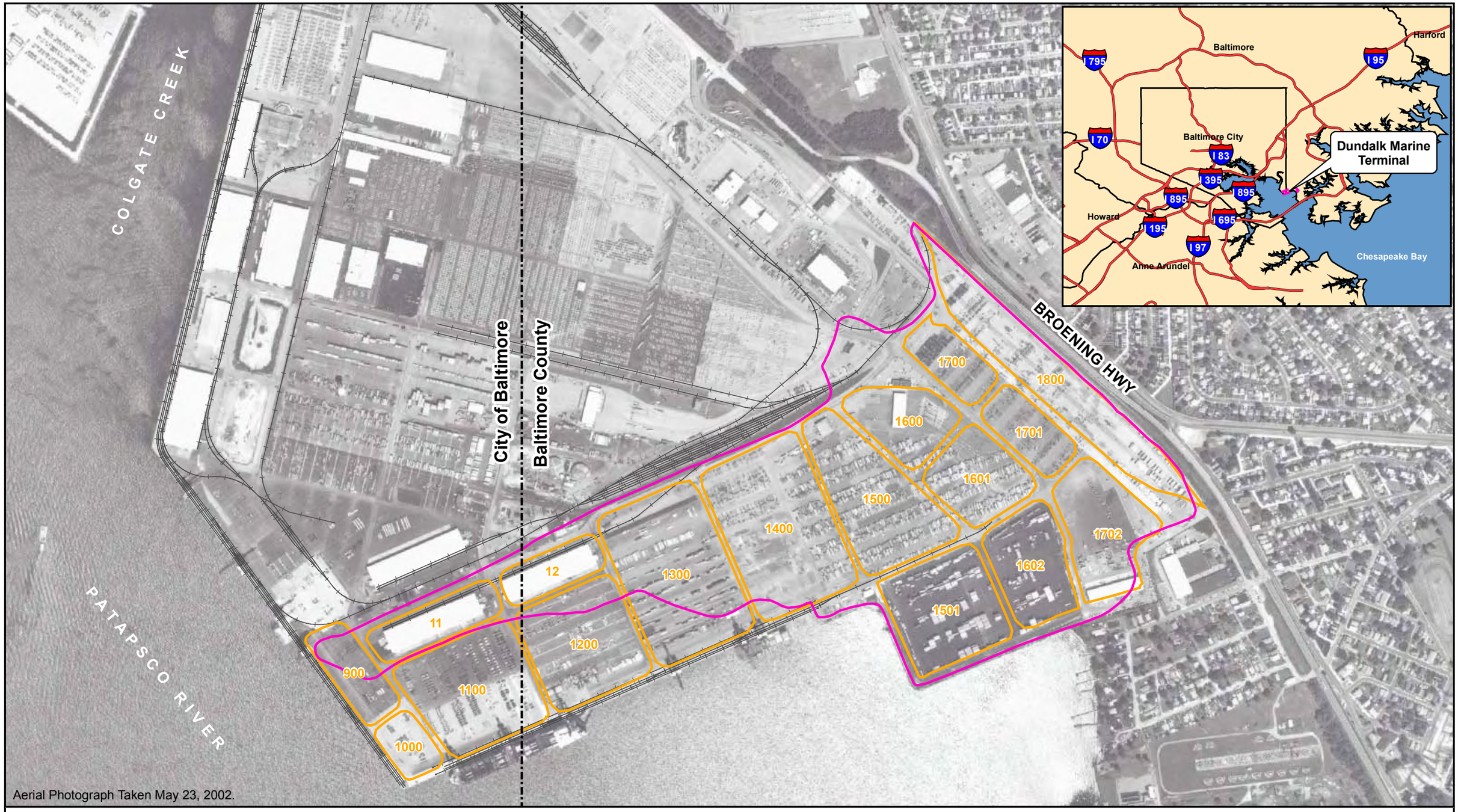
\\APHRODITE\PROJ\HONEYWELLINC\DUNDALKMARINETERMINAL\MAPFILES\FINAL_COPR_INVESTIGATION\FIGURE 1-2-1 - SITE VICINITY MAP.MXD BHATHAWA 5/18/2009 14:18:20



Aerial Photograph Taken May 23, 2002.

Legend
- Areas
- COPR Extent (CH2M HILL, 2009)
- County/City Boundary
- Railroad Centerline

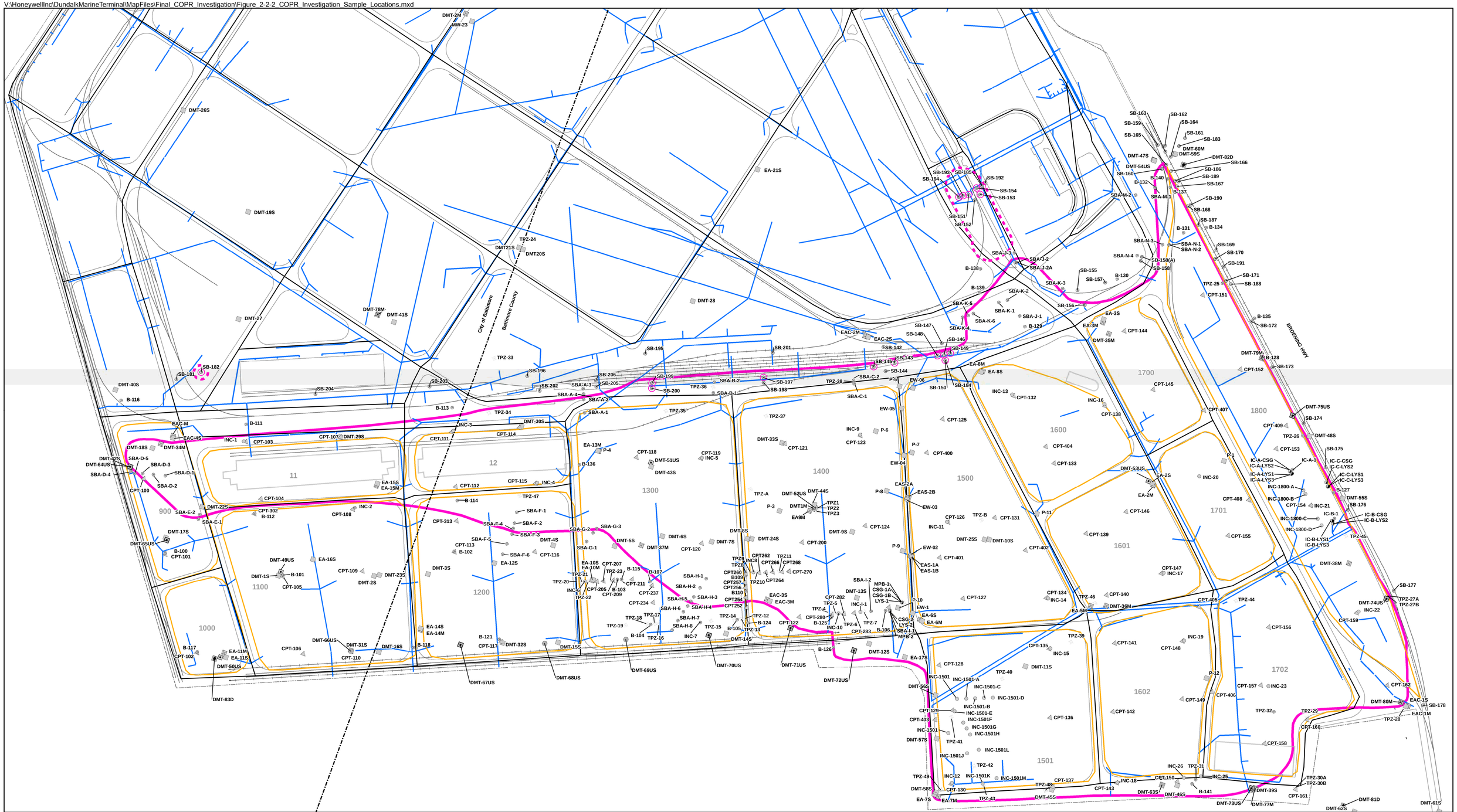
N
W E
S

0 300 600 900
Feet

Figure 2-1
Site Vicinity Map
Chromium Transport Study
Dundalk Marine Terminal
Baltimore, Maryland

CH2MHILL

V:\HoneywellInc\DundalkMarineTerminal\MapFiles\Final_COPR_Investigation\Figure_2-2-2_COPR_Investigation_Sample_Locations.mxd



Legend

- Shallow Well
- D-Series Well
- Upper Sand Well
- M-Series Well
- Piezometer
- Lysymeter
- Inclinometer
- CPT Boring
- Soil Boring
- Shallow COPR Present
- County/City Boundary
- Curb
- Railroad Centerline
- Storm Sewer Line
- Approximate COPR Extent
- Areas
- Buildings
- COPR Extent (CH2M Hill, 2009)
- DMT Boundary

Created By: BHH (04/03/2009)
Checked By:
Approved By:

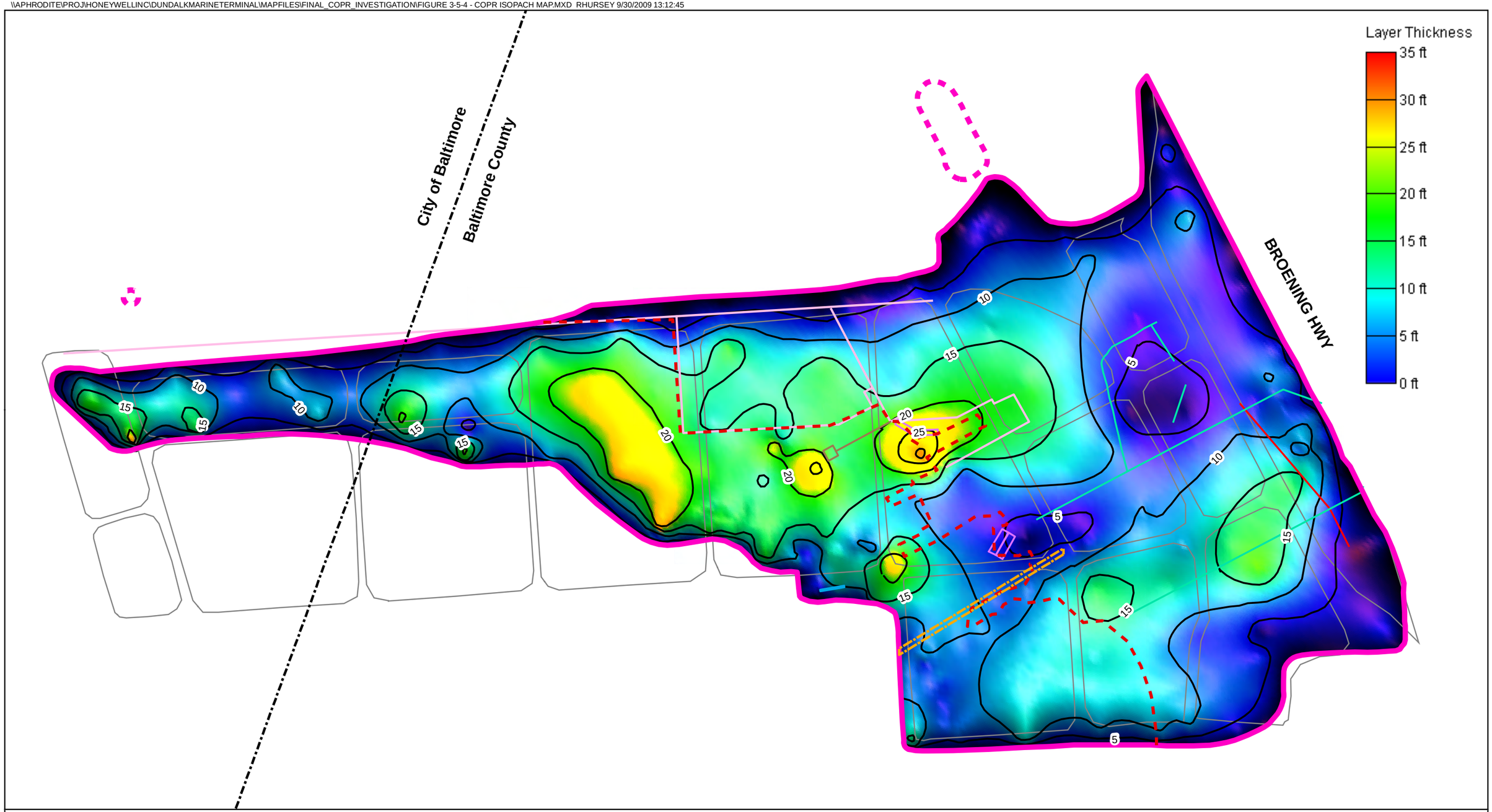
N W E S

0 100 200 400
Feet

Figure 2-2
COPR Investigation Sample Locations
Dundalk Marine Terminal
Baltimore, Maryland

CH2MHILL

\\APHRODITE\PROJ\HONEYWELLINC\DUNDALKMARINETERMINAL\MAPFILES\FINAL_COPR_INVESTIGATION\FIGURE 3-5-4 - COPR ISOPACH MAP.MXD RHURSEY 9/30/2009 13:12:45



Legend

- 15th Street COPR Removal
- COPR Extent (CH2M Hill, 2009)
- Areas
- Extent of shoreline and bulkhead from early aerial photography
- County/City Boundary
- Approximate COPR Extent

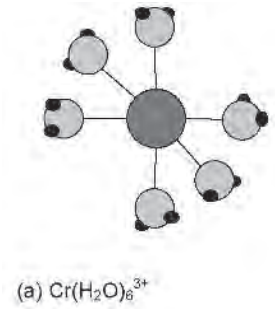
Created By: BHH 04/03/09
Checked By: CJH 04/03/09
Approved By: BML 05/19/09

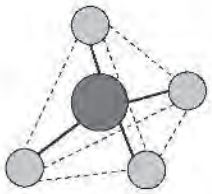
N W E S

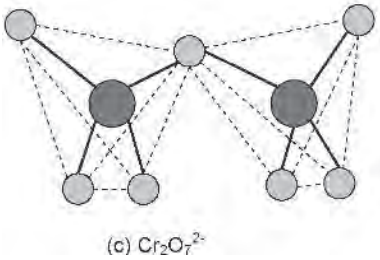
0 200 400 600 800 Feet

Figure 2-3
COPR Isopach Map
COPR Investigation Report
Dundalk Marine Terminal
Baltimore, Maryland

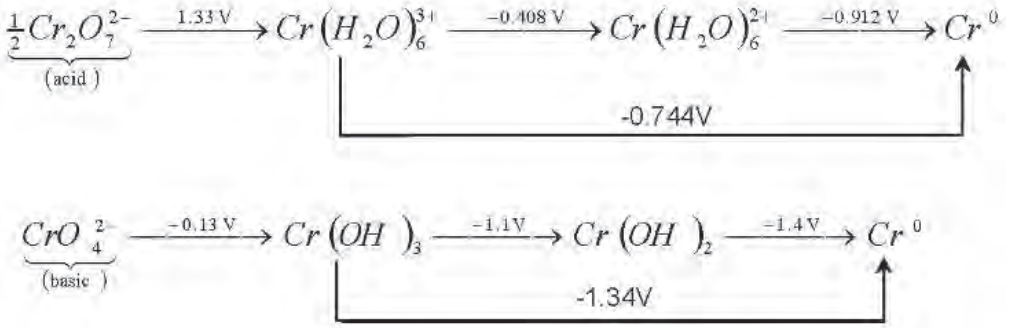
CH2MHILL



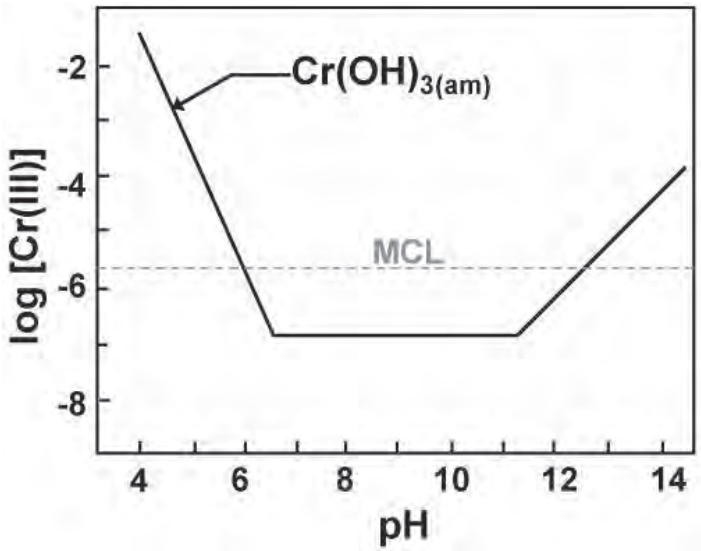




(a) Common forms of Chromium

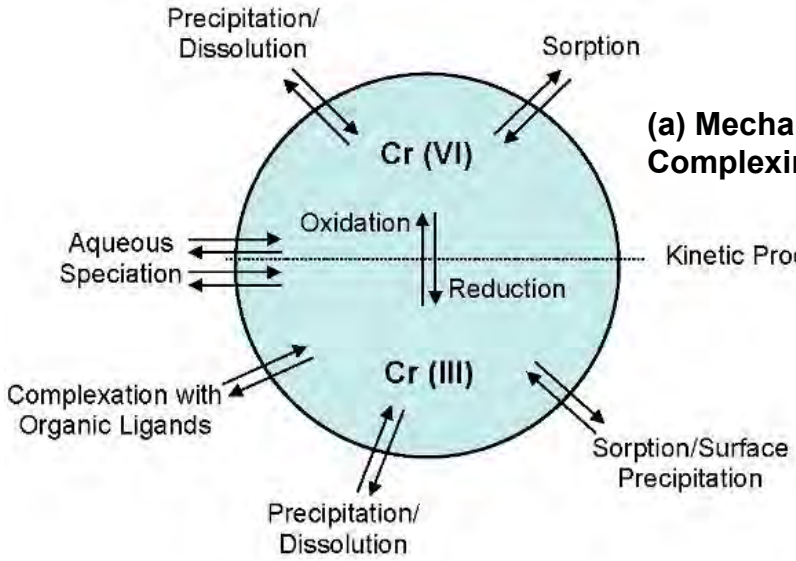


(b) Latimer Diagram for Chromium

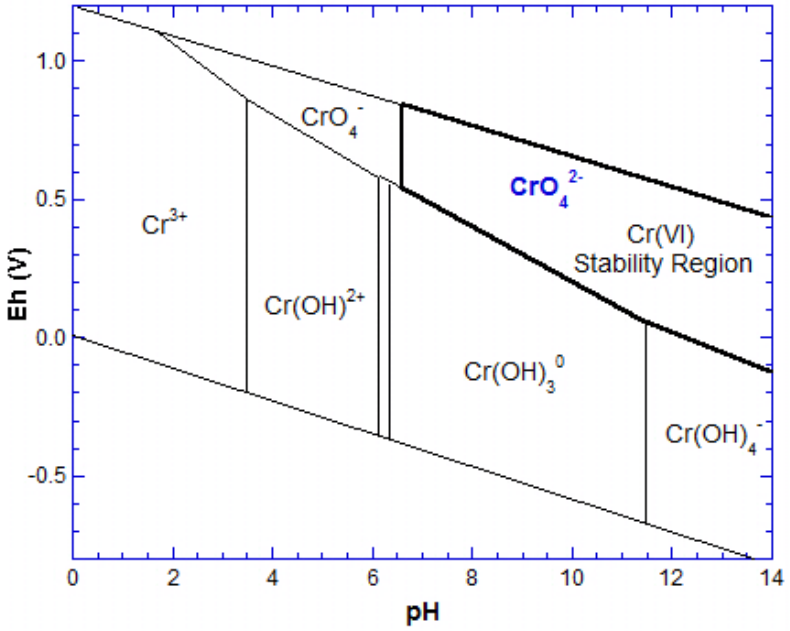


(c) Equilibria of $Cr(OH)_3$ with pH

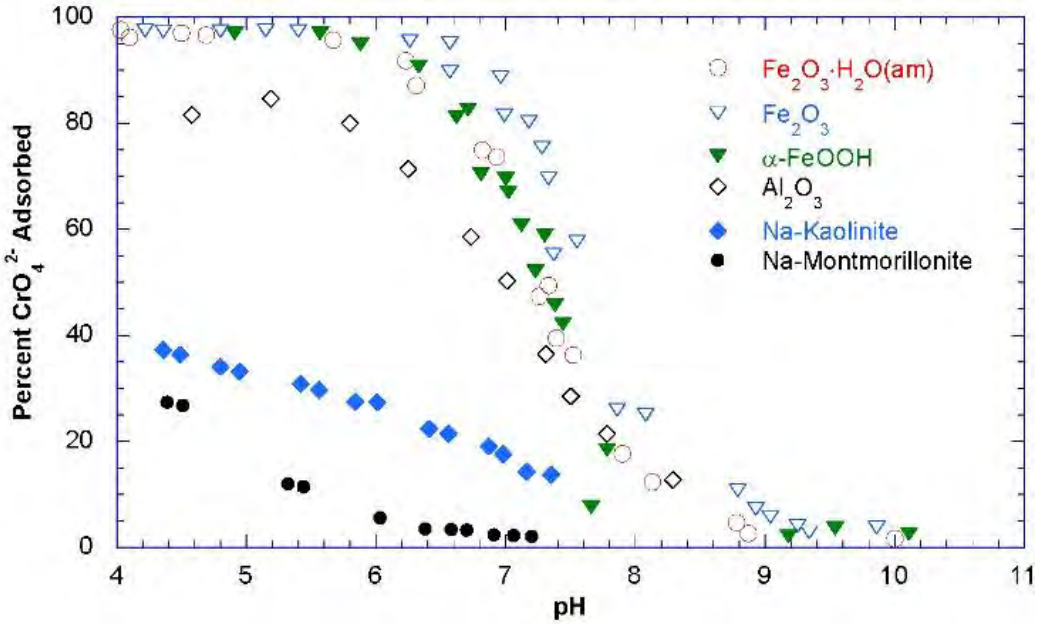
Figure 2-4
Chemistry of Chromium
Chromium Transport Study
Dundalk Marine Terminal, Baltimore, Maryland



(a) Mechanisms Affecting the Speciation and Complexing of Chromium in the Environment



(b) Eh-pH Diagram for Chromium Species



(c) Chromate Adsorption to a Variety of Mineral Types (Rai et al., 1989) and Iron Hydroxide-Dominated, Kaolinitic, and Montmorillonitic Soils (Zachara et al., 1989)

Figure 2-5
Chromium Stability in the Environment
Chromium Transport Study
Dundalk Marine Terminal, Baltimore, Maryland