Outfall 002
Outfall 003
Outfall 004
Outfall 001
Dock #1
Dock #2
Salt Dock
RHONE POULENC
Railroad Bridge
CITY OF PORTLAND
RHONE POULENC
Approximate location of former process discharge pipe
Former Salt Storage Area
Old Caustic Tank Farm
Former DDT Trench and Pond
Acid Plant Area
Former Ammonia Plant Area
Chlorate Plant Area
Lot 1
Lot 2
Lot 3
Lot 4
Seltzman Creek

Chemistry Legend

Lead - Surface Water total_or_dissolved, Exceedance_class	Lead - Transition Water total_or_dissolved, Exceedance_class	Lead - Ground Water total_or_dissolved, Exceedance_class
D, MCLx10 (0.15 mg/l)	D, MCLx10 (0.15 mg/l)	D, MCLx10 (0.15 mg/l)
T, MCLx10 (0.15 mg/l)	T, MCLx10 (0.15 mg/l)	T, MCLx10 (0.15 mg/l)
D, Acute (0.01571 mg/l)	D, Acute (0.01571 mg/l)	D, Acute (0.01571 mg/l)
T, Acute (0.01571 mg/l)	T, Acute (0.01571 mg/l)	T, Acute (0.01571 mg/l)
D, Chronic (0.00061 mg/l)	D, Chronic (0.00061 mg/l)	D, Chronic (0.00061 mg/l)
T, Chronic (0.00061 mg/l)	T, Chronic (0.00061 mg/l)	T, Chronic (0.00061 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DO NOT QUOTE OR CITE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 coincidently at a sampling location, the dissolved value will appear on top.

integral consulting inc.

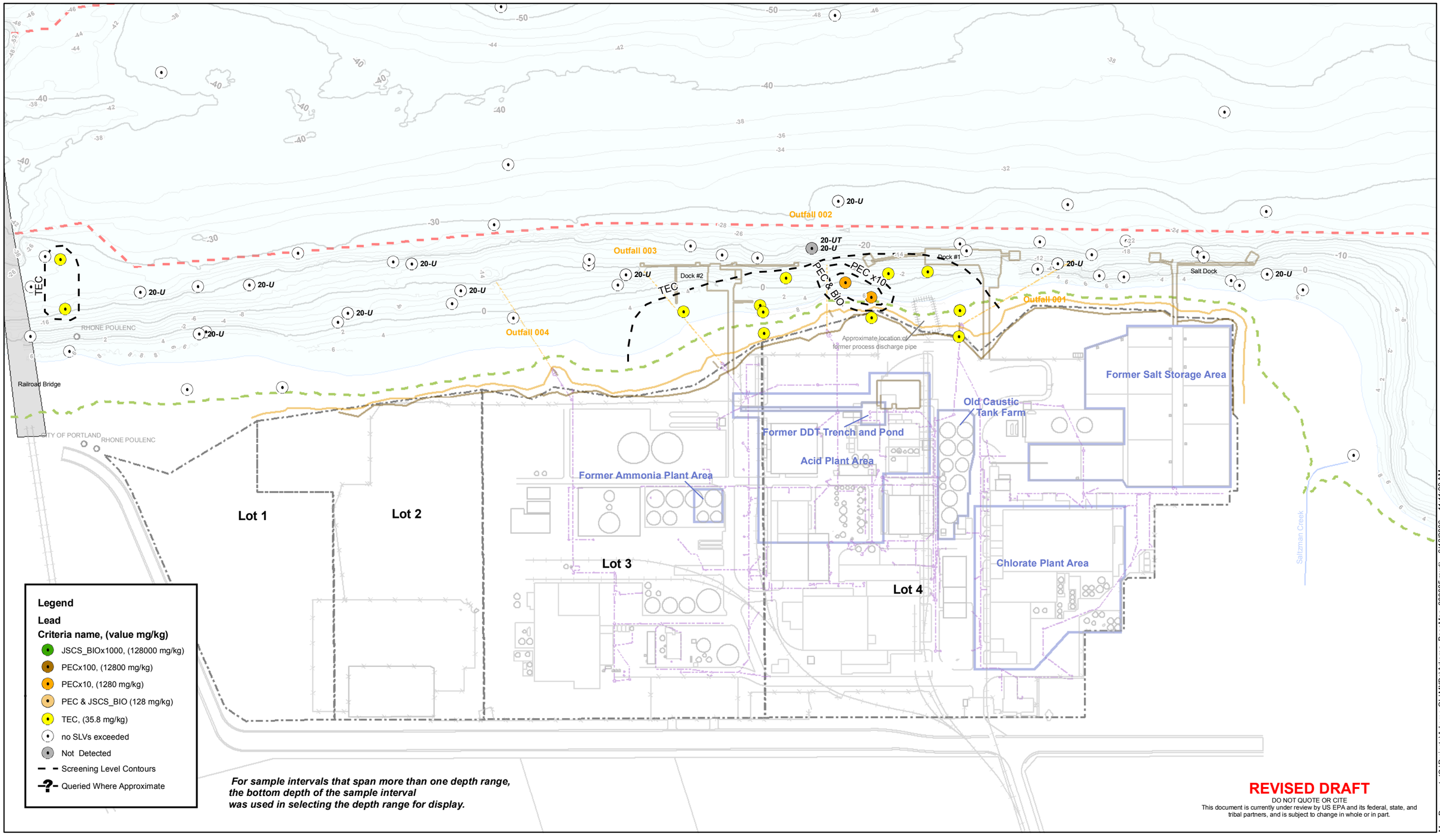
200 100 0 200 Feet

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

Map-300
Arkema Site
Surface Water, Transition Zone Water, and Groundwater Samples
Lead

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



integral consulting inc.

200 100 0 200 Feet

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-301
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Surface (0-1 ft)
Lead

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

Outfall 002

Outfall 003

Outfall 004

Outfall 001

Dock #1

Dock #2

Salt Dock

Approximate location of former process discharge pipe

Former Salt Storage Area

Old Caustic Tank Farm

Former DDT Trench and Pond

Acid Plant Area

Former Ammonia Plant Area

Chlorate Plant Area

Lot 1

Lot 2

Lot 3

Lot 4

Railroad Bridge

RHONE POULENC

CITY OF PORTLAND

Seltzman Creek

Legend

Lead

Criteria name, (value mg/kg)

- JSCS_BIOx1000, (128,000 mg/kg)
- PECx100, (12,800 mg/kg)
- PECx10, (1,280 mg/kg)
- PEC & JSCS_BIO, (128 mg/kg)
- TEC, (35.8 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

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.

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

integral consulting inc.

200 100 0 200 Feet

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-302
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Shallow Subsurface (1-4 ft)
Lead

Outfall 002
Outfall 003
Outfall 004
Outfall 001
Dock #1
Dock #2
Salt Dock
Railroad Bridge
RHONE POULENC
CITY OF PORTLAND
RHONE POULENC
Approximate location of former process discharge pipe
Former Salt Storage Area
Old Caustic Tank Farm
Former DDT Trench and Pond
Acid Plant Area
Former Ammonia Plant Area
Chlorate Plant Area
Lot 1
Lot 2
Lot 3
Lot 4
Seltzman Creek

Legend

Lead

Criteria name, (value mg/kg)

- JSCS_BIOx1000, (128000 mg/kg)
- PECx100, (12800 mg/kg)
- PECx10, (1280 mg/kg)
- PEC & Bio_ECO , (128 mg/kg)
- TEC, (35.8 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

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.

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

integral consulting inc.

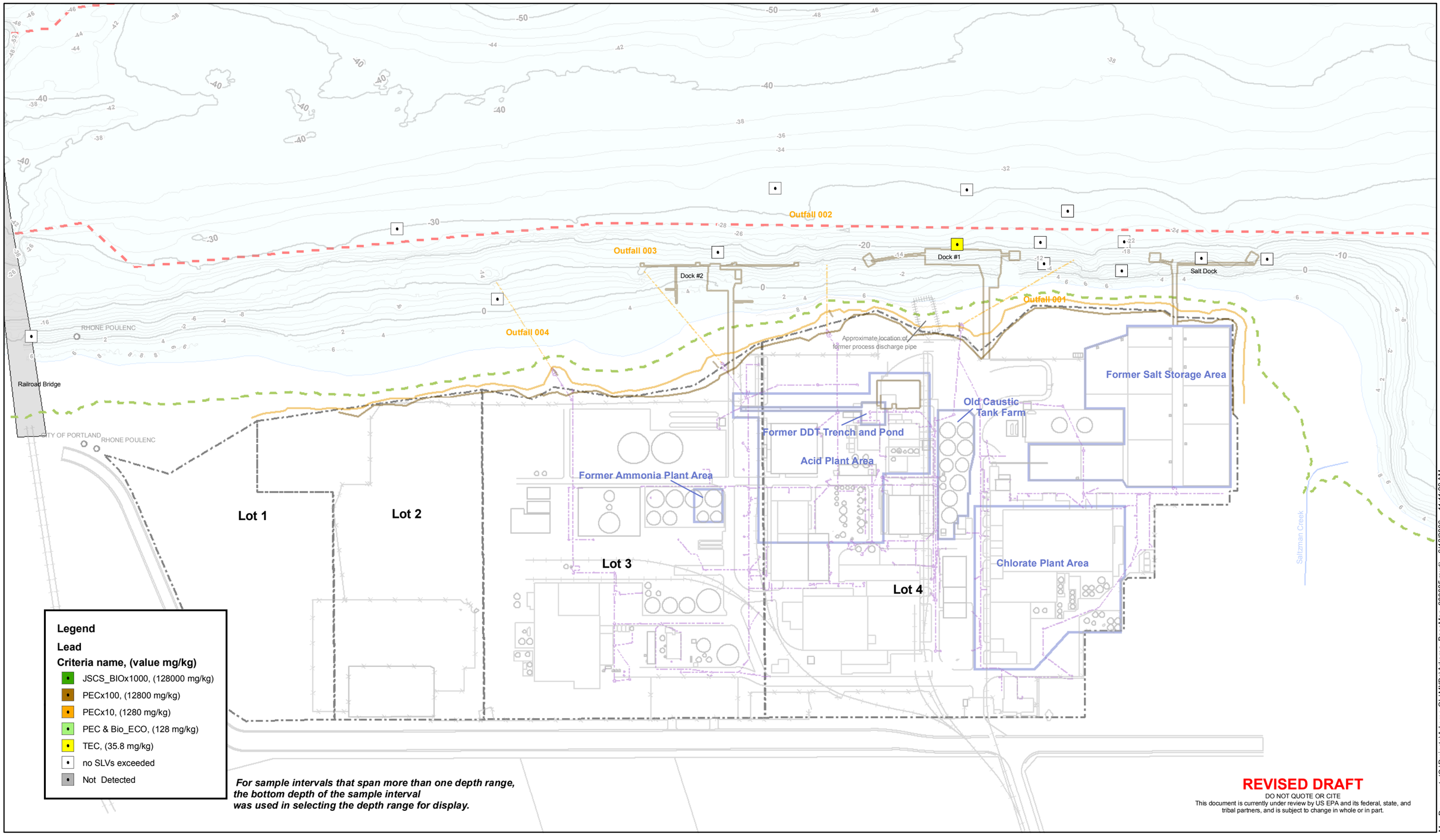
200 100 0 200 Feet

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-303
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Intermediate Subsurface (4-8 ft)
Lead



integral consulting inc.

200 100 0 200 Feet

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-304
Arkema Site
Surface & Sub-Surface Sediment Samples
Depth Range: Deep Subsurface (> 8 ft)
Lead

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%

Outfall 002
Outfall 003
Outfall 004
Outfall 001

AP02DPG
23 *T*

Dock #1
Dock #2
Salt Dock

0.547mg/kg,
0.242mg/kg,
0.316mg/kg,

Approximate location of former process discharge pipe

0.065mg/kg,
0.091mg/kg, *J*
0.0731mg/kg,

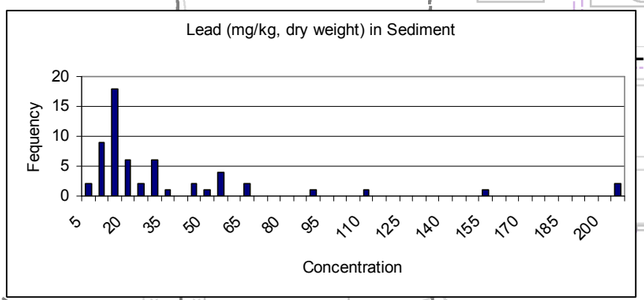
T02
0.0741mg/kg, *U*

RHONE POULENC
Railroad Bridge
CITY OF PORTLAND
RHONE POULENC

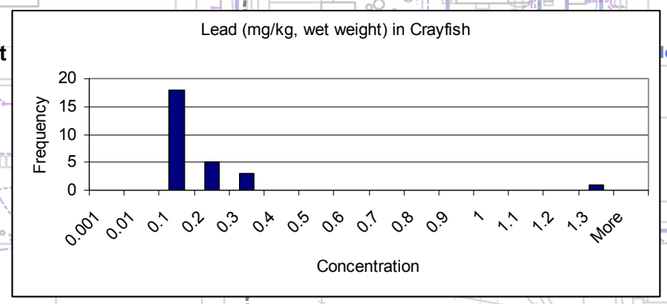
Former Salt Storage Area
Old Caustic Tank Farm
Former DDT Trench and Pond
Acid Plant Area
Former Ammonia Plant Area

Lot 1
Lot 2

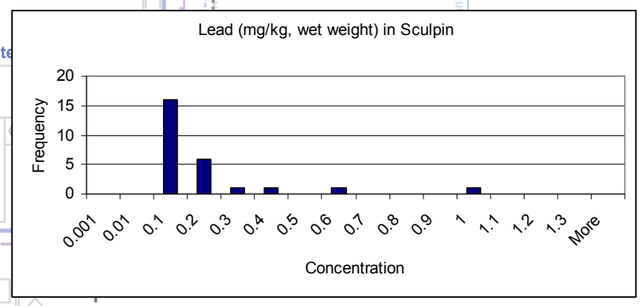
Lead (mg/kg, dry weight) in Sediment



Lead (mg/kg, wet weight) in Crayfish



Lead (mg/kg, wet weight) in Sculpin



Chemistry

Lead

- JSCS_BIOx1000, (128000 mg/kg)
- PECx100, (12800 mg/kg)
- PECx10, (1280 mg/kg)
- PEC, (128 mg/kg)
- Bio_ECO, (128 mg/kg)
- TEC, (35.8 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
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 coincidently at a sampling location, the dissolved value will appear on top.
2) Graphs are from the Portland Harbor RI/FS Round 1 Report (2004)

integral consulting inc.

200 100 0 200 Feet

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

Map-305
Arkema Site
Surface Sediment & Tissue Samples
Lead
Depth Range: Surface (0 - 1 ft)

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