

May 6, 2025

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
2520 West Iles Avenue
Springfield, Illinois 62704

Illinois Environmental Protection Agency
Collinsville FOS
1101 Eastport Plaza Dr, Suite 100
Collinsville, Illinois 62234

**Shell Oil Products US Steam Enhanced Extraction Pretreatment System - Treated Water Analytical Data
Village of Roxana Wastewater Treatment Plant
Water Pollution Control Permit No. 2023-EE-68012
April 2025 Analytical**

To Whom It May Concern:

AECOM Technical Services, Inc. (AECOM), on behalf of Shell Oil Products US (Shell), is submitting this letter as required by Water Pollution Control Permit No. 2023-EE-68012, Special Condition 8(B). This Permit is for the pre-treatment and discharge of the steam enhanced extraction (SEE) wastewater to the Village of Roxana Wastewater Treatment Plant (WWTP). Special Condition 8(B) of the Permit requires monitoring of the system discharges and submittal of analytical results to the Illinois Environmental Protection Agency (IEPA). Wastewater treated through the pretreatment system is sampled on a weekly basis in accordance with Condition 13 of the August 22, 2022, letter from Illinois EPA, Permit Section, Division of Land Pollution Control (Log N. B-43R-CA-107).

The SEE system was winterized and sat idle during the winter months. System startup activities began in March 2025. During system startup and operation activities in April 2025, nine (9) samples of treated wastewater discharge was analyzed. The table below summarizes the samples and corresponding results.

Sample ID	Sample Date	Benzene (mg/L)
PWYSEE-WaterEff-040125	4/1/2025	0.0002 J
PWYSEE-WaterEff-040325	4/3/2025	Not detected
PWYSEE-WaterEff-040825	4/8/2025	0.0003 J
PWYSEE-WaterEff-041025	4/10/2025	0.0007
PWYSEE-WaterEff-041425	4/14/2025	Not detected
PWYSEE-WaterEff-041725	4/17/2025	Not detected
PWYSEE-WaterEff-042125	4/21/2025	Not detected
PWYSEE-WaterEff-042425	4/24/2025	Not detected
PWYSEE-WaterEff-042825	4/28/2025	Not detected

J = estimated result below reporting limit

Please contact Ms. Wendy Pennington (wendy.pennington@aecom.com; 314-452-8929) with any questions.

Sincerely,



Wendy Pennington, P.E.
Compliance Manager
AECOM



Samuel Fisher, CHMM
Task Manager
AECOM

encl: Applicable results pages from Teklab Work Orders 25040062, 25040474, 25040754, 25041089, 25041384, 25041724, 25041933, 25042304, and 25042508

cc: Buddy Bealer (Shell)
Scott Schmidt (Village of Roxana)
Jason Woody (Village of Roxana)
Project File

Client: AECOM Technical Services Inc.

Work Order: 25040062

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 02-Apr-25

Lab ID: 25040062-001

Client Sample ID: PWYSEE-WaterEff-040125

Matrix: AQUEOUS

Collection Date: 04/01/2025 08:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5	J	0.2	µg/L	1	04/01/2025 13:12	236844
Surr: 1,2-Dichloroethane-d4	*	0	80-120		89.1	%REC	1	04/01/2025 13:12	236844
Surr: 4-Bromofluorobenzene	*	0	80-120		93.8	%REC	1	04/01/2025 13:12	236844
Surr: Dibromofluoromethane	*	0	80-120		98.1	%REC	1	04/01/2025 13:12	236844
Surr: Toluene-d8	*	0	80-120		96.1	%REC	1	04/01/2025 13:12	236844

Client: AECOM Technical Services Inc.

Work Order: 25040474

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 04-Apr-25

Lab ID: 25040474-001

Client Sample ID: PWYSEE-WaterEff-040325

Matrix: AQUEOUS

Collection Date: 04/03/2025 13:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/04/2025 08:29	237064
Surr: 1,2-Dichloroethane-d4	*	0	80-120		105.7	%REC	1	04/04/2025 08:29	237064
Surr: 4-Bromofluorobenzene	*	0	80-120		98.7	%REC	1	04/04/2025 08:29	237064
Surr: Dibromofluoromethane	*	0	80-120		106.5	%REC	1	04/04/2025 08:29	237064
Surr: Toluene-d8	*	0	80-120		102.3	%REC	1	04/04/2025 08:29	237064

Client: AECOM Technical Services Inc.

Work Order: 25040754

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 09-Apr-25

Lab ID: 25040754-001

Client Sample ID: PWYSEE-WaterEff-040825

Matrix: AQUEOUS

Collection Date: 04/08/2025 06:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5	J	0.3	µg/L	1	04/08/2025 09:28	237215
Surr: 1,2-Dichloroethane-d4	*	0	80-120		110.0	%REC	1	04/08/2025 09:28	237215
Surr: 4-Bromofluorobenzene	*	0	80-120	S	79.5	%REC	1	04/08/2025 09:28	237215
Surr: Dibromofluoromethane	*	0	80-120		103.9	%REC	1	04/08/2025 09:28	237215
Surr: Toluene-d8	*	0	80-120		95.1	%REC	1	04/08/2025 09:28	237215
<i>Surrogate recovery is outside control limits due to matrix interference.</i>									

Client: AECOM Technical Services Inc.
Client Project: PWY SEE 2025 Water / 60738191-7.2.2
Lab ID: 25041089-001
Matrix: AQUEOUS

Work Order: 25041089
Report Date: 11-Apr-25
Client Sample ID: PWYSEE-WaterEff-041025
Collection Date: 04/10/2025 10:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		0.7	µg/L	1	04/11/2025 03:34	237418
Surr: 1,2-Dichloroethane-d4	*	0	80-120		99.0	%REC	1	04/11/2025 03:34	237418
Surr: 4-Bromofluorobenzene	*	0	80-120		99.4	%REC	1	04/11/2025 03:34	237418
Surr: Dibromofluoromethane	*	0	80-120		99.5	%REC	1	04/11/2025 03:34	237418
Surr: Toluene-d8	*	0	80-120		100.9	%REC	1	04/11/2025 03:34	237418

Client: AECOM Technical Services Inc.

Work Order: 25041384

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 15-Apr-25

Lab ID: 25041384-001

Client Sample ID: PWYSEE-WaterEff-041425

Matrix: AQUEOUS

Collection Date: 04/14/2025 09:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/14/2025 14:14	237554
Surr: 1,2-Dichloroethane-d4	*	0	80-120		97.6	%REC	1	04/14/2025 14:14	237554
Surr: 4-Bromofluorobenzene	*	0	80-120		97.4	%REC	1	04/14/2025 14:14	237554
Surr: Dibromofluoromethane	*	0	80-120		99.6	%REC	1	04/14/2025 14:14	237554
Surr: Toluene-d8	*	0	80-120		100.9	%REC	1	04/14/2025 14:14	237554

Client: AECOM Technical Services Inc.

Work Order: 25041724

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 21-Apr-25

Lab ID: 25041724-001

Client Sample ID: PWYSEE-WaterEff-041725

Matrix: AQUEOUS

Collection Date: 04/17/2025 09:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/17/2025 18:40	237835
Surr: 1,2-Dichloroethane-d4	*	0	80-120		97.4	%REC	1	04/17/2025 18:40	237835
Surr: 4-Bromofluorobenzene	*	0	80-120		99.6	%REC	1	04/17/2025 18:40	237835
Surr: Dibromofluoromethane	*	0	80-120		97.2	%REC	1	04/17/2025 18:40	237835
Surr: Toluene-d8	*	0	80-120		101.9	%REC	1	04/17/2025 18:40	237835

Client: AECOM Technical Services Inc.

Work Order: 25041933

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 22-Apr-25

Lab ID: 25041933-001

Client Sample ID: PWYSEE-WaterEff-042125

Matrix: AQUEOUS

Collection Date: 04/21/2025 08:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/22/2025 06:00	237898
Surr: 1,2-Dichloroethane-d4	*	0	80-120		98.2	%REC	1	04/22/2025 06:00	237898
Surr: 4-Bromofluorobenzene	*	0	80-120		99.5	%REC	1	04/22/2025 06:00	237898
Surr: Dibromofluoromethane	*	0	80-120		100.4	%REC	1	04/22/2025 06:00	237898
Surr: Toluene-d8	*	0	80-120		101.1	%REC	1	04/22/2025 06:00	237898

Client: AECOM Technical Services Inc.

Work Order: 25042304

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 25-Apr-25

Lab ID: 25042304-001

Client Sample ID: PWYSEE-WaterEff-042425

Matrix: AQUEOUS

Collection Date: 04/24/2025 08:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/24/2025 20:30	238124
Surr: 1,2-Dichloroethane-d4	*	0	80-120		97.1	%REC	1	04/24/2025 20:30	238124
Surr: 4-Bromofluorobenzene	*	0	80-120		98.8	%REC	1	04/24/2025 20:30	238124
Surr: Dibromofluoromethane	*	0	80-120		99.9	%REC	1	04/24/2025 20:30	238124
Surr: Toluene-d8	*	0	80-120		100.8	%REC	1	04/24/2025 20:30	238124

Client: AECOM Technical Services Inc.

Work Order: 25042508

Client Project: PWY SEE 2025 Water / 60738191-7.2.2

Report Date: 29-Apr-25

Lab ID: 25042508-001

Client Sample ID: PWYSEE-WaterEff-042825

Matrix: AQUEOUS

Collection Date: 04/28/2025 08:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030B, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS									
Benzene	NELAP	0.1	0.5		ND	µg/L	1	04/28/2025 11:58	238228
Surr: 1,2-Dichloroethane-d4	*	0	80-120		96.3	%REC	1	04/28/2025 11:58	238228
Surr: 4-Bromofluorobenzene	*	0	80-120		95.4	%REC	1	04/28/2025 11:58	238228
Surr: Dibromofluoromethane	*	0	80-120		102.3	%REC	1	04/28/2025 11:58	238228
Surr: Toluene-d8	*	0	80-120		96.0	%REC	1	04/28/2025 11:58	238228