



# Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## 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  
 Mail Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Contact Name \_\_\_\_\_  
 Contact Title \_\_\_\_\_  
 Phone \_\_\_\_\_

### 3.0 Operator Information

Name Equilon Enterprises LLC d/b/a SOPUS  
 Mail Address 17 Junction Drive, PMB #399  
 City Glen Carbon  
 State IL Zip Code 62034  
 Contact Name Kevin Dyer  
 Contact Title Principal Program Manager  
 Phone 618-288-7237

### 4.0 Type of Submission (check applicable item and provide requested information, as applicable)

RFI Phase I Workplan/Report IEPA Permit Log No. B-43R  
 RFI Phase II Workplan/Report Date of Last IEPA Letter on Project Jan 3, 2013  
 CMP Report; Log No. of Last IEPA Letter on Project B-43R-CA-39  
 Other (describe): \_\_\_\_\_ Does this submittal include groundwater information:  Yes  No  
Groundwater Gauging Request  
 Date of Submittal Nov 8, 2012

### 5.0 Description of Submittal: (briefly describe what is being submitted and its purpose)

Updated information related to February 4, 2011 Groundwater Flow Notification and Request to Reduce the Frequency of Groundwater Gauging.

### 6.0 Documents Submitted (identify all documents in submittal, including cover letter; give dates of all documents)

RCRA Corrective Action Certification and letter dated November 8, 2012.

### 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.

Date of Submission: Mar 13, 2013

**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: *Kevin E. Ryan* Date: 03/13/13  
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.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44 (h))

Professional's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Professional's Name \_\_\_\_\_

Address \_\_\_\_\_

Professional's Seal:

City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_

**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 \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature of Laboratory Responsible Officer

Mailing Address of Laboratory

Address \_\_\_\_\_

City \_\_\_\_\_

\_\_\_\_\_  
Name and Title of Laboratory Responsible Officer

State \_\_\_\_\_ Zip Code \_\_\_\_\_



November 8, 2012

BY CERTIFIED MAIL

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

Ms. Amy Boley  
Illinois Environmental Protection Agency  
Bureau of Land  
1021 North Grand Avenue East  
Springfield, Illinois 62794

Chris N. Cahnovsky  
Regional Manager, Field Operations Section  
Illinois Environmental Protection Agency  
Bureau of Land  
2009 Mall Street  
Collinsville, Illinois 62234

**Subject: Update to February 4, 2011 Groundwater Flow Control Notification,  
Updated Response to Violation Notice L-2011-01126 &  
Request to Reduce Groundwater Gauging Frequency  
WRB Refining LP, Wood River Refinery  
Roxana, Illinois  
119115002 – Madison County  
Equilon Enterprises LLC d/b/a Shell Oil Products US  
Log B-43R**

Dear Ms. Boley, Mr. Cahnovsky and Mr. Nightingale:

On behalf of Shell Oil Products US (SOPUS), URS Corporation (URS) is submitting this update to SOPUS' February 4, 2011 Groundwater Flow Control Notification letter to the Illinois Environmental Protection Agency (IEPA) and SOPUS' June 10, 2011 Response to Violation Notice L-2011-01126. Additionally, for the reasons explained below, SOPUS requests to reduce the frequency of groundwater gauging at the WRB Refining LP Wood River Refinery.

In January 2011, SOPUS began conducting weekly gauging of a subset of the refinery groundwater monitoring wells and selected wells in Roxana in response to learning of temporary reductions in groundwater pumping by the operator of the refinery, WRB Refining LP, an affiliate of Phillips 66 (P66). As reported in a letter to the Illinois Environmental Protection Agency (IEPA) dated February 4, 2011, SOPUS originally believed that "there may have been an instance where control

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along the west fenceline of the North Property,” as required by SOPUS’ RCRA permit, may not have been maintained.

Since that time, WRB has conducted maintenance work on several wells and piping and installed new groundwater depression wells. This has resulted in increased pumping rates on a more reliable basis. Additionally, a permit modification was submitted July 29, 2011 to maintain groundwater withdrawal rates at a minimum of 3,000 gallons per minute (gpm) from Main and North Properties. The groundwater contour maps that have been submitted for the Wood River Refinery Corrective Action Program and Roxana Interim Groundwater Monitoring Program (on a semiannual and quarterly basis, respectively) demonstrate capture.

During 2012, SOPUS developed a groundwater flow model to better understand conditions for groundwater capture. The modeling report was submitted to IEPA on July 27, 2012. One conclusion of the model was that the minimum pumping rates to maintain groundwater capture under differing water level conditions are on the order of 2,500-2,700 gpm (specifically 2,523 to 2,668 gpm as predicted by the model). Based on this and our understanding of the WRB pumping rates, groundwater capture would have been maintained during the period when it was suspect (i.e., January 2011).

Based on the modeling results, we reevaluated the actual measured groundwater data by using smaller contour intervals. Contour maps from before (October and November 2010), during (January 2011), and after (February 2011) the suspect period were produced using a contour interval of 0.25 feet. The maps are included in this submittal as **Figures 1 through 4**. These maps indicate that groundwater capture was maintained along the west fenceline of North Property.

Based on the above information, SOPUS believes it is no longer necessary to continue gauging monitoring wells on a weekly basis to assess groundwater capture. SOPUS requests the Agency’s concurrence to stop weekly gauging and return to quarterly gauging as required by the RCRA permit. As a separate but related matter, SOPUS will continue to gauge monitoring wells that display separate phase product on a weekly basis.

SOPUS also requests that IEPA rescind Violation Notice L-2011-01126 to the extent Attachment A allegations 1, 2 and 3 are based on IEPA’s contention that “the rate of groundwater pumping from the Water Production Wells was not high enough to ensure that groundwater flow was adequately controlled in the uppermost aquifer.” SOPUS further reserves all of its rights and defenses associated with this matter.



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November 8, 2012  
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If you have any questions concerning this information, please contact Kevin Dyer, SOPUS Principal Program Manager, at [kevin.dyer@shell.com](mailto:kevin.dyer@shell.com) (618/288-7237), or me at [bob.billman@urs.com](mailto:bob.billman@urs.com) (314/743-4108).

Sincerely,

A handwritten signature in blue ink that reads "Robert B. Billman".

Robert B. Billman  
Senior Project Manager

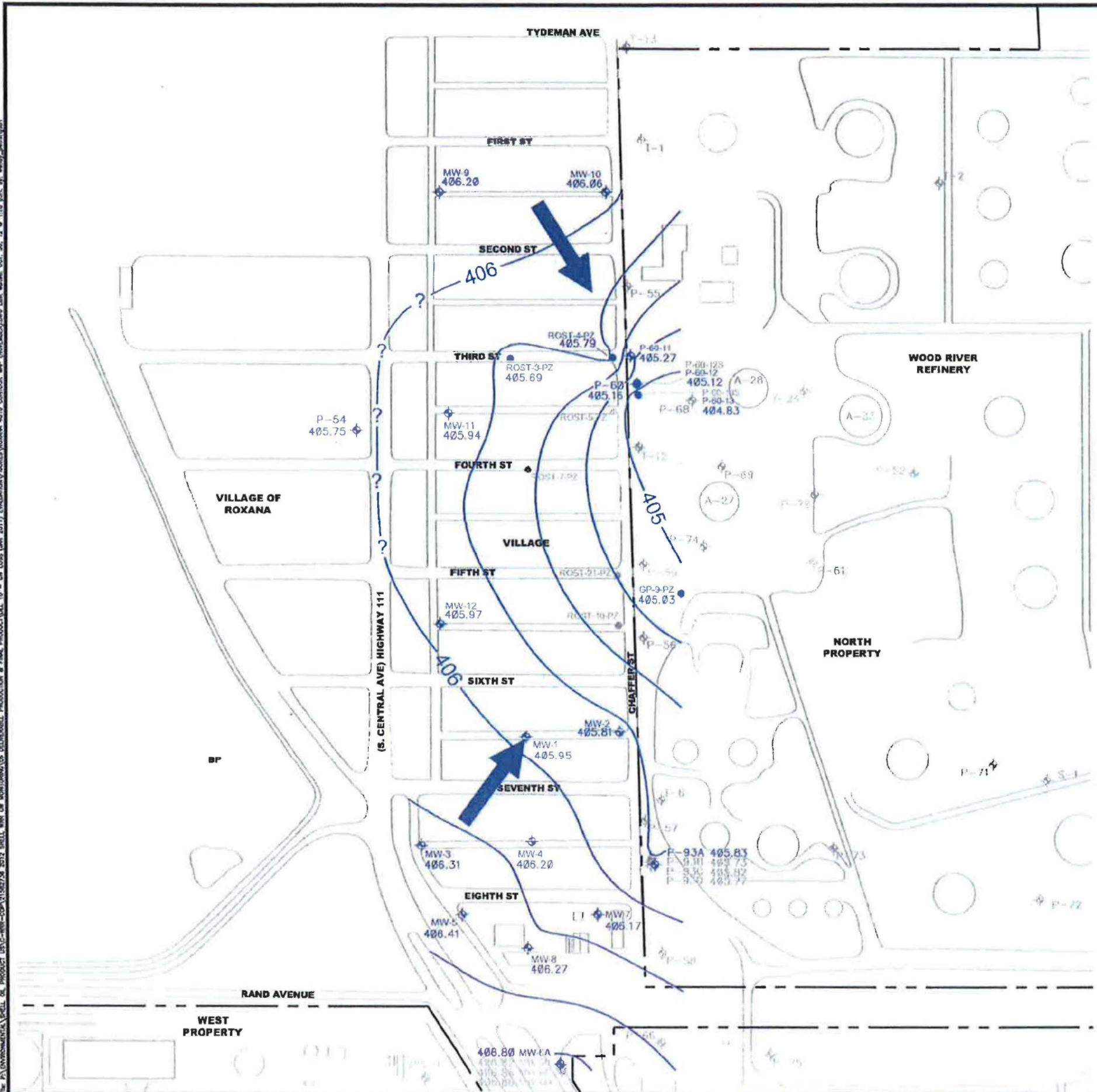
Enclosures:

- Figure 1 – Groundwater Contour Map, October 2010
- Figure 2 – Groundwater Contour Map, November 2010
- Figure 3 – Groundwater Contour Map, January 2011
- Figure 4 – Groundwater Contour Map, February 2011

Cc: Kevin Dyer, SOPUS  
Ken Kerntke, Phillips 66  
James L. Morgan, Assistant Attorney General, State of Illinois  
John Waligore, IEPA Division of Legal Counsel



THE ENVIRONMENTAL SHELL OIL PRODUCTS US - COPA 11582736 2012 SHELL OIL MONITORING & DELIVERABLE PRODUCTION & FINAL PRODUCT DEL. TO - CH. LOSE (JAN 2013) EVALUATION FOR ROKANA 4019 CONTOUR MAP (NOVEMBER 2010) LOST LOST. OCT. 30, 12 @ 1:10 P.M. BY: WMP, B3



**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 GAUGED FOR THIS EVENT
- 405— GROUNDWATER CONTOUR (0.25 FEET INTERVAL)
- ➔ GROUNDWATER FLOW

**NOTES:**

- 1) WATER LEVELS WERE OBTAINED DURING THE FOURTH QUARTER 2010 GAUGING EVENT ON NOVEMBER 11-12, 2010.
- 2) CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 8 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILITZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
- 3) PRODUCT WAS IDENTIFIED IN MONITORING WELL P-60 (0.04 FT\*) AND PIEZOMETER P-60-13 (0.37 FT). THE ELEVATIONS PRESENTED ON THIS FIGURE WERE CORRECTED BY A SPECIFIC GRAVITY OF 0.74 FOR THESE WELLS.
- 4) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.
- 5) REFINERY GROUNDWATER PUMPING RATES RANGED FROM 3,058 TO 3,106 GALLONS PER MINUTE FOR THE DAYS DURING WHICH THIS GAUGING EVENT WAS PERFORMED.

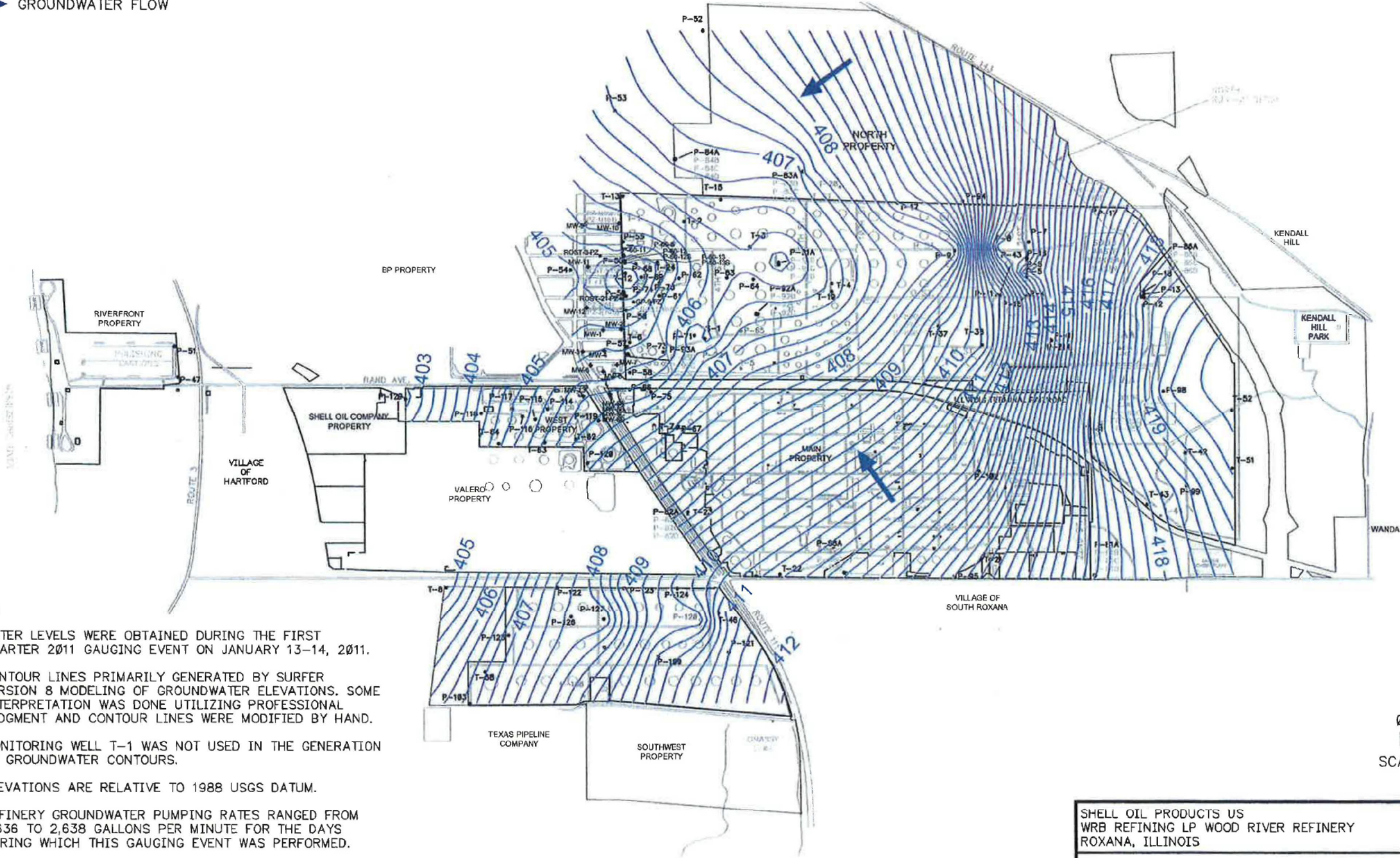
\* INDICATES THAT THE PRODUCT AND/OR WATER LEVEL IS ABOVE THE TOP OF THE WELL SCREEN.



|  |  |                         |
|--|--|-------------------------|
| SHELL OIL PRODUCTS US<br>WRB REFINING LP WOOD RIVER REFINERY<br>ROXANA, ILLINOIS |  | PROJECT NO.<br>21562736 |
| <b>URS</b>   |  |                         |
| DRN. BY: wmp Oct 2012<br>DSGN. BY: wmp<br>CHKD. BY: b3                           | Groundwater Contour Map<br>November 2010 | FIG. NO.<br>2           |

**LEGEND**

- MONITORING WELLS
- 407— GROUNDWATER CONTOUR (0.25 FEET INTERVAL)
- ➔ GROUNDWATER FLOW



- 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. REFINERY GROUNDWATER PUMPING RATES RANGED FROM 2,636 TO 2,638 GALLONS PER MINUTE FOR THE DAYS DURING WHICH THIS GAUGING EVENT WAS PERFORMED.

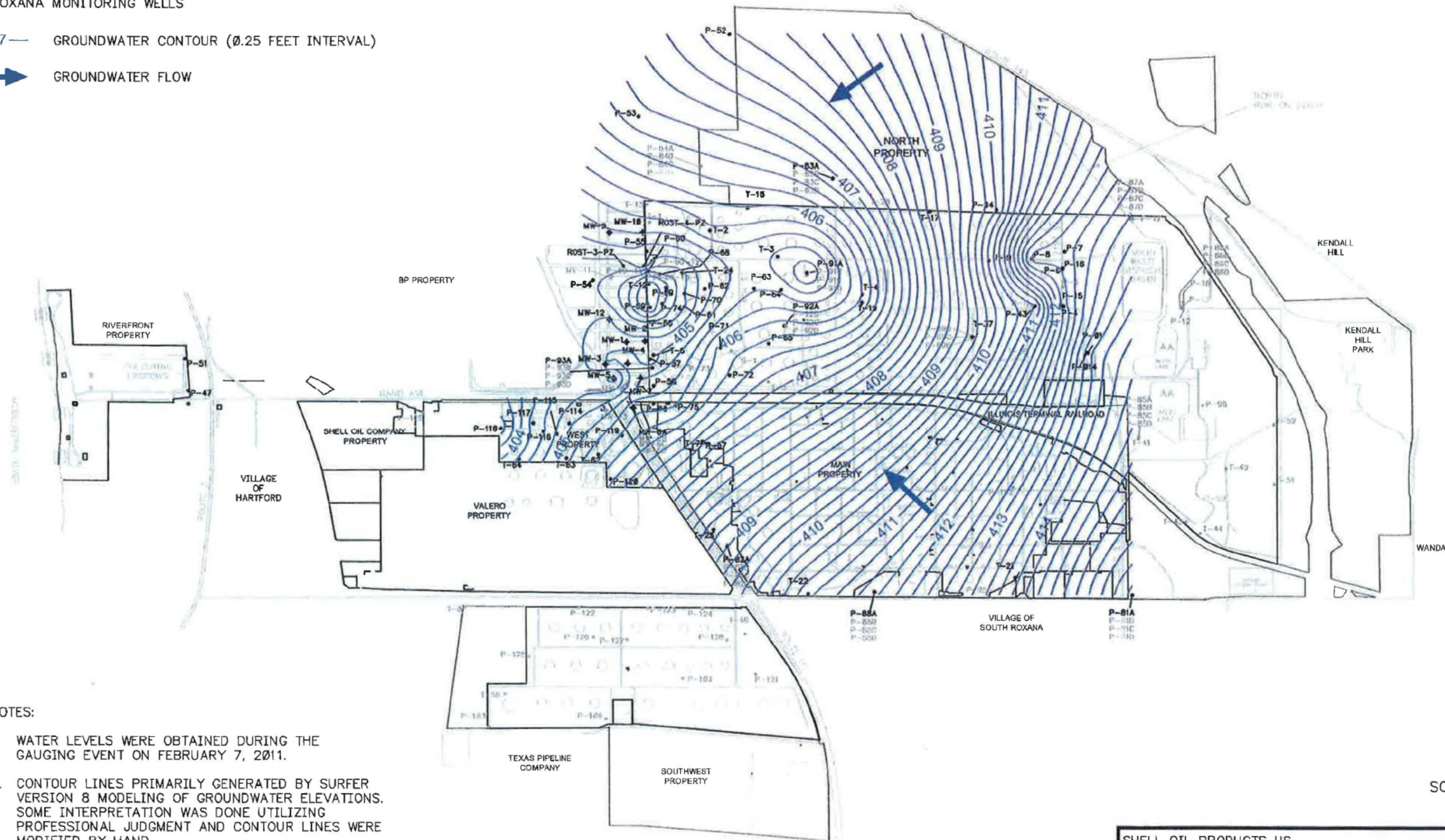
|  |   |                         |
|--|---|-------------------------|
| SHELL OIL PRODUCTS US<br>WRB REFINING LP WOOD RIVER REFINERY<br>ROXANA, ILLINOIS |   | PROJECT NO.<br>21562736 |
| <b>URS</b>   |   |                         |
| DRN. BY:wmp Oct 2012<br>DSGN. BY:djd<br>CHKD. BY:b3                              | Groundwater Contour Map<br>January 2011 | FIG. NO.<br>3           |

FILE: P:\PROJECTS\ROXANA\ROXANA\_GW\_MONITORING\CONTOUR\CONTOUR\_FINAL\_PRODUCT.DWG, 10 - 01 10:55 (Jan. 2011) EVOLUTION\FIGURES\1011\_GW\_CONTOUR\_FINAL\_PRODUCT.DWG, 30, 12, 0, 1114, 871, BY: wanda, 09/26/2012



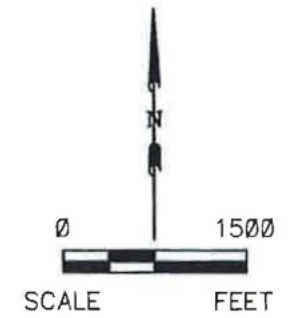
**LEGEND**

- MONITORING WELLS
- ◆ ROXANA MONITORING WELLS
- 407— GROUNDWATER CONTOUR (0.25 FEET INTERVAL)
- ➔ GROUNDWATER FLOW



**NOTES:**

1. WATER LEVELS WERE OBTAINED DURING THE GAUGING EVENT ON FEBRUARY 7, 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. REFINERY GROUNDWATER PUMPING RATE WAS 3,495 GALLONS PER MINUTE FOR THE DAY ON WHICH THIS GAUGING EVENT WAS PERFORMED.



|  |  |                         |
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| SHELL OIL PRODUCTS US<br>WRB REFINING LP WOOD RIVER REFINERY<br>ROXANA, ILLINOIS |  | PROJECT NO.<br>21562736 |
| <b>URS</b>   |  |                         |
| DRN. BY:wmp Oct 2012<br>DSGN. BY:djd<br>CHKD. BY:b3                              | Groundwater Contour Map<br>February 2011 | FIG. NO.<br>4           |

FROM: D:\ENVIRONMENTAL\ROXANA\PROJECTS\ROXANA\GWS\GWS\_21562736\_2011\_SHELL\_OIL\_MONITORING\GWS\_DETAILED\_PRODUCTION & FINAL\_PRODUCT\DEL\_10 - DW\_GWS (GWS 2011) EVALUATION\FIGURE\_7-11\_GW\_CONTOUR\_PUMPING\_LOS\_WEEK\_OCT\_30\_12 @ 1118 AM BY: WMP/AR/01/01