

February 10, 2015

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

**Subject: 1191150002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
New Groundwater Monitoring Well Installation
Hartford, Illinois
Log No. B-43R-CA-47**

Dear Mr. Nightingale:

AECOM (formerly URS Corporation), on behalf of Shell Oil Products US, is submitting the boring log, well construction diagram and monitoring well development form for an additional groundwater monitoring well designated MW-23, installed in Hartford, Illinois. This information satisfies Condition 1(c) of the IEPA RCRA Permit Corrective Action Monitoring Well Installation Plan approval letter dated October 9, 2014 (Log No. B-43R-CA-47).

If you have any questions or require further information, please contact Bob Billman at (314) 429-0100 or bob.billman@aecom.com.

Sincerely,
AECOM, on behalf of Shell Oil Products US



Eric Fritsch
Task Manager



Bob Billman
Senior Project Manager

cc: Kevin Dyer, SOPUS
Thomas Tunnicliff, BP
Repositories (Village Hall, Library, Website)



Illinois Environmental Protection Agency

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

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: Equilon Enterprises LLC d/b/a Shell Oil Products US

Facility Address: 900 S. Central Ave., Roxana, IL 62048

Site ID #: 1191150002 Fed ID #: ILD 080 012 305

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

LPC-160 Forms

Groundwater

Leachate

Quarterly - Enter: 1, 2, 3, or 4

Quarterly - Enter: 1, 2, 3, or 4

Semi-Annual

Semi-Annual

Annual

Annual

Biennial

Biennial

Groundwater Data (without LPC-160 Forms)

Quarterly - Enter: 1, 2, 3, or 4 Annual Semi-Annual Biennial

Well Construction Information

Well Construction Forms, Boring Logs and/or Abandonment Forms

Well Survey Data (e.g., Stick-up Elevation Data)

Notice of Statistically Significant Evidence of Groundwater Contamination
(35 Ill. Adm. Code 724.198)

Notice of Exceedence of Groundwater Concentration Limit (35 Ill. Adm. Code 724.199(h))

Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater
(35 Ill. Adm. Code 724.199(i))

Gas Monitoring Reports

Other (identify)

AECOM (EVIRON) LOG (EPA FORMAT)+1 WELL P:\RESOURCES\GINT\DATA\GINT\ENVIRONMENTAL\AECOM STL (ENVIRONMENTAL)\GLB 21563720

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-23

Starting Date: 1/19/15
 Completion Date: 1/20/15
 Casing Elevation: 431.41
 Ground Elevation: 428.70

Quadrangle Sec:34 T:5N R:9W
 UTM (or State Plane) Coord
 N: (X):792004.5
 E: (Y):2321442.8

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
0 - 2.9				2.9			FILL	Gravel and Topsoil (FILL) Becomes loose, moist, black, coarse grained sand with gravel and cinders	
2.9 - 104.6				104.6			CL	Soft, wet, black, medium plastic, Silty CLAY (CL), with organics Becomes gray	
104.6 - 44.6				44.6			CL	Becomes medium stiff, moist	
44.6 - 7.6				7.6			CL	With brown mottling	
7.6 - 24		24	12	1.7			CL	Becomes soft	
24 - 24		24	19	6.4			CL	Becomes wet, sandy	
24 - 22		24	22	48.5			CL		
22 - 24		24	24	6.2			CL		
24 - 15		24	15	2.9			CL		
15 - 20		24	9	0.2			CL	Loose, moist, gray, fine to medium grained SAND (SP)	
20 - 24		24	12	5.5			CL	Grades to medium grained 0.5" thick clay seam	

Completion Depth: 36.5 Ft bgs
 Project No.: 21563720
 Project Name: Roxana MW-23 Installation
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Driller Name: E. Wetzel
 Drilling Method: Hollow-Stem Auger
 Drill Rig Type: CME-75
 Logged by: E. Arthur
 County: Madison
 Site ID No.: 1191150002
 Federal ID No.: ILD 080 012 305

Water Depth: 29.2 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

Air Knife/Hand Auger
 Splitspoon Sampler
 HSA - No Soil Sample
 Geoprobe
 Concrete
 Cement/Bentonite Grout
 Bentonite Seal
 Filter Sand
 Screen



USC based on field visual observations

AECOM (EVIRON) LOG (EPA FORMAT)-1 WELL P:\RESOURCES\GINT\DATA\GINT\ENVIRONMENTAL\AECOM STL (ENVIRONMENTAL)\GLB 215115

LOG OF BORING AND WELL CONSTRUCTION DETAIL

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 Completion Date: 1/20/15
 Casing Elevation: 431.41
 Ground Elevation: 428.70
 Quadrangle Sec:34
 T:5N
 R:9W
 UTM (or State Plane) Coord
 N: (X):792004.5
 E: (Y):2321442.8

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS
30		24	11	0.2			SP
		24	13	0.1			
		24	12	0.1			
		24	12	0.1			
		24	20	1.0			
35		24	22	0.6			

DESCRIPTION

Same: Loose, moist, gray, medium grained SAND (SP)

Becomes wet, fine grained

Grades to medium grained

Bottom of boring at 36.5' bgs

NOTES

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 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

- Air Knife/Hand Auger
- Spoon Sampler
- HSA - No Soil Sample
- Geoprobe
- Concrete
- Cement/Bentonite Grout
- Bentonite Seal
- Filter Sand
- Screen



USC based on field visual observations



Illinois Environmental Protection Agency

Well Completion Report

Site Number: 1191150002County: MadisonSite Name: Village of Roxana, IllinoisWell #: MW-23

State _____

Plane Coordinate: X 2321442.8 Y 792004.5 (or) Latitude: _____ Longitude: _____Borehole #: MW-23Surveyed by: Juneau Associates, Inc. P.C.-Robert Brown, PLSIL Registration #: 35-3298Drilling Contractor: Roberts Environmental Drilling, Inc.Driller: E. WetzelConsulting Firm: AECOMGeologist: E. ArthurDrilling Method: Hollow Stem AugerDrilling Fluid (Type): N/ALogged By: E. ArthurDate Started: 1/19/2015 Date Finished: 1/20/2015Report Form Completed By: E. FritschDate: 2/3/2015

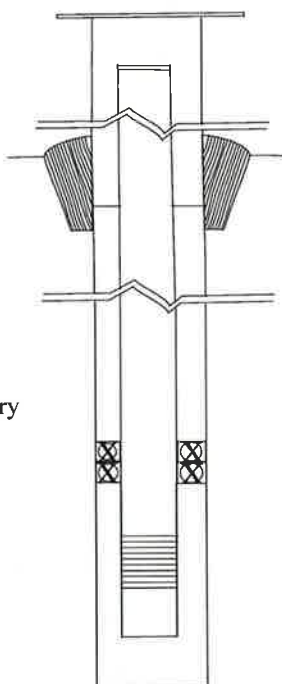
ANNULAR SPACE DETAILS

Type of Surface Seal: ConcreteType of Annular Sealant: Cement/Bentonite GroutInstallation Method: Side Discharging TremieSetting Time: 14:15 on 1/19/2015Type of Bentonite Seal - - Granular, Pellet, Slurry
(Choose One)Installation Method: Gravity FeedSetting Time: 13:30 on 1/19/2015Type of Sand Pack: ANSI / NSF Quartz SandGrain Size: 61 grade (Sieve Size)Installation Method: Gravity FeedType of Backfill Material: N/A
(if applicable)Installation Method: N/A

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



Elevations (MSL)*	Depths (BGS)	(.01ft.)
431.77	-3.07	Top of Protective Casing
431.41	-2.71	Top of Riser Pipe
428.70	0	Ground Surface
426.70	2.00	Top of Annular Sealant
397.83	30.87	Static Water Level (After Completion)
406.39	22.31	Top of Seal
404.39	24.31	Top of Sand Pack
402.39	26.31	Top of Screen
392.39	36.31	Bottom of Screen
392.14	36.56	Bottom of Well
392.14	36.56	Bottom of Borehole

* Referenced to a National Geodetic Datum

CASING MEASUREMENTS

Diameter of Borehole (inches)	9
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	N/A
Riser Pipe Length (feet)	29.02
Bottom of Screen to End Cap (feet)	0.25
Screen Length (1 st slot to last slot) (feet)	9.7
Total Length of Casing (feet)	3.07
Screen Slot Size **	0.010 in.

**Hand-Slotted Well Screens are Unacceptable

GROUNDWATER DEVELOPMENT/SAMPLING DATA SHEET

PROJECT NAME: Roxana MW-23 Installation

PROJECT NUMBER: 21563720.32000

DATE: 1/22/15

WEATHER: Cloudy 40°

FIELD PERSONNEL: E. Arthur

MONITORING WELL ID: MW-23

INITIAL DATA

Well Diameter: 2 in.
 Total Depth of Well: 39.27 ft btoc
 Depth to Water: 30.99 ft btoc
 Height of Water Column: 8.28 ft
 (C 163 gallons/ft for 2 inch well, 1 468 gallons/ft for 6-inch well)

Gallons/Lin.Ft: 0.163
 Vol. Of Water Column: 1.35 gallons
 Min. Purge Volume: 6.75 gallons (5 volumes)
 Depth to Top of Screen: 26 ft btoc

Water Added during Drilling/Installation: 20 gallons
 Total Water to be Removed: 26.75 gallons (5 volumes + 1x added)
 Ambient PID/FID Reading: 0.0 ppm
 Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Purge Method: _____ Stabilized: +/- 0.2 +/- 1°C +/- 10% visually sediment free

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
PARAMETERS NOT COLLECTED PER SOP										

Start Time: 1040
 Average Purge Rate (gallons/min): 2

Purge Stop Time: 1100
 Well Volumes Purged: 29.6

Elapsed Time: 20 min
 Water Quality Meter ID: N/A

Total Volume Purged: 40 gallons
 Calibrated on: N/A

SAMPLING DATA

Sampling Method _____

Sample Date: N/A

Sample Time: N/A

Analysis: N/A

COMMENTS:

DTB = 39.27 ft btoc prior to development

Is the purgewater visually sediment free? YES NO

DTB = 39.267 ft btoc after development

39.27 (EA)