
FIGURES

Plot Date: 07/01/10 - 3:04pm, Plotted by: adam.stenberg
 Drawing Path: S:\13867\005_DataGaps-Report\CAD, Drawing Name: SamplingMonitoringNetwork_UP-RiverCampus_070110.dwg

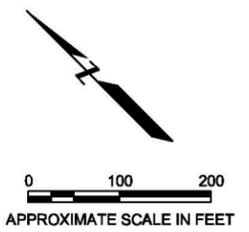


2009-2010 SAMPLING LOCATION

- 2A 2006 SAMPLING AREAS
- 2A1 2009 MIS SAMPLING AREAS
- MIS SAMPLE LOCATION (2009)
- ▲ 2009 DISCRETE DIRECT-PUSH SOIL SAMPLE LOCATION
- ▲ 2010 DIRECT-PUSH GROUNDWATER SAMPLING LOCATION
- ▲ 2009 DIRECT-PUSH SOIL AND 2010 GROUNDWATER SAMPLE LOCATION
- ⊕ EXISTING MONITORING WELL LOCATION

OTHER SITE FEATURES

- PROPERTY LINE
- PARCEL LINE
- FENCE
- GATE
- CHEVRON PETROLEUM PIPELINE

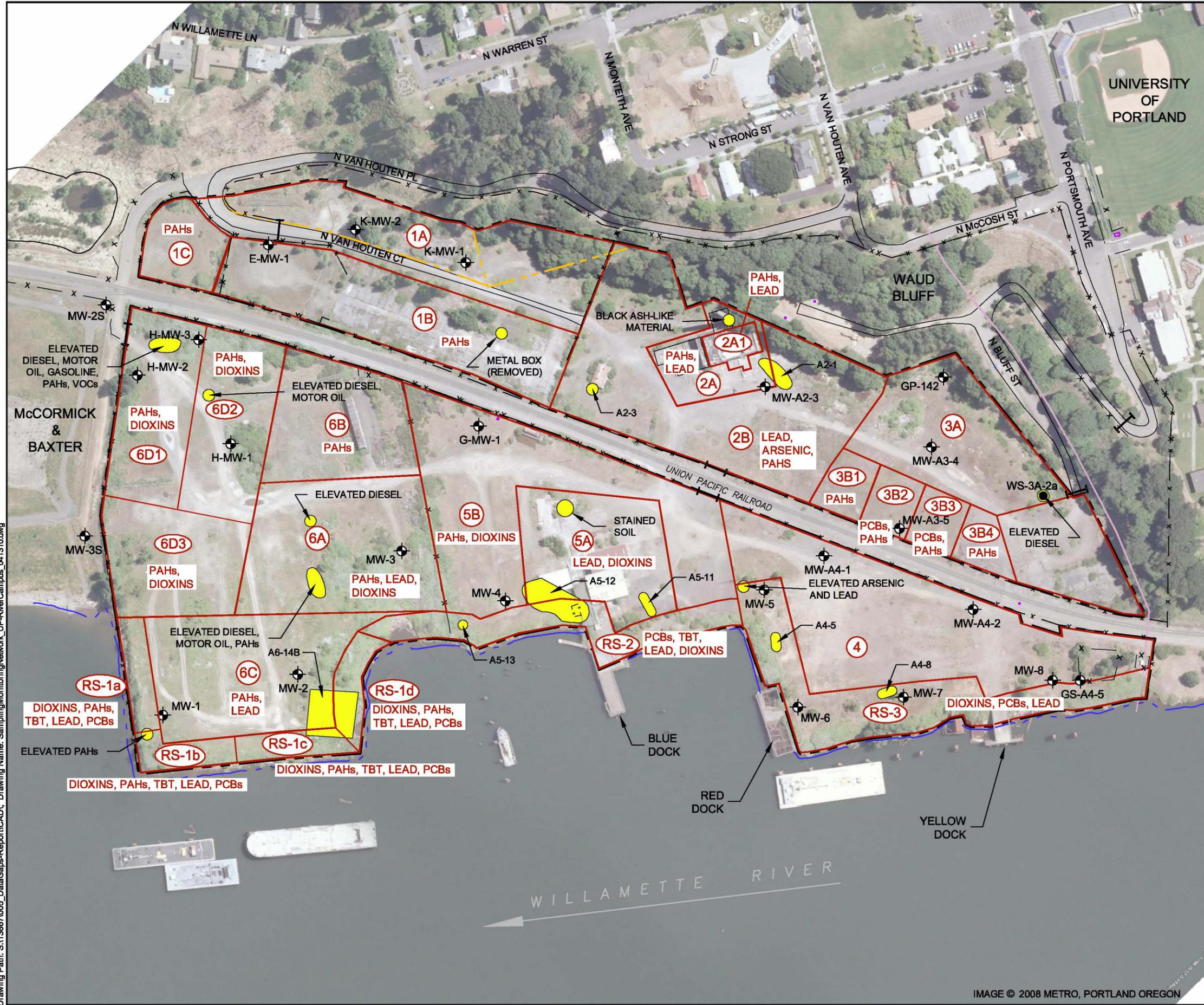


SAMPLING LOCATIONS AND MONITORING WELL NETWORK
 University of Portland, River Campus Property
 Portland, Oregon

By: APS Date: 07/01/10 Project No. 13867

AMEC Geomatrix Figure **1**

Plot Date: 04/13/10 - 4:34pm, Plotted by: adam.stenberg
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EXPLANATION

- 2A SAMPLING AREAS AND CONSTITUENTS EXCEEDING SCREENING LEVELS
- EXISTING MONITORING WELL LOCATION
- PROPERTY LINE
- PARCEL LINE
- FENCE
- GATE
- CHEVRON PETROLEUM PIPELINE
- POTENTIAL EXCAVATION AREA

UNIVERSITY OF PORTLAND

WAUD BLUFF

N BLUFF ST

N PORTSMOUTH AVE

N VAN HOUTEN AVE

N VAN HOUTEN PL

N VAN HOUTEN CT

N STRONG ST

N WARREN ST

N WILLAMETTE LN

McCORMICK & BAXTER

UNION PACIFIC RAILROAD

BLUE DOCK

RED DOCK

YELLOW DOCK

WILLAMETTE RIVER

0 100 200
APPROXIMATE SCALE IN FEET

SAMPLING AREAS AND CONSTITUENTS OF POTENTIAL CONCERN
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/13/10	Project No. 13867
AMEC Geomatrix		Figure 2

IMAGE © 2008 METRO, PORTLAND OREGON

Plot Date: 04/14/10 - 3:59pm, Plotted by: adam.stenberg
 Drawing Path: S:\13867\005_DataGaps-Report\CAD_ Drawing Name: SamplingAreas_UF-RiverCampus_041310.dwg

LEGEND

- POTENTIAL EXCAVATION AREA
 - 1A SAMPLING AREAS
 - EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS**
- PHASE 2 ESA BORING (2005)
 - GEOPROBE BORING LOCATION (1999-2000)
 - MIS BORING LOCATION (2006)
 - WASTE SAMPLE LOCATION (2006)
 - TEST PIT LOCATION (1996)
- OTHER SITE FEATURES**
- PROPERTY LINE
 - FENCE

SUMMARY OF RESULTS

MIS-1C		SAMPLE ID
0-1'	-	
1-5'	PAHs	
5-10'	-	

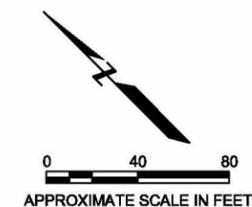
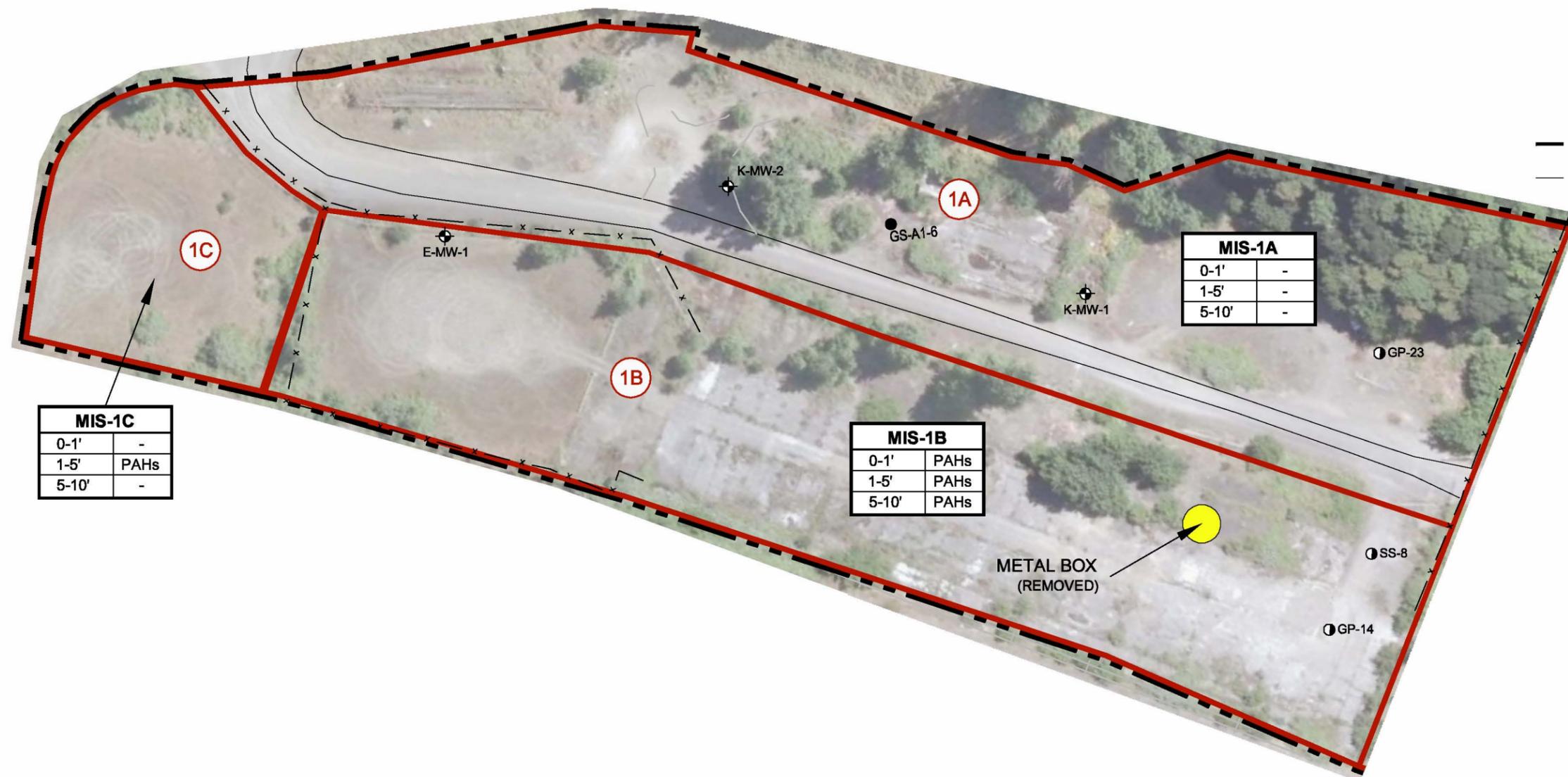
SAMPLING DEPTH INTERVAL

 CONSTITUENTS THAT EXCEED SCREENING LEVEL

MIS-1A	
0-1'	-
1-5'	-
5-10'	-

MIS-1B	
0-1'	PAHs
1-5'	PAHs
5-10'	PAHs

MIS-1C	
0-1'	-
1-5'	PAHs
5-10'	-



NOTES:

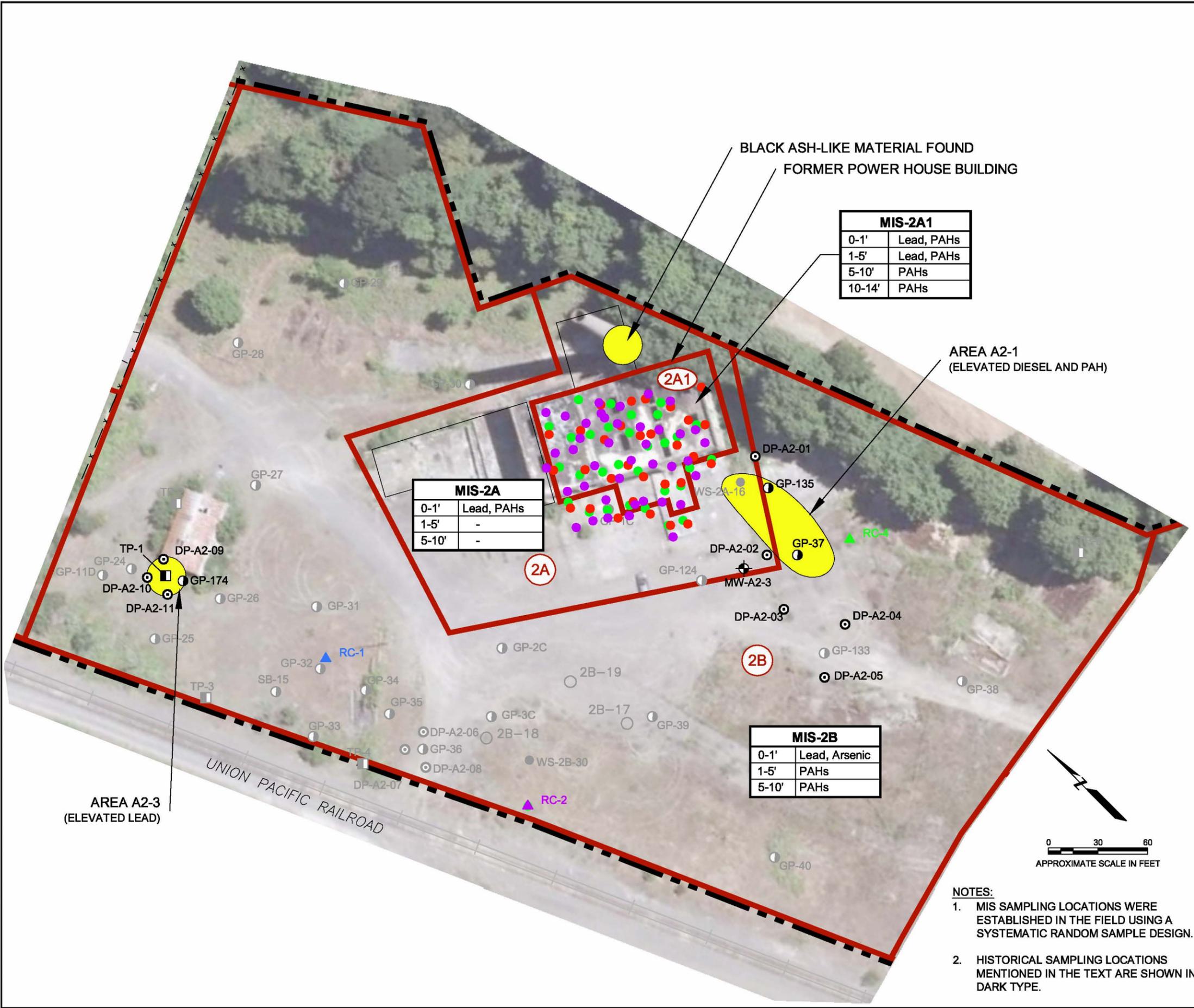
1. MIS SAMPLING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SYSTEMATIC RANDOM SAMPLE DESIGN.
2. HISTORICAL SAMPLING LOCATIONS MENTIONED IN THE TEXT ARE SHOWN IN DARK TYPE.

AREAS 1A, 1B and 1C
 University of Portland, River Campus Property
 Portland, Oregon

By: APS Date: 04/14/10 Project No. 13867

AMEC Geomatrix Figure **3**

Plot Date: 04/14/10 - 4:04pm, Plotted by: adam.stenberg
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DATA GAP INVESTIGATION SAMPLING LOCATION

- POTENTIAL EXCAVATION AREA
 - 2A SAMPLING AREAS
 - MIS SAMPLE LOCATION (2009)
 - MIS SAMPLE LOCATION (A-INTERNAL DUPLICATE (2009))
 - MIS SAMPLE LOCATION (A-INTERNAL TRIPLICATE (2009))
 - DISCREET DIRECT-PUSH SOIL SAMPLE LOCATION
 - 2010 DIRECT-PUSH GROUNDWATER SAMPLE LOCATION
 - 2009 DISCRETE DIRECT-PUSH SOIL AND 2010 GROUNDWATER SAMPLE LOCATION
 - EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS**
- PHASE 2 ESA BORING (2005)
 - GEOPROBE BORING LOCATION (1999-2000)
 - MIS BORING LOCATION (2006)
 - WASTE SAMPLE LOCATION (2006)
 - TEST PIT LOCATION (1996)
- OTHER SITE FEATURES**
- PROPERTY LINE
 - FENCE

SUMMARY OF RESULTS

MIS-2B		}	SAMPLE ID	
0-1'	Lead, Arsenic			
1-5'	PAHs			
5-10'	PAHs			

SAMPLING DEPTH INTERVAL
CONSTITUENTS THAT EXCEED SCREENING LEVEL

MIS-2A1	
0-1'	Lead, PAHs
1-5'	Lead, PAHs
5-10'	PAHs
10-14'	PAHs

MIS-2A	
0-1'	Lead, PAHs
1-5'	-
5-10'	-

MIS-2B	
0-1'	Lead, Arsenic
1-5'	PAHs
5-10'	PAHs



- NOTES:**
1. MIS SAMPLING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SYSTEMATIC RANDOM SAMPLE DESIGN.
 2. HISTORICAL SAMPLING LOCATIONS MENTIONED IN THE TEXT ARE SHOWN IN DARK TYPE.

AREAS 2A and 2B
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/14/10	Project No. 13867
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AMEC Geomatrix Figure 4

Plot Date: 04/14/10 - 4:13pm, Plotted by: adam.stenberg
 Drawing Path: S:\13867\005_DataGaps-Report\CAD_ Drawing Name: SamplingAreas_UF-RiverCampus_041310.dwg

DATA GAP INVESTIGATION SAMPLING LOCATION

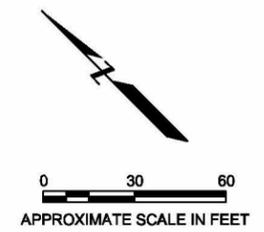
- POTENTIAL EXCAVATION AREA
 - 3A SAMPLING AREAS
 - MIS SAMPLE LOCATION (2009)
 - EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS
- GEOPROBE BORING LOCATION (1999-2000)
 - ORIGINAL BORING LOCATION
 - WASTE SAMPLE LOCATION (2006)
 - TEST PIT LOCATION (1996)
- OTHER SITE FEATURES
- PROPERTY LINE
 - FENCE

SUMMARY OF RESULTS

MIS-3B1		} SAMPLE ID
0-1'	-	
1-5'	PAHs	
5-10'	-	

SAMPLING DEPTH INTERVAL CONSTITUENTS THAT EXCEED SCREENING LEVEL

NOTE:
 MIS SAMPLING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SYSTEMATIC RANDOM SAMPLE DESIGN.



MIS-3A	
0-1'	-
1-5'	-
5-10'	-

MIS-3B1	
0-1'	-
1-5'	PAHs
5-10'	-

MIS-3B2	
0-1'	PCBs
1-5'	PAHs
5-10'	-

MIS-3B3	
0-1'	PCBs
1-5'	PAHs
5-10'	-

MIS-3B4	
0-1'	-
1-5'	PAHs
5-10'	-

AREAS 3A and 3B
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/14/10	Project No. 13867
AMEC Geomatrix		Figure 5

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DATA GAP INVESTIGATION SAMPLING LOCATION

- POTENTIAL EXCAVATION AREA
- 5A SAMPLING AREAS
- 2010 DIRECT-PUSH GROUNDWATER SAMPLE LOCATION
- DISCRETE DIRECT-PUSH SOIL SAMPLE LOCATION
- EXISTING GROUNDWATER MONITORING WELL

HISTORICAL SAMPLING LOCATIONS

- PHASE 2 ESA BORING (2005)
- GEOPROBE BORING LOCATION (1999-2000)

OTHER SITE FEATURES

- PROPERTY LINE
- FENCE

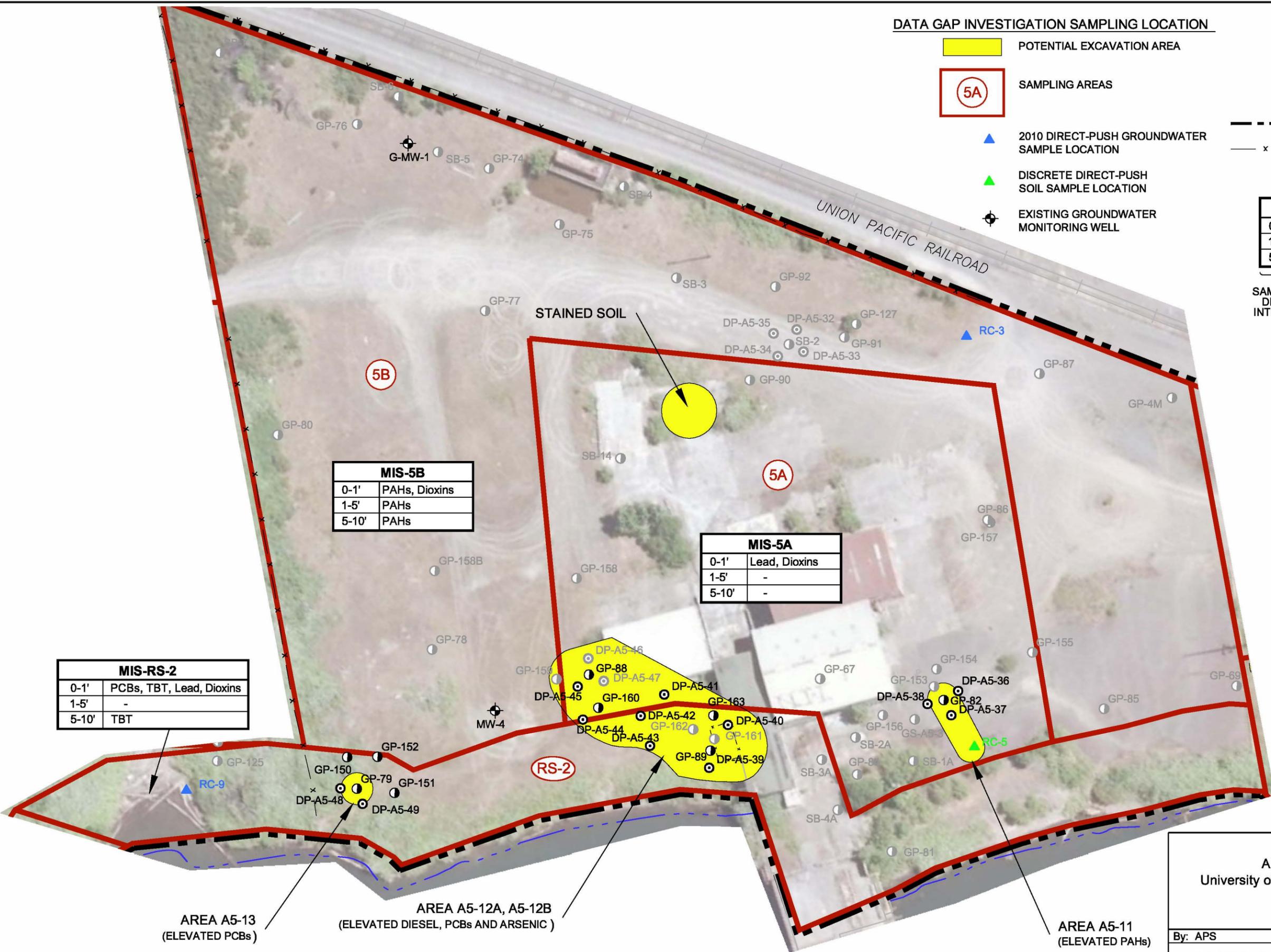
SUMMARY OF RESULTS

MIS-5A	
0-1'	Lead, Dioxins
1-5'	-
5-10'	-

SAMPLING DEPTH INTERVAL CONSTITUENTS THAT EXCEED SCREENING LEVEL

SAMPLE ID

NOTE:
 HISTORICAL SAMPLING LOCATIONS MENTIONED IN THE TEXT ARE SHOWN IN DARK TYPE.



MIS-RS-2	
0-1'	PCBs, TBT, Lead, Dioxins
1-5'	-
5-10'	TBT

MIS-5B	
0-1'	PAHs, Dioxins
1-5'	PAHs
5-10'	PAHs

MIS-5A	
0-1'	Lead, Dioxins
1-5'	-
5-10'	-

AREA A5-13
 (ELEVATED PCBs)

AREA A5-12A, A5-12B
 (ELEVATED DIESEL, PCBs AND ARSENIC)

AREA A5-11
 (ELEVATED PAHs)

AREAS 5A, 5B, and RS-2
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/14/10	Project No. 13867
AMEC Geomatrix		Figure 6

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DATA GAP INVESTIGATION SAMPLING LOCATION

- POTENTIAL EXCAVATION AREA
- RS-1a SAMPLING AREAS
- MIS SAMPLE LOCATION (2009)
- ▲ 2010 DIRECT-PUSH GROUNDWATER SAMPLE LOCATION
- ⊕ EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS**
- PHASE 2 ESA BORING (2005)
- ⊙ GEOPROBE BORING LOCATION (1999-2000)
- SURFACE SOIL SAMPLE LOCATION
- TEST PIT LOCATION (1996)
- OTHER SITE FEATURES**
- PROPERTY LINE
- x FENCE

MIS-RS-1A	
0-1'	PCBs, TBT, Lead, Dioxins
1-5'	PCBs, TBT, Lead, PAHs, Dioxins
5-10'	PCBs, TBT, PAHs

MIS-RS-1D	
0-1'	PCBs, TBT, Lead, Dioxins
1-5'	PCBs, TBT, Lead, PAHs, Dioxins
5-10'	PCBs, TBT, PAHs

MIS-6C	
0-1'	Lead, PAHs
1-5'	-
5-10'	PAHs

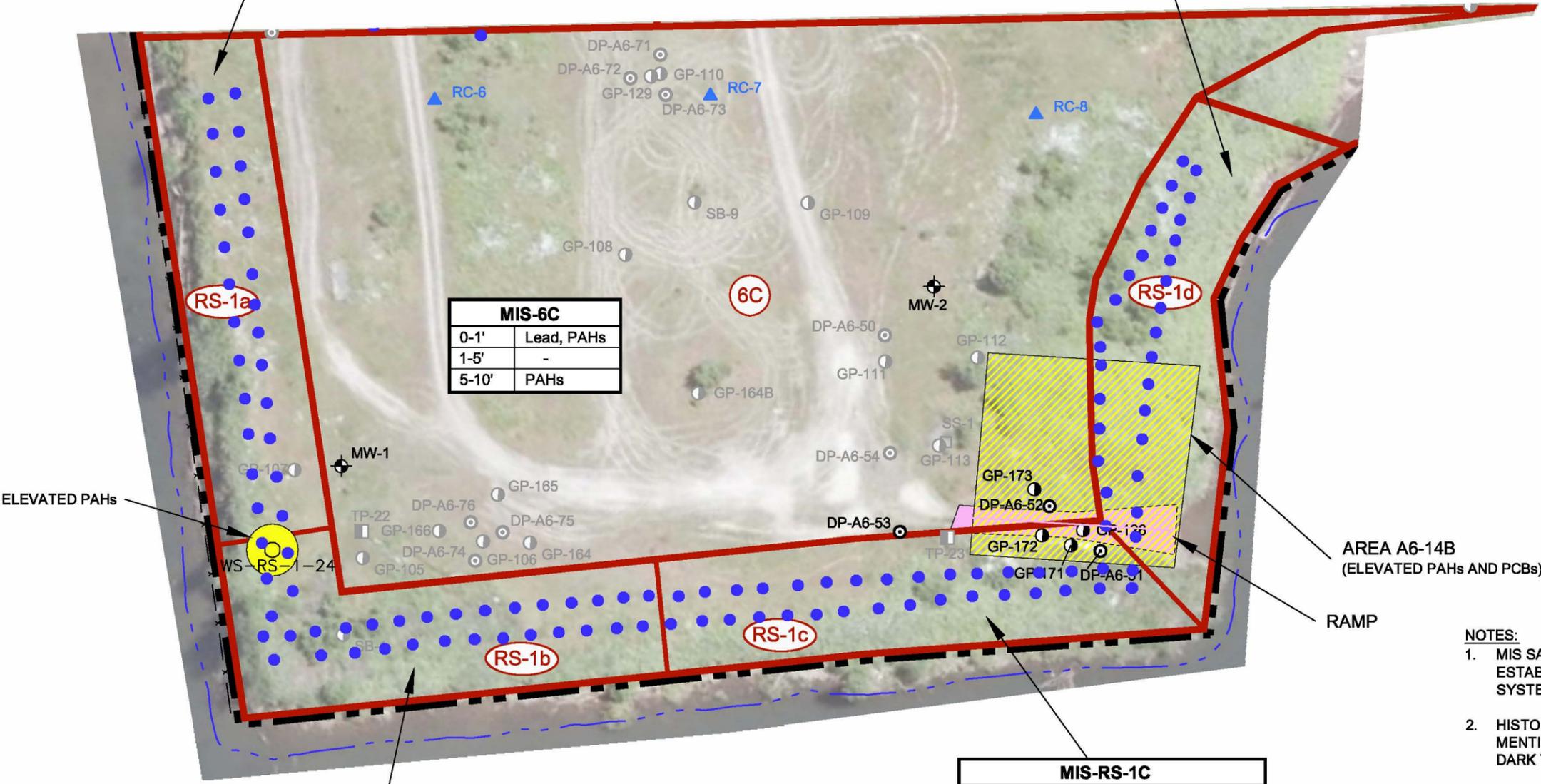
MIS-RS-1C	
0-1'	PCBs, TBT, Lead, Dioxins
1-5'	PCBs, TBT, Lead, PAHs, Dioxins
5-10'	PCBs, TBT, PAHs

MIS-RS-1B	
0-1'	PCBs, TBT, Lead, Dioxins
1-5'	PCBs, TBT, Lead, PAHs, Dioxins
5-10'	PCBs, TBT, PAHs

SUMMARY OF RESULTS

MIS-6C		SAMPLE ID
0-1'	Lead, PAHs	
1-5'	-	
5-10'	PAHs	

SAMPLING DEPTH INTERVAL CONSTITUENTS THAT EXCEED SCREENING LEVEL

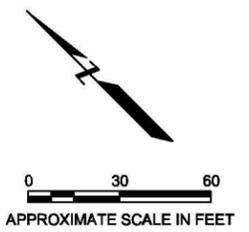


AREA A6-14B (ELEVATED PAHs AND PCBs)

RAMP

NOTES:

1. MIS SAMPLING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SYSTEMATIC RANDOM SAMPLE DESIGN.
2. HISTORICAL SAMPLING LOCATIONS MENTIONED IN THE TEXT ARE SHOWN IN DARK TYPE.



AREAS RS-1 and 6C University of Portland, River Campus Property Portland, Oregon		
By: APS	Date: 04/14/10	Project No. 13867
AMEC Geomatrix		Figure 7

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MIS-6D1	
0-1'	PAHs, Dioxins
1-5'	-
5-10'	-

MIS-6D2	
0-1'	PAHs, Dioxins
1-5'	-
5-10'	-

MIS-6B	
0-1'	PAHs
1-5'	-
5-10'	-

MIS-6A	
0-1'	PAHs, Dioxins
1-5'	PAHs
5-10'	Lead

MIS-6D3	
0-1'	PAHs, Dioxins
1-5'	-
5-10'	-

DATA GAP INVESTIGATION SAMPLING LOCATION

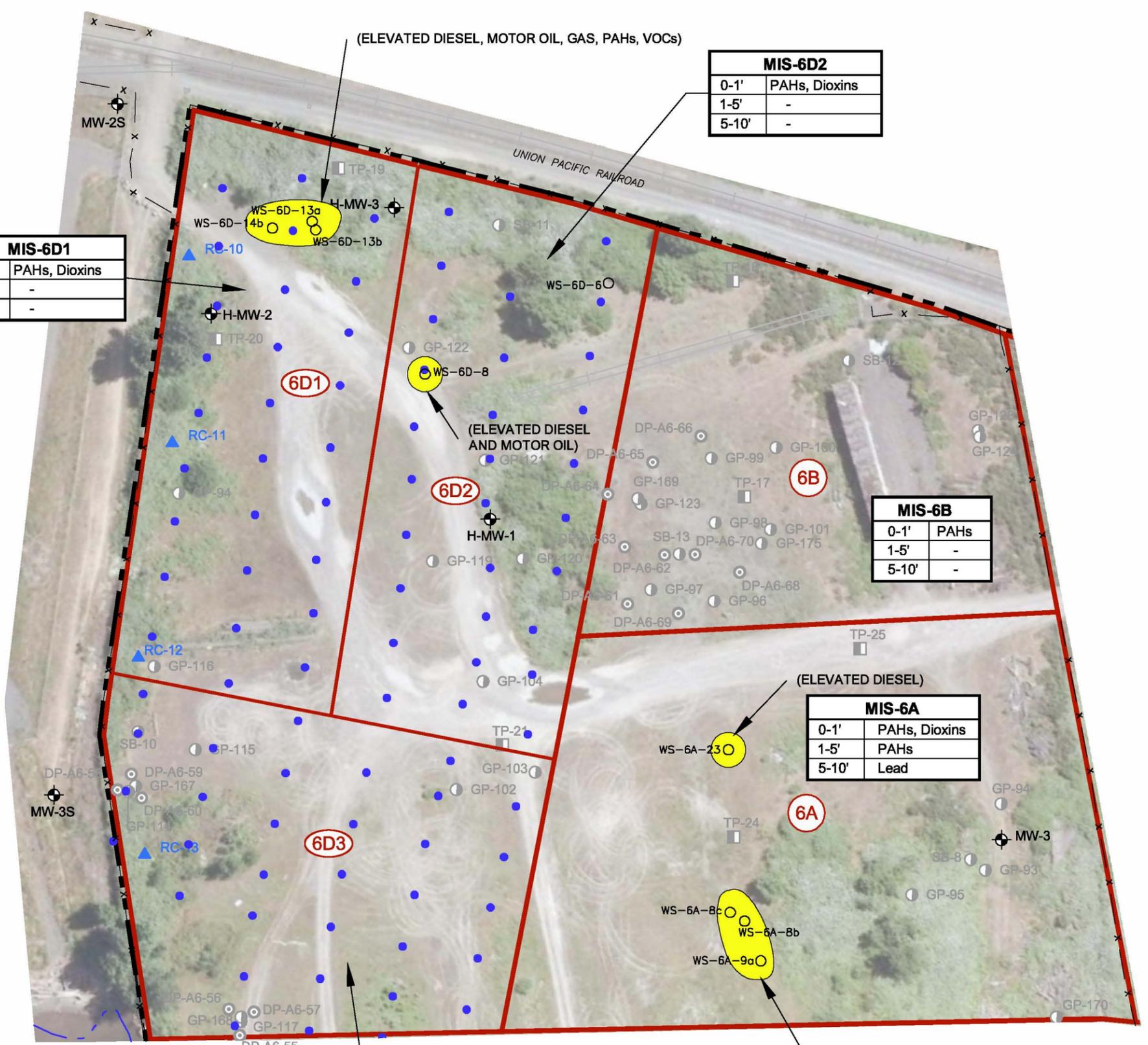
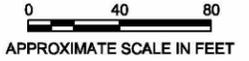
- POTENTIAL EXCAVATION AREA
- 6A SAMPLING AREAS
- MIS SAMPLE LOCATION (2009)
- ▲ 2010 DIRECT-PUSH GROUNDWATER SAMPLE LOCATION
- ⊕ EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS**
- PHASE 2 ESA BORING (2005)
- GEOPROBE BORING LOCATION (1999-2000)
- ORIGINAL BORING LOCATION
- TEST PIT LOCATION (1996)
- OTHER SITE FEATURES**
- PROPERTY LINE
- FENCE

SUMMARY OF RESULTS

MIS-6D1	
0-1'	PAHs, Dioxins
1-5'	-
5-10'	-

SAMPLE ID
 SAMPLING DEPTH INTERVAL
 CONSTITUENTS THAT EXCEED SCREENING LEVEL

NOTES:
 MIS SAMPLING LOCATIONS WERE ESTABLISHED IN THE FIELD USING A SYSTEMATIC RANDOM SAMPLE DESIGN.



AREAS 6A, 6B, and 6D
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/14/10	Project No. 13867
AMEC Geomatrix		Figure 8

Plot Date: 04/14/10 - 4:55pm, Plotted by: adam.stenberg
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LEGEND

- POTENTIAL EXCAVATION AREA
- RS-3 SAMPLING AREAS

- EXISTING GROUNDWATER MONITORING WELL
- HISTORICAL SAMPLING LOCATIONS**
- PHASE 2 ESA BORING (2005)
- GEOPROBE BORING LOCATION (1999-2000)
- ORIGINAL BORING LOCATION
- SURFACE SOIL SAMPLE LOCATION
- TEST PIT LOCATION (1996)

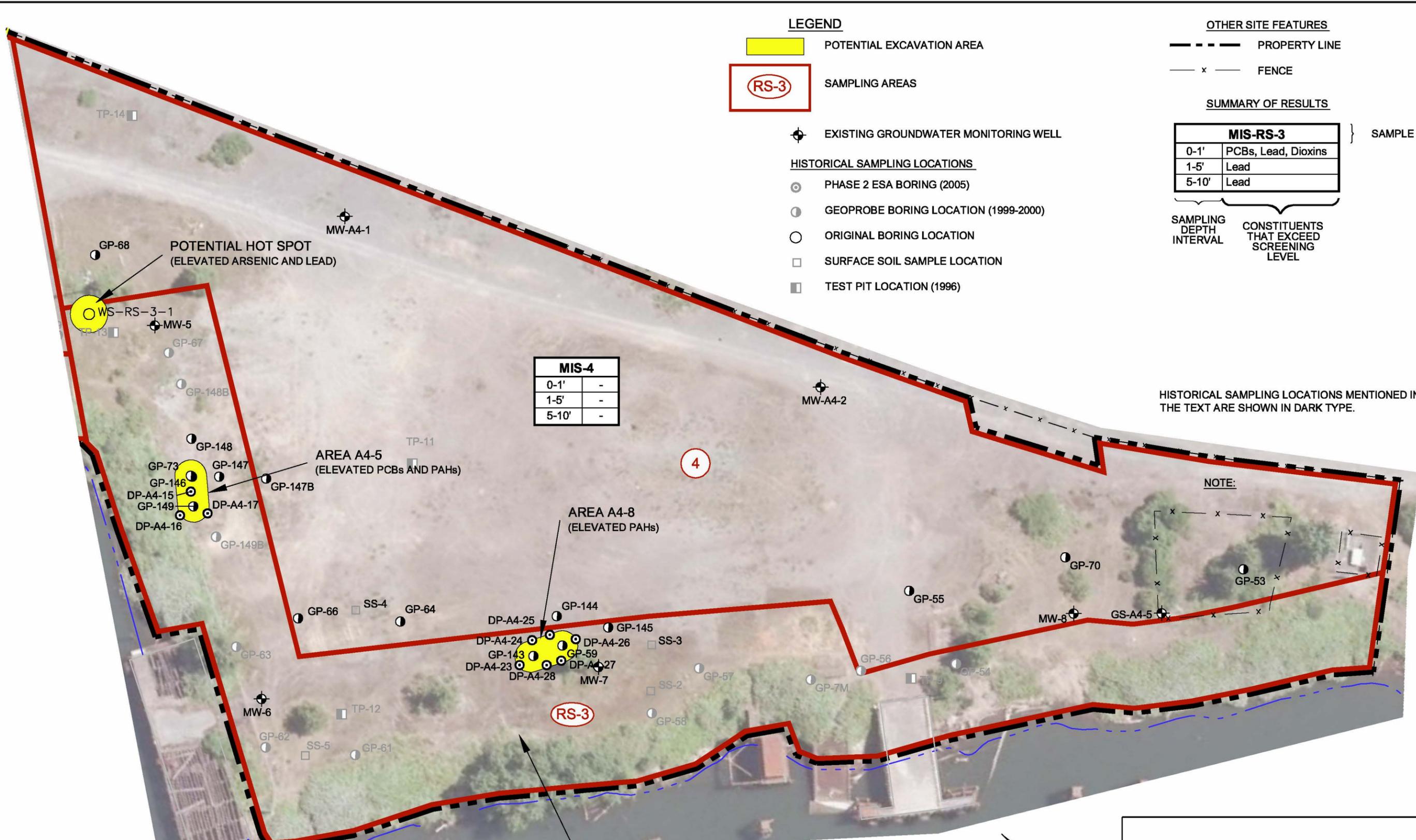
OTHER SITE FEATURES

- PROPERTY LINE
- FENCE

SUMMARY OF RESULTS

MIS-RS-3		SAMPLE ID
0-1'	PCBs, Lead, Dioxins	
1-5'	Lead	
5-10'	Lead	

SAMPLING DEPTH INTERVAL CONSTITUENTS THAT EXCEED SCREENING LEVEL



MIS-4

0-1'	-
1-5'	-
5-10'	-

HISTORICAL SAMPLING LOCATIONS MENTIONED IN THE TEXT ARE SHOWN IN DARK TYPE.

NOTE:

MIS-RS-3

0-1'	PCBs, Lead, Dioxins
1-5'	Lead
5-10'	Lead

AREAS 4 and RS-3
 University of Portland, River Campus Property
 Portland, Oregon

By: APS	Date: 04/14/10	Project No. 13867
AMEC Geomatrix		Figure 9

0 30 60
 APPROXIMATE SCALE IN FEET