



February 22, 2013

Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land
Illinois Department of Environmental Protection
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Subject: 1191150002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43R
New Groundwater Monitoring Well Installation
Roxana, Illinois

Dear Mr. Nightingale;

URS Corporation, on behalf of Shell Oil Products US (SOPUS), is submitting the boring log, monitoring well construction diagram and monitoring well development form for the P-55 replacement monitoring well installed about 7 feet east of the original monitoring well along the western fence line of the WRB Refining LP Wood River Refinery in Roxana, Illinois.

If you have any questions or require further information please contact Bob Billman at 314-429-0100.

Regards;

Wendy Pennington
Task Manager

Bob Billman
Senior Project Manager

Cc:
Kevin Dyer
Project File



Illinois
Environmental
Protection Agency

Bureau of Land
1021 North Grand Avenue East
Box 19276
Springfield, IL 62794-9276

RCRA Permit Application Form LPC-PA23

This form must be used for any permit application for a hazardous waste management facility regulated in accordance with RCRA, Subtitle C, including all requests to modify an existing permit. One original and three (3) copies, of all permit applications must be submitted. Attach the original and appropriate number of copies of a cover letter, any necessary plans, specifications, reports, forms, (e.g., corrective action certification form), and any other certifications etc. to fully support and describe the activities or modifications being proposed. Attach sufficient information to demonstrate compliance with all applicable regulatory requirements. Applications without this form will be deemed incomplete. Please refer to the RCRA checklist and decision guide documents for further guidance. For RCRA corrective action, this form should only be used if requesting an actual modification to a RCRA permit. A RCRA Corrective Action Certification form should be used in all other instances.

Note: Permit applications which are hand-delivered to the Bureau of Land, Permit Section must be delivered to 1021 North Grand Avenue East between the hours of 8:30 a.m. to 5:00 p.m., Monday through Friday (excluding State holidays).

Please type or print all information legibly.

I. SITE IDENTIFICATION

Site # (Illinois EPA): 1191150002 USEPA ID Number: ILD 080 012 305
 Site Name: Wood River Refinery
 Physical Site Location (street, road, etc.): 900 South Central Avenue
 City, Zip Code: Roxana, IL 62084 County: Madison
 Existing RCRA Permit (if applicable): Permit Log B-43R

II. OWNER/OPERATOR IDENTIFICATION

OWNER

OPERATOR

Name: <u>WRB Refining LP</u>	<u>Equilon Enterprises LLC d/b/a Shell Oil Products US</u>
Address: <u>600 North Dairy Ashford Road</u>	<u>Environmental Services</u>
<u>Houston, TX 77079-1175</u>	<u>17 Junction Drive; PMB #399</u>
	<u>Glen Carbon, IL 62034</u>
Contact Name: <u>Eric Petersen</u>	<u>Kevin Dyer</u>
Phone #: <u>(618) 255-3190</u>	<u>(618) 288-7237</u>

III. PERMIT APPLICATION IDENTIFICATION

APPLICATION TYPE:

- New Part B Permit
- Part B Permit Renewal
- Class 1 Modification
- Class 1* (prior approval required) Modification
- Class 2 Modification
- Class 3 Modification
- Additional information to supplement application Log Number B-43R

APPLICATION TYPE cont.:

- Remedial Action Plan Permit (RAPP)
- Sig RAPP Modification
- Non Sig RAPP Modification
- Major UIC Modification
- Minor UIC Modification

THIS APPLICATION INVOLVES:

- Storage
- Treatment
- Disposal
- Incineration
- Groundwater
- Corrective Action
- UIC Class I
- UIC Class V

DESCRIPTION OF THIS PERMIT REQUEST: (Include a brief narrative description here.)

Replacement groundwater monitoring well construction information.

IL 532-2792
LPC 625

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

IV. SIGNATURES Original signatures required. Signature stamps or applications transmitted electronically or by facsimile are not acceptable. All applications shall be signed by the person in accordance with 35 IAC 702.126(a).

Please check the box of the appropriate certification.

OWNER

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 that 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.

Alternative owner certification. For remedial action plans (RAPs) permit under Subpart H of 35 IAC 703, the owner may choose to make the following certification instead of the certification above.

Based on my knowledge of the conditions of the property described in the RAP and my inquiry of the person or persons that manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, upon information 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.

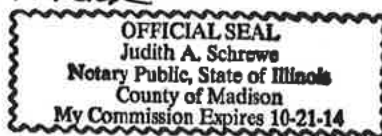
Owner Name (Printed or Typed): Jay D. Churchill
Owner Signature: Jay D. Churchill Title: Refinery Manager Date: 2-15-2013

OPERATOR

I certify under penalty of law that this document and all attachment 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 that 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.

Operator Name (Printed or Typed): Kevin E. Dyer
Operator Signature: Kevin E. Dyer Title: Principal Program Manager Date: 2-15-2013

NOTARY: (Required for both owner and operator signatures)
Subscribe and sworn before me this 15th day of February, 2013.
Notary Signature: Judith A. Schrewe Notary Seal:
My commission expires on: 10-21-14



ENGINEER

I certify under penalty of law that this document and all attachment 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 that 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.

Engineer Name (Printed or Typed): _____
Engineer Signature: _____ Illinois License No.: _____
Expiration Date of License: _____
Engineer Address: _____ Engineer Seal: _____

Engineer Phone No. _____

All information submitted as part of the Application is available to the public except when specifically designated by the Applicant to be treated confidentially as a trade secret or secret process in accordance with Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines.

LOG OF BORING P-55 Replacement Well

Depth In feet	Inches Driven	Inches Recovered	Blow Counts	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
								Starting Date: 1/10/13 Completion Date: 1/10/13 Casing Elevation: 443.78 Ground Elevation: 444.20	Quadrangle Sec: 34 (E - center of NE 1/4) T: 5N R: 9W UTM (or State Plane) Coord N: (X): 793803.04 E: (Y): 2322278.76
5				1.1	█	▣	GRAVEL	Gravel (FILL)	Air knifed to 10' bgs to clear utilities.
				1.5	█	▣	FILL	Soft, moist, brown, low plastic sandy CLAY (FILL), trace gravel	
				1.4	█	▣	FILL		
				1.4	█	▣	FILL		
				1.8	█	▣	FILL		
				2.2	█	▣	SP	Loose, moist, brown, fine grained SAND (SP), with clay	
				1.7	█	▣	SP	Clay grades out	
				2.0	█	▣	SP		
				1.5	█	▣	SP		
10				1.2	█	▣	SP		
	36	27		0.8	█	▣	SP	Becomes medium dense, brown with gray, silty	
				1.2	█	▣	SP	Becomes brown	
				1.6	█	▣	SP		
15	60	54		3.0	█	▣	SP	Silt grades out	
				1.5	█	▣	SP		
				1.5	█	▣	SP		
20	60	57		2.2	█	▣	SP	3" seam of dark gray	
				1.9	█	▣	SP	Becomes fine to medium grained	

URS (ENVIROM) LOG (EPA FORMAT) 21562850.15000 (ROXANA MW 2013) GPJ_URSTLEV.GDT 2/11/13

Completion Depth: 53.0 Ft bgs
 Project No.: 21562850.15000
 Project Name: Roxana/WRR Well Drilling
 Drilling Contractor: Roberts Environmental Drilling Inc.
 Driller Name: P. Seymour
 Drilling Method: Direct Push
 Drill Rig Type: 8040 DT
 Logged by: W. Pennington
 County: Madison
 Site ID No.: 1191150002
 Federal ID No.: ILD 080 012 305

Water Depth: 43 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 NE - None Encountered
 NA - Not Applicable

Geoprobe
 Air Knife/Hand Auger Sampler
 Air Rotary
 Sonic
 Splitspoon Sampler
 Hollow Stem Auger- Soil samples not collected



USC based on field visual observations

LOG OF BORING P-55 Replacement Well

Depth In feet	Inches Driven	Inches Recovered	Blow Counts	PID (ppm)	Sampler Graphic	Symbol	USCS	Starting		Completion		Casing Elevation: 443.78	Ground Elevation: 444.20	Quadrangle		UTM (or State Plane) Coord N: (X): 793803.04 E: (Y): 232278.76	NOTES	
								Date: 1/10/13	Sec: 34 (E - center of NE 1/4)	Date: 1/10/13	T: 5N			R: 9W				
DESCRIPTION																		
	60	54							Same: Medium dense, moist, brown, fine to medium grained Silty SAND (SP)									
				2.2														
				1.8														
30	60	54		1.6				SP									Becomes gray	
				2.0														
				244.6				CL									Medium stiff, moist, brown, low plastic CLAY (CL)	
35	60	59																
				19.3				SP										Becomes brown
				39.2														Becomes gray
40	60	60						ML										Soft to medium stiff, moist, gray SILT (ML)
				397.2				SP										Medium dense to dense, wet, brown, medium to coarse grained SAND (SP)
								ML-CL										Soft to medium stiff, moist, gray, low plastic Clayey SILT (ML-CL)
				1024				SP										Medium dense, moist, gray, fine grained SAND (SP)
								CL										Soft to medium stiff, moist, gray, low plastic CLAY (CL)
				805.2				SP										Medium dense to dense, wet, brown, medium to coarse grain SAND (SP)
45	60	54		389.8				ML										Medium stiff, wet, gray, low plastic, SILT (ML), with clay
				104.7				SP										Medium dense to dense, wet, grayish brown, medium to coarse grained SAND (SP)
				134.5														Becomes dark gray

Sample P-55R-43 for VOCs at 1305

URS (ENVIRON) LOG (EPA FORMAT) 21562850.15000 (FOXANA MW 2013) GPJ_URSSTLEY.GDT 2/1/13

Completion Depth: 53.0 Ft bgs
 Project No.: 21562850.15000
 Project Name: Roxana/WRR Well Drilling
 Drilling Contractor: Roberts Environmental Drilling Inc.
 Driller Name: P. Seymour
 Drilling Method: Direct Push
 Drill Rig Type: 8040 DT
 Logged by: W. Pennington
 County: Madison
 Site ID No.: 1191150002
 Federal ID No.: ILD 080 012 305

Water Depth: 43 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 NE - None Encountered
 NA - Not Applicable

Geoprobe
 Air Knife/Hand Auger Sampler
 Air Rotary
 Sonic
 Splitspoon Sampler
 Hollow Stem Auger-Soil samples not collected



USC based on field visual observations

LOG OF BORING P-55 Replacement Well

Depth In feet	Inches Driven	Inches Recovered	Blow Counts	PID (ppm)	Sampler Graphic	Symbol	USCS	Starting		Completion		Quadrangle		UTM (or State Plane) Coord
								Date: 1/10/13	Date: 1/10/13	Sec: 34 (E - center of NE 1/4)	T: 5N	R: 9W	N: (X): 793803.04	
								DESCRIPTION				NOTES		
	60	30		244.7	▲		SP	Same: Medium dense to dense, wet, dark gray, medium to coarse grained SAND (SP)				Sample P-55R-51 for VOCs at 1310		
								Bottom of boring at 53 ft bgs						
55														
60														
65														
70														

URS (ENVIRON) LOG (EPA FORMAT) 21562850.15000 (ROXANA MW 2013) GPJ_URSSTLEV.GDT 2/1/13

Completion Depth: 53.0 Ft bgs
 Project No.: 21562850.15000
 Project Name: Roxana/WRR Well Drilling
 Drilling Contractor: Roberts Environmental Drilling Inc.
 Driller Name: P. Seymour
 Drilling Method: Direct Push
 Drill Rig Type: 8040 DT
 Logged by: W. Pennington
 County: Madison
 Site ID No.: 1191150002
 Federal ID No.: ILD 080 012 305

Water Depth: 43 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 NE - None Encountered
 NA - Not Applicable

Geoprobe
 Air Knife/Hand Auger Sampler
 Air Rotary
 Sonic
 Splitspoon Sampler
 Hollow Stem Auger- Soil samples not collected



USC based on field visual observations



Illinois Environmental Protection Agency

This form may be completed within Acrobat before printing.

Well Completion Report

Site Number: 1191150002

County: Madison

Site Name: Wood River Refinery - Roxana, IL

Well #: P-55 (replacement well)

State

Plane Coordinate: X 232276.76 Y 793803.04 (or) Latitude: _____ Longitude: _____

Borehole #: P-55R

Surveyed by: Juneau Engineering & Surveying - Robert Brown, PLS

IL Registration #: 35-3298

Drilling Contractor: Roberts Environmental Drilling, Inc

Driller: P. Seymour

Consulting Firm: URS Corporation

Geologist: W. Pennington

Drilling Method: Direct Push

Drilling Fluid (Type): N/A

Logged By: W. Pennington

Date Started: 1/10/13 Date Finished: 1/10/13

Report Form Completed By: W. Pennington

Date: 1/31/13

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Installation Method: Tremie

Setting Time: 1350

Type of Bentonite Seal - - Granular, Pellet, Slurry
(Choose One)

Installation Method: Gravity Feed

Setting Time: 1315

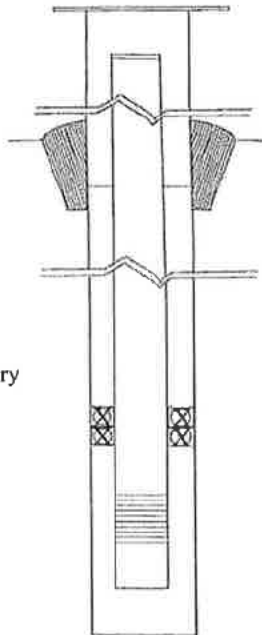
Type of Sand Pack: ANSI/NSF quartz sand

Grain Size: 61 grade (Sieve Size)

Installation Method: Gravity Feed

Type of Backfill Material: Native & Placed Sand
(if applicable)

Installation Method: Gravity Feed



Elevations (MSL)*	Depths (BGS)	(.01 ft.)
444.20	0	Top of Protective Casing
443.78	0.42	Top of Riser Pipe
444.20	0	Ground Surface
442.20	2.00	Top of Annular Sealant
401.16	43.04	Static Water Level (After Completion)
408.35	35.85	Top of Seal
405.35	38.85	Top of Sand Pack
403.35	40.85	Top of Screen
393.35	50.85	Bottom of Screen
393.10	51.10	Bottom of Well
391.20	53.00	Bottom of Borehole

* Referenced to a National Geodetic Datum

CASING MEASUREMENTS

Diameter of Borehole (inches)	4.5
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	n/a
Riser Pipe Length (feet)	40.43
Bottom of Screen to End Cap (feet)	0.25
Screen Length (1" slot to last slot) (feet)	10
Total Length of Casing (feet)	50.68
Screen Slot Size **	0.010 in

**Hand-Slotted Well Screens are Unacceptable

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

GROUNDWATER DEVELOPMENT/SAMPLING DATA SHEET

PROJECT NAME: SOPUS - Roxana / WRR PROJECT NUMBER: 21562850.15000
 DATE: 1-21-13
 WEATHER: 20s sunny
 FIELD PERSONNEL: M. Corbett C. Williams
 MONITORING WELL ID: P-55 replacement

INITIAL DATA

Well Diameter: 2 in. 51 ft bloc
 Total Depth of Well: 43.04 ft bloc
 Depth to Water: 7.96 ft
 Height of Water Column: 7.96 ft
 (0.163 gallons/ft for 2 inch well, 1.468 gallons/ft for 6-inch well)

Gallons/Lin.Ft: 0.163 gallons
 Vol. of Water Column: 1.3 gallons
 Min. Purge Volume: 6.5 gallons (5 volumes)
 Depth to Top of Screen: 41 ft bloc

Water Added during Drilling: 12 gallons
 Water to be Removed: 60 gallons (5x added)
 Ambient PID/FID Reading: 0.0 ppm
 Wellbore PID/FID Reading: 136 ppm

PURGE DATA

Purge Method: hurricane pump

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
<u>No GW Parameters Collected</u>										
<u>based on SOP</u>										

Stabilized: +/- 0.2 +/- 10% visually sediment free
 Purge Stop Time: 1015 Elapsed Time: 215 min Total Volume Purged: 67 gallons
 Average Purge Rate (gallons/min): 0.3 Water Quality Meter ID: 5 Calibrated on: 67

SAMPLING DATA

Sampling Method: N/A Analysis: N/A
 Sample Date: N/A Sample Time: N/A

COMMENTS:

DTB = 51.05 ft bloc prior to development
DTB = 51.10 ft bloc after development
Winter was visually sediment free at end of purging