

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: WRB Refining LP - Wood River Refinery County: Madison
Street Address: 900 South Central Ave. Site No. (IEPA): 1191150002
City: Roxana, IL 62084 Site No. (USEPA): ILD 080 012 305

2.0 OWNER INFORMATION

Name: Not Applicable

Mailing Address: _____

Contact Name: _____

Contact Title: _____

Phone No.: _____

3.0 OPERATOR INFORMATION

Equilon Enterprises LLC d/b/a Shell Oil Products US

17 Junction Drive, PMB #399

Glen Carbon, IL 62034

Kevin Dyer

Principal Program Manager

618-288-7237

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

- RFI Phase I Workplan/Report
 RFI Phase II Workplan/Report
 CMP Report; Phase _____
 Other (describe):
Revised IQ11 and 2Q11 Report Figures 3, 5-8

Date of Submittal November 28, 2011

IEPA Permit Log No. _____

Date of Last IEPA Letter _____

on Project 6/16/11

Log No. of Last IEPA _____

Letter on Project B-43R-CA-1; CA-3; CA-5; CA-6; CA-7; CA-8;

CA-10; CA-11; and PS11-032

Does this submittal include groundwater information: Yes No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

Revised Figure Nos. 3, and 5-8 for 1st and 2nd Quarter 2011 Roxana Interim Groundwater Monitoring Program Reports.

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

Cover letter (November 28, 2011), RCRA Corrective Action Certification, 1st Quarter 2011 Revised Figures 3 and 5-8, 2nd Quarter 2011 Revised Figures 3 and 5-8.

7.0 CERTIFICATION STATEMENT - (This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below). The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

IEPA RCRA Corrective Action Certification
For: Equilon Enterprises LLC d/b/a Shell Oil Products US
Date of Submission: 11/28/11
Page 2

7.1 **OWNER/OPERATOR CERTIFICATION** (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____

(Date)

Title: _____

Operator Signature: [Signature]

11/21/11
(Date)

Title: Principal Program Manager

7.2 **PROFESSIONAL CERTIFICATION (if necessary)** - Work carried out in this submittal or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. No one is relieved from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Professional's Signature: [Signature]

11/28/11
Date: _____

Professional's Name: Robert B. Billman

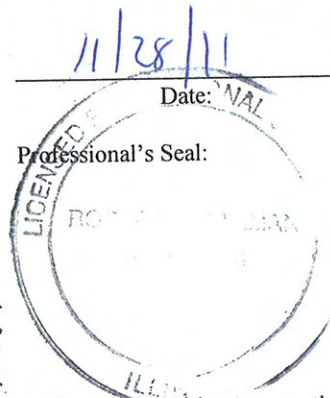
Professional's Seal:

Professional's Address: URS Corporation

1001 Highlands Plaza Drive West

St. Louis, MO 63110

Professional's Phone No.: 314-743-4108



7.3 **LABORATORY CERTIFICATION (if necessary)** - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA

Name of Laboratory _____

Signature of Laboratory
Responsible Officer

Date

Mailing Address of Laboratory

Name and Title of Laboratory Responsible Officer



November 28, 2011

Mr. Steven F. Nightingale, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794

**Subject: Groundwater Monitoring Revised Figures – 1st & 2nd Quarter 2011
Roxana, Illinois
119115002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43-CA-1; CA-3; CA-5; CA-6; CA-7; CA-8; CA-10; CA-11; PS11-032**

Dear Mr. Nightingale:

On behalf of Shell Oil Products US, URS Corporation is submitting the enclosed figures for your review. The figures are being submitted based on Condition 5 of the Agency's letter dated June 16, 2011 and Conditions 1 and 2 of the Agency's letter dated August 31, 2011. For 1st and 2nd Quarter 2011, Figure 3, "Groundwater Contours," was revised to demonstrate a broader view of regional groundwater flow, Figure 5 was created to demonstrate thickness of free product at the site, and Figures 6-8 were created to demonstrate dissolved phase concentrations of benzene at the site.

If you have any questions during your review, please contact Kevin Dyer, SOPUS Principal Program Manager, at kevin.dyer@shell.com (618/288-7237), or me at bob.billman@urs.com (314/743-4108).

Sincerely,

Robert B. Billman
Senior Project Manager

Enclosures: RCRA Corrective Action Certification and Figures (original plus 2 copies)

1st Quarter 2011 Figures
Figure 3 – Groundwater Contours

1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
Phone: 314.429.0100
Fax: 314.429.0462



Mr. Stephen F. Nightingale, P.E.
Illinois Environmental Protection Agency
November 28, 2011
Page 2

Figure 5 – Thickness of Free Product
Figure 6 – Dissolved Phase Benzene Concentrations in Groundwater
Figure 7 – Typical Cross-Section with Benzene Analytical Results – 1st Street to 8th Street
Figure 8 – Typical Cross-Section with Benzene Analytical Results – Highway 111 to Chaffer

2nd Quarter 2011 Figures

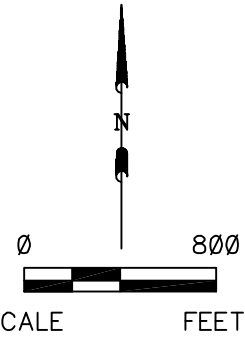
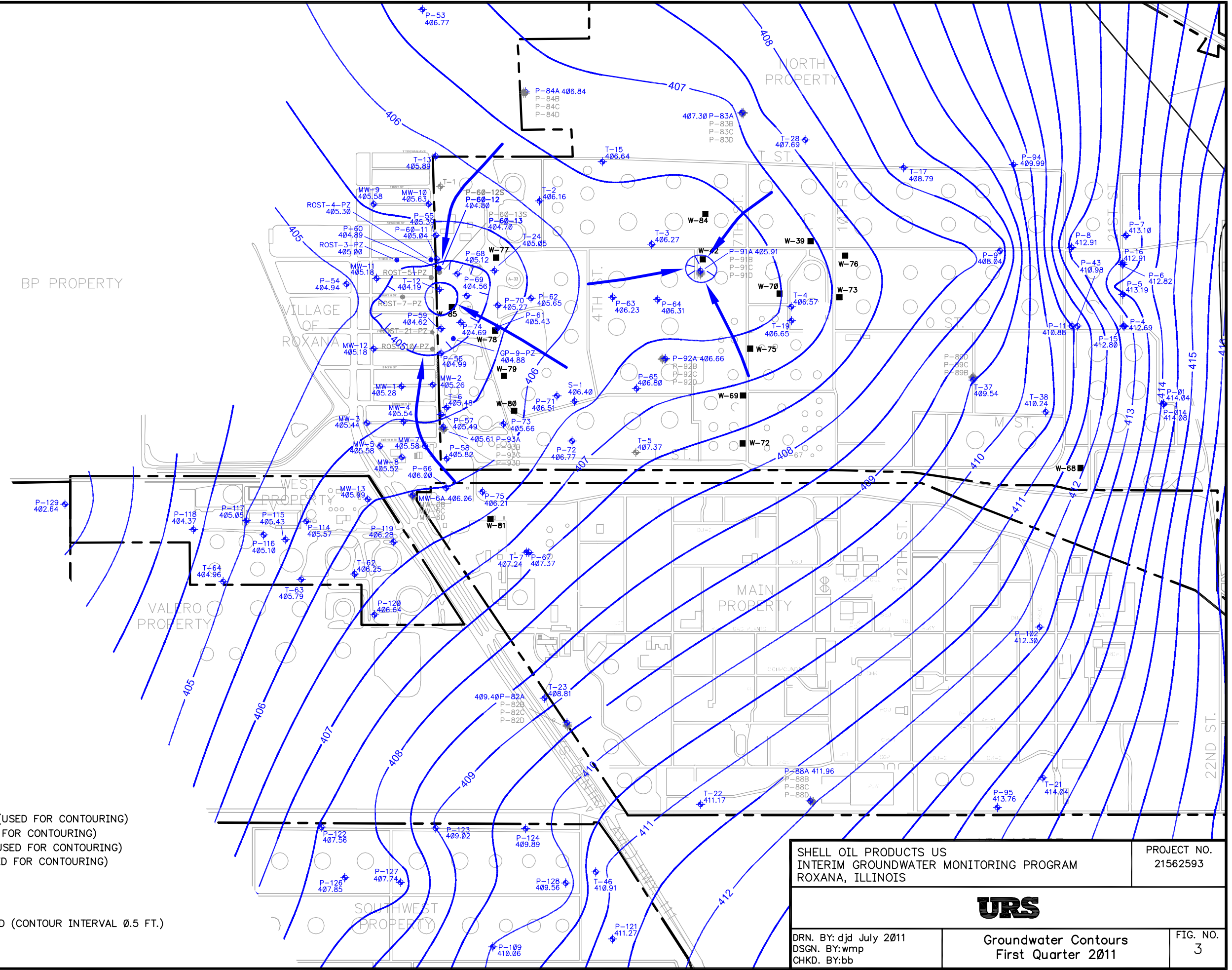
Figure 3 – Groundwater Contours
Figure 5 – Thickness of Free Product
Figure 6 – Dissolved Phase Benzene Concentrations in Groundwater
Figure 7 – Typical Cross-Section with Benzene Analytical Results – 1st Street to 8th Street
Figure 8 – Typical Cross-Section with Benzene Analytical Results – Highway 111 to Chaffer

Cc: Kevin Dyer, SOPUS
Amy Boley, IEPA
Marty Reynolds, Village of Roxana (Repository)
Eric Petersen, ConocoPhillips
Repository – Roxana Public Library

FILE: P:\ENVIRONMENTAL\SHELL_OIL_PRODUCT_US-B-ROXANA-ROUTE_111\2156XXXX-ROXANA_I & A\QUARTERLY_GW_2011\1ST_QUARTER_2011\FIGURES\FIGURE_3_GROUNDWATER_CONTOURS_FIRST_QUARTER_2011.DWG Last edited: NOV. 15, 11 @ 2:04 p.m. by: david_deguire

NOTES:

1. WATER LEVELS WERE OBTAINED DURING THE FIRST QUARTER 2011 GAUGING EVENT ON JANUARY 13-14, 2011.
2. CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 8 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. MONITORING WELL T-1 WAS NOT USED IN THE GENERATION OF GROUNDWATER CONTOURS.
4. ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.
5. THE ROST-4-PZ A - G WELLS WERE INSTALLED IN 2Q11.
6. W-86 WAS INSTALLED IN JULY 2011.



- LEGEND**
- ◆ MONITORING WELL LOCATION GAUGED (USED FOR CONTOURING)
 - PIEZOMETER LOCATION GAUGED (USED FOR CONTOURING)
 - PIEZOMETER LOCATION GAUGED (NOT USED FOR CONTOURING)
 - ◆ MONITORING WELL LOCATION (NOT USED FOR CONTOURING)
 - GROUNDWATER PRODUCTION WELLS
 - GROUNDWATER GRADIENT
 - 407— GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL 0.5 FT.)

REFERENCE: SHELL DRAWING E-36137-12

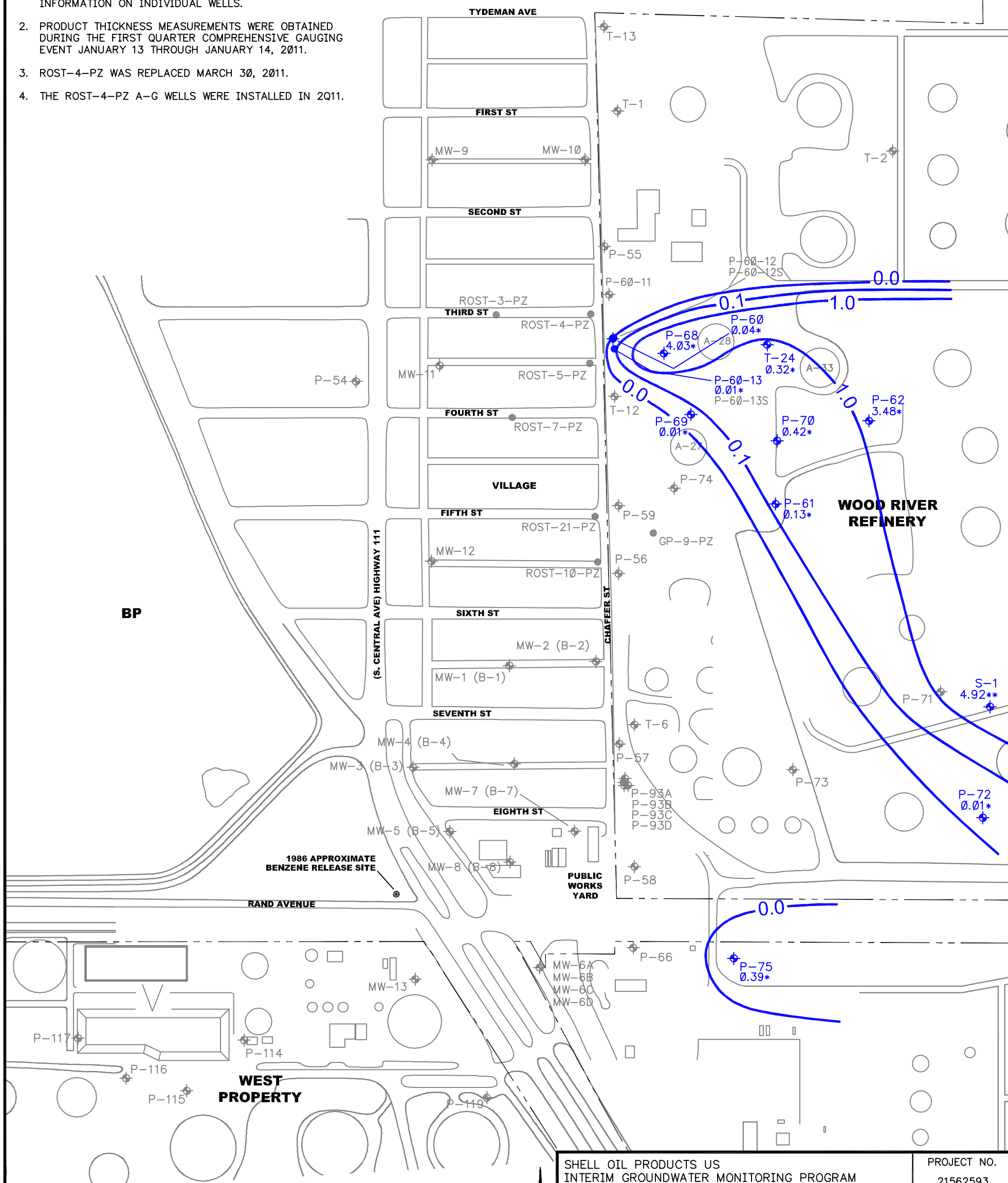
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY: djd July 2011 DSGN. BY: wmp CHKD. BY: bb	Groundwater Contours First Quarter 2011	FIG. NO. 3

LEGEND

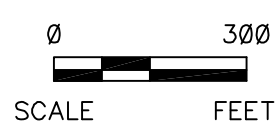
- ◆ 0.02 GROUNDWATER MONITORING LOCATION GAUGED, PRODUCT THICKNESS IN FEET
- ⊕ GROUNDWATER MONITORING LOCATION (NO PRODUCT OBSERVED UNLESS OTHERWISE NOTED)
- FREE PRODUCT THICKNESS CONTOUR
- * INDICATES THAT THE PRODUCT LEVEL IS ABOVE THE TOP OF WELL SCREEN IN WELLS WITH PRODUCT
- ** SCREENED INTERVAL INFORMATION IS NOT AVAILABLE FOR THIS WELL

NOTE:

1. THIS MAP DEPICTS OF THE EXTENT AND THICKNESS OF PRODUCT BENEATH THE WEST FENCE LINE AREA. WELLS LOCATED OUTSIDE "0" FOOT CONTOUR DID NOT EXHIBIT MEASURABLE PRODUCT. REFER TO TABLE 1 FOR GAUGING INFORMATION ON INDIVIDUAL WELLS.
2. PRODUCT THICKNESS MEASUREMENTS WERE OBTAINED DURING THE FIRST QUARTER COMPREHENSIVE GAUGING EVENT JANUARY 13 THROUGH JANUARY 14, 2011.
3. ROST-4-PZ WAS REPLACED MARCH 30, 2011.
4. THE ROST-4-PZ A-G WELLS WERE INSTALLED IN 2Q11.



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY:djd October 2011 DSGN. BY:djd CHKD. BY:tja	Thickness of Free Product	FIG. NO. 5

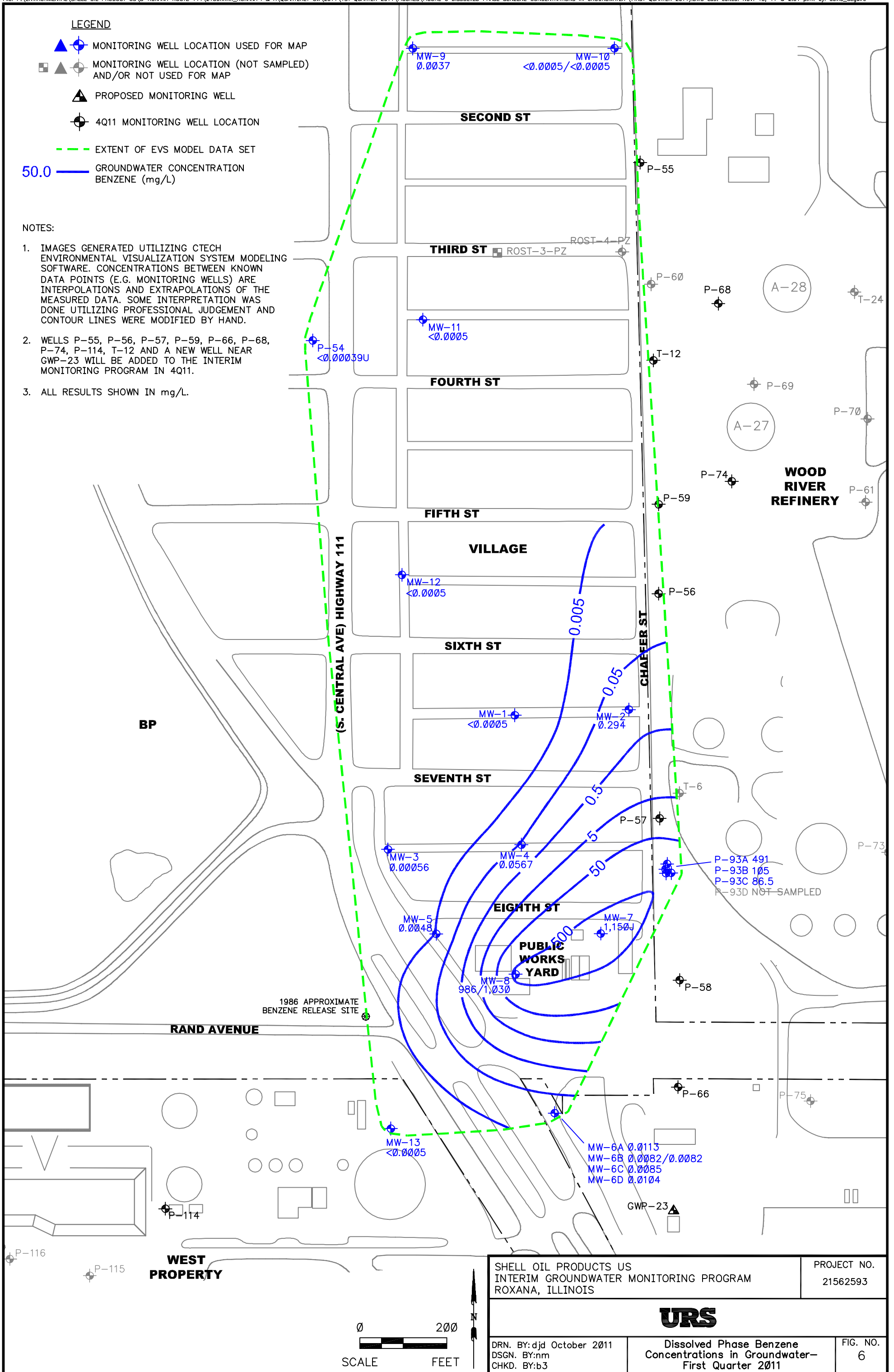


LEGEND

- MONITORING WELL LOCATION USED FOR MAP
- MONITORING WELL LOCATION (NOT SAMPLED) AND/OR NOT USED FOR MAP
- PROPOSED MONITORING WELL
- 4Q11 MONITORING WELL LOCATION
- EXTENT OF EVS MODEL DATA SET
- 50.0 GROUNDWATER CONCENTRATION BENZENE (mg/L)

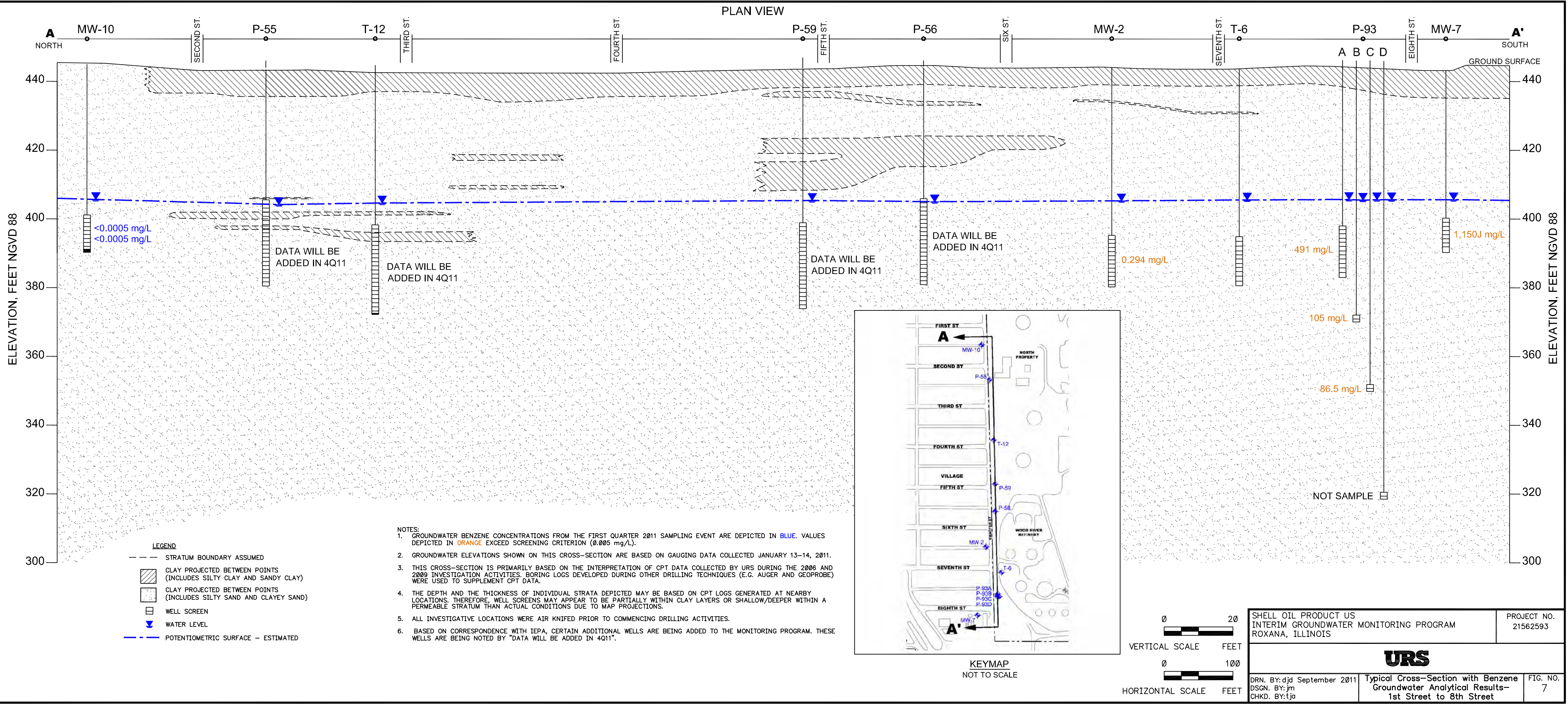
NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. WELLS P-55, P-56, P-57, P-59, P-66, P-68, P-74, P-114, T-12 AND A NEW WELL NEAR GWP-23 WILL BE ADDED TO THE INTERIM MONITORING PROGRAM IN 4Q11.
3. ALL RESULTS SHOWN IN mg/L.



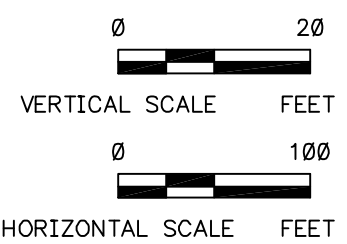
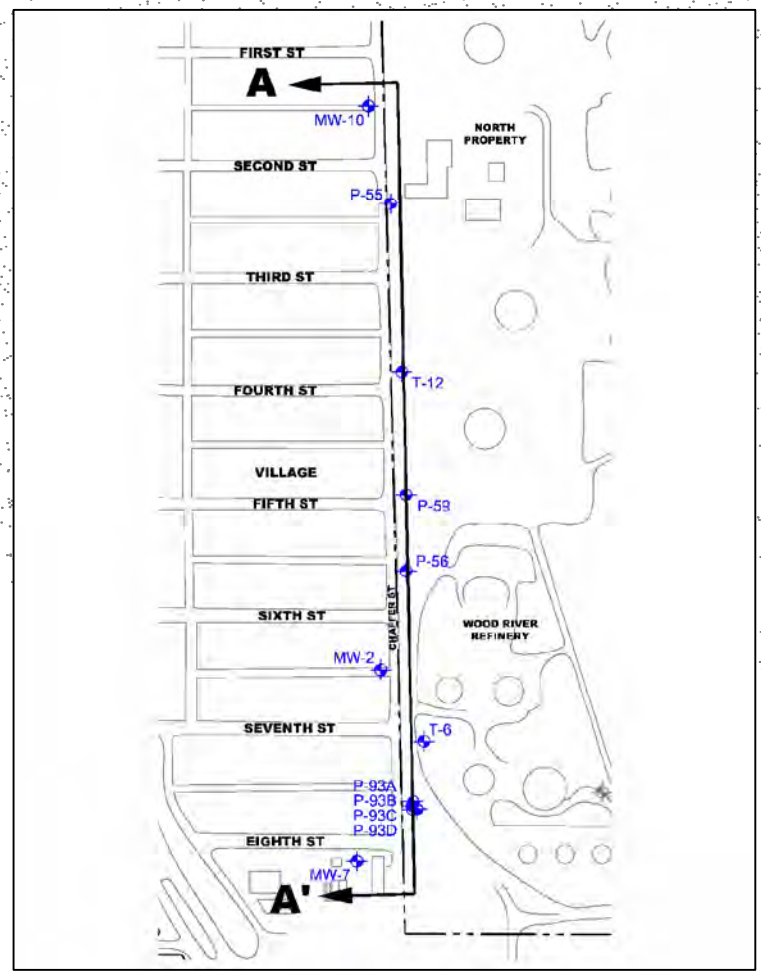
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY:djd October 2011 DSGN. BY:nm CHKD. BY:b3	Dissolved Phase Benzene Concentrations in Groundwater- First Quarter 2011	FIG. NO. 6

P:\ENVIRONMENTAL\SHELL_OIL_PRODUCT_US\B-ROXANA-ROUTE_111\2156XXX\ROXANA_1 & A\QUARTERLY_GW_2011\1ST QUARTER_2011\FIGURES\Figure 7 Typical Cross-Section with Benzene GW Analytical Results (1st to 8th St).DWG
 15.11.11 11:08 am, by: djd, dgru



- LEGEND**
- STRATUM BOUNDARY ASSUMED
 - CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY CLAY AND SANDY CLAY)
 - CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY SAND AND CLAYEY SAND)
 - WELL SCREEN
 - WATER LEVEL
 - POTENTIOMETRIC SURFACE - ESTIMATED

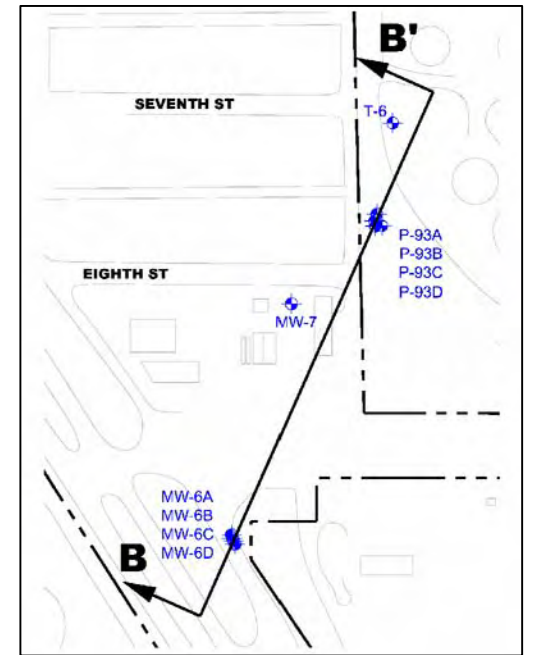
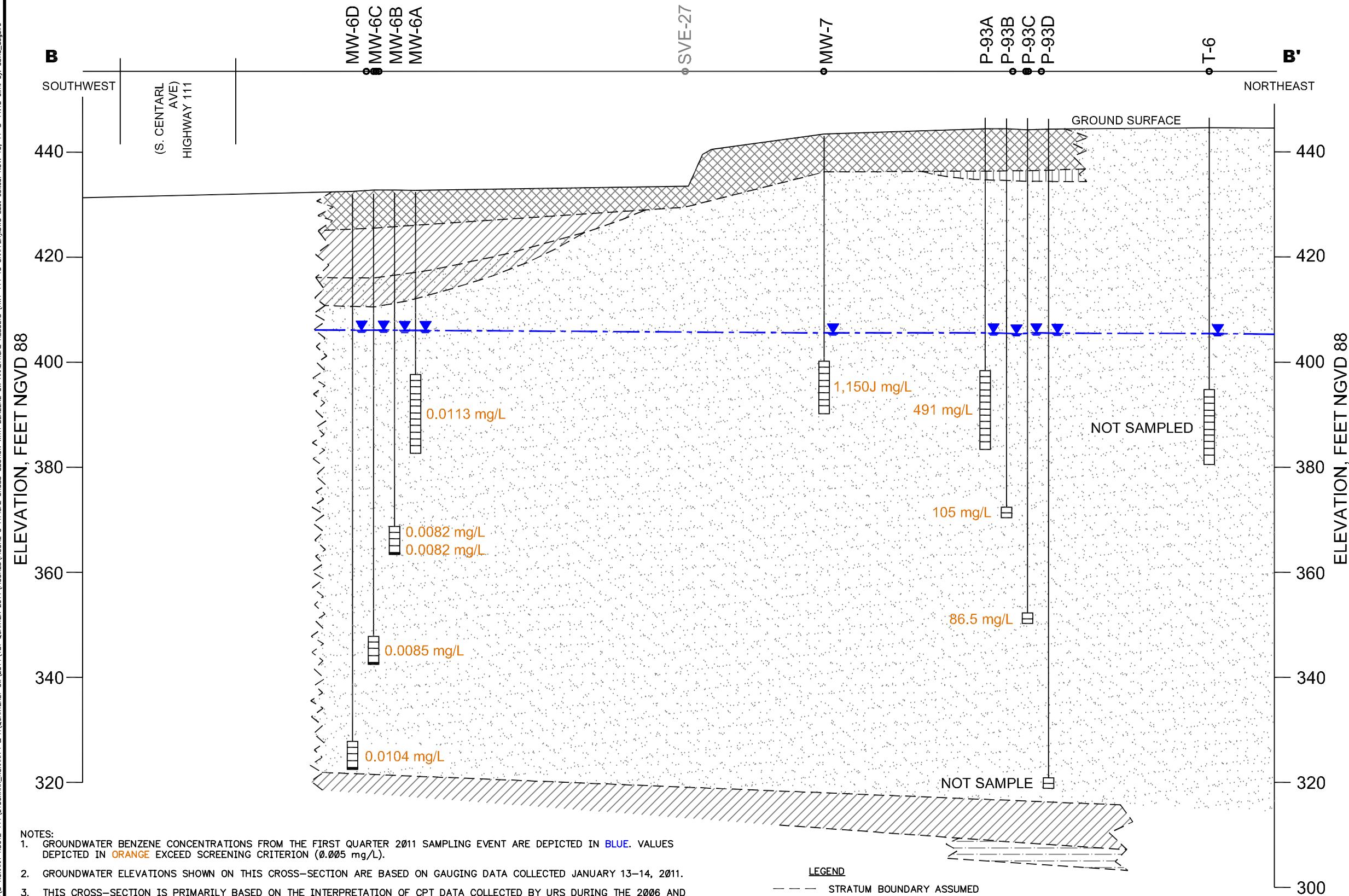
- NOTES:**
- GROUNDWATER BENZENE CONCENTRATIONS FROM THE FIRST QUARTER 2011 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED SCREENING CRITERION (0.005 mg/L).
 - GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GAUGING DATA COLLECTED JANUARY 13-14, 2011.
 - THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
 - THE DEPTH AND THE THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOW/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
 - ALL INVESTIGATIVE LOCATIONS WERE AIR KNIFED PRIOR TO COMMENCING DRILLING ACTIVITIES.
 - BASED ON CORRESPONDENCE WITH IEPA, CERTAIN ADDITIONAL WELLS ARE BEING ADDED TO THE MONITORING PROGRAM. THESE WELLS ARE BEING NOTED BY "DATA WILL BE ADDED IN 4Q11".



SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
DRN. BY: djd September 2011 DSGN. BY: jm CHKD. BY: tja	Typical Cross-Section with Benzene Groundwater Analytical Results- 1st Street to 8th Street	FIG. NO. 7

Fig. P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\B-ROXANA-ROUTE 111\2156XXX-ROXANA I & A QUARTERLY GW\2011\1ST QUARTER 2011\FIGURES\FIGURE 8 TYPICAL CROSS-SECTION WITH BENZENE GW ANALYTICAL RESULTS (HWY 111 TO CHAFFER).DWG Last edited: NOV. 15, 11 @ 11:13 a.m. by: david_degure

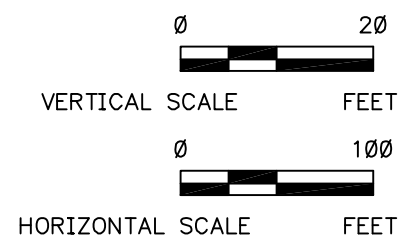
PLAN VIEW



KEYMAP
NOT TO SCALE

- NOTES:
- GROUNDWATER BENZENE CONCENTRATIONS FROM THE FIRST QUARTER 2011 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED SCREENING CRITERION (0.005 mg/L).
 - GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GAUGING DATA COLLECTED JANUARY 13-14, 2011.
 - THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
 - THE DEPTH AND THE THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOW/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
 - ALL INVESTIGATIVE LOCATIONS WERE AIR KNIFED PRIOR TO COMMENCING DRILLING ACTIVITIES.
 - LITHOLOGICAL INFORMATION FROM SVE-27 WAS OBTAINED FROM BORING LOG TO SUPPLEMENT SITE GEOLOGY ONLY.

- LEGEND
- STRATUM BOUNDARY ASSUMED
 - [Hatched Box] CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY CLAY AND SANDY CLAY)
 - [Dotted Box] CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY SAND AND CLAYEY SAND)
 - [Square Box] WELL SCREEN
 - [Inverted Triangle] WATER LEVEL
 - POTENTIOMETRIC SURFACE - ESTIMATED

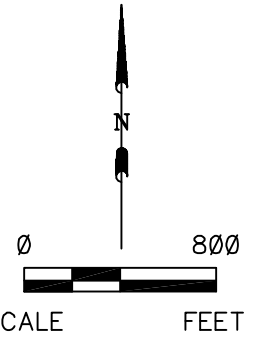
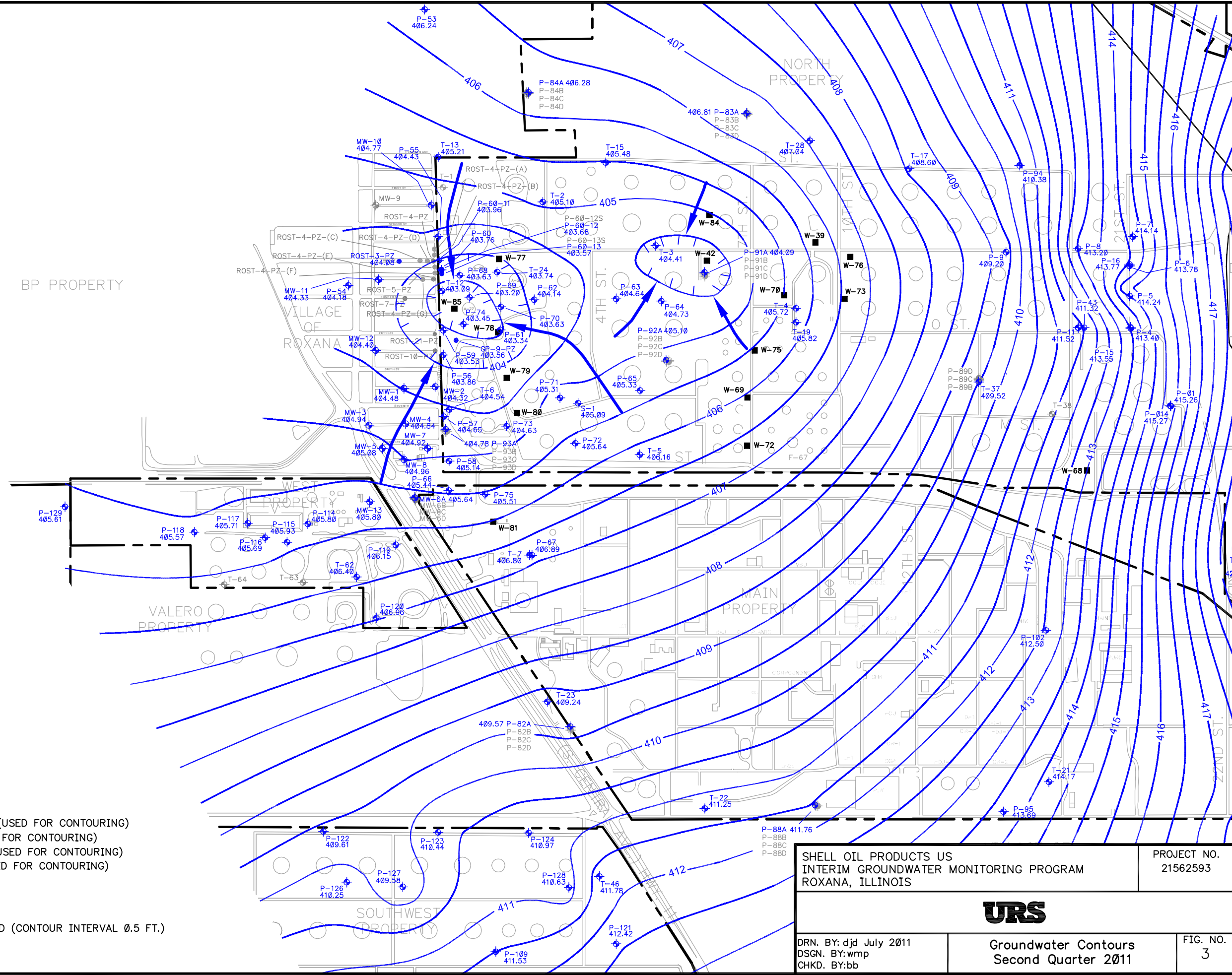


SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY:djd September 2011 DSGN. BY:jm CHKD. BY:tja	Typical Cross-Section with Benzene Groundwater Analytical Results- Highway 111 to Chaffer	FIG. NO. 8

File: P:\ENVIRONMENTAL\SHELL_OIL_PRODUCT_US\B-ROXANA-ROUTE_111\2156XXXX-ROXANA_I & A\QUARTERLY_GW_2011\2ND_QUARTER_2011\FIGURES\FIGURE_3_GROUNDWATER_CONTOURS_2ND_QUARTER_2011 (REVISED).DWG Last edited: NOV. 15, 11 @ 2:10 p.m. by: david_desquire

NOTES:

1. WATER LEVELS WERE OBTAINED DURING THE SECOND QUARTER 2011 GAUGING EVENT ON APRIL 25-26, 2011.
2. CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 8 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM
4. MONITORING WELL MW-9, P-60-12S, P-60-13S, T-1, T-38, T-58, T-63, T-64, ROST WELLS, AND DEEPER SCREENED WELLS WERE NOT USED IN THE GENERATION OF GROUNDWATER CONTOURS.
5. W-86 WAS INSTALLED IN JULY 2011.



- LEGEND**
- ◆ MONITORING WELL LOCATION GAUGED (USED FOR CONTOURING)
 - PIEZOMETER LOCATION GAUGED (USED FOR CONTOURING)
 - PIEZOMETER LOCATION GAUGED (NOT USED FOR CONTOURING)
 - ◆ MONITORING WELL LOCATION (NOT USED FOR CONTOURING)
 - GROUNDWATER PRODUCTION WELLS
 - ➔ GROUNDWATER GRADIENT
 - 407— GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL 0.5 FT.)




REFERENCE: SHELL DRAWING E-36137-12

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562593
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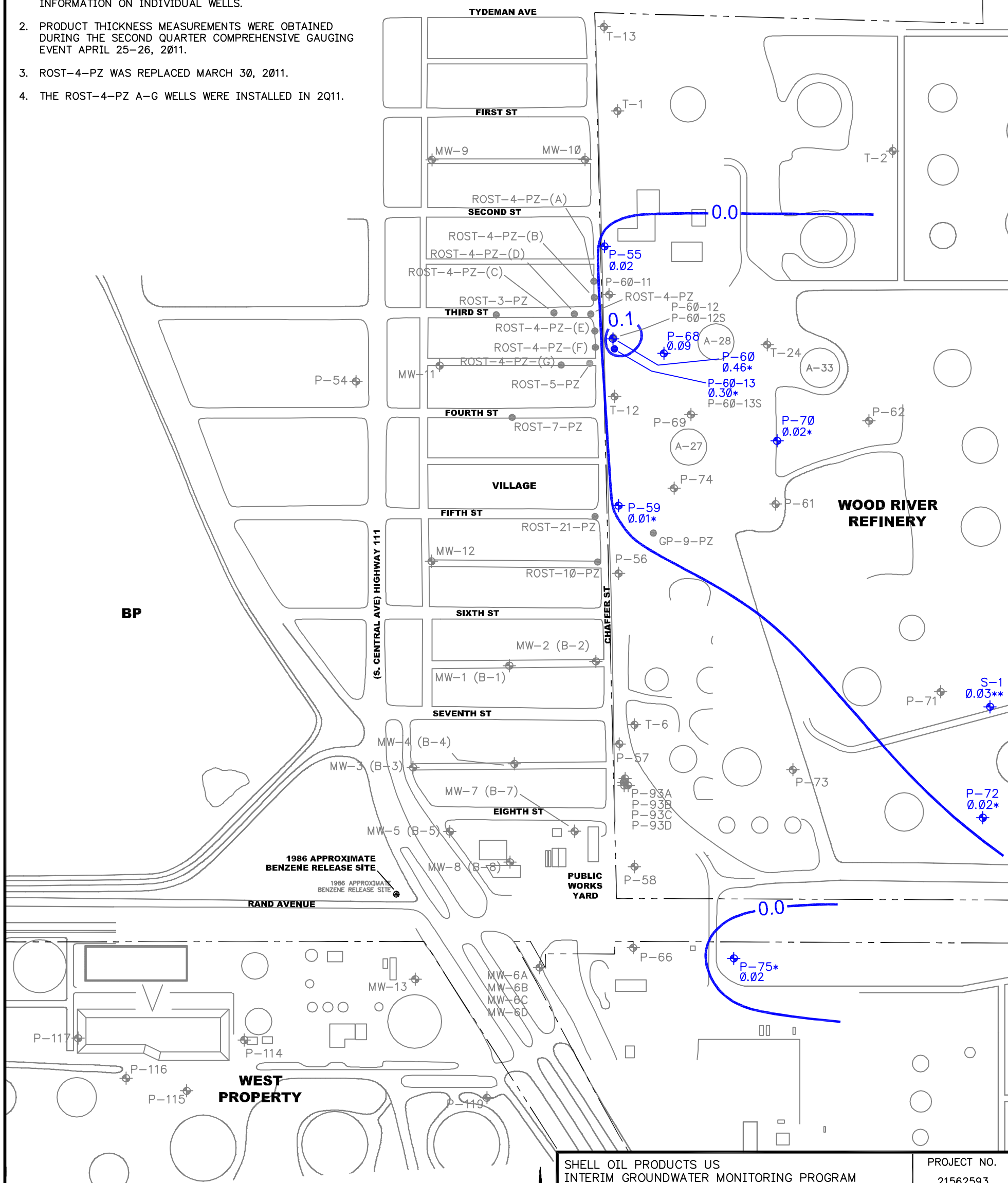
DRN. BY: djd July 2011 DSGN. BY: wmp CHKD. BY: bb	Groundwater Contours Second Quarter 2011	FIG. NO. 3
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LEGEND

-  0.02 GROUNDWATER MONITORING LOCATION GAUGED, PRODUCT THICKNESS IN FEET
-  GROUNDWATER MONITORING LOCATION (NO PRODUCT OBSERVED UNLESS OTHERWISE NOTED)
-  FREE PRODUCT THICKNESS CONTOUR
- * INDICATES THAT THE PRODUCT LEVEL IS ABOVE THE TOP OF WELL SCREEN IN WELLS WITH PRODUCT
- ** SCREENED INTERVAL INFORMATION IS NOT AVAILABLE FOR THIS WELL







NOTE:

1. THIS MAP DEPICTS OF THE EXTENT AND THICKNESS OF PRODUCT BENEATH THE WEST FENCE LINE AREA. WELLS LOCATED OUTSIDE "0" FOOT CONTOUR DID NOT EXHIBIT MEASURABLE PRODUCT. REFER TO TABLE 1 FOR GAUGING INFORMATION ON INDIVIDUAL WELLS.
2. PRODUCT THICKNESS MEASUREMENTS WERE OBTAINED DURING THE SECOND QUARTER COMPREHENSIVE GAUGING EVENT APRIL 25-26, 2011.
3. ROST-4-PZ WAS REPLACED MARCH 30, 2011.
4. THE ROST-4-PZ A-G WELLS WERE INSTALLED IN 2Q11.



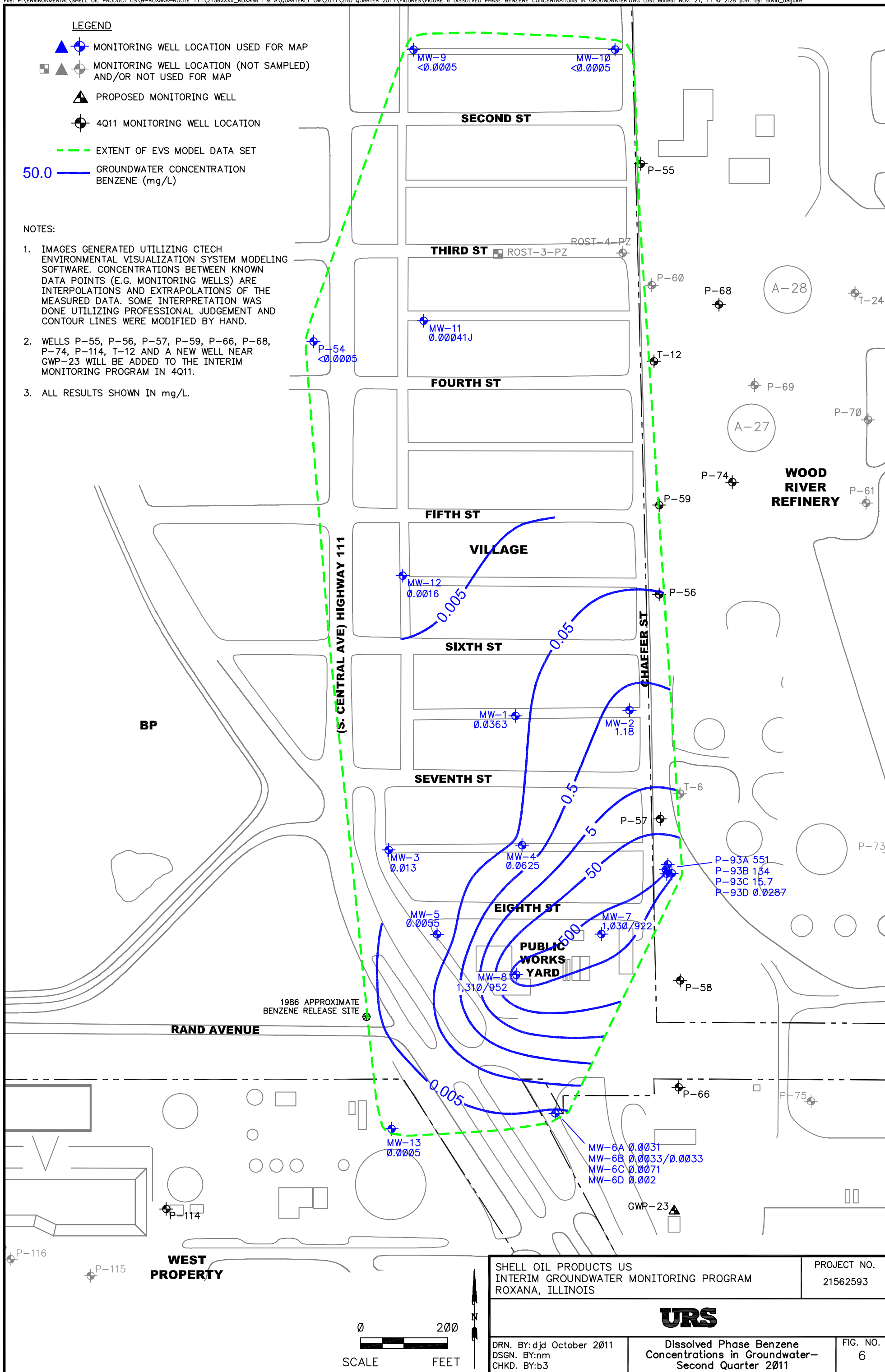
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY:djd October 2011 DSGN. BY:djd CHKD. BY:tja	Thickness of Free Product	FIG. NO. 5

LEGEND

-  MONITORING WELL LOCATION USED FOR MAP
-  MONITORING WELL LOCATION (NOT SAMPLED) AND/OR NOT USED FOR MAP
-  PROPOSED MONITORING WELL
-  4Q11 MONITORING WELL LOCATION
-  EXTENT OF EVS MODEL DATA SET
-  50.0 GROUNDWATER CONCENTRATION BENZENE (mg/L)

NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. WELLS P-55, P-56, P-57, P-59, P-66, P-68, P-74, P-114, T-12 AND A NEW WELL NEAR GWP-23 WILL BE ADDED TO THE INTERIM MONITORING PROGRAM IN 4Q11.
3. ALL RESULTS SHOWN IN mg/L.



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562593
URS		
DRN. BY:djd October 2011 DSGN. BY:nm CHKD. BY:b3	Dissolved Phase Benzene Concentrations in Groundwater- Second Quarter 2011	FIG. NO. 6

P:\ENVIRONMENTAL\SHELL_OIL_PRODUCT_US\B-ROXANA-ROUTE_111\2156XXX\ROXANA_1 & A\QUARTERLY_GW\2011\2ND QUARTER 2011\FIGURES\FIGURE 7 TYPICAL CROSS-SECTION WITH BENZENE GW ANALYTICAL RESULTS (SST TO 8TH ST).DWG Last saved: NOV. 11 @ 11:05 a.m. by: david_deguzis

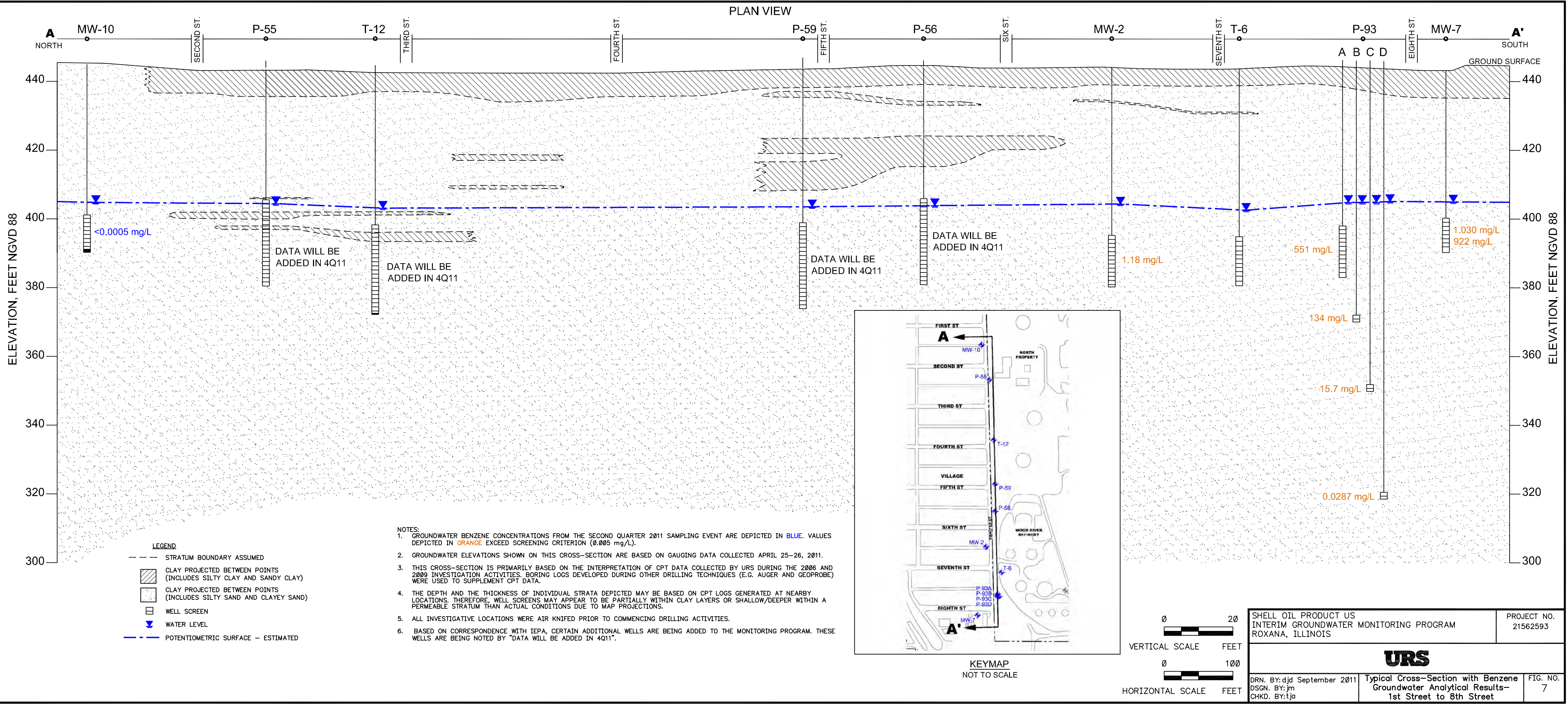
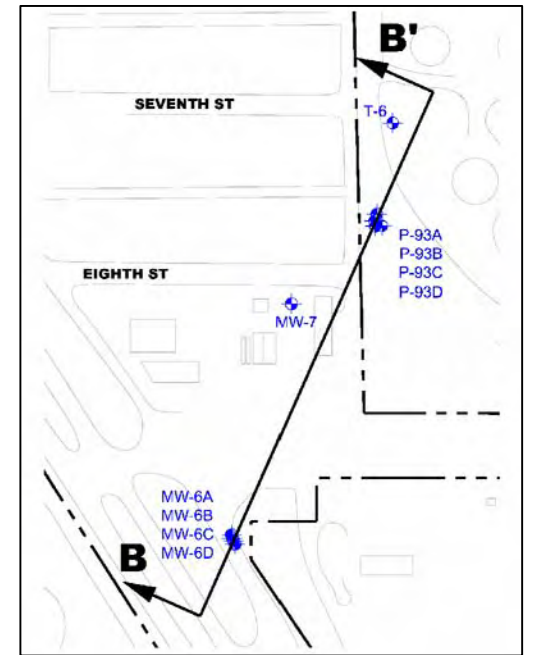
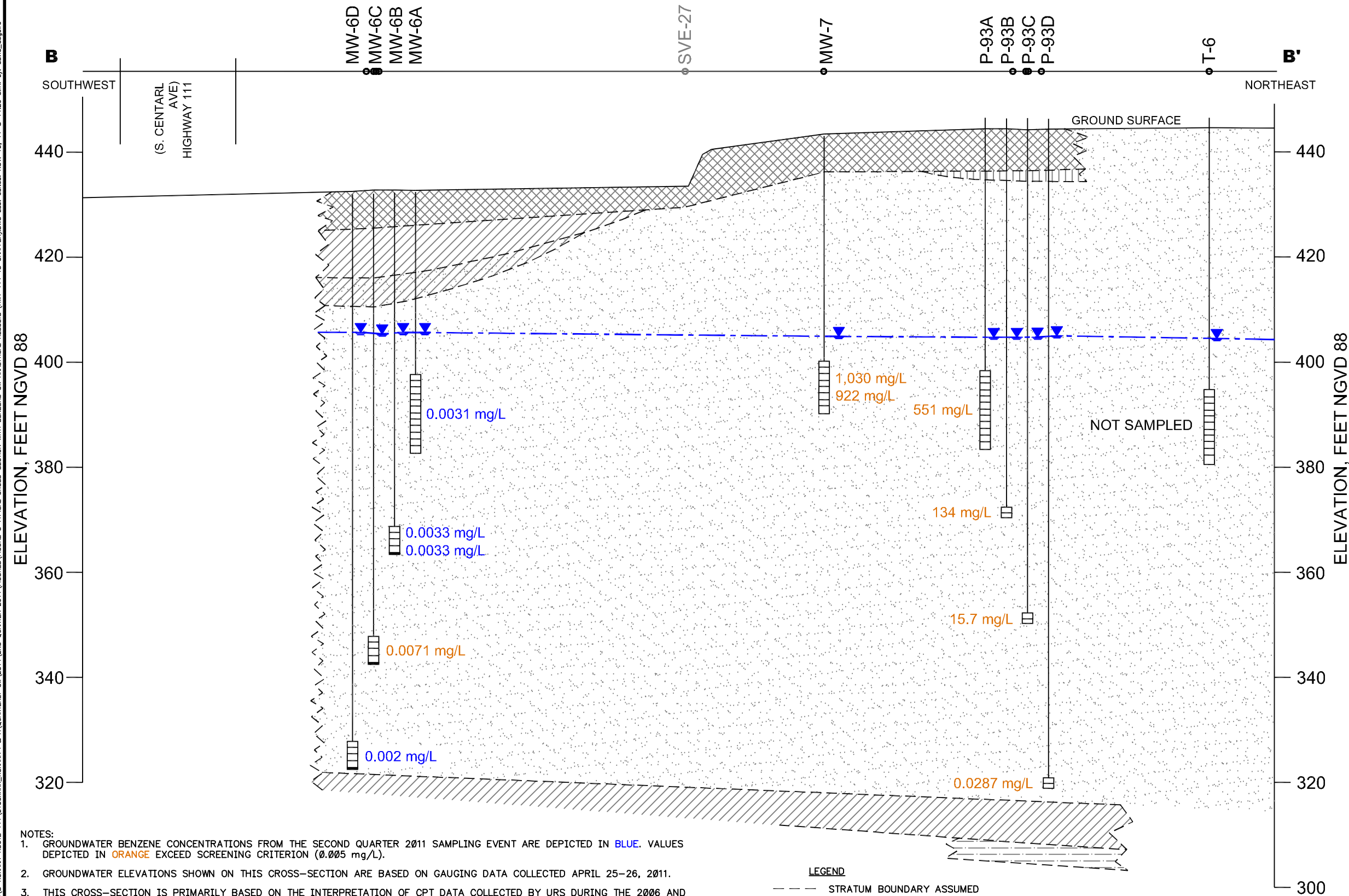


Fig. P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\B-ROXANA-ROUTE 111\2156XXX-ROXANA I & A QUARTERLY GW\2011\2ND QUARTER 2011\FIGURES\FIGURE 8 TYPICAL CROSS-SECTION WITH BENZENE GW ANALYTICAL RESULTS (HWY 111 TO CHAFFER) DWG Last edited: NOV. 15, 11 @ 11:20 a.m. by: david_degure

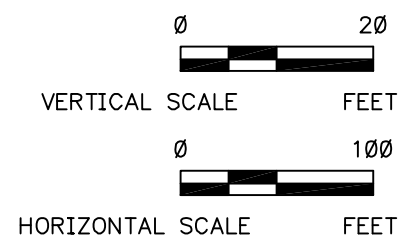
PLAN VIEW



KEYMAP
NOT TO SCALE

- NOTES:
- GROUNDWATER BENZENE CONCENTRATIONS FROM THE SECOND QUARTER 2011 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED SCREENING CRITERION (0.005 mg/L).
 - GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GAUGING DATA COLLECTED APRIL 25-26, 2011.
 - THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
 - THE DEPTH AND THE THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOW/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
 - ALL INVESTIGATIVE LOCATIONS WERE AIR KNIFED PRIOR TO COMMENCING DRILLING ACTIVITIES.
 - LITHOLOGICAL INFORMATION FROM SVE-27 WAS OBTAINED FROM BORING LOG TO SUPPLEMENT SITE GEOLOGY ONLY.

- LEGEND
- STRATUM BOUNDARY ASSUMED
 - [Hatched Box] CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY CLAY AND SANDY CLAY)
 - [Dotted Box] CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY SAND AND CLAYEY SAND)
 - [Square Box] WELL SCREEN
 - [Downward Arrow] WATER LEVEL
 - [Dashed Line] POTENTIOMETRIC SURFACE - ESTIMATED



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URS		
DRN. BY:djd September 2011 DSGN. BY:jm CHKD. BY:tja	Typical Cross-Section with Benzene Groundwater Analytical Results- Highway 111 to Chaffer	FIG. NO. 8