

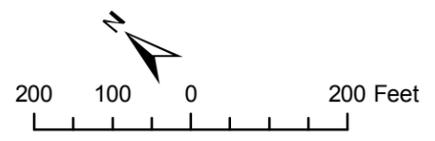
Chemistry Legend

Zinc - Surface Water		Zinc - Transition Water		Zinc - Ground Water	
total_or_dissolved, Exceedance_class		total_or_dissolved, Exceedance_class		total_or_dissolved, Exceedance_class	
■	D, HH_Fishx10000 (26000 mg/l)	●	D, HH_Fishx10000 (260,000 mg/l)	▲	D, HH_Fishx10000 (260,000 mg/l)
■	T, HH_Fishx10000 (26000 mg/l)	●	T, HH_Fishx10000 (260,000 mg/l)	▲	T, HH_Fishx10000 (260,000 mg/l)
■	D, MCLx10 (50 mg/l)	●	D, MCLx10 (50 mg/l)	▲	D, MCLx10 (50 mg/l)
■	T, MCLx10 (50 mg/l)	●	T, MCLx10 (50 mg/l)	▲	T, MCLx10 (50 mg/l)
■	D, Chronic (0.04 mg/l)	●	D, Chronic (0.04 mg/l)	▲	D, Chronic (0.0098 mg/l)
■	T, Chronic (0.04 mg/l)	●	T, Chronic (0.04 mg/l)	▲	T, Chronic (0.0098 mg/l)
■	D, Acute (0.0397297 mg/l)	●	D, Acute (0.0397297 mg/l)	▲	D, Acute (0.0397297 mg/l)
■	T, Acute (0.0397297 mg/l)	●	T, Acute (0.0397297 mg/l)	▲	T, Acute (0.0397297 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

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

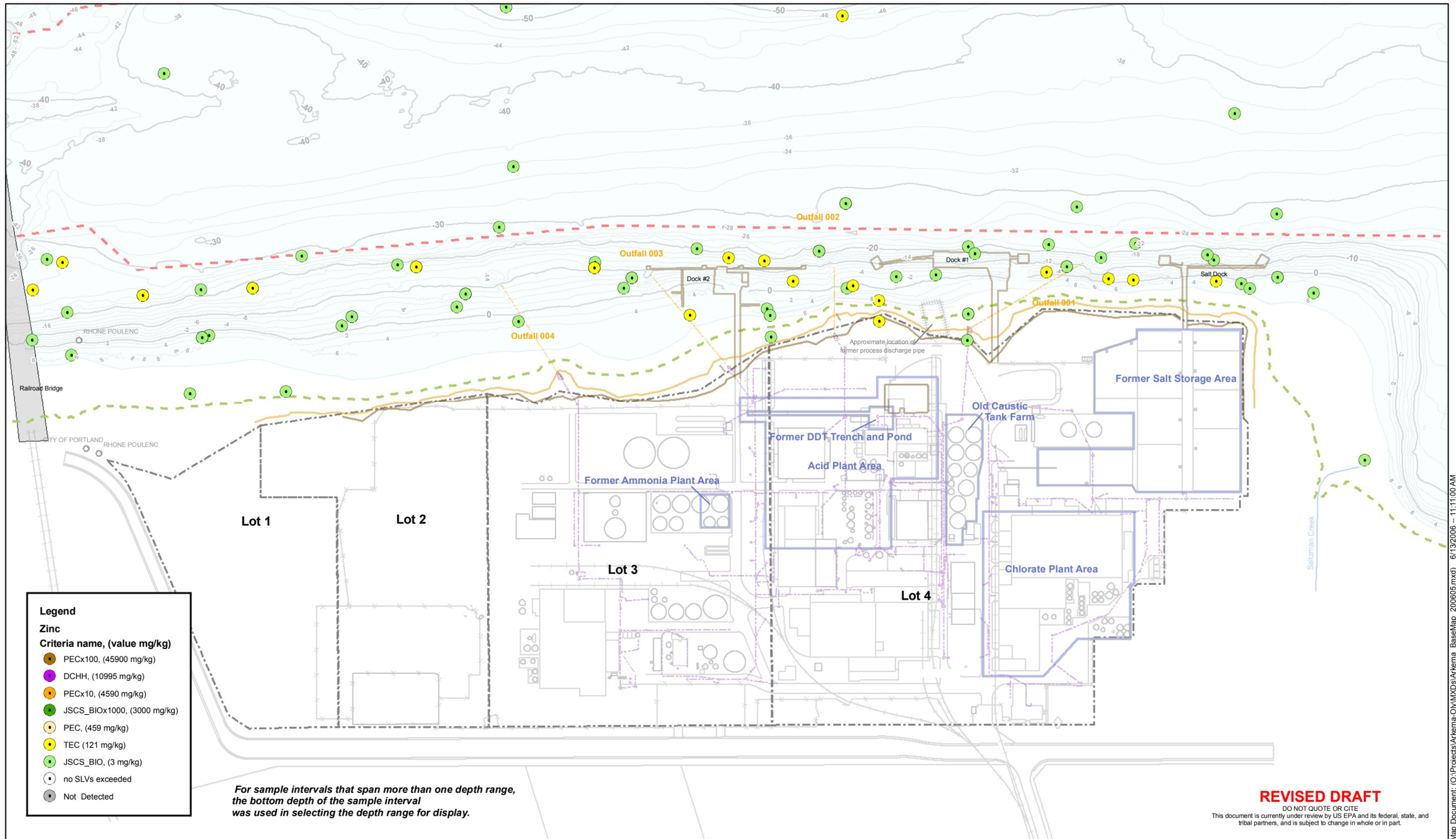


FEATURE SOURCES:
Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
Vertical Datum: North American Vertical Datum of 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-329
Arkema Site
Surface Water, Transition Zone Water,
and Groundwater Samples
Zinc

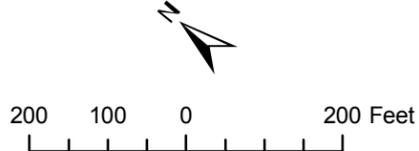
Map Document: (O:\Projects\Arkema-01\MXDs\ArkemaSW_DotMap_Screened_20060622.mxd) 6/23/2006 - 6:06:12 PM



- Legend**
- Zinc**
- Criteria name, (value mg/kg)**
- PECx100, (45900 mg/kg)
 - DCHH, (10995 mg/kg)
 - PECx10, (4590 mg/kg)
 - JSCS_BIOx1000, (3000 mg/kg)
 - PEC, (459 mg/kg)
 - TEC (121 mg/kg)
 - JSCS_BIO, (3 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.

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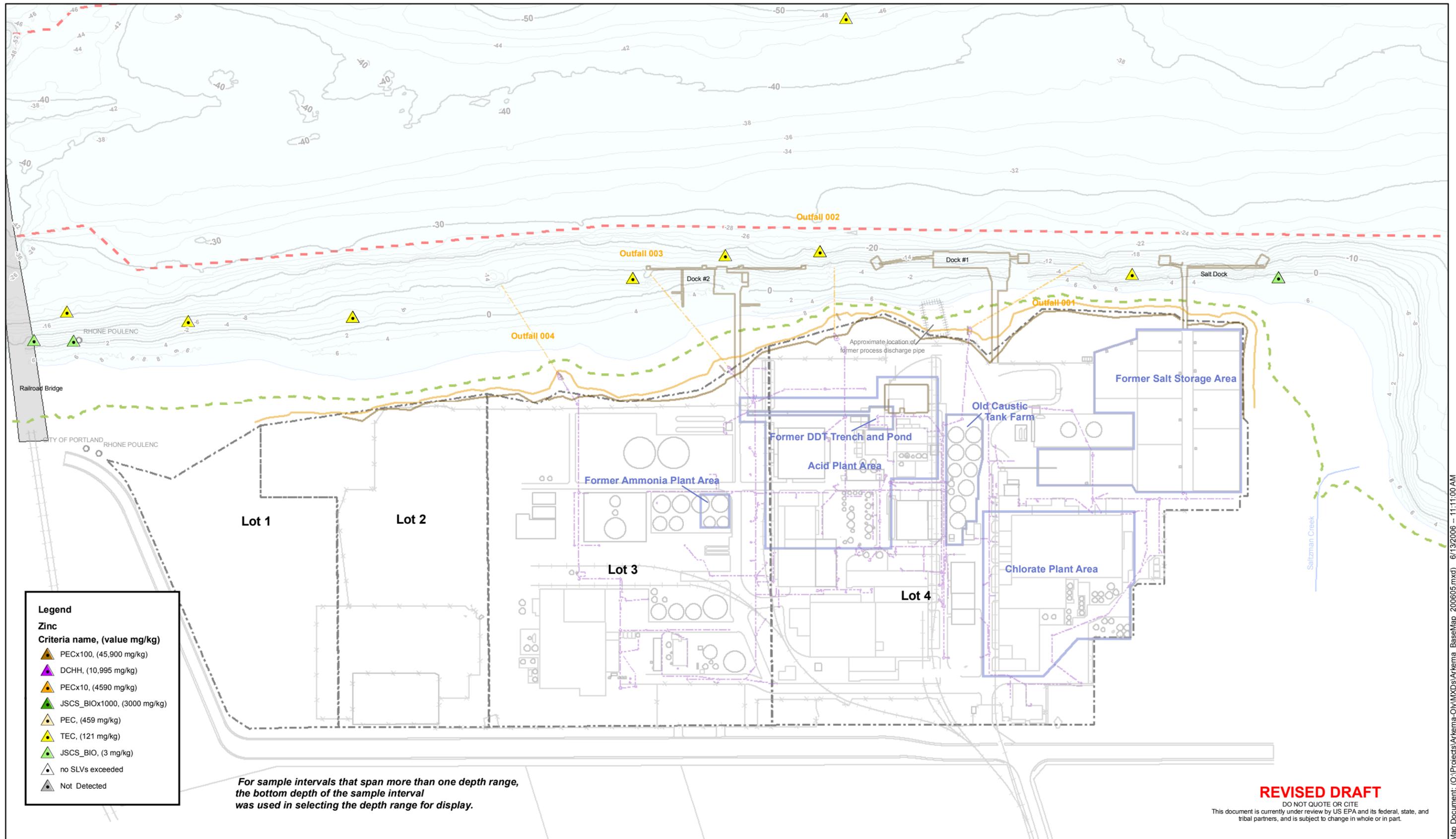


FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum 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.

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

Map-330
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Surface (0-1 ft)
Zinc

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



Legend

Zinc

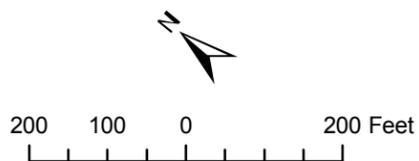
Criteria name, (value mg/kg)

- ▲ PECx100, (45,900 mg/kg)
- ▲ DCHH, (10,995 mg/kg)
- ▲ PECx10, (4590 mg/kg)
- ▲ JSCS_BIOx1000, (3000 mg/kg)
- ▲ PEC, (459 mg/kg)
- ▲ TEC, (121 mg/kg)
- ▲ JSCS_BIO, (3 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.

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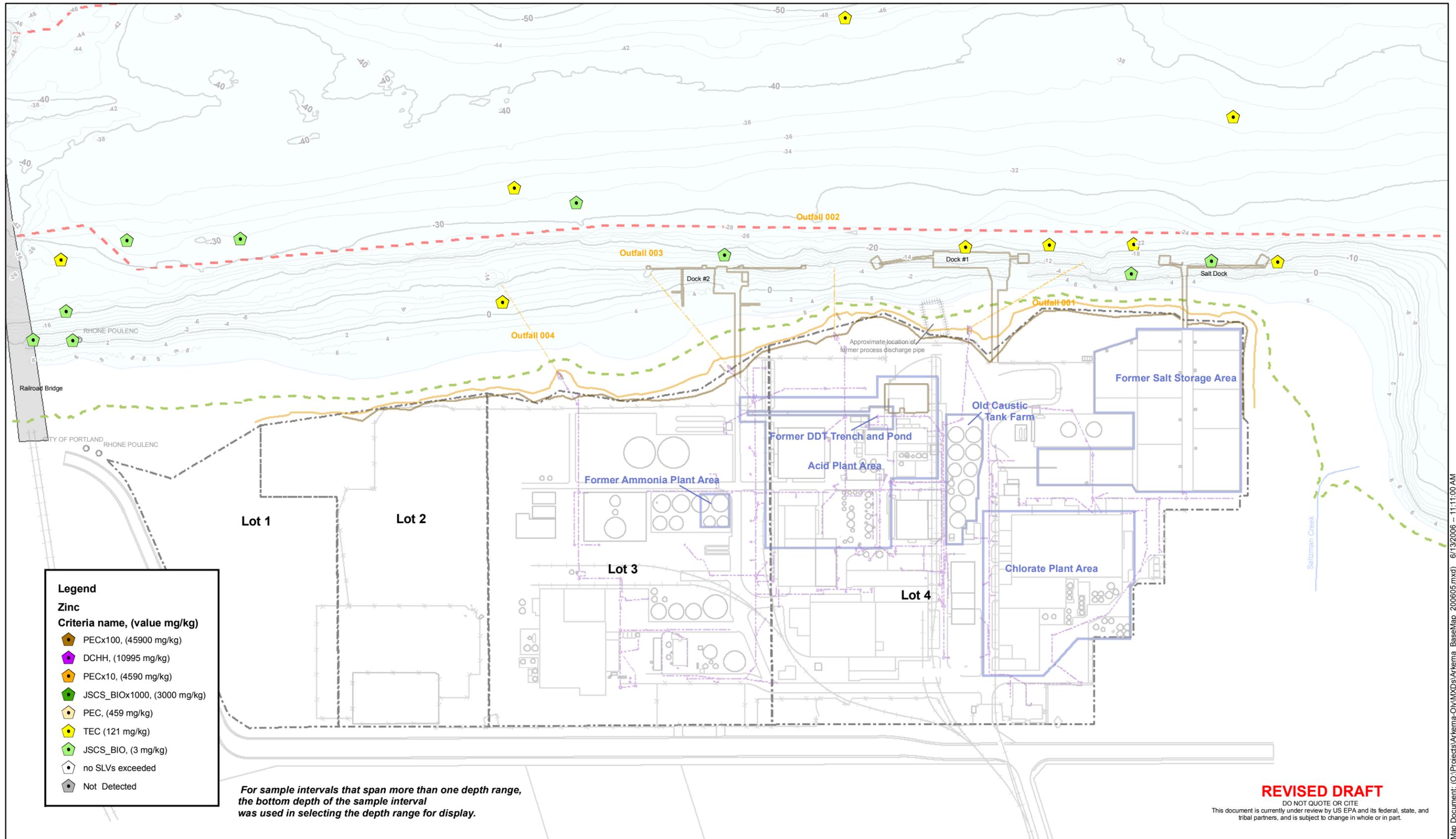


FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum 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.

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

Map-331
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Shallow Subsurface (1-4 ft)
Zinc

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



Legend

Zinc

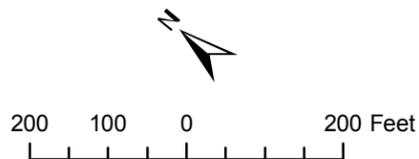
Criteria name, (value mg/kg)

- ◆ PECx100, (45900 mg/kg)
- ◆ DCHH, (10995 mg/kg)
- ◆ PECx10, (4590 mg/kg)
- ◆ JSCS_BIOx1000, (3000 mg/kg)
- ◆ PEC, (459 mg/kg)
- ◆ TEC (121 mg/kg)
- ◆ JSCS_BIO, (3 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.

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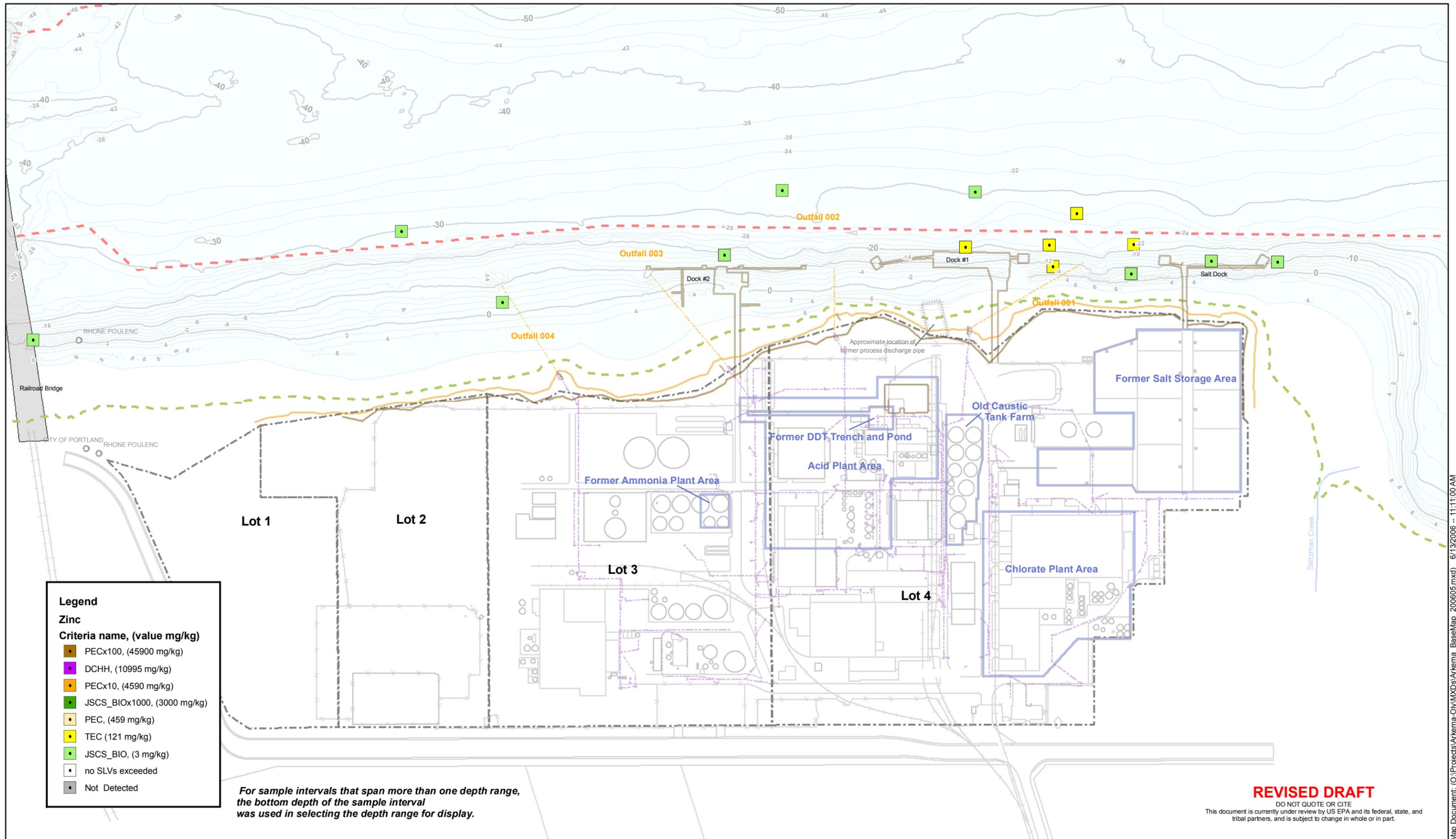


FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum 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.

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

Map-332
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Intermediate Subsurface (4-8 ft)
Zinc

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



Legend

Zinc

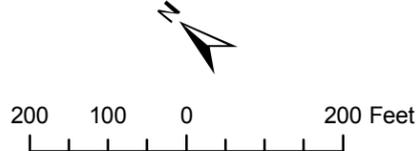
Criteria name, (value mg/kg)

- PECx100, (45900 mg/kg)
- DCHH, (10995 mg/kg)
- PECx10, (4590 mg/kg)
- JSCS_BIOx1000, (3000 mg/kg)
- PEC, (459 mg/kg)
- TEC (121 mg/kg)
- JSCS_BIO, (3 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.

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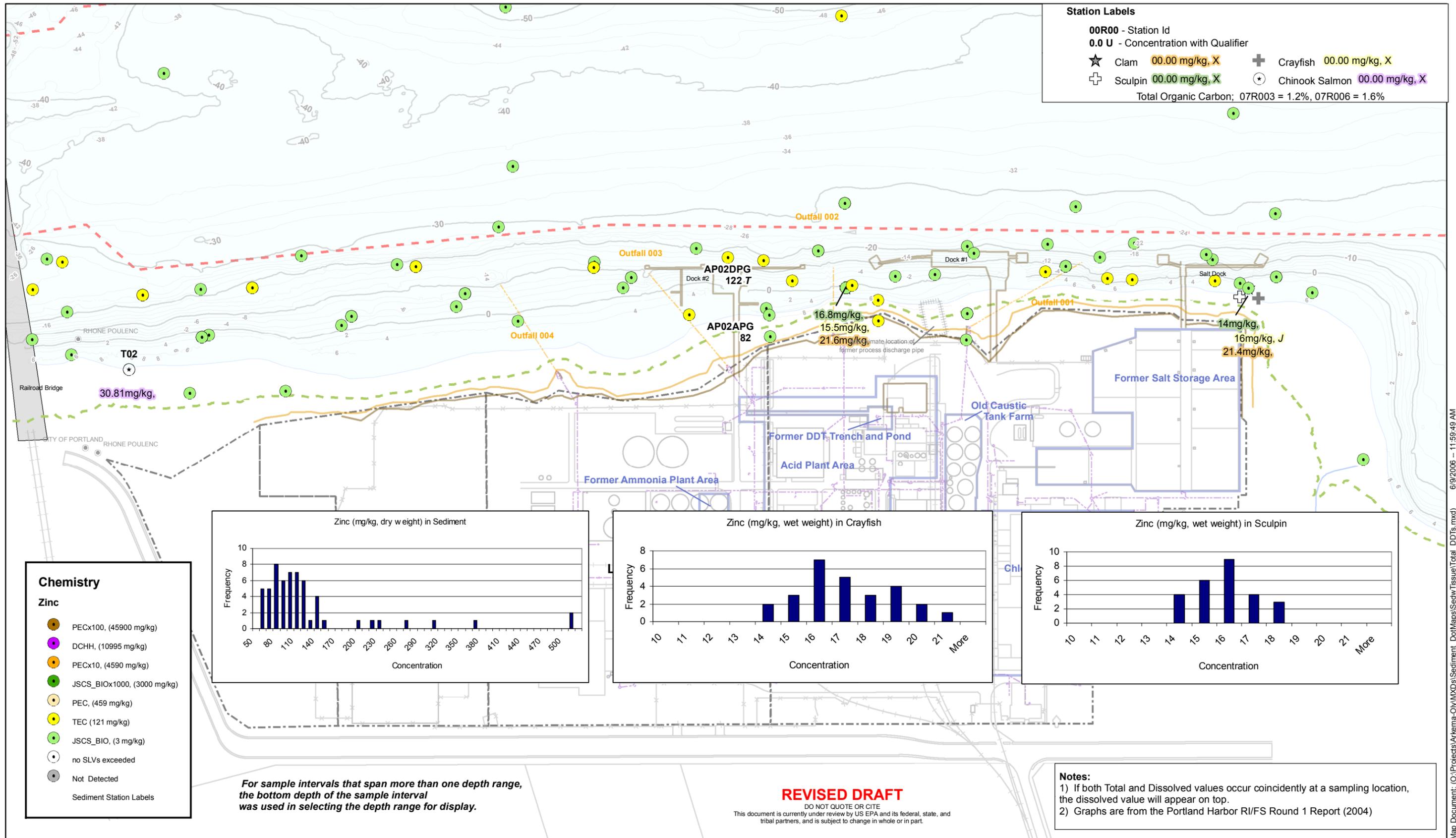


FEATURE SOURCES:
 Bathymetric Information: Multibeam bathymetric survey conducted by David Evans and Associates, Inc. from February 6 - March 6, 2004. Contours were derived from a Digital Terrain Model (DTM) based on a three-foot grid of multibeam data.
 Vertical Datum: North American Vertical Datum 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.

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

Map-333
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Deep Subsurface (> 8 ft)
Zinc

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



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

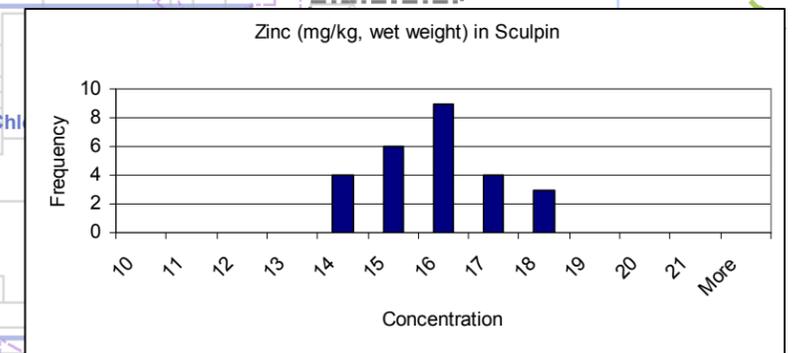
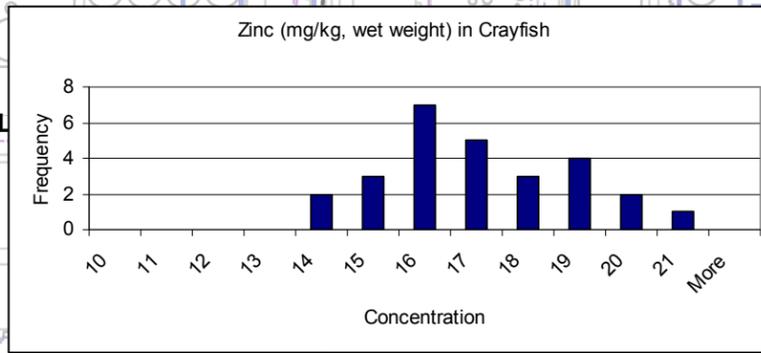
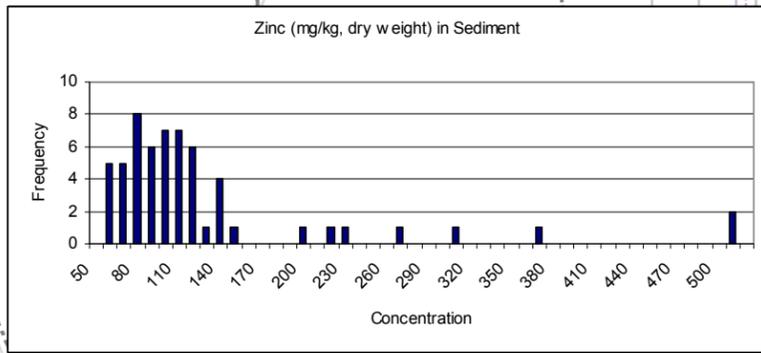
Total Organic Carbon: 07R003 = 1.2%, 07R006 = 1.6%

Chemistry

Zinc

●	PECx100, (45900 mg/kg)
●	DCHH, (10995 mg/kg)
●	PECx10, (4590 mg/kg)
●	JSCS_BIOx1000, (3000 mg/kg)
●	PEC, (459 mg/kg)
●	TEC (121 mg/kg)
●	JSCS_BIO, (3 mg/kg)
○	no SLVs exceeded
○	Not Detected

Sediment Station Labels



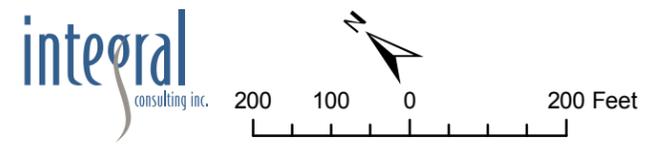
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Notes:

- 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:
 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. 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-334
Arkema Site
Surface Sediment & Tissue Samples
Zinc
Depth Range: Surface (0 - 1 ft)

Map Document: (O:\Projects\Arkema-O\MXDs\Sediment_DotMaps\SedW\Tissue\Total_DDTs.mxd) 6/9/2006 - 11:59:49 AM