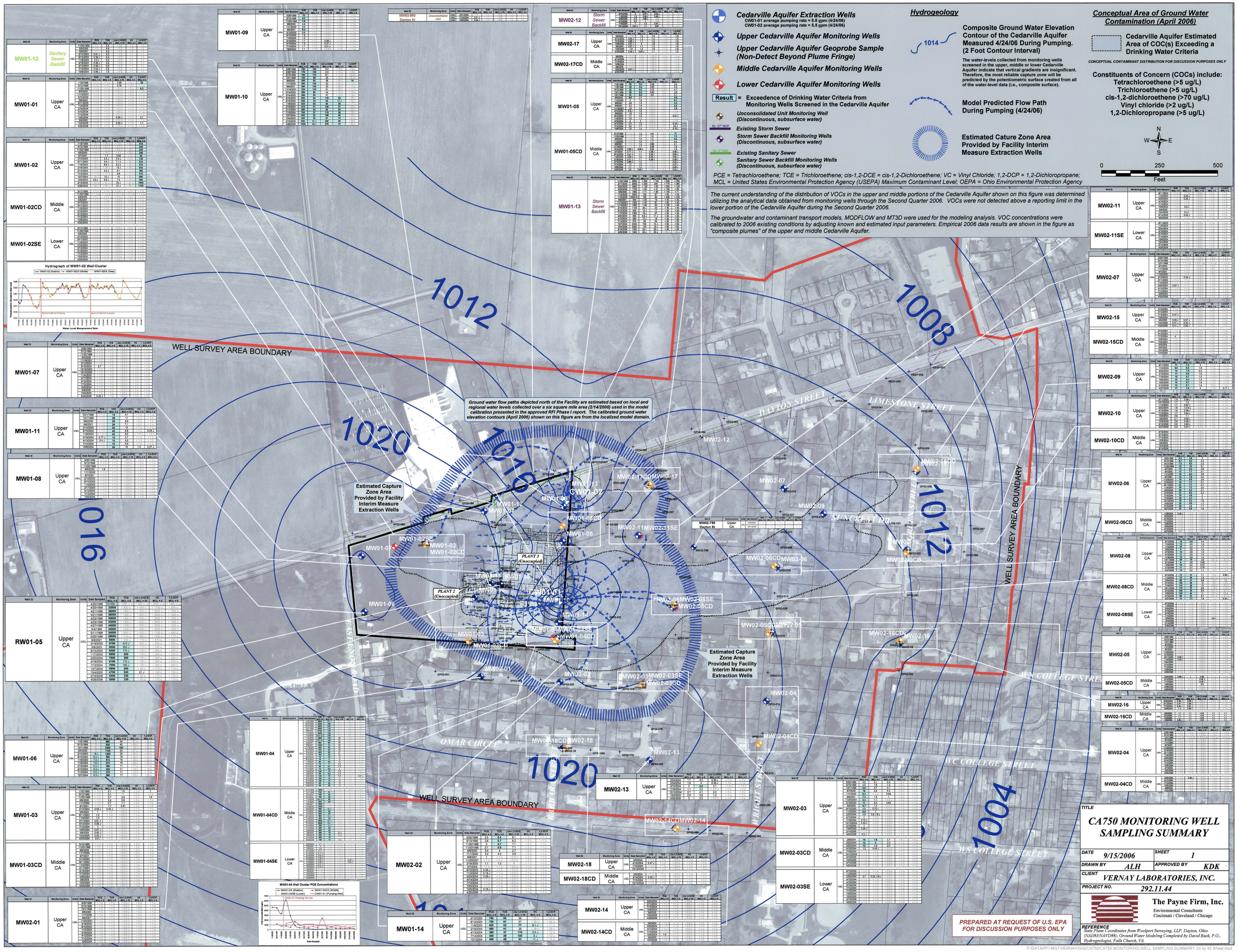
Cedarville Aquifer Extraction Wells
CW01-01 average pumping rate = 8.8 gpm (4/24/06)
CW01-02 average pumping rate = 5.5 gpm (4/24/06)
Upper Cedarville Aquifer Monitoring Wells
Upper Cedarville Aquifer Geoprobe Sample (Non-Detect Beyond Plume Fringe)
Middle Cedarville Aquifer Monitoring Wells
Lower Cedarville Aquifer Monitoring Wells
Result = Exceedence of Drinking Water Criteria from Monitoring Wells Screened in the Cedarville Aquifer
Unconsolidated Unit Monitoring Well (Discontinuous, subsurface water)
Ex. 27" RCP
Existing Storm Sewer
Storm Sewer Backfill Monitoring Wells (Discontinuous, subsurface water)
Ex. 4" SAN
Existing Sanitary Sewer
Sanitary Sewer Backfill Monitoring Wells (Discontinuous, subsurface water)
PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; VC = Vinyl Chloride; 1,2-DCP = 1,2-Dichloropropane;
MCL = United States Environmental Protection Agency (USEPA) Maximum Contaminant Level; OEPA = Ohio Environmental Protection Agency
Hydrogeology
1014
Composite Ground Water Elevation Contour of the Cedarville Aquifer Measured 4/24/06 During Pumping. (2 Foot Contour Interval)
The water-levels collected from monitoring wells screened in the upper, middle or lower Cedarville Aquifer indicate that vertical gradients are insignificant. Therefore, the most reliable capture zone will be predicted by the potentiometric surface created from all of the water-level data (i.e., composite surface).
Model Predicted Flow Path During Pumping (4/24/06)
Estimated Cature Zone Area Provided by Facility Interim Measure Extraction Wells
Conceptual Area of Ground Water Contamination (April 2006)
Cedarville Aquifer Estimated Area of COC(s) Exceeding a Drinking Water Criteria
CONCEPTUAL CONTAMINANT DISTRIBUTION FOR DISCUSSION PURPOSES ONLY
Constituents of Concern (COCs) include:
Tetrachloroethene (>5 ug/L)
Trichloroethene (>5 ug/L)
cis-1,2-dichloroethene (>70 ug/L)
Vinyl chloride (>2 ug/L)
1,2-Dichloropropane (>5 ug/L)
N
W
E
S
0
250
500
Feet
The current understanding of the distribution of VOCs in the upper and middle portions of the Cedarville Aquifer shown on this figure was determined utilizing the analytical data obtained from monitoring wells through the Second Quarter 2006. VOCs were not detected above a reporting limit in the lower portion of the Cedarville Aquifer during the Second Quarter 2006.
The groundwater and contaminant transport models, MODFLOW and MT3D were used for the modeling analysis. VOC concentrations were calibrated to 2006 existing conditions by adjusting known and estimated input parameters. Empirical 2006 data results are shown in the figure as "composite plumes" of the upper and middle Cedarville Aquifer.
Ground water flow paths depicted north of the Facility are estimated based on local and regional water levels collected over a six square mile area (2/14/2000) used in the model calibration presented in the approved RFI Phase I report. The calibrated ground water elevation contours (April 2006) shown on this figure are from the localized model domain.
WELL SURVEY AREA BOUNDARY
Estimated Capture Zone Area Provided by Facility Interim Measure Extraction Wells
PLANT 3 (Unoccupied)
PLANT 2 (Unoccupied)
DAYTON STREET
LIMESTONE STREET
WRIGHT STREET
OMAR CIRCLE
WC COLLEGE STREET
WS COLLEGE STREET
1012
1008
1020
1016
1004
MW01-12
MW01-11
MW01-11SE
MW01-05
MW01-02SE
MW01-02
MW01-02CD
MW01-07
MW01-10
MW01-14
MW01-03
MW01-03SE
MW01-04CD
MW02-12
MW02-17CD
MW02-17
MW02-07
MW02-09
MW02-11
MW02-11SE
MW02-06CD
MW02-06
MW02-08
MW02-08SE
MW02-08CD
MW02-05CD
MW02-05
MW02-16CD
MW02-16
MW02-03
MW02-03SE
MW02-03CD
MW02-04
MW02-04CD
MW02-13
MW02-14CD
MW02-14
MW02-18CD
MW02-18
MW02-01
MW02-02
PREPARED AT REQUEST OF U.S. EPA FOR DISCUSSION PURPOSES ONLY
TITLE
CA750 MONITORING WELL SAMPLING SUMMARY
DATE 9/15/2006
SHEET 1
DRAWN BY ALH
APPROVED BY KDK
CLIENT VERNAY LABORATORIES, INC.
PROJECT NO. 292.11.44
The Payne Firm, Inc.
Environmental Consultants
Cincinnati / Cleveland / Chicago
REFERENCE
State Plane Coordinates from Woolpert Surveying, LLP, Dayton, Ohio (NAD83/NAVD88); Ground Water Modeling Completed by David Back, P.G., Hydrogeologist, Falls Church, VA
F:/DATA/PFI-MGT/VERNAY/GIS/CA750/CA750 MONITORING WELL SAMPLING SUMMARY 33 by 42 Sheet.mxd