

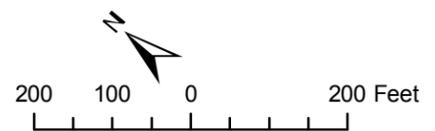
Chemistry Legend

Chromium - Surface Water total_or_dissolved, Exceedance_class	Chromium - Transition Water total_or_dissolved, Exceedance_class	Chromium - Ground Water total_or_dissolved, Exceedance_class
■ D, MCLx10 (1 mg/l)	● D, MCLx10 (1 mg/l)	▲ D, MCLx10 (1 mg/l)
■ T, MCLx10 (1 mg/l)	● T, MCLx10 (1 mg/l)	▲ T, MCLx10 (1 mg/l)
■ D, Acute (0.20028 mg/l)	● D, Acute (0.20028 mg/l)	▲ D, Acute (0.20028 mg/l)
■ T, Acute (0.20028 mg/l)	● T, Acute (0.20028 mg/l)	▲ T, Acute (0.20028 mg/l)
■ D, Chronic (0.026 mg/l)	● D, Chronic (0.026 mg/l)	▲ D, Chronic (0.026 mg/l)
■ T, Chronic (0.026 mg/l)	● T, Chronic (0.026 mg/l)	▲ T, Chronic (0.026 mg/l)
□ D, None Exceeded	○ D, None Exceeded	△ D, None Exceeded
□ T, None Exceeded	○ T, None Exceeded	△ T, None Exceeded
■ D, Not Detected	● D, Not Detected	▲ D, Not Detected
■ T, Not Detected	● T, Not Detected	▲ T, Not Detected

REVISED DRAFT

DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Notes:
1) If both Total and Dissolved values occur coincidentally at a sampling location, the dissolved value will appear on top.

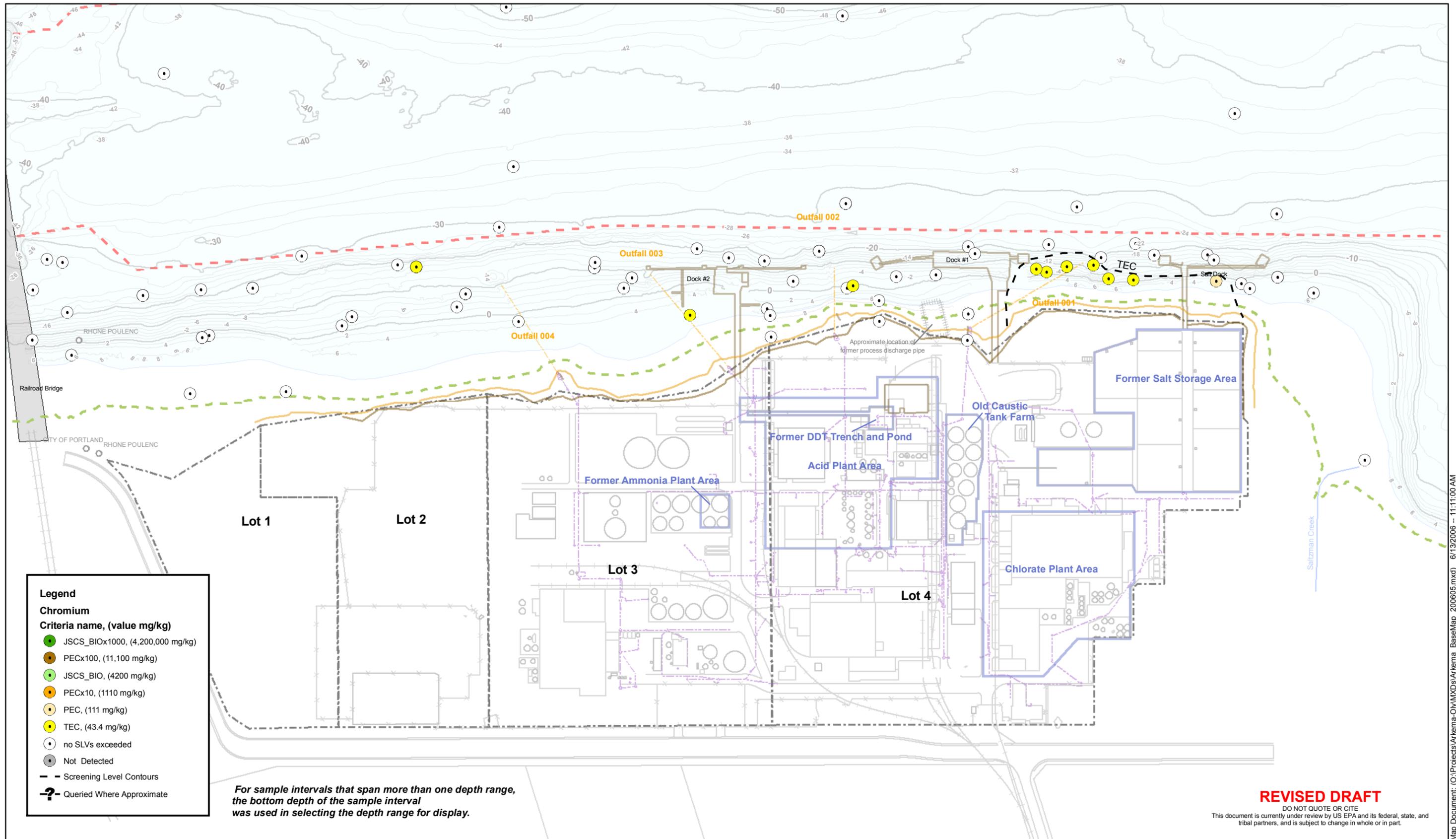


FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004.
 Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum of 1988 (NAVD88).
 Horizontal Datum: North American Datum of 1983 - 91 adjusted (NAD83/91), State Plane Coordinate System (SPCS), Oregon North Zone.
 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006.

— Ordinary High Water	— 12ft_Contour	— Navigation Channel
— Top of Bank	— Property Lines	— River
— E-Sewer-L	— Outfalls	
— Storm Drain		

Map-83
Arkema Site
Surface Water, Transition Zone Water,
and Groundwater Samples
Chromium

Map Document: (O:\Projects\Arkema-01\MXDs\ArkemaSW_DotMap_Screened_20060622.mxd) 6/23/2006 - 6:06:12 PM

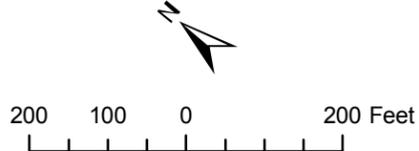


- Legend**
- Chromium**
- Criteria name, (value mg/kg)**
- JSCS_BIOx1000, (4,200,000 mg/kg)
 - PECx100, (11,100 mg/kg)
 - JSCS_BIO, (4200 mg/kg)
 - PECx10, (1110 mg/kg)
 - PEC, (111 mg/kg)
 - TEC, (43.4 mg/kg)
 - no SLVs exceeded
 - Not Detected
 - - Screening Level Contours
 - ? Queried Where Approximate

For sample intervals that span more than one depth range, the bottom depth of the sample interval was used in selecting the depth range for display.

REVISED DRAFT

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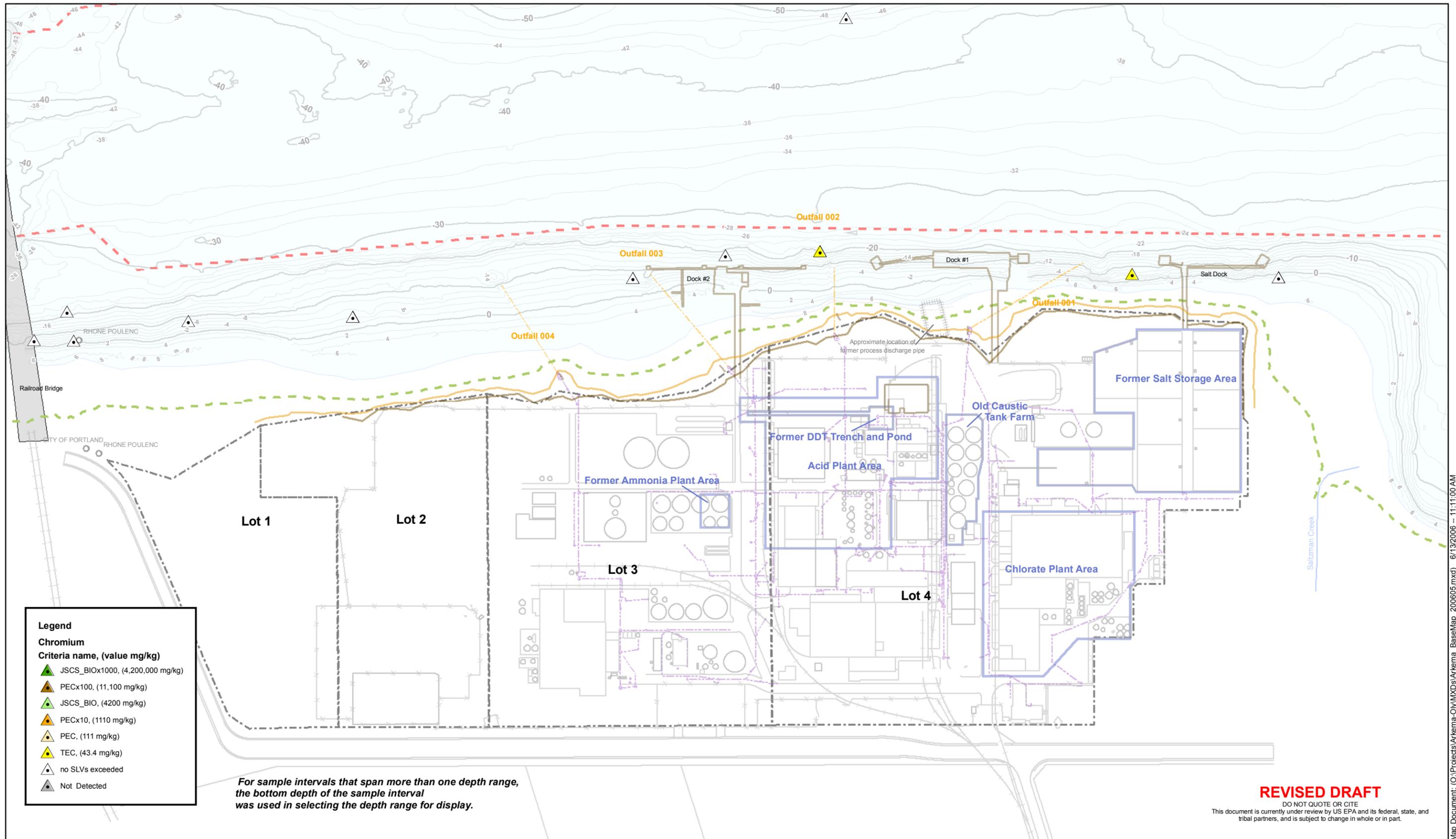


FEATURE SOURCES:
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 Horizontal Datum: North American Datum of 1983 - 91 adjusted (NAD83/91), State Plane Coordinate System (SPCS), Oregon North Zone.
 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006. Most buildings and structures on the Arkema site have been demolished or removed.
 OHW and Top of Slope lines were created from the April 2006 DEA survey, the +12ft contour line was derived from the combined lidar/bathymetry grid.
 Lot Lines: Created by importing pdf file from ERM, georeferencing to CAD lines (RMS error = 2.3042) and heads-up digitizing the lot lines.

- Ordinary High Water
- Top of Bank
- E-Sewer-L
- Storm Drain
- 12ft_Contour
- Bridges
- Property Lines
- Navigation Channel
- River
- Outfalls

Map-84
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Surface (0-1 ft)
Chromium

Map Document: (O:\Projects\Arkema-01\MXDs\Arkema_BaseMap_200605.mxd) 6/13/2006 - 11:11:00 AM



Legend

Chromium

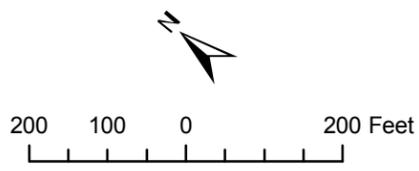
Criteria name, (value mg/kg)

- ▲ JSCS_BIOx1000, (4,200,000 mg/kg)
- ▲ PECx100, (11,100 mg/kg)
- ▲ JSCS_BIO, (4200 mg/kg)
- ▲ PECx10, (1110 mg/kg)
- ▲ PEC, (111 mg/kg)
- ▲ TEC, (43.4 mg/kg)
- ▲ no SLVs exceeded
- ▲ Not Detected

For sample intervals that span more than one depth range, the bottom depth of the sample interval was used in selecting the depth range for display.

REVISED DRAFT

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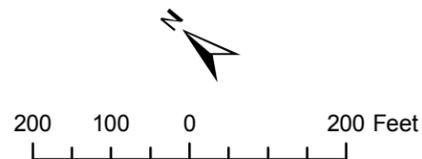
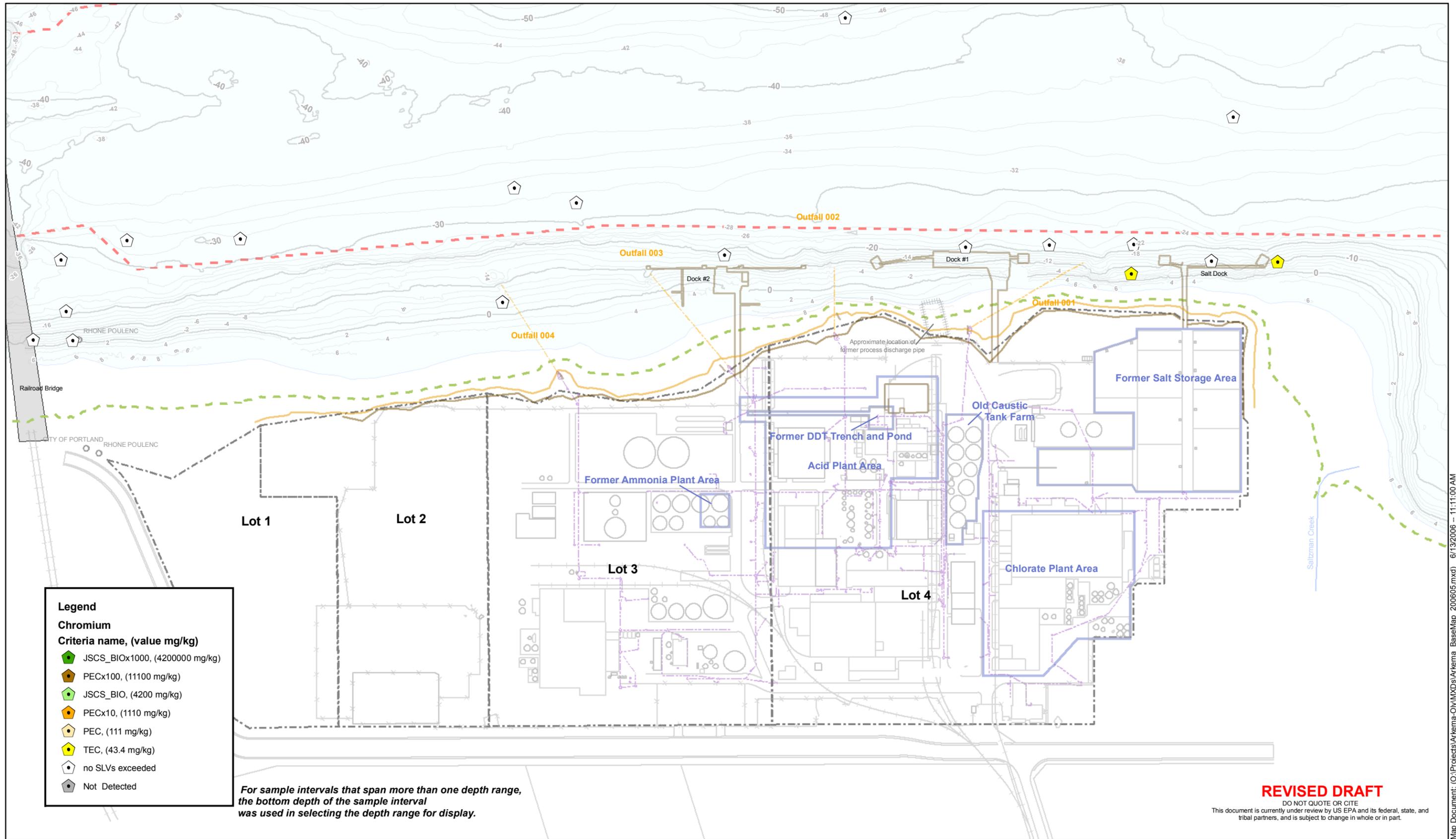


FEATURE SOURCES:
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 Vertical Datum: North American Vertical Datum of 1988 (NAVD88).
 Horizontal Datum: North American Datum of 1983 - 91 adjusted (NAD83/91), State Plane Coordinate System (SPCS), Oregon North Zone.
 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006. Most buildings and structures on the Arkema site have been demolished or removed.
 OHW and Top of Slope lines were created from the April 2006 DEA survey, the +12ft contour line was derived from the combined lidar/bathymetry grid.
 Lot Lines: Created by importing pdf file from ERM, georeferencing to CAD lines (RMS error = 2.3042) and heads-up digitizing the lot lines.

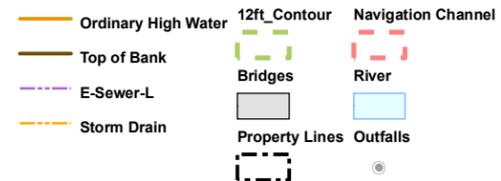
— Ordinary High Water	- - - 12ft Contour	- - - Navigation Channel
— Top of Bank	— Bridges	— River
- - - E-Sewer-L	— Property Lines	● Outfalls
- - - Storm Drain	- - - Property Lines	

Map-85
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Shallow Subsurface (1-4 ft)
Chromium

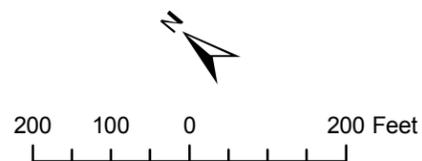
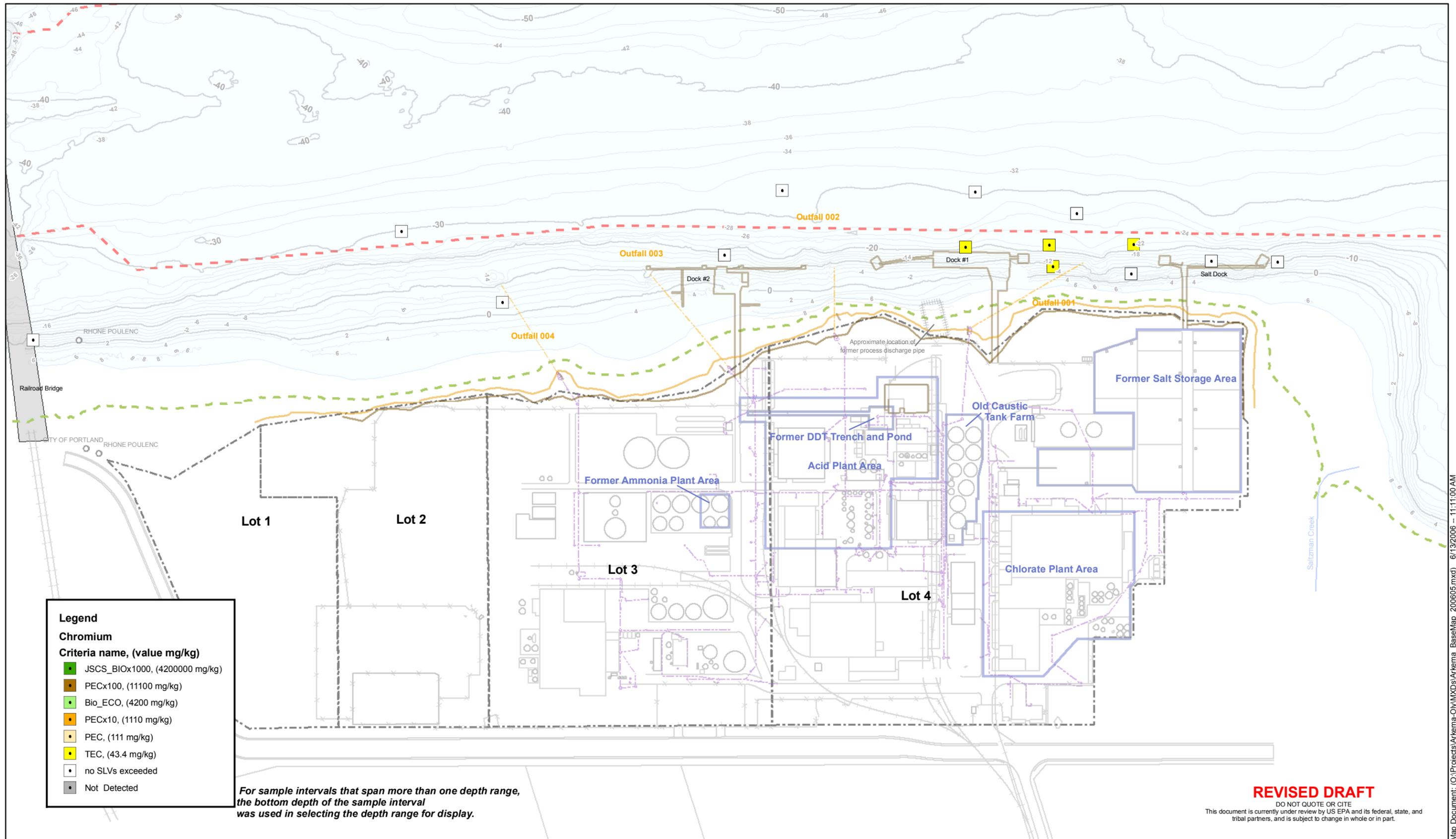
Map Document: (O:\Projects\Arkema-01\MapDocs\Arkema_BaseMap_200605.mxd) 6/13/2006 11:11:00 AM



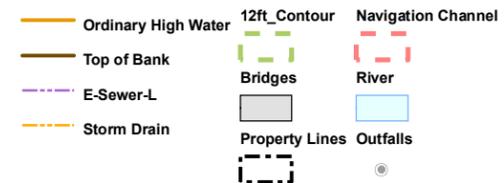
FEATURE SOURCES:
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 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006. Most buildings and structures on the Arkema site have been demolished or removed.
 OHW and Top of Slope lines were created from the April 2006 DEA survey, the +12ft contour line was derived from the combined lidar/bathymetry grid.
 Lot Lines: Created by importing pdf file from ERM, georeferencing to CAD lines (RMS error = 2.3042) and heads-up digitizing the lot lines.



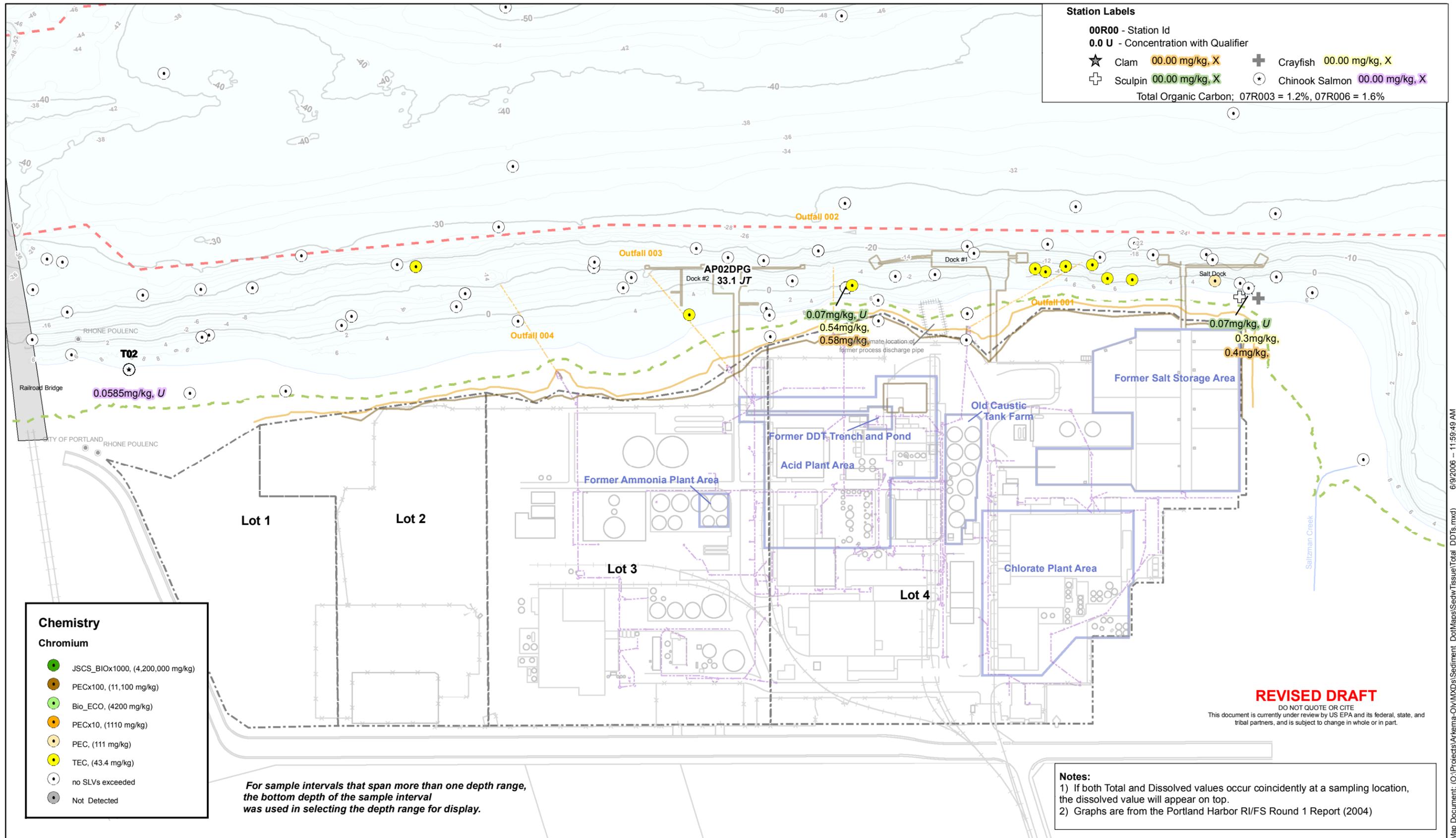
Map-86
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Intermediate Subsurface (4-8 ft)
Chromium



FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum of 1988 (NAVD88).
 Horizontal Datum: North American Datum of 1983 - 91 adjusted (NAD83/91), State Plane Coordinate System (SPCS), Oregon North Zone.
 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006. Most buildings and structures on the Arkema site have been demolished or removed.
 OHW and Top of Slope lines were created from the April 2006 DEA survey, the +12ft contour line was derived from the combined lidar/bathymetry grid.
 Lot Lines: Created by importing pdf file from ERM, georeferencing to CAD lines (RMS error = 2.3042) and heads-up digitizing the lot lines.



Map-87
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Deep Subsurface (> 8 ft)
Chromium



Station Labels

00R00 - Station Id
 0.0 U - Concentration with Qualifier

★ Clam	00.00 mg/kg, X	+	Crayfish	00.00 mg/kg, X	
+	Sculpin	00.00 mg/kg, X	★	Chinook Salmon	00.00 mg/kg, X

Total Organic Carbon: 07R003 = 1.2%, 07R006 = 1.6%

Chemistry

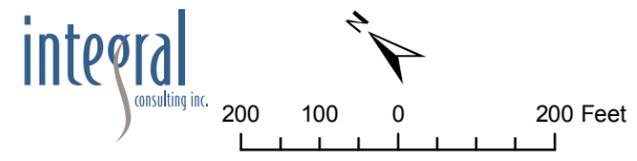
Chromium

●	JSCS_BIOx1000, (4,200,000 mg/kg)
●	PECx100, (11,100 mg/kg)
●	Bio_ECO, (4200 mg/kg)
●	PECx10, (1110 mg/kg)
●	PEC, (111 mg/kg)
●	TEC, (43.4 mg/kg)
○	no SLVs exceeded
○	Not Detected

For sample intervals that span more than one depth range, the bottom depth of the sample interval was used in selecting the depth range for display.

Notes:

- 1) If both Total and Dissolved values occur coincidentally at a sampling location, the dissolved value will appear on top.
- 2) Graphs are from the Portland Harbor RI/FS Round 1 Report (2004)



FEATURE SOURCES:
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 Units: International Feet.
 Basemap: Basemap features updated in 2006 by David Evans and Associates. Ordinary high water line, top of bank, and other site features surveyed in April 2006. Basemap features reflect structures that have been removed from the site.
 OHW and Top of Slope lines were created from the April 2006 DEA survey, the +12ft contour line was derived from the combined lidar/bathymetry grid.

—	Ordinary High Water	—	12ft_Contour	—	Navigation Channel
—	Top of Bank	—	Bridges	—	River
—	E-Sewer-L	—	Property Lines	—	Outfalls
—	Storm Drain	—		—	

Map-88
Arkema Site
Surface Sediment & Tissue Samples
Chromium
Depth Range: Surface (0 - 1 ft)

Map Document: (O:\Projects\Arkema-O\MapDocs\Sediment_Tissue\Total_DDTs.mxd) 6/9/2006 - 11:59:49 AM