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:

3.0 OPERATOR INFORMATION

Equilon Enterprises LLC d/b/a Shell Oil Products US
17 Junction Drive, PMB #399
Glen Carbon, IL 62034
Contact Name: Kevin Dyer
Contact Title: Principal Program Manager
Phone No.: 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):
Groundwater delineation location plan
Date of Submittal June 12, 2012

IEPA Permit Log No. B-43R
Date of Last IEPA Letter on Project March 14, 2012
Log No. of Last IEPA Letter on Project B-43R-CA-25
Does this submittal include groundwater information: ☒ Yes ☐ No

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

Plan to install groundwater delineation point near existing location GWP-24, as requested in condition 2(b)(iv) of IEPA's March 14, 2012 letter.

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

RCRA Corrective Action Certification and letter dated June 12, 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.

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: _____ 6/11/12 (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: _____ _____ Date:

Professional's Name: _____ Professional's Seal:

Professional's Address: _____

_____

_____

Professional's Phone No.: _____

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

_____

_____

_____

URS

June 12, 2012

Mr. Stephen Nightingale, P.E.
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, IL 62794

Subject: **1191150002 – Madison County**
Equilon Enterprises
Roxana, Illinois
ILD080012305
Log No. B-43R-CA-25

Dear Mr. Nightingale:

On behalf of Shell Oil Products US (Shell), URS Corporation (URS) is responding to Condition 2(b) (iv) of the subject March 14, 2012 Agency letter. This condition requested submittal of a proposed alternate location east of GWP-24 for delineation purposes.

The request was based on concentrations in groundwater (primarily benzene) exceeding Class I Groundwater Quality Standards at the previous profiling location GWP-24 as shown on **Figure 1**. The figure also shows data for other nearby groundwater sampling locations. Groundwater (and soil) samples will be collected for delineation purposes from the proposed location GWP-25 shown on **Figure 1** (subject to accessibility and utility clearance).

The work to be conducted will follow the procedures the Agency approved for previous subsurface activities; these are summarized below. References are made to URS' Standard Operating Procedures (SOPs), and are incorporated by reference. The work will also be performed in accordance with the current health and safety plan (or addendum).

Proposed location GWP-25 will be marked in the field (e.g., spray paint or stake) and reviewed with Phillips 66 representatives and Illinois' Joint Utility Locating Information for Excavators (JULIE) (SOP 5 – Utility Clearance). An air-vac system or hand augering will be used to advance a hole to a depth of 10 feet below ground surface (bgs) in order to verify the location is clear of utility lines or other obstructions. The air-knife work will be conducted by a vacuum excavation firm contracted and supervised by URS (SOP 5 – Utility Clearance Procedures).

Soil sampling will be performed using a dual-tube sampling system advanced by the hydraulic push system of a Geoprobe® for logging and soil sampling purposes (SOP 29-Soil Probe Operation). The dual tube system consists of a 4-foot long by 1.125-inch diameter clear acetate liner attached to 1-inch diameter inner rods. The acetate liner and inner rods are advanced simultaneously with the 2.125 inch diameter outer rods. Once a sample is collected within the acetate liner, the inner rods and acetate liner are retrieved while the outer rods remain in place. The acetate liner is replaced and returned to the sampling depth, at which point the process is repeated.

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

The subsurface stratigraphy will be continuously logged (SOP 17-Logging) to the groundwater table by a qualified field scientist in accordance with the Unified Soil Classification System (USCS). The field scientist will note soil attributes such as color, particle size, consistency, moisture content, structure, plasticity, odor (if obvious), and organic content (if visible). The soil samples will also be screened in the field using a photoionization detector (PID) (SOP 14-Head Space Soil Screening). Observations will be noted on the soil boring logs.

During soil sampling, two soil samples may be collected for analysis. The first soil sample will be collected from the soil interval exhibiting the highest headspace (PID) reading and the second soil sample will be collected from just above the apparent groundwater table (SOP 28-Soil Sampling and SOP 38-Methanol Preservation Sampling). The soil samples will be analyzed for Volatile Organic Compounds (VOCs) and Semivolatile Organic Compounds (SVOCs) (including Polynuclear Aromatic Hydrocarbons (PAHs).

Upon completion of the soil sampling, groundwater profiling will be completed from the same vicinity using temporary one inch diameter piezometers. Samples will be collected from piezometers placed at the top of the groundwater surface (approximate) and at a depth of approximately 8 foot below the first sample. The water level will be gauged, and samples will be collected per SOP 42 – Groundwater Profiling. The groundwater will be purged and monitored for pH, temperature, conductivity, turbidity, dissolved oxygen (DO), and oxygen-reduction potential (ORP). Parameter readings will be collected after each flow-through cell volume and purging will continue until water-quality parameters have stabilized over 3 flow-through cell volumes or for 1 hour, whichever occurs first (SOP 33-Water Quality Monitoring). Once stabilization is achieved, the groundwater flow will be diverted from the flow-through cell and the groundwater will be sampled for VOCs and SVOCs (including PAHs). Dedicated tubing will be used for each sample interval. Upon completion, the temporary piezometers will be pulled, the borings will be backfilled with bentonite grout and the ground surface will be returned to its original condition (SOP 12-Grouting Procedures).

Personnel conducting the sampling will wear clean disposable protective gloves. Sample containers will be labeled with a sample ID number, site name, sampler initials, sample date and time, sample preservative, and the parameters to be analyzed. After sample collection, the samples will be logged on a chain-of-custody (COC) form, packaged to prevent damage during shipment, and cooled to 4°C. The samples will then be delivered, under the proper COC documentation, to Accutest Laboratories in Marlborough, Massachusetts. Refer to SOP 24 – Sample Classification, Packaging, and Shipping (DOT), SOP 25 – Sample Containers, Preservation, and Holding Times and SOP 26 – Sample Control and Custody Procedures. The data from the field activities will be collected in accordance with the procedures described in this work plan. Quality assurance samples in the form of duplicates, trip blanks, and matrix spike and matrix spike duplicates (MS/MSD) will be collected (SOP 23-Quality Assurance Samples) from each media. Duplicates of selected samples will be collected and analyzed from 10 percent of the sample locations to check for sampling and analytical reproducibility. MS and MSD

samples will be collected and analyzed from 5 percent of the sample locations to evaluate the effect of the sample matrix on the accuracy of the analysis. Trip blanks will be collected and analyzed on a daily basis to assess VOC cross contamination of samples during shipment to the laboratory. The trip blank will consist of one or more VOA vials prepared by the laboratory, transported to the field, and shipped with the other samples to the laboratory. The trip blanks will not be opened in the field. Equipment blanks will also be collected and analyzed from 10 percent of the sample locations if non-dedicated or non-expendable equipment are used.

Field personnel will wear Level D personal protective equipment (PPE) with the potential to upgrade to USEPA Modified Level D or Level C if site conditions warrant. A PID with a 10.2 electron volt (eV) probe and combustible gas indicator (CGI) will be used during the field activities to monitor air quality for health and safety purposes. Field instruments will be calibrated prior to each use in accordance with the manufacturer's specifications. Health and safety related information will be primarily recorded in field logbooks. Phillips 66 personnel may inspect the work area and monitor the ambient air, as necessary prior to the issuance of daily work permits in areas where they are required.

Field personnel and equipment will undergo decontamination procedures to ensure the health and safety of those present, to maintain sample integrity, and to minimize cross contamination between sampling locations (SOP 4 – Decontamination). Reusable sampling equipment (e.g., groundwater pumps) will be decontaminated between each sampling location by washing with Alconox®, LiquiNox®, or equivalent detergent wash, a desorbing agent (e.g., isopropyl alcohol), and a distilled water rinse. Personnel and small equipment decontamination will be performed at the sample location.

Investigative derived waste (IDW) including PPE, and expendable materials will be collected and disposed of properly (SOP 16 – IDW Handling). Expendable materials (e.g., disposable sampling equipment, such as gloves and tubing) having a low probability of contamination will be collected in trash bags and disposed of as municipal waste. IDW (including soil and decontamination fluids) will be disposed of in accordance with SOPUS and WRR procedures.

The analytical results will be reviewed according to the procedures used for previous sampling. A summary letter will be prepared summarizing and providing documentation of the field work and collected data. The report will include tables (data screened to the latest version of the TACO screening levels), figures, and supporting information (e.g., laboratory data) as appropriate.

The work will be scheduled upon your approval of the proposed location. We estimate this scope of work will take approximately six weeks, contingent upon contractor availability.

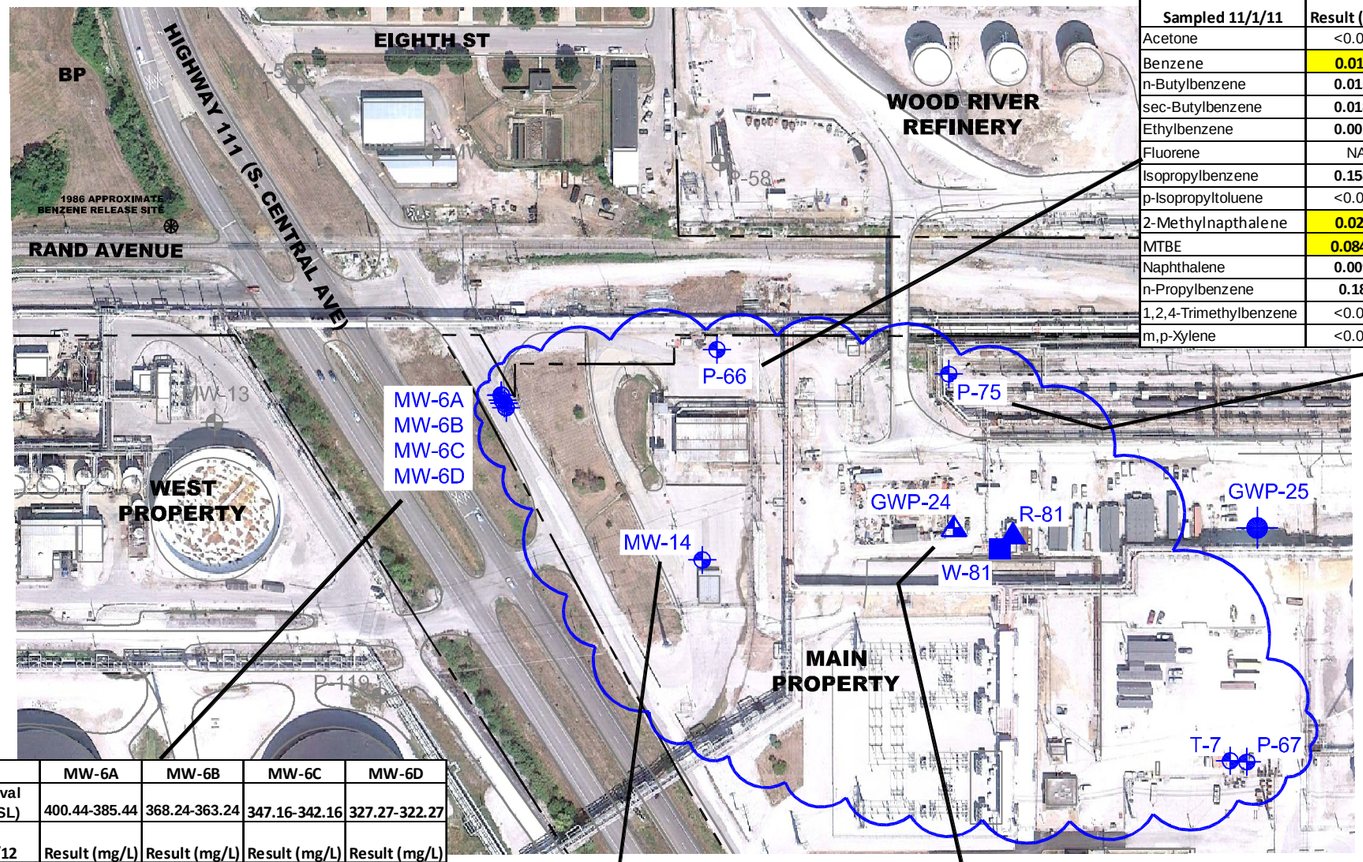
If you have any questions or require additional information, please contact Kevin Dyer, Shell project manager, at kevin.dyer@shell.com (618/288-7237), or me at bob.billman@urs.com (314/743-4108).

Sincerely,

Robert B. Billman
Senior Project Manager

Enclosure Figure 1 – GWP-25 Proposed Location

Cc: Kevin Dyer, Shell
Amy Boley, IEPA
Eric Petersen, Phillips 66
Project file



Location	P-66
Screened Interval Elevation (ft MSL)	401.98-376.98
Sampled 11/1/11	Result (mg/L)
Acetone	<0.005
Benzene	**0.0171**
n-Butylbenzene	**0.0153**
sec-Butylbenzene	**0.0185**
Ethylbenzene	**0.0016**
Fluorene	NA
Isopropylbenzene	**0.1580**
p-Isopropyltoluene	<0.005
2-Methylnapthalene	**0.0295**
MTBE	**0.0845 J**
Naphthalene	**0.0091**
n-Propylbenzene	**0.188**
1,2,4-Trimethylbenzene	<0.005
m,p-Xylene	<0.001

Location	P-75
Depth	403.19-378.19
Sampled 6/10/08	Result (mg/L)
Acetone	<0.2
Benzene	**3.62 D**
n-Butylbenzene	**0.0268**
sec-Butylbenzene	**0.241**
Ethylbenzene	**0.0836**
Fluorene	NA
Isopropylbenzene	**0.126**
p-Isopropyltoluene	**0.00398 J**
2-Methylnapthalene	NA
MTBE	**0.125**
Naphthalene	**0.162**
n-Propylbenzene	**0.0607**
1,2,4-Trimethylbenzene	**0.0382 U**
m,p-Xylene	**0.345 U**

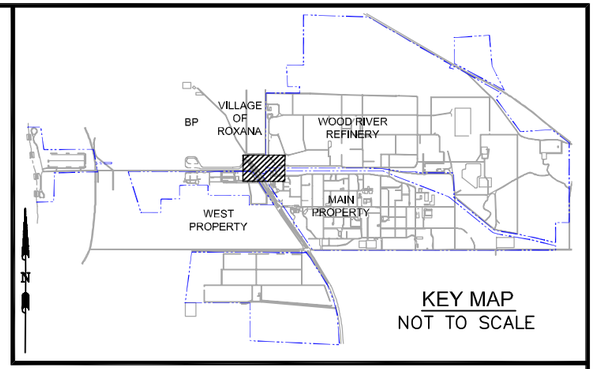
Location	MW-6A	MW-6B	MW-6C	MW-6D
Screened Interval Elevation (ft MSL)	400.44-385.44	368.24-363.24	347.16-342.16	327.27-322.27
Sampled 1/17/12	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)
Acetone	<0.005	<0.005	<0.005	<0.005
Benzene	<0.0005	**0.0013**	**0.0028**	**0.0022**
n-Butylbenzene	<0.005	<0.005	<0.005	<0.005
sec-Butylbenzene	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Fluorene	NA	NA	NA	NA
Isopropylbenzene	<0.005	<0.005	<0.005	<0.005
p-Isopropyltoluene	<0.005	<0.005	<0.005	<0.005
2-Methylnapthalene	<0.00022	<0.00022	<0.00022	<0.000085
MTBE	**0.0185**	**0.0049**	<0.001	<0.001
Naphthalene	<0.00011	<0.00011	<0.00011	<0.00016 U
n-Propylbenzene	<0.005	<0.005	<0.005	<0.005
1,2,4-Trimethylbenzene	<0.005	<0.005	<0.005	<0.005
m,p-Xylene	<0.001	<0.001	<0.001	<0.001

Location	MW-14
Screened Interval Elevation (ft MSL)	400.77-390.77
Sampled 11/9/11	Result (mg/L)
Acetone	<0.005
Benzene	<0.0005
n-Butylbenzene	<0.005
sec-Butylbenzene	<0.005
Ethylbenzene	<0.001
Fluorene	NA
Isopropylbenzene	<0.005
p-Isopropyltoluene	<0.005
2-Methylnapthalene	<0.00021
MTBE	<0.001
Naphthalene	<0.00011
n-Propylbenzene	<0.005
1,2,4-Trimethylbenzene	<0.005
m,p-Xylene	<0.001

Location	GWP-24	
Depth Below Ground Surface	44 ft	52 ft
Sampled 10/4/10	Results (mg/L)	
Acetone	**2.66**	**1.82**
Benzene	**1.99 D**	**2 D**
n-Butylbenzene	**0.0521**	**0.0604**
sec-Butylbenzene	**0.0399 J**	**0.039 J**
Ethylbenzene	< 0.05 U	**0.0486 J**
Fluorene	< 0.833	**0.109 J J**
Isopropylbenzene	**0.0629**	**0.0764**
p-Isopropyltoluene	**0.025 J**	**0.0304 J**
2-Methylnaphthalene	**0.687 J**	**2.49 J**
MTBE	**0.0102 J**	< 0.05 U
Naphthalene	< 0.833	**0.621 J J**
n-Propylbenzene	**0.131**	**0.145**
1,2,4-Trimethylbenzene	**0.333**	**0.732**
m,p-Xylene	< 0.1 U	**0.142**

Analytes	Screening Criteria (mg/L)
Acetone	N/A
Benzene	0.005
n-Butylbenzene	N/A
sec-Butylbenzene	N/A
Ethylbenzene	0.7
Fluorene	0.28
Isopropylbenzene	N/A
p-Isopropyltoluene	N/A
2-Methylnaphthalene	0.0028
MTBE	0.07
Naphthalene	0.14
n-Propylbenzene	N/A
1,2,4-Trimethylbenzene	N/A
m,p-Xylene	10.0

SCREENING CRITERIA (CLASS I-GROUNDWATER QUALITY STANDARDS) TAKEN FROM THE WOOD RIVER REFINERY RCRA POST-CLOSURE PERMIT (EFFECTIVE DATE-OCTOBER 28, 2010).



KEY MAP
NOT TO SCALE

LEGEND

- GWP-25 PROPOSED LOCATION
- AREA OF FOCUS
- GROUNDWATER MONITORING WELLS
- GROUNDWATER PROFILING LOCATIONS
- WOOD RIVER OIL RECOVERY WELLS
- WOOD RIVER WATER PRODUCTION WELLS

NOTES:

1. GROUNDWATER DATA ARE ONLY SHOWN FOR WELLS INSIDE THE AREA OF FOCUS.
2. ANALYTES SHOWN IN THE BOXES WERE DETECTED IN ONE OR MORE OF THE SAMPLES TAKEN FROM THE INDICATED MONITORING WELLS.
3. INDICATES EXCEEDANCE OF THE SCREENING CRITERIA. N/A INDICATES THAT SCREENING CRITERIA WEREN'T AVAILABLE.
4. PRODUCT HAS BEEN MEASURED IN MONITORING WELL P-66 DURING ONE OF THE LAST EIGHT QUARTERS AT A THICKNESS OF 0.02 FT. THE PRODUCT AND/OR WATER LEVEL HAS BEEN OVER THE TOP OF THE SCREEN DURING THE SAME PERIOD OF TIME.
5. PRODUCT HAS BEEN MEASURED IN MONITORING WELL P-75 DURING SEVEN OF THE LAST EIGHT QUARTERS AT THICKNESSES RANGING FROM 0.01 TO 0.39 FT. THE PRODUCT AND/OR WATER LEVEL HAS BEEN OVER THE TOP OF THE SCREEN DURING THE SAME PERIOD OF TIME.
6. PRODUCT HAS BEEN MEASURED IN MONITORING WELL P-67 DURING FOUR OF THE LAST EIGHT QUARTERS AT THICKNESSES RANGING FROM 0.02 TO 0.19 FT. THE PRODUCT AND/OR WATER LEVEL HAS BEEN OVER THE TOP OF THE SCREEN DURING THE SAME PERIOD OF TIME.
7. PRODUCT HAS BEEN MEASURED IN MONITORING WELL T-7 DURING THE LAST EIGHT QUARTERS AT THICKNESSES RANGING FROM 0.03 TO 0.16 FT. THE PRODUCT AND/OR WATER LEVEL HAS BEEN OVER THE TOP OF THE SCREEN DURING THE SAME PERIOD OF TIME.
8. NA INDICATES THAT ANALYTE WAS NOT ANALYZED FOR.

QUALIFIERS:
D = THE RESULT IS FROM A DILUTED SAMPLE.
J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
U = THE ANALYTE WAS NOT DETECTED BELOW THE REPORTING LIMIT.

0 200
SCALE FEET

N

SHELL OIL PRODUCTS US ROXANA, ILLINOIS	PROJECT NO. 21562536
URS	
DRN. BY: djd May 2012 DSGN. BY: djd CHKD. BY: bbb	GWP-25 Proposed Location FIG. NO. 1

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\C-WRR-COP\21562736 2012 SHELL WRR GW MONITORING\06 DELIVERABLE PRODUCTION & FINAL PRODUCT\DEL 3-GWP-24\FIGURES\FIGURE 1 GWP-25 PROPOSED LOCATION.DWG Last edited JUN. 07, 12 @ 4:07 p.m. by: curt_smith