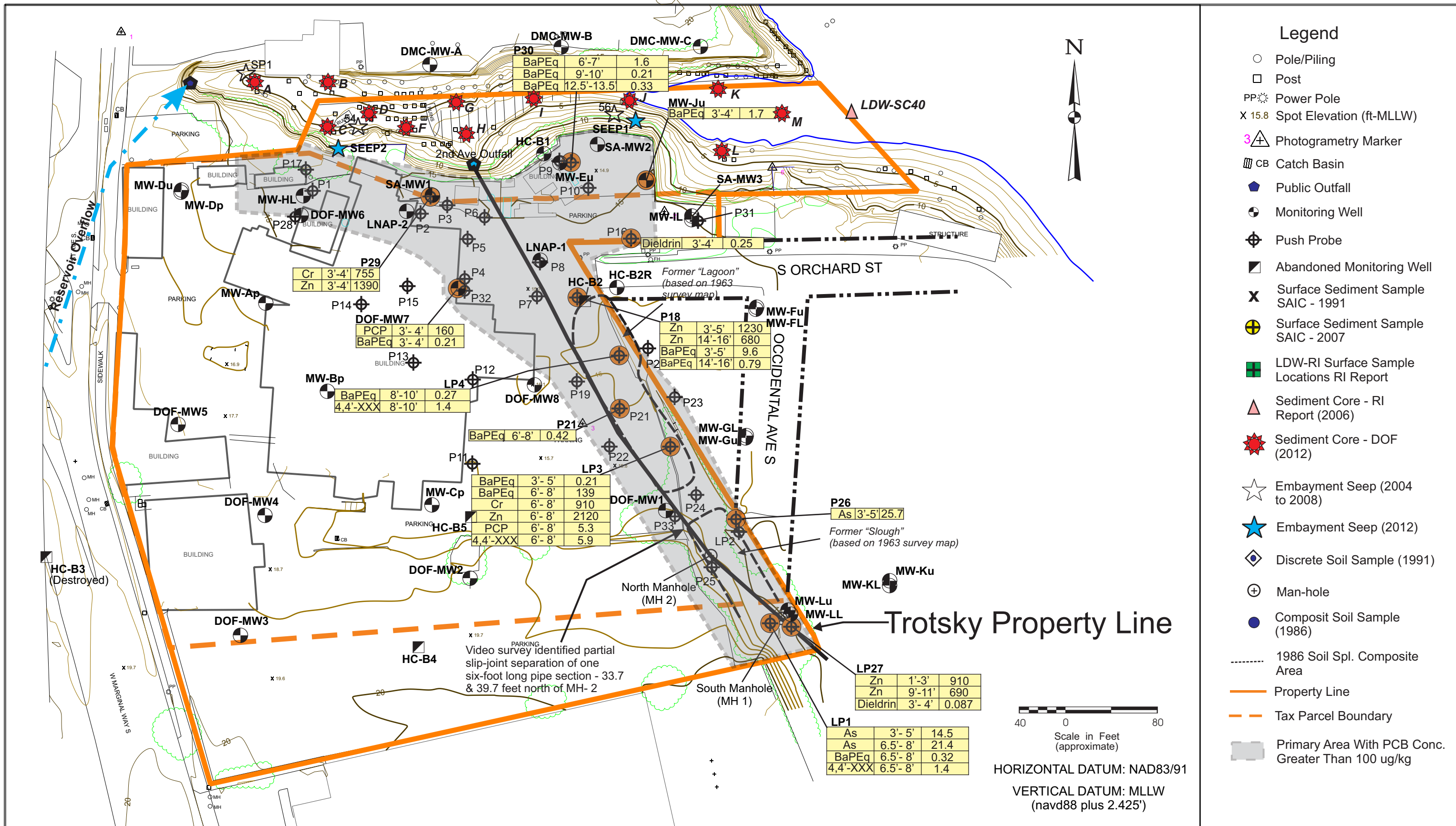
Extent of Lead in Soil
Ten to Fifteen Feet Deep

SUM-008-00 (ICS)

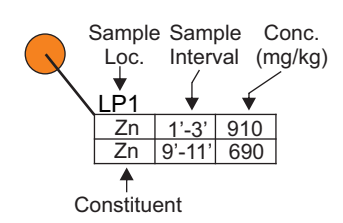
March 2018

Dalton, Olmsted & Fuglevand, Inc.

FIGURE
6-16c

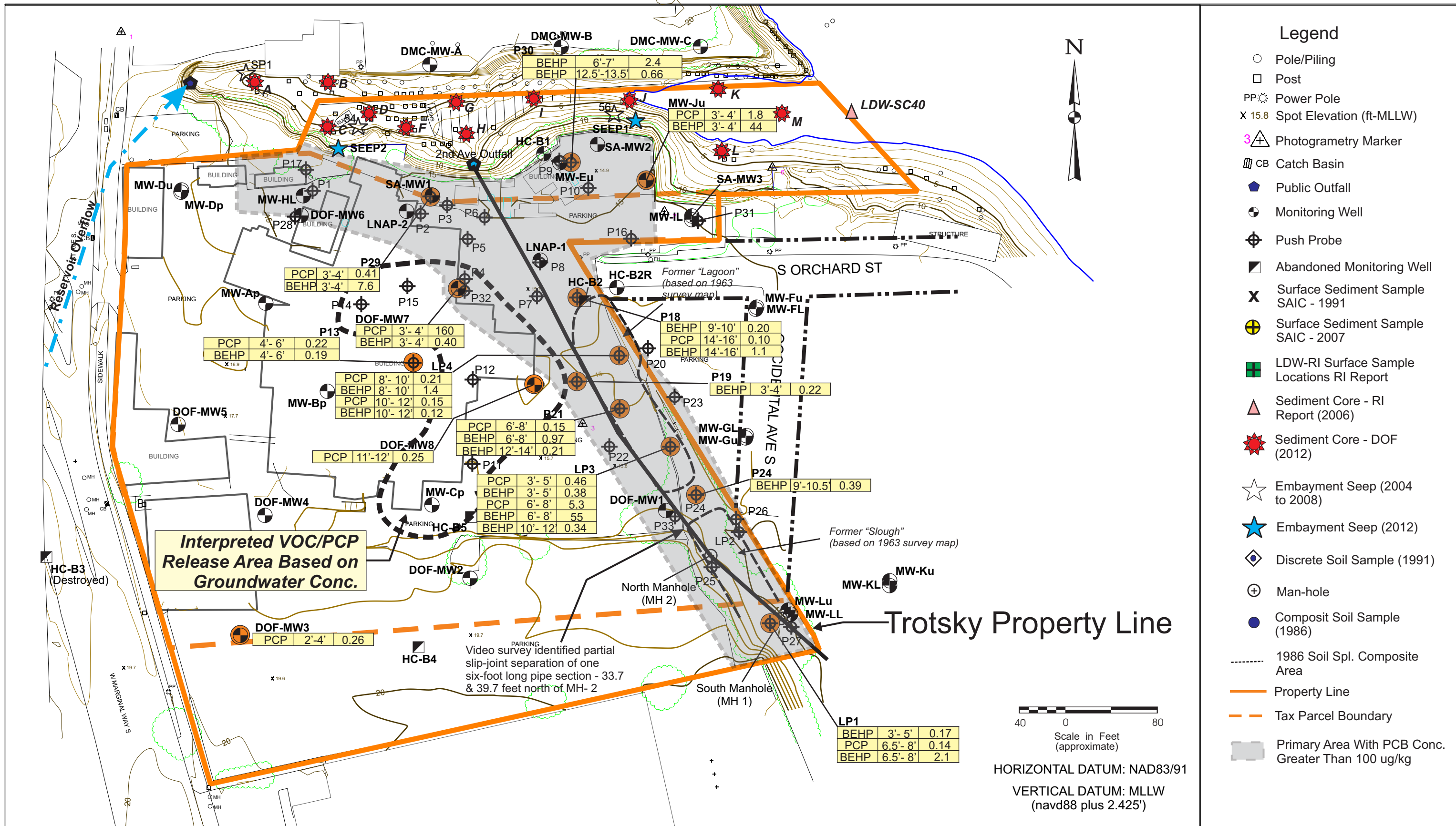


Ref: Soil COPCs.cdr



ICS/NW Cooprage Site	
Soil Contact SL Exceedances Other Constituents	
<i>SUM-008-00 (ICS)</i>	<i>July 2016</i>
<i>Dalton, Olmsted & Fuglevand, Inc.</i>	

FIGURE 6-17a



ICS/NW Cooprage Site






PCP and BEHP in Soil

SUM-008-00 (ICS) **July 2016**

Dalton, Olmsted & Fuglevand, Inc.

FIGURE 6-17b



- DMC-MW11  Deeper Monitoring Well with Soil Samples Below 0' MLLW
- DOF-MW6  Upper Zone Monitoring Well
- B  Sediment Core
- P17  Push-Probe
- C' — C''  Section Trend

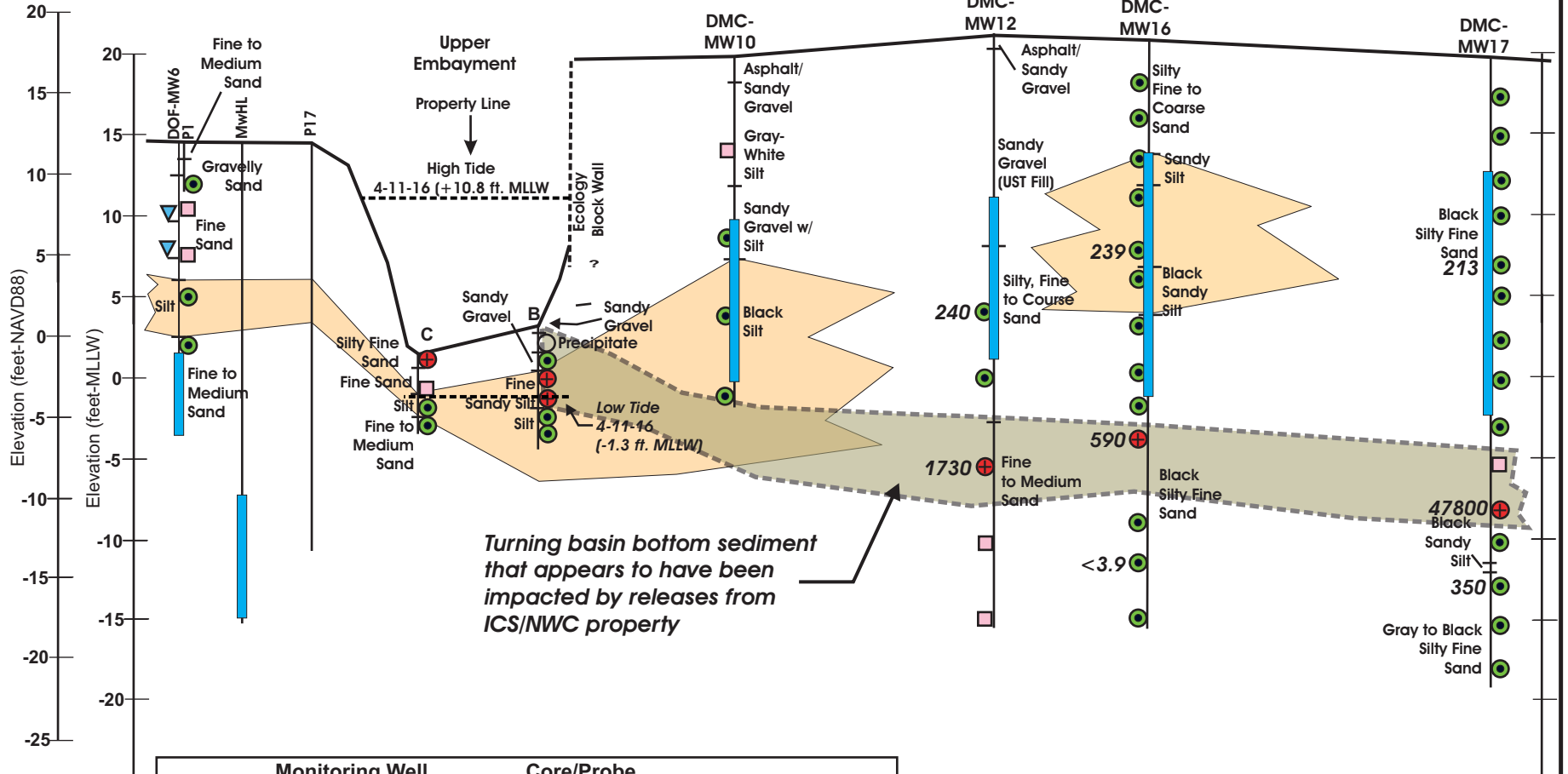
Ref: Douglas Deeper Spl. Locations

ICS/NW Cooperage Site		FIGURE 6-18
Douglas Property Deeper Soil Sample Locations		
<i>SUM-008-00 (ICS)</i>	<i>April 2018</i>	
<i>Dalton, Olmsted & Fuglevand, Inc.</i>		

to C ← See Figure 4-4a C'

Douglas Property

C''



Monitoring Well

- High Tide*
- Low Tide*
- Soil Sample
- Well Screen

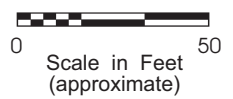
Core/Probe

- Geologic Contact
- Sediment/Soil Sample

Legend:

- No Sheen Noted on Log
- Light Sheen Noted on Log
- ⊕ Moderate to Heavy Sheen noted on log
- 1730 Total PCB Conc. (ug/kg)
- Silt Deposits

* April 11, 2016: High Tide +10.8' MLLW; Low Tide -1.3' MLLW

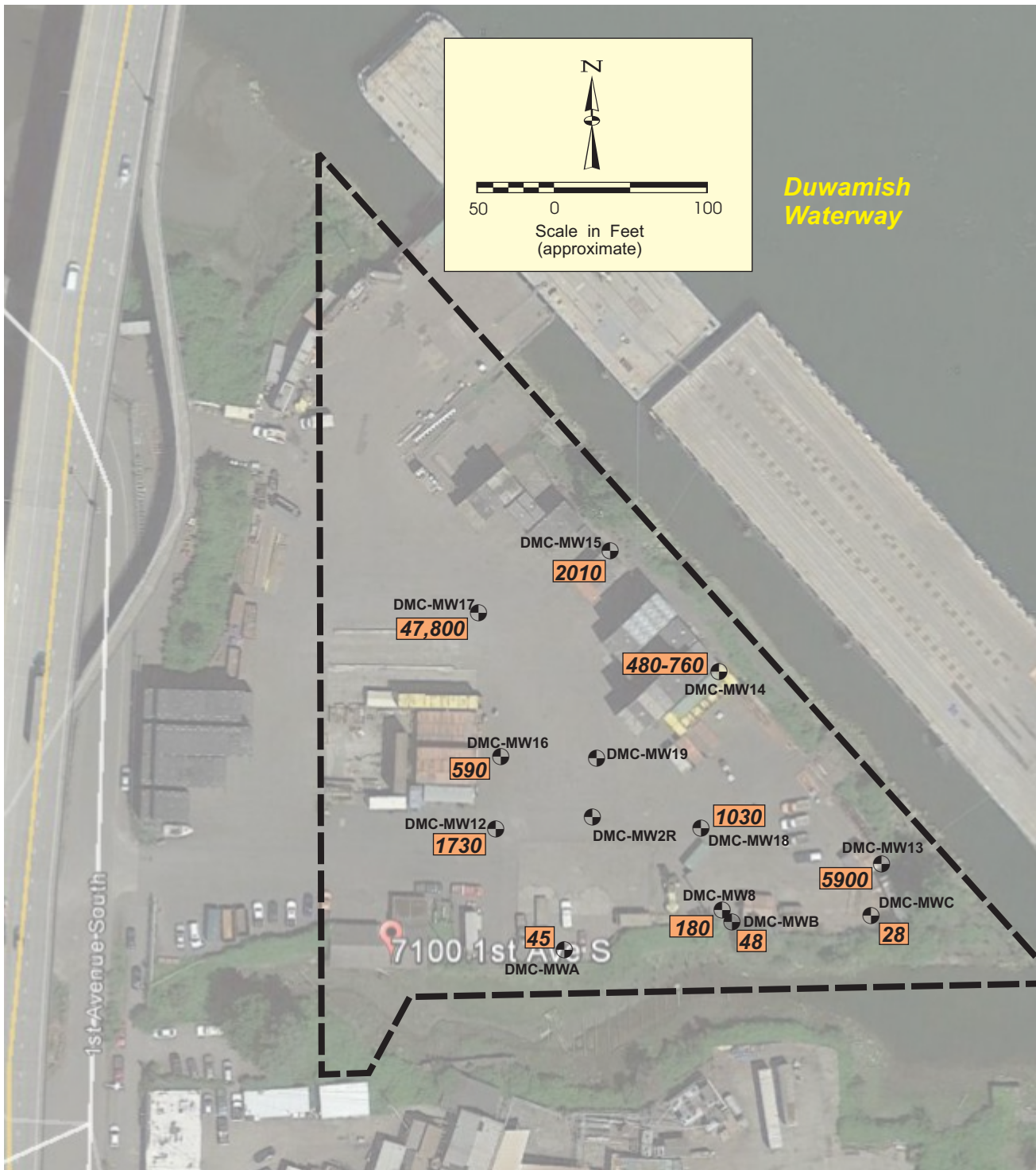



ICS/NW Cooperage Site
Seattle, Washington


**Turning Basin Bottom Layer
PCB Section C'-C''**

SUM-008-00 **FIGURE 6-19** April 2018
Dalton, Olmsted & Fuglevand, Inc.

Ref: Section C-C' Embayment releases.cdr



DMC-MW11  Deeper Monitoring Well with Soil Samples Below 0' MLLW

 PCB Conc. (ug/kg) in Former Turning Basin Sediment

ICS/NW Cooperage Site		FIGURE 6-20
Douglas Property PCB Concentrations In Turning Basin Bottom Sediment		
SUM-008-00 (ICS)	April 2018	
<i>Dalton, Olmsted & Fuglevand, Inc.</i>		

Ref: Douglas TB Bottom PCB Conc.cdr

