

February 20, 2024

Chelsea Fazzino, PG Licensed Professional Geologist Department of Environmental Protection Southeast Regional Office 2 East Main Street Norristown, PA 19401

sent via email to cfazzino@pa.gov

Subject:

Tank Group 07A Closure Report Former Philadelphia Energy Solutions Refinery 3144 West Passyunk Avenue, Philadelphia, PA

Dear Ms. Fazzino:

Terraphase Engineering Inc. (Terraphase) has prepared this *Tank Group 07A Closure Report* (Tank Closure Report), on behalf of Philadelphia Energy Solutions Refining and Marketing LLC (PESRM). This Tank Closure Report presents the alternate Site Assessment analytical results associated with Tank Group 07A (the "Site"). The results of the alternate Site Assessment activities support obtaining regulatory closure of aboveground storage tanks (ASTs) GP R 250 (PADEP No. 019A) and GP R 251 (PADEP No. 020A), known as Tank Group 07A, at the former Philadelphia Energy Solutions (PES) Refinery property located at 3144 West Passyunk Avenue in Philadelphia, Pennsylvania (**Figure 1**). The presence of standing water, determined to be shallow groundwater emergent at the ground surface, is present within the containment berm for former ASTs GP R 250 and GP R 251. This has prevented PESRM from being able to complete Site Assessment sampling in accordance with Terraphase's (2021) *AST Closure Work Plan*. Terraphase shared an alternative approach to complete Site Assessment sampling with the Pennsylvania Department of Environmental Protection (PADEP) on December 1, 2023. PADEP approved the alternate Site Assessment scope of work for Tank Group 07A in its correspondence dated December 6, 2023.

Background

The demolition and decommissioning of the subject ASTs began and was completed in September 2021. Prior to demolition, the primary products held within these tanks were Light Cycle Oil (GP R 250) and Untreated Distillate (GP R 251). Additional details regarding the size, contents, and construction of the tanks are provided in **Table 1**. On behalf of PESRM, JD2 Environmental, Inc. and ACI submitted to PADEP the required tank registration amendments, copies of which are provided as **Appendix A**. In addition, the Aboveground Storage Tank System Closure Report form (2630-FM-BECB0514) is included in **Appendix B**.

Alternate Site Assessment Sampling

Standing water has been observed within the containment berm for former ASTs GP R 250 and GP R 251 for several months. NorthStar Contracting Group, Inc. (NorthStar) conducted dewatering activities in the area but was unsuccessful. Additionally, Terraphase conducted a comparison of recent groundwater elevations to the surface elevation in the area and it indicated that groundwater is at an elevation similar to or greater than the ground surface elevation in the area of the two tanks. Terraphase also installed piezometers and measured groundwater levels between July 2023 and August 2023. The results of this monitoring indicated the groundwater elevation in the piezometers are greater than or equal to the elevation of the surface water during the majority of the gauging events and are provided in **Appendix C.** The PADEP agreed with this assessment.

Based on the preceding evidence demonstrating that the standing water in Tank Group 07A is in connection with groundwater, Site Assessment sampling could not be completed in accordance with the PADEP-approved *AST Closure Work Plan* (Terraphase 2021). As such, PESRM presented an alternative Site Assessment scope of work to PADEP representatives and submitted the scope on December 1, 2023, which PADEP approved on December 6, 2023.

Soil and groundwater sampling was completed by Terraphase and their subcontractor MB Drilling, LLC on December 15, 2023. Prior to the initiation of the sampling activities, a review of available information provided by Facility representatives regarding the presence/absence of underground utilities was used in the proposed sampling locations. In addition, a private locate was performed using geophysical and electromagnetic techniques to identify potential utilities or subsurface structures at proposed drilling locations.

Soil borings were completed using direct-push (i.e., Geoprobe) drilling methods and advanced to 5 feet below ground surface (ft bgs). Continuous soil cores were collected, and field screened using a photoionization detector to identify potentially impacted zones. Soil boring logs are provided in **Appendix D**. In total, seven soil borings were installed during the Site Assessment, as close in proximity to the ASTs and standing water as possible. Terraphase collected a soil sample from one 6-inch interval in each boring, as well as a field duplicate at boring GPR250-03. In addition, groundwater samples were collected from two nearby piezometers (previously installed to evaluate groundwater elevations in the area), and two surface water samples were collected from the standing water within the TG07A secondary containment berms. A field duplicate sample was collected at piezometer TG07A-PZ01. Site Assessment sampling locations are depicted on **Figure 2**.

Soil, groundwater, and surface water samples were analyzed for Short List 1-5¹. Laboratory analytical services were provided by Alpha Analytical, Inc. of Westborough, Massachusetts, which is a PADEP-certified laboratory. Samples submitted for analyses were placed directly into laboratory provided glassware and stored on ice in a cooler under appropriate chain of custody protocol.

¹ Short List 1-5 includes analytes benzene, cumene, 1,2-dibromoethane, 1,2-dichloroethane, ethyl benzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, methyl tert-butyl ether, xylenes, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, chrysene, fluorene, naphthalene, phenanthrene, pyrene, and lead.



Sampling Results

Soil sampling results were compared to the following Non-Residential (Non-Res) Medium Specific Concentrations (MSCs) to help identify potential releases to the environment from the ASTs and their associated piping:

- Non-Res Direct Contact (DC) Numeric Values for Surface Soil (0-2 ft bgs)
- Non-Res DC Numeric Value for Subsurface Soil (2-15 ft bgs)
- Non-Res Soil-to-Groundwater (SGW) Numeric Values for Used Aquifers (Total Dissolved Solids [TDS] ≤ 2,500)

As presented in **Table 2a**, none of the Site Assessment soil samples collected in proximity to GP R 250 or GP R 251 exhibited concentrations greater than the applicable MSCs. **Figure 2** presents the spatial distribution of the soil sampling locations. **Appendix E** provides copies of the laboratory data packages.

Groundwater and surface water² sampling results were compared to the following Non-Res MSCs to help identify potential releases to the environment from the ASTs and their associated piping:

• Non-Res Groundwater Numeric Values for Used Aquifers (TDS ≤ 2,500)

As presented in **Table 2b**, none of the Site Assessment groundwater or surface water samples collected in proximity to GP R 250 or GP R 251 exhibited concentrations greater than the applicable MSCs. **Figure 2** presents the spatial distribution of the groundwater sampling locations. **Appendix E** provides copies of the laboratory data packages.

Conclusion

Terraphase has prepared this Tank Closure Report, on behalf of PESRM, to detail the results of the alternate Site Assessment activities in Tank Group 07A. The specific ASTs addressed in this Tank Closure Report include GP R 250 (PADEP No. 019A) and GP R 251 (PADEP No. 020A).

Visual observations of the ASTs in Tank Group 07A revealed no indications of release. Based on the soil, groundwater, and surface water results, no evidence of a release from GP R 250 or GP R 251 was identified. The Site Assessment outcome for the two tanks was "No Obvious Contamination – Sample Results Meet Action Levels." Based on the information presented, PESRM has overcome the presumption of liability under Act 32 as detailed in 25 PA Code §245.303(d) and respectfully requests closure of tanks GP R 250 and GP R 251 in Tank Group 07A.

Sincerely,

for Terraphase Engineering Inc.

win I. Long Kevin Long

Principal Consultant

Nicholas J. Scala

Principal Geologist, PG, LSRP

² Based on the evidence demonstrating that the standing water in Tank Group 07A is in connection with groundwater, the surface water results were compared to the applicable groundwater MSCs.



Attachments (10):

- Table 1 Aboveground Storage Tank Details
- Table 2a Summary of Soil Analytical Results
- Table 2b Summary of Groundwater and Surface Water Analytical Results
- Figure 1 Facility Location
- Figure 2 Soil, Groundwater, and Surface Water Sampling Locations
- Appendix A Tank Registration Amendment Forms
- Appendix B Aboveground Storage Tank System Closure Report Forms
- Appendix C October 4, 2023 *Technical Memorandum Tank Group 07A Gauging Summary* prepared by Terraphase Engineering on behalf of PESRM
- Appendix D Soil Boring Logs and Piezometer Completion Records
- Appendix E Laboratory Data Package
- cc: Julianna Connolly, LSP, PESRM Amy Piccone, PESRM Richard Staron, PADEP



Tables

- 1 Aboveground Storage Tank Details
- 2a Summary of Soil Analytical Results
- 2b Summary of Groundwater and Surface Water Analytical Result



Table 1

Aboveground Storage Tank Details

Tank Group 07A

Philadelphia Energy Solutions Refining and Marketing LLC, Philadelphia, PA

	State Regulation		Design Capacity	y	Proposed	Regulatory		Status Modification		Double	Diameter	Height	Remaining Liquid	GPS Survey	Demo	Storage Tanks Reg./Permit App Form	Release	Incident	Int. Remedial/ Corrective Action
Facility	Number	Tank Number	(gal)	Primary Product	Analyte List ^X	Status	Facility ID	Date	Tank Type	Bottom	(ft)	(ft)	(gal)	Complete	Complete	Submitted	Notification	No.	Required
Girard Point	019A	GP R 250	3,045,000	Light Cycle Oil	Short List 1-5	R	51-33624	9/29/2021	IFR	Y	120	40		Y	Y*	11/1/2021			
Girard Point	020A	GP R 251	3,045,000	Distillate, Untreated	Short List 1-5	R	51-33624	9/29/2021	IFR	Y	120	40		Y	Y*	11/1/2021			

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Notes

* - Double bottom still to be removed.

Abbreviations

IFR -- Internal Floating Roof

No -- No R -- Removed

Y -- Yes

Philadelphia Energy Solutions Refining and Marketing LLC, Philadelphia, PA

Location			GPR250-01	GPR250-02	GPR250-03	GPR250-03	GPR251-01	GPR251-02	GPR251-03	GPR251-04
Field Sample ID	Nen Des Direct	Non-Res Used	GPR250-01-SS01	GPR250-02-SS01	GPR250-03-SS01	GPR250-03-SS01D	GPR251-01-SS01	GPR251-02-SS01	GPR251-03-SS01	GPR251-04-SS01
Collection Depth (ft bgs)	Non-Res Direct	Aquifer	2.5 - 3.0	1.5 - 2.0	2.0 - 2.5	2.0 - 2.5	0.0 - 0.5	3.0 - 3.5	2.5 - 3.0	1.0 - 1.5
Sample Method	Mcc	(TDS ≤ 2500)	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Sample Date	IVI3C	Soil-to-GW MSC	12/15/2023	12/15/2023	12/15/2023	12/15/2023	12/15/2023	12/15/2023	12/15/2023	12/15/2023
Comments						Field Duplicate				
Volatile Organic Compounds										
Benzene	280	0.5	0.00028 J (0.00042)	ND (0.00046)	ND (0.00046)	ND (0.00048)	ND (0.00042)	ND (0.00045)	ND (0.00047)	ND (0.00054)
Cumene	10000	2500	ND (0.00084)	ND (0.00091)	ND (0.00093)	ND (0.00097)	ND (0.00085)	ND (0.00091)	ND (0.00094)	ND (0.0011)
1,2-Dibromoethane	3.7	0.005	ND (0.00042)	ND (0.00046)	ND (0.00046)	ND (0.00048)	ND (0.00042)	ND (0.00045)	ND (0.00047)	ND (0.00054)
1,2-Dichloroethane	85	0.5	ND (0.00084)	ND (0.00091)	ND (0.00093)	ND (0.00097)	ND (0.00085)	ND (0.00091)	ND (0.00094)	ND (0.0011)
Ethyl Benzene	880	70	ND (0.00084)	ND (0.00091)	ND (0.00093)	ND (0.00097)	ND (0.00085)	ND (0.00091)	ND (0.00094)	ND (0.0011)
Methyl tert-butyl ether	8500	2	ND (0.0017)	ND (0.0018)	ND (0.0018)	ND (0.0019)	ND (0.0017)	ND (0.0018)	ND (0.0019)	ND (0.0022)
Toluene	10000	100	ND (0.00084)	ND (0.00091)	ND (0.00093)		ND (0.00085)	ND (0.00091)	ND (0.00094)	ND (0.0011)
1,2,4-Trimethylbenzene	4700	300	0.00038 J (0.0017)	ND (0.0018)	ND (0.0018)	ND (0.0019)	ND (0.0017)	ND (0.0018)	ND (0.0019)	ND (0.0022)
1,3,5-Trimethylbenzene	4700	93	ND (0.0017)	ND (0.0018)	ND (0.0018)	ND (0.0019)	ND (0.0017)	ND (0.0018)	ND (0.0019)	ND (0.0022)
Xylenes (total)	7900	1000	ND (0.00084)	ND (0.00091)	ND (0.00093)	ND (0.00097)	ND (0.00085)	ND (0.00091)	ND (0.00094)	ND (0.0011)
Semivolatile Organic Compoun	ds									
Anthracene	190000	350	0.11 J (0.12)	ND (0.12)	0.057 J (0.12)	ND (0.12)	ND (0.12)	ND (0.11)	ND (0.12)	ND (0.13)
Benzo(a)anthracene	130	340	0.37 (0.12)	0.032 J (0.12)	0.28 (0.12)	0.035 J (0.12)	0.078 J (0.12)	0.022 J (0.11)	0.06 J (0.12)	0.15 (0.13)
Benzo(a)pyrene	91	46	0.45 (0.16)	ND (0.16)	0.27 (0.16)	ND (0.16)	0.081 J (0.16)	ND (0.15)	0.076 J (0.16)	0.21 (0.17)
Benzo(b)fluoranthene	76	170	0.58 (0.12)	0.058 J (0.12)	0.31 (0.12)	0.042 J (0.12)	0.093 J (0.12)	ND (0.11)	0.084 J (0.12)	0.23 (0.13)
Benzo(g,h,i)perylene	190000	180	0.3 (0.16)	0.038 J (0.16)	0.14 J (0.16)	ND (0.16)	0.043 J (0.16)	ND (0.15)	0.044 J (0.16)	0.13 J (0.17)
Chrysene	760	230	0.42 (0.12)	0.039 J (0.12)	0.28 (0.12)	0.038 J (0.12)	0.077 J (0.12)	0.022 J (0.11)	0.063 J (0.12)	0.17 (0.13)
Fluorene	130000	3800	0.021 J (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.19)	ND (0.19)	ND (0.2)	ND (0.22)
Naphthalene	66	25	0.19 (0.04)	ND (0.039)	ND (0.04)	ND (0.039)	ND (0.039)	ND (0.037)	0.035 J (0.039)	0.18 (0.043)
Phenanthrene	190000	10000	0.24 (0.12)	0.028 J (0.12)	0.28 (0.12)	0.056 J (0.12)	0.092 J (0.12)	ND (0.11)	0.046 J (0.12)	0.12 J (0.13)
Pyrene	96000	2200	0.55 (0.12)	0.045 J (0.12)	0.48 (0.12)	0.069 J (0.12)	0.13 (0.12)	0.033 J (0.11)	0.077 J (0.12)	0.2 (0.13)
Metals										
Lead	1000	450	350 (2.35)	36.3 (2.24)	19.8 (2.36)	17.2 (2.31)	38 (2.29)	21.8 (2.28)	40.1 (2.32)	66.7 (2.63)
Notes:										

1 All concentrations reported in mg/kg (ppm); detection limits in parentheses.

2 No concentrations exceed the Non-Res Direct Contact with Soil MSC.

3 No concentrations exceed the Non-Res Used Aquifer (TDS \leq 2500) Soil-to-GW MSC.

Abbreviations:

ND - Not Detected

J - Estimated Concentration

Table 2b Summary of Groundwater and Surface WaterAnalytical Results Tank Group 07A

Philadelphia Energy Solutions Refining and Marketing LLC, Philadelphia, PA

Location	Non-Res Used	TG07A-PZ01	TG07A-PZ01	TG07A-PZ02	TG07A-SW01	TG07A-SW02	
Field Sample ID	Aquifer	TG07A-PZ01-231215	TG07A-PZ01-231215D	TG07A-PZ02-231215	TG07A-SW01-231215	TG07A-SW02-231215	
Sample Method	(TDS ≤ 2500)	Grab	Grab	Grab	Grab	Grab	
Sample Date	Groundwater	12/15/2023	12/15/2023	12/15/2023	12/15/2023	12/15/2023	
Comments	MSC		Field Duplicate				
Volatile Organic Compounds							
Benzene	5	ND (0.5)	ND (0.5)	ND (0.5)	0.19 J (0.5)	0.2 J (0.5)	
Cumene	3500	ND (0.5)	ND (0.5)	ND (0.5)	0.19 J (0.5)	0.19 J (0.5)	
1,2-Dibromoethane	0.05	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	
1,2-Dichloroethane	5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	
Ethyl Benzene	700	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	
Methyl tert-butyl ether	20	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	
Toluene	1000	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)	
1,2,4-Trimethylbenzene	530	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	
1,3,5-Trimethylbenzene	530	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	
Xylenes (total)	10000	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	
Semivolatile Organic Compound	ls						
Anthracene	66	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Benzo(a)anthracene	3.9	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	
Benzo(a)pyrene	0.2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Benzo(b)fluoranthene	1.2	ND (0.05)	ND (0.05)	ND (0.05)	0.01 J (0.05)	0.02 J (0.05)	
Benzo(g,h,i)perylene	0.26	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Chrysene	1.9	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Fluorene	1900	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Naphthalene	100	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	
Phenanthrene	1100	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	
Pyrene	130	ND (0.1)	ND (0.1)	ND (0.1)	0.02 J (0.1)	0.03 J (0.1)	
Metals							
Lead	5	1.609 (1)	0.4309 J (1)	ND (1)	0.8006 J (1)	2.074 (1)	

Notes:

1 All concentrations reported in ug/L (ppb); detection limits in parentheses.

2 No concentrations exceed the Non-Res Used Aquifer (TDS \leq 2500) Groundwater MSC.

3 Based on the evidence demonstrating that the standing water in Tank Group 07A is in connection with groundwater, the surface water results were compared to the applicable groundwater MSCs.

Abbreviations:

ND - Not Detected

J - Estimated Concentration

Figures

- 1 Figure 1 Facility Location
- 2 Figure 2 Soil, Groundwater, and Surface Water Sampling Locations







GPR250-02 TG07A-	
GPR250-03	
GPR250-03	Legend
GPR250-03	Legend Property Boundary
GPR250-03	Legend Property Boundary Tank Group 07 Boundary
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Pining
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location Sample Location
GPR250-03	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location Sample Location Soil
GPR250-03	Legend → Property Boundary → Tank Group 07 Boundary → Tank Group 07 Boundary → Existing Conrete Sump Pit → Estimated Groundwater Flow Direction → Associated Piping ⊗ Concrete Wall Location Sample Location ⓒ Soil ◆ Surface Water
GPR250-03	Legend → Property Boundary ↓ Tank Group 07 Boundary ↓ Tank Group 07 Boundary ↓ Tank Group 07 Boundary ↓ Existing Conrete Sump Pit ↓ Estimated Groundwater Flow Direction ↓ Associated Piping ♥ Concrete Wall Location Sample Location ♥ Soil ↓ Surface Water ↓ Piezometer
GPR250-03	Legend → Property Boundary → Tank Group 07 Boundary → Tank Group 07 Boundary → Existing Conrete Sump Pit → Estimated Groundwater → Flow Direction → Associated Piping ⊗ Concrete Wall Location Sample Location ⓒ Soil ↔ Surface Water ↔ Piezometer Soil, Groundwater.
GPR250-03 O Piladelphia Energy Solutions Refining and Marketing LLC	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location Sample Location ● Soil ● Piezometer Soil, Groundwater, and Surface Water
GPR2 50-03 O O D D D D D D D D D D D D D D D D D	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location Sample Location Image: Soil Image: Soil, Groundwater, and Surface Water Sampling Locations
GPR2 50-03 O Filadelphia Energy Solutions Refining and Marketing LLC oveground Storage Tank Closure MBER: P044.001.02	Legend Property Boundary Tank Group 07 Boundary Existing Conrete Sump Pit Estimated Groundwater Flow Direction Associated Piping Concrete Wall Location Sample Location Image: Soil Image: Property Boundary Image: Soil Image: Soil, Groundwater, and Surface Water Sampling Locations Figure 2

Appendix A

Tank Registration Amendment Forms





October 28, 2021

VIA EMAIL (ELECTRONIC SUBMISSION)

Pennsylvania Department of Environmental Protection Central Office - Division of Storage Tanks Rachel Carson State Office Building 400 Market Street Harrisburg, Pennsylvania 17101

Subject:Philadelphia Energy Solutions Refining and Marketing, LLC (PES)PADEP Storage Tanks Registration/Permitting Application FormPADEP Facility ID #51-33624 - Girard Point Refinery

Dear PADEP:

On behalf of our client, JD2 Environmental, Inc. (JD2) is attaching the Pennsylvania Department of Environmental Protection's (PADEP's) Storage Tanks Registration/Permitting Application Form for the removal of the following aboveground storage tanks (ASTs):

Facility Name	PADEP Facility ID #	PADEP Tank ID #	Owner Tank ID #	AMS Tank ID #	Removal Date
Girard Point Refinery	51-33624	019A	GP 250	P-009	9/29/2021
Girard Point Refinery	51-33624	020A	GP 251	P-010	9/29/2021

If you have any questions regarding this submittal, please do not hesitate to contact me at (610) 430-8151.

Sincerely yours,

JD2 ENVIRONMENTAL, INC.

Whistian Datterthursde

Kristian Satterthwaite Environmental Scientist PADEP Inspector #5081

KS:wc Attachment

cc: REPSG

2630-PM-BECB0514 Rev. 6/2019 Permsylvania Department of environmental PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS

STORAGE TANKS REGISTRATION / PERMITTING **APPLICATION FORM**

Before completing this form, read the step-by-step instructio	ns provided in this application package.						
	DEP USE ONLY						
	Client ID#						
51-33624	Site ID#						
Facility ID #	Account #						
	Auth ID#						
Phila Ref Girard Point	APS ID#						
Facility Name	Master Auth ID#						
I., PURPOSE	OF SUBMITTAL						
INITIAL (Applies to First	-Time Facility Registration)						
Register Tanks(s) to be Used*	Register Tank(s) to be Temporarily Out of Use						
Register Tank(s) to be Removed	Register Tank(s) to be Closed in Place						
AMENDED (Applies to Currently R	egistered Tank(s) or Existing Facility)						
Changed Owner Information	Changed Contact Information						
Changed Facility Information	Changed Facility Operator Information						
Changed to Currently In Use Tank(s)*	Added Tank(s) to Existing Facility*						
Changed to Temporarily Out of Use Tank(s)	Changed to Permanently Closed Tank(s)/Removed						
Changed Product	Changed to Exempt Tank(s)						
CHANGE OF	OWNERSHIP						
Tanks Changed Ownership and Remain at Same Fa	cility*						
* For Underground Storage Tanks (UST), attach the UST and copies of the Class A and Class B operator training cert	Operator Training Documentation Form (2630-PM-BECB0514a)						
II. CURRENT OR NEW TANK C	WNER / CLIENT INFORMATION						
DEP Client ID# Client Type/Code Fee Kind (c	heck one if applicable)						
298341 🗌 Volunt	eer Fire Co/EMS Org 🔲 State Govt 📋 Fed Govt						
Organization Name or Registered Fictitious Name	Employer ID# (EIN) Dun & Bradstreet ID#						
Philadelphia Energy Solutions Refining and Marketing, LLC							
Individual Last Name First Name	MI Suffix SSN						
Additional Individual Last Name First Name	P. Sr.						
staational individual East Name I list Name	mi Suttix SSN						
Mailing Address Line 1 Mailing Address Line 2							
3144 West Passyunk Avenue							
Address Last Line – City State	ZIP+4 Country						
Philadelphía PA	19145 USA						
Client Contact Last Name First Name	MI Suffix						
Bowman Gary	P. Sr.						
Client Contact Title	Phone Ext						
President	610-636-4574						
E-mail Address	FAX						
Gbowman@northstar.com							

	III. SITE	INFORM	ATION				
DEP Site ID#	Site Name						
EPA ID#	Estimated Number of	f Employee	s to be Present a	t Site		N 2	
Description of Site							
County Name	Municipality			City	Boro	Twp	State
County Name	Municipality			City	Boro	Twp	State
Site Location Line 1		Site Loc	ation Line 2				
Site Location Last Line - City		State	ZIP+4				
Detailed Written Directions to	Site						
Site Contact Last Name	First N	ame	MI		Suffix		
Site Contact Title		Site Con	tact Firm				
Mailing Address Line 1		Mailing /	Address Line 2				
Address Last Line – City		State	ZIP+4				
Phone Ext	FAX	E-mail A	ddress				
NAICS Codes (Two- & Three-Di	git Codes – List All That Ap	ply)		6-Digi	t Code (¢	Optional)	
Site to Client Relationship	· · · · · · · · · · · · · · · · · · ·						
	Illa. PROPERTY C	WNER IN	FORMATIO	N			
Same as Tank Owner Identi	fied in Section II. Diffe	erent than Ta	ank Owner Identi	fied in Sect	ion II: id	antified b	alow
Organization Name or Register	ed Fictitious Name		Employer ID#	# (EIN)	Dun 8	Bradstr	eet ID#
Individual Last Name	First Name		MI	Suffix	SSN		
Additional Individual Last Name	First Name		MI	Suffix	SSN		
Mailing Address Line 1	Mailing Address	Line 2					
Address Last Line - City	State		ZIP+4	Co	untry		
Property Owner Contact Last N	ame First Name		MI	Sut	ffix		
Property Owner Contact Title			Phone	Ext	1		
E-mail Address				FAX	x		

	IV: FACIL	ITY INFOR	MATION					
DEP Storage Tank Facility ID#	Facility Name				Facility Kind			
Facility Location Line 1 (if different th	an Site Location)		Facility Loc	ation Line 2				
Facility Location Last Line - City			State		ZIP+4			
Latitude/Longitude		Latitude			Longitude			
Point of Origin	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
Horizontal Accuracy Measure	East							
Horizontal Reference Datum Code	North A	American Datum of 1983 Geodetic System of 1984						
Horizontal Collection Method Code								
Reference Point Code								
Altitude	Feet			or	Meters			
Altitude Datum Name	The Na	ational Geodetic orth American V	vertical Datur	n of 1929 of 1988 (NAVI	D88)			
Altitude (Vertical) Location Datum C	ollection Method Co	ode						
Geometric Type Code								
Data Collection Date								
Source Map Scale Number		li	nch(es)	=	Feet			
	0/	C	entimeter(s)	=	Meters			
Flammable & Combustible Linuis	Demail # /if an all							
State or Municipality that loound	the Dermit # (if applic	capie)						
otate of manopanty that issued			ORMATION	1				
Same as Owner Identified in Sect	ion II.	Different that	Owner Ident	Ifled in South	on ili identified	helew		
DEP Client ID#	Cli	ent Type / Co	le le	med in Section	on II; identified	Delow.		
Organization Name or Registered Fic	titious Name		Employer II	D# (EIN)	Dun & Brads	treet ID#		
Individual Last Name	First Name		MI S	Suffix	SSN			
Additional Individual Last Name	First Name		MI S	Suffix	SSN			
Mailing Address Line 1	Mailing Address Li	ne 2						
Address Last Line - City	State	4	ZIP+4	Co	ountry			
Client Contact Last Name	First Name	M	1	Su	ffix			
Client Contact Title		PI	none	Ex	t			
E-mail Address				FA	X			

V. CHANG	E OF OWNERSHIP INFORMATION	
All Tanks Changed Ownership at th	e Facility	
Some Tanks Changed Ownership a	t the Facility (List all applicable tank numl	pers in Section VI.)
OWNERSHIP CHANGE TO - Client informa	tion is noted in Section II.	
OWNERSHIP CHANGE FROM (previous ow	ner information)	
Name		
Employer ID# (EIN) or SSN		
Mailing Address Line 1		
Mailing Address Line 2		
Address Last Line - City	State	ZIP+4
Previous Facility ID#		
DATE OF SALE/TRANSFER		
SIGNATURE	& CERTIFICATION OF PREVIOUS OWNER	
Previous owner's signature is not available. has attached a deed of transfer or other application.	As required, the "new" owner Second S	s 🗌 No 🗌 N/A
have reviewed this form for submission to the §4903 (relating to false swearing) and 18 PA. Co authority to sign this Section for the transfer o that all information provided in Section V is true	e Department. I certify under penalty of la S.A. §4904 (relating to unsworn falsification permit or registration for the storage tanks a, accurate and complete to the best of my k	w as provided in 18 PA. C.S.A to authorities), that I have th listed herein. Further, I certif nowledge and belief.
Tune on Drint Devidence Original Manual		

Previous	Øwner	Signature
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Title

Date

2630-PM-BECB0514 Rev. 6/2019 Form Facility ID# 51-33624

Facility Name Phila Ref Girard Point

	Dlara	-	eeded.	Exempt	Code								eded	Exempt Reference Code	
	P-Cinsed In		if more lines are n	CAS# (If Hazardous	Substance)								f more lines are ne	CAS# (If Hazardous Substance)	
	R-Removed		ng amended. Copy this page	CERCLA Name (If Hazardous Substance) Substance Name (If Other Petroleum Substance or Petroleum	Light Cycle Oil	Untreated Distillate							ng amended. Copy this page i	CERCLA Name (If Hazardous Substance) Substance Name (If Other Petroleum Substance or Petroleum Based Mixture)	
ESCRIPTION	iership. E-Exempt	-	ly those tanks beil	Substance Code (Currently or	Last Stored								y those tanks beir	Substance Code (Currently or Last Stored)	
ORAGE DE	der your own f Use		nation, list on	Capacity (Gallons)	3.045.000	3,045,000							nation, list onl	Capacity (Gallons)	
VI. ST	this facility une	eld Constructed	amending inform	Change of Status Date (Mol/Dav/Yrt)	09/29/2021	09/29/2021							amending inform	Change of Status Date (Mo/Day/Yr)	
	storage tank af T-T		all new tanks. If	Install Date (Mo(Dav/Yr)	01/01/1939	01/01/1939							all new tanks. If	Install Date (Mo/Day/Yr)	
	ently in U	ufactured	KS. List	Tvoe	L.	ш							KS. List	Туре	
	ly each n C-Curn	M-Man	UND IAN	New Status	R	R							JND TAN	New Status	
	orint legib odes:	des:	OVEGRO	Prev Status	F	F	-						DERGROU	Prev Status	
	Type or I Status Ci	Type Cot	A. AB	Tank#	019A	020A	< <	A	A	A	A	A	B. UNI	Tank#	

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Facility ID# 51-33624

Facility Name Phila Ref Girard Point

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UND NEW TANK INSTALLATION INFORMATION ションショー Ż ę nlata this The DFP Cartified Installar

Tank Construction & Corrosion Drotantion (4)	Toul 4	Tout #		:		
	I all V #	I SINK #	I ank #	iank#	Tank #	Tank #
Tank Manufacturer:						
Model:						
A. Unprotected Steel (Single Wall)				□		
B. Cathodically Protected Steel (Galvanic)						
C. Cathodically Protected Steel (Impressed Current)						
D. Unprotected Steel (Double Wall)						
E. Fiberglass (Single Wall)						
F. Fiberglass (Double Wall)						
G. Steel w/Plastic or Fiberglass Jacket or Double Wall Act 100						
H. Steel With FRP Coating (Act 100 or Equivalent)						
1. Steel with Lined Interior						
J. Concrete						
O. Cathodically Protected Double Wall Steel (Galvanic)						
P. Cathodically Protected Steel with Liner						
Q. Double Bottom (ASTs Only)						
R. Molded Plastic Form (ASTs Only)						
S. Stainless Steel						
T. Aluminum						ב
U. Fire Protected Double Wall AST						
V. Steel with Plastic or Fiberglass Jacket or Double Wall Act 100 with Anodes						
W. Steel with FRP Coating (Act 100 or Equivalent) with Anodes						
X. Molded Plastic Form (Double Wall) (AST's Only)						

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Facility ID# 51-33624	Facility Name F	hila Ref Girard Poir	ıt			
Underground Piping Construction & Corrosion Protection – Single/Inner Wall (28)	Tank#	Tank#	Tank #	Tank#	Tank #	Tank #
Primary (Inner) Piping Manufacturer: Model:						
A. Bare Steel						
B. Cathodically Protected Metallic						
C. Copper						
D. Fiberglass						
E. Flexible (Non-Metallic)						
G. No Dispensing Piping						
99. Other:						
Underground Piping Construction & Corrosion Protection – Outer Wall (29)	Tank#	Tank#	Tank#	Tank#	Tank #	Tank #
Secondary (Outer) Piping Manufacturer:						
Model:						
A. Bare Steel						
B. Cathodically Protected Metallic						
D. Fiberglass						
E. Flexible (Non-Metallic)						
G. No Dispensing Piping						
L. Poly-encased Stainless Steel						
99. Other:						
]]]	

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Aboveground Piping Construction	Tank #	Tank #	Tank #	Tank#	Tank#	Tank #
& Corrosion Protection (3)						
A. Carbon Steel						C
B. Cathodically Protected Metallic						
C. Copper] [
D. Single Wall Fiberglass						
E. Single Wall Flexible (Non-Metallic)						
F. PVC						
G. None						
I. Double Wall - Metallic Primary						
J. Double Wall - Rigid (FRP) Primary						
K. Double Wall - Flexible Primary						
L. Stainless Steel						
99. Other:	¢					
	Tank #	Tank #	Tank #	Tank#	Tank #	Tonk #
Product Delivery System (4)						I ANK #
A. Suction: Check valve at pump						
B. Suction: Check valve at tank						
C. Pressure						
D. Gravity fed						
E. None						
Spill Prevention (6)	Tank#	Tank #	Tank#	Tank #	Tank#	Tank#
S. Permanently installed and liquid tight (single-walled)						
D. Permanently installed and liquid tight (double-walled)						
N. None (AST only)						
E. Fill in less than 25 gallons (exempt)						זן
		Interes]	ן		ב

Facility ID# 51-33624 Facility Name Phila Ref Girard Point 2630-PM-BECB0514 Rev. 6/2019 Form

1 00 1

Facility ID# 51-33624

Facility Name Phila Ref Girard Point

 A. Overfill alarm E. Fill in less than 25 gallons (exempt) N. None (AST only) 			I ank #	Tank #	Tank#	Tank#
E. Fill in less than 25 gallons (exempt) N. None (AST only)						
N. None (AST only)						
					כ	
S. Drop tube shutoff device						
Y. Yes (AST only) Type:						
Emergency Containment (16) ASTs only	Tank #	Tank #	Tank#	Tank#	Tank #	Tank #
N. No - Explain:						
Y. Yes (includes double-walled tanks with required appurtenances)						
V. Underground vault						
Secondary Containment (17) 1 Single Wall ASTs only	Tank#	Tank #	Tank #	Tank #	Tank#	Tank #
N. No - Explain:						
Y. Yes] [
V. Underground vault						
Stage I Vapor Recovery (19) T USTs and ASTs when applicable	Tank #	Tank#	Tank #	Tank #	Tank#	Tank #
A. Coaxial					E	
3. 2 Point] []		
N. None or incomplete						

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Facility ID# 51-33624

Facility Name Phila Ref Girard Point

Tank-top Containment Sumps Present	Tank#	Tank#	Tank#	Tank #	Tank#	Tank#
(Product Piping Unly) (21) USTs only						
N. None – Explain:						
S. At some penetrations and liquid tight – Explain:						
A. At all penetrations and liquid tight						
Indor dismonor Postsineert Parts	******	;]
Under-uispenser Containment Present (22)	lank#	Tank#	Tank#	Tank#	Tank#	Tank#
USTs only						
N. None – Explain:						C
S. At some dispensers and liquid tight – Explain:						
A. Under all dispensers and liquid tight						
]]	ב
Line Leak Detector Shuts Off Pump (23)	Tank #	Tank#	Tank#	Tank #	Tank#	Tank#
N NO			[1		
Y. Yes						
	Toul #		:			
Tank Supplies Emergency Generator (25)	Lank#	ank#	Tank #	Tank#	Tank#	Tank #
N. No						E
Y. Yes][
]	ן		כ	ב

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Facility ID# 51-33624

Facility Name Phila Ref Girard Point

Write the Tank Number(s) and place an X in the appropriate box for each tank that was removed or closed in place. Items 2 & 3 below apply to large ASTs and all USTs Tank # Tank # Tank # Tank # Items 2 & 3 below apply to large ASTs and all USTs O19A O20A Tank # Tank # Tank # Tank # Tank # Tank # 1. Contamination suspected or observed and notification of contamination form was submitted to the appropriate DEP O19A 020A Imak # Tank # Tank # Tank # Tank # 2. Closure document submitted to the appropriate DEP X		VIII. ABOVEGROUND'& UNDERG	ROUND TAN	K INFORMAT	ION FOR PE	RMANENT CI	OSLIRE	
Items 2 & 3 below apply to large ASTs and all USTs Tank # Tank #	Z	ite the Tank Number(s) and place an $oxtimes$ in the appropriate	box for each ta	nk that was ren	noved or closed	l in place.	and the second	
1. Contamination suspected or observed and notification of contamination suspected or observed and notification of regional office. 019A 020A 010 010 2. Closure document submitted to the appropriate DEP regional office. 010 010 010 010 010 010 010 3. Closure document kept on file by owner. 3. Closure document kept on file by owner. 010 010 010 010 010 010 010		Items 2 & 3 helow and/v to lame 4 STs and all LISTs	Tank#	Tank#	Tank#	Tank #	Tank #	Tank#
1. Contamination suspected or observed and notification of contamination form was submitted to the appropriate DEP regional office. Image: Contamination form was submitted to the appropriate DEP regional office. 2. Closure document submitted to the appropriate DEP regional office. Image: Closure document submitted to the appropriate DEP regional office. 3. Closure document kept on file by owner. Image: Closure document kept on file by owner.		sino and and and to take hors and an oors	019A	020A				
2. Closure document submitted to the appropriate DEP Image: Closure document submitted to the appropriate DEP Image: Closure document submitted to the appropriate DEP 3. Closure document kept on file by owner. Image: Closure document kept on file by owner. Image: Closure document kept on file by owner.	~`	Contamination suspected or observed and notification of contamination form was submitted to the appropriate DEP regional office.						
3. Closure document kept on file by owner.	r,	Closure document submitted to the appropriate DEP regional office.						
	က်	Closure document kept on file by owner.						

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IX. OWNER CERTIFICATION

A.

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I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. This registration is conditioned upon compliance with provisions of the Storage Tank and Spill Prevention Act of 1989, all applicable regulations, and with the requirements for obtaining and maintaining a permit required under this Act. I certify my responsibility for assuring the following permit requirements:

- Storage tank systems are in compliance with applicable administrative, technical and operational requirements as specified in Subchapter E for underground tanks or Subchapter F or G for aboveground tanks.
- Tank handling and inspection activities are performed by an individual possessing DEP certification in the appropriate category as required in Subchapters A and B.
- Underground storage tanks meet the applicable financial responsibility requirements of Subchapter H (relating to financial responsibility requirements).
- A Spill Prevention Response (SPR) Plan must be submitted to the appropriate DEP regional office for facilities that have aboveground storage tanks where the total capacity of all aboveground tanks is greater than 21,000 gallons.
- Other state and local permits required for operation of the tank system have been attained.

My signature represents to the Department that I own the storage tank(s) and am aware of the responsibilities and potential liabilities as an "owner" arising under the Storage Tank and Spill Prevention Act of 1989 and all applicable regulations. I am also advised that statements made on this registration is made subject to the penalties of 18 PA. C.S.A. Section 4904 relating to unsworn falsification to authorities.

Type or Print Owner Name Gary Bowman

Information & Invoices should be sent to:

- Tank Owner Contact
- Site Contact
- Facility Operator
- Other Responsible Party Identified Below

Organization Name or Registered Fi	ctitious Name	Emplo	ver ID# (EIN)	Dun & Bradstreet ID#
NorthStar Contracting Group, Inc.			,	
Individual Last Name	First Name	M	Suffix	SSN
Bowman	Gary	Ρ.	Sr.	
Additional Individual Last Name	First Name	MI	Suffix	SSN

Mailing Address Line 2			
-			
	State	ZIP+4	Country
	PA	19124	USA
2		Phone	Ext.
		610-636-4574	
		State PA	State ZIP+4 PA 19124 Phone 610-636-4574

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X. INSTALLER / REMOVER CERTIFICATION

This section must be completed by the certified tank handler(s) who is responsible for the installation or removal from service of the aboveground and underground storage tank systems listed in Section VI. Tank modification activity must be submitted on a "Tank Modification Report" form.

SIGNATURE & CERTIFICATION OF INSTALLER(S) / REMOVER(S)

As the certified tank handler responsible for the tank handling activities in the category or categories listed. I certify that all tank handling activities were conducted in compliance with the design, installation and operation standards of the Storage Tank and Spill Prevention Act of 1989 and all applicable regulations. I also certify, under penalty of law as provided in 18 PA C.S.A. 4904 (relating to unsworn falsification to authorities), that the information provided therein is true, accurate and complete to the best of my knowledge and belief.

ŧ	Installer/Remover Name	Construction Standard	Individual Certification#	Certification Category	Company Certification#	Installer/Remover Signature	Af
×	Kristian Satterthwaite		5081	AFR	1557	Mart Oct. Hand	10/26/01
×	Kristian Satterthwaite		5081	AFR	1557	Martine 201 110 112	10/0/01
						Stor 12 1 199 James and Store	10/100/11
							/ /
							1

XI. INSPECTOR CERTIFICATION

This section must be completed by the DEP Certified Tank Inspector(s) who is responsible for varifying the installation standards for field constructed tanks and aboveground tanks greater than 21,000 gallons listed in Section VI. (Type or Print legibly) A DEP Certified Inspector may also be responsible for inspecting existing ASTs which are entering regulated service for the first time with no tank handling activities.

SIGNATURE & CERTIFICATION OF INSPECTOR(S)

As the certified tank inspector responsible for verifying tank handling activities and construction standards, I certify that the tank(s) listed below are constructed to appropriate industry standards and, if applicable, to manufacturer's specifications; that the tank(s) have been tested as required by industry standards; and that the tank(s) meet or exceed applicable design and operating standards; and are in compliance with the requirements of the Storage Tank and Spill Prevention Act of 1989, and all applicable regulations. I also certify under penalty of law as provided in 18 PA C.S.A. 4904 (relating to unsworn falsification to authorities), that the information provided herein is true, accurate and complete to the best of my knowledge and belief.

Tank#	Inspector Name	Construction Standard	Individual Certification#	Certification Category	Company Certification#		inspector Signature			ata
							F			
		TIS IIX	E SDECIEIO	AICTAL LAT	and an and an				_	
			יובויזביים ב	INDIALLAI	UN FERIMII	NUMBER				
If a site-sper	cific permit was required for	r a new tank install	ation, write the tai	nk number(s) an	d permit number	(s) in the annu	unista hov			
20	to Coordia Installation Domini					while one of the	WAN ATHINK			
in l	Mina unemensin munado-m	III Iau	K# Tank#	Tank# T	ank# Tank#	Tank#	Tank#	Tank#	Tank#	Tank
								And the same t	1 MILLION	AVERAS
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Appendix B

Aboveground Storage Tank System Closure Report Forms



DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS

ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

51-33624

Facility I.D.

Former Philadelphia Refinery Point Breeze - Tank Group 7A

Facility Name

Philadelphia Municipality Philadelphia County

January 22, 2024 Date Prepared

Kevin L. Long Name of Person Submitting Report (Please Print)

> Terraphase Engineering Company Name (If Applicable)

> > Principal Consultant Title

Closure Method (Check all that apply):

AST Removal

- AST Closure-In-Place
- AST Change-In-Service

Site Assessment Results (Check all that apply):

- No Obvious Contamination Sample Results Meet Standards/Levels
- No Obvious Contamination Sample Results Do Not Meet Standards/Levels
- Obvious, Localized Contamination Sample Results Meet Standards/Levels
- Obvious, Localized Contamination Sample Results Do Not Meet Standards/Levels
- Obvious, Extensive Contamination

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION **BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS**

DATE RECEIVED:

ABOVEGROUND STORAGE TANK SYSTEM **CLOSURE REPORT FORM**

Owners who are permanently closing aboveground storage tank systems may use this form to demonstrate that a storage tank system closure was performed in accordance with technical guidance document 263-4200-001 "Closure Requirements for Aboveground Storage Tank Systems". PLEASE PRINT OR TYPE. COMPLETE ALL QUESTIONS.

SECTION I. Owner/Facility/Tank/Waste Management and Disposal Information

1. Facility ID Number 51-33624

- Breeze Tank Group 7A
- 3. Facility County Philadelphia

6. Facility Contact Person Anne R. Garr

- 5. Facility Address 3144 West Passyunk Avenue
- 4. Facility Municipality Philadelphia

2. Facility Name Former Philadelphia Refinery Point

- 7. Facility Telephone Number (312) 796-6564
- 8. Owner Name Philadelphia Energy Solutions Refining and Marketing LLC
- 9. Owner Mailing Address 111 S. Wacker Dr., Ste 3000
- 10. Description of Aboveground Storage Tank Systems (Complete for each tank system closed)

DATE OF TANK SYSTEM	CLOSURE (Month/Day/Year)	9- 29 -2021	9- 29 -2021					
Description of Aboveground Storage Tank System (Complete for each tank system undergoing closure)								
DEP Tank ID Number		019A	020A					
Total Capacity (Gallons)		3,045,000	3,045,000					
Substance(s) Stored	a. Petroleum		_		_			
I hroughout Operating	Unleaded Gasoline							
Life of Lank System	Leaded Gasoline							
(Check All That Apply)	Aviation Gasoline							
	Blended Ethanol %							
	Kerosene							
	Jet Fuel							
	Diesel Fuel							
	Biodiesel%							
	Fuel Oil No. 1							
	Fuel Oil No. 2							
	Fuel Oil No. 4							
	Fuel Oil No. 5							
	Fuel OII No. 6							
	New Motor Oil							
	Nonpetroleum Oil Specify							
	Other Specify	Light Cylco	Distillato					
	Other, Opeeny	Oil	Untreated					
NOTE: If Hazardous	b. Hazardous Substance							
Substance Block is Checked.	Name of Principal							
Attach Safety Data	CERCLA Substance							
Sheets (SDS)	AND							
、 <i>,</i>	Chemical Abstract							
	Service (CAS) No.							
	c. Unknown							

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CLOSURE METHOD(s):	DEP Tank ID Number:	019A	020A	
Partial Storage Tank System Closure				
Tank	a. Removal	\boxtimes	\square	
🗌 N/A	b. Closure-in-Place			
	c. Change-in-Service			
Piping	a. Removal	\boxtimes	\square	
🗌 N/A	b. Closure-in-Place			
	c. Change-in-Service			
Dispenser	a. Removal			
🖂 N/A	b. Closure-in-Place			
	c. Change-in-Service			
Other	a. Removal			
	b. Closure-in-Place			
	c. Change-in-Service			

Describe Closure Activities:

The tanks and associated piping were evacuated of any sale-able product, which was consolidated / bulked and eventually sold. All materials were either transferred to a slop oil tank through existing piping at the facility or via vacuum truck. When feasible the lines were drained back to the tank, and any product removed using a vacuum truck and stored with the other bulked products for future sale. The associated piping was then cleaned using copious amounts of water, high pressure water and /or purged with air or an inert gas such as nitrogen. Some heavy oil lines were flushed using cutter stock before using water. When required, a thermal Oxidizer was utilized to reduce the LEL inside the tank prior to opening and performing Confined Space Entry for cleaning. When necessary or prudent tanks and/or piping were also purged by pulling the internal atmosphere through activated carbon. Once the piping was cleaned, verification was conducted via a physical walk-down of the system, and painting valves and piping green as each was confirmed to be open and empty. The piping and utilities were then air gapped by the mechanical contractor (Nooter). Air gapping was followed by the simultaneous removal of the piping system and the cleaning the interior of the tank. Interior cleaning was conducted by one of three subcontracted industrial services companies (ACV Enviro, MPW, EISCO) and included when necessary the removal of floating roof seals (EFR/IFR). Pontoons were also inspected prior to demolition and if found to contain free product, they were evacuated and the product consolidated with the other like products stored for future sale. All cleaning water and rinsates were collected via vacuum truck and water was decanted at the wash pad leading to the the on-site WWTPs. The remaining sludges and tank bottoms were stabilized with water absorbing polymers and or organic products such as kiln dried sawdust to ensure no free liquids in transit. The material was then loaded into intermodal containers (maximum 24 tons per container and 6 containers per rail car), placed on rail cars. Bills of lading were generated and sent to the railroad to schedule for pickup. The material was managed under 40 CFR 261.4(a)(24) verified recycling exemption and transported by rail to CWM in Sulphur, LA. Upon completion of the cleaning process the tanks and any remaining piping were dismantled, loaded into scrap recycling trucks and/or containers weighed at the facility scale and transported to a local scrap recycling company.

Yes N/A

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 \boxtimes

11. Briefly describe the storage tank facility and the nature of the operations which were conducted at the facility (both historical and present) **including use of the storage tank systems:**

Tank Group 07A was located in the south-central portion of the Former Philadelphia Refinery

Complex. The tanks in the group held a variety of materials associated with the petroleum refining process.

- 12. A site location and sampling map of the site, drawn to scale, is attached. See page 11 of 11.
 - 13. Original, color photographs of the closure process involving any excavation are attached (i.e., inside of excavation/piping runs, pit water, containment structure and foundation showing condition).
 - 14. An amended "Storage Tanks Registration/Permitting Application" Form was submitted to the DEP, Bureau of Environmental Cleanup and Brownfields, Division of Storage Tanks, P.O. Box 8762, Harrisburg, PA 17105-8762.

Date: 10 / 4 / 2021



15. If a release was confirmed, the appropriate regional office of DEP was notified by the owner or operator.

Date: / / Office: ____

N/A

Yes

 \square

- 16. If tanks were cleaned on-site:
 - a. Briefly describe the disposition of usable product: <u>Usable product was drained from the tanks</u> prior to cleaning and transferred to other on-site storage tanks. The useable product was <u>consolidated and sold</u>. Any residual product was discharged to the on-site process sewer and wastewater treatment system.

b. Briefly describe the disposal of unusable product, sludges, sediments, and wastewater generated during cleaning. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal): All tank bottoms to include sediments, sludges containing recoverable oil were managed in accordance with 40 CFR261.4(a)24. When shipped by rail to CWM in Sulphur, LA, the material was solidified using organic agents such as kilndried sawdust to ensure no free liquid during trasnsit, then placed into Inter-modal containers, loaded onto railcars, properly placarded and BOL's were generated and provided to the railroad. When transported to SAREX in West Deptford, NJ, the material was transporterd via vacuum truck and managed under the same exemption 40 CFR 261.4(a)(24). Any wastewater generated from cleaning was treated through the onsite waste water treatment plants (NPDES Permit #s 0012629 (Point Breeze) and 0011533 (Girard Point). Generator ID # PAD 0497910-98.

- c. If tank contents were determined/deemed to be hazardous waste, provide:
 - (1) Generator ID Number: PAD 04979109
 - (2) Licensed Hazardous Waste Transporter Name and ID Number: Dana Transport, HW ID #40106; Chemical Waste Management - LA 0000777201, BNSF Railway Company - LA 000147272
- \boxtimes 17. If tanks were removed from the site for cleaning:
 - a. Provide the name and permit number of the processing, treatment, storage or disposal facility performing the tank cleaning:
 - b. If tank contents were determined/deemed to be hazardous waste, provide:
 - (1) Generator ID Number:
 - (2) Licensed Hazardous Waste Transporter Name and ID Number:
 - 18. Briefly describe the disposition of tanks/piping (Attach documentation of proper disposal): <u>All tanks and associated piping were cleaned, demolished and recycled for scrap value. Pipe and tank</u> <u>scrap was not segregated for transportation to the scrap facility; therefore, a specific quantity of piping</u> <u>or. tank scrap was not detailed in disposal documentation.</u>

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	\boxtimes	19.	If contaminated soil is excavated:			
			 Briefly describe the disposition and amount (tons) of contaminated soil. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal): 			
			 b. If contaminated soil is determined/deemed to be hazardous waste, provide: (1) Generator ID Number:			
Yes	N/A ⊠	20.	Briefly describe the disposition of and amount (tons) of uncontaminated soil and debris (attach analyses):			
		21.	If the tanks were "Closed-in-Place" provide information below: a. Briefly describe the tank cleaning process:			
			b. If subcontracted, name and address of company that performed the tank cleaning:			
			c. How were tanks marked/labeled with permanent closure date:			

I, <u>Philadelphia Energy Solutions Refining And Marketing LLC</u>, hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating (Print Name)

to unsworn falsification to authorities) that I am the owner of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section I) is true, accurate and complete to the best of my knowledge and belief.

Signature of Tank Owner

2 / 7 / 2024

Date

Philadelphia Energy Solutions Refining And Marketing LLC

Company Name (If applicable)

Anne R. Garr, Assistant Secretary

Title

ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION II. Tank Handling Information

Facility ID Number<u>51 - 33624</u> DEP Tank ID Number(s) <u>019A, 020A</u>

Yes N/A

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1. Briefly describe the excavation and initial on-site staging of uncontaminated/contaminated soil and debris:

Removed tank and piping debris was segregated and loaded into roll-off containers during demolition. Soil excavation was not completed at the time of AST removal.

2. Briefly describe the method of piping system closure and the closure of the piping systems including the quantity and condition of the piping:

All the pertinent tank and piping system locations requiring sampling for closure purposes were documented, cleaned, demolished, and recycled for scrap value. In some cases, air gapping and removal of tank system piping prior to the demo of the tank was conducted. No problems or issues concerning the condition of the piping systems were reported.

3. Briefly describe the condition of the tanks and any problems encountered during tank handling or tank removal activities:

None reported.

4. Briefly describe the method used to purge the tanks of and monitor for hazardous or explosive vapors:

Vapors were monitored via a LEL meter. The tanks and associated piping were evacuated of any sale-able product and then cleaned using copious amounts of water, high pressure water and /or purged with air or an inert gas such as nitrogen. Some heavy oil lines were flushed using cutter stock before using water. When required, a thermal oxidizer was utilized to reduce the LEL inside the tank prior to opening and performing Confined Space Entry for cleaning. When necessary or prudent tanks and/or piping were also purged by pulling the internal atmosphere through activated carbon.

- 5. If tanks were cleaned on-site:
 - a. Briefly describe the tank cleaning process: <u>The subcontracted companies used to clean tanks</u> were ACV ENVIRO, EISCO, and MPW. Tanks were drained, cut open, rinsed and scrubbed clean of any residuals before demolition. See additional detail on page 3.
 - b. If subcontracted, name and address of company that performed the tank cleaning:

NorthStar Contracting Group, Inc., 2250 East Adams Avenue, Philadelphia, PA 19124 ACV Enviro, 2527 Market Street, Aston PA 19014 EISCO, 288 Oak Grove Road, Swedesboro, NJ 08085 MPW, 9711 Lancaster Road SE, Hebron, OH 43025

6. If tanks were "Closed-in-Place", briefly describe how tanks were rendered inoperative, marked permanently closed with date, vented and secured to prevent unauthorized entry:

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7. If contamination was suspected or observed, the "Notification of Contamination" form was submitted.

Kristian Satterthwaite

_, hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to

(Print Name)

unsworn falsification to authorities) that I am the certified remover who performed the tank handling activities associated with the closure of the above referenced storage tank(s) and that the information provided by me in this closure report (Section I) is true, accurate and complete to the best of my knowledge and belief.

Signature of Certified Remover

#5081

Remover Certification Number

1 / 31 / 2024 Date

#1557

Company Certification Number

JD2 Environmental, Inc.

Company Name

800 East Washington Street

Street

West Chester, PA 19380

City/Town, State, Zip

(610) 430-8151

Phone
ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # <u>019A</u> (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number 51 - 33624

- A. Provide depth of *BEDROCK* and *WATER* IF encountered during excavation or soil boring (write "N/A": if NOT encountered).
 - Bedrock N/A
 feet below land surface
 Water 1
 feet below land surface

B. Provide Length of *PIPING* IF piping was closed-in-place (write "N/A" if NOT closed-in-place).

Length of piping <u>N/A</u> feet

C. TANK SYSTEM REMOVED FROM THE GROUND/SITE

1). Was obvious contamination observed while excavating, sampling or removing the tank system?

- NO ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records ----→ Do not complete item C.2. below.
 - YES ----→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills):

_____ Complete item C.2. below.

- 2). Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?
 - YES ---- ➤ Remove or remediate contaminated soil ---- ➤ Conduct confirmatory sampling ---- ➤ See end of this section for options on submission and maintenance of closure records.
 - NO ---- ➤ Continue Interim Remedial Actions ---- ➤ See end of this section for options on submission and maintenance of closure records.

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

■ NO ---- Conduct confirmatory sampling ---- See end of this section for options on submission and maintenance of closure records.

YES ---- ➤ Report release to DEP within 24 hours ---- ➤ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills):

Continue with corrective action – – – – See end of this section for options on submission and maintenance of closure records.

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

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Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and operators who took the tank system out of service;
- (b) By the current owners and operators of the tank system site; or
- (c) By mailing these records to the DEP regional office responsible for the county in which the tank is located if they cannot be maintained at the closed facility.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the Corrective Action Process (CAP) regulations requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, Kevin Long , hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn (Print Name)

falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.

Signature of Person Performing Site Assessment

Principal Consultant Title of Person Performing Site Assessment

609-236-8171 x93 Telephone Number of Person Performing Site Assessment

Date

Terraphase Engineering, Inc. Name of Company Performing Site Assessment

ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

Sample/Analysis Information (Attachment for Section III.)

Facility ID Number 51 - 33624

Sample I.D. (See diagram)	Parameter	Analytical Method ¹	r	Media	Result (units)	Detection Limit (units)	Date Sample Taken	Date Sample Analyzed
See attached summary table								1 1
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¹ Where EPA Method 5035 is used, indicate sample collection option in the right-hand box of this column using the following codes:

P - Samples placed in a soil sample vial with a preservative present.

E - Samples collected and stored in a soil collection device which is airtight and affords little to no headspace.

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N - Samples placed in soil sample vial without a preservative present.

Site Location and Sampling Map - Use this page or suitable facsimile to provide a large-scale map of the site where storage tank systems were closed. Scales between 1" = 10 and 1" = 100 feet frequently work well. Include the following information as each applies to the site: facility name and I.D., county, township or borough, property boundaries or area of interest, buildings, roads and streets with names or route numbers, utilities, location and ID number of storage tank systems removed including piping and dispensers, soil stockpile locations, excavations or other locations of product recovery, north arrow, approximate map scale and legend. Also, show depth and location of samples with sample ID numbers cross-referenced to the same ID numbers shown on Page 10 of 11.

Facility Name and ID:

County:

Township/Borough: See attached Figure

Table 1 - 019A (GP R 250)

Sample/Analysis Information (Attachment for Section III.)

		Start Depth	End Depth		Analytical		Results	Detection Limit		Date Sample
Location GPR250-01	Sample ID GPR250-01-SS01	(ft) 2.5	(ft) 3	Parameter Benzo(b)fluoranthene	Method SW/8270F	Media Soil	(mg/kg) 0.58	(mg/kg) 0.12	Date Sample Taken 12/15/2023	Analyzed 12/19/2023
GPR250-01	GPR250-01-SS01	2.5	3	Lead	SW6010D	Soil	350	2.35	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	Pyrene Phonanthrono	SW8270E	Soil	0.55	0.12	12/15/2023	12/19/2023
GPR250-01 GPR250-01	GPR250-01-SS01	2.5	3	Naphthalene	SW8270E	Soil	0.24	0.12	12/15/2023	12/19/2023
GPR250-01	GPR250-01-SS01	2.5	3	Fluorene	SW8270E	Soil	0.021	0.2	12/15/2023	12/19/2023
GPR250-01 GPR250-01	GPR250-01-SS01 GPR250-01-SS01	2.5	3	Benzo(g,h,i)perylene Benzo(a)pyrene	SW8270E SW8270F	Soil	0.3	0.16	12/15/2023	12/19/2023 12/19/2023
GPR250-01	GPR250-01-SS01	2.5	3	Benzo(a)anthracene	SW8270E	Soil	0.37	0.12	12/15/2023	12/19/2023
GPR250-01	GPR250-01-SS01	2.5	3	Anthracene	SW8270E	Soil	0.11	0.12	12/15/2023	12/19/2023
GPR250-01 GPR250-01	GPR250-01-SS01 GPR250-01-SS01	2.5	3	Chrysene	SW8260D SW8270E	Soil	0.42	0.12	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	1,2-Dibromoethane	SW8260D	Soil	ND	0.00042	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	Xylenes (total)	SW8260D	Soil	ND ND	0.0017	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	Benzene	SW8260D	Soil	0.00028	0.00042	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	Cumene	SW8260D	Soil	ND	0.00084	12/15/2023	12/20/2023
GPR250-01 GPR250-01	GPR250-01-SS01 GPR250-01-SS01	2.5	3	Ethyl Benzene Methyl tert-butyl ether	SW8260D SW8260D	Soil	ND ND	0.00084	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	Toluene	SW8260D	Soil	ND	0.00084	12/15/2023	12/20/2023
GPR250-01	GPR250-01-SS01	2.5	3	1,2,4-Trimethylbenzene	SW8260D	Soil	0.00038	0.0017	12/15/2023	12/20/2023
GPR250-02 GPR250-02	GPR250-02-SS01 GPR250-02-SS01	1.5	2	Benzo(g,h,i)perylene	SW8260D SW8270E	Soil	0.038	0.16	12/15/2023	12/20/2023
GPR250-02	GPR250-02-SS01	1.5	2	Pyrene	SW8270E	Soil	0.045	0.12	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	Phenanthrene	SW8270E	Soil	0.028	0.12	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	Chrysene	SW8270E	Soil	0.039	0.12	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	Benzo(b)fluoranthene	SW8270E	Soil	0.058	0.12	12/15/2023	12/19/2023
GPR250-02 GPR250-02	GPR250-02-SS01 GPR250-02-SS01	1.5	2	Benzo(a)pyrene Benzo(a)anthracene	SW8270E SW8270F	Soil	ND 0.032	0.16	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	Anthracene	SW8270E	Soil	ND	0.12	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	1,2-Dibromoethane	SW8260D	Soil	ND	0.00046	12/15/2023	12/20/2023
GPR250-02 GPR250-02	GPR250-02-SS01 GPR250-02-SS01	1.5	2	Toluene	SW8270E SW8260D	Soil	ND ND	0.2	12/15/2023	12/19/2023
GPR250-02	GPR250-02-SS01	1.5	2	1,2,4-Trimethylbenzene	SW8260D	Soil	ND	0.0018	12/15/2023	12/20/2023
GPR250-02	GPR250-02-SS01	1.5	2	1,2-Dichloroethane	SW8260D	Soil	ND	0.00091	12/15/2023	12/20/2023
GPR250-02	GPR250-02-SS01	1.5	2	Lead	SW6010D	Soil	36.3	2.24	12/15/2023	12/20/2023
GPR250-02	GPR250-02-SS01	1.5	2	Benzene	SW8260D	Soil	ND	0.00046	12/15/2023	12/20/2023
GPR250-02 GPR250-02	GPR250-02-SS01 GPR250-02-SS01	1.5	2	Cumene Fthyl Benzene	SW8260D SW8260D	Soil	ND ND	0.00091	12/15/2023 12/15/2023	12/20/2023 12/20/2023
GPR250-02	GPR250-02-SS01	1.5	2	Methyl tert-butyl ether	SW8260D	Soil	ND	0.0018	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	Pyrene	SW8270E	Soil	0.48	0.12	12/15/2023	12/19/2023
GPR250-03 GPR250-03	GPR250-03-SS01 GPR250-03-SS01	2	2.5	Naphthalene	SW8260D SW8270E	Soil	ND ND	0.00093	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	Fluorene	SW8270E	Soil	ND	0.2	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01	2	2.5	Chrysene Ronzo(a h i)porulono	SW8270E	Soil	0.28	0.12	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01	2	2.5	Benzo(b)fluoranthene	SW8270E	Soil	0.14	0.10	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01	2	2.5	Benzo(a)pyrene	SW8270E	Soil	0.27	0.16	12/15/2023	12/19/2023
GPR250-03 GPR250-03	GPR250-03-SS01 GPR250-03-SS01	2	2.5	Benzo(a)anthracene Phenanthrene	SW8270E SW8270E	Soil	0.28	0.12	12/15/2023 12/15/2023	12/19/2023 12/19/2023
GPR250-03	GPR250-03-SS01	2	2.5	1,2-Dibromoethane	SW8260D	Soil	ND	0.00046	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	Anthracene	SW8270E	Soil	0.057	0.12	12/15/2023	12/19/2023
GPR250-03 GPR250-03	GPR250-03-SS01 GPR250-03-SS01	2	2.5	1,2,4-Trimethylbenzene	SW8260D SW8260D	Soil	ND	0.0018	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	1,2-Dichloroethane	SW8260D	Soil	ND	0.00093	12/15/2023	12/20/2023
GPR250-03 GPR250-03	GPR250-03-SS01 GPR250-03-SS01	2	2.5	1,3,5-Trimethylbenzene Benzene	SW8260D SW8260D	Soil Soil	ND ND	0.0018	12/15/2023 12/15/2023	12/20/2023 12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	Cumene	SW8260D	Soil	ND	0.00093	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01	2	2.5	Ethyl Benzene	SW8260D	Soil	ND	0.00093	12/15/2023	12/20/2023
GPR250-03 GPR250-03	GPR250-03-SS01 GPR250-03-SS01	2	2.5	Lead	SW8260D SW6010D	Soil	ND 19.8	2.36	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Anthracene	SW8270E	Soil	ND	0.12	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	1,3,5-Trimethylbenzene	SW8260D	Soil	ND 0.035	0.0019	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Benzo(a)pyrene	SW8270E	Soil	ND	0.16	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Benzo(b)fluoranthene	SW8270E	Soil	0.042	0.12	12/15/2023	12/19/2023
GPR250-03 GPR250-03	GPR250-03-SS01D GPR250-03-SS01D	2	2.5	Benzo(g,h,i)perviene Chrvsene	SW8270E SW8270E	Soil	0.038	0.16	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Fluorene	SW8270E	Soil	ND	0.2	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Naphthalene	SW8270E	Soil	ND	0.039	12/15/2023	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Phenanthrene	SW8270E	Soil	0.056	0.12	<u>12/15/2023</u>	12/19/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Lead	SW6010D	Soil	17.2	2.31	12/15/2023	12/20/2023
GPR250-03 GPR250-03	GPR250-03-SS01D GPR250-03-SS01D	2	2.5	xylenes (total) 1,2,4-Trimethylbenzene	SW8260D SW8260D	Soil Soil	ND ND	0.0019	12/15/2023 12/15/2023	12/20/2023 12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	1,2-Dibromoethane	SW8260D	Soil	ND	0.00048	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	1,2-Dichloroethane	SW8260D	Soil	ND	0.00097	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Benzene	SW8260D	Soil	ND	0.00097	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Ethyl Benzene	SW8260D	Soil	ND	0.00097	12/15/2023	12/20/2023
GPR250-03	GPR250-03-SS01D	2	2.5	Methyl tert-butyl ether	SW8260D	Soil	ND ND	0.0019	12/15/2023	12/20/2023
TG07A-PZ01	TG07A-PZ01-231215			Benzo(a)anthracene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01 TG07A-PZ01	TG07A-P201-231215 TG07A-P201-231215			Benzo(b)Tluoranthene Benzo(g,h,i)pervlene	SW8270ESIM SW8270ESIM	Groundwater Groundwater	ND ND	0.00005	12/15/2023 12/15/2023	12/22/2023 12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Lead	SW6020B	Groundwater	0.001609	0.0001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01 TG07A-PZ01	TG07A-PZ01-231215			Toluene Phenanthrene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-PZ01 TG07A-PZ01	TG07A-P201-231215 TG07A-P201-231215			Cumene Benzene	SW8260D SW8260D	Groundwater Groundwater	ND ND	0.0005	12/15/2023 12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			1,3,5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			1,2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			1,2-Dibromoethane	SW8260D SW8011	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Xylenes (total)	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-PZ01 TG07A-P701	TG07A-PZ01-231215			Anthracene Xylenes (total)	SW8270ESIM	Groundwater Groundwater	ND ND	0.0001	12/15/2023 12/15/2022	12/22/2023 12/22/2023
	L COLLEUI COICIDU	1	1		502000	SIGGINGWALEI		0.001	12/ 13/ 2023	1 LI LLI LULD

Table 1 - 019A (GP R 250)

Sample/Analysis Information (Attachment for Section III.)

		Start Depth	End Depth		Analytical		Results	Detection Limit		Date Sample
Location	Sample ID	(ft)	(ft)	Parameter	Method	Media	(mg/kg)	(mg/kg)	Date Sample Taken	Analyzed
TG07A-PZ01	TG07A-PZ01-231215D			Anthracene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(a)anthracene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			, Benzo(g.h.i)pervlene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Phenanthrene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Naphthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Lead	SW6020B	Groundwater	0.0004309	0.001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215D			Chrvsene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2.4-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Cumene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.3.5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/22/2023
TG07A-PZ02	TG07A-PZ02-231215			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzo(g,h,i)pervlene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Fluorene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Phenanthrene	SW8270FSIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzo(a)anthracene	SW8270FSIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-P702	TG07A-PZ02-231215			Naphthalene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1.3.5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Anthracene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Xylenes (total)	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Lead	SW60208	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1 2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1 2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Cumene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-P702-231215			1 2 4-Trimethylbenzene	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-1202	TG07A-SW01-231215			Benzo(a)pyrene	SW/8270FSIM	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	0.00001	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(a)anthracene	SW0270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Pyrene	SW/8270ESIM	Groundwater	0.00002	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(g h i)pervlene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Phenanthrene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1 3 5-Trimethylbenzene	SW/8260D	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Anthracene	SW/8270FSIM	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Nanhthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Toluene	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07Δ-S\W/01	TG07A-SW01-231213			Ethyl Benzene	SW/8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG074-SW01	TG07Δ-S\W/01-231213			Benzene	SW/8260D	Groundwater	0 00010	0.0005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW/01	TG07A-SW01-231215			1.2.4-Trimethylhenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1.2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Lead	SW6020B	Groundwater	0.0008006	0.001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Cumene	SW/8260D	Groundwater	0.00019	0.001	12/15/2023	12/21/2023
TG07A-SW/01	TG07A-SW/01-231215			Xylenes (total)	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW02-231215			Phenanthrene	SW8270FSIM	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Benzo(a)anthracene	SW/8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231213			Benzo(a)pyrene	SW8270FSIM	Groundwater	ND	0.00000	12/15/2023	12/21/2023
TG07A-5W02	TG07A-SW02-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	0.00002	0.0001	12/15/2023	12/21/2023
TG074-SW/02	TG07Δ-S\N/02-231213			Benzo(g h j)pervlene	SW/8270ESIM	Groundwater	ND	0.00000	12/15/2023	12/21/2023
TG07A-SW/02	TG07A-SW/02-231213			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG074-SW02	TG074-S\N/02-221215			Anthracene	SW/8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW/02	TG07A-SW/02-231213			Naphthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07Δ-S\M/02	TG07A-SW02-231213			1.3.5-Trimethylhenzene	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW/02-231215			Fluorene	SW8270FSIM	Groundwater	ND	0.0023	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW/02-231215			Xylenes (total)	SW/8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Benzene	SW8260D	Groundwater	0.0002	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1.2.4-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1,2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023

TG07A-SW02 TG07A-SW02-231215 Pyrene SW8270ESIM Groundwater 0.0003 0.0001 12/15/2023 12/21/2023 TG07A-SW02 TG07A-SW02-231215 Cumene SW8260D Groundwater 0.00019 0.0005 12/15/2023 12/21/2023	TG07A-SW02	TG07A-SW02-231215	 	Lead	SW6020B	Groundwater	0.002074	0.001	12/15/2023	12/21/2023
TG07A-SW02 TG07A-SW02-231215 Cumene SW8260D Groundwater 0.00019 0.0005 12/15/2023 12/21/2023	TG07A-SW02	TG07A-SW02-231215	 	Pyrene	SW8270ESIM	Groundwater	0.00003	0.0001	12/15/2023	12/21/2023
	TG07A-SW02	TG07A-SW02-231215	 	Cumene	SW8260D	Groundwater	0.00019	0.0005	12/15/2023	12/21/2023

Notes:

D - Duplicate

SS -- Soil Sample

SW -- Surface Water

PZ -- Piezometer





	Client: Former Philadelphia Refinery	
terraphas engineeri	SeProject: Tank 019A – Tank Group 07A – ASTn gClosure Report Forms	Photo Log
	Project Number: P044.001.002	Page 1

019A (GP R 250)

Product Movement and Waste Disposal Documentation (Tank 019A)



PES Project Load Ticket

#5120103

Hilly Juny

Sold to: fillighany

Location:

Carrier:__

Scrap

TA,11+750

Load Ticket:_

16165

1545 Date:__

Non-Haz / A	CM / Sp	pecial W	aste
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Activity Location:

No. 1 P+S No. 2 Heavy Melt Cast Iron Mixed Pipe Light Iron Re-Bar Other Mixed Non-Ferrous Insulated Copper Wire No. 1 Copper Wire Brass Aluminum Stainless, Grade	Waste Stream C&D Demolition Debris Non-Friable ACM Friable ACM PB WWTP Sludge GP WWTP Sludge Characteristic Haz Waste (flammable D001, corrosive D002, reactive D003, toxicity D004 – D043) Process Haz Waste Demo Debris (C&D) Non-Haz Waste (Solid) Non-Haz Waste (Liquid) PCB (Non-TSCA) PCB (TSCA)
Other Alloy, Grade	
L Mixed	Disposal Facility:
Condition	Carrier:
Condition Prepared Unprepared Green Waste Concrete Masonry Mixed Masonry Wood Only Demo Debris (C&D) Dirt / Fill Sand Fill Crushed Stone Other:	Carrier: Truck #: Container #: Manifest #: Profile / Approval #: Scale Info Scale Ticket #: Gross Weight:
Scale Ticket #:	
Gross Weight:	Tare weight:
Tare Weight: 11460 115	Net weight:
Net Weight: 293601 1,0	Net Kilogram Conversion (PCB Only):
NorthStar Rep. Signature:	NorthStar Rep. Signature:
Received By:	

HILCO REDEVELOPEMENT PARTNERS

3144 W. PASSYUNK AVE

PHILADELPHIA PA, 19145

Customer: HILCO HILCO

σ.,

DT260-50 - TRUCK 260 W/ TRAILER 50 CARLAD - CARLA DAVILA

Remarks: SCRAP REMOVAL

Signature:

Material	Quantity	Price	Material \$	Delivery \$	Misc \$	Tax \$	Line Total \$
SCRAP	14.68 tn						

Weight Information

Material	Gross	Tare	Net
SCRAP	70960.00	41600.00	29360.00

Ticket #: 20030415 Date: 09/24/2021 7:16 AM Phone: () -Fax: () -

Order Number: 001 SCRAP REMOVAL Tons: 63842.216 Loads: 4260



ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # <u>020A</u> (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number 51 - 33624

- A. Provide depth of *BEDROCK* and *WATER* IF encountered during excavation or soil boring (write "N/A": if NOT encountered).
 - Bedrock N/A
 feet below land surface
 Water 1
 feet below land surface

B. Provide Length of *PIPING* IF piping was closed-in-place (write "N/A" if NOT closed-in-place).

Length of piping <u>N/A</u> feet

C. TANK SYSTEM REMOVED FROM THE GROUND/SITE

1). Was obvious contamination observed while excavating, sampling or removing the tank system?

- NO ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records ----→ Do not complete item C.2. below.
 - YES ----→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills):

_____ Complete item C.2. below.

- 2). Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?
 - YES ---- ➤ Remove or remediate contaminated soil ---- ➤ Conduct confirmatory sampling ---- ➤ See end of this section for options on submission and maintenance of closure records.
 - NO ---- ➤ Continue Interim Remedial Actions ---- ➤ See end of this section for options on submission and maintenance of closure records.

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

■ NO ---- Conduct confirmatory sampling ---- See end of this section for options on submission and maintenance of closure records.

YES ---- ➤ Report release to DEP within 24 hours ---- ➤ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills):

Continue with corrective action – – – – See end of this section for options on submission and maintenance of closure records.

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and operators who took the tank system out of service;
- (b) By the current owners and operators of the tank system site; or
- (c) By mailing these records to the DEP regional office responsible for the county in which the tank is located if they cannot be maintained at the closed facility.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the Corrective Action Process (CAP) regulations requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, <u>Kevin Long</u>, hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn (Print Name)

falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.

Signature of Person Performing Site Assessment

Principal Consultant Title of Person Performing Site Assessment

Terraphase Engineering, Inc. Name of Company Performing Site Assessment

609-236-8171 x93 Telephone Number of Person Performing Site Assessment

ABOVEGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

Sample/Analysis Information (Attachment for Section III.)

Facility ID Number 51 - 33624

Sample I.D. (See diagram)	Parameter	Analytical Method ¹	r	Media	Result (units)	Detection Limit (units)	Date Sample Taken	Date Sample Analyzed
See attached summary table								1 1
							/ /	1 1
							/ /	1 1
							/ /	1 1
							/ /	1 1
							/ /	1 1
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								1 1
							/ /	1 1
							/ /	/ /

¹ Where EPA Method 5035 is used, indicate sample collection option in the right-hand box of this column using the following codes:

P - Samples placed in a soil sample vial with a preservative present.

E - Samples collected and stored in a soil collection device which is airtight and affords little to no headspace.

2630-FM-BECB0514 Rev. 12/2018 Section III

N - Samples placed in soil sample vial without a preservative present.

Site Location and Sampling Map - Use this page or suitable facsimile to provide a large-scale map of the site where storage tank systems were closed. Scales between 1" = 10 and 1" = 100 feet frequently work well. Include the following information as each applies to the site: facility name and I.D., county, township or borough, property boundaries or area of interest, buildings, roads and streets with names or route numbers, utilities, location and ID number of storage tank systems removed including piping and dispensers, soil stockpile locations, excavations or other locations of product recovery, north arrow, approximate map scale and legend. Also, show depth and location of samples with sample ID numbers cross-referenced to the same ID numbers shown on Page 10 of 11.

Facility Name and ID:

County:

Township/Borough: See attached Figure

Table 1 - 020A (GP R 251)

Sample/Analysis Information (Attachment for Section III.)

Location	Sample ID	Start Depth (ft)	End Depth (ft)	Parameter	Analytical Method	Media	Results (mg/kg)	Detection Limit (mg/kg)	Date Sample Taken	Date Sample Analyzed
GPR251-01 GPR251-01	GPR251-01-SS01 GPR251-01-SS01	0	0.5	Toluene Xvlenes (total)	SW8260D SW8260D	Soil Soil	ND ND	0.00085	12/15/2023 12/15/2023	<u>12/20/2023</u> 12/20/2023
GPR251-01	GPR251-01-SS01	0	0.5	Naphthalene	SW8270E	Soil	ND	0.039	12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	Fluorene	SW8270E	Soil	ND	0.19	12/15/2023	12/19/2023
GPR251-01 GPR251-01	GPR251-01-SS01 GPR251-01-SS01	0	0.5	Benzo(g,h,i)perylene	SW8270E	Soil	0.077	0.12	12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	Benzo(b)fluoranthene	SW8270E	Soil	0.093	0.12	12/15/2023	12/19/2023
GPR251-01 GPR251-01	GPR251-01-SS01 GPR251-01-SS01	0	0.5	Benzo(a)pyrene Benzo(a)anthracene	SW8270E	Soil Soil	0.081	0.16	12/15/2023 12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	Phenanthrene	SW8270E	Soil	0.092	0.12	12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	1,2,4-Trimethylbenzene	SW8260D	Soil	ND	0.0017	12/15/2023	12/20/2023
GPR251-01 GPR251-01	GPR251-01-SS01 GPR251-01-SS01	0	0.5	Lead	SW8270E SW6010D	Soil	ND 38	2.29	12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	Pyrene	SW8270E	Soil	0.13	0.12	12/15/2023	12/19/2023
GPR251-01	GPR251-01-SS01	0	0.5	1,2-Dibromoethane	SW8260D	Soil	ND ND	0.00042	12/15/2023	12/20/2023
GPR251-01	GPR251-01-SS01	0	0.5	1,3,5-Trimethylbenzene	SW8260D	Soil	ND	0.0017	12/15/2023	12/20/2023
GPR251-01	GPR251-01-SS01	0	0.5	Benzene	SW8260D	Soil	ND	0.00042	12/15/2023	12/20/2023
GPR251-01 GPR251-01	GPR251-01-SS01 GPR251-01-SS01	0	0.5	Ethyl Benzene	SW8260D SW8260D	Soil	ND ND	0.00085	12/15/2023	12/20/2023
GPR251-01	GPR251-01-SS01	0	0.5	Methyl tert-butyl ether	SW8260D	Soil	ND	0.0017	12/15/2023	12/20/2023
GPR251-02	GPR251-02-SS01	3	3.5	Anthracene	SW8270E	Soil	ND	0.11	12/15/2023	12/19/2023
GPR251-02	GPR251-02-SS01	3	3.5	Naphthalene	SW8270E	Soil	ND	0.037	12/15/2023	12/19/2023
GPR251-02	GPR251-02-SS01	3	3.5	Fluorene	SW8270E	Soil	ND	0.19	12/15/2023	12/19/2023
GPR251-02 GPR251-02	GPR251-02-SS01 GPR251-02-SS01	3	3.5	Chrysene Benzo(g.h.i)pervlene	SW8270E SW8270E	Soil	0.022 ND	0.11 0.15	12/15/2023	12/19/2023
GPR251-02	GPR251-02-SS01	3	3.5	Benzo(b)fluoranthene	SW8270E	Soil	ND	0.11	12/15/2023	12/19/2023
GPR251-02	GPR251-02-SS01	3	3.5	Benzo(a)pyrene	SW8270E	Soil	ND	0.15	12/15/2023	12/19/2023
GPR251-02 GPR251-02	GPR251-02-SS01	3	3.5	Phenanthrene	SW8270E	Soil	0.022 ND	0.11	12/15/2023	12/19/2023
GPR251-02	GPR251-02-SS01	3	3.5	Lead	SW6010D	Soil	21.8	2.28	12/15/2023	12/20/2023
GPR251-02 GPR251-02	GPR251-02-SS01 GPR251-02-SS01	3 २	3.5	Toluene Methyl tert-butyl ether	SW8260D	Soil	ND ND	0.00091	12/15/2023 12/15/2023	12/20/2023 12/20/2023
GPR251-02	GPR251-02-SS01	3	3.5	Ethyl Benzene	SW8260D	Soil	ND	0.00091	12/15/2023	12/20/2023
GPR251-02	GPR251-02-SS01	3	3.5	Cumene	SW8260D	Soil	ND	0.00091	12/15/2023	12/20/2023
GPR251-02 GPR251-02	GPR251-02-SS01 GPR251-02-SS01	3	3.5	Benzene 1.3.5-Trimethylbenzene	SW8260D SW8260D	Soil	ND ND	0.00045	12/15/2023	12/20/2023
GPR251-02	GPR251-02-SS01	3	3.5	1,2-Dichloroethane	SW8260D	Soil	ND	0.00091	12/15/2023	12/20/2023
GPR251-02	GPR251-02-SS01	3	3.5	1,2-Dibromoethane	SW8260D	Soil	ND	0.00045	12/15/2023	12/20/2023
GPR251-02 GPR251-02	GPR251-02-SS01	3	3.5	1,2,4-Trimethylbenzene	SW8260D	Soil	ND	0.0018	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01	2.5	3	Methyl tert-butyl ether	SW8260D	Soil	ND	0.0019	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01 GPR251-03-SS01	2.5	3	Ethyl Benzene	SW8260D	Soil	ND ND	0.00094	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01	2.5	3	Benzene	SW8260D	Soil	ND	0.00047	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01	2.5	3	1,3,5-Trimethylbenzene	SW8260D	Soil	ND	0.0019	12/15/2023	12/20/2023
GPR251-03 GPR251-03	GPR251-03-SS01 GPR251-03-SS01	2.5	3	1,2-Dichloroethane	SW8260D SW8260D	Soil	ND ND	0.00094	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01	2.5	3	1,2,4-Trimethylbenzene	SW8260D	Soil	ND	0.0019	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01	2.5	3	Anthracene	SW8270E	Soil	ND	0.12	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01	2.5	3	Phenanthrene	SW8270E	Soil	0.046	0.12	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01	2.5	3	Pyrene	SW8270E	Soil	0.077	0.12	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01 GPR251-03-SS01	2.5	3	Naphthalene	SW8270E SW8270E	Soil	0.035 ND	0.039	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01	2.5	3	Chrysene	SW8270E	Soil	0.063	0.12	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01	2.5	3	Benzo(b)fluoranthene	SW8270E	Soil	0.084	0.12	12/15/2023	12/19/2023
GPR251-03 GPR251-03	GPR251-03-SS01 GPR251-03-SS01	2.5	3	Benzo(a)pyrene Benzo(a)anthracene	SW8270E	Soil	0.076	0.18	12/15/2023	12/19/2023
GPR251-03	GPR251-03-SS01	2.5	3	Xylenes (total)	SW8260D	Soil	ND	0.0019	12/15/2023	12/20/2023
GPR251-03	GPR251-03-SS01 GPR251-03-SS01	2.5	3	Benzo(g,h,i)perylene	SW8270E	Soil Soil	0.044 ND	0.16	12/15/2023 12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Pyrene	SW8270E	Soil	0.2	0.13	12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Benzo(a)anthracene	SW8270E	Soil	0.15	0.13	12/15/2023	12/19/2023
GPR251-04 GPR251-04	GPR251-04-SS01 GPR251-04-SS01	1	1.5	Benzo(a)pyrene Benzo(b)fluoranthene	SW8270E SW8270E	Soil	0.21	0.17	12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Benzo(g,h,i)perylene	SW8270E	Soil	0.13	0.17	12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Chrysene	SW8270E	Soil	0.17	0.13	12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Anthracene	SW8270E	Soil	ND	0.13	12/15/2023	12/19/2023
GPR251-04	GPR251-04-SS01	1	1.5	Phenanthrene	SW8270E	Soil	0.12	0.13	12/15/2023	12/19/2023
GPR251-04 GPR251-04	GPR251-04-SS01 GPR251-04-SS01	1	1.5	Fluorene 1.2.4-Trimethylbenzene	SW8270E SW8260D	Soil Soil	ND ND	0.22	12/15/2023 12/15/2023	12/19/2023 12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	Toluene	SW8260D	Soil	ND	0.0011	12/15/2023	12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	Methyl tert-butyl ether	SW8260D	Soil	ND	0.0022	12/15/2023	12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	Cumene	SW8260D	Soil	ND	0.0011	12/15/2023	12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	Benzene	SW8260D	Soil	ND	0.00054	12/15/2023	12/21/2023
GPR251-04 GPR251-04	GPR251-04-SS01 GPR251-04-SS01	1	1.5	1,3,5-Trimethylbenzene	SW8260D SW8260D	Soil	ND ND	0.0022	12/15/2023 12/15/2023	12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	1,2-Dibromoethane	SW8260D	Soil	ND	0.00054	12/15/2023	12/21/2023
GPR251-04	GPR251-04-SS01	1	1.5	Lead	SW6010D	Soil	66.7	2.63	12/15/2023	12/20/2023
GPR251-04 TG07A-PZ01	TG07A-PZ01-231215			Ayleries (total) Benzo(a)anthracene	SW8260D SW8270ESIM	50II Groundwater	ND ND	0.0022	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
1G07A-PZ01 TG07A-P701	1GU/A-PZ01-231215 TG07A-PZ01-231215			Naphthalene Lead	SW8270ESIM SW6020B	Groundwater Groundwater	ND 0.001609	0.0001	12/15/2023 12/15/2023	12/22/2023 12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-PZ01 TG07A-PZ01	TG07A-P201-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND ND	0.0005	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Cumene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			1,3,5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0005	<u>12/15/2023</u> <u>12/15/2023</u>	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			1,2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
1G07A-PZ01 TG07A-P701	1GU/A-PZ01-231215 TG07A-PZ01-231215			1,2,4-Trimethylbenzene	SW8260D SW8011	Groundwater Groundwater	ND ND	0.0025	12/15/2023 12/15/2023	12/21/2023 12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Xylenes (total)	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215			Anthracene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
IGU/A-PZ01	1GU/A-PZ01-231215D			xyienes (total)	SW8260D	Groundwater	ND	0.001	12/15/2023	12/22/2023

Table 1 - 020A (GP R 251)

Sample/Analysis Information (Attachment for Section III.)

		Start Depth	End Depth		Analytical		Results	Detection Limit		Date Sample
Location	Sample ID	(ft)	(ft)	Parameter	Method	Media	(mg/kg)	(mg/kg)	Date Sample Taken	Analyzed
TG07A-PZ01	TG07A-PZ01-231215D			Anthracene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(a)anthracene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			, Benzo(g.h.i)pervlene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Phenanthrene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Naphthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Lead	SW6020B	Groundwater	0.0004309	0.001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215D			Chrvsene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2.4-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Cumene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			1.3.5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/22/2023
TG07A-PZ01	TG07A-PZ01-231215D			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/22/2023
TG07A-PZ02	TG07A-PZ02-231215			Pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Benzo(a)pyrene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzo(g,h,i)pervlene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Fluorene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Phenanthrene	SW8270FSIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzo(a)anthracene	SW8270FSIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-PZ02-231215			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-P702	TG07A-PZ02-231215			Naphthalene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1.3.5-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Anthracene	SW8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Xylenes (total)	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Lead	SW60208	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1 2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			1 2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Cumene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-P702	TG07A-P702-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-PZ02	TG07A-P702-231215			1 2 4-Trimethylbenzene	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-1202	TG07A-SW01-231215			Benzo(a)pyrene	SW/8270FSIM	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	0.00001	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(a)anthracene	SW0270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Pyrene	SW/8270ESIM	Groundwater	0.00002	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Benzo(g h i)pervlene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Fluorene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Phenanthrene	SW8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1 3 5-Trimethylbenzene	SW/8260D	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Anthracene	SW/8270FSIM	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Nanhthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Toluene	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231213			Ethyl Benzene	SW/8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG074-SW01	TG07Δ-S\W/01-231213			Benzene	SW/8260D	Groundwater	0 00010	0.0005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW/01	TG07A-SW01-231215			1.2.4-Trimethylhenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			1.2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Lead	SW6020B	Groundwater	0.0008006	0.001	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW01-231215			Cumene	SW/8260D	Groundwater	0.00019	0.001	12/15/2023	12/21/2023
TG07A-SW/01	TG07A-SW/01-231215			Xylenes (total)	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW01	TG07A-SW02-231215			Phenanthrene	SW8270FSIM	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Benzo(a)anthracene	SW/8270ESIM	Groundwater	ND	0.00005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231213			Benzo(a)pyrene	SW8270FSIM	Groundwater	ND	0.00000	12/15/2023	12/21/2023
TG07A-5W02	TG07A-SW02-231215			Benzo(b)fluoranthene	SW8270ESIM	Groundwater	0.00002	0.0001	12/15/2023	12/21/2023
TG074-SW/02	TG07Δ-S\N/02-231213			Benzo(g h j)pervlene	SW/8270ESIM	Groundwater	ND	0.00000	12/15/2023	12/21/2023
TG07A-SW/02	TG07A-SW/02-231213			Chrysene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG074-SW02	TG074-S\N/02-221215			Anthracene	SW/8270FSIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW/02	TG07A-SW/02-231213			Naphthalene	SW8270ESIM	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07Δ-S\M/02	TG07A-SW02-231213			1.3.5-Trimethylhenzene	SW/8260D	Groundwater	ND	0.0001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW/02-231215			Fluorene	SW8270FSIM	Groundwater	ND	0.0023	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW/02-231215			Xylenes (total)	SW/8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Toluene	SW8260D	Groundwater	ND	0.00075	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Methyl tert-butyl ether	SW8260D	Groundwater	ND	0.001	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Ethyl Benzene	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			Benzene	SW8260D	Groundwater	0.0002	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1.2-Dichloroethane	SW8260D	Groundwater	ND	0.0005	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1.2.4-Trimethylbenzene	SW8260D	Groundwater	ND	0.0025	12/15/2023	12/21/2023
TG07A-SW02	TG07A-SW02-231215			1,2-Dibromoethane	SW8011	Groundwater	ND	0.00001	12/15/2023	12/21/2023

TG07A-SW02 TG07A-SW02-231215 Pyrene SW8270ESIM Groundwater 0.0003 0.0001 12/15/2023 12/21/2023 TG07A-SW02 TG07A-SW02-231215 Cumene SW8260D Groundwater 0.00019 0.0005 12/15/2023 12/21/2023	TG07A-SW02	TG07A-SW02-231215	 	Lead	SW6020B	Groundwater	0.002074	0.001	12/15/2023	12/21/2023
TG07A-SW02 TG07A-SW02-231215 Cumene SW8260D Groundwater 0.00019 0.0005 12/15/2023 12/21/2023	TG07A-SW02	TG07A-SW02-231215	 	Pyrene	SW8270ESIM	Groundwater	0.00003	0.0001	12/15/2023	12/21/2023
	TG07A-SW02	TG07A-SW02-231215	 	Cumene	SW8260D	Groundwater	0.00019	0.0005	12/15/2023	12/21/2023

Notes:

D - Duplicate

SS -- Soil Sample

SW -- Surface Water

PZ -- Piezometer



TG07A-I	PZ01 Legend ↓ Tank Group 07 Boundary Associated Piping PESRM Sample Location ③ Soil ◆ Surface Water Sample ◆ Piezometer
Philadelphia Energy Solutions Refining and Marketing LLC poveground Storage Tank Closure	Site Location and Sampling Map 020A (GP R 251)
JMBER: P044.001.002	Figure 2



Photo Log

Project Number: P044.001.002

Closure Report Forms

Project: Tank 020A – Tank Group 07A – AST

terraphase



terra phase	Client: Former Philadelphia Refinery Project: Tank 020A – Tank Group 07A – AST Closure Report Forms	Photo Log
	Project Number: P044.001.002	Page 2

Product Movement and Waste Disposal Documentation (Tank 020A)



Concrete Masonry

Dirt / Fill Sand Fill

Mixed Masonry Wood Only

Crushed Stone Other:____

Demo Debris (C&D)

Sold to: Location: Carrier:_

.

Condition

Non-Ferrous

PES Project Load Ticket

Load Ticket:

Date:

16139

9-23-21

5/20/03

Scrap :	Non-Haz / ACM / Special Waste
Migrany	Activity Location:
Steel / Ferrous No. 1 P+S No. 2 Heavy Melt Cast Iron Mixed Pipe Light Iron Re-Bar Other Trous Insulated Copper Wire No. 1 Copper Wire Brass Aluminum Stainless, Grade Other Alloy, Grade	Waste Stream C&D Demolition Debris Non-Friable ACM Friable ACM PB WWTP Sludge GP WWTP Sludge Characteristic Haz Waste (flammable D001, corrosive D002, reactive D003, toxicity D004 – D043) Process Haz Waste Demo Debris (C&D) Non-Haz Waste (Solid) Non-Haz Waste (Liquid) PCB (Non-TSCA) PCB (TSCA)
Mixed	Disposal Facility:
Other: n Prepared Unprepared	Carrier:
Green Waste	Container #:

Manifest #: Profile / Approval #:_____

Scale Info

Scale licket #:_	
Gross Weight:_	67766 16-
Tare Weight:	42400 115
Net Weight:	20366120,0
NorthStar Rep.	Signature:
Received By:	Jole.

HILCO REDEVELOPEMENT PARTNERS

3144 W. PASSYUNK AVE

PHILADELPHIA PA, 19145

Customer: HILCO HILCO

,

DT327-1109 - ALLEGHENY TRUCK 327-1109 CARLAD - CARLA DAVILA

Remarks: SCRAP REMOVAL

Signature:

Material	Quantity	Price	Material \$	Delivery \$	Misc \$	Tax \$	Line Total \$
SCRAP	10.18 tn						

Weight Information

Material	Gross	Tare	Net
SCRAP	62760.00	42400.00	20360.00

Ticket #: 20030389 Date: 09/23/2021 9:23 AM Phone: () -Fax: () -

Order Number: 001 SCRAP REMOVAL Tons: 63420.856 Loads: 4234



Product Movement and Waste Disposal Documentation (Tank Group 07A)

Date	From Tank #	Product Qty. (gal)	Transferred To Tank #	Product				
791								
10/21/2020	GP 791	0	N/A	Benzene				
		798						
10/21/2020	GP 798	0	N/A	Benzene				
		250						
10/9/2020	GP 250	7.046	PB 219	Untreated Distillate				
7/7/2021	Tank 250	3,200	Tank 843	NA				
8/16/2021	Tank 250/251	2.000	Tank 219	Oil/Water				
		251		0.9.1200				
8/26/2020	GP 251	7,046	PB 219	Untreated Distillate				
8/16/2021	Tank 250/251	2,000	Tank 219	Oil/Water				
9/10/2021	Tank 251	3,000	Wash Pad	Oil/Water				
9/10/2021	Tank 251	3,000	Wash Pad	NA				
9/10/2021	Tank 251	3,000	Wash Pad	Water				
9/10/2021	Tank 251	3,000	Wash Pad	Water/Oil				
9/10/2021	Tank 251	3,000	Tank 219	Oil				
		494						
6/28/2021	Tank 494	2,800	843	Oil				
6/28/2021	Tank 494	2,800	843	Oil				
6/28/2021	Tank 494	2800	843	Oil				
6/28/2021	Tank 494	2800	843	Oil				
6/28/2021	Tank 494	2800	843	Oil				
6/28/2021	Tank 494	2800	843	Oil				
6/29/2021	Tank 494	3000	219	Oil/Water				
6/29/2021	Tank 137 & 494	3000	843	Water/Oil				
6/29/2021	Tank 137 & 494	3000	219	Oil/Water				
7/2/2021	Tank 494	3000	843	Heavy Oil				
7/2/2021	Tank 494	2500	843	Recovery Oil and Water				
7/2/2021	Tank 494	3000	843	Oil				
7/2/2021	Tank 494	3000	Tank 843	Heavy Oil				
7/2/2021	Tank 494	2500	Tank 843	Recover Oil/Water				
7/2/2021	Tank 494	3000	Tank 843	Oil				
7/16/2021	Tank 494	300	Tank 843	Flush				
		790						
10/21/2020	Tank 790	0	N/A	Benzene				
		792						
10/21/2020	Tank 792	0	N/A	Cumene				
		793						
10/21/2020	Tank 793	0	N/A	Cumene				
		794	•					
11/6/2020	Tank 794	11927.09375	TK# 796 and totes	Solvent (glycol)				
		799						
10/16/2020	Tank 799	305.8229167	PB 191	Benzene				
. ,		767		•				
11/16/2020	Tank 767	1761.54	PB 191	Recovered Oil				

TG07A Disposition of residual Liquid/ Tank Bottoms

Tank #	Primary Product	Reg. #	AMS #	Temp Out of Service or CIP	Removal Date	HSM Ship Date	Sold as Product	Remarks
-				Date				
GP 250	LCO	019A	P-009	10/9/2020	9/29/2021	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 251	Distillate, Untreated	020A	P-010	8/26/2020	9/29/2021	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 494	Main Frac Bottoms	029A	P-039	T-9/17/2021	4/14/2022	Yes	N/A	Multiple Shipping Dates Managed as HSM and shipped by Rail to WM (see Shipment #'s 11 thru 15)
GP 767	Recovered Oil	046A	P-135	T - 11/16/2020	7/8/2022	N/A	N/A	Tank had approx. 1800 gallons of product that was transferred to PB 191 and subsequently sold and shipped by barge - sludge stablized and shipped by Rail to WM (see Shipment #11)
GP 790	Benzene	034A	P-017	T-11/04/2019	2/21/2020	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 791	Benzene	006A	P-018	T-11/04/2019	2/21/2022	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 792	Cumene	035A	P-019	T - 4/22/2020	2/21/2022	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 793	Cumene	036A	P-020	T - 4/24/2020	2/21/2022	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 794	Tetraethylene Glycol	037A	P-153	T - 11/6/2020	2/21/2022	N/A	Yes	Direct load to tank truck and sold to PBF - Residuals product was transferred after sale to 796 / washwater and residuals were fed to the GP WWTP to augment
GP 795	Benzene	N/A	P-021	T- 7/24/2009	2/21/2022	N/A	Yes	Flow Thru Oprocess Tank Exempt from PADEP Registration Tank
GP 796	Spent Tetraethylene Glycol	038A	P-154	T- 8/26/2021	8/26/2021	N/A	N/A	Tank was RCRA Empty - Residual material and washwater were Drained to the GP WWTP to augment dwindling food source
GP 798	Benzene	007A	P-022	T - 11/22/2019	2/21/2022	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 799	Benzene	039A	P-023	T - 8/3/2017	2/21/2022	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP 1088	*Fresh Caustic	033A	N/A	T - 10/15/2021	7/8/2022	N/A	Yes	Consolidated with other fresh Caustic into GP 973 and Sold to PBF Wash Water was drained at the bundle pad (BOL's to be posted)
GP 1116	Udex feed	030A	P-001	T- 12/19/2019	10/4/2021	N/A	N/A	Tank was empty and air gapped at turnover in June 2020
GP1117	Udex feed	005A	P-024	T- 2/6/2014	10/4/2021	N/A	N/A	Tank was empty and air gapped at turnover in June 2020

			We	ight				
Container #	Origin of Waste	Gross	Tare	Net	Facility Net	Rail Car #	Railcar Position	Over/Und er
5388	Tank 219	76,500	27,700	24.40	25.16	91047	А	0.4
5166	Tank 219	76,600	27,800	24.40	24.88	91047	В	0.4
5143	Tank 219	76,600	27,800	24.40	25.21	91047	С	0.4
5365	Tank 227	76,400	27,650	24.38	24.91	91047	D	0.4
5203	Tank 227	76,300	27,800	24.25	24.77	91047	E	0.3
5056	Tank 227	76,450	27,800	24.33	24.95	91047	F	0.3
				146.15	149.88			2
		Running To	otal (tons)	11,305.21	11,363.13			

			We	ight				
Container #	Origin of Waste	Gross	Tare	Net	Facility Net	Rail Car #	Railcar Position	Over/Und er
5217	Tank 843	76,350	27,900	24.23	24.22	91150	А	0.2
5141	Tank 843	76,600	27,900	24.35	24.52	91150	В	0.4
5339	Tank 843	76,700	27,600	24.55	24.05	91150	С	0.6
5075	Tank 843	76,500	27,800	24.35	24.23	91150	D	0.4
5321	Tank 843	76,050	27,650	24.20	24.21	91150	E	0.2
5225	Tank 843	76,300	27,650	24.33	24.18	91150	F	0.3
5085	Tank 843	76,100	27,750	24.18	24.18	91141	А	0.2
5109	Tank 843	76,600	27,850	24.38	24.37	91141	В	0.4
5284	Tank 843	76,500	27,800	24.35	24.36	91141	С	0.4
5239	Tank 843	76,750	28,200	24.28	24.38	91141	D	0.3
5242	Tank 843	77,100	28,350	24.38	24.39	91141	E	0.4
5257	Tank 843	76,400	28,100	24.15	24.03	91141	F	0.1
5356	Tank 843	75,950	27,600	24.18	24.07	91494	А	0.2
5793	Tank 843	76,400	27,700	24.35	24.36	91494	В	0.4
5215	Tank 843	76,650	27,750	24.45	24.49	91494	С	0.4
5269	Tank 843	76,750	27,950	24.40	24.38	91494	D	0.4
5307	Tank 843	76,550	27,750	24.40	24.34	91494	E	0.4
5228	Tank 843	76,050	27,800	24.13	24.23	91494	F	0.1
				437.60	436.99			6
		Running To	otal (tons)	11,742.81	11,800.12			

		Weight					
Container #	Origin of Waste	Gross	Tare	Net	Facility Net	Rail Car #	Railcar Position
5146	Tank 843	76,100	28,000	24.05	24.20	91063	А
5133	Tank 843	76,600	27,800	24.40	24.50	91063	В
5334	Tank 843	76,350	27,750	24.30	24.05	91063	С
5322	Tank 843	76,150	27,700	24.23	22.83	91063	D
5052	Tank 843	76,350	27,800	24.28	24.25	91063	E
5243	Tank 843	68,450	28,100	20.18	20.19	91063	F
5190	Tank 843	70,750	27,750	21.50	21.27	91133	А
5295	Tank 843	72,050	27,950	22.05	21.97	91133	В
5291	Tank 843	75,600	27,850	23.88	23.77	91133	С
5042	Tank 843	73,150	27,750	22.70	21.71	91133	D
5267	Tank 843	69,650	27,950	20.85	20.87	91133	E
5233	Tank 843	70,300	28,000	21.15	20.86	91133	F
5337	Tank 843	70,750	27,800	21.48	20.79	91085	А
5395	Tank 843	74,450	27,650	23.40	24.80	91085	В
5360	Tank 843	76,550	27,900	24.33	24.32	91085	С
5383	Tank 843	75,850	27,600	24.13	24.21	91085	D
5272	Tank 843	76,850	28,050	24.40	24.24	91085	E
5211	Tank 843	76,750	27,950	24.40	24.45	91085	F
415.68 413.28					413.28		
Running Total (tons) 12,158.49 12,213.40							

Over/Under 0.1 0.4 0.3 0.2 0.3 -2.5 -2.0 -0.1 -1.3 -3.2 -2.5 -0.1 0.1 0.1 0.1 -2.5 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	
0.1 0.4 0.3 0.2 0.3 -3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4 0.4	Over/Under
0.4 0.3 0.2 0.3 -3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4 0.4	0.1
0.3 0.2 0.3 -3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	0.4
0.2 0.3 -3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4 0.4	0.3
0.3 -3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4 0.4	0.2
-3.8 -2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	0.3
-2.5 -2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-3.8
-2.0 -0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-2.5
-0.1 -1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-2.0
-1.3 -3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-0.1
-3.2 -2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-1.3
-2.9 -2.5 -0.6 0.3 0.1 0.4 0.4	-3.2
-2.5 -0.6 0.3 0.1 0.4 0.4	-2.9
-0.6 0.3 0.1 0.4 0.4	-2.5
0.3 0.1 0.4 0.4	-0.6
0.1 0.4 0.4	0.3
0.4	0.1
0.4	0.4
10	0.4
-16	-16

Weight								
Container #	Origin of Waste	Gross	Tare	Net	Facility Net	Rail Car #	Railcar Position	Over/Und er
5198	Tank 843	76,500	28,300	24.10	24.45	91075	А	0.1
5363	Tank 843	76,550	27,900	24.33	24.21	91075	В	0.3
5137	Tank 843	76,500	27,900	24.30	24.22	91075	С	0.3
5237	Tank 843	77,350	28,700	24.33	24.43	91075	D	0.3
5130	Tank 843	76,600	28,000	24.30	24.14	91075	E	0.3
5148	Tank 843	76,650	27,950	24.35	24.58	91075	F	0.4
5077	Tank 843	76,750	28,000	24.38	24.57	91058	А	0.4
2371	Tank 843	76,900	28,100	24.40	24.49	91058	В	0.4
5317	Tank 843	76,800	28,100	24.35	24.32	91058	С	0.4
5110	Tank 843	76,800	28,000	24.40	24.29	91058	D	0.4
5003	Tank 843	77,350	28,550	24.40	24.57	91058	E	0.4
5161	Tank 843	76,300	27,950	24.18	24.12	91058	F	0.2
5304	Tank 843	76,800	28,000	24.40	24.45	91475	А	0.4
5058	Tank 843	76,700	28,000	24.35	24.40	91475	В	0.4
5207	Tank 843	76,800	28,000	24.40	24.25	91475	С	0.4
5180	Tank 843	76,550	27,900	24.33	24.33	91475	D	0.3
5236	Tank 843	76,950	28,300	24.33	24.50	91475	E	0.3
5283	Tank 843	77,000	28,200	24.40	24.45	91475	F	0.4
					438.77			6
Running Total (tons)				12,596.49	12,652.17			

UU11041-0#

Consignee: CHEMICAL WASTE MANAGEMENT

Bill of Lading (Page 1 of 2)

792

91047-24 3A

DOCUMENT #

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC
Street: 3144 PASSYUNKAVE

City/Stale/Zip: PHILADELPHIA, PA 19145

EPA ID: PAD 049791 098

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

INC

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

ΤÒ

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

TICKET 58115

SHIPPER'S INSTRU	JCTIONS
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HAZARDOUS MATERIAL	NO. SHIPPING UNITS		DESCRIPTION O SPECIAL MARKS &	OF ARTICLES		Туре	Volume	0.04
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Bill of Lading (Continuation Sheet) 2 of 2

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Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

1. 1 Cas

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

DOCUMENT# 91047-20 3A

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Man	Date: /-74-29

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

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Bill of Lading (Page 1 of 2)

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91047-24X 3B DOCUMENT #

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Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

TICKET 58116

	FROM	
Shipper: _LC	T: PHILADELPHIA ENERGY SOLUTION	IS R&M
Street	3144 PASSYUNKAVE	
EPA ID	D: PAD 049791 098	
City/Sta	ale/Zip: PHILADELPHIA, PA 19145	

Phone: (440) 228-1524

INCOLUTION AS	SHIPPING		DESCRIPTION O SPECIAL MARKS &	F ARTICLES EXCEPTIONS	Туре	Volume	UpM
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		RAIL CAR# E	PIX91047				
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TO Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

DOCUMENT# 91047-2 3B

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS Rain
LLC
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

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Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per / me to	Date: 1-25-22
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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TO Consignee: CHEMICAL WASTE MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

r

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/ai 1241

TICKET 58117

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

FROM

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

HAZARDOUS MATERIAL	NO. SHIPPING UNITS		DESCRIPTION SPECIAL MARKS	NOF ARTICLES		Туре	Volume	IOM
x	1	RQ, UN3077, E SUBSTANCE	ENVIRONMENT SOLID. N.O.S	ALLY HAZARDOU 9. III (BENZENE)	JS	СМ	24.40	т
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то	
Consignee: CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	-
Phone: (337) 583-2169	-

DOCUMENT# 91047-20 3C

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Denvill Gar	Date: 1-24-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Consignee: CHEMICAL WASTE MANAGEMENT

INC_____ Street 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

LFA ID. EADOUDTITZUT

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

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VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

TICKET 58118

91047-**2** 3

DOCUMENT #

LLC

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

FROM

Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

NO. HAZARDOUS SHIPPING DESCRIPTION OF ARTICLES MATERIAL UNITS SPECIAL MARKS & EXCEPTIONS Type Volume UOM RQ, UN3077, ENVIRONMENTALLY HAZARDOUS Х 1 SUBSTANCE, SOLID, N.O.S. 9. III (BENZENE) CM 24.38 Т PROFILE: 969843LA IM CONTAINER# EPIU225365 RAIL CAR# EPIX91047 NH ERG# 171 H039 RECEIVED subject to the classifications and tariffs In effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carrier (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. Il is mutually agreed as to each carrier of all or any of said properly, over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Billt of Lading terms and conditions in the governing classification on the dale of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp LĽĊ Date: Per: Per: Date: 12/23/2021 Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4 9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material Designate Consignee: Chemical Waste Management, Inc. Certification of receipt of materials Per Date:



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Consignee: CHEMICAL WASTE MANAGEMENT	Shippe LLC
Street: 7170 JOHN BRANNON ROAD	Street
EPA ID: LAD000777201	EPA I
City/Stale/Zip: SULPHUR LA 70665	City/Si
Phone: (337) 583-2169	Phone

DOCUMENT# 91047-202 3D

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: machice	Date: 112412022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # _

WEIGHED BY _____

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Bill of Lading (Page 1 of 2)

91047-**21** 3E

TO Consignee: CHEMICAL WASTE MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/al 1241

TICKET 58119

DOCUMENT

(X)41041-3E

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

HAZARDOUS	NO, S SHIPPING UNITS	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS				Volume	1,504
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE. SOLID. N.O.S. 9. III (BENZENE)				24.25	Т
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Per:			12/23/2021	rei,		Dati	5.
Mark with X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for Identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4 9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials							
Pet:	TTIE	1 Au	hody	Date	-24-	-22	
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то
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

DOCUMENT# 91047-26X 3E

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Josept Courude	Date: //24/2022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

164991

RECEIVING TICKET # _____

WEIGHED BY _____

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DOCUMENT #

167108 Bill of Lading (Page 1 of 2)

91047-**21**X 3F

Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

2

100

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC

Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098

217/10.1740 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

TICKET	58120
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HAZARDOUS MATERIAL	SHIPPING UNITS	S	DESCRIPTION	OF ARTICLES & EXCEPTIONS		Туре	Volume	
X	1	RQ, UN3077, ENV SUBSTANCE, SC	/IRONMENT	ALLY HAZARD 9. III (BENZEN	DOUS IE)	СМ	24.33	Т
			PROFILE	E: 969843LA				
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time interested in in the governing the governing cla Shipper: PHIL	n all or any sa classification assification and ADELPHIA	d property, that every se on the dale of shipment the said terms and conc ENERGY SOLUTIO	arvice to be perfor . Shipper hereby ditions. DNS R&M	certifies that he Carrier: CSX	that be subject to all is familiar with all th Railroad Corp	I the Bill of Ladi	as to each pa ading terms and ng terms and o	rty at any of conditions conditions in
Per:		E Date	e: 2/23/2021	Per:	I		Date):
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Per:	terr	1-e (li	nbod	Date:	\mathcal{C}		1-2	1-2
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то
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

DOCUMENT# 91047-XX 3F

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Vince 7	Date: /-24-22

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FICKET 37

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OUTROLING FLOKET 37

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

WEIGHED BY _____



Bill of Lading (Page 1 of 2)

0041150-34 765625

91150-3A

DOCUMENT #

ĩÖ Consignee: CHEMICAL WASTE MANAGEMENT INC

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 201.4/al 1241

56038 at 1

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLĊ Street: 3144 PASSYUNKAVE EPA ID; PAD 049791 098

Cily/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

HAZARDO MATERI/	NO. US SHIPPING M. UNITS	DESCRIPTION SPECIAL MARKS	NOF ARTICLES S& EXCEPTIONS	А (S Тура	8,460 Volume	
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		IM CONTAINER# EPIU22621	7 7	.		
		RAIL CAR# EPIX91150	۶ 			
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		ERG# 171 H039	*			
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Mark with "X* or "RQ" if appropriate to designate Hezerdous Materiale Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for Identifying hezardous materials on Bills of Lading 172.201(n)(1) (III) of Title 4 D. Code of Fodoral Regulations, Also, when shipping hezardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Loding does apply, unless a spacific exception from the requirement is provided in the Regulation for a period real regulation.						
Designated Per:	Consignes; Ci	hemical Waste Management, Inc	Certification of receipt of ma Date;	lerials		
	un kj	ANDANN-C	for		2#28-	22

TO Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2189

DOCUMENT# 91150-3A

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/State/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

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Carrier 2: BNSF Rallway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per Joseph Councille,	Dale: 212812022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

WEIGHED BY _____

(BAA Bill of Lading (Page 1 of 2)

0041150-3B 765624

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DOCUMENT#

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Consignee: CHEMICAL WASTE MANAGEMENT
Streel: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
Clly/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/al 1241

56039 : chite

	FROM
Shipper: P	HILADELPHIA ENERGY SOLUTIONS R&M
Street: 3	144 PASSYUNKAVE
EPA ID: P/	AD 049791 098
Oll. JOLL	47 . And all 4 manual marks by a large state

Cily/State/Zip: PHILADELPHIA, PA 10145

Phone: (440) 228-1524



HAZARDOUS MATERIAL	NO, SHIPPING UNITS	DESCRIPTIC SPECIAL MARI	N OF ARTICLES (S& EXCEPTIONS	4 Туро	(8,700 Volume	
<u>×</u>	1	RQ, UN3077, ENVIRONMEN SUBSTANCE, SOLID, N.O.S PROFI	TALLY HAZARDOUS 6. 9. III (BENZENE) LE: 969843LA	СМ	24.35	цом Т
		IM CONTAINER# EPIU2251	11		• • • • • • • • • • • • • • • • • • •	
		RAIL CAR# EPIX91150	· · · · · · · · · · · · · · · · · · ·		NH	-
		ERG# 171 H039				
agroes to carry / It is mutually agr Ume interested in in the governing the governing cit Shipper: PHIL LLC	O Us usual pic end as to eac n aD or any sal classification assification an ADELPHIA	acco of delivery as seld destination. If on the carifer of all or any of seld property, if on the carifer of all or any of seld property, id property, that every service to be per on the date of shipment. Shipper here the seld terms and conditions. ENERGY SOLUTIONS R&M	g any person or corperation in possession offeroute, otherwise to deliver to emother wor all or any portion of sakt route to dest formed hereunder shell be subject to all it by certifies that he is familiar with all the Carrier: CSX Railroad Corp	on of the p carilor on t ination and ha Billi of t Bill of Ladi	roperly under the ho route to said d I as to each party ading terms and ing terms and co	e confract) estination, e at any conditions nditions in
Per:		Dale:	Per: Luis Castro		Dale:	122
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Designated C	onsignee: C	hemical Waste Management. Ir	C Certification of receipt of ma	lerials		
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Bill of Lading (Continuation Sheet) 2 of 2

10
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
Cily/Stale/Zip: SULPHUR LA 70665
Phone: (337) 603-2169

DOCUMENT# 91150-3B

FROM

Shippe: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

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Carrier 2: BNSF Railway Company Acknowledgement of Receipt	· · · · · · · · · · · · · · · · · · ·		
Per:	Dale:		
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169	·····
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02/51/2022

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 74564

WEIGHED BY_____

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Bill of Lading (Page 1 of 2)

91150-3C

DOCUMENT#

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Consignee: CHEMICAL WASTE MANAGEN	NENT
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70685	
Phone: (337) 583-2169	·

ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 281.4/ai 1241

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PROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

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HAZARDOUS MATERIAL	no. Shipping Units	DESCRIPTION (SPECIAL MARKS	DF ARTICLES EXCEPTIONS	Тура	49,100 Volume	LIDM
X	1	RQ, UN3077, ENVIRONMENTA SUBSTANCE, SOLID, N.O.S. 9	LLY HAZARDOUS .III (BENZENE)	CM	24.55	т
	,		: 969843LA			
		IW CONTAINER# EPI0225339				
		RAIL CAR# EPIX91150				
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					,	
		ERG# 171 H039				
RECEIVED sub good order, exc (lita word carrie agrees to carry H II is mutually agr Unte intorested I In the governing the governing ch Shipper: PHII LLC Per:	lact to the class apt as noted (t being under to Us usual ph read ns to oac n añ or any so classification assification ADELPHIA	asilications and teriffs in effect on the date contents and condition of packages unkno sloed through this contract as meaning a sec of delivery as add destination. If on lic in centier of all or any of said property, ove id property, that every service to be perfor on the date of shipment. Shipper hereby d the seld terms and conditions. NENERGY SOLUTIONS R&M Date:	of the Issue of this Bill of Luding, if why, marked consigned and destine my parson or corporation in poses touto, otherwise to deliver to another rell or any portion of said route to a certifies that he is familiar with all th Carrier: CSX Reilroad Corp Per:	e property d es Indicat ston of the er opriferon es lination en li the Bill of La e Bill of La	described above ed above which s properly under it ithe route to askid d as to each par Lading terms and ding torms and c Date 2,7	In opporent inki costifer na contract) dostination iy et any d conditions oriditions in $\frac{1}{2}$
Mark with X ² or governing the trai Leding 172.201(a preactited kn sect requirement is pro- Designated C Per:	RG* If epprop naportalion of 1 (1) (ii) of Title in 172.204(a ovided in the R ansignee: C	dato to designate Hazardous Materials Subs inazardous materials. The use of this column a 4 8. Code of Federal Regulations, Also, wi of the Federal Regulations, as indicated or tegulation for a particular material. Chemical Waste Management, Inc	lances as defined in the Department is an optional method for Identifying i en shipping hazardous materials, the the Bill of Lading does apply, unless Certification of receipt of t Date:	of Transport hozordolis n shipper's cc a opacific or naterials	allon Regulations raterials on Bills o ruffeallon statame rcoption from the	/ xnl



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Consi INC	gnee: CHEMICAL WASTE MANAGEMENT
Street	7170 JOHN BRANNON ROAD
EPA	D: LAD000777201
Cily/S	Iale/Zip: SULPHUR LA 70665
Phone	e: (337) 583-2169

DOCUMENT# 01150-9C

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1624
mone, (440) 226-1624

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			<u> </u>
Per;	Dale;	میں پی ایک میں پر ماللہ ہے جو میں کا انٹرین کے میں ہوتے ہیں۔ اور ایک میں میں میں ایک میں اور والے میں میں ایک م ایک ایک ایک میں	
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169	<u></u>
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 1165608

WEIGHED BY _____

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Strad: 7170			Shipper: PHILADELPHI/ LLC			R&M	
CILLEL ID. LAP			Street: 3144 PASSYU	Street: 3144 PASSYUNKAVE			
	JUUU////20		EPA ID: PAD 049791 0	<u>98</u>		•••••	
City/State/Zi	p: SULPH	JR I.A 70685	Cily/State/Zip; PHILADE	LPHIA, F	PA 19145		
Phone: (337) 583-216) 	Phone: (440) 228-1524				
· · · · · · · · · · · · · · · · · · ·	ADDITIC	NAL INFORMATION	S'NJAdits	INSTRUC	rions		
VRE TANK I DEFINITION 261.4/ai 1241	Bottoms Of Solid 1	EXCLUDED FROM THE WASTE UNDER 40CFR					
Tru	ut ?	56041					
HAZARDOUS MATERIAL	no, Shipping Units	DESCRI SPECIAL M	PTION OF ARTICLES IARKS & EXCEPTIONS	Туро	48,100 Volumo	1014	
x	1	RQ, UN3077, ENVIRONN SUBSTANCE, SOLID, N. PR	ENTALLY HAZARDOUS O.S. 9. III (BENZENE) OFILE: 969843LA	СМ	24,35	<u> r</u>	
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	فيتصارفه والم	Dale;	Per: Luis Castro		Date:	120	
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то
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
Clly/Stale/Zlp: SULPHUR LA 70665
Phone; (337) 503-2109

DOCUMENT# 91150-3D

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

1

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			
Per;	Dale:		
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169	· · · · · · · · · · · · · · · · · · ·
Per: Verhon K PAUL	Date:		2-28-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 1165600

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Bill of Lading (Page 1 of 2)



91150-3E

DOCUMENT#

TO Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR I.A 70685

Phone: (337) 583-2169

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ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE **DEFINITION OF SOLID WASTE UNDER 40CFR** 261.4/ai 1241

-Tilld 56042

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
Cily/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	D Spe	ESCRIPTION (CIAL MARKS /	OF ARTICLES	15		Тура	48,400 Volume) ЦОМ
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Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Dapariment of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (4) of Tille 4 9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement proscribed in section 172.204(a) of the Federal Regulations, and caled on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.									
Designated (Consignee:	Chemical Waste Mana	igement, Inc	Certific	nilon q	f receipt of in	naterials	*****	
- Bell	na:	FUCLY	······	Date:	<u>)</u>	22			Fr.1

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TO
Consignee: CHEMICAL WASTE MANAGEMENT
Sireel: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/State/Zip: SULPHUR LA 70685
Phone: (337) 583-2169

DOCUMENT# 91150-3E

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Streot: 3144 PASSYUNKAVE EPA ID: PAD 049791 090 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Dato:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Joseph Councilly	Date: 3-112022

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 7651635

WEIGHED BY

A INCOMPACT



Bill of Lading (Page 1 of 2)



91150-317

DOCUMENT #

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TO	
Consignee: CHEMICAL WASTE MANAG	GEMENT
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
Cily/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	
ADDITIONAL INFORMATIO	N

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241



	FROM
Shippen LLC	PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE
EPA ID	PAD 040791 098

Cily/State/Zip: PHILADELPHIA, PA 19145

Phono: (440) 228-1524

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HAZARDOUS MATERIAL	NO. SHIPPING UNITE		DESCRIPTION C SPECIAL MARKS	F ARTICL	es ONS		Туро	48,66C Volume	<u>)</u> UOM
x	1	RQ, UN3077, SUBSTANCE	ENVIRONMENTA 5. SOLID. N.O.S. 9 PROFILE	LLY HAZ III (BEN 96984	ARDOUS ZENE) BLA	3	СМ	24.33	<u> </u>
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		RAIL CAR# E	EPIX91150	***	• /				
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		ERG# 171	H039						
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то
Consignee: CHEMICAL WASTE MANAGEMEN'T
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

DOCUMENT# 01150-3F

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Sireel: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 Clly/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Perilerhon & Paul Venche	(Dale: 2-28-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 105/096

WEIGHED BY _____

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WM1141-5# 765649

Bill of Lading (Page 1 of 2)

DOCUMENT# 01141-3A

10
Consignee; CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
Cily/State/Zip: SULPHUR LA 70065
Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/ai 1241



FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC

Sireel: 3144 PASSYUNKAVE

EPA ID: PAD 049791 090 Cily/Siale/Zip: PHILADELPHIA, PA 10145

Phone: (440) 228-1524

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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS	Туре	48,360 Volunio		
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE. SOLID. N.O.S. 9. III (BENZENE) PROFILE: 969843LA	СМ	24.18	T	
		IM CONTAINER# EPIU225085				
	·····+	RAIL CAR# EPIX91141				
			······	NH _		
		ERG# 171 H039				
RECEIVED subject to the classifications and tarilis in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carrier (the word carrier being understood through this contract os meaning any person or corporation in possession of the property under the contract) argress to carry for us usual place of delivery as and dostinetion. If only errors or corporation in possession of the property under the contract) it is mutually agreed as to each carrier of all or any of said property, over all or any postion of said route to destination and as to each perty at any time interested in all or eny said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp						
Per:	i i i	Date: Per: Luis C	astro	Dale:	2	
Mark with "X" or "RQ" if appropriate to designate Hazerdous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of inszerdous materials. The use of this column is an optional method for identifying hazerdous materials on Bills of Leding 172,201(a)(1) (III) of Tills 4 9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's calification statement prescribed in section 172,204(a) of the Federal Regulations, as indicated on the Bill of Leding dees apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.						
Per R	ionsignee:	Date: 31		シー		

ТО
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 683-2169

1

DOCUMENT# 91141-3A

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
Cily/State/Zip; PHILADELPHIA, PA 19145
Phone: (440) 228-1624

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Joseph Corla	Dale: 3-1/2022

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OVERWEIGHT

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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765619 **RECEIVING TICKET #**

WEIGHED BY
10551 Bill of Lading (Page 1 of 2)

0041141-55

765653

DOCUMENT# 91141-38

TO	
Consignee: CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201	

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2189

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED PROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 281.4/ei 1241

55596 plat _

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID; PAD 049791 098
Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	no. Shipping Units		DESCRIPTION O SPECIAL MARKS &	F ARTICLE EXCEPTIO	\$ N5		Туре	48,76C Volume) ирм
x	1	RQ, UN3077, I SUBSTANCE	ENVIRONMENTAL SOLID. N.O.S. 9. PROFILE	LYHAZA III (BENZ 969843	RDOUS ENE) LA		СМ	24.38	<u> </u>
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RECEIVED suit good order, oxo (the word carri- agrees to carry II is mutuelly ag fine interested in the governing the governing of Shipper: PH	bject to the cla capt as noted a er being unde <i>to</i> Us usualp greed as to ea in all or any s g classification o passification o pLADELPHI	estilications and tail (contents and condi- rstaod through this lace of delivory as s ch carder of all or a ald property, that ov n on the date of all nd the said terms ar A ENERGY SOL	ifs in effect on the date tion of packages unkno contract as meening a ladd destination. If on its ny of said property, ovo ery service to be perfor prinent. Shipper hereby id conditions. 	of the (sau wn), mulked ny person o route, othe r all or any p nied herour corliftes the Carrier:	e of this Bill d consigned or corporatio (wise to deli portion of sa ider shall be in ho is famil CSX Raili	or Lacing, in and deatine- on in possos ver lo anolin Id route to a subject to a lar with all li road Corp	d as indicat alon of the er cariter or estination of it the Bill of Le	description development of above which property under t i line route to sel nd as to each pe i Lading terms and uting terms and	anti cerrier the contract) d destineton. rty el any nd conditions conditions in
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Designation	Roneignee'	Chemical Wash	A Management, Inc	Cerli	fication of	receipt of	materials		
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TO	
Consignee; CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/State/Ztp: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91141-3B

FRÖM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 090
City/State/Zip: PHILADELPHIA, PA 19146
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Verhouk Paul Verktan	Date: 3-1-22

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FICKET 53

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 765653

WEIGHED BY ______

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Bill of Lading (Page 1 of 2)

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		10		r .	NOW		
Consignee: C NC	HEMICAL	WASTE MANAG	EMENT	Shipper: PHILADELPHIA	NENERG'	Y SOLUTIONS F	8.M
Street: 7170	JOHN BRAN	NON ROAD		Street: 3144 PASSYUNKAVE			
EPA ID: LAD000777201				EPA ID; PAD 049791 098			
Cllv/Stale/Zip: SULPHUR LA 70865				Cily/Stale/Zip: PHILADELPHIA, PA 19145			
Phone: (337)) 583-2169	······································	······································	Phone: (440) 228-1524			
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TO
Consignee: CHEMICAL WASTE MANAGEMENT
Streel: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

DOCUMENT# 91141-3C

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Sireel: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524
EPA ID: PAD 049791 098 City/State/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Vernon & Poul Un-k	Pale: 3-1-72

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 765637

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Bill of Lading (Page 1 of 2)

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		то			FROM			
Consignee: C	CHEMICAL	WASTE MANAGEMENT		Shipper: PHILADI	ELPHIA ENEI	rgy sol	UTIONS.	R&M
Street: 7170 JOHN BRANNON ROAD				Street: 3144 PASSYUNKAVE				
EPA ID: LAD	0000777201			EPA ID: PAD 04	9791 098			
Cilv/Stale/Zi	D: SULPHU	R I.A 70665		City/Stale/Zip: PH	ILAOELPHIA	, PA 1914	15	
Phone: (337) 583-2169			ŀ	Phone: (440) 228	-1524			
		VAL INFORMATION	L	SHIF	PPER'S INSTRU	IC'TIONS		
VRE TANK E DEFINITION 261.4/al 1241	BOTTOMS OF SOLID 1	EXCLUDED FROM THE WASTE UNDER 40CFR				-		
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HAZARDOUS MATERIAL	no. Shipping Units	DESCRIPTI SPECIAL MAR	ION OF AR	TICLES EPTIONS	Туг	481- 10 Volu	560 	OM
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Consignee: CHEMICAL WASTE MANAGEMENT	-
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	-
City/Stale/Zip: SULPHUR LA 70665	-
Phone: (337) 583-2169	-

DOCUMENT# 91141-3D

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID; PAD 049791 098
Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

336-2169

C/14-200 HOKET 30 239

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # $\dot{\mathbf{x}}$

WEIGHED BY

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Bill of Lading (Page 1 of 2)

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Consignee: CHEMICAL WASTE MANAGEME	NT
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/State/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

ADDITIONAL INFORMATION

'n

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

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PROM
hipper: PHILADELPHIA ENERGY SOLUTIONS R&M
LC
Streel: 3144 PASSYUNKAVE
PA ID: PAD 049791 098
Cily/State/Zip: PHILADELPHIA, PA 19145
Pilone: (440) 228-1524
SHIPPER'S INSTRUCTIONS

48,760 NO, SHEPING DESCRIPTION OF ARTICLES HAZARDOUS Volume Туре MATERIAL UNITS SPECIAL MARKS & EXCEPTIONS LIOM RQ, UN3077, ENVIRONMENTALLY HAZARDOUS Т 24.38 CM SUBSTANCE. SOLID. N.O.S. 9. III (BENZENE) 1 Х PROFILE: 969843LA IM CONTAINER# EPIU225242 RAIL CAR# EPIX91141 NH ERG# 171 H039 RECEIVED subject to the classifications and tarills in effect on the date of the lacue of this bill of Lading. the property described above in apparent need order, even as unled frequently and carrier good order, axcept as noted (containts and condition of packages unknown), marked consigned and destined as indicated above which and center (the word capter being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivory on and destination. If no its courts of the property to use the contract of the solid destination. the ward cather being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivery as and destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in effort any said property, that every service to be performed thereunder sholl be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment. Shipper foreby certifies that the its familiar with all the Bill of Lading terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp Date: -453 Dale: Per: Luis Castro 2/21 しみみ Per: Mark with "X" or "RQ" if appropriate to designate Hazerdous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hezardous materials. The use of this column is an optional method for identifying hezardous materials on Bits of Lading 172.201(a)(1) (iii) of Title 4.9. Code of Federal Regulations, Also, when shipping hezardous materials, the shipper's certification statement proscribed in section 172.204(a) of the Federal Regulations, as indicated on the Bitt of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. CertIfication of receipt of materials Designated Consignee: Chemical Wasle Management, Inc Date: 20

TO
Consignee: CHEMICAL WAST'E MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70865
Phone: (337) 583-2169

DOCUMENT# 91141-3E

	FROM
Shipper: F LLC	PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3	144 PASSYUNKAVE
EPA ID; F	PAD 049791 098
City/State	Zip: PHILADELPHIA, PA 19145
Phone: (4	40) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 338-2169
Per: Vernoc X PAU	Date: 3-2-2-2

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

то
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/State/7in: Still DUI 19 1 A 70885

City/State/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE **DEFINITION OF SOLID WASTE UNDER 40CFR** 261.4/8/ 1241



DOCUMENT# 91141-3F

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 220-1524

SHIPPER'S INSTRUCTIONS

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HAZARDDUS MATERIAL	no. Shipping Units	DESCRIPTION OF ARTIC SPECIAL MARKS & EXCEPT	LES TONS	Туре	48,300 Voiume	ом	
x	1	RQ, UN3077, ENVIRONMENTALLY HA SUBSTANCE, SOLID, N.O.S, 9.111 (BEI	ZARDOUS VZENE)	СМ	24.15	Т	
		PROFILE: 96984	I3LA				
		IM CONTAINER# EPIU225251					
		RAIL CAR# EPIX91141					
					NH		
		ERG# 171 H039					
RECEIVED subject to the classifications and lattife in effect on the date of the issue of this Bill of Leding, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carifer (the vord carrier being understood through this contract as meaning any person or corporation in possession of the property under the carifer (the vord carrier being understood through this contract as meaning any person or corporation in possession of the property under the centract as meaning any person or corporation in possession of the property under the centract) agrees to carry for us usual place of delivery as solid destination. If on its route, otherwise to deliver to another contract to said destination. It is mutually agreed as to each canter of all or any of said property, over all or any perion of said route to addition and as to each party at any time interested in oil or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification and he said forms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp							
Per:	. Le		Luis Castro		$\frac{\partial}{\partial \lambda}$	82	
Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations' governing the transportation of hazardous materials. The use of this column is an optional method for identifying hozardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4 0. Code of Federal Regulations, Also, when shipping inszerdous materials, the shipper's cortification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.							
Per:Blu	NA	Dale:	3320	1011015			

[0]
Consignee; CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
Clly/Slale/Zlp: SULPHUR LA 70865
Phone: (337) 583-2169

DOCUMENT# 91141-3F

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 220-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Pernill bary	Dale: 3.1-22



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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 1115159

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Bill of Lading (Page 1 of 2)

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		<u>TO</u>	Fi	ROM	·······		
Consignae: C INC	CHEMICAL	WASTE MANAGEMENT	Shipper: PHILADELPHIA	ENERO	SY SOLUTIONS	R&M	
Sireel: 7170	JOHN BRA	VNON ROAD Street: 3144 PASSYUN			IKAVE		
EPA ID: LAD	000077720	1	EPA ID: PAD 049791 09	8			
City/Stale/Zi	p: SULPHL	JR LA 70665	Cily/Stale/Zip; PHILADEL	PHIA, F	PA 19145		
Phone: (337) 583-2189		Phono: (440) 228-1524	<u>·</u>	······································		
	ADDITIO	NAL INFORMATION	SHIPPER'S II	VSTRUC	TIONS		
VRE TANK I DEFINITION 261.4/al 124	BOTTOMS OF SOLID 1	EXCLUDED FROM THE WASTE UNDER 40CFR		••••••••••••••••••••••••••••••••••••••			
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	Jub	55603					
Hazardous Material	nd. Shipping Units	DESCRIPTI SPECIAL MAR	DN OF ARTICLES KS & EXCEPTIONS	Туµо	48,360 Voluma	1014	
		RQ, UN3077, ENVIRONMEN	TALLYHAZARDOUS		``	1 m	
<u> </u>	1	SUBSTANCE. SOLID, N.O.	S. 9.III (BENZENE)	CM	24.18	<u> </u>	
		PROF	ILE: 969843LA				
		IM CONTAINER# EPIU2263	160				
		RAIL CAR# EPIX91494	RAIL CAR# EPIX91494			<u> </u>	
·······						<u> </u>	
					A-1-1		
		ERG# 171 H039			M		
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RECEIVED sub good order, exc. (the word carrie agrees to carry it it is mutually ag time intorested it in the governing the governing cl Shipper: PHII LLC	ject to the cla apt as noted (or boing under to Us usual pl read as to cad wall or sny se classification assification assification LADELPHI/	ssilications and tailifs in offect on the contents and condition of packages u stood through this contract as moan ace of delivery as said destination. If the carrier of all or any of suid properly, ind property, that overy service to be p on the date of shipment. Shipper he d the said terms and conditions. A ENERGY SOLUTIONS R&M	date of the issue of this Bill of Lading, the honown), marked consigned and destined ng any person or corporation in possession its route, otherwise to deliver to another over all or any portion of sold route in des arformed herounder shall be subject to all reby certifies that he is familiar with all the Carrier; CSX Railroad Corp	proparty as Indicat on of the caritar or lination a lina Bill of Bill of La	described above in ad abavo which sa proparty under the n the routo to said d nd as to each party I Lading torms and ding torms and co	la apparen Id caritar contrac estination estination et any conditions inditions i	
Per:	in the	Dale:	Per: Luis Castro		Dale:	122	
Mark with "X" or ' governing the tre Leding 172 201(c	"RQ" ((sprop inspatiation of s)(1) (l8) of Titl silon 172,204(s insuliad to the f	ilate to designate Hazardous Motorieis hazardous motorials. The use of tida co o 4 B. Code of Federat Regulations, Als) of the Federat Regulations, as Indicot Regulation for a particular material.	Substances as dofined in the Department of Jurin is an optional method for klantifying ha o, when shipping hezerdous materials, the sl ad on the Bill of Lading does apply, unless o	Transport zardous n tipper's cr specific e	alion Regulations naterials on Dills of artification statement xception from the		
prescribed in sec requirement is pr	1011000 01 110 1	influences in a bernannet universen					
prescribed in sec requirement is pr Designateri C	Consignee: (Chemical Waste Management,	inc Certification of receipt of m	alorials			

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Consignee: CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/State/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91494-2A

TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
LLC
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
Cily/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 220-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Nermon K PAUl	Date: 2-25-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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... 163504 Bill of Lading (Page 1 of 2)

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Consignee: CHEMICA	L WASTE MANA	GEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M				
Streel: 7170 JOHN BF	ANNON ROAD		Street: 3144 PASSYU	NKAVE			
EPA ID: LAD0007772	201		EPA ID: PAD 049791 0	98	,		
City/Stale/Zip: SULP	IUR LA 70665		City/State/Zip: PHILADE	LPHIA, F	PA 19145		
Phone: (337) 583-216	39		Phone: (440) 228-1524				
ADDIT	IONAL INFORMATI	ON	SHIPPER'S	INSTRUC	TIONS		
VRE TANK BOTTOM DEFINITION OF SOLI 261.4/al 1241	S EXCLUDED I D WASTE UNDE	ROM THE R 40CFR					
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10kt c	22004						
NO. HAZARDOUS SHIPPING MATERIAL UNITS)	DESCRIPTION SPECIAL MARKS	DF ARTICLES & EXCEPTIONS	Туро	48,700 Volume	·^~~	
X 1	RQ, UN3077	ENVIRONMENTA					
		PROFILE	: 969843LA		24,35		
	IM CONTAIN	ER# EPIU225793					
	RAIL CAR# I	EPIX01494					
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RECEIVED subject to the d good order, except as noted (the word carrier being und agrees to carry to Us usual) It is multally agreed as to a line interested in all or any s in the governing classification ine governing classification e Shipper: PHILADELPH LLC	assifications and tai (contents and cond erstood through this alace of delivery as a colo cartler of all or a sold property, that or on on the date of shi and the said terms ar IA ENERGY SO	ilfs in effect on the dele ilion of packagos unkno confract as moaning e said destination. If on its ny of seld property, ovo vory sorvice to be perfor pmont. Shipper hereby nd conditions.	e of the issue of this fill of Loding, the win), marked consigned and destined my person or corporation in possessi a route, otherwise to delivor to enotion r all or any portion of sold route to des med horeunder shall be subject to all certifics that he is temiliar with all the Carrier: CSX Railroad Corp	proporty a as indicate on of the j carrier on lination or he Bill of Lad	described abovo in ad above which ank properly under the the route to said de at as to each party Lading terms and con ding terms and con	apparent 3 certifer contract) etination. et any onditions ditions in	
Per:	5	Dale:	Per: Luis Castro	+	Dale:	122	
Mark with "X" or "TQ" if appro governing the transportation o Lading 172.201(a)(1) (iii) of Tf prescribed in socion 172.204 requirement is provided in the	priate to designata H I hozardous material lie 4 9. Codo of Fede a) of the Foderel Re Regulation for a part	azardous Materiala Suba s. The use of this columr rai Regulations, Also, wi guialions, as Indicated or Icular material.	tences as dofined in the Department of Is an optional method for Identifying ha ten skipping hazardous motorials, the sk I the Bill of Lading does apply, unless a	Transpuite zardous m Upper's col specific ox	ilion Regulations aterials on Bills of rtification statement coption from the		
Designated Consignee:	Chemical Waste	Management, Inc	Certification of receipt of me	alerials			
Per: Var	Ma has	······	Dale:		.7.28	- 2 - 2	
<u> </u>	11 - year	- Ter	12000		100		

Consignee: CHEMICAL WASTE MANAGEME	NT
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/State/Zip: SULPHUR LA 70665	
Phone: (337) 503-2169	

DOCUMENT# 91494-2B

Т	Q FROM
Shipper I.L.C	; PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE
EPA ID	: PAD 049791 098
City/Sta	le/Zip: PHILADELPHIA, PA 19145
Phone:	(440) 228-1624

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per poseth Courte	Date: 2/26/2022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

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Consignee: CHEMICAL WASTE MANAGEMENT				Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M					R&M		
Street: 7170	JOHN BR/	ANNON ROAD		ľ	Street	: 3144 PAS	SSYUN	KAVE			
EPA ID: LAI	000077720	01		ľ	EPA I	D: PAD 0497	791 098				
City/Stale/Zi	p: SULPH	UR LA 70665		ſ	Cily/S	lale/Zip: PHIL	ADELP	HIA, P	A 19145		
Phone: (337) 583-216	9		ŀ	Phone	: (440) 228-1	524				
	ADDITIC	DNAL INFORMATIC	DN	к.		SHIPP	ER'S INS	STRUCT	IONS		
VRE TANK DEFINITION 261.4/al 124	BOTTOMS I OF SOLIE 1	B EXCLUDED F WASTE UNDE	ROM THE R 40CFR								
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HAZARDOUS	NO. Shipping		DESCRIPTI	ባለ ባደ ላይ	1)() 65				48,90	0	
MATERIAL	UNITS		SPECIAL MAR	RKSAEXC	EPTIONS	5		Туре	Volume		
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			PROF	ILE: 969	1843LA	<u>۱</u>				, , 	
		IM CONTAIN	ER# EPIU2252	215						14	7331
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Per:	Dale: Per: Luis Castro Dale: Dale:					2					
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Designated C	onsignee:	Chemical Waste	Management,	inc C	Corlifica	lion of receip	t of mat	erials			
Per:	case	Pour		Date	э: (2/25		79			
ar	ri-e	Quet,	odla	ux		2-2.	5~0	22			<u></u>

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70605 Phone: (337) 583-2169

DOCUMENT# 91494-2C

TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 220-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per Vernon Klay	Date: D-25-23

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91494-2D

10 Consignee: CHEMICAL WASTE MANAGEMENT INC

Streel: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 201.4/al 1241

ilut 55606

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLĊ

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phono: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	nd. Shipping Units	DESCRIPTION (SPECIAL MARKS (DF ARTICLES & EXCEPTIONS	/ Тура	48,800 Volume	<u></u>
X	1	RQ, UN3077, ENVIRONMENTA SUBSTANCE. SOLID, N.O.S. 9 PROFILE	LLYHAZARDOUS), (II (BENZENE)	СМ	24.40	рм Т
		IM CONTAINER# EPIU225269			11.20	
······		RAIL CAR# EPIX91494	<u> </u>		-1+057	
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		ERG# 171 H039			NH	
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RECLIVED Sub good ordor, exc (the word carite agrees to carry of it is mutually ag time interested i in the governing c the governing c Shipper: PHII LLC	ject to the cla: ept as noted () or being under to Us usual pl rood as to eac a all or any as to classification assification an LADELPHIA	solications and cariffs in offoct on the data contents and condition of packages unkno stood through this contract as meaning a acce of dolivery as sold destination. If on its cander of ell or eny of seld properly, ove id property, that every service to be perfor a on the date of shipment. Shipper heroby at the seld terms and conditions. A ENERGY SOLUTIONS R&M	a of this issue of this till of Lading, i won, marked consigned and destin- iny person or carporation in posse is route, otherwise to doliver to anoth r nil or any portion of sold route to nied hereunder shell be subject to certifies that he is femiliter with all Carrier: CSX Railroad Corp	In property d ad as Indicate ssion of the p to carrier on dostination an at the Bill of Lac	lescribed above in d obove which sel property under the the route to seld de d as to each party Leding terms and co ling terms and con	appatent d carrier contract) istination, at ony conditions ditions hi
Per:	-20	(5) Date:	Per: Luis Cast	ñø	Dale:	122
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Pet:	<u> </u>	Ambodeau	Date: D-25-2			

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

DOCUMENT# 91494-2D

TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524
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Carrier 2: BNSF Rallway Company Acknowledgement of Receipt	
Per:	Dale:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 338-2169
Per: Joseph Councille	Date: 2/25/2022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

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DOCUMENT# 91494-2E

то	
Consignee: CHEMICAL WASTE MANAGEMENT INC	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70005	
Phone: (337) 583-2169	
ADDITIONAL INFORMATION	

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241



	FROM
Shipper: LLC	PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE

EPA ID; PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19146

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	ND. SHIPPING UNITS	DESCRIPTION O SPECIAL MARKS	DF ARTICLES LEXCEPTIONS	Тура	48,800 Volumo)
x	1	RQ, UN3077, ENVIRONMENTA SUBSTANCE, SOLID, N.O.S. 9	LLY HAZARDOUS .III (BENZENE)	СМ	24.40	Т
		PROFILE	: 969843LA			
		IM CONTAINER# EPIU225307				
		RAIL CAR# EPIX91494				
		ERG# 171 H039			NH	
time word carry f agrees to carry f It is mituely age time interested k in the governing the governing di Shipper: PHIL LLC	r being under lo Us usual pli laad us to eec a sli or any sa classification assification an ADELPHIA	stood through this contract as indening e acco of delivery as said dostination. If on its h certier of all or any of said property, ove id property, that every service to be partor on the date of shipment. Shipper hereby d the said terms and conditions. A ENERGY SOLUTIONS R&M	ny person or contration in posessel route, otherwise to deliver to another rail or any portion of and route to des much hereunder shall be subject to all i certifies that he is familier with all the Cerrier: CSX Railroad Corp	on of the j carrier on linellon or the Bill of Bill of La	property under the c the route to sold dec id as to soch party a Lading terms and cond ding terms and cond	ination dination, t any aditions illions in
Por:		Date.	Pol: Luis Castro		2/2/	22-
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L		C Concinente	and the del	R)-	~~	

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 Cily/Siale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

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DOCUMENT# 91494-2E

TOFROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 008
Cliy/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 220-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	<u> </u>	an a
Per:	Date:	
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169
Per aperts app	Dale: 2/251	12022
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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265519 RECEIVING TICKET # _____

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Bill of Lading (Page 1 of 2)

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DOCUMENT# 91494-2F

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FROM ____

PROM	_
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M	
Sireel: 3144 PASSYUNKAVE	
EPA ID: PAD 049791 098	

Cily/State/Zip: PHILADELPHIA, PA 19145

Phone: (440) 220-1524

SHIPPER'S INSTRUCTIONS

ADDITIONAL INFORMATION
VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 281.4/al 1241

TO

Consignee: CHEMICAL WASTE MANAGEMENT

Streel: 7170 JOHN BRANNON ROAD

City/Stale/Zip: SULPHUR LA 70665

EPA ID: LAD000777201

Phone: (337) 583-2169

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MATERIAL	UNITS	SI	DESCRIPTION OF	DF ARTICLE EXCEPTIC	s Ng	•	Гура	Volume	nм
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· · · · · · · · · · · · · · · · ·		RAIL CAR# EPIX	91494						
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Per:	-9	5 Dal	e:	Pør:	Luis C	astro		Dale:	122
Mark with "X" or "RQ" If appropriate to dosignate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hezardous materials. The use of this column is an optional method for identifying furcentious materials on Diks of Lading 172.201(n)(1) (III) of Tille 4 9. Code of Pederal Regulations, Also, when stillpping inzerdous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unloss a specific exception from the requirement is provided in the Regulation for a particular material.									
Designated	Consignee:	Chemical Waste Mar	nagement, Inc	Corlif	callon of requ	eipt of male	rials		
Pe(: C	1114	2 Alu	hoded	Date:	\mathcal{P}		9	-25-	22
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n ,

Consignes: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

DOCUMENT# 91494-2F

TO FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNICAVE EPA ID: PAD 049791 098

City/State/Zip: PHILADELPHIA, PA 19145

Phone: (440) 220-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			
Por:	Date:		
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169	
Per: Demillear	Date: 2-25-	22	

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

165514

RECEIVING TICKET # ____

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WEIGHED BY _____

Patrick Dauria

From: Sent: To: Cc: Subject: Attachments: Doan, Janet <JDoan@wm.com> Tuesday, March 29, 2022 10:21 AM Patrick Dauria Rhyne, John EPIX 91085 91085.pdf

Good morning! I hope you are having a wonderful day today 🥹

Attached are BOLs and weight tickets for 91085.

5395 and 5383 were invoiced at solidification rate

all others at solid rate

Thank you for your business.

JANET DOAN

Scheduling Coordinator Gulf Coast Area <u>GulfCoastScheduling@wm.com</u> jdoan@wm.com

Main: 337.583.3700 Direct: 337.583.3745 7170 John Brannon Road Sulphur, LA 70665





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Bill of Lading (Page 1 of 2)

DOCUMENT # 91085-3A

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Consignee: CH INC Street: 7170 JC EPA ID: LADO City/Stale/Zip: Phone: (337) 5	EMICAL	WASTE MANA	GEMENTIN	Shipper: PHILADELPH LLC Street: 3144 PASSY	IA ENERG	Y SOLUTION	S R&M			
Street: 7170 JC EPA ID: LAD00 City/Stale/Zip: Phone: (337) 5	0077720	NNON ROAD		Street: 3144 PASSY	UNKAVE					
EPA ID: LAD0 City/Stale/Zip: Phone: (337) 5	0077720 ⁻	1			Street: 3144 PASSYUNKAVE					
City/Stale/Zip: Phone: (337) 5		EPA ID: LAD000777201				EPA ID: PAD 049791 098				
Phone: (337) 5	City/Stale/Zip: SULPHUR LA 70665				City/Stale/Zip: PHILADELPHIA, PA 19145					
	Phone: (337) 583-2169				Phone: (440) 228-1524					
	ADDITIO	NAL INFORMATIC)N	SHIPPER'S	S INSTRUCT	IONS	· · ·····			
DEFINITION OI 261.4/ai 1241		EXCLUDED F WASTE UNDE	ROM THE R 40CFR							
HAZARDOUS S MATERIAL	NO, SHIPPING UNITS	•	OESCRIPTION O	PF ARTICLES EXCEPTIONS	Туре	Volume	цом			
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		IM CONTAIN	ER# EPIU225337							
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RECEIVED subject good order, except (the word carrier b agrees to carry fo t II is mutually agrees lime interested in a in the governing class Shipper: PHILA LLC	t to the class as noted (d eing under: Us usual pla d as to eac all or any sai assification sification an DELPHIA	suffications and ter contents and condi- stood through this ace of delivery es a h center of all or a id property, that ex- on the date of shi d the sald terms ar A ENERGY SOL	Iffs In effect on the date ition of packages unknot contract as meaning a seid destination. If on its ny of said properly, ove yery service to be perfor pment. Shipper hereby nd conditions. UTIONS R&M Date:	of the Issue of Ihis Bill of Lading, I wn), marked consigned and destine ny person or corporation in posses route, otherwise to deliver to anoth all or any portion of said route to d med hereunder shall be subject to a certifies that he is familiar with all the Carrier: CSX Railroad Corp	he property c ad as indicate ssion of the p war carrier on estination an all the Bill of he Bill of Lac	lescribed abova of above which s properly under it the roule to said d as to each par Leding terms and c ding terms and c Dafe	In apparer ald carrier te contract destination ly at any d conditions t onditions t			
		1-1-2	2/18/2022	Luis Cast	<i><i><i>ī</i></i>0</i>	$\underline{\mathcal{A}}$	182			
vark with "X" of "RC governing the transf .ading 172.201(a)(1 xescribed in section requirement is provi-	a" II appropri portation of I I) (III) of Title n 172.204(a) ided in the R	hazardous material hazardous material 4 9. Code of Fede) of the Federal Ref Regulation for a part	azardous materiais Suat s. The use of this colum rial Regulations, Also, wi gulations, as indicated or licular material.	tances as defined in the Department is en optional method for identifying en shipping hazerdous meterlais, the the Bill of Lading does apply, unless	of fransporta hazardous m a shippar's ca a specific ex	aterials on Bills of Alfication stateme ception from the	r nt			
Designated Cor	nsignee: (Chemical Waste	e Management, Inc	Certification of receipt of	materials					
Per:) /	in	$h \leq r$	VCOV	Date: 2/25/	タフ					

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Consignee: CHEMICAL WASTE MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

•

DOCUMENT# 91085-3A

Т	0	FROM
Shipper.	: PHILADELPHIA E	NERGY SOLUTIONS R&M
Street:	3144 PASSYUNK	AVE
EPA ID	PAD 049791 098	,
City/Sta	le/Zip: PHILADELP	HIA, PA 19145
Phone: ((440) 228-1524	······

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: V-refan	Date: 3 - 25 - 22
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # ___/ Ld (

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91085-3B



Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

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DOCUMENT# 91085-3B

TO ----- FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Acknowledgement of Receipt		•
Per:	Date:	
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169
Per.	Date: 5-7.8.2	27_

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TICKET 54

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 766101

WEIGHED BY _____



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DOCUMENT# 91085-3C

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/al 1241

то

Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

City/Stale/Zip: SULPHUR LA 70665

EPA ID: LAD000777201

Phone: (337) 583-2169

INC

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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTI SPECIAL MAR	ION OF ARTICLES RKS & EXCEPTIONS	Туре	Volume	UOM
X	1	RQ, UN3077, ENVIRONMEN SUBSTANCE, SOLID. N.O. PROF	NTALLY HAZARDOUS S. 9.111 (BENZENE) FILE: 969843LA	СМ	24.33	Ť
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	· · · ·	RAIL CAR# EPIX91085				
		ERG# 171 H039			NH	
RECEIVED sul good order, exc (tho word carri agrees to carry II is mutually ag time interested in the governing c	pject to the clar cept as noted (er being under <i>to</i> Us usual pi preed as to eac in all or any sa g classification lassification an	sifications and tariffs in effect on the contents and condition of packages u stood through this contract as mean ace of delivery as said destination. If h carrier of all or any of said properly id property, that every service to be p on the date of shipment. Shipper he d the said terms and conditions.	e date of the issue of this Bill of Lading, t inknown), marked consigned and destine ling any person or corporation in posses on its route, otherwise to deliver lo anoth r, over all or any portion of seld route to d performed herounder shall be subject to a preby certifies that he is familiar with all t	he property of ad as indicate ssion of the p er carder on estination an all the Billi of he Bill of Lac	lescribed above of abova which s property under ti the route to said d as to each par Lading terms and ding terms and c	in epparent aid carrier ne contract) desUnation. ty at any d conditions onditions in
Shipper: PHI	LADELPHIA	VENERGY SOLUTIONS R&M	Carrier: CSX Railroad Corp			
Per:	C	17-) Date: 2/18/2022	Per: Luis Castro	>		8-22
Mark with "X" or governing the tra Lading 172.2010 prescribed in se requirement is p	*RQ" If approp ansportation of (a)(1) (iii) of Tith ction 172,204(a rovided in the F	riale to designate Hazardous Materials hazardous materials. The use of this c a 4 9. Code of Federal Regulations, As) of the Federal Regulations, as Indica Regulation for a particular material.	Substances as defined in the Department olumn is an optional method for Identifying so, when shipping hazardous materials, the ted on the Bill of Lading does apply, unless	of Transporta hazardous m shipper's cer a specific ex	tion Regulations aterials on Bills o dification stateme ception from the	f int
Designated (Consignee: (Chemical Waste Management,	Inc Certification of receipt of	materials		
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Consignee:	CHEMICAL	WASTE	MANAGEMENT
-			

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

 ~ 1

City/Stale/Zip: SULPHUR LA 70685

Phone: (337) 583-2169

DOCUMENT# 91085-3C

TO -----FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 Cliy/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: May/11	Date: 3-25-22

EP111225560 FICKET 19

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

WEIGHED BY

0011085 1 × × 1 (doD7) Bill of Lading age 1 of 2)

TO Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

ichen tellete

DOCUMENT # 91085-3D

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	Di SPE	ESCRIPTION C	F ARTICLES	5 NS		Туре	Volume	LIOM
x	1	RQ, UN3077, ENVIR SUBSTANCE. SOLI	ONMENTA D. N.O.S. 9 PROFILE	LLY HAZA III (BENZI 969843L	rdous Ene) .A		СМ	24.13	Т
		IM CONTAINER# E	PIU225383						
		RAIL CAR# EPIX91	085						
		ERG# 171	H039					NH	
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good order, ex (the word carry agrees to carry II is mutually a time interested in the governing the governing Shipper: PH	cept as noted (ier being undei) if o Us usual pl greed as to ear in all or any sa ug classification ar LIADELPHI/	contents and conflicton of pr rstood through this contract ace of delivery as said desli th carrier of all or any of sai id property, that every servi on the dale of shipmant. I d the said terms and conditi ENERGY SOLUTION	ackages unkno t as meaning a ination. If on its d property, over ice to be perfor Shipper hereby ions. IS R&M	wn), marked ny person or route, olhen all or any po med hereund certifies that Carrier: (consigned a consigned a corporation wise to delive ortion of said ler shall be s he is familla CSX Railro	In destined a In possession r to another route to dest ubject to all t r with all the ad Corp	property of as Indicate on of the g carrier on lination an the Bill of Lac	ed above which sroparty under (the route to said d as to each pa Lading tarms and ling tarms and	ald carrier the contract) d destination. rty at any nd conditions conditions in
Per:		Date:	18/2022	Per:	Luis	Castr	Ð	Dat	822
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Designated	Consignee:	Chemical Waste Mana	gement, Inc	Certific	cation of re	ceipt of m	aterials		
Pér;B	elinc	la Suic	er	Date:	3/2	5/5	20		
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Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

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DOCUMENT# 91085-3D

TO------FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

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Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Masulto	Date: 3-25-22

EPILI22205 TICKET 46

(1) 653375 68088 82380 1b1NB0UN0 12:55Ph 03/25/2022

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07/25/2022

OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET #

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91085-3E

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Consignee: (INC	CHEMICAL	WASTE MANA	SEMENT INC	 Shipper: P LLC 	HILADELPHIA	ENER	GY SOLUTIO	NS R&M
Street: 7170	JOHN BRA	NNON ROAD		Street: 3	144 PASSYU	NKAVE		
EPA ID: LAD	000077720	1		EPA ID: P	AD 049791 0	98		
City/Stale/Zi	p: SULPHL	JR LA 70665		City/Stale/	Zip: PHILADEI	PHIA, F	PA 19145	······
Phone: (337) 583-2169			Phone: (44	0) 228-1524			
	ADDITIO	NAL INFORMATIO	J	1	SHIPPER'S I	NSTRUC	TIONS	
VRE TANK I DEFINITION 261.4/al 1241	BOTTOMS OF SOLID	EXCLUDED F WASTE UNDE	ROM THE R 40CFR		, , , , , , , , , , , , , , , , , , ,			
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HAZARDOUS MATERIAL	NÔ. SHIPPING UNITS		DESCRIPTION SPECIAL MARKS	OF ARTICLES & EXCEPTIONS		Туре	Volume	lion
x	1	RQ, UN3077, SUBSTANCE	ENVIRONMENTA	LLY HAZARDOU D. III (BENZENE)	JS	СМ	24.40	T
			PROFILE	: 969843LA				
		IM CONTAIN	ER# EPIU225272					
		RAIL CAR# E	PIX91085					
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		ERG# 171	H039				NH	
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RECEIVED sub good order, exc {the word carrie agrees to carry It is mutually ag time interested i in the governing che governing che Shipper: PHI LLC	Ject to the cla sept as noted (ar being under to Us usual pi reced es to ead in all or any so g classification assification ar LADELPHI/	ssilications and terr contents and condi rstood through this ace of delivery as s sh carrier of all or a ald property, that ev on the dele of shi to the said terms an A ENERGY SOL	iffs In effect on the data tion of packages unkno- contract as meaning in aid destination. If on it ny of said properly, ove eny service to be perfo- pment. Shipper hereby id conditions.	e of the issue of this own), marked consign any person or corpor s route, otherwise to rall or any portion of rmed hereunder shaf certifies that he is for Carrier: CSX R	Bill of Lading, the led and destined ation in possessi- deliver to another said route to des be subject to all milier with all the allroad Corp	property as indicat on of the carrier or tination a the Bill of La	described above ed above which property under i the route to sai nd as to each pa Lading terms and ding terms and	e in apparent said carrier the contract) d destination. and at any nd conditions conditions in
Per:	:: :	18- 3	Date: 2/18/2022	Per: Luis	Castro		Dat	18/20
Mark with "X" or governing the tra Lading 172.201(prescribed in sec requirement is pr	"RQ" if approp ansportation of a)(1) (iii) of Titl clion 172.204(r rovided in the 1	viale to designate H hazardous materials a 4 9. Code of Fede a) of the Federal Reg Regulation for a part	azardous Materials Sub s. The use of this colum ral Regulations, Also, w gulations, as indicated o icular material.	stances as defined in n is an optional metho hen shipping hazardor n the Bill of Lading do	he Department of d for Identifying ha is materials, the sl as apply, unless a	Transport zardous m hipper's ca specific es	ation Regulations taterials on Bills triffication statem sception from the	s of Jent
Designated (Consignee:	Chemical Waste	Management, Inc	Certification	of receipt of m	aterials		
Del	nda	SN	icer	Date:	28 2	2		······

Consignee:	CHEMICAL	WASTE	MANAGEMENT
oonoidinoor			

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/State/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

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DOCUMENT# 91085-3E

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Nernon K PAUl	Date: 3-28-27

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 14459

WEIGHED BY_____



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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91085-3F

TO Consignee: CHEMICAL WASTE MANAGEMENT INC

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19146

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS	Туре	Volume	LIOM
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE. SOLID. N.O.S. 9. III (BENZENE)	СМ	24.40	т
		PROFILE: 969843LA			
	-	IM CONTAINER# EPIU225211			
		RAIL CAR# EPIX91085			
		ERG# 171 H039		NH	
	·				
RECEIVED sub good order, exo (the word carrie agrees to carry II is mutually ag time interested in the governing ct the governing ct Shipper: PHI LLC	vect to the cla sept as noted (ar being under to Us usual placed as to each in all or any sa g classification lassification ar LADELPHI/	ssifications and tariffs in effect on the date of the issue of this Bill of La contents and condition of packages unknown), marked consigned and or stood through this contract as meaning any person or corporation in ace of delivery as said destination. If on its route, othorwise to deliver lo the carrier of all or any of said properly, over all or any portion of said rou- hid property, that every service to be performed hareunder shall be subje on the date of shipment. Shipper hereby certifies that he is femiliar will do the said terms and conditions. A ENERGY SOLUTIONS R&M Carrier: CSX Railroad	ding, the property of destined as indicate possession of the p another carrier on the to destination an act to all the Bill of Lac Corp	lescribed above of above which property under it the route to said d as to each pa Leding terms and sling terms and	In apparent seld carrier he contract) d destination. rty at any id conditions conditions in
Per:		Date: Per: Luis (Castro	Dati 21	8/27
Mark with "X" or governing the tra Lading 172.201(prescribed in ser requirement is p	*RQ* If approp ansportation of (a)(1) (III) of Titl clion 172,204(a rovided in the l	riale to designate Hazardous Materials Substances as defined in the Depa hazardous materials. The use of this column is an optional method for ider e 4 9. Code of Federal Regulations, Also, when shipping hazardous materi a) of the Federal Regulations, es indicated on the Bill of Lading does apply, Regulation for a particular material.	rtment of Transporta hilfying hazardous m ials, the shipper's ce unless a specific ex	ation Regulations aterials on Bills rtification statem ception from the	of ent
Designated C	Consignee:	Chemical vvaste Management, Inc Certification of rece	ipt of materials	<u> </u>	
Bel	enta	Date: 34	28/22		

Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

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City/Stale/Zip: SULPHUR LA 70665

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Phone: (337) 583-2169

DOCUMENT# 91085-3F

TO FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2189
Per: Joseph Course Cla	Date: 712512022

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653504 6R0SS 80440 1bTNROUND 08:2864 03/28/2022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET #

WEIGHED BY

Patrick Dauria

From: Sent: To: Cc: Subject: Attachments: Doan, Janet <JDoan@wm.com> Monday, April 25, 2022 1:47 PM Patrick Dauria Rhyne, John EPIX 91133-3 91133-3.pdf

Patrick,

91133-3%, box 5190 was invoiced at the solidification rate. 91133-3C, box 5291 was overweight.

Thanks,

JANET DOAN Scheduling Coordinator Gulf Coast Area GulfCoastScheduling@wm.com jdoan@wm.com

Main: 337.583.3700 Direct: 337.583.3745 7170 John Brannon Road Sulphur, LA 70665



C. Pas Bill of Lading (Page 1 of 2)

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DOCUMENT# 91133-3A

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Consignee: CHEMICAL	E: CHEMICAL WASTE MANAGEMENTIAC Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M				
Street: 7170 JOHN BRA	7170 JOHN BRANNON ROAD, Street: 3144 PASSYUNKAVE				
EPA ID: LAD00077720	EPA ID: PAD 049791 098				
City/Stale/Zip: SULPHU	Stale/Zip: SULPHUR LA 70665 City/Stale/Zip: PHILADELPHIA, PA 19146				
Phone: (337) 583-2169		Phone: (440) 228-1524			
ADDITIC	NAL INFORMATION	SHIPPER'S	NSTRUCT	TIONS	
VRE TANK BOTTOMS DEFINITION OF SOLID 261.4/al 1241	EXCLUDED FROM THE WASTE UNDER 40CFR				
Trout le	(136				
NO. HAZARDOUS SHIPPING MATERIAL UNITS	DESCRIPTIO SPECIAL MAR	ON OF ARTICLES KS & EXCEPTIONS	Туре	Volume	<u>}0M</u>
X 1	RQ, UN3077, ENVIRONMEN SUBSTANCE. SOLID. N.O.S	ITALLY HAZARDOUS S. 9.111 (BENZENE)	СМ	21,50	r
	PROF	ILE: 969843LA			-
	IM CONTAINER# EPIU2251	130		1	
	RAIL CAR# EPIX91133		<u> </u>	<u> </u>	
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	ERG# 171 H039			-	
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RECEIVED subject to the cl good order, except as noted (the word carrier being undu- agrees to carry to Us usual p II is mutually agreed as to ea time interested in all or any s in the governing classification the governing classification shinner: PHILADELPH	assifications and tariffs in effect on the (contents and condition of packages u erstood through this contract as mean blace of delivery as said destination. If ich carrier of all or any of said properly, aid property, that every service to be p in on the dele of shipment. Shipper he ind the said terms and conditions. IA ENERGY SOLUTIONS R&M	date of the issue of this Bill of Lading, the nknown), marked consigned and desilned ing any person or corporation in possess on its route, otherwise to deliver to anothe , over all or any portion of said route to de erformed hereunder shell be subject to al reby certifies that he is familiar with all the I Carrier: CSX Railroad Corp	a property i as indicat ion of the r carrier or stination a i the Billt of e Bill of La	described above in ed above which sa property under the h the roule to said o nd as to each party f Lading terms and oling terms and co	n apparent Id carrier a contract) Jestination. y at any conditions in
	Date:	Per		Date:	
	2/18/2022	Luis Castr	8	21	8/2-
Mark with "X" or "RQ" if appro- governing the transportation of Lading 172.201(a)(1) (ill) of TI prescribed in section 172.204 requirement is provided in the	priate to designate Hazardous Materials if hazardous materials. The use of this co ille 49. Code of Federal Regulations, Als (a) of the Federal Regulations, as indicat Regulation for a particular material.	Substances as defined in the Department of olumn is an optional method for identifying h to, when shipping hazardous materials, the led on the Bill of Lading does apply, unless	a transport azardous n shippor's ce a specific e	anon Regulations naterials on Bills of artification statemer xception from the	ĸ
Designated Consignee	Chemical Waste Management,	Inc Certification of receipt of n	naterials		
PerBelink	Shicen_	Date: 45/27			
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	DOCUMENT# 91133-3A			
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Consignee: CHEMICAL WASTE MANAGEMENT TINC	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC			
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE			
EPA ID: LAD000777201	EPA ID: PAD 049791 098			
Cilv/Stale/Zin: SUI PHUR LA 70665	City/State/Zip: PHILADELPHIA, PA 19145			
Phone: (337) 583-2169	Phone: (440) 228-1524			

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Nevnon Au	Date: 4-4-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 140057

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Bill of Lading (Page 1 of 2)

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DOCUMENT# 91133-3B

Street: 3144 PASSYUNKAVE

City/Stale/Zip: PHILADELPHIA, PA 19145

EPA 1D; PAD 049791 098

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

Consignee: CHEMICAL WASTE MANAGEMENT INC

то

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE
DEFINITION OF SOLID WASTE UNDER 40CFR
261.4/al 1241

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Phone: (440) 228-1524				
	SHIPPER'	S INSTRUCTIO	NS	
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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION C SPECIAL MARKS &	F ARTICLES EXCEPTIONS	Туре	Volume	юм
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE. SOLID. N.O.S. 9.111 (BENZENE) PROFILE: 969843LA		CM	22.05	T
		IM CONTAINER# EPIU225295	<u> </u>			
		RAIL CAR# EPIX91133				
		ERG# 171 H039			NH	
		[<u> </u>	
RECEIVED sut good order, exc (the word carring grees to carry II is multually ag time interested in the governing c the governing c Shipper: PHI LLC	piect to the cla cept as noted (ar being unde to Us usual p greed as to eau in all or any su g classification classification at LADELPHI	ssilications and tariifs in effect on the date (contents and condition of packages unkno ratood through this contract as meaning a lace of delivery as said destination. If on its ch carrier of all or any of said property, over aid property, that avery service to be perfor n on the date of shipment, Shipper hareby nd the said terms and conditions. A ENERGY SOLUTIONS R&M	of the issue of this Bill of Lading, to why, marked consigned and destine ny person or corporation in posses route, otherwise to deliver to anoth rall or any portion of said route to d med hereundar shall be subject to certifies that he is familiar with all to Carrier: CSX Railroad Corp	he property of as Indicat ision of the er carrier or estination a listination a lithe Bill of he Bill of La	described above in ed above which sa property under the the route to said d nd es to each parts 'Lading terms and ding terms and co	a apparent ld carder e contract) lestination, / at any conditions inditions in
Per;	· ····································	Date: 2/18/2022	Per: Luis Cast	n.o	Date:	f. D
Mark with "X" or governing the for Lading 172.2010 prescribed in se requirement is p	"RQ" if approp ansportation of (a)(1) (ii) of Tit ction 172.204(provided in the	niale to designate Hazardous Materials Subs f hazardous materials. The use of this column le 4 9. Code of Federal Regulations, Also, wi a) of the Federal Regulations, as indicated or Regulation for a particular material.	tances as defined in the Department Is an optional method for Identifying ien shipping hazardous materials, the I the Bill of Lading does apply, unless	of Transport hazardous n shipper's ce s a specific e	ation Regulations naterials on Bills of artification statement xception from the	R
Designated	Consignee;	Chergieal Waste Management, Inc	Certification of receipt of	materials		
Per:	<u>fil</u>	Kubodeaux	Date: 4-5-22			



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Bill of Lading (Continuation Sheet) 2 of 2

Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169

DOCUMENT# 91133-3B

TOFROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
LLC
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: (a)y Smith	Date: 4-5-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

WEIGHED BY _____

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19979 (VIII33 Coloc Bill of Lading (Page 1 of 2) DOCUMENT # 91133-3C FROM TO Consignee: CHEMICAL WASTE MANAGEMENT Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLĆ INC Street: 7170 JOHN BRANNON ROAD **3144 PASSYUNKAVE** Street: EPA ID: PAD 049791 098 EPA ID: LAD000777201 City/Stale/Zip: PHILADELPHIA, PA 19145 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 Phone: (440) 228-1524 SHIPPER'S INSTRUCTIONS ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE **DEFINITION OF SOLID WASTE UNDER 40CFR** 261.4/al 1241 NO. HAZARDOUS SHIPPING DESCRIPTION OF ARTICLES MATERIAL UNITS SPECIAL MARKS & EXCEPTIONS Type Volume UOM RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9, III (BENZENE) CM 23.88 Т Х 1 PROFILE: 969843LA IM CONTAINER# EPIU225291 RAIL CAR# EPIX91133 ERG# 171 H039 RECEIVED subject to the classifications and tasilfs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carder (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said properly, over all or any portion of said route to destination and as to each party at any ime interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Leding terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp Per: Date: Per: Luis Castro 2/18/2022 ø Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Loding 17.2.01(a)(1)(iii) of Tile 4 9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's contification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Date:

Consignee: CHEMICAL WASTE MANAGEMENT	Inc
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	1
Phone: (337) 583-2169	

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DOCUMENT# 91133-3C

TOFROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	- 1		
Per:	Dale;		
Carrier-3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169	· · · · · · · · · · · · · · · · · · ·
Per LALAM >	Date: 4-5-2	7	

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 7605

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DOCUMENT # 91133-3D

•	DOCUMENT # 91133-3D
то	FROM
Consignee: CHEMICAL WASTE MANAGEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE
EPA ID: LAD000777201	EPA ID: PAD 049791 098
City/Stale/Zip: SULPHUR LA 70665	City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (337) 583-2169	Phone: (440) 228-1524
ADDITIONAL INFORMATION	SHIPPER'S INSTRUCTIONS
VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241	

HAZARDOUS MATERIAL	NO, SHIPPING UNITS	DESCRIPTION (SPECIAL MARKS)	OF ARTICLES EXCEPTIONS	Туре	Volume	UOM
x	1.	RQ, UN3077, ENVIRONMENTA SUBSTANCE, SOLID, N.O.S. 9	LLYHAZARDOUS .III (BENZENE)	СМ	22.70	т
		PROFILE	969843LA			
[IM CONTAINER# EPIU225042				
		RAIL CAR# EPIX91133				
l <u> </u>		······································			· ·	
			· · · · · · · · · · · · · · · · · · ·			dia -
	1	ERG# 171 H039			NH	119
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good order, ex {the word cars agrees to carr It is mutually a time interester in the governing the governing	kcept as noted (rier being unde y <i>IO</i> Us usual p ugreed as to ea d in all or any su ng classification classification a	(contents and condition of packages unkno rstood through this contract as meaning a lace of delivery as said destination. If on it ch carrier of all or any of said properly, ove ald property, that every service to be perfor n on the date of shipment. Shipper hereby nd the said terms and conditions.	wn), marked consigned and destin iny person or corporation in posse s route, otherwise to deliver lo anoti r all or any portion of said route to med hereunder shall be subject to certifies that he is familiar with all	ed as indicate salon of the p ter carrier on Sestination an all the Bill of the Bill of Lac	ed above which is property under the the route to said as to each par Lading terms and ding terms and c	said carner he contract) I destination. ty at any d conditions conditions in
Shipper: PI	{ILADELPHI	A ENERGY SOLUTIONS R&M	Carrier: CSX Railroad Corp)		
Per:		Date: 2/18/2022	Per: Luis Cas	tra	Date O	18/22
Mark with "X" governing the Lading 172 20 prescribed in s requirement is	or "RQ" if apprograms (ransportation of (s)(1) (iii) of Tit ection 172.204(provided in the	orlate to designate Hazardous Materials Sub i hazardous materials. The use of this column le 4 9. Code of Federal Regutations, Also, wi a) of the Federal Regutations, as indicated o Regutation for a particular material,	stances as defined in the Department n is an optional method for Identifying nen shipping hazardous materials, ih n the Bill of Lading does apply, unles	of Transporta hazardous m e shipper's ce s a specific ax	ation Regulations aterials on Bills o ruffication stateme ception from the	ent
Designated	Consignee:	Chemical Waste Management, Inc	Certification of receipt of	materials		
Be	enda	Snicik	Date: 4400			
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Bill of Lading (Continuation Sheet) 2 of 2

Consignee: CHEMICAL WASTE MANAGEMENT	rC
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91133-3D

TO ----- FROM PRI ADELPHIA ENERGY SOLUTIONS R&M

Shipper LLC	: PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE
EPA ID	: PAD 049791 098
City/Sta	le/Zip; PHILADELPHIA, PA 19145
Phone:	(440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			
Per:	Date:		
Carrier 3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169	
Per: Notten	Date: 4. 4.2	22	

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91133-3E

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Consignee: CHEMICAL WASTE MANAGEMEN ŁĽĆ INC **3144 PASSYUNKAVE** Street: 7170 JOHN BRANNON ROAD Street: EPA ID: PAD 049791 098 EPA ID: LAD000777201 City/State/Zip: PHILADELPHIA, PA 19145 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 Phone: (440) 228-1524 SHIPPER'S INSTRUCTIONS ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/al 1241 Fichet 6/100 NO SHIPPING DESCRIPTION OF ARTICLES HAZARDOUS SPECIAL MARKS & EXCEPTIONS Туре Volume UNITS MATERIAL UOM RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9. III (BENZENE) CM 20.85 т 1 х PROFILE: 969843LA IM CONTAINER# EPIU225267 RAIL CAR# EPIX91133 ERG# 171 H039 RECEIVED subject to the classifications and lariffs in effect on the date of the Issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carrier (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry /o Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to destination and as to each party et any time Interested In all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp LLC Per: Date: Date Per: Luis Costro 2/18/2022 Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations mark with a or real in appropriate to designate reactions materials doctances as defined in the Department of Pransportation (regionation) governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Tille 4 B. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the regularement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Date:

	\sim
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91133-3E

TO	FROM
Shipper: PHILADELPHIA ENERGY	Y SOLUTIONS R&M
Street: 3144 PASSYUNKAVE	
EPA ID: PAD 049791 098	
City/Stale/Zip: PHILADELPHIA, PA	A 19145
Phone: (440) 228-1524	· · · · · · · · · · · · · · · · · · ·

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: An Ant	Dale: $L - 4 - 22$

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91133-3F





Consignee: CHEMICAL WASTE MANAGEMENT	C
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91133-3F

т	D FROM
Shipper:	PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE
EPA ID:	PAD 049791 098
City/Stal	e/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Venon K. M.	Date: 4-4-20

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 1000

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Patrick Dauria

From:Doan, Janet <JDoan@wm.com>Sent:Monday, April 25, 2022 1:28 PMTo:Patrick DauriaCc:Rhyne, JohnSubject:91063-3Attachments:91063-3.pdf

All solid 91063-3A, 91063-3B, 91063-3D & 91063-3E were overweight.

JANET DOAN Scheduling Coordinator Gulf Coast Area GulfCoastScheduling@wm.com idoan@wm.com

Main: 337.583.3700 Direct: 337.583.3745 7170 John Brannon Road Sulphur, LA 70665



Recycling is a good thing. Please recycle any printed emails.


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Bill of Lading (Page 1 of 2)

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DOCUMENT# 91063-3A

		70	Fi	ROM		
Consignee: Ch	IEMICAL V	VASTE MANAGEMENT	Shipper: PHILADELPHIA	ENERG	Y SOLUTIONS	R&M
Street: 7170 J	OHN BRAN	INON ROAD	Street: 3144 PASSYUN	IKAVE		
EPA ID: LAD	000777201		EPA ID: PAD 049791 0	8		
City/Stale/Zin	SULPHU	R LA 70665	City/Stale/Zip; PHILADEt	PHIA, P/	A 19145	
Phone: (337)	583-2169		Phone: (440) 228-1524		· · · · · · · · · · · · · · · · · · ·]
			SHIPPER'S I	NSTRUCT	IONS	
VRE TANK B DEFINITION (261.4/al 1241	OTTOMS OF SOLID	EXCLUDED FROM THE WASTE UNDER 40CFR				
Tida	t lelli	28				
HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF SPECIAL MARKS & F	ARTICLES	Турө	Volume	юм
x	1	RQ, UN3077, ENVIRONMENTAL SUBSTANCE, SOLID, N.O.S. 9.1	LYHAZARDOUS II (BENZENE)	СМ	24.05	т
		FROICE.	303043LA			
		IM CONTAINER# EPIU225146				
		RAIL CAR# EPIX91063		<u> </u>		
		ERG# 171 H039			-M-	
				·		
RECEIVED sub good order, exc (the word carrie agrees to carry It is mutually ag	ject to the cla ept as noted or being unde fo Us usual p reed as to ea	ssifications and tariffs in effect on the date of (contents and condition of packages unknow rstood through this contract as meaning an lace of delivery as said destination. If on its ch carrier of all or any of said property, over	of the issue of this Bill of Lading, the n), marked consigned and destined y person or corporation in possess routa, otherwise to deliver to another all or any portion of said route to de	e property d as indicate lon of the p carder on stingtion an	lescribed above in a above which sai properly under the the route to said d id as to each party	apparent id carrier contract) estination. at any

It is mutually agreed as to each carrier of an or any or sale property, over an or any portion of sale role and the deal of act party at any time interested in all or any sale property, that every service to be performed hereunder shall be subject to all the Bitl of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bitl of Lading terms and conditions in the governing classification and the sale terms and conditions.

Shipper: PHILADELPHIA ENERGY SOLUTIONS Reim				CSXR	ailroad		•	,	
Per:	1. 4. 3	Date: 2/18/2022	Per:	L.	uis (Castro	2118	j	
Mark with 'X governing th Lading 172. prescribed h requirement	Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (III) of Title 4.9. Code of Federal Regulations. Also, when shipping hazardous meterials, the shipper's cartification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from tha requirement is provided in the Regulation for a particular material.								
Designate	ed Consignee: Chemical Was	te Management, Inc	Certi	fication	of recei	pt of materials			
Per	plinda She	Cer	Date:	U	\emptyset	22			

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	TOFROM
	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE
	EPA ID: PAD 049791 098
	City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (337) 583-2169	Phone: (440) 228-1524

DOCUMENT# 91063-3A

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	······································	
Per:	Date:	
Carrier 3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169
Per: Vernon K Parl	Date:	4-6-28-

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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DOCUMENT # 91063-3B

		TO	- C		FROM		
Consignee: C	CHEMICAL	WASTE MANAGEMENT		Shipper: PHILADELPH	IIA ENERG	Y SOLUTIONS	R&M
Street: 7170 .	JOHN BRAI	NNON ROAD		Street: 3144 PASSY	UNKAVE		
EPA ID: LAD	000077720	[EPA ID: PAD 049791	098		
City/Stale/Zi	p: SULPHU	R LA 70665		City/Stale/Zip: PHILAD	ELPHIA, P/	A 19145	
Phone: (337)) 583-2169			Phone: (440) 228-1524	•		
	ADDITIO	VAL INFORMATION		SHIPPER	S INSTRUCT	ONS	
VRE TANK 6 DEFINITION 261.4/al 1241	BOTTOMS OF SOLID 1	EXCLUDED FROM THE WASTE UNDER 40CFR					
Ticho	to ((129					
HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIP SPECIAL MA	TION OF AF	RTICLES CEPTIONS	Туре	Volume I	IOM
×	1	RQ, UN3077, ENVIRONME SUBSTANCE, SOLID, N.C	ENTALLY D.S. 9.111 (HAZARDOUS BENZENE)	CM	24.40	Т
		PRO	FILE: 96	9843LA		<u></u>	
1		IM CONTAINER# EPIU22	5133				_
		RAIL CAR# EPIX91063			_		
							_
			7				_
		ERG# 171 H039				NH	_
				·			
RECEIVED sub	pject to the cla	ssifications and tariffs in effect on th	he date of the	he issue of this Bill of Lading,	the property d	lescribed above in	n appere

erty described above in apparent licated above which said carrier good order, except as noted (contents and condition of packages unknown), marked consigned a estine (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Billi of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions.

Per:

Luis Castro

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp

2/18/2022

Date:

Per:

Date 2 Ζ

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Mark with "X" or "RQ" If appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations main while or the transportation of hazardous materials substances as denied in the Department of Transportation Kegulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Tille 49. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

Designated Consignee: Chemical Waste Management, Inc	Certification of receipt of materials
Belinda Spicer	Date: 4722

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Consignee: CHEMICAL WASTE MANAGEMENT	C
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/State/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91063-3B

TO ----- FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLĊ Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3; Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Datt Jam	Date: 4-7-22-

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91063-3C

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Consignee: (CHEMICAL	WASTE MANAGEMENT	The	Shipper: PHILADELPHIA	ENERG	BY SOLUTIONS	R&M
INC Street: 7170	JOHN BRAI			Street: 3144 PASSYUN	IKAVE		
EPA ID: At	700077720	1		EPA ID: PAD 049791 09	18		
City/Stale/Zi	in: SULPHU	IR LA 70665		City/Stale/Zip: PHILADEL	PHIA, P	PA 19145	**
Phone: (337) 583-2169			Phone: (440) 228-1524			
		NAL INFORMATION		SHIPPER'S I	NSTRUCT	rions	
VRE TANK DEFINITION 261.4/al 124	BOTTOMS I OF SOLID 1	EXCLUDED FROM TH WASTE UNDER 40CFF	ΗΕ \$				
Trol	te le	(130					
HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DES	SCRIPTION OF A	RTICLES CEPTIONS	Туре	Volume	IDM
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^	· ·		PROFILE: 96	59843LA			
		IM CONTAINER# EP	IU225334			1	
		RAIL CAR# EPIX910	63				
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RECEIVED su good order, ex (the word carri- agrees to carry II is mutually a time interested in the governing Shipper: Ph LLC	bject to the cla cept as noted i ler being unde y to Us usual p greed as to ea i fin all or any s ing classification classification a IILADELPHI.	Issifications and tartifs in effe (contents and condition of par rstood through this contract is tace of delivery as said destin ch carrier of all or any of said aid property, that every servic n on the date of shipment. Shind the said terms and condition A ENERGY SOLUTION:	ct on the date of t ckages unknown), as meaning any j atlon. If on its rou properly, over all e to be performed lipper hereby cert ns. S R&M C	the issue of this Bill of Lading, the , marked consigned and destined person or corporation in possessi ite, otherwise to deliver to another or any portion of said route to des I hereunder shall be subject to all iffies that he is familiar with all the arrier: CSX Railroad Corp	property as indicat on of the carrier or stination a the Billi of Billi of Le	described above in ied above which sa properly under the h the route to said d nd as to each party f Lading terms and ading terms and con	apparen ld carrier a contract estination at any conditions in nditions in
Per:	, - ÷	Date: 2/18	/2022	er: Luis Castro		Date:	3/22
Mark with "X" o governing the f Lading 172.201 prescribed in su requirement is	r "RQ" if approj ransportation o I (a)(1) (ili) of Tit ection 172.204( providad in the	priale to designate Hezardous f hazardous materials. The use le 4 9, Code of Federal Regula a) of the Federal Regulations, Regulation for a particular mat	Materials Substand of this column is a titons, Also, when s as indicated on the erial.	ces as delined in the Department of an optional method for Idenilfying ha shipping hazardous materials, the s a Bill of Lading does apply, unless a	Transport azardous n hipper's ce specific e	lation Regulations naterials on Bills of entification statement xception from the	l
Designated	Consignee:	Chemical Waste Manag	ement, Inc	Certification of receipt of m	aterials		
1 Congrant	۸		D	ate:			

Consignee: CHEMICAL WASTE MANAGEMENT INC	C
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

#### DOCUMENT# 91063-3C

TOFROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone; (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Contraction Ocall	Date: 4-5

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 760077

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WIII Bill of Lading (Page 1 of 2)

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		ŤΟ						FROM	A			
Consignee: (		WASTE MANAG	BEMENT	5	Shipper: LLC	PHI	LADEL	PHIA EN	VERG	Y SOLU	TIONS	R&M
Street: 7170	JOHN BRAN	NON ROAD			Street:	314	44 PAS	SYUNKA	٩VE			
EPA ID: LA	000777201			I	EPA ID:	PA	D 0497	91 098				
City/Stale/Zi	in: SULPHU	R LA 70665			City/Sta	le/Zi	p; PHIL	ADELPH	IIA, P/	A 19145		•••
Phone: (337	583-2169				Phone:	(440)	) 228-15	524				
			<u>.</u>		•		SHIPPE	ER'S INSI	RUCT	IONS		
VRE TANK DEFINITION 261.4/al 124	BOTTOMS OF SOLID 1	EXCLUDED FI WASTE UNDEF	ROM THE R40CFR									
-10	lide (	1131										
	NO, SHIPPING UNITS		DESCRIPTI SPECIAL MAR	ON OF A	RTICLES CEPTIONS				Туре	Volum	8	
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Bill of Lading (Continuation Sheet) 2 of 2

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EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91063-3D

TO FROM					
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M					
Street: 3144 PASSYUNKAVE					
EPA ID: PAD 049791 098					
City/Stale/Zip: PHILADELPHIA, PA 19145					
Phone: (440) 228-1524					

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: VRVNOG VL PAU/	Date: 4-5-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET #_____ ηCj

WEIGHED BY

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LLC Per: Date: 2/18/2022 Per: Luis Castro Date: Date: Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (ill) of Title 4 9. Code of Federal Regulations, Also, when shipping the bill of Lading does apply, unless a specification statement prescribed in section 172.204(a) of the Federal Regulations as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a paticular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Part Date: Date:	RECEIVED s good order, e (the word car agress to car It is mutually time intereste in the governing Sbinper: Pi	ubject to the cla xcept as noted (rier being under y to Us usual pl agreed as to eau d in all or any ss ing classification classification ar HII ADEI PHI/	solfications and ter contents and condi- rated through this ace of delivery as s ch carder of all or a ald property, that ev to on the date of shi to the said terms ar A ENERGY SOI	iffs in effect on the da illon of packages unki- contract as meaning aid destination. If on ny of said properly, of rery service to be perf pment. Shipper heret d conditions.	ate of the issu nown), marke g any person its route, oth ver all or any formed hereu by certifies th Carrier	ue of this ed const or corp erwise to portion nder sh at he is	s Bill of gned an oration i o deliver of said u all be su familar Railroa	Lading, the d deslined in possessi r lo another route to des ubject to all with all the ad Corp	e property as indicat lon of the carrier or stination a the Bill of a Bill of La	describe ed above property n the rout nd as to f Lading tading ten	d above in e which sa under the e to said d each party larms and ms and co	i apparent id carrier a contract) lestination. y at any conditions inditions in	
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Perpina Snicar Date: 14, 122	Designated	Consignee:	Chemical Wast	e Management, In	ic Cert	ificalio	n of re	celpt of m	naterials				
	150	limh	Shi	NG	Dale:	Ú	(0)	12	2				



Consignee; CHEMICAL WASTE MANAGEMENT	Ċ
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91063-3E

TO FRUM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE.
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			
Per:	Date:		
Carrier 3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169	
Per: Jan Jam	Date: 4 - 6 -	.72	

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 100312

WEIGHED BY _____



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DOCUMENT# 91063-3F .

Street: 3144 PASSYUNKAVE

City/Stale/Zip: PHILADELPHIA, PA 19145

EPA ID: PAD 049791 098

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FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD

то

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

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SHIPF	PER'S INS	TRUCTION	s	
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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS		Туре	Volume	UDM
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9. III (BENZENE) PROFILE: 969843LA	S	СМ	23.18	T
		IM CONTAINER# EPIU225243				
		RAIL CAR# EPIX91063		-	•	
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		ERG#171 H039		NF		
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good order, exc {the word carrie àgrees to carry It is mutually ag time interested in the governing the governing c	cept as noted (or being under 10 Us usual pl reed as to eac in all or any sa g classification lassification ar	contents and condition of packages unknown), marked consigner rstood through this contract as meaning any person or corporat ace of delivery as said destination. If on its route, otherwise to de ch carrier of all or any of said properly, over all or any portion of s ald property, that every service to be performed hereunder shall to a on the date of shipment. Shipper hereby certifies that he is fan d the said terms and conditions.	and destined tion in possessi- eliver lo another said route lo des be subject to all nillar with all the	as Indicate on of the j carrier on Inelion ar the Bill of Bill of Lac	ed above which property under t the route to sain ad as to each pa Lading terms at ding terms and	said carrier the contract) d deslination. rty at any nd conditions conditions in
LLC	LAUCLPHN	Carrier Con Rain Carrier Con Rain	indad Corp			
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Bill of Lading (Page 1 of 2)

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DOCUMENT # 91063-3F

LLC

Consignee: CHEMICAL WASTE MANAGEMENT

το

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/State/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

33

Street:	3144 PASSYUNKAVE	•
EPA ID	: PAD 049791 098	
City/Sta	le/Zip: PHILADELPHIA, PA 19145	
Phone:	(440) 228-1524	

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

SHIPPER'S INSTRUCTIONS

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HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION C SPECIAL MARKS &	FARTICLES EXCEPTIONS	Туре	Volume	ЦОМ
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		RAIL CAR# EPIX91063			•	
		ERG# 171 H039		NH		
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RECEIVED suf good order, exc (the word carrl agrees to carry it is mutually ag time interested in the governing c Shipper: PH LLC	Dject to the cla cept as noted to er being unde to Us usual pi greed as to ear in all or any sa g classification classification ar LADELPHI	issifications and tariffs in effect on the date (contents and condition of packages unkno rstood through this contract as meaning a lace of delivery as said destination. If on its ch carrier of all or any of said properly, ove ald property, that every service to be perfor a on the date of shipment. Shipper hereby ad the said terms and conditions. A ENERGY SOLUTIONS R&M	of the Issue of this Bill of Lading, the wn), marked consigned and destined ny person or corporation in possessi route, otherwise to defiver to another rall or any portion of said route to des med hereunder shall be subject to all certifies that he is familiar with all the Carrier: CSX Railroad Corp	property (as indicate on of the carrier on slination ar the Bill of La	described above ed above which property under the route to sai nd as to each pa Lading terms a ding terms and	a In apparent said carrier the contract) d destination. arty at any nd conditions conditions in
Per:	-9	Date: 2/18/2022	Per: Luis Castro	÷	Dat	8-22
Mark with X° or governing the tr Lading 172.2011 prescribed in se requirement is p Designated (Per:	$\frac{PRQ''}{PRQ''} if appropriate an apportation of (a)(1) (iii) of Till (clion 172.204(s)) or ovided in the local state of the $	oriale to designate Hazardous Materials Subs I hazardous materials. The use of this column te 4.9, Code of Federal Regulations, as Indicated or Regulation for a particular material. Chemical Waste Management, Inc	tances as defined in the Department of is an optional method for identifying he ien shipping hazardous materials, the s is the Bill of Lading does apply, unless a Certification of receipt of m Date:	i Transporti azacdovs n hipper's ce i specific ex naterials	ation Regulation naterials on Bills rtification staten kception from the	s of Jant 3

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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0306 RECEIVING TICKET #

WEIGHED BY_____

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Patrick Dauria

From: Sent: To: Cc: Subject: Attachments: Doan, Janet <JDoan@wm.com> Monday, March 28, 2022 9:18 AM Patrick Dauria Rhyne, John EPIX 91058 91058.pdf

Follow Up Flag: Flag Status:

Follow up Flagged



BOLs and weight tickets attached for EPIX 91058. All will be invoiced at solid rate. Overweight charges will apply for boxes listed below: 5077 5110 5003 125 Y Y 5161

Thank you for your business!

JANET DOAN

Scheduling Coordinator Gulf Coast Area GulfCoastScheduling@wm.com jdoan@wm.com

Main: 337.583.3700 Direct: 337.583.3745 7170 John Brannon Road Sulphur, LA 70665





1041058-011 766053

DOCUMENT # 91058-2A

το	FROM
Consignee: CHEMICAL WASTE MANAGEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE
EPA ID: LAD000777201	EPA ID: PAD 049791 098
City/Stale/Zip: SULPHUR LA 70665	Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (337) 583-2169	Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

ADDI	ITIONAL INFORMATION
VRE TANK BOTTO DEFINITION OF SOI 261.4/al 1241	MS EXCLUDED FROM THE LID WASTE UNDER 40CFR
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HAZARDOUS MATERIAL	NO. SHIPPING UNITS		DESCRIPTION O SPECIAL MARKS &	F ARTICLE EXCEPTIC	es DNS		Туре	_≁ Volum	9 U	OM
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		RAIL CAR# E	PIX91058							
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Per:		11- <u>)</u>	Date: 2/23/2022	Per:	Luis	Castro	?		Date:	
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Bill of Lading (Continuation Sheet) 2 of 2

Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

City/Stale/Zip: SULPHUR LA 70665

EPA ID: LAD000777201

Phone: (337) 583-2169

DOCUMENT# 91058-2A

TO ----- FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			
Per:	Date:		
Carrier 3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169	
Per:	Date: 3.24	1.25	

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # _____

WEIGHED BY _____

Y1168-00 746054 湖 Bill of Lading (Page 1 of 2) DOCUMENT # 91058-2B Consignee: CHEMICAL WASTE MANAGEMENT FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 Street: 3144 PASSYUNKAVE City/Stale/Zip: SULPHUR LA 70665 EPA ID: PAD 049791 098 Phone: (337) 583-2169 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524 ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE SHIPPER'S INSTRUCTIONS DEFINITION OF SOLID WASTE UNDER 40CFR Tiduto Lo140 NO. SHIPPING HAZARDOUS MATERIAL DESCRIPTION OF ARTICLES UNITS SPECIAL MARKS & EXCEPTIONS RQ, UN3077, ENVIRONMENTALLY HAZARDOUS Туре Volume х 1 SUBSTANCE, SOLID. N.O.S. 9. III (BENZENE) 10 J CM 24.40 PROFILE: 969843LA τ IM CONTAINER# EPIU222371 RAIL CAR# EPIX91058 ERG# 171 H039 RECEIVED subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated above which said carrier the under the under the content of the property under the property under the property of the property under the property under the property of the property under the property under the property under the property under the property of the pr (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. agrees to carry to us usuarplace or usavery as salo destination. If on its foute, otherwise to deliver to another carrier on the route to salo destination. If on its foute, otherwise to deliver to another carrier on the route to salo destination. If on its foute, otherwise to deliver to another carrier on the route to salo destination. If on its foute, otherwise to deliver to another carrier on the route to salo destination. If on its foute, otherwise to deliver to another carrier on the route to salo destination and as to each party at any time intercepted in all or any portion of said route to all the Difficult to be acher and the deliver of time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Billi of Lading terms and conditions in the neuroning classification on the date of advance. School backturget that has be fortilled with all the Billi of Lading terms and conditions in time interested in an or any sale property, that every service to be performed herebooer shall be subject to an the bint of Lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the performance of the sate formations. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp Per: Dale: Per: 2/23/2022 Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4.9. Cade of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification Bills of prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. " Date: Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Date:

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DOCUMENT# 91058-2B

0 FROM
PHILADELPHIA ENERGY SOLUTIONS R&M
3144 PASSYUNKAVE
PAD 049791 098
le/Zip: PHILADELPHIA, PA 19145
(440) 228-1524

Carrier 2: BNSF Railway Comp	pany	
Per:	Date:	
Carrier 3: Chemical Waste Man	nagement, Inc. LA0000147272	2 (800) 336-2169
Per:	Par Date: 2-	- 24-20

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

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City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # _____

WEIGHED BY _____



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TO
Consignee: CHEMICAL WASTE MANAGEMENT
Street: 7170 JOHN BRANNON ROAD
EPA ID: LAD000777201
City/Stale/Zip: SULPHUR LA 70665
Phone: (337) 583-2169
ADDITIONAL INFORMATION
VRE TANK BOTTOMS EXCLUDED FROM TH

VRE TANK BC DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

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DOCUMENT #	91058-2C
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FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

MATERIAL	NO. SHIPPING UNITS	DE SPEC	ESCRIPTION OF ARTICLES CIAL MARKS & EXCEPTIONS	Туре	Volume	10M
х	1	RQ, UN3077, ENVIR SUBSTANCE. SOLI	RONMENTALLY HAZARDOUS ID. N.O.S. 9.111 (BENZENE)	СМ	24.35	т
فللنصع عنيدي يبينان" ١٠٠٠- اعترا يست			PROFILE: 969843LA			
	A.,	IM CONTAINER#E	PIU225317			
	<u>.</u> ,	RAIL CAR# EPIX91	058			
		ERG# 171	H039		NA	
RECEIVED sul good order, ex- (the word card agrees to carry	bject to the cla cept as noted er being unde 10 Us usual p	(contents and condition of p rstood through this contract lace of delivery as said desi	packages unknown), marked consigned ar of as meaning any person or corporation lination. If on its route, otherwise to delive	d destined as indical in possession of the r lo another carrier of route to destination a	led above which s properly under th n the route to said nd as to each par	ald carrier a contract) destination. ly at any
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RECEIVED sul good order, ex (the word carry II is mutually and time interested In the governing of Shipper: PH LLC Per:	bject to the cla cept as noted or being unde to Us usual p greed as to ea in all or any s g classification a ILADELPHI	(contents and condition of p (contents and condition of p ratord through this contract lace of delivery as said desi ch carrier of all or any of sa aid property, that every serv no on the dale of shipment. Ind the said terms and condit A ENERGY SOLUTION Date 2/2	Dackages unknown), marked consigned an ct as meaning any person or corporation tination. If on its route, otherwise to delive id property, over all or any portion of said vice to be performed hereunder shall be su Shipper hereby certifies that he is familiar tions. NS R&M Carrier: CSX Railron 2: Per: 23/2022 Luis (d destined as indica in possession of the r lo another carrier of noute lo destination a ibject to all the Bill of with all the Bill of Li ad Corp	ted above which s property under th n the route to sold ind as to each par f Lading terms and ading terms and c	aid carrier a contract) destination. ly at any 1 conditions in onditions in

Consignee: CHEMICAL WASTE MANAGEMENT

Street: 7170 JOHN BRANNON ROAD

City/Stale/Zip: SULPHUR LA 70665

EPA ID: LAD000777201

Phone: (337) 583-2169

,

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INC

DOCUMENT# 91058-2C

TO-----FROM

7	Shipper: PHILADELPHIA ENERGY SOLUTIONS Rate
	Street: 3144 PASSYUNKAVE
-	EPA ID: PAD 049791 098
	City/Stale/Zip: PHILADELPHIA, PA 19145
	Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Variation of Pour	Date: 3-24-22
Vernon & HUI	

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # $\frac{2066615}{24566}$ weighed by $\underline{24566}$



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DOCUMENT # 91058-2D

	TO	
Consignee: CHEMICAL	WASTE MAN	AGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241



FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/State/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

· · · · · · · · · · · · · · · · · · ·
M.

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION O SPECIAL MARKS &	F ARTICLES EXCEPTIONS	Туре	Volume	
X	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE. SOLID. N.O.S. 9.III (BENZENE)		СМ	24.40	т
	 	PROFILE	: 969843LA			
		IM CONTAINER# EPIU225110				
		RAIL CAR# EPIX91058		1		
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		ERG#171 H039		_	10-1	
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the word carry agrees to carry If is mutually at time interested in the governing the governing Shipper: PH LLC	good order, except as hold (compared to plottering and condition) plottering any person or corporation in possession of the property under the contract) (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry <i>to</i> Us usual place of delivery as said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. If is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to dastination and as to each party at any it is mutually agreed as to each carrier of all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M					
Per:	Date: 2/23/2022 Per: Luis Castro Date:				ate:	
Mark with "X" or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4.9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement Lading 172.201(a)(1) (iii) of Title 4.9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.						
Certification of receipt of materials						
Designated	Designated Consignee: Chemical Waste Management, ind					
Belinda Spicin 3/04/28						

DOCUMENT# 91058-2D

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/ZIp: SULPHUR LA 70665

Phone: (337) 583-2169

TO -----FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 Cily/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Joseph Could	Date: 3/29/2022

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET #_____

WEIGHED BY _____



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DOCUMENT # 91058-2E

то Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 jobs leifout

	FROM
Shipper: P	HILADELPHIA ENERGY SOLUTIONS R&M
Street: 3	144 PASSYUNKAVE
EPA ID: F	AD 049791 098
City/Stale	Zip: PHILADELPHIA, PA 19145
Phone: (4	40) 228-1524
	SHIPPER'S INSTRUCTIONS

FROM

NC HAZARDOUS SHIPI MATERIAL UNI), Ping Its	DESCRIPTION OF A SPECIAL MARKS & EX	RTICLES CEPTIONS	Туре	Volume	<u>0</u> M]
X 1	R I S	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9.111 (BENZENE)			24.40	Т
		PROFILE: 9	69843LA			+
		14 CONTAINED# EPIL 1225003		200		┫━━━┥
		M CONTAINER ET TOLLOOD				
	F	RAIL CAR# EPIX91055				
			•			
					111	
		ERG# 171 H039		<u>}</u>	<u>1\/3\</u>	11
RECEIVED subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated ebove which said carrier good order, except as noted (contents and condition of packages unknown), marked consigned and destined as indicated ebove which said carrier good order, except as noted (contents and condition of packages unknown), marked consigned and destined in possession of the property under the contract) (the word carrier being understood through this contract as meaning any person or corporation in possession of the property under the contract) is mutually agreed as to each carrier or all or any of said property, over all or any or said route to destination and as to each party at any it is mutually agreed as to each carrier or ship the subject to all the Bill of Lading terms and conditions in in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions. The governing classification and the said terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M Carrier: CSX Railroad Corp LLC Date: Per: Luis Casto Date: 2/23/2022 Mark with X' or "RQ" if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation statement fields. The use of this column is an optional method for identifying hazardous materials on the regulations, as indicated on the Bill of Lading dees appty, unless a specific exception from the requirement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certif						

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

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DOCUMENT# 91058-2E

TO -----FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

Carrier 2: BNSF Railway Company	
Per;	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Acknowledgement of Receipt	Date: 3/25/2022
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OVERWLGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 140062

WEIGHED BY _____

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DOCUMENT # 91058-2F

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
FPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Chy/dia(2)2); 1112.0
SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF ARTICL SPECIAL MARKS & EXCEPT	ES ONS	Туре	Volume	<u>юм</u>
x	1	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9.III (BENZENE)		СМ	24.18	т
		PROFILE: 96984	3LA			<u> </u>
		IM CONTAINER# EPIU225161				
		RAIL CAR# EPIX91058				<u>_</u>
	<u></u>					
		ED.04.474 H039			HUH	
	<u> </u>	ERG#171 1059				
Rective as noted (contents and condition of packages unknown), marked consigned and destined as indicated barried as indicated barried as model (contents and condition of packages unknown), marked consigned and destined as indicated barried barried as indicated barried barrie						
Mark with X* or "RQ" if appropriate to designate Hazardous Materials Substances as optional method for Identifying hazardous materials on Bills of governing the transportation of hazardous materials. The use of this column is an optional method for Identifying hazardous materiats on Bills of Lading 172 201(a)(1) (III) of Tille 4.0. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement Lading 172 201(a)(1) (III) of Tille 4.0. Code of Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Per Date: Date: Date:						
' Pl	FUNILY MAL					

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

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DOCUMENT# 91058-2F

TOFROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: N Part	Date: 3-75-2-2-2-
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 7 4 add(cl)

WEIGHED BY _____

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Patrick Dauria

From: Sent: To: Cc: Subject: Attachments: Doan, Janet <JDoan@wm.com> Monday, March 28, 2022 9:16 AM Patrick Dauria Rhyne, John EPIX 91475 91475.pdf

Follow Up Flag: Flag Status: Follow up Flagged

Z APPROVED

Good morning Patrick,

Please see attached BOLs and weight tickets for EPIX 91475. All will be invoiced at solid rate. Overweight charges of \$125.00/ea apply to the following boxes: 5058

5+125= 625. 5207 5180 5236 5283

Thanks and Have a Great Day!

JANET DOAN

Scheduling Coordinator Gulf Coast Area <u>GulfCoastScheduling@wm.com</u> jdoan@wm.com

Main: 337.583.3700 Direct: 337.583.3745 7170 John Brannon Road Sulphur, LA 70665



Recycling is a good thing. Please recycle any printed emails.

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Bill of Lading (Page 1 of 2)

X

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DOCUMENT # 91475-2A

то	FROM		
Consignee: CHEMICAL WASTE MANAGEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M		
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE		
EPA ID: LAD000777201	EPA ID: PAD 049791 098		
City/Stale/Zip: SULPHUR LA 70665	City/Stale/Zip: PHILADELPHIA, PA 19145		
Phone: (337) 583-2169	Phone: (440) 228-1524		
ADDITIONAL INFORMATION	SHIPPER'S INSTRUCTIONS		
VRE TANK BOTTOMS EXCLUDED FROM THE			

R'S INSTRUCTIONS

FROM

DEFINITION OF S 261.4/ai 1241	OLID WASTE UNDER 40CFR
Ticket	61410

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION SPECIAL MARKS	OF ARTICLES & EXCEPTIONS	Туре	Volume	цом
x	1	RQ, UN3077, ENVIRONMENTA SUBSTANCE, SOLID. N.O.S.	ALLY HAZARDOUS 9.111 (BENZENE)	СМ	24.40	Т
		PROFIL	E: 969843LA			
		IM CONTAINER# EPIU225304				
		RAIL CAR# EPIX91475				
· · · · · · · · · · · · · · · · · · ·	<u> </u>					
		ERG# 171 H039			MH	
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RECEIVED su good order, ex (the word carr agrees to carr) It is mutually a time interested in the governing the governing Shipper: Ph	bject to the cla ccept as noted tor being under y to Us usual p greed as to ea i in all or any s in all or any s in g classification classification a iLADELPHI	assifications and tariffs in effect on the de (contents and condition of packages unkin- arstood through this contract as meaning place of delivery as said destination. If on sch carrier of all or any of said properly, of said property, that every service to be perform on the dale of shipment. Shipper herein and the said terms and conditions. IA ENERGY SOLUTIONS R&M	te of the issue of this bin of lown), marked consigned en any person or corporation its route, otherwise to delive /er all or any portion of said ormed hereunder shall be si by certifies that he is familia Carrier: CSX Railro	ad destined as indicat in possession of the r lo another carrier on route lo destination er ubject to all the Bill of r with all the Bill of La ad Corp	ed above which s property under to the route to said nd as to each par / Lading terms an iding terms and c	said carrier he contract) I destination. rty at any Id conditions conditions in
		Date:	Per: / · /	A +.	Date	B:
Per:		2/23/2022	Luus (astro		
Mark with "X" or "RQ" If appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Tille 4.9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Per: Buttother Date: 223/22						
:						



DOCUMENT# 91475-2A

Consignee: CHEMICAL WASTE MANAGEMENT
INC

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/State/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

TO-----FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company
Advantagement of Receipt
Achiperedgement of Date: 7 72-12
Per Veria via ter to to the second se
Carrier 3: Chemical Waste Management, Inc. LA0000147272 (0007 000 2100
Advantigement of Receipt
Acknowledgemester Date: 0 27 - 7
Per: Manuel M No.
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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WEIGHED BY _____

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Bill of Lading (Page 1 of 2)

766013

	то
Consignee: CHEMICAL W	ASTE MANAGEMENT
Street: 7170 JOHN BRANN	NON ROAD

EPA ID; LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

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DOCUMENT# 91475-2B

FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLĆ Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/State/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION OF A SPECIAL MARKS & EX	RTICLES CEPTIONS	Туре	Volume	
X	1	RQ, UN3077, ENVIRONMENTALL SUBSTANCE. SOLID. N.O.S. 9.11	Y HAZARDOUS (BENZENE)	СМ	24.35	Т
		PROFILE: 969843LA				
······	<u> </u>	IM CONTAINER# EPIU225058				
		RAIL CAR# EPIX91475			· · · · · · · · · · · · · · · · · · ·	
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		ERG# 171 H039				-
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RECEIVED si goad order, ev (the word can agrees to carr II is mutually a time intereste in the governing Shipper: PI LLC Per: Mark with "X"	inject to the ci ccept as noted fier being und y to Us usual igreed as to e d in all or any classification classification ilLADEUPH	(contents and condition of packages unknown (contents and condition of packages unknown erstood through this contract as meaning any place of delivery as said destination. If on lis r ach carrier of all or any of said property, over said property, that every service to be perform on on the date of shipment. Shipper hereby c and tho said terms and conditions. IIA ENERGY SOLUTIONS R&M Date: 2/23/2022 ropriate to designate Hazardous Materials Subst	n), marked consigned and destined y person or corporation in posses: oute, othenwise to deliver to anothe all or any portion of said route to de ad hereunder shell be subject to a ertifies that he is familiar with all it Carrier: CSX Railroad Corp Per: Lucia Castro ances as defined in the Department is an optional method for identifying	of Transpo hazardous botination s hit he Bill of L	property under t n the route to said and as to each pa of Lading terms and Dat Dat Dat Dat Dat Dat Dat Dat Dat Dat	he contract) t destination. ty at any ad conditions conditions in e: $\frac{23}{23}$
governing the Lading 172.2/ prescribed in requirement i	transportation 01(a)(1) (iii) of section 172.20 s provided in th	of hazardous materiais. The use of this occurrent Tille 4.9. Code of Federal Regulations, Also, wh 14(a) of the Federal Regulations, as indicated on the Regulation for a particular material.	en shipping hazardous materials, thi the Bill of Lading doas apply, unless Certification of receipt of	a snippers s a specific material	exception from th	
Designate Per:	d Consigner	Lundoll aux	Date:		5-4	2~ -04

DOCUMENT# 91475-2B

Consignee: CHEMICAL WASTE MANAGEMENT	
NC	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

τo	FROM
Shipper: PHILADELPHIA	ENERGY SOLUTIONS R&M

Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per:	Date: 7/24/2022

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

(OUIS RECEIVING TICKET # ____

WEIGHED BY

UM14119-02-1765989 Bill of Lading (Page 1 of 2)

TO	
Consignee: CHEMICAL WASTE MANAGEMENT	
INC	
Street: 7170 JOHN BRANNON ROAD	

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261,4/al 1241

61412 Ticket

DOCUMENT # 91475-2C

FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524
SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING (JNITS		DESCRIPTION O SPECIAL MARKS&	F ARTICLES EXCEPTIONS		Туре	Volume	UOM
×	1	RQ, UN3077, I SUBSTANCE	ENVIRONMENTAL . SOLID. N.O.S. 9.	LYHAZARDOUS III (BENZENE)		СМ	24.40	т
			PROFILE: 969843LA					
		IM CONTAIN	ER# EPIU225207	· · · · · · · · · · · · · · · · · · ·				
		RAIL CAR# E	PIX91475					
		ERG# 171	H039				NH	
RECEIVED sui good order, ex- (the word carri- agrees to carry I) is mutually a time interested in the governing the governing Shipper; PH	bject to the cla capt as noted for being under for Us usual p greed as to as in all or any s g classification classification a ILADELPHI	issifications and tari (contents and condi rstood through this face of delivery as s ch carrier of all or an eid property, that ev a on the date of shin nd the said terms an A ENERGY SOL	fis in effect on the date lion of packages unkno contract as meaning a naid destination. If on its ery service to be perfor prment. Shipper hereby in conditions.	of the issue of this Bill wn), marked consigned ny person or corporation route, otherwise to delik r all or any portion of sai med hereunder shall be certifies that he is famili Carrier: CSX Railr	of Lading, the p and destined a n in possession war to another c d route to desti subject to all th iar with all the l oad Corp	property (s indicate n of the arrier on netion ar le Bill of Bill of La	described above ed above which property under the route to su ad as to each p Lading terms ding terms and	re in apparent h said carrier t the contract) aid destination. and y at any and conditions d conditions in
LLC Per:		2) - 3	Date: 2/23/2022	Per: Luis (Castro		Da	ate:
Mark with "X" or "RQ" if appropriate to designate Hazardous Materiats Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for Identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4.9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.								
Designated	Consignee:	Chemical Weste	Management, Inc	Certification of	receipt of ma	terials		
Per: Bl	linde	19pi	Cer	Date: BQ	322			

DOCUMENT# 91475-2C

Consignee: CHEMICAL WASTE MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

TO ------ FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145

Рһопе: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Dozent Commile	Date: 3/23/2022
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET # 1/45659

WEIGHED BY_____

÷ Bill of Lading (Page 1 of 2)

00914115-220 765990

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Consignee: CHEMICAL WASTE MANAGEMENT	
INC	
Street: 7170 JOHN BRANNON ROAD	

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

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DOCUMENT# 91475-2D

	FROM
Shipper:	PHILADELPHIA ENERGY SOLUTIONS R&M
LLĊ	

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION O SPECIAL MARKS &	F ARTICLES EXCEPTIONS	Туре	Voluma	
'x	1	RQ, UN3077, ENVIRONMENTAL SUBSTANCE, SOLID. N.O.S. 9.	LY HAZARDOUS III (BENZENE)	см	24.33	Т
		PROFILE	969843LA			
	<u> </u>	IM CONTAINER# EPIU225180			*****	
		BAIL CAR# EPIX91475				
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agroes to carry It is mutually a time interested in the governing the governing Shipper: PH	to Us usual p greed as to ea in all or any s ig classification classification a IILADELPH	blace of delivery as said desiriation. In office ach carrier of all or any of sald properly, over said property, that every service to be perfor on on the dale of shipment. Shipper heraby and the said terms and conditions. IA ENERGY SOLUTIONS R&M	r all or any portion of said route to de med hereunder shall be subject to al certifies that he is familiar with all th Carrier: CSX Railroad Corp	stination a the Bill of Bill of La	nd as to each p I Leding torms a Iding terms and	arty at any ind conditions conditions in
Per:		Date: 2/23/2022	Per: Luis Castro		Da	te:
Mark with "X" of governing the t Lading 172.20 prescribed in s requirement is Designated Per: B	x "RQ" If appro ransportation of I(a)(1) (iii) of T ection 172.204 provided In the Consignee	opfate to designate Hazardous Materials Sub of hazardous materials. The use of this colum title 4 9. Code of Federal Regulations, Also, w (a) of the Federal Regulations, as indicated of a Regulation for a particular material. : Chemical Waste Management, Inc	stances as defined in the Department n is an optional method for identifying then shipping hazardous materials, the on the Bill of Lading does apply, unless Certification of receipt of Date: 3236	of Transpor hazardous i shipper's c a specific e materials	tation Regulation materials on Bills ertification states exception from th	ns s of ment ne

DOCUMENT# 91475-2D

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

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TO ______FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company			
Acknowledgement of Receipt Per:	Date:		
Carrier 3: Chemical Waste Management, Inc.	LA0000147272	(800) 336-2169	
Acknowledgement of Receipt	Date: 3-23	.22	
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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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το Consignee: CHEMICAL WASTE MANAGEMENT INC

Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665

Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241

OCHMENTE STHUSZE

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCRIPTION O SPECIAL MARKS &	F ARTICLES EXCEPTIONS	Туре	Volume	_цом		
x	1	RQ, UN3077, ENVIRONMENTAI SUBSTANCE, SOLID, N.O.S. 9	LYHAZARDOUS III (BENZENE)	СМ	24.33	т		
		PROFILE	PROFILE: 969843LA					
		IM CONTAINER# EPIU225236						
		RAIL CAR# EPIX91477						
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RECEIVED su good order, ex (the word carr agrees to carry II is mutuelly a time interested in the governing the governing Shipper: PH	bject to the cla cept as noted for being under to Us usual p greed as to ea in all or any s og classificatio classification a	assifications and tariffs in effect on the date (contents and condition of packages unkno- ristood through this contract as meaning a lace of delivery as said destination. If on its ch carrier of all or any of said property, over aid property, that every service to be perfor n on the date of shipment. Shipper hereby nd the said terms and conditions. A ENERGY SOLUTIONS R&M	of the issue of this Bill of Lading, it wn), marked consigned and destine my person or corporation in posses route, otherwise to deliver to anoth r all or any portion of said route to d med hereunder shall be subject to a certifies that he is femiliar with ell t Carrier: CSX Railroad Corp	d as indicati sion of the er carrier on estination a it the Billi of La	ed above which property under the roule to sa nd as to each p Lading terms a ding terms and	said carrier the contract) id destination. erty at any nd conditions conditions in		
Per:		Date: 2/23/2022	Per: Luis Cast	ī0	Da	te:		
Mark with 'X' or 'RQ' if appropriate to designate Hazardous Materials Substances as defined in the Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading 172.201(a)(1) (iii) of Title 4.9. Code of Federal Regulations, Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular meterial. Designated Consignee: Chemical Waste Management, Inc Certification of receipt of materials Per Date: Date: Date: Date:								



DOCUMENT# 91475-2E

	TOFROM
Consignee: CHEMICAL WASTE MANAGEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE
	EPA ID: PAD 049791 098
City/Stale/Zip: SLILPHUR LA 70865	City/Stale/Zip; PHILADELPHIA, PA 19145
Phone: (337) 583-2169	Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt			•
Per:	Date:		
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272	(800) 336-2169	
Per: Deveril 1 Gram	Date: 3.24.	27	

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 16/101-7

WEIGHED BY _____

004141004476660 (1686 Bill of Lading (Page 1 of 2)

DOCUMENT # 91475-2F

	то
Consignee: CHEMICAL WA	ASTE MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/ai 1241

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FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER'S INSTRUCTIONS

HAZARDOUS MATERIAL	NO. SHIPPING UNITS	DESCF SPECIAL	RIPTION OF ARTICLES MARKS & EXCEPTION	5	Туре	Volume	
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Per:	:	2/23/2	.022	fined in the Department	of Transpol	tation Regulat	lons
Mark with "X" of governing the Lading 172.20 prescribed in s requirement is Designated Per:	or "RQ" if appro transportation (1(a)(1) (iii) of T provided in the Consignee	priale to designate Hazardous Ma of hazardous materials. The use o lite 4 9. Code of Federal Regulations, as a Regulation for a particular mater : Chemical Waste Manage	aleriats Substances as de f this column is an option ons, Also, when shipping indicated on the Bill of L ial. ment, Inc Certif	al method for Identifying hazardous materials, the ading does apply, unless ication of receipt of 3 23 7	materials	materials on B Sertification Sta Exception from	ills of tement the

DOCUMENT# 91475-2F

Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 TO------FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Acknowledgement of Receipt	
Рег.	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Arresth	Date: 3/27/2022

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # ______

WEIGHED BY _____



0091015-214 (0622)

TO FROM Consignee: CHEMICAL WASTE MANAGEMENT ٦C. INC ЦĊ Street: 7170 JOHN BRANNON ROAD Street: 3144 PASSYUNKAVE EPA ID: LAD000777201 EPA ID: PAD 049791 098 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 Phone: (440) 228-1524 ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 iclus 61385

DOCUMENT # 91075-2A

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

Cily/Stale/Zip: PHILADELPHIA, PA 19145

SHIPPER'S INSTRUCTIONS

HAZARDOL MATERIAL	NO. S SHIPPING UNITS		DESCRIPTION SPECIAL MARKS	OF ARTICL	es Ons		Туре	Volume	:
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agrees to carr It is mutually a time intereste in the governing the governing Shipper: PI LLC Per:	y /O Us usual pla igreed as to eac d in all or any sai- ng classification classification any ILADELPHIA	ce of delivery as a h carrier of all or a d property, that en on the date of shi the said terms ar ENERGY SOL	said destination, if on it iny of said property, ovo very service to be perfo ipment. Shipper hereby nd conditions. UTIONS R&M Date:	s route, other s route, other r all or any p med hereun certifies tha Carrier:	wise to delive ortion of said ser shall be s he is familia	In possessi- er to another roule to des ubject to all the r with all the ad Corp	on of the p carrier on t tination and the Bill of L Bill of Ladi	roperly under the he route to said d f as to each party ading terms and ing terms and co	es contract) lestination, / al any conditions nditions in
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Consignee: CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91075-2A

т	0 FROM
Shipper	PHILADELPHIA ENERGY SOLUTIONS R&M
Street:	3144 PASSYUNKAVE
EPA ID	PAD 049791 098
City/Sta	le/Zip: PHILADELPHIA, PA 19145
Phone:	(440) 228-1524

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Carrier 2: BNSF Railway Company Acknowledgement of Receipt	•
Per:	Date:
Carrier 3; Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: V V V	Date: 11-1-22

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CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # 1100221

WEIGHED BY _____

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Vernon PAUL DRIVER

CO-DRIVER _____



Cnv

CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169 TRANSPORTER

251275

SERVICE ORDER

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¢ Bill of Lading (Page 1 of 2)

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DOCUMENT # 91075-28

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PAID. LAU		R1A 70665			//Stale/Zip	PHILADE	PHIA, P	A 19145	
hone: (337	p. 30LFTIO) 583-2169	IN EA FOOD		Ph	one: (440)	228-1524			
				£		SHIPPER'S	INSTRUCT	IONS	
RE TANK (DEFINITION 261,4/al 124	BOTTOMS OF SOLID 1	EXCLUDED FR WASTE UNDER	OM THE 40CFR						
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HAZARDOUS MATERIAL	no. Shipping Units		DESCRIPTIO SPECIAL MARK	N OF ARTICL	ES ONS	- A 14 Martin	Туре	Volume	
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RECEIVED su good order, ex (the word carrin agrees to carry it is mutually as time interested in the governing the governing Shipper: PH LLC	bject to the cla cept as noted a rer being unde rer being unde greed as to ea i (n all or any s: ng classification classification a ILADELPHI	ssifications and tari (contenis and condil rstood through this lace of delivery as s ch carrier of all or ar ald property, that ev n on the date of ship nd the said tenns an A ENERGY SOL	Ifs In effect on the lon of packages ur contract as meanin aid destination. If or y of sald properly, ery service to be peo- oment, Shipper her d conditions.	date of the iss known), mark ng any persor n tts route, off over all or any prormed here eby certifies t Carrie	ue of this Bill ed consigned or corporati lenvise to de portion of sa under shall b nat he is fam r: CSX Rai	or Learing, in d and destined on in posses: liver to anothe aid route to de e subject to at illar with all th troad Corp	e property d as indicat sion of the er carrier or assilnation a li the Bill of La	ed above which property under in the route to sa nd as to each p f Lading terms and ading terms and	said carder the contract id destination arty at any nd conditions conditions in
Per:		15 3	2/23/2022	Per:	Luis	Castr	Ø		232
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Lading 172.201 prescribed in so requirement is	provided in the	ragaination to a peri							A REAL PROPERTY AND A REAL
Lading 172 201 prescribed in so requirement is Designated	provided in the Consignee:	Chemical Waste	e Management.	Inc Ce	tification o	receipt of	materials		

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Consignee: CHEMICAL WASTE MANAGEMENT	Ċ
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91075-28

TO ------ FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M

LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Cal Aud	Date: 4-4-22

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调了 四部 101

(et. 766) - 167047709⁵

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # ____ / LP (D'D D L /

WEIGHED BY _____







CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169

TRAN	ISPO	DRT	ER
25	82	24	3

SERVICE ORDER

PROFILE	START TRIP	Su	althur	LA	DATE	4-4	TIME	
NUMBER	END TRIP	5	L phyr	LA	DATE	4-4	TIME	
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empty bring it bo	s< K	!				~		
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CONTACT			3. LEFT JOE	ISITE	6, ARRIVE	D FACILITY	9. OTHER (E	XPLAIN)
PHONE			DATE	TIME AM / PM	CODE	EXI	PLANATION	
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LOAD SCHEDULED TIME				17:10	2 r	anil		
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CITY / STATE				INN	5 TS	p		
P.O. #				1000	ra	;1	_	
HAZARD CLASS L	JN / NA #							
PROPER SHIPPING NAME								
CONTAINER TYPE	CONTAINER NUMBER	SIZE						
CONTAINER DROPPED AT JOB SITE			DEMURRAG		IONS:			
CONTAINER PICKED UP		?						
LINER DELIVERED: Y N EQUIPME	NT WASHOUT:	Y N		-		····		
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CITY/STATE Sin Aur LA			MANIFEST #:(1107.	5-2B			
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RECEIVER'S SIGNATURE:)							
	RECEIV	ER'S SIGNATI	URE VERIFIES ARRI	VAL AND DEPARTU	IRETIME			

Bill of Lading (Page 1 of 2)

16693

DOCUMENT # 91075 -2C

ΤΟ	FROM
Consignee: CHEMICAL WASTE MANAGEMENT	Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 7170 JOHN BRANNON ROAD	Street: 3144 PASSYUNKAVE
EPA ID: LAD000777201	EPA ID: PAD 049791 098
City/Stale/Zip: SULPHUR LA 70665	Cily/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (337) 583-2169	Phone: (440) 228-1524
ADDITIONAL INFORMATION	SHIPPER'S INSTRUCTIONS
VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241	
Ticket (01381)	
NO. HAZARDOUS SHIPPING DESCRIPTION OF A MATERIAL UNITS SPECIAL MARKS & E)	ARTICLES (CEPTIONS Type Volume

1000	UNITS		SPECIAL MARKS	EXCEPTIONS	Туре	Volume	1 IrOM
x	1	RQ,UN3077, SUBSTANCE	ENVIRONMENTA 5. SOLID. N.O.S. 9 PROFILE	LLYHAZARDOUS .III (BENZENE) : 969843LA	СМ	24.30	T
		IM CONTAIN	ER# EP(U225137				
		RAIL CAR# E	EPIX91075				
		ERG# 171	H039			MR	
	L						
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Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

DOCUMENT# 91075 - 2C

το----- FROM

Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC Street: 3144 PASSYUNKAVE EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPHIA, PA 19145 Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	•
Per:	Dale:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: NCKPOU	Date: 41-1-22

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国际情绪。 64×4月《韵韵》

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # _____OO

WEIGHED BY _____

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Ernon PAUl DRIVER

CO-DRIVER





CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169

TRANSPORTER 255054

SERVICE ORDER

PROFILE ALG PULL 1	START TRIP	SLIP	'hun	24	DATE 4	4-1-2:		
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CONTACT			3. LEFT JOB	SITE	6. ARRIVE	D FACILITY	9. OTHER (E	EXPLAIN)
PHONE			DATE	TIME AM / PM	CODE	EXI	PLANATION	
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ADDRESS			1	1030				
CITY/STATE LACASSIL								
P.O. #				ļ			<u></u>	
HAZARD CLASS	JN / NA #							
PROPER SHIPPING NAME								
CONTAINER TYPE	CONTAINER NUMBER	SIZE						
CONTAINER DROPPED AT JOB SITE			DEMURRAG	E EXPLANAT	IONS:			
CONTAINER PICKED UP AT JOB SITE	5137	30x						
LINER DELIVERED: Y N EQUIPME	NT WASHOUT	Y N						
BOX CONDITION: GOOD	FAIR	POOR		····	·····		••••	
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CITY/STATE SULP HUK	213]	MANIFEST #:	<u> </u>	OF)	$\langle q $	1075	 }
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RUN# DATE L	1-1-2	2	DOLLY DOWN					
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RECEIVER'S SIGNATURE:	2							
f	RECE	EIVER'S SIGNATI	URE VERIFIES ARR	IVAL AND DEPART	UHE TIME			

Bill of Lading (Page 1 of 2) $(MU15 \sigma W)$ $(MU15 \sigma W)$

DOCUMENT # 91075-20

TO Consignee: CHEMICAL WASTE MANAGEMENT INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 NO. HAZARDOUS SHIPPING MATERIAL UNITS DESCRIPTION OF A SPECIAL MARKS & EX	ARTICLES		Volume	В R&M
CHEMICAL WASTE MANAGEMENT NC Sireet: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 ADDITIONAL INFORMATION VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 NO. HAZARDOUS NO. MATERIAL UNITS	ARTICLES		Volume	
ADDITIONAL INFORMATION ADDITIONAL INFORMATION /RE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 ADDITION OF SOLID WASTE WA	Street: 3144 PASSYUNKA EPA ID: PAD 049791 098 City/Stale/Zip: PHILADELPH Phone: (440) 228-1524 SHIPPER'S INST		Volume	
PA ID: LAD000777201 Dity/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169 ADDITIONAL INFORMATION /RE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 ICULE LETERS NO. HAZARDOUS SHIPPING DESCRIPTION OF A SPECIAL MARKS & EXCLUSION OF A	ARTICLES	Type	Volume	
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ADDITIONAL INFORMATION ADDITIONAL INFORMATION /RE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 INC. NO. HAZARDOUS SHIPPING MATERIAL UNITS DESCRIPTION OF A SPECIAL MARKS & EX	Phone: (440) 228-1524 SHIPPER'S INST	Type	ONS Volume	<u>ІОМ</u>
ADDITIONAL INFORMATION /RE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241 Include Construction NO. HAZARDOUS SHIPPING DESCRIPTION OF A MATERIAL UNITS SPECIAL MARKS & EX	ARTICLES XCEPTIONS	Type	ONS Volume	<u>ІОМ</u>
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X 1 SUBSTANCE. SOLID. N.O.S. 9.III	I (BENZENE)	M	24.33	<u> </u>
PROFILE: 9	969843LA			
IM CONTAINER# EPIU225237		<u> </u>		<u> </u>
RAIL CAR# EPIX91075				
				_ _
ERG# 171 H039			<u>_NY</u>	
		<u> </u>		
RECEIVED subject to the classifications and tariffs in effect on the date of good order, except as noted (contents and condition of packages unknown) (the word carrier being understood through this contract as meaning any agrees to carry to Us usual place of delivery as said destination. If on its roi its mutually agreed as to each carrier of all or any of said properly, over all lime interested in all or any said property, that every service to be performer the governing classification on the date of shipment. Shipper hereby cer the governing classification and the said terms and conditions. Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M (LC	f the issue of this Bill of Lading, the pro- n), marked consigned and destined as i person or corporation in possession of sule, otherwise to deliver to another car ill or any portion of said route to destina ed hereunder shall be subject to all the entities that he is familiar with all the Bill Carrier: CSX Railroad Corp	operty d Indicate of the p rrier on t atton an Billi of Lad	escribed above in d above which sa roperly under the the route to said d d as to each party Lading terms and construction of the said of the ling terms and co	n apparen aid carrier e contract festination y at any condition onditions i
Per: Date: F	Per: Luis Castro		Date;	232

prescribed in section 172.204(a) of the Federal Regulations, as inc requirement is provided in the Regulation for a particular material.

Designated Consignee: Chemical Wasle Management, Inc	Certification	of receipt of materials
Per: Brunda Spicen	Date:	22

[~]

Bill of Lading (Continuation Sheet) 2 of 2

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Consignee: CHEMICAL WASTE MANAGEMENT	D
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	
Phone: (337) 583-2169	

DOCUMENT# 91075-2D

Decemental order of T
TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Acknowledgement of Receipt	
Per:	Dale:
Carrier 3: Chemical Waste Management, Inc. Acknowledgement of Receipt	LA0000147272 (800) 336-2169
Per: Dosent Could	Date: 471/2022

LYILLOND d51 自己推开并

(b. 653504 GROSS 81020 167080000 96+4560 - 0470172022

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

766991 RECEIVING TICKET # _

WEIGHED BY



CO-DRIVER



Chm

CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169 TRANSPORTER

251399

SERVICE ORDER

PROFILE AL ACLARIA	START TRIP	Sul	her lA		DATE	4111202			
NUMBER 769873LA	END TRIP	561	phur 1A		DATE	11/202	7 TIME		
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INSTRUCTIONS			WAIT TO LOAD	DEL. ONLY	SWAP	TURN	P/U ONLY	INTER-PLANT	
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		· · ·	CODES:						
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CONTACT			3. LEFT JOB	SITE	6. ARRIVE	D FACILITY	9. OTHER (E	XPLAIN)	
PHONE			DATE	TIME AM/PM	CQDE	EXI	PLANATION		
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LOAD SCHEDULED TIME				13:05	2 6	hile	16.95		
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P.O. #				100-					
HAZARD CLASS UN	N / NA #								
PROPER SHIPPING NAME									
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ply lEb I	·4 - 2)	-56	237						
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FROM

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Bill of Lading (Page 1 of 2)

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DOCUMENT# 91075-2ビ

Jonsignee; C	CHEMICAL	WASTE MANAG	EMENTURC	Shipper: PHILADELP	HIA ENERG	SY SOLUTIONS	S KØM	
Street: 7170 JOHN BRANNON ROAD				Slreet: 3144 PASSYUNKAVE				
EPA ID: LAD	00077720	1		EPA ID: PAD 049791 098				
City/Stale/Zip	; SULPHU	R LA 70665		City/State/Zip: PHILA	DELPHIA, F	PA 19145		
Phone: (337)	583-2169	<u> </u>		Phone: (440) 228-152	4			
	ADDITIO	NAL INFORMATION	1	SHIPPER	'S INSTRUC	TIONS		
VRE TANK E DEFINITION 261.4/al 1241	BOTTOMS OF SOLID	EXCLUDED FR WASTE UNDER	ROM THE R 40CFR					
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- jou		26]					
HAZARDOUS MATERIAL	NO, SHIPPING UNITS		DESCRIPTION (SPECIAL MARKS &	DF ARTICLES EXCEPTIONS	Туре	Valume	ирм	
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BAIL CAR# EPIX91075								
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Received sub- good order, exc (the word carri- agrees to carry It is mutually ag- time interested in the governing of Shipper; PHI LLC	cept as noted er being unde Io Us usual p greed as to ea In all or any si g classification a ILADELPHI	contents and condi- contents and condi- stood through this lace of delivery as s ch carrier of all or ar aid property, that even on the date of shir nd the said terms an A ENERGY SOL	aid of packages unknot contract as meaning a aid destination. If on it y of said property, ove ery service to be perfo ment. Shipper hereby d conditions. UTIONS R&M Date:	wn), marked consigned and destinny person or corporation in poss s route, otherwise to deliver to and r all or any portion of said route to med hereunder shall be subject to certifies that he is familiar with a Carrier: CSX Railroad Co Per:	ned as indical ession of the other carrier or o destination a o all the Bill of the Bill of La rp	ed ebove which sa property under th the roule to said of nd as to each part I Lading terms and co ading terms and co Date:	aid carrier e contract) destination. y at eny conditions in	
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prescribed in se requirement is p Designated	Consignee:	Chemical Waste	Management, Inc	Certification of receipt	ormatenais			

Bill of Lading (Continuation Sheet) 2 of 2

Consignee: CHEMICAL WASTE MANAGEMENT 3 INC Street: 7170 JOHN BRANNON ROAD EPA ID: LAD000777201 City/Stale/Zlp: SULPHUR LA 70665

Phone: (337) 583-2169

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DOCUMENT# 91075-25

TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/Stale/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc.	LA0000147272 (800) 336-2169
Per: Joseph Councille	Date: 4/1/2022
h p	

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

RECEIVING TICKET # _____

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Joseph Courn He DRIVER

SERVICE ORDER

CO-DRIVER





CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169

TRANSPORTER

251400

START TRIP DATE 12022 TIME 969893L, PROFILE LOCATION NUMBER END TRIP SU DATEY / JUJ J TIME Ohu OCATION DISPATCHED BY TRUCK # うちいもと TYPE Ka 61 ζ TRAILER # ORDER CALLED IN BY **ROLL OFF INSTRUCTIONS (/)** WAIT TO INSTRUCTIONS DEL. ONLY SWAP TURN P/U ONLY INTER-PLANT LOAD CODES: 1. DEPART FACILITY 4. ARRIVE TSD 7. BREAKDOWN START 8. BREAKDOWN END 2. ARRIVE JOB SITE 5. DEPART TSD 3. LEFT JOB SITE 6. ARRIVED FACILITY 9. OTHER (EXPLAIN) CONTACT AM PM PHONE DATE CODE EXPLANATION LOAD SCHEDULED DATE LOAD SCHEDULED TIME Ch<u>Cr49</u> SHIPPER NAME £ 1:57) 7 na C Y ADDRESS Λ icastine 5 CITY / STATE P.O. # HAZARD CLASS UN/NA# PROPER SHIPPING NAME CONTAINER CONTAINER SIZE TYPE NUMBER CONTAINER DROPPED 2 41 **DEMURRAGE EXPLANATIONS:** 1 AT JOB SITE CONTAINER PICKED UP AT JOB SITE LINER DELIVERED: EQUIPMENT WASHOUT: V Y Y Ø BOX CONDITION: GOOD POOR つい コプ 2 REMARKS: 2 WM **RECEIVER NAME:** SHIPPER SIGNATURE: ADDRESS 1/ 7/ Slannon - KA ohn SHIPPER'S SIGNATURE VERIFIES ARRIVAL AND DEPARTURE TIME uldhur CITY / STATE MANIFEST #: 4 10 20 _ 15 TIME SLOT S.R. # DOLLY DOWN EQUIPMENT / BOX # 0 112022 DATE 97 RUN # DOLLY DOWN LOCATION RECEIVER'S SIGNATURE: RECEIVER'S SIGNATURE VERIFIES ARRIVALAND DEPARTURE TWE

IJ Bill of Lading (Page 1 of 2)

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DOCUMENT # 91075-2F

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Consignee: CHE	MICAL WASTE	MANAGEMENT

INC Street: 7170 JOHN BRANNON ROAD

EPA ID: LAD000777201

City/Stale/Zip: SULPHUR LA 70665 Phone: (337) 583-2169

ADDITIONAL INFORMATION

VRE TANK BOTTOMS EXCLUDED FROM THE DEFINITION OF SOLID WASTE UNDER 40CFR 261.4/al 1241



NÖ.

FROM Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M LLC

Street: 3144 PASSYUNKAVE

EPA ID: PAD 049791 098

City/Stale/Zip: PHILADELPHIA, PA 19145

Phone: (440) 228-1524

SHIPPER S INSTRUCTIONS

HAZARDOUS MATERIAL	SHIPPING UNITS		DESCRIPTION (SPECIAL MARKS)	OF ARTIC	LES IONS	Турв	Volume	HOM
х	1	RQ, UN3077, SUBSTANCE	RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID. N.O.S. 9, III (BENZENE)					Т
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		IM CONTAIN	ER# EPIU225148					ļ.
		RAIL CAR# E	EPIX91075					
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agrees to carry i If is mutually agr time interested i in the governing cl Shipper: PHII LLC Per:	to Us usual pl reed as to eac n all or any sa classification assification an .ADELPHIA	ace of delivery as the carrier of all or a the carrier of all or a id property, that even on the date of shild the said terms and ENERGY SOL	said destination. If on its ny of said property, ove rery service to be perfor pment, Shipper hereby nd conditions. LUTIONS R&M	route, oth r all or any med here cerlifies t Carrie Per:	erwise to deliver to and portion of said routo k under shall be subject t hat he is familiar with a : CSX Railroad Co	other carrier on o destination an o all the Billi of all the Billi of La rp	the route to sail to as to each pa Lading terms a ding terms and	d destination arty at any nd conditions conditions ir
	e de la compañía de		272372022		Luis Casi	<i></i>	9.	23-22
governing the tra Lading 172.201 (a prescribed in sec requirement is pr	nsportation of a)(1) (III) of Titk tion 172.204(a ovided in the F	nate to designate H hazardous material 4 9. Gode of Fede) of the Federal Re tegulation for a part	azardous Materiais Suos s. The use of Ihis colum: iral Regulations, Also, wi gulations, as Indicated or icular material.	tances as its an opti- ien shipplr i the Bill of	delined in the Departme onal method for Identifyk g hazardous materials, Lading does apply, unit	nt of fransporte ng hazardous m the shipper's ce ass a specific ex	ation Regulations haterials on Bills rtification statem coeption from the	s of ent
Designated C	onsignee: (Chemical Waste	e Management, Inc	Cer	ification of receipt (of materials		
Per: C	TH	Kunha	Marx	Date	0	ð	-23-2	22-
00		•		/		1	+ 1 8	72

Bill of Lading (Continuation Sheet) 2 of 2

DOCUMENT# 91075-2F

Consignee: CHEMICAL WASTE MANAGEMENT	
Street: 7170 JOHN BRANNON ROAD	
EPA ID: LAD000777201	
City/Stale/Zip: SULPHUR LA 70665	

Phone: (337) 583-2169

TO FROM
Shipper: PHILADELPHIA ENERGY SOLUTIONS R&M
Street: 3144 PASSYUNKAVE
EPA ID: PAD 049791 098
City/State/Zip: PHILADELPHIA, PA 19145
Phone: (440) 228-1524

Carrier 2: BNSF Railway Company Acknowledgement of Receipt	
Per:	Date:
Carrier 3: Chemical Waste Management, Inc. Acknowled	LA0000147272 (800) 336-2169
Per	Date: 4.1-72

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OVERWEIGHT

CHEMICAL WASTE MANAGEMENT, INC. 7170 JOHN BRANNON ROAD SULPHUR, LA 70665

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RECEIVING TICKET #_____

WEIGHED BY _____





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CWM TRANSPORTATION - LAKE CHARLES 7170 JOHN BRANNON RD. SULPHUR, LA 70663 (800) 336-2169

TRANSPORTER 250063

SERVICE ORDER

PROFILE ALDON		START TRIP	SulP	nor LA		Đ	ATE 4_	1-22	TIME	
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HAZARD CLASS	U	N / NA #						*100-10*10/00/00/00/00/00		
PROPER SHIPPING NAME			_						·······	
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ANALYTICAL REPORT

Lab Number:	L2374526
Client:	Terraphase Engineering Inc.
	1100 Canal Pointe Boulevard
	Suite 100
	Princeton, NJ 08540
ATTN:	Nick Scala
Phone:	(609) 236-8171
Project Name:	FORMER PHILADEPHIA REFINERY
Project Number:	P044.001.002
Report Date:	12/26/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Lab Number:	L2374526
Report Date:	12/26/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2374526-01	GPR251-01-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:12	12/15/23
L2374526-02	GPR250-02-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 16:26	12/15/23
L2374526-03	GPR251-02-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 16:08	12/15/23
L2374526-04	GPR251-03-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:45	12/15/23
L2374526-05	GPR251-04-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:33	12/15/23
L2374526-06	GPR250-03-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:17	12/15/23
L2374526-07	GPR250-03-SS01D	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:17	12/15/23
L2374526-08	GPR250-01-0.5-1.0	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:54	12/15/23
L2374526-09	GPR250-01-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:38	12/15/23
L2374526-10	FB-231215-1	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:37	12/15/23
L2374526-11	TB-231215-1	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:56	12/15/23



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Lab Number: L2374526 Report Date: 12/26/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.



Project Name: FORMER PHILADEPHIA REFINERY Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Case Narrative (continued)

Report Submission

December 26, 2023: This final report includes the results of all requested analyses. December 22, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Microextractables

L2374526-10, -11, and WG1868000-3: The sample was in improper preservative. The 8011 compound was analyzed from an HCI preserved vial.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Lelly Mell Kelly O'Neill

Title: Technical Director/Representative

Date: 12/26/23



ORGANICS



VOLATILES



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-01	Date Collected:	12/15/23 14:12
Client ID:	GPR251-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 19:09		
Analyst:	JIC		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westb	orough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0017	0.00017	1
Benzene	ND		mg/kg	0.00042	0.00014	1
1,2-Dichloroethane	ND		mg/kg	0.00085	0.00022	1
Toluene	ND		mg/kg	0.00085	0.00046	1
1,2-Dibromoethane	ND		mg/kg	0.00042	0.00025	1
Ethylbenzene	ND		mg/kg	0.00085	0.00012	1
p/m-Xylene	ND		mg/kg	0.0017	0.00048	1
o-Xylene	ND		mg/kg	0.00085	0.00025	1
Xylenes, Total	ND		mg/kg	0.00085	0.00025	1
Isopropylbenzene	ND		mg/kg	0.00085	0.00009	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0017	0.00016	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0017	0.00028	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	96	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-02	Date Collected:	12/15/23 16:26
Client ID:	GPR250-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 17:53		
Analyst:	JIC		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00018	1
Benzene	ND		mg/kg	0.00046	0.00015	1
1,2-Dichloroethane	ND		mg/kg	0.00091	0.00023	1
Toluene	ND		mg/kg	0.00091	0.00050	1
1,2-Dibromoethane	ND		mg/kg	0.00046	0.00027	1
Ethylbenzene	ND		mg/kg	0.00091	0.00013	1
p/m-Xylene	ND		mg/kg	0.0018	0.00051	1
o-Xylene	ND		mg/kg	0.00091	0.00026	1
Xylenes, Total	ND		mg/kg	0.00091	0.00026	1
Isopropylbenzene	ND		mg/kg	0.00091	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00030	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	105	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-03	Date Collected:	12/15/23 16:08
Client ID:	GPR251-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 18:43		
Analyst:	JIC		
Percent Solids:	87%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	_ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00018	1
Benzene	ND		mg/kg	0.00045	0.00015	1
1,2-Dichloroethane	ND		mg/kg	0.00091	0.00023	1
Toluene	ND		mg/kg	0.00091	0.00049	1
1,2-Dibromoethane	ND		mg/kg	0.00045	0.00026	1
Ethylbenzene	ND		mg/kg	0.00091	0.00013	1
p/m-Xylene	ND		mg/kg	0.0018	0.00051	1
o-Xylene	ND		mg/kg	0.00091	0.00026	1
Xylenes, Total	ND		mg/kg	0.00091	0.00026	1
Isopropylbenzene	ND		mg/kg	0.00091	0.00009	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00030	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	94	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	108	70-130	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-04	Date Collected:	12/15/23 15:45	
Client ID:	GPR251-03-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil			
Analytical Method:	1,8260D			
Analytical Date:	12/20/23 18:18			
Analyst:	JIC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	_ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0019	0.00019	1
Benzene	ND		mg/kg	0.00047	0.00016	1
1,2-Dichloroethane	ND		mg/kg	0.00094	0.00024	1
Toluene	ND		mg/kg	0.00094	0.00051	1
1,2-Dibromoethane	ND		mg/kg	0.00047	0.00027	1
Ethylbenzene	ND		mg/kg	0.00094	0.00013	1
p/m-Xylene	ND		mg/kg	0.0019	0.00052	1
o-Xylene	ND		mg/kg	0.00094	0.00027	1
Xylenes, Total	ND		mg/kg	0.00094	0.00027	1
Isopropylbenzene	ND		mg/kg	0.00094	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0019	0.00018	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0019	0.00031	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	94	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-05	Date Collected:	12/15/23 15:33	
Client ID:	GPR251-04-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil			
Analytical Method:	1,8260D			
Analytical Date:	12/21/23 10:48			
Analyst:	JIC			
Percent Solids:	75%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0022	0.00022	1
Benzene	ND		mg/kg	0.00054	0.00018	1
1,2-Dichloroethane	ND		mg/kg	0.0011	0.00028	1
Toluene	ND		mg/kg	0.0011	0.00058	1
1,2-Dibromoethane	ND		mg/kg	0.00054	0.00032	1
Ethylbenzene	ND		mg/kg	0.0011	0.00015	1
p/m-Xylene	ND		mg/kg	0.0022	0.00060	1
o-Xylene	ND		mg/kg	0.0011	0.00031	1
Xylenes, Total	ND		mg/kg	0.0011	0.00031	1
Isopropylbenzene	ND		mg/kg	0.0011	0.00012	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0022	0.00021	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0022	0.00036	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	110	70-130	
Toluene-d8	97	70-130	
4-Bromofluorobenzene	94	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-06	Date Collected:	12/15/23 15:17	
Client ID:	GPR250-03-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil			
Analytical Method:	1,8260D			
Analytical Date:	12/20/23 15:06			
Analyst:	JIC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	Low - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00019	1
Benzene	ND		mg/kg	0.00046	0.00015	1
1,2-Dichloroethane	ND		mg/kg	0.00093	0.00024	1
Toluene	ND		mg/kg	0.00093	0.00050	1
1,2-Dibromoethane	ND		mg/kg	0.00046	0.00027	1
Ethylbenzene	ND		mg/kg	0.00093	0.00013	1
p/m-Xylene	ND		mg/kg	0.0018	0.00052	1
o-Xylene	ND		mg/kg	0.00093	0.00027	1
Xylenes, Total	ND		mg/kg	0.00093	0.00027	1
Isopropylbenzene	ND		mg/kg	0.00093	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00031	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	106	70-130	
Toluene-d8	94	70-130	
4-Bromofluorobenzene	102	70-130	
Dibromofluoromethane	104	70-130	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-07	Date Collected:	12/15/23 15:17	
Client ID:	GPR250-03-SS01D	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil			
Analytical Method:	1,8260D			
Analytical Date:	12/20/23 15:45			
Analyst:	JIC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0019	0.00019	1
Benzene	ND		mg/kg	0.00048	0.00016	1
1,2-Dichloroethane	ND		mg/kg	0.00097	0.00025	1
Toluene	ND		mg/kg	0.00097	0.00052	1
1,2-Dibromoethane	ND		mg/kg	0.00048	0.00028	1
Ethylbenzene	ND		mg/kg	0.00097	0.00014	1
p/m-Xylene	ND		mg/kg	0.0019	0.00054	1
o-Xylene	ND		mg/kg	0.00097	0.00028	1
Xylenes, Total	ND		mg/kg	0.00097	0.00028	1
Isopropylbenzene	ND		mg/kg	0.00097	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0019	0.00019	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0019	0.00032	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	93	70-130	
4-Bromofluorobenzene	103	70-130	
Dibromofluoromethane	105	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-09	Date Collected:	12/15/23 14:38
Client ID:	GPR250-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 16:24		
Analyst:	JIC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by EPA 5035 Low - Westborough Lab									
Methyl tert butyl ether	ND		mg/kg	0.0017	0.00017	1			
Benzene	0.00028	J	mg/kg	0.00042	0.00014	1			
1,2-Dichloroethane	ND		mg/kg	0.00084	0.00022	1			
Toluene	ND		mg/kg	0.00084	0.00046	1			
1,2-Dibromoethane	ND		mg/kg	0.00042	0.00025	1			
Ethylbenzene	ND		mg/kg	0.00084	0.00012	1			
p/m-Xylene	ND		mg/kg	0.0017	0.00047	1			
o-Xylene	ND		mg/kg	0.00084	0.00024	1			
Xylenes, Total	ND		mg/kg	0.00084	0.00024	1			
Isopropylbenzene	ND		mg/kg	0.00084	0.00009	1			
1,3,5-Trimethylbenzene	ND		mg/kg	0.0017	0.00016	1			
1,2,4-Trimethylbenzene	0.00038	J	mg/kg	0.0017	0.00028	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	104	70-130	
Dibromofluoromethane	104	70-130	



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37
Client ID:	FB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/26/23 11:04
Analytical Date:	12/26/23 12:43		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37
Client ID:	FB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 00:59		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	100	70-130	



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-11	Date Collected:	12/15/23 18:56
Client ID:	TB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/26/23 11:04
Analytical Date:	12/26/23 12:51		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-11	Date Collected:	12/15/23 18:56
Client ID:	TB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 01:25		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	106	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	101	70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/20/23 09:50 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MD	L
Volatile Organics by EPA 5035 Low	- Westboro	ugh Lab for	sample(s):	01-04	Batch:	WG1866806-5
Methyl tert butyl ether	ND		mg/kg	0.0020	0.00	020
Benzene	ND		mg/kg	0.00050	0.00	017
1,2-Dichloroethane	ND		mg/kg	0.0010	0.00	026
Toluene	ND		mg/kg	0.0010	0.00	054
1,2-Dibromoethane	ND		mg/kg	0.00050	0.00	029
Ethylbenzene	ND		mg/kg	0.0010	0.00	014
p/m-Xylene	ND		mg/kg	0.0020	0.00	056
o-Xylene	ND		mg/kg	0.0010	0.00	029
Xylenes, Total	ND		mg/kg	0.0010	0.00	029
Isopropylbenzene	ND		mg/kg	0.0010	0.00	011
1,3,5-Trimethylbenzene	ND		mg/kg	0.0020	0.00	019
1,2,4-Trimethylbenzene	ND		mg/kg	0.0020	0.00	033

		Acceptance	tance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	108		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	93		70-130	
Dibromofluoromethane	102		70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/20/23 09:58 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	
Volatile Organics by EPA 5035 Low	- Westboro	ugh Lab for	sample(s):	06-07,09	Batch:	WG1866905-5
Methyl tert butyl ether	ND		mg/kg	0.0020	0.0002	0
Benzene	ND		mg/kg	0.00050	0.0001	7
1,2-Dichloroethane	ND		mg/kg	0.0010	0.0002	6
Toluene	ND		mg/kg	0.0010	0.0005	4
1,2-Dibromoethane	ND		mg/kg	0.00050	0.0002	9
Ethylbenzene	ND		mg/kg	0.0010	0.0001	4
p/m-Xylene	ND		mg/kg	0.0020	0.0005	6
o-Xylene	ND		mg/kg	0.0010	0.0002	9
Xylenes, Total	ND		mg/kg	0.0010	0.0002	9
Isopropylbenzene	ND		mg/kg	0.0010	0.0001	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0020	0.0001	9
1,2,4-Trimethylbenzene	ND		mg/kg	0.0020	0.0003	3

		Acceptance		
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	100		70-130	
Toluene-d8	96		70-130	
4-Bromofluorobenzene	102		70-130	
Dibromofluoromethane	100		70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 09:26 Analyst: LAC

Parameter	Result	Qualifier	Units	RL		MDL
Volatile Organics by EPA 5035 Low	- Westborou	ugh Lab for	sample(s):	05	Batch:	WG1867304-5
Methyl tert butyl ether	ND		mg/kg	0.002	D	0.00020
Benzene	ND		mg/kg	0.0005	0	0.00017
1,2-Dichloroethane	ND		mg/kg	0.001	C	0.00026
Toluene	ND		mg/kg	0.001	C	0.00054
1,2-Dibromoethane	ND		mg/kg	0.0005	0	0.00029
Ethylbenzene	ND		mg/kg	0.001	C	0.00014
p/m-Xylene	ND		mg/kg	0.002	C	0.00056
o-Xylene	ND		mg/kg	0.001	C	0.00029
Xylenes, Total	ND		mg/kg	0.001	C	0.00029
Isopropylbenzene	ND		mg/kg	0.001	C	0.00011
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	C	0.00019
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	C	0.00033

		Acceptance		
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	107		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	92		70-130	
Dibromofluoromethane	105		70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 21:06 Analyst: MAG

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS - Wes	tborough Lab	for sample(s): 10-11	Batch:	WG1867314-5
Methyl tert butyl ether	ND	ug/l	1.0	0.17
Benzene	ND	ug/l	0.50	0.16
1,2-Dichloroethane	ND	ug/l	0.50	0.13
Toluene	ND	ug/l	0.75	0.20
Ethylbenzene	ND	ug/l	0.50	0.17
p/m-Xylene	ND	ug/l	1.0	0.33
o-Xylene	ND	ug/l	1.0	0.39
Xylenes, Total	ND	ug/l	1.0	0.33
Isopropylbenzene	ND	ug/l	0.50	0.19
1,3,5-Trimethylbenzene	ND	ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND	ug/l	2.5	0.19

	Acce				
Surrogate	%Recovery	Qualifier	Criteria		
1,2-Dichloroethane-d4	101		70-130		
Toluene-d8	108		70-130		
4-Bromofluorobenzene	109		70-130		
Dibromofluoromethane	99		70-130		



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	Method Blank Analysis Batch Quality Control		

Analytical Method:	1,8011	Extraction Method:	EPA 8011
Analytical Date:	12/26/23 12:11	Extraction Date:	12/26/23 11:04
Analyst:	ЈКН		

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westbe	orough Lab f	or sample(s)	: 10-11	Batch: \	NG1868000-1	
1,2-Dibromoethane	ND		ug/l	0.010	0.005	А



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - West	borough Lab Asso	ciated sample	(s): 01-04 Ba	atch: WG1	866806-3 WG186	6806-4			
Methyl tert butyl ether	130		122		66-130	6		30	
Benzene	106		100		70-130	6		30	
1,2-Dichloroethane	107		101		70-130	6		30	
Toluene	101		96		70-130	5		30	
1,2-Dibromoethane	120		118		70-130	2		30	
Ethylbenzene	102		96		70-130	6		30	
p/m-Xylene	105		100		70-130	5		30	
o-Xylene	102		98		70-130	4		30	
Isopropylbenzene	93		89		70-130	4		30	
1,3,5-Trimethylbenzene	93		90		70-130	3		30	
1,2,4-Trimethylbenzene	94		90		70-130	4		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery	Qual %Recovery	Qual Criteria
1,2-Dichloroethane-d4	112	109	70-130
Toluene-d8	99	96	70-130
4-Bromofluorobenzene	93	94	70-130
Dibromofluoromethane	104	104	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	r RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - West	borough Lab Ass	sociated sample(s	s): 06-07,09	Batch:	WG1866905-3	WG1866905-4			
Methyl tert butyl ether	97		98		66-130	1		30	
Benzene	94		94		70-130	0		30	
1,2-Dichloroethane	94		93		70-130	1		30	
Toluene	87		87		70-130	0		30	
1,2-Dibromoethane	91		93		70-130	2		30	
Ethylbenzene	90		90		70-130	0		30	
p/m-Xylene	92		92		70-130	0		30	
o-Xylene	92		92		70-130	0		30	
Isopropylbenzene	91		90		70-130	1		30	
1,3,5-Trimethylbenzene	92		92		70-130	0		30	
1,2,4-Trimethylbenzene	92		91		70-130	1		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery Qu	al %Recovery Qua	l Criteria
1,2-Dichloroethane-d4	100	101	70-130
Toluene-d8	94	94	70-130
4-Bromofluorobenzene	102	101	70-130
Dibromofluoromethane	102	103	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - Westh	oorough Lab Asso	ociated sample	(s): 05 Batch	: WG1867	304-3 WG18673)4-4			
Methyl tert butyl ether	124		126		66-130	2		30	
Benzene	106		103		70-130	3		30	
1,2-Dichloroethane	104		103		70-130	1		30	
Toluene	99		96		70-130	3		30	
1,2-Dibromoethane	119		120		70-130	1		30	
Ethylbenzene	98		95		70-130	3		30	
p/m-Xylene	102		100		70-130	2		30	
o-Xylene	100		98		70-130	2		30	
Isopropylbenzene	91		88		70-130	3		30	
1,3,5-Trimethylbenzene	91		89		70-130	2		30	
1,2,4-Trimethylbenzene	92		89		70-130	3		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery	Qual %Recovery	Qual Criteria
1,2-Dichloroethane-d4	109	109	70-130
Toluene-d8	97	95	70-130
4-Bromofluorobenzene	92	92	70-130
Dibromofluoromethane	106	106	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	ו %R	LCSD ecovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	10-11	Batch:	WG1867314-3	WG1867314-4				
Methyl tert butyl ether	89			88		63-130	1		20	
Benzene	98			97		70-130	1		20	
1,2-Dichloroethane	98			96		70-130	2		20	
Toluene	100			100		70-130	0		20	
Ethylbenzene	110			100		70-130	10		20	
p/m-Xylene	105			105		70-130	0		20	
o-Xylene	105			100		70-130	5		20	
Isopropylbenzene	110			100		70-130	10		20	
1,3,5-Trimethylbenzene	110			100		64-130	10		20	
1,2,4-Trimethylbenzene	110			100		70-130	10		20	

Surrogate	LCS %Recovery Qua	LCSD I %Recovery Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101	99	70-130
Toluene-d8	108	107	70-130
4-Bromofluorobenzene	106	106	70-130
Dibromofluoromethane	99	100	70-130



Lab Control Sample Analysis

Project Name: FORMER PHILADEPHIA R			RY	Batch Qu	ality Cont	rol	Lab	Number:	L23745	26
Project Number:	P044.001.002						Repo	ort Date:	12/26/2	3
		LCS	0	LCSD	0	%Recovery		Quel	RPD	

Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	Column	
Microextractables by GC - Westborough Lab	Associated sam	nple(s): 10-11	Batch: WG	1868000-2						
1,2-Dibromoethane	92		-		80-120	-		20	А	


Project Name:	FORMER PHIL	_ADEPHIA I	REFINERY	Ma	trix Sp Batch Qเ	ike Ana Jality Col	alysis ^{ntrol}		Lab Nun	nber:	L2	2374526	
Project Number:	P044.001.002								Report L	Date:	12	2/26/23	
	Native	MS Addad	MS Found	MS % Pocovory	Qual	MSD Found	MSD % Pocovory	Qual	Recovery		Qual	RPD Limits	Colum

Parameter	Sample	Added	Found	%Recove	ery Qual	Found	%Recovery	Qual	Limits	RPD	Qual	Limits	<u>Column</u>
Microextractables by GC - V	Vestborough Lab	Associated	d sample(s): ´	10-11 QC	Batch ID: W	G1868000-	3 QC Samp	le: L237	4526-10	Client ID): FB-23	1215-1	
1,2-Dibromoethane	ND	0.25	0.233	93		-	-		80-120	-		20	А



SEMIVOLATILES



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-01	Date Collected:	12/15/23 14:12	
Client ID:	GPR251-01-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil	Extraction Method	: EPA 3546	
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19	
Analytical Date:	12/19/23 10:00			
Analyst:	EK			
Percent Solids:	84%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - We	estborough Lab					
Naphthalene	ND		mg/kg	0.039	0.024	1
Fluorene	ND		mg/kg	0.19	0.019	1
Phenanthrene	0.092	J	mg/kg	0.12	0.024	1
Anthracene	ND		mg/kg	0.12	0.038	1
Pyrene	0.13		mg/kg	0.12	0.019	1
Benzo(a)anthracene	0.078	J	mg/kg	0.12	0.022	1
Chrysene	0.077	J	mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.093	J	mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.081	J	mg/kg	0.16	0.047	1
Benzo(ghi)perylene	0.043	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Nitrobenzene-d5	65		23-120	
2-Fluorobiphenyl	58		30-120	
4-Terphenyl-d14	65		18-120	



		Serial_No:	12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-02	Date Collected:	12/15/23 16:26
Client ID:	GPR250-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 09:11		
Analyst:	EK		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - W	estborough Lab					
Naphthalene	ND		mg/kg	0.039	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.028	J	mg/kg	0.12	0.024	1
Anthracene	ND		mg/kg	0.12	0.038	1
Pyrene	0.045	J	mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.032	J	mg/kg	0.12	0.022	1
Chrysene	0.039	J	mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.058	J	mg/kg	0.12	0.033	1
Benzo(a)pyrene	ND		mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.038	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	68	23-120	
2-Fluorobiphenyl	63	30-120	
4-Terphenyl-d14	70	18-120	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-03	Date Collected:	12/15/23 16:08	
Client ID:	GPR251-02-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil	Extraction Method:	EPA 3546	
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19	
Analytical Date:	12/19/23 08:21			
Analyst:	EK			
Percent Solids:	87%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - We	estborough Lab					
Naphthalene	ND		mg/kg	0.037	0.023	1
Fluorene	ND		mg/kg	0.19	0.018	1
Phenanthrene	ND		mg/kg	0.11	0.023	1
Anthracene	ND		mg/kg	0.11	0.036	1
Pyrene	0.033	J	mg/kg	0.11	0.018	1
Benzo(a)anthracene	0.022	J	mg/kg	0.11	0.021	1
Chrysene	0.022	J	mg/kg	0.11	0.019	1
Benzo(b)fluoranthene	ND		mg/kg	0.11	0.031	1
Benzo(a)pyrene	ND		mg/kg	0.15	0.046	1
Benzo(ghi)perylene	ND		mg/kg	0.15	0.022	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	65	23-120	
2-Fluorobiphenyl	60	30-120	
4-Terphenyl-d14	66	18-120	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-04	Date Collected:	12/15/23 15:45	
Client ID:	GPR251-03-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil	Extraction Method:	EPA 3546	
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19	
Analytical Date:	12/19/23 10:25			
Analyst:	EK			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	0.035	J	mg/kg	0.039	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.046	J	mg/kg	0.12	0.024	1
Anthracene	ND		mg/kg	0.12	0.038	1
Pyrene	0.077	J	mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.060	J	mg/kg	0.12	0.022	1
Chrysene	0.063	J	mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.084	J	mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.076	J	mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.044	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Nitrobenzene-d5	69		23-120	
2-Fluorobiphenyl	62		30-120	
4-Terphenyl-d14	66		18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-05	Date Collected:	12/15/23 15:33
Client ID:	GPR251-04-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 10:50		
Analyst:	EK		
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - W	estborough Lab					
Naphthalene	0.18		mg/kg	0.043	0.026	1
Fluorene	ND		mg/kg	0.22	0.021	1
Phenanthrene	0.12	J	mg/kg	0.13	0.026	1
Anthracene	ND		mg/kg	0.13	0.042	1
Pyrene	0.20		mg/kg	0.13	0.021	1
Benzo(a)anthracene	0.15		mg/kg	0.13	0.024	1
Chrysene	0.17		mg/kg	0.13	0.022	1
Benzo(b)fluoranthene	0.23		mg/kg	0.13	0.036	1
Benzo(a)pyrene	0.21		mg/kg	0.17	0.052	1
Benzo(ghi)perylene	0.13	J	mg/kg	0.17	0.025	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	83	23-120	
2-Fluorobiphenyl	74	30-120	
4-Terphenyl-d14	81	18-120	



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-06	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 09:35		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Wes	tborough Lab					
Naphthalene	ND		mg/kg	0.040	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.28		mg/kg	0.12	0.024	1
Anthracene	0.057	J	mg/kg	0.12	0.039	1
Pyrene	0.48		mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.28		mg/kg	0.12	0.022	1
Chrysene	0.28		mg/kg	0.12	0.021	1
Benzo(b)fluoranthene	0.31		mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.27		mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.14	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	72	23-120	
2-Fluorobiphenyl	64	30-120	
4-Terphenyl-d14	70	18-120	



		Serial_No:	12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-07	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01D	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 08:46		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - We	stborough Lab					
Naphthalene	ND		mg/kg	0.039	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.056	J	mg/kg	0.12	0.024	1
Anthracene	ND		mg/kg	0.12	0.038	1
Pyrene	0.069	J	mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.035	J	mg/kg	0.12	0.022	1
Chrysene	0.038	J	mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.042	J	mg/kg	0.12	0.033	1
Benzo(a)pyrene	ND		mg/kg	0.16	0.048	1
Benzo(ghi)perylene	ND		mg/kg	0.16	0.023	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	72	23-120	
2-Fluorobiphenyl	67	30-120	
4-Terphenyl-d14	78	18-120	



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-09	Date Collected:	12/15/23 14:38
Client ID:	GPR250-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 12:28		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - W	estborough Lab					
Naphthalene	0.19		mg/kg	0.040	0.024	1
Fluorene	0.021	J	mg/kg	0.20	0.019	1
Phenanthrene	0.24		mg/kg	0.12	0.024	1
Anthracene	0.11	J	mg/kg	0.12	0.039	1
Pyrene	0.55		mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.37		mg/kg	0.12	0.022	1
Chrysene	0.42		mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.58		mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.45		mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.30		mg/kg	0.16	0.023	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	68	23-120	
2-Fluorobiphenyl	57	30-120	
4-Terphenyl-d14	58	18-120	



		Serial_No:	12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37
Client ID:	FB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00
Analytical Date:	12/22/23 11:00		
Analyst:	DV		

Parameter	Result Qualifie		Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM -	Westborough La	ab				
Naphthalene	ND		ug/l	0.10	0.05	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.05	0.02	1
Anthracene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1
Chrysene	ND		ug/l	0.10	0.01	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	48	23-120	
2-Fluorobiphenyl	49	15-120	
4-Terphenyl-d14	52	41-149	



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	Mathad Blank Analysia		

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E	Extraction Method:	EPA 3546
Analytical Date:	12/19/23 05:54	Extraction Date:	12/18/23 09:19
Analyst:	ЕК		

Parameter	Result	Qualifier	Units	RL	MD	L
Semivolatile Organics by GC/MS	6 - Westboroug	h Lab for s	ample(s):	01-07,09	Batch:	WG1865200-1
Naphthalene	ND		mg/kg	0.033	0.0	20
Fluorene	ND		mg/kg	0.16	0.0	16
Phenanthrene	ND		mg/kg	0.099	0.0	20
Anthracene	ND		mg/kg	0.099	0.0	32
Pyrene	ND		mg/kg	0.099	0.0	16
Benzo(a)anthracene	ND		mg/kg	0.099	0.0	18
Chrysene	ND		mg/kg	0.099	0.0	17
Benzo(b)fluoranthene	ND		mg/kg	0.099	0.0	28
Benzo(a)pyrene	ND		mg/kg	0.13	0.0	40
Benzo(ghi)perylene	ND		mg/kg	0.13	0.0	19

	Acceptanc			
Surrogate	%Recovery	Qualifier	Criteria	
Nitrobenzene-d5	66		23-120	
2-Fluorobiphenyl	62		30-120	
4-Terphenyl-d14	77		18-120	



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	Mothod Blank Analysis		

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E-SIM	Extraction Method:	EPA 3510C
Analytical Date:	12/21/23 17:36	Extraction Date:	12/21/23 08:00
Analyst:	RP		

Parameter	Result	Qualifier Units	RL	MDL	
Semivolatile Organics by GC/M	S-SIM - Westbo	rough Lab for sam	ole(s): 10 E	Batch: WG18667	77-1
Naphthalene	ND	ug/l	0.10	0.05	
Fluorene	ND	ug/l	0.10	0.01	
Phenanthrene	ND	ug/l	0.05	0.02	
Anthracene	ND	ug/l	0.10	0.01	
Pyrene	ND	ug/l	0.10	0.02	
Benzo(a)anthracene	ND	ug/l	0.05	0.02	
Chrysene	ND	ug/l	0.10	0.01	
Benzo(b)fluoranthene	ND	ug/l	0.05	0.01	
Benzo(a)pyrene	ND	ug/l	0.10	0.02	
Benzo(ghi)perylene	ND	ug/l	0.10	0.01	

		Acceptance			
Surrogate	%Recovery	Qualifier	Criteria		
				_	
Nitrobenzene-d5	80		23-120		
2-Fluorobiphenyl	75		15-120		
4-Terphenyl-d14	71		41-149		



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Semivolatile Organics by GC/MS - Westborou	igh Lab Assoc	iated sample(s)	: 01-07,09 E	Batch: WG1	865200-2 WG186	65200-3			
Naphthalene	56		61		40-140	9		50	
Fluorene	56		62		40-140	10		50	
Phenanthrene	57		64		40-140	12		50	
Anthracene	60		66		40-140	10		50	
Pyrene	62		66		35-142	6		50	
Benzo(a)anthracene	57		64		40-140	12		50	
Chrysene	61		68		40-140	11		50	
Benzo(b)fluoranthene	62		66		40-140	6		50	
Benzo(a)pyrene	69		73		40-140	6		50	
Benzo(ghi)perylene	59		64		40-140	8		50	

Surrogate	LCS %Recovery Qu	LCSD Ial %Recovery Qual	Acceptance Criteria
Nitrobenzene-d5	62	67	23-120
2-Fluorobiphenyl	57	64	30-120
4-Terphenyl-d14	67	72	18-120



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recoverv	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
	,,					14 2	-,		
Semivolatile Organics by GC/MS-SIM - West	orough Lab A	ssociated samp	ole(s): 10 Batc	h: WG1866	6777-2 WG1866	777-3			
Naphthalene	58		75		40-140	26		40	
Fluorene	59		76		40-140	25		40	
Phenanthrene	58		74		40-140	24		40	
Anthracene	59		76		40-140	25		40	
Pyrene	55		68		26-127	21		40	
Benzo(a)anthracene	66		86		40-140	26		40	
Chrysene	61		78		40-140	24		40	
Benzo(b)fluoranthene	59		74		40-140	23		40	
Benzo(a)pyrene	57		72		40-140	23		40	
Benzo(ghi)perylene	66		83		40-140	23		40	

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qual	I %Recovery Qual	Criteria
- Nitrobenzene-d5	67	84	23-120
2-Fluorobiphenyl	61	75	15-120
4-Terphenyl-d14	55	67	41-149



METALS



Project Name:	FORM	IER PHILA	DEPHIA I	REFINE	RY		Lab Number: L23745			26		
Project Number:	P044.	001.002					Report I	Date:	12/26/23	12/26/23		
				SAMPL	E RES	ULTS						
Lab ID:	L2374	526-01					Date Col	lected:	12/15/23	12/15/23 14:12		
Client ID:	GPR2	51-01-SS0	1				Date Re	ceived:	12/15/23	12/15/23		
Sample Location:	3144 \	W. PASSY	UNK AVE				Field Pre	ep:	Not Spec	Not Specified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	84%					Dilution	Data	Dete	Dron	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst	
Total Metals - Mans	field Lab											
Lead, Total	38.0		mg/kg	2.29	0.123	1	12/19/23 14:53	12/20/23 21:32	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	RY		Lab Number: L23745			26	
Project Number:	P044.	001.002					Report I	Date:	12/26/2	3	
				SAMPL	E RES	ULTS					
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-02 50-02-SS0 N. PASSY	1 UNK AVE				Date Co Date Re Field Pre	llected: ceived: əp:	12/15/23 12/15/23 Not Spec	16:26 cified	
Sample Depth: Matrix: Percent Solids: Parameter	Soil 84% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Lead. Total	36.3		ma/ka	2.24	0.120	1	12/19/23 14:53	12/20/23 21:37	EPA 3050B	1,6010D	ТАА



Project Name:	FORM	IER PHILA	DEPHIA F	REFINE	RY		Lab Nun	L23745	26			
Project Number:	P044.	001.002					Report I	Date:	12/26/2	12/26/23		
•			:	SAMPL	E RES	ULTS	•					
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-03 51-02-SS0 V. PASSY	1 UNK AVE.				Date Col Date Rec Field Pre	lected: ceived: p:	12/15/23 16:08 12/15/23 Not Specified			
Sample Depth: Matrix: Percent Solids: Parameter	Soil 87% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Total Metals - Mansf	ield Lab											
Lead, Total	21.8		mg/kg	2.28	0.122	1	12/19/23 14:53	12/20/23 21:42	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA		REFINE	RY		Lab Nur	L23745	L2374526			
Project Number:	P044.	001.002					Report I	Date:	12/26/2	12/26/23		
				SAMPL	E RES	ULTS						
Lab ID: Client ID:	L2374 GPR2	526-04 51-03-SS0	1				Date Col Date Re	llected: ceived:	12/15/23 12/15/23	15:45		
Sample Location:	3144 \	W. PASSY	UNK AVE.				Field Pre	ep:	Not Spec	Not Specified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	83%					Dilution	Date	Date	Pren	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst	
Total Metals - Manst	field Lab											
Lead, Total	40.1		mg/kg	2.32	0.124	1	12/19/23 14:53	12/20/23 21:47	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA	DEPHIA I	REFINE	RY		Lab Nun	nber:	L23745	26		
Project Number:	P044.	001.002					Report D	Date:	12/26/2	12/26/23		
				SAMPL		ULTS						
Lab ID:	L2374	526-05					Date Col	lected:	12/15/23	15:33		
Client ID:	GPR2	51-04-SS0	1				Date Red	ceived:	12/15/23	12/15/23		
Sample Location:	3144 \	W. PASSY	UNK AVE				Field Pre	ep:	Not Spec	Not Specified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	75%					Dilation	Data	Dete	D	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Date Prepared	Date Analyzed	Prep Method	Method	Analyst	
Total Metals - Mans	field Lab											
	00.7			0.00	0.4.44	4	40/40/00 44 50	40/00/02 04-54		1 60100	TAA	
Leau, rotai	00.7		тту/кд	2.63	0.141		12/19/23 14:53	12/20/23 21:51	EPA 3050B	1,0010D	IAA	



Project Name:	FORM	IER PHILA		REFINE	RY		Lab Nur	nber:	L23745	L2374526		
Project Number:	P044.	001.002					Report I	Date:	12/26/23	12/26/23		
				SAMPL	E RES	ULTS						
Lab ID:	L2374	526-06					Date Col	lected:	12/15/23	12/15/23 15:17		
Client ID:	GPR2	50-03-SS0	1				Date Re	ceived:	12/15/23	12/15/23		
Sample Location:	3144 \	N. PASSY	UNK AVE				Field Pre	ep:	Not Spec	Not Specified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	83%					Dilution	Data	Dete	Dron	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst	
Total Metals - Mans	field Lab											
Lead, Total	19.8		mg/kg	2.36	0.126	1	12/19/23 14:53	12/20/23 21:56	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	ERY		Lab Number: L2374526			26		
Project Number:	P044.	001.002					Report	Date:	12/26/2	12/26/23		
				SAMPI	LE RES	ULTS						
Lab ID:	L2374	526-07					Date Co	ollected:	12/15/23	15:17		
Client ID:	GPR2	50-03-SS0	1D				Date Re	eceived:	12/15/23			
Sample Location:	3144 \	N. PASSY	UNK AVE	•			Field Pr	rep:	Not Spec	cified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	83%					Dilution	Date	Date	Pren	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst	
Total Metals - Mansi	field Lab											
Lead, Total	17.2		mg/kg	2.31	0.124	1	12/19/23 14:5	3 12/20/23 22:24	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	RY		Lab Nur	nber:	L23745	26	
Project Number:	P044.	001.002					Report I	Date:	12/26/2	3	
-				SAMPL	E RES	ULTS	•				
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-09 50-01-SS0 N. PASSY	1 UNK AVE				Date Co Date Re Field Pre	llected: ceived: ep:	12/15/23 12/15/23 Not Spec	14:38 cified	
Sample Depth: Matrix: Percent Solids: Parameter	Soil 83% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Lead. Total	350		ma/ka	2.35	0.126	1	12/19/23 14:53	12/20/23 22:28	EPA 3050B	1,6010D	ТАА



12/20/23 19:10 12/21/23 07:25 EPA 3005A

1,6020B

EJF

Project Name:	FORM	IER PHILA	DEPHIA	REFINE	ERY		Lab Nu	mber:	L2374	526		
Project Number:	P044.	001.002					Report	Date:	12/26/	12/26/23		
				SAMP	LE RES	ULTS						
Lab ID:	L2374	526-10					Date Co	ollected:	12/15/2	23 18:37		
Client ID:	FB-23	1215-1					Date Re	eceived:	12/15/2	23		
Sample Location:	3144	3144 W. PASSYUNK AVE.						ер:	Not Sp	Not Specified		
Sample Depth:												
Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Total Metals - Mans	field Lab											

0.3430

1

ug/l

1.000

Lead, Total

ND

Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield	Lab for sample(s):	01-07,09	Batch:	WG186	65412-1				
Lead, Total	ND	mg/kg	2.00	0.107	1	12/19/23 14:53	12/20/23 19:40) 1,6010D	TAA
			Prep Inf	ormatio	n				
		Digestion	Method:	EPA	3050B				
Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield	Lab for sample(s):	10 Batch	n: WG18	366341-	1				
Lead, Total	ND	ug/l	1.000	0.3430	1	12/20/23 19:10	12/21/23 07:01	1,6020B	EJF

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis Batch Quality Control

Project Name:	FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	/ Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Total Metals - Mansfield Lab Associated sample	(s): 01-07,09	Batch: WG	1865412-2 S	RM Lot Numbe	er: D122-540				
Lead, Total	100		-		83-117	-			
Total Metals - Mansfield Lab Associated sample	(s): 10 Batch	: WG186634	41-2						
Lead, Total	106		-		80-120	-			



		Matrix Spike Analysis		
Project Name:	FORMER PHILADEPHIA REFINERY	Batch Quality Control	Lab Number:	L2374526
Project Number:	P044.001.002		Report Date:	12/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	N Qual Fo	ISD ound	MSD %Recovery	Qual	Recovery Limits	RPD Qu	RPD al Limits
Total Metals - Mansfield Lab	Associated sam	ple(s): 01-0	7,09 QC I	Batch ID: WG1	865412-3	QC S	ample: L237384	43-01	Client ID:	MS Sample	9
Lead, Total	319	49.2	453	272	Q	-	-		75-125	-	20
Total Metals - Mansfield Lab	Associated sam	ple(s): 10	QC Batch I	ID: WG186634	1-3 QC	Sample	: L2374526-10	Client	ID: FB-23	1215-1	
Lead, Total	ND	530	550.3	104		-	-		75-125	-	20



Project Name: Project Number:	FORMER PHILADEPHIA P044.001.002	REFINERY	Lab Duplicate Analy Batch Quality Control	vsis	La Re	ab Number: eport Date:	L2374526 12/26/23
Parameter		Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield	Lab Associated sample(s):	01-07,09 QC Batch I	D: WG1865412-4 QC Sam	ole: L2373843	B-01 Client	ID: DUP Sa	mple
Lead, Total		319	405	mg/kg	24	Q	20
Total Metals - Mansfield	Lab Associated sample(s):	10 QC Batch ID: WC	G1866341-4 QC Sample: L2	2374526-10 C	lient ID: F	B-231215-1	
Lead, Total		ND	ND	ug/l	NC		20



INORGANICS & MISCELLANEOUS



Serial	No:12262316:20
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Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	EFINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR251-01- 3144 W. PA	1 -SS01 SSYUNK	AVE.				Date (Date I Field	Collected: Received: Prep:	12/15/23 14:12 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lat)								
Solids, Total	84.3		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR250-02 3144 W. PA	2 -SS01 SSYUNK	AVE.				Date Date Field	Collected: Received: Prep:	12/15/23 16:26 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	83.8		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002							lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-03 GPR251-02-SS01 3144 W. PASSYUNK AVE.						Date Date Field	Collected: Received: Prep:	12/15/23 16:08 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	86.7		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002							lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-04 GPR251-03-SS01 3144 W. PASSYUNK AVE.						Date Date Field	Collected: Received: Prep:	12/15/23 15:45 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	82.9		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Serial	No:12262316:20
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Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002							lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-05 GPR251-04-SS01 3144 W. PASSYUNK AVE.						Date Date Field	Collected: Received: Prep:	12/15/23 15:33 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	75.2		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Serial	No:12262316:20
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Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002							lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-06 GPR250-03-SS01 3144 W. PASSYUNK AVE.						Date Date Field	Collected: Received: Prep:	12/15/23 15:17 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat)								
Solids, Total	83.4		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB


Serial_I	No:1226231	6:20
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Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY			Lab N Repo	lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID:	L2374526-0	7					Date	Collected:	12/15/23 15:17	
Client ID:	GPR250-03-	-SS01D					Date	Received:	12/15/23	
Sample Location:	3144 W. PA	SSYUNK	AVE.				Field	Prep:	Not Specified	
Sample Depth: Matrix:	Soil									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lat)								
Solids, Total	83.4		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY			Lab N Repo	lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR250-01- 3144 W. PA	9 -SS01 SSYUNK	AVE.				Date (Date I Field	Collected: Received: Prep:	12/15/23 14:38 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	82.8		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Parameter	Ν	ative Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Project Number:	P044.001.002				R	eport Date	e: 12/26/23
Project Name:	FORMER PHILADEPHIA REFINE	RY	Lab Duplicate Analys Batch Quality Control	SIS	La	ab Numbe	r: L2374526

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	Hairo Gampio	Bupfilouto Gumpio	Unito			
General Chemistry - Westborough Lab Associated sa	ample(s): 01-07,09 C	QC Batch ID: WG1864892-1	QC Sample:	L2373100-01	1 Client ID: DUP Sample	
Solids, Total	68.9	69.3	%	1	20	



Sample Receipt and Container Information

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
A	Absent
В	Absent

Container Information

Container Info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374526-01A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-01B	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-01C	Vial water preserved	А	NA		3.9	Υ	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-01D	Plastic 120ml unpreserved	А	NA		3.9	Υ	Absent		TS(7)
L2374526-01E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Υ	Absent		PB-TI(180)
L2374526-01F	Glass 120ml/4oz unpreserved	А	NA		3.9	Υ	Absent		PA-PAH(14)
L2374526-02A	Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-02B	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-02C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-02D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-02E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-02F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-03A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-03B	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-03C	Vial water preserved	А	NA		3.9	Υ	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-03D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-03E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Υ	Absent		PB-TI(180)
L2374526-03F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-04A	Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-04B	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-04C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-04D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)

YES





Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Container	Information		Initial	Final	Temp			Frozen	
Container	ID Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374526-04E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-04F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-05A	Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-05E	3 Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-050	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-05E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-05E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-05F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-06A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-06E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-060	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-06E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-06E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-06F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-07A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-07E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-070	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-07D	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-07E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-07F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-08A	Vial MeOH preserved	А	NA		3.9	Y	Absent		HOLD-8260HLW(14)
L2374526-08E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	HOLD-8260HLW(14)
L2374526-080	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	HOLD-8260HLW(14)
L2374526-08E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		HOLD-WETCHEM()
L2374526-08E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		HOLD-METAL(180)
L2374526-08F	Glass 120ml/4oz unpreserved	NA	NA			Y	Absent		HOLD-8260HLW(14)
L2374526-09A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-09E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)





Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374526-09C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-09D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-09E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-09F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-10A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-10B	Vial HCl preserved	А	NA		3.9	Y	Absent		8011(14),PA-8260(14)
L2374526-10C	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-10D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020T-PPB(180)
L2374526-10E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374526-10F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374526-11A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-11B	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14),PA-8260(14)



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374526

Report Date: 12/26/23

GLOSSARY

Acronyms	

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



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Project Number: P044.001.002

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Footnotes

- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(a)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C -Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- **D** Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- **F** The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



¹

Project Name: FORMER PHILADEPHIA REFINERY

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- **S** Analytical results are from modified screening analysis.
- V The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethvltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H, B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kieldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables)

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: AI, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: AI, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. EPA 245.1 Hg. SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:12262316:20

ALPHA	CHAIN OF	CUSTO	DY	PAGE	OF 2	Date	Rec'd in	Lab:	21	16	12	3	ALPH	A JOB #: 1237452
WESTBORD, MA	MANSFIELD, MA	Project Informa	tion	-		Rep	ort Info	rmation	n - Dat	a Deliv	erabl	es	Billin	g Information
TEL: 508-898-9220 FAX: 508-898-9193	TEL: 506-822-9300 FAX: 508-822-3288	Project Name: Gr	mer Phi	ladelal	nizi Refi	w OF	AX	X	EMAIL			1	Sam	e as Client info PO #:
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(Lab Use Only)	Sample ID	Date	Time	Matrix	Sampler Initials	345	1	11	1	11	1	11	/	Sample Specific Comments
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02	GPR250-02-5501	2/15/23	16:26	sa	1030	X						1		
03	GPR251-02-5501	12/15/22	16:08	50	woo	X								
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08	GPR250-01-0.5-1.0	12/15/23	14:54	50	1070	H	11							
DQ	GPR-250-01-5501	12/15/23	14:38	50	100	X								
10	FB-231215-1	12/15/23	18:37	50	1050	X								
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Serial_No:12262316:20

APHA	CHAIN O	F CUST	ODY	PAGE Z	OF Z	Date	Rec'd i	n Lab:	12	116	12	3	AL	PH	A JOB #: 12374526
WESTBORO, MA TEL 508-898-9220 FAX: 508-898-9193	MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288	Project Infor Project Name:	mation Former fly	iladelpl	niz Retil	Rep V DF	ort Info AX	ormatic X	on - Dat	ta Deliv	verab,	es	Bi	lling iame	g Information as Client info PO #:
Client Informati	on	Project Location	3144 1	J. Poss	YORK A	A DA	DEx	0	Add'l D	eliverab)	les				
Client Terro	his Engineerin	Project #: POL	14.001.0	502	1 11	Regu	latory	Require	ements	Repor	rt Lim	its			
Address: 100 C	and pointe Blud.	Project Manage	· lizk	Cala		State	Fed Pr	ogram		Gr	iteria		_		
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Phone: 215 -	297 - 3502	Turn-Around	Time	5-0-			4	e.	-			-	-	-	
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(Lab Use Only)	Sample ID	Date	Time	Matrix	Initials	15	/	11		11	1	1		/	Sample Specific Comments
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PADEP Short List 1-5:

Benzene

Cumene

1,2 – Dibromoethane

1,2 - Dichloroethane

Ethyl Benzene

Toluene

1,2,4 – Trimethylbenzene

1,3,5 – Trimethylbenzene

Methyl tert-butyl ether

Xylenes (total)

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Chrysene

Fluorene

Naphthalene

Phenanthrene

Pyrene

Lead

Serial_No:12262316:20

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ANALYTICAL REPORT

Lab Number:	L2374524
Client:	Terraphase Engineering Inc.
	1100 Canal Pointe Boulevard
	Suite 100
	Princeton, NJ 08540
ATTN:	Nick Scala
Phone:	(609) 236-8171
Project Name:	FORMER PHILADELPHIA REFINERY
Project Number:	P044.001.002
Report Date:	12/27/23

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:	FORMER PHILADELPHIA REFINERY
Project Number:	P044.001.002

Lab Number:	L2374524
Report Date:	12/27/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2374524-01	TG07A-PZ01-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 08:27	12/15/23
L2374524-02	TG07A-PZ02-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 09:57	12/15/23
L2374524-03	TG07A-SW02-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 10:46	12/15/23
L2374524-04	TG07A-SW01-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 16:39	12/15/23
L2374524-05	FB-231215-2	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:45	12/15/23
L2374524-06	TB-231215-2	WATER	3144 W. PASSYUNK AVE.	12/15/23 19:00	12/15/23
L2374524-07	TG07A-PZ01-231215D	WATER	3144 W. PASSYUNK AVE.	12/15/23 08:27	12/15/23

Project Name: FORMER PHILADELPHIA REFINERY Project Number: P044.001.002

Lab Number: L2374524 Report Date: 12/27/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.



Project Name: FORMER PHILADELPHIA REFINERY Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Case Narrative (continued)

Report Revision

December 27, 2023: The Volatile Organics analyte list has been amended on L2374524-01 through -07.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2374524-07: A sample identified as "TG07A-PZ01-231215D" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.

Microextractables

L2374524-01, -02, -03, -04, -05, -06, and -07: The sample was in improper preservative. The 8011 compound was analyzed from an HCl preserved vial.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Cattlin Wallien Caitlin Walukevich

Title: Technical Director/Representative

Date: 12/27/23



ORGANICS



VOLATILES



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8011 12/21/23 19:04 JKH	Extraction Method: Extraction Date:	EPA 8011 12/21/23 14:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 21:58		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	107	70-130	
Dibromofluoromethane	99	70-130	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-02	Date Collected:	12/15/23 09:57	
Client ID:	TG07A-PZ02-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8011 12/21/23 19:12 JKH	Extraction Method: Extraction Date:	EPA 8011 12/21/23 14:22	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-02 TG07A-PZ02-231215 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 09:57 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/21/23 22:24 MJV	·	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1		
Benzene	ND		ug/l	0.50	0.16	1		
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1		
Toluene	ND		ug/l	0.75	0.20	1		
Ethylbenzene	ND		ug/l	0.50	0.17	1		
p/m-Xylene	ND		ug/l	1.0	0.33	1		
o-Xylene	ND		ug/l	1.0	0.39	1		
Xylenes, Total	ND		ug/l	1.0	0.33	1		
Isopropylbenzene	ND		ug/l	0.50	0.19	1		
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1		
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	109	70-130	
4-Bromofluorobenzene	104	70-130	
Dibromofluoromethane	101	70-130	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-03	Date Collected:	12/15/23 10:46	
Client ID:	TG07A-SW02-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 19:20			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-03 TG07A-SW02-231215 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 10:46 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/21/23 22:50 MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	0.20	J	ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	0.19	J	ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Accer Qualifier Cri	otance teria
1,2-Dichloroethane-d4	102	70	0-130
Toluene-d8	107	70	0-130
4-Bromofluorobenzene	108	70	0-130
Dibromofluoromethane	101	70	0-130



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39	
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 19:28			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 23:16		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	0.19	J	ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	0.19	J	ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptan Qualifier Criteria	ice a
1,2-Dichloroethane-d4	103	70-13	30
Toluene-d8	110	70-13	80
4-Bromofluorobenzene	107	70-13	80
Dibromofluoromethane	99	70-13	80



		Serial_No	0:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45
Client ID:	FB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22
Analytical Date:	12/21/23 18:40		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	0:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45
Client ID:	FB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 23:42		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	99	70-130	



		Serial_No	:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-06	Date Collected:	12/15/23 19:00
Client ID:	TB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	None
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22
Analytical Date:	12/21/23 18:48		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-06	Date Collected:	12/15/23 19:00
Client ID:	TB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	None
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 00:08		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	109	70-130	
4-Bromofluorobenzene	107	70-130	
Dibromofluoromethane	100	70-130	



Analyst:

		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-07	Date Collected:	12/15/23 08:27	
Client ID:	TG07A-PZ01-231215D	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 18:56			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



Serial_No:12272310:32				
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID: Client ID: Sample Location:	L2374524-07 TG07A-PZ01-231215D 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 08:27 12/15/23 Refer to COC	
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/22/23 00:33 MJV			

Parameter	Result	Result Qualifier		RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westb	orough Lab					
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	105	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	105	70-130	
Dibromofluoromethane	101	70-130	



Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	Method Blank Analysis Batch Quality Control		
	4 0044	Extraction Mathem	

Analytical Method:	1,8011	Extraction Method:	EPA 8011
Analytical Date:	12/21/23 17:35	Extraction Date:	12/21/23 14:22
Analyst:	ЈКН		

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westbor	ough Lab foi	r sample(s):	01-07	Batch:	WG1866933-1	
1,2-Dibromoethane	ND		ug/l	0.010	0.005	А



Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374524 Report Date: 12/27/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 21:06 Analyst: MAG

Parameter	Result Qua	lifier Units	RL	MDL
Volatile Organics by GC/MS - We	estborough Lab for s	ample(s): 01-07	Batch:	WG1867314-5
Methyl tert butyl ether	ND	ug/l	1.0	0.17
Benzene	ND	ug/l	0.50	0.16
1,2-Dichloroethane	ND	ug/l	0.50	0.13
Toluene	ND	ug/l	0.75	0.20
Ethylbenzene	ND	ug/l	0.50	0.17
p/m-Xylene	ND	ug/l	1.0	0.33
o-Xylene	ND	ug/l	1.0	0.39
Xylenes, Total	ND	ug/l	1.0	0.33
Isopropylbenzene	ND	ug/l	0.50	0.19
1,3,5-Trimethylbenzene	ND	ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND	ug/l	2.5	0.19

		Acceptance		
Surrogate	%Recovery	Qualifier	Criteria	
1.2 Dichloroothopo d4	101		70 120	
	101		70-130	
Toluene-d8	108		70-130	
4-Bromofluorobenzene	109		70-130	
Dibromofluoromethane	99		70-130	


Lab Control Sample Analysis

Project Name:	FORMER PHILADELPHIA REFINERY	Batch Quality Control	Lab Number:	L2374524
Project Number:	P044.001.002		Report Date:	12/27/23

	LCS		LCSD		%Recovery			RPD		
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	Column	
Microextractables by GC - Westborough Lab	Associated sam	ple(s): 01-0	7 Batch: WG1	866933-2						
1,2-Dibromoethane	99		-		80-120	-		20	A	



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

	LCS			LCSD		%Recovery			RPD	
Parameter	%Recovery	Qual	%R	ecovery	Qual	Limits	RPD	Qual	Limits	
Volatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	01-07	Batch:	WG1867314-3	WG1867314-4				
Methyl tert butyl ether	89			88		63-130	1		20	
Benzene	98			97		70-130	1		20	
1,2-Dichloroethane	98			96		70-130	2		20	
Toluene	100			100		70-130	0		20	
Ethylbenzene	110			100		70-130	10		20	
p/m-Xylene	105			105		70-130	0		20	
o-Xylene	105			100		70-130	5		20	
Isopropylbenzene	110			100		70-130	10		20	
1,3,5-Trimethylbenzene	110			100		64-130	10		20	
1,2,4-Trimethylbenzene	110			100		70-130	10		20	

	LCS	LCSD	Acceptance
Surrogate	%Recovery Qua	l %Recovery Qual	Criteria
1,2-Dichloroethane-d4	101	99	70-130
Toluene-d8	108	107	70-130
4-Bromofluorobenzene	106	106	70-130
Dibromofluoromethane	99	100	70-130



SEMIVOLATILES



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method: Analytical Date:	1,8270E-SIM 12/22/23 10:27 DV	Extraction Date:	12/21/23 08:00
Analyst.			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM -	Westborough La	ab				
Naphthalene	ND		ug/l	0.10	0.05	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.05	0.02	1
Anthracene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1
Chrysene	ND		ug/l	0.10	0.01	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	78	23-120	
2-Fluorobiphenyl	75	15-120	
4-Terphenyl-d14	70	41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-02	Date Collected:	12/15/23 09:57
Client ID:	TG07A-PZ02-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method: Analytical Date: Analyst:	1,8270E-SIM 12/21/23 17:53 DV	Extraction Date:	12/21/23 08:00

Parameter	Result	Result Qualifier		RL	MDL	Dilution Factor				
Semivolatile Organics by GC/MS-SIM - Westborough Lab										
Naphthalene	ND		ug/l	0.10	0.05	1				
Fluorene	ND		ug/l	0.10	0.01	1				
Phenanthrene	ND		ug/l	0.05	0.02	1				
Anthracene	ND		ug/l	0.10	0.01	1				
Pyrene	ND		ug/l	0.10	0.02	1				
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1				
Chrysene	ND		ug/l	0.10	0.01	1				
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1				
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1				
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1				

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	66	23-120	
2-Fluorobiphenyl	64	15-120	
4-Terphenyl-d14	62	41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-03	Date Collected:	12/15/23 10:46
Client ID:	TG07A-SW02-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method: Analytical Date: Analyst:	1,8270E-SIM 12/21/23 18:10 DV	Extraction Date:	12/21/23 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Semivolatile Organics by GC/MS-SIM - Westborough Lab										
Naphthalene	ND		ug/l	0.10	0.05	1				
Fluorene	ND		ug/l	0.10	0.01	1				
Phenanthrene	ND		ug/l	0.05	0.02	1				
Anthracene	ND		ug/l	0.10	0.01	1				
Pyrene	0.03	J	ug/l	0.10	0.02	1				
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1				
Chrysene	ND		ug/l	0.10	0.01	1				
Benzo(b)fluoranthene	0.02	J	ug/l	0.05	0.01	1				
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1				
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1				

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	51	23-120	
2-Fluorobiphenyl	50	15-120	
4-Terphenyl-d14	48	41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00
Analytical Date:	12/21/23 18:26		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - V	Vestborough La	ab				
Naphthalene	ND		ug/l	0.10	0.05	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.05	0.02	1
Anthracene	ND		ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1
Chrysene	ND		ug/l	0.10	0.01	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.05	0.01	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	65	23-120	
2-Fluorobiphenyl	63	15-120	
4-Terphenyl-d14	56	41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45
Client ID:	FB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method	EPA 3510C
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00
Analytical Date:	12/21/23 18:43		
Analyst:	DV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS-S	IM - Westborough La	ıb					
Naphthalene	ND		ug/l	0.10	0.05	1	
Fluorene	ND		ug/l	0.10	0.01	1	
Phenanthrene	ND		ug/l	0.05	0.02	1	
Anthracene	ND		ug/l	0.10	0.01	1	
Pyrene	ND		ug/l	0.10	0.02	1	
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1	
Chrysene	ND		ug/l	0.10	0.01	1	
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1	
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1	
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Nitrobenzene-d5	73		23-120	
2-Fluorobiphenyl	69		15-120	
4-Terphenyl-d14	64		41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-07 TG07A-PZ01-231215D 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 08:27 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8270E-SIM 12/22/23 10:44 DV	Extraction Method: Extraction Date:	EPA 3510C 12/21/23 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM	- Westborough La	ab				
Naphthalene	ND		ug/l	0.10	0.05	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.05	0.02	1
Anthracene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1
Chrysene	ND		ug/l	0.10	0.01	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	71	23-120	
2-Fluorobiphenyl	70	15-120	
4-Terphenyl-d14	70	41-149	



Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524		
Project Number:	P044.001.002	Report Date:	12/27/23		
Method Blank Analysis					

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E-SIM	Extraction Method:	EPA 3510C
Analytical Date:	12/21/23 17:36	Extraction Date:	12/21/23 08:00
Analyst:	RP		

Parameter	Result	Qualifier Units	s RL	MDL	
Semivolatile Organics by GC/MS	S-SIM - Westbo	rough Lab for sa	mple(s): 01-	05,07 Batch:	WG1866777-1
Naphthalene	ND	ug/l	0.10	0.05	
Fluorene	ND	ug/l	0.10	0.01	
Phenanthrene	ND	ug/l	0.05	0.02	
Anthracene	ND	ug/l	0.10	0.01	
Pyrene	ND	ug/l	0.10	0.02	
Benzo(a)anthracene	ND	ug/l	0.05	0.02	
Chrysene	ND	ug/l	0.10	0.01	
Benzo(b)fluoranthene	ND	ug/l	0.05	0.01	
Benzo(a)pyrene	ND	ug/l	0.10	0.02	
Benzo(ghi)perylene	ND	ug/l	0.10	0.01	

		Α	cceptance	
Surrogate	%Recovery	Qualifier	Criteria	
				_
Nitrobenzene-d5	80		23-120	
2-Fluorobiphenyl	75		15-120	
4-Terphenyl-d14	71		41-149	



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Parameter	LCS %Recoverv	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
	, , , , , , , , , , , , , , , , , , ,								
Semivolatile Organics by GC/MS-SIM -	Westborough Lab A	Associated sample	e(s): 01-05,07	Batch:	WG1866777-2	WG1866777-3			
Naphthalene	58		75		40-140	26		40	
Fluorene	59		76		40-140	25		40	
Phenanthrene	58		74		40-140	24		40	
Anthracene	59		76		40-140	25		40	
Pyrene	55		68		26-127	21		40	
Benzo(a)anthracene	66		86		40-140	26		40	
Chrysene	61		78		40-140	24		40	
Benzo(b)fluoranthene	59		74		40-140	23		40	
Benzo(a)pyrene	57		72		40-140	23		40	
Benzo(ghi)perylene	66		83		40-140	23		40	

Surrogate	LCS %Recovery Qua	LCSD al %Recovery Qual	Acceptance Criteria
Nitrobenzene-d5	67	84	23-120
2-Fluorobiphenyl	61	75	15-120
4-Terphenyl-d14	55	67	41-149



Lab Duplicate Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Project Number: P044.001.002

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Semivolatile Organics by GC/MS-SIM - Westboro ID: TG07A-PZ01-231215	ugh Lab Associated samp	le(s): 01-05,07 QC B	atch ID: WG1866	6777-4 (QC Sample:	L2374524-01	Client
Naphthalene	ND	0.46	ug/l	NC		40	
Fluorene	ND	0.02J	ug/l	NC		40	
Phenanthrene	ND	0.03J	ug/l	NC		40	
Anthracene	ND	ND	ug/l	NC		40	
Pyrene	ND	ND	ug/l	NC		40	
Benzo(a)anthracene	ND	ND	ug/l	NC		40	
Chrysene	ND	ND	ug/l	NC		40	
Benzo(b)fluoranthene	ND	ND	ug/l	NC		40	
Benzo(a)pyrene	ND	ND	ug/l	NC		40	
Benzo(ghi)perylene	ND	ND	ug/l	NC		40	

Surrogate	%Recovery Qualif	ier %Recovery Quali	Acceptance fier Criteria	
Nitrobenzene-d5	78	60	23-120	
2-Fluorobiphenyl	75	59	15-120	
4-Terphenyl-d14	70	54	41-149	



METALS



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	524	
Project Number:	P044.	001.002					Report	Date:	12/27/	23	
				SAMPI	LE RES	ULTS					
Lab ID:	L2374	524-01					Date Co	ollected:	12/15/2	3 08:27	
Client ID:	TG07A	A-PZ01-23 ⁻	1215				Date Re	eceived:	12/15/2	3	
Sample Location:	3144 \	N. PASSY	JNK AVE	•			Field Pr	ep:	Refer to		
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals -	Mansfield Lab							
Lead, Dissolved	1.609	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 17:18 EPA 3005A	1,6020B	EJF



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	524	
Project Number:	P044.0	001.002					Report	Date:	12/27/	23	
				SAMPL	LE RES	ULTS					
Lab ID:	L2374	524-02					Date Co	ollected:	12/15/2	23 09:57	
Client ID:	TG07A	A-PZ02-23 ⁻	1215				Date Re	eceived:	12/15/2	23	
Sample Location:	3144 V	W. PASSY	JNK AVE				Field Pr	ep:	Refer to	o COC	
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals -	Mansfield Lab								l
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:06 EPA 3005A	1,6020B	EJF	



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	524	
Project Number:	P044.0	001.002					Report	Date:	12/27/	23	
				SAMPI	LE RES	ULTS					
Lab ID:	L2374	524-03					Date Co	ollected:	12/15/2	3 10:46	
Client ID:	TG07A	A-SW02-23	1215				Date Re	eceived:	12/15/2	23	
Sample Location:	3144 V	W. PASSY	JNK AVE				Field Pr	ep:	Refer to	DOD o	
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals -	Mansfield Lab							
Lead, Dissolved	2.074	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:11 EPA 3005A	1,6020B	EJF



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	L2374524		
Project Number:	P044.0	044.001.002					Report	Date:	12/27/			
				SAMPI	LE RES	ULTS						
Lab ID:	L2374	524-04					Date Co	ollected:	12/15/2	3 16:39		
Client ID:	TG07A	TG07A-SW01-231215						eceived:	12/15/2	12/15/23		
Sample Location:	3144 V	N. PASSY	JNK AVE				Field Pr	ep:	Refer to			
Sample Depth: Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	

Dissolved Metals ·	- Mansfield L	ab							
Lead, Dissolved	0.8006	J	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:16 EPA 3005A	1,6020B	EJF



12/21/23 09:34 12/21/23 18:20 EPA 3005A

1,6020B

EJF

Project Name:	FORM	IER PHILA	DELPHIA		IERY		Lab Nu	Lab Number: L2374524				
Project Number:	P044.	001.002					Report	Report Date: 12/27				
				SAMP	LE RES	ULTS						
Lab ID:	L2374	2374524-05						ollected:	12/15/2	12/15/23 18:45		
Client ID:	FB-23	FB-231215-2						eceived:	12/15/2	23		
Sample Location:	3144	3144 W. PASSYUNK AVE.						Field Prep:		Refer to COC		
Sample Depth:												
Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Dissolved Metals - M	Mansfield	Lab										

0.3430

1

ug/l

1.000



Lead, Dissolved

ND

Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	524		
Project Number:	P044.	P044.001.002						Date:	12/27/	12/27/23		
				SAMPI	LE RES	ULTS						
Lab ID:	L2374	524-07					Date Co	ollected:	12/15/2	3 08:27		
Client ID:	TG07A	TG07A-PZ01-231215D						eceived:	12/15/2	12/15/23		
Sample Location:	3144 \	N. PASSYI	JNK AVE				Field Pr	ep:	Refer to			
Sample Depth: Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	

Dissolved Metals - Mansfield Lab											
Lead, Dissolved	0.4309	J	ug/l	1.000	0.3430	1	12/21/23 08:33 12/21/23 14:07 EPA 3005A	1,6020B	EJF		



Project Name:FORMER PHILADELPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifi	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals	- Mansfield Lab for san	nple(s): 01-0)5 Batch	: WG18	865448-1				
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 09:34	12/21/23 16:55	1,6020B	EJF
			Prep Info	ormatio	n				
		Digestior	Method:	EPA	3005A				
Parameter	Result Qualifi	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals	- Mansfield Lab for san	nple(s): 07	Batch: V	/G1866	342-1				
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 08:33	12/21/23 13:44	1,6020B	EJF

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis

Project Name:	FORMER PHILADELI	PHIA REFINERY	,	Batch Qua	lity Contr	ol	Lab N	lumber:	L2374524
Project Number:	P044.001.002						Repo	rt Date:	12/27/23
Parameter		LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

106

Dissolved Metals - Mansfield Lab Associated sar	nple(s): 01-05	Batch: WG1865448-2			
Lead, Dissolved	104	-	80-120	-	
Dissolved Metals - Mansfield Lab Associated sar	nple(s): 07 Ba	atch: WG1866342-2			

-

80-120

-

	1
	7
- 14	ALPHA
1.4	ANALYTICAL

Lead, Dissolved

		Matrix Spike Analysis		
Project Name:	FORMER PHILADELPHIA REFINERY	Datch Quality Control	Lab Number:	L2374524
Project Number:	P044.001.002		Report Date:	12/27/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	RPD Qual Limits
Dissolved Metals - Mansfield Lat	Associated	sample(s): 01	-05 QC	C Batch ID: WG	61865448	3-3 QC	Sample: L2374	524-01	Client ID): TG07/	A-PZ01-231215
Lead, Dissolved	1.609	530	564.8	106		-	-		75-125	-	20
Dissolved Metals - Mansfield Lab	Associated	sample(s): 07	QC B	atch ID: WG18	66342-3	QC Sar	nple: L2374524	-07 (Client ID: 1	G07A-P	Z01-231215D
Lead, Dissolved	0.4309J	530	541.2	102		-	-		75-125	-	20



Project Name: Project Number:	FORMER PHILADEL P044.001.002	PHIA REFINERY	Lab Duplicate Batch Quality	Analysis Control	Lai Re _l	b Number: port Date:	L2374524 12/27/23
Parameter		Native Sample	Duplicate Sa	mple Units	RPD	Qual R	PD Limits
Dissolved Metals - Mans	field Lab Associated sa	ample(s): 01-05 QC Batc	h ID: WG1865448-4	QC Sample: L237452	4-01 Client	ID: TG07A-	PZ01-231215
Lead, Dissolved		1.609	0.4029J	ug/l	NC		20
Dissolved Metals - Mans	field Lab Associated sa	ample(s): 07 QC Batch IE	D: WG1866342-4 QC	C Sample: L2374524-0	7 Client ID	: TG07A-PZ	01-231215D
Lead, Dissolved		0.4309J	0.4608J	ug/l	NC		20



Sample Receipt and Container Information

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
A	Absent
В	Absent

Containar Information

Container info	ormation		Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	pН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L2374524-01A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-01A1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()	
L2374524-01B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-01B1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()	
L2374524-01C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-01C1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()	
L2374524-01D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Υ	Absent		PB-6020S-PPB(180)	
L2374524-01D1	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		ARCHIVE()	
L2374524-01E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-01E1	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		ARCHIVE()	
L2374524-01F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-01F1	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		ARCHIVE()	
L2374524-02A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-02B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-02C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-02D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-02E	Amber 250ml unpreserved	А	9	9	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-02F	Amber 250ml unpreserved	А	9	9	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-03A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-03B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-03C	Vial HCI preserved	А	NA		3.9	Υ	Absent		8011(14)	
L2374524-03D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	

YES



Project Name: FORMER PHILADELPHIA REFINERY*Project Number:* P044.001.002

Container Info	rmation		Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler pH pl	рН	deg C	Pres	Seal	Date/Time	Analysis(*)		
L2374524-03E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-03F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-04A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-04B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-04C	Vial HCl preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-04D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-04E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-04F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-05A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-05B	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-05C	Vial HCl preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-05D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-05E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-05F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-06A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-06B	Vial HCl preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-07A	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-07B	Vial HCl preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-07C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-07D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-07E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-07F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	



Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374524

Report Date: 12/27/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER PHILADELPHIA REFINERY

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Footnotes

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- С - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Е - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- Н - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - The lower value for the two columns has been reported due to obvious interference.
- J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



¹

⁻ The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- V The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)



Project Name:FORMER PHILADELPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethvltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H, B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kieldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables)

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: AI, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: AI, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. EPA 245.1 Hg. SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

APHA	CHAIN OI	FCL	JSTO	DY ,	PAGE_}	OF	Da	le Rec'd	in Lab	12	/11	6/	23	A	LPH	A JOB #: (237452)
WESTBORO, MA TEL: 508-898-9220 FAX: 508-696-6193	MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288	Project	ct Informa Name: 日	tion FM [®]	feting	nilecelphiz Livy	Re	Port Inf	ormal	ion - Da	ata Del L. Deliver	livera	bles	6	lilling Same	as Client info PO #:
Client Informatio	on A Terralese Ensureen	Project Project	Location: 3 #: PO44	144 W.	Passy	unk Au	Reg	ulatory	Requ	iremen	s/Rep	ort Li	mits			
Address: 3144	The BULL SURTIO	Project	Manager: p	ick Sce	ala		Stat	e /Fed Pi	rogram	ŝ		Criteria	1			
Phone: 215 -	297-350Z	Turn-	Around Ti	me			1	- 4	0/00	2		-	-		2	
Fax: Email: pick, Sca These samples ha Other Project S	La @ ferraphase com we been previously analyzed by Alpha Specific Requirements/Comm	Date D	lard C ue: etection L	RUSH (anty	Time:	(hereined)	AIL	1-5 1000 820	lea	7	17	7	/	1	1	SAMPLE HANDLING Filtration field
please see is Jussolve Nease servi Alphalabid	EDD to EDD Otem	aphase	2.com	CEQ-	is for	sampler's	AN	+519						1	1	Not needed Lab to do Preservation Lab to do (Preset specify below)
(Lab Use Only)	Sample ID		Date	Time	Matrix	Initials	5	1/	4	11	11	[]	1	1	6	Sample Specific Comments
4524-01	16071- P201-231	215	12/15/23	8:27	GW	VIO	X	- 11-				-	-	-		
02	TG074-P202-231	215	12/13/23	9:57	GW	250	Y					_	-		-	
03	16074-5W02-23	1215	12/15/23	10:46	an	430	X									
04	7607A-5W01-23	1215	2/15/23	16:39	GW	100	X					1				
05	FB-231215-2		12/15/23	18:45	88	450	X									
Ob	18-23 1215-2		12/15/23	19:00	13	#50	X			-						
		-		F	Conta	ainer Type		+				-				Please print clearly, legibly and com- pletely. Samples can not be logged
Page 53 of 54		ished By:		Preservative Date/Time /2/15/2/3/2015 /2/15/28/21/00 /2/15/28/21/00			Received By: Date			in and turnarou start until any a All samples sul Alpha's Terms See reverse sk O BC		in and turnaround time clock will not start until any ambiguities are resolve All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.				

PADEP Short List 1-5:

Benzene

Cumene

1,2 – Dibromoethane

1,2 - Dichloroethane

Ethyl Benzene

Taluene

1,2,4 – Trímethylbenzene

1,3,5 + Trimethylbenzene

Methyl tert-butyl ether

Xylenes (total)

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo{g,'n,i)perylene

Chrysene

Fluorene

Naphthalene

Phenanithrene

Pyrene

Lead

: :

.

Appendix C

October 4, 2023 *Technical Memorandum - Tank Group* 07A Gauging Summary prepared by Terraphase Engineering on behalf of PESRM





Technical Memorandum

То:	Lisa Strobridge, PG	From:	Terraphase Engineering Inc.
	Department of Environmental Protection		
	Southeast Regional Office		
cc:	Philadelphia Energy Solutions Refining and		
	Marketing LLC		
	c/o Joseph Jeray, PE, Vice President Hilco		
	Redevelopment Partners		
Date:	October 4, 2023	Project No.:	P044.001.002
Subject:	Tank Group 07A Gauging Summary		

Former Philadelphia Energy Solutions Refinery, Philadelphia, PA

Terraphase Engineering Inc. (Terraphase) prepared this memorandum, on behalf of the Philadelphia Energy Solutions Refining and Marketing LLC (PESRM), to present results of water level monitoring in the Tank Group 07A area. The results of the monitoring will be used to support obtaining regulatory closure of the tanks GP R 250 and 251, known as Tank Group 07A, at the former Philadelphia Energy Solutions (PES) Refinery property located at 3144 Passyunk Avenue in Philadelphia, Pennsylvania. Specifically, if groundwater levels do not lower to a point where Site Assessment samples can be collected, this information will be utilized to support an alternate sampling scope proposal to the Pennsylvania Department of Environmental Protection (PADEP).

Background

Standing water has been observed within the containment berm for former tanks GP R 250 and 251 for several months. The water was initially considered to be pooled stormwater that would evaporate and eventually dry to allow for soil sampling. NorthStar Contracting Group, Inc. conducted dewatering activities in the area. A diesel-powered trash pump was operated for over 175 hours in an attempt to remove the standing water. The dewatering effort was unsuccessful, as soil conditions were still considered too saturated for sampling.

In addition, Terraphase has conducted a comparison of recent groundwater elevations to the surface elevation in the area. The analysis indicated that groundwater is at an elevation similar to or greater than the ground surface elevation in the area of the two tanks.

These two lines of evidence indicate that the standing water present in the GP R 250 and 251 tank containment area is likely daylighted groundwater. During a call on May 11, 2023, PADEP suggested that piezometers be installed to further evaluate standing water/daylighted groundwater observed in the GP R 250 and 251 tank containment area.

Piezometer Installation

On July 7, 2023, Terraphase installed two AMS[™] stainless steel drive-point piezometers (TG07A-PZ-01 and TG07A-PZ-02) near the edge of the standing water surrounding the former locations of GP R 250 and 251. Piezometer TG07A-PZ-01 was installed east of the tank berm. Piezometer TG07A-PZ-02 was installed in a constructed access ramp on the western side of the area. The piezometer locations are depicted on Figure 1.

The piezometers were installed using hammer drill. The AMS[™] stainless steel drive-point piezometers contain a 14-inch-long slotted screen. Each point was installed to intercept the anticipated groundwater table based on historical groundwater elevations in surrounding wells. TG07A-PZ-01 and TG07A-PZ-02 were installed to a depth of approximately 2 feet bgs and the stainless-steel rod attached to the screen was allowed to stick up above the ground surface. A hydrated bentonite seal was placed around the point at ground surface to prevent surface water infiltration. Neither of the piezometers was located within the observed standing water, nor was standing water observed at the ground surface of the piezometer locations during the weekly monitoring (discussed below). The location and elevation of each piezometer was surveyed by Vargo Associates of Franklinville, NJ.

Weekly Monitoring

Terraphase measured groundwater levels in the new piezometers (see Figure 1) daily from July 11 through July 14, 2023, then the monitoring was performed weekly for an additional 5 weeks through August 18, 2023. In addition, photographs were taken during each weekly gauging event to document the standing water conditions. A photolog depicting the conditions of the area is provided in Attachment A. Lastly, Terraphase marked a measuring point location on the concrete containment wall along the southern portion of the tank group, and the measuring point location was also surveyed by Vargo. The concrete measuring point allowed for a direct measurement of the standing water located within the tank group.

During each monitoring event, groundwater level measurements were collected from each of the monitoring points using an electronic water level indicator. Groundwater elevations were then calculated as summarized in Table 1. As shown on Table 1, the groundwater elevation in piezometer TG07A-PZ-01 was greater than or equal to the elevation of the surface water (as measured from the measuring point on the concrete wall) during all nine gauging events. The groundwater elevation in TG07A-PZ-02 was greater than or equal to the elevation of the surface water in six of the nine sampling events and was within 0.05 ft of the surface water elevation in the other gauging events. These measurements indicate that the surface water in TG07A is daylighted groundwater.

Based on this analysis, PESRM would like to re-visit our discussion regarding an alternative Site Assessment sampling approach. Please let us know when you are available to discuss.

Attachments (3):

Table 1 – Monitoring Well Gauging SummaryFigure 1 – Gauging Locations Tank Group 07AAttachment A – TG07A Gauging Photograph Log



Tables

1 Monitoring Well Gauging Summary


Table 01 Monitoring Well Gauging Summary Tank Group 07A

Philadelphia Energy Solutions Refining and Marketing LLC, Philadelphia, PA

			July 11, 2023 Jul		July 1	2, 2023	July 13	3, 2023	July 14	l, 2023	July 20	, 2023	July 26	5, 2023	August	2, 2023	August	9, 2023	August	18, 2023
				Groundwater/		Groundwater/		Groundwater/		Groundwater/		Groundwater/		Groundwater/		Groundwater/		Groundwater/		Groundwater/
				Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water
	TOIC	DTB	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation
Location ID	(ft AMSL)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)	(ft below TOIC)	(ft AMSL)
TG 07A-PZ-01	9.55	5.25	3.25	6.30	3.21	6.34	3.30	6.25	3.23	6.32	3.02	6.53	3.05	6.50	3.26	6.29	3.02	6.53	3.19	6.36
TG 07A-PZ-02	9.52	5.22	3.27	6.25	3.22	6.30	3.32	6.20	3.31	6.21	3.01	6.51	3.09	6.43	3.24	6.28	3.09	6.43	3.16	6.36
Concrete Wall 01	11.8	3.81*	5.48	6.30	5.53	6.25	5.54	6.24	5.56	6.22	5.32	6.46	5.42	6.36	5.50	6.28	5.42	6.36	5.51	6.27

Notes:

Vertical Datum is NAVD 1988.

Surveyed by Vargo Associates on July, 12 2023

Elevations at the Concrete Wall 01 measuring point are surface water elevations

* -- Value represents ground surface within tank area

Figures

1 Gauging Locations Tank Group 07A





Attachment A

TG07A Gauging Photograph Log





terra phase	Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA	Photo Log
	Project Number: P044.001.002	Page 1



te e n	erraphase	Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA	Photo Log
		Project Number: P044.001.002	Page 2



ter e n g	raphase	Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA	Photo Log
		Project Number: P044.001.002	Page 3



1	terra phase	 Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA 	Photo Log
		Project Number: P044.001.002	Page 4



terraphase	Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA	Photo Log
	Project Number: P044.001.002	Page 5



terra phase	Client: Philadelphia Energy Solutions Refining and Marketing LLC Project: TG07A Piezometer Monitoring – 3144 W. Passyunk Ave, Philadelphia, PA	Photo Log
	Project Number: P044.001.002	Page 6

Appendix D

Soil Boring Logs and Piezometer Completion Records



Project Number: P044.001.002

Log of Boring GPR251-01 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA
Groundwater Level 0.5 feet bgs	Sampling Method(s) Grab	Temporary Well NA
Borehole Backfill Soil Cuttings	Location Tank Group 07A	

Depth (feet)	Recoverv (inches)	Samnle Tyne	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0		Ъ	SM		SILTY SAND, tan brown, dense, moist, poorly graded	0	Sample GPR251-01-SS01
			GM GP		SILT AND GRAVEL, tan brown, wet, dense, well graded	0	from 0.0-0.5' bgs
				000		0	
	21/6	50	SM		SILTY SAND, tan brown, dense, wet, poorly graded	1.6	
						0	
4	_					0	
						0	
					End of boring		
6	-						
2 10	_						
+bu.e							
12	-						
14							
2							
16							
18	-				F		
- -							
101101							
20							
<u>ال</u>							

Project Number: P044.001.002

Log of Boring GPR251-02 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl		
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs		
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA		
Groundwater Level 4.0 feet bgs	Sampling Method(s) Grab	Temporary Well NA		
Borehole Backfill Soil Cuttings	Location Tank Group 07A			

Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0-			GW CL	////	GRAVEL, dark brown, poorly graded, loose, moist CLAY, tan brown, firm, medium plasticity, low dilatancy, mottling, moist	0 0	
						0	
2-	48/60					0	
						0	Sample GPR251-02-SS01 from 3.0-3.5' bgs
4 -					<u> </u>	0 0	
			SM		SILTY SAND, tan brown, dense, poorly graded, wet End of boring	0	
6-	-						
6							
-8 KJO	-						
shallow							
9 2 10-							
gs.bg4[
oring Lo							
97 P2							
07A/TG							
51/s60	1						
3oring L							
16 -							
ES/Tec							
18-	-						
044 - Pt							
- 02 -							

Project Number: P044.001.002

Log of Boring GPR251-03 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl		
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs		
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA		
Groundwater Level 3.0 feet bgs	Sampling Method(s) Grab	Temporary Well NA		
Borehole Backfill Soil Cuttings	Location Tank Group 07A			

Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
2-	 2/60		GW		GRAVEL, tan brown, well graded, loose, moist, large, angular pieces	0 0 0 0	Comple ODD254 02 5504
4-	 2/60		SM		SILTY SAND, tan brown, loose, poorly graded, wet	0 0 0 0	Sample GPR251-03-SS01 from 2.5-3.0' bgs
6·					End of boring		
10 well shallow_KJO.							
7A Boring Logs.bg4[1							
ng Logs/TG07A/TG0 14							
NPES/Technical/Bori							
rojects/P044 - PESRN 00							

Project Number: P044.001.002

Log of Boring GPR251-04 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA
Groundwater Level 1.5 feet bgs	Sampling Method(s) Grab	Temporary Well NA
Borehole Backfill Soil Cuttings	Location Tank Group 07A	

> Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0-			GW		GRAVEL, black, loose, poorly graded, moist, no odor	0	
			CL		SILTY CLAY, tan brown, firm, medium plasticity, low dilatancy, moist, black mottling	0	Sample GPR251-04-SS01 from 1.0-1.5' bas
2—			SM		SANDY SILT, tan brown, poorly graded, dense, wet	0	nom 1.0-1.3 bys
						0	
						0	
4 —						0	
						0	
					End of boring		
6 —							
8-							
2 10 —							
2							
1							
12-							
14							
0							
16							
10							
18-							
-							
20 -							
			_				

Project Number: P044.001.002

Log of Boring GPR250-01 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl	
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs	
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA	
Groundwater Level 3.0 feet bgs	Sampling Method(s) Grab Temporary Well NA		
Borehole Backfill Soil Cuttings	Location Tank Group 07A		

et)	(inches)	ype	mbol	-og		ling, ppm	
Depth (fe	Recovery	Sample T	USCS Sy	Graphic L	MATERIAL DESCRIPTION	PID Read	REMARKS AND OTHER TESTS
0-			GW		GRAVEL AND SAND, well graded, dry, some brick-like material, loose	0 0.2 0	Sample GPR250-01-0.5-1.0 from 0.5-1.0' bgs
2—	32/60		SM		SANDY SILT AND GRAVEL, tan brown, dense, medium plasticity, low dilatancy, moist, well graded	0 0 0	Sample GPR250-01-SS01 from 2.5-3.0' bgs
4—			SW		GRAVELLY SAND, tan brown, loose, wet, well graded	0	
6 —							
8							
10 —							
12-							
14-							
16-							
18-							
20 -							

Project: Former Philadelphia Refinery

Project Location: 3144 W. Passyunk Avenue

Project Number: P044.001.002

Log of Boring GPR250-02 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl		
Drilling Method Hand Auger	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 3 feet bgs		
Drill Rig Type NA	Drilling Contractor MB Drilling	Elevation NA		
Groundwater Level 2.0 feet bgs	Sampling Method(s) Grab	Temporary Well NA		
Borehole Backfill Soil Cuttings	Location Tank Group 07A			

	Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION		PID Reading, ppm	REMARKS AND OTHER TESTS
	0— 2—	36/36		SM		SILTY SAND, tan brown, some gravel, dense, moist, well graded		0 0 0 0 0 0	Sample GPR250-02-SS01 from 1.5-2.0' bgs
	4—					End of boring due to saturation in borehole			
	6—					_			
thallow_KJO.tpl]	8—					_			
ogs.bg4[no well s	10—					_			
TG07A Boring Lo	12—					_	_		
ng Logs\TG07A\	14 —					_			
S\Technical\Bori	16—								
P044 - PESRM\PE	18—								
V:\Projects\	20								

Project Number: P044.001.002

Log of Boring GPR250-03 Sheet 1 of 1

Date(s) Drilled 12/15/23	Logged By K. O'Rourke	Checked By A. Strohl	
Drilling Method Direct Push	Drill Bit Size/Type 2" x 5' macrocore	Total Depth of Borehole 5 feet bgs	
Drill Rig Type Geoprobe 7822DT	Drilling Contractor MB Drilling	Elevation NA	
Groundwater Level 2.5 feet bgs	Sampling Method(s) Grab	Temporary Well NA	
Borehole Backfill Soil Cuttings	Location Tank Group 07A		

Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0- 2- 4-	31/60		GW CL MH CL		Gravel, black and red, dry, loose, well graded CLAY AND GRAVEL, tan brown, medium plasticity, low dilatancy, moist, firm, no odor gravel content decreases SANDY SILT, tan brown, medium plasticity, low dilatancy, firm, wet CLAY, tan brown, medium plasticity, low dilatancy, wet, firm, some mottling	0 0 0 0 0 0 0 0 0	Sample GPR250-03-SS01 and GPR250-03-SS01D from 2.0-2.5' bgs
6 - [id:OfY8 -					End of boring	0	
Boring Logs.bg4[no well shallow - 01	_						
nica/Boring Logs\TG07A\TG07A 9 -	_						
Projects/P044 - PESRM/PES/Tech - 07 - 08	-						

Project: Former Philadelphia Refinery Project Location: 3144 W. Passyunk Avenue

Project Number: **P044.001.002**

Key to Log of Boring Sheet 1 of 1

-	1							
Depth (feet)	Recovery (inches)	Sample Type	USCS Symbol	Graphic Log	MATERIAL DE	SCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	2	3	4	5	6		7	8
	LUMN	DES	SCRIF	TION	<u>S</u>	_		
1 2 3 4	Depth Recov Samp showr USCS	(fee very (le Ty n. S Syn	t): De inche pe: Ty nbol: l	oth in f s): Pei /pe of JSCS	feet below the ground surface. rcent Recovery soil sample collected at the depth interval symbol of the subsurface material.	 5 Graphic Log: Graphic depiction of the subsurface material encountered. 6 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text. 7 PID Reading, ppm: The reading from a photo-ionization detector, in parts per million. 8 REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel. 		
FIE	LD AN	ID L	ABOF		RY TEST ABBREVIATIONS			
CH CO CO LL:	EM: Cl MP: C NS: Or Liquid	hemi ompa ne-di Limi	cal te action mens t, pere	sts to a test ional c cent	assess corrosivity consolidation test	PI: Plasticity Index, percent SA: Sieve analysis (percent passing No. 200 Sieve) UC: Unconfined compressive strength test, Qu, in ksf WA: Wash sieve (percent passing No. 200 Sieve)		
MA	TERIA	LG	RAPH	IC SY	MBOLS			
MATERIAL GRAPHIC SYMBOLS Lean CLAY, CLAY w/SAND, SANDY CLAY (CL) Silty GRAVEL (GM) Silty GRAVEL (GM) Solution Poorly graded GRAVEL (GP)						Well graded GRAVEL (GW) SILT, SILT w/SAND, SANDY SILT (MH) Silty SAND (SM)		
	PICAL	SAN	IPLE	R GRA	APHIC SYMBOLS	OTHER G	RAPHIC S	<u>SYMBOLS</u>
Grab Sample						— ⊻ Wate — ⊻ Wate ↓ Minou ↓ stratu – - Inferr – ?- Queri	r level (at tim r level (after r change in n im ed/gradation ied contact b	e of drilling, ATD) waiting, AW) naterial properties within a al contact between strata etween strata
<u>GE</u>	NERA	L NC	<u>DTES</u>					

 Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
 Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative

2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.



PIEZOMETER COMPLETION RECORD

DRILLING INFORMATION	SURFACE COMPLETION	PIEZOMETER
DRILLING BEGAN:	FLUSH MOUNT	MONITORING WELL NO. TG07A-PZ-01
DATE 7/10/2023 TIME 12:30	ABOVE GROUND W/BUMPER POST	PROJECT PESRM
WELL INSTALLATION BEGAN:	CONCRETE ASPHALT	SITE 3144 W. Passyunk Ave, Philadelphia
DATE 7/10/2023 TIME 12:30		BOREHOLE NO. N/A
WELL COMPLETION FINISHED:		WELL PERMIT NO. N/A
DATE 7/10/2023 TIME 14:04		GROUND SURFACE TO 2 30 ft bas
DRILLING CO.		BOTTOM OF WELL
DRILLER Terraphase Engineering Inc.		
LICENSE		ANNULAR SEAL
OTHER: AMSTM Staiplage Steel Diazometer Croundwater	Sampling Kit	BENTONITE
DIAMETER OF AUGERS:		WATER
AMOUNT USED 2 lbs		
$\mathbf{V} \text{ PELLETS SIZE } 1/4 \text{ - inch bydrated}$		
	0.19	CASING
	DEPTH FT BGS	
	0.5	Stainless Steel Piezometer Extension w/ Coupler
MEG BY DDSCo Jpo	DEPTHFTBGS	
	1.10	MFG BY. AIVIS ""
		0.875 - inch $0.1.25 - inch$
AMOUNT OF WATER USED <u>8 OUNCES</u>		
		LENGTH OF CASING <u>3 II.</u>
AMOUNT USED NA		SCHEDULE 40 PVC
		Stainless Steel Plezometer W/ Coupler
FROM10		MFG. BY: <u>AMS[™]</u>
		CASING DIAMETER:
MFG. BY		ID <u>0.875 - Inch</u> OD <u>1.25 - Inch</u>
		SLOT SIZE <u>#50 mesh filter screen</u>
		LENGTH OF SCREEN <u>1.2 ft.</u>
		AR LENGTH OF SUMP <u>NA</u>
	DEPTH FT BGS	
SURVEY INFORMATION	DEPTH FT BGS	BOREHOLE BACKFILL
TOC ELEVATION 9.55 ft AMSL		AMOUNT CALCULATED
GROUND ELEVATION <u>6.6 ft. AMSL</u>		AMOUNT USED <u>NA</u>
NORTHING COORD. 217703.8353		
EASTING COORD. <u>2683074.7401</u>	DEPTH FT BGS	
DATE SURVEYED June 12, 2023		
SURVEY CO. Vargo Associates		FORMATION COLLAPSE
TOC MEASURING POINT:		FROM TO
		PRODUCT
CENTRALIZERS USED?		MFG. BY
YES VINO		METHOD INSTALLED:
CENTRALIZER DEPTHS:		



PIEZOMETER COMPLETION RECORD

DRILLING INFORMATION	SURFACE COMPLETION	PIEZOMETER
DRILLING BEGAN:	FLUSH MOUNT	MONITORING WELL NO. TG07A-PZ-02
DATE 7/10/2023 TIME 10:30	ABOVE GROUND W/BUMPER POST	PROJECT PESRM
WELL INSTALLATION BEGAN:	CONCRETE ASPHALT	SITE 3144 W. Passyunk Ave, Philadelphia
DATE 7/10/2023 TIME 10:30		BOREHOLE NO. N/A
WELL COMPLETION FINISHED:		WELL PERMIT NO. N/A
DATE 7/10/2023 TIME 12:07		GROUND SURFACE TO 2.5 ft bas
DRILLING CO.		BOTTOM OF WELL
DRILLER Terraphase Engineering Inc		
		ANNULAR SEAL
OTHER: AMSTM Stainless Steel Piezometer Groundwater	Sampling Kit	
DIAMETER OF AUGERS:		WATER
	_	
$\mathbf{V} = \mathbf{P} \mathbf{E} \mathbf{E} \mathbf{E} \mathbf{E} \mathbf{E} \mathbf{E} \mathbf{E} E$		
	DEPTHETBGS	CASING
	0.5	Stainless Steel Piezometer Extension w/ Coupler
MEC BY DDOOs las	0.72	
MFG. BT PDSCO, Inc.	DEPTH FT BGS	
	1.30	
		D 875 inch OD 1 25 inch
AMOUNT OF WATER USED <u>8 OUNCES</u>		
		LENGTH OF CASING <u>3 ft.</u>
		WELL SCREEN
AMOUNT USED <u>NA</u>		SCHEDULE 40 PVC
6AND, SIZE		Stainless Steel Piezometer w/ Coupler
FORMATION COLLAPSE:		PRODUCT
FROMTO		MFG. BY: <u>AMS™</u>
PRODUCT		CASING DIAMETER:
MFG. BY		ID <u>0.875 - inch</u> OD <u>1.25 - inch</u>
METHOD INSTALLED:	2 50	SLOT SIZE <u>#50 mesh filter screen</u>
		LENGTH OF SCREEN <u>1.2 ft.</u>
		LENGTH OF SUMP <u>NA</u>
	DEPTH FT BGS	
SURVEY INFORMATION	DEPTH FT BGS	BOREHOLE BACKFILL
TOC ELEVATION 9.52 ft AMSL		AMOUNT CALCULATED
GROUND ELEVATION 6.8 ft. AMSL		AMOUNT USED NA
NORTHING COORD. 217464.675		
EASTING COORD. <u>2682728.9078</u>		BENTONITE PELLETS, SIZE
DATE SURVEYED June 12, 2023		
SURVEY CO. Vargo Associates		FORMATION COLLAPSE
TOC MEASURING POINT:		FROM TO
		PRODUCT
CENTRALIZERS USED?		MFG. BY
YES NO		METHOD INSTALLED:
CENTRALIZER DEPTHS:		

Appendix E

Laboratory Data Package





ANALYTICAL REPORT

Lab Number:	L2374524
Client:	Terraphase Engineering Inc.
	1100 Canal Pointe Boulevard
	Suite 100
	Princeton, NJ 08540
ATTN:	Nick Scala
Phone:	(609) 236-8171
Project Name:	FORMER PHILADELPHIA REFINERY
Project Number:	P044.001.002
Report Date:	12/27/23

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:	FORMER PHILADELPHIA REFINERY
Project Number:	P044.001.002

Lab Number:	L2374524
Report Date:	12/27/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2374524-01	TG07A-PZ01-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 08:27	12/15/23
L2374524-02	TG07A-PZ02-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 09:57	12/15/23
L2374524-03	TG07A-SW02-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 10:46	12/15/23
L2374524-04	TG07A-SW01-231215	WATER	3144 W. PASSYUNK AVE.	12/15/23 16:39	12/15/23
L2374524-05	FB-231215-2	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:45	12/15/23
L2374524-06	TB-231215-2	WATER	3144 W. PASSYUNK AVE.	12/15/23 19:00	12/15/23
L2374524-07	TG07A-PZ01-231215D	WATER	3144 W. PASSYUNK AVE.	12/15/23 08:27	12/15/23

Project Name: FORMER PHILADELPHIA REFINERY Project Number: P044.001.002

Lab Number: L2374524 Report Date: 12/27/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.



Project Name: FORMER PHILADELPHIA REFINERY Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Case Narrative (continued)

Report Revision

December 27, 2023: The Volatile Organics analyte list has been amended on L2374524-01 through -07.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2374524-07: A sample identified as "TG07A-PZ01-231215D" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.

Microextractables

L2374524-01, -02, -03, -04, -05, -06, and -07: The sample was in improper preservative. The 8011 compound was analyzed from an HCl preserved vial.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Cattlin Wallien Caitlin Walukevich

Title: Technical Director/Representative

Date: 12/27/23



ORGANICS



VOLATILES



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8011 12/21/23 19:04 JKH	Extraction Method: Extraction Date:	EPA 8011 12/21/23 14:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 21:58		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborough Lab							
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
Toluene	ND		ug/l	0.75	0.20	1	
Ethylbenzene	ND		ug/l	0.50	0.17	1	
p/m-Xylene	ND		ug/l	1.0	0.33	1	
o-Xylene	ND		ug/l	1.0	0.39	1	
Xylenes, Total	ND		ug/l	1.0	0.33	1	
Isopropylbenzene	ND		ug/l	0.50	0.19	1	
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1	
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	107	70-130	
Dibromofluoromethane	99	70-130	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-02	Date Collected:	12/15/23 09:57
Client ID:	TG07A-PZ02-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8011 12/21/23 19:12 JKH	Extraction Method: Extraction Date:	EPA 8011 12/21/23 14:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	А



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-02 TG07A-PZ02-231215 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 09:57 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/21/23 22:24 MJV	·	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	109	70-130	
4-Bromofluorobenzene	104	70-130	
Dibromofluoromethane	101	70-130	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-03	Date Collected:	12/15/23 10:46	
Client ID:	TG07A-SW02-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 19:20			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-03 TG07A-SW02-231215 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 10:46 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/21/23 22:50 MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	0.20	J	ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	0.19	J	ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Accer Qualifier Cri	otance teria
1,2-Dichloroethane-d4	102	70	0-130
Toluene-d8	107	70	0-130
4-Bromofluorobenzene	108	70	0-130
Dibromofluoromethane	101	70	0-130



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39	
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 19:28			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	А



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 23:16		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	0.19	J	ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	0.19	J	ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptan Qualifier Criteria	ice a
1,2-Dichloroethane-d4	103	70-13	30
Toluene-d8	110	70-13	80
4-Bromofluorobenzene	107	70-13	80
Dibromofluoromethane	99	70-13	80


		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45	
Client ID:	FB-231215-2	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method	l: EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 18:40			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	0:12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45
Client ID:	FB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 23:42		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1		
Benzene	ND		ug/l	0.50	0.16	1		
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1		
Toluene	ND		ug/l	0.75	0.20	1		
Ethylbenzene	ND		ug/l	0.50	0.17	1		
p/m-Xylene	ND		ug/l	1.0	0.33	1		
o-Xylene	ND		ug/l	1.0	0.39	1		
Xylenes, Total	ND		ug/l	1.0	0.33	1		
Isopropylbenzene	ND		ug/l	0.50	0.19	1		
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1		
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	99	70-130	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-06	Date Collected:	12/15/23 19:00	
Client ID:	TB-231215-2	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	None	
Sample Depth:				
Matrix:	Water	Extraction Method	I: EPA 8011	
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22	
Analytical Date:	12/21/23 18:48			
Analyst:	JKH			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-06	Date Collected:	12/15/23 19:00
Client ID:	TB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	None
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 00:08		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1		
Benzene	ND		ug/l	0.50	0.16	1		
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1		
Toluene	ND		ug/l	0.75	0.20	1		
Ethylbenzene	ND		ug/l	0.50	0.17	1		
p/m-Xylene	ND		ug/l	1.0	0.33	1		
o-Xylene	ND		ug/l	1.0	0.39	1		
Xylenes, Total	ND		ug/l	1.0	0.33	1		
Isopropylbenzene	ND		ug/l	0.50	0.19	1		
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1		
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	109	70-130	
4-Bromofluorobenzene	107	70-130	
Dibromofluoromethane	100	70-130	



Analyst:

MJV

		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-07	Date Collected:	12/15/23 08:27
Client ID:	TG07A-PZ01-231215D	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/21/23 14:22
Analytical Date:	12/21/23 18:56		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-07 TG07A-PZ01-231215D 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 08:27 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260D 12/22/23 00:33 MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor						
Volatile Organics by GC/MS - Westborough Lab												
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1						
Benzene	ND		ug/l	0.50	0.16	1						
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1						
Toluene	ND		ug/l	0.75	0.20	1						
Ethylbenzene	ND		ug/l	0.50	0.17	1						
p/m-Xylene	ND		ug/l	1.0	0.33	1						
o-Xylene	ND		ug/l	1.0	0.39	1						
Xylenes, Total	ND		ug/l	1.0	0.33	1						
Isopropylbenzene	ND		ug/l	0.50	0.19	1						
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1						

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	105	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	105	70-130	
Dibromofluoromethane	101	70-130	



Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	Method Blank Analysis Batch Quality Control		
	4 0044		

Analytical Method:	1,8011	Extraction Method:	EPA 8011
Analytical Date:	12/21/23 17:35	Extraction Date:	12/21/23 14:22
Analyst:	ЈКН		

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westbor	ough Lab for	r sample(s):	01-07	Batch:	WG1866933-1	
1,2-Dibromoethane	ND		ug/l	0.010	0.005	А



Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374524 Report Date: 12/27/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 21:06 Analyst: MAG

Parameter	Result Qua	lifier Units	RL	MDL
Volatile Organics by GC/MS - We	estborough Lab for s	ample(s): 01-07	Batch:	WG1867314-5
Methyl tert butyl ether	ND	ug/l	1.0	0.17
Benzene	ND	ug/l	0.50	0.16
1,2-Dichloroethane	ND	ug/l	0.50	0.13
Toluene	ND	ug/l	0.75	0.20
Ethylbenzene	ND	ug/l	0.50	0.17
p/m-Xylene	ND	ug/l	1.0	0.33
o-Xylene	ND	ug/l	1.0	0.39
Xylenes, Total	ND	ug/l	1.0	0.33
Isopropylbenzene	ND	ug/l	0.50	0.19
1,3,5-Trimethylbenzene	ND	ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND	ug/l	2.5	0.19

	Acceptance					
Surrogate	%Recovery	Qualifier	Criteria			
1.2 Dichloroothopo d4	101		70 120			
	101		70-130			
Toluene-d8	108		70-130			
4-Bromofluorobenzene	109		70-130			
Dibromofluoromethane	99		70-130			



Lab Control Sample Analysis

Project Name:	FORMER PHILADELPHIA REFINERY	Batch Quality Control	Lab Number:	L2374524
Project Number:	P044.001.002		Report Date:	12/27/23

	LCS		LCSD		%Recovery			RPD		
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	Column	
Microextractables by GC - Westborough Lab	Associated sam	ple(s): 01-0	7 Batch: WG1	866933-2						
1,2-Dibromoethane	99		-		80-120	-		20	A	



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

	LCS			LCSD		%Recovery			RPD	
Parameter	%Recovery	Qual	%R	ecovery	Qual	Limits	RPD	Qual	Limits	
Volatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	01-07	Batch:	WG1867314-3	WG1867314-4				
Methyl tert butyl ether	89			88		63-130	1		20	
Benzene	98			97		70-130	1		20	
1,2-Dichloroethane	98			96		70-130	2		20	
Toluene	100			100		70-130	0		20	
Ethylbenzene	110			100		70-130	10		20	
p/m-Xylene	105			105		70-130	0		20	
o-Xylene	105			100		70-130	5		20	
Isopropylbenzene	110			100		70-130	10		20	
1,3,5-Trimethylbenzene	110			100		64-130	10		20	
1,2,4-Trimethylbenzene	110			100		70-130	10		20	

	LCS	LCSD	Acceptance
Surrogate	%Recovery Qua	l %Recovery Qual	Criteria
1,2-Dichloroethane-d4	101	99	70-130
Toluene-d8	108	107	70-130
4-Bromofluorobenzene	106	106	70-130
Dibromofluoromethane	99	100	70-130



SEMIVOLATILES



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-01	Date Collected:	12/15/23 08:27	
Client ID:	TG07A-PZ01-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 3510C	
Analytical Method: Analytical Date:	1,8270E-SIM 12/22/23 10:27 DV	Extraction Date:	12/21/23 08:00	
Analyst.				

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM -	Westborough La	ab				
Naphthalene	ND		ug/l	0.10	0.05	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.05	0.02	1
Anthracene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1
Chrysene	ND		ug/l	0.10	0.01	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	78	23-120	
2-Fluorobiphenyl	75	15-120	
4-Terphenyl-d14	70	41-149	



	Serial_No:12272310:3		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-02	Date Collected:	12/15/23 09:57
Client ID:	TG07A-PZ02-231215	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method: Analytical Date: Analyst:	1,8270E-SIM 12/21/23 17:53 DV	Extraction Date:	12/21/23 08:00

Parameter	Result Qualifier		Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS-SIM - Westborough Lab							
Naphthalene	ND		ug/l	0.10	0.05	1	
Fluorene	ND		ug/l	0.10	0.01	1	
Phenanthrene	ND		ug/l	0.05	0.02	1	
Anthracene	ND		ug/l	0.10	0.01	1	
Pyrene	ND		ug/l	0.10	0.02	1	
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1	
Chrysene	ND		ug/l	0.10	0.01	1	
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1	
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1	
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	66	23-120	
2-Fluorobiphenyl	64	15-120	
4-Terphenyl-d14	62	41-149	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-03	Date Collected:	12/15/23 10:46	
Client ID:	TG07A-SW02-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 3510C	
Analytical Method: Analytical Date: Analyst:	1,8270E-SIM 12/21/23 18:10 DV	Extraction Date:	12/21/23 08:00	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS-SIM - Westborough Lab							
Naphthalene	ND		ug/l	0.10	0.05	1	
Fluorene	ND		ug/l	0.10	0.01	1	
Phenanthrene	ND		ug/l	0.05	0.02	1	
Anthracene	ND		ug/l	0.10	0.01	1	
Pyrene	0.03	J	ug/l	0.10	0.02	1	
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1	
Chrysene	ND		ug/l	0.10	0.01	1	
Benzo(b)fluoranthene	0.02	J	ug/l	0.05	0.01	1	
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1	
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	51	23-120	
2-Fluorobiphenyl	50	15-120	
4-Terphenyl-d14	48	41-149	



		Serial_No:12272310:32		
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524	
Project Number:	P044.001.002	Report Date:	12/27/23	
	SAMPLE RESULTS			
Lab ID:	L2374524-04	Date Collected:	12/15/23 16:39	
Client ID:	TG07A-SW01-231215	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 3510C	
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00	
Analytical Date:	12/21/23 18:26			
Analyst:	DV			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS-SIM - Westborough Lab							
Naphthalene	ND		ug/l	0.10	0.05	1	
Fluorene	ND		ug/l	0.10	0.01	1	
Phenanthrene	ND		ug/l	0.05	0.02	1	
Anthracene	ND		ug/l	0.10	0.01	1	
Pyrene	0.02	J	ug/l	0.10	0.02	1	
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1	
Chrysene	ND		ug/l	0.10	0.01	1	
Benzo(b)fluoranthene	0.01	J	ug/l	0.05	0.01	1	
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1	
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	65	23-120	
2-Fluorobiphenyl	63	15-120	
4-Terphenyl-d14	56	41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID:	L2374524-05	Date Collected:	12/15/23 18:45
Client ID:	FB-231215-2	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Refer to COC
Sample Depth:			
Matrix:	Water	Extraction Method	EPA 3510C
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00
Analytical Date:	12/21/23 18:43		
Analyst:	DV		

Parameter	Result	Result Qualifier Units		RL	MDL	Dilution Factor			
Semivolatile Organics by GC/MS-SIM - Westborough Lab									
Naphthalene	ND		ug/l	0.10	0.05	1			
Fluorene	ND		ug/l	0.10	0.01	1			
Phenanthrene	ND		ug/l	0.05	0.02	1			
Anthracene	ND		ug/l	0.10	0.01	1			
Pyrene	ND		ug/l	0.10	0.02	1			
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1			
Chrysene	ND		ug/l	0.10	0.01	1			
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1			
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1			
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1			

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Nitrobenzene-d5	73		23-120	
2-Fluorobiphenyl	69		15-120	
4-Terphenyl-d14	64		41-149	



		Serial_No:	12272310:32
Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524
Project Number:	P044.001.002	Report Date:	12/27/23
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2374524-07 TG07A-PZ01-231215D 3144 W. PASSYUNK AVE.	Date Collected: Date Received: Field Prep:	12/15/23 08:27 12/15/23 Refer to COC
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8270E-SIM 12/22/23 10:44 DV	Extraction Method: Extraction Date:	EPA 3510C 12/21/23 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Semivolatile Organics by GC/MS-SIM - Westborough Lab										
Naphthalene	ND		ug/l	0.10	0.05	1				
Fluorene	ND		ug/l	0.10	0.01	1				
Phenanthrene	ND		ug/l	0.05	0.02	1				
Anthracene	ND		ug/l	0.10	0.01	1				
Pyrene	ND		ug/l	0.10	0.02	1				
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1				
Chrysene	ND		ug/l	0.10	0.01	1				
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1				
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1				
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1				

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	71	23-120	
2-Fluorobiphenyl	70	15-120	
4-Terphenyl-d14	70	41-149	



Project Name:	FORMER PHILADELPHIA REFINERY	Lab Number:	L2374524		
Project Number:	P044.001.002	Report Date:	12/27/23		
Method Blank Analysis					

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E-SIM	Extraction Method:	EPA 3510C
Analytical Date:	12/21/23 17:36	Extraction Date:	12/21/23 08:00
Analyst:	RP		

Parameter	Result	Qualifier Units	s RL	MDL	
Semivolatile Organics by GC/MS	S-SIM - Westbo	rough Lab for sa	mple(s): 01-	05,07 Batch:	WG1866777-1
Naphthalene	ND	ug/l	0.10	0.05	
Fluorene	ND	ug/l	0.10	0.01	
Phenanthrene	ND	ug/l	0.05	0.02	
Anthracene	ND	ug/l	0.10	0.01	
Pyrene	ND	ug/l	0.10	0.02	
Benzo(a)anthracene	ND	ug/l	0.05	0.02	
Chrysene	ND	ug/l	0.10	0.01	
Benzo(b)fluoranthene	ND	ug/l	0.05	0.01	
Benzo(a)pyrene	ND	ug/l	0.10	0.02	
Benzo(ghi)perylene	ND	ug/l	0.10	0.01	

		Acceptance		
Surrogate	%Recovery	Qualifier	Criteria	
				_
Nitrobenzene-d5	80		23-120	
2-Fluorobiphenyl	75		15-120	
4-Terphenyl-d14	71		41-149	



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Parameter	LCS %Recoverv	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
	, , , , , , , , , , , , , , , , , , ,								
Semivolatile Organics by GC/MS-SIM -	Westborough Lab A	Associated sample	e(s): 01-05,07	Batch:	WG1866777-2	WG1866777-3			
Naphthalene	58		75		40-140	26		40	
Fluorene	59		76		40-140	25		40	
Phenanthrene	58		74		40-140	24		40	
Anthracene	59		76		40-140	25		40	
Pyrene	55		68		26-127	21		40	
Benzo(a)anthracene	66		86		40-140	26		40	
Chrysene	61		78		40-140	24		40	
Benzo(b)fluoranthene	59		74		40-140	23		40	
Benzo(a)pyrene	57		72		40-140	23		40	
Benzo(ghi)perylene	66		83		40-140	23		40	

Surrogate	LCS %Recovery Qua	LCSD al %Recovery Qual	Acceptance Criteria
Nitrobenzene-d5	67	84	23-120
2-Fluorobiphenyl	61	75	15-120
4-Terphenyl-d14	55	67	41-149



Lab Duplicate Analysis Batch Quality Control

Project Name: FORMER PHILADELPHIA REFINERY

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Project Number: P044.001.002

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Semivolatile Organics by GC/MS-SIM - Westboro ID: TG07A-PZ01-231215	ugh Lab Associated samp	le(s): 01-05,07 QC B	atch ID: WG1866	6777-4 (QC Sample:	L2374524-01	Client
Naphthalene	ND	0.46	ug/l	NC		40	
Fluorene	ND	0.02J	ug/l	NC		40	
Phenanthrene	ND	0.03J	ug/l	NC		40	
Anthracene	ND	ND	ug/l	NC		40	
Pyrene	ND	ND	ug/l	NC		40	
Benzo(a)anthracene	ND	ND	ug/l	NC		40	
Chrysene	ND	ND	ug/l	NC		40	
Benzo(b)fluoranthene	ND	ND	ug/l	NC		40	
Benzo(a)pyrene	ND	ND	ug/l	NC		40	
Benzo(ghi)perylene	ND	ND	ug/l	NC		40	

Surrogate	%Recovery Qualif	ier %Recovery Quali	Acceptance fier Criteria	
Nitrobenzene-d5	78	60	23-120	
2-Fluorobiphenyl	75	59	15-120	
4-Terphenyl-d14	70	54	41-149	



METALS



Project Name:	FORM	IER PHILA	DELPHIA		IERY		Lab Nu	mber:	L2374		
Project Number:	P044.	001.002					Report	Date:	12/27/		
				SAMP	LE RES	ULTS					
Lab ID:	L2374	524-01					Date Co	ollected:	12/15/2	3 08:27	
Client ID:	TG07A	A-PZ01-23 ⁻	1215				Date Re	eceived:	12/15/2	23	
Sample Location:	3144 \	N. PASSY	UNK AVE				Field Pr	ep:	Refer to	DOD o	
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals -	Mansfield Lab							
Lead, Dissolved	1.609	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 17:18 EPA 3005A	1,6020B	EJF



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	524	
Project Number:	P044.0	001.002					Report	Date:	12/27/	23	
				SAMPL	LE RES	ULTS					
Lab ID:	L2374	524-02					Date Co	ollected:	12/15/2	23 09:57	
Client ID:	TG07A	A-PZ02-23 ⁻	1215				Date Re	eceived:	12/15/2	23	
Sample Location:	3144 V	W. PASSY	JNK AVE				Field Pr	ep:	Refer to	o COC	
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals - N	Mansfield Lab							
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:06 EPA 3005A	1,6020B	EJF



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374	L2374524		
Project Number:	P044.0	001.002					Report	Date:	12/27/			
				SAMPI	LE RES	ULTS						
Lab ID:	L2374	524-03					Date Co	ollected:	12/15/2	3 10:46		
Client ID:	TG07A	A-SW02-23	1215				Date Re	eceived:	12/15/2	23		
Sample Location:	3144 V	W. PASSY	JNK AVE				Field Pr	ep:	Refer to	DOD o		
Sample Depth: Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	

Dissolved Metals -	Mansfield Lab							
Lead, Dissolved	2.074	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:11 EPA 3005A	1,6020B	EJF



Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374		
Project Number:	P044.0	001.002					Report	Date:	12/27/		
				SAMPI	LE RES	ULTS					
Lab ID:	L2374	524-04					Date Co	ollected:	12/15/2	3 16:39	
Client ID:	TG07A	A-SW01-23	81215				Date Re	eceived:	12/15/2	23	
Sample Location:	3144 V	W. PASSY	JNK AVE	•			Field Pr	ep:	Refer to	DOD o	
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals ·	- Mansfield L	ab							
Lead, Dissolved	0.8006	J	ug/l	1.000	0.3430	1	12/21/23 09:34 12/21/23 18:16 EPA 3005A	1,6020B	EJF



12/21/23 09:34 12/21/23 18:20 EPA 3005A

1,6020B

EJF

Project Name:	FORM	IER PHILA	DELPHIA		IERY		Lab Number: L2374524					
Project Number:	P044.	001.002					Report	Date:	12/27/	12/27/23		
				SAMP	LE RES	ULTS						
Lab ID:	L2374	524-05					Date Co	ollected:	12/15/2	23 18:45		
Client ID:	FB-23	1215-2					Date Re	eceived:	12/15/2	23		
Sample Location:	3144	W. PASSY	UNK AVE				Field Pr	ep:	Refer to	o COC		
Sample Depth:												
Matrix:	Water											
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Dissolved Metals - M	Mansfield	Lab										

0.3430

1

ug/l

1.000



Lead, Dissolved

ND

Project Name:	FORM	IER PHILA	DELPHIA	REFIN	IERY		Lab Nu	mber:	L2374		
Project Number:	P044.	001.002					Report	Date:	12/27/		
				SAMPI	LE RES	ULTS					
Lab ID:	L2374	524-07					Date Co	ollected:	12/15/2	3 08:27	
Client ID:	TG07A	A-PZ01-23 ⁻	1215D				Date Re	eceived:	12/15/2	3	
Sample Location:	3144 \	N. PASSYI	JNK AVE				Field Pr	ep:	Refer to		
Sample Depth: Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst

Dissolved Metals ·	- Mansfield L	ab							
Lead, Dissolved	0.4309	J	ug/l	1.000	0.3430	1	12/21/23 08:33 12/21/23 14:07 EPA 3005A	1,6020B	EJF



Project Name:FORMER PHILADELPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifi	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals	- Mansfield Lab for san	nple(s): 01-0)5 Batch	: WG18	865448-1				
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 09:34	12/21/23 16:55	5 1,6020B	EJF
			Prep Info	ormatio	n				
		Digestior	Method:	EPA	3005A				
Parameter	Result Qualifi	er Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals	- Mansfield Lab for san	nple(s): 07	Batch: V	/G1866	342-1				
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	12/21/23 08:33	12/21/23 13:44	1,6020B	EJF

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis

Project Name:	FORMER PHILADELI	PHIA REFINERY	,	Batch Qua	lity Contr	ol	Lab N	lumber:	L2374524
Project Number:	P044.001.002						Repo	rt Date:	12/27/23
Parameter		LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

106

Dissolved Metals - Mansfield Lab Associated sar	nple(s): 01-05	Batch: WG1865448-2			
Lead, Dissolved	104	-	80-120	-	
Dissolved Metals - Mansfield Lab Associated sar	nple(s): 07 Ba	atch: WG1866342-2			

-

80-120

-

	1
	7
- 14	ALPHA
1.4	ANALYTICAL

Lead, Dissolved

		Matrix Spike Analysis		
Project Name:	FORMER PHILADELPHIA REFINERY	Datch Quality Control	Lab Number:	L2374524
Project Number:	P044.001.002		Report Date:	12/27/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	RPD Qual Limits
Dissolved Metals - Mansfield Lat	Associated	sample(s): 01	-05 QC	C Batch ID: WG	61865448	3-3 QC	Sample: L2374	524-01	Client ID): TG07/	A-PZ01-231215
Lead, Dissolved	1.609	530	564.8	106		-	-		75-125	-	20
Dissolved Metals - Mansfield Lab	Associated	sample(s): 07	QC B	atch ID: WG18	66342-3	QC Sar	nple: L2374524	-07 (Client ID: 1	G07A-P	Z01-231215D
Lead, Dissolved	0.4309J	530	541.2	102		-	-		75-125	-	20



Project Name:FORMER PHILADELPHIA REFINERYProject Number:P044.001.002			Lab Duplicate Batch Quality	Lai Re _l	b Number: port Date:	L2374524 12/27/23	
Parameter		Native Sample	Duplicate Sa	mple Units	RPD	Qual R	PD Limits
Dissolved Metals - Mans	field Lab Associated sa	ample(s): 01-05 QC Batc	h ID: WG1865448-4	QC Sample: L237452	4-01 Client	ID: TG07A-	PZ01-231215
Lead, Dissolved		1.609	0.4029J	ug/l	NC		20
Dissolved Metals - Mans	field Lab Associated sa	ample(s): 07 QC Batch IE	D: WG1866342-4 QC	C Sample: L2374524-0	7 Client ID	: TG07A-PZ	01-231215D
Lead, Dissolved		0.4309J	0.4608J	ug/l	NC		20



Sample Receipt and Container Information

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
A	Absent
В	Absent

Containar Information

Container info	ormation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	pН	pН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374524-01A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-01A1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()
L2374524-01B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-01B1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()
L2374524-01C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)
L2374524-01C1	Vial HCI preserved	А	NA		3.9	Y	Absent		ARCHIVE()
L2374524-01D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Υ	Absent		PB-6020S-PPB(180)
L2374524-01D1	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		ARCHIVE()
L2374524-01E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374524-01E1	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		ARCHIVE()
L2374524-01F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374524-01F1	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		ARCHIVE()
L2374524-02A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-02B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-02C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)
L2374524-02D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)
L2374524-02E	Amber 250ml unpreserved	А	9	9	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374524-02F	Amber 250ml unpreserved	А	9	9	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374524-03A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-03B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374524-03C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)
L2374524-03D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)

YES



Project Name: FORMER PHILADELPHIA REFINERY*Project Number:* P044.001.002

Container Info	Container Information			Final	Temp			Frozen		
Container ID	Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L2374524-03E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-03F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-04A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-04B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-04C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-04D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-04E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-04F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-05A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-05B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-05C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-05D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-05E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-05F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-06A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-06B	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-07A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-07B	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)	
L2374524-07C	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14)	
L2374524-07D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020S-PPB(180)	
L2374524-07E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	
L2374524-07F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)	



Project Name: FORMER PHILADELPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374524

Report Date: 12/27/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER PHILADELPHIA REFINERY

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Footnotes

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- С - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Е - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- Н - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - The lower value for the two columns has been reported due to obvious interference.
- J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



¹

⁻ The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- V The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)


Project Name:FORMER PHILADELPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374524

 Report Date:
 12/27/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethvltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H, B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kieldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables)

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: AI, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: AI, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. EPA 245.1 Hg. SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:12272310:32

APHA	CHAIN OI	FCL	JSTO	DY ,	PAGE_}	OF	Da	le Rec'd	in Lab	12	/11	6/	23	A	LPH	A JOB #: (237452)
WESTBORO, MA TEL: 508-898-9220 FAX: 508-696-6193	MANISFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288	Project	nt Informa	tion FM [®]	feting	nilecelphiz Livy	Re	Port Inf	ormal	ion - Da	ata Del L. Deliver	livera	bles	6	lilling Same	as Client info PO #:
Client Informatio	on A Terrallese Ensureen	Project Project	Location: 3 #: PO44	144 W.	Passy	unk Au	Reg	ulatory	Requ	iremen	s/Rep	ort Li	mits			
Address: 3144	The BUD SURTIO	Project	Manager: p	ick Sce	ala		Stat	e /Fed Pi	rogram	ŝ		Criteria	1			
Phone: 215 -	297-350Z	Turn-	Around Ti	me			1	- 4	olve,	2		-	-		2	
Fax: Email: pick, Sca These samples ha Other Project S	La @ ferraphase com ve been previously analyzed by Alpha Specific Requirements/Comm	Date D	lard C ue: etection L	RUSH (anty	Time:	(beenadi	AIL	1-5 1000 820	lea	7	17	7	/	1	1	SAMPLE HANDLING Filtration field
please see is Jussolve Nease servi Alphalabid	EDD to EDD Otem	aphase	2.com	CEQ-	is for	sampler's	AN	+519						1	1	Not needed Lab to do Preservation Lab to do (Preset specify below)
(Lab Use Only)	Sample ID		Date	Time	Matrix	Initials	5	1/	4	11	11	[]	1	1	6	Sample Specific Comments
4524-01	16071- P201-231	215	12/15/23	8:27	GW	VIO	X	- 11-				-	-	-		
02	76074-P202-231	215	12/13/23	9:57	GW	250	Y						-		-	
03	16074-5W02-23	1215	12/15/23	10:46	an	430	X							1		-
04	7607A-5W01-23	1215	2/15/23	16:34	GW	100	X									
05	FB-231215-2		12/15/23	18:45	88	450	X									
Ob	18-23 1215-2		12/15/23	19:00	13	#50	X			-						
		-		F	Conta	ainer Type		+				-				Please print clearly, legibly and com- pletely. Samples can not be logged
Page 53 of 54	T.an	Relinqui	ished By:		Date 12/15 12/15 12/15	e/Time 202010 8 2100 6 013	100	Rith	eceived	By:	/ een0	DEC 1	Dat 4/15 5 1 2/16	e/Tim 6-3 023 2 0 B	2015	in and turnaround time clock will not start until any ambiguities are resolve All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

PADEP Short List 1-5:

Benzene

Cumene

1,2 – Dibromoethane

1,2 - Dichloroethane

Ethyl Benzene

Taluene

1,2,4 – Trímethylbenzene

1,3,5 + Trimethylbenzene

Methyl tert-butyl ether

Xylenes (total)

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo{g,'n,i)perylene

Chrysene

Fluorene

Naphthalene

Phenanithrene

Pyrene

Lead

: :

.



ANALYTICAL REPORT

Lab Number:	L2374526
Client:	Terraphase Engineering Inc.
	1100 Canal Pointe Boulevard
	Suite 100
	Princeton, NJ 08540
ATTN:	Nick Scala
Phone:	(609) 236-8171
Project Name:	FORMER PHILADEPHIA REFINERY
Project Number:	P044.001.002
Report Date:	12/26/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Lab Number:	L2374526
Report Date:	12/26/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2374526-01	GPR251-01-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:12	12/15/23
L2374526-02	GPR250-02-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 16:26	12/15/23
L2374526-03	GPR251-02-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 16:08	12/15/23
L2374526-04	GPR251-03-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:45	12/15/23
L2374526-05	GPR251-04-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:33	12/15/23
L2374526-06	GPR250-03-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:17	12/15/23
L2374526-07	GPR250-03-SS01D	SOIL	3144 W. PASSYUNK AVE.	12/15/23 15:17	12/15/23
L2374526-08	GPR250-01-0.5-1.0	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:54	12/15/23
L2374526-09	GPR250-01-SS01	SOIL	3144 W. PASSYUNK AVE.	12/15/23 14:38	12/15/23
L2374526-10	FB-231215-1	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:37	12/15/23
L2374526-11	TB-231215-1	WATER	3144 W. PASSYUNK AVE.	12/15/23 18:56	12/15/23



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Lab Number: L2374526 Report Date: 12/26/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.



Project Name: FORMER PHILADEPHIA REFINERY Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Case Narrative (continued)

Report Submission

December 26, 2023: This final report includes the results of all requested analyses. December 22, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Microextractables

L2374526-10, -11, and WG1868000-3: The sample was in improper preservative. The 8011 compound was analyzed from an HCI preserved vial.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Lelly Mell Kelly O'Neill

Title: Technical Director/Representative

Date: 12/26/23



ORGANICS



VOLATILES



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-01	Date Collected:	12/15/23 14:12
Client ID:	GPR251-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 19:09		
Analyst:	JIC		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westb	orough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0017	0.00017	1
Benzene	ND		mg/kg	0.00042	0.00014	1
1,2-Dichloroethane	ND		mg/kg	0.00085	0.00022	1
Toluene	ND		mg/kg	0.00085	0.00046	1
1,2-Dibromoethane	ND		mg/kg	0.00042	0.00025	1
Ethylbenzene	ND		mg/kg	0.00085	0.00012	1
p/m-Xylene	ND		mg/kg	0.0017	0.00048	1
o-Xylene	ND		mg/kg	0.00085	0.00025	1
Xylenes, Total	ND		mg/kg	0.00085	0.00025	1
Isopropylbenzene	ND		mg/kg	0.00085	0.00009	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0017	0.00016	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0017	0.00028	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	96	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-02	Date Collected:	12/15/23 16:26
Client ID:	GPR250-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 17:53		
Analyst:	JIC		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
/olatile Organics by EPA 5035 Low - Westborough Lab									
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00018	1			
Benzene	ND		mg/kg	0.00046	0.00015	1			
1,2-Dichloroethane	ND		mg/kg	0.00091	0.00023	1			
Toluene	ND		mg/kg	0.00091	0.00050	1			
1,2-Dibromoethane	ND		mg/kg	0.00046	0.00027	1			
Ethylbenzene	ND		mg/kg	0.00091	0.00013	1			
p/m-Xylene	ND		mg/kg	0.0018	0.00051	1			
o-Xylene	ND		mg/kg	0.00091	0.00026	1			
Xylenes, Total	ND		mg/kg	0.00091	0.00026	1			
Isopropylbenzene	ND		mg/kg	0.00091	0.00010	1			
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1			
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00030	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	105	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-03	Date Collected:	12/15/23 16:08
Client ID:	GPR251-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 18:43		
Analyst:	JIC		
Percent Solids:	87%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by EPA 5035 Low - Westborough Lab									
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00018	1			
Benzene	ND		mg/kg	0.00045	0.00015	1			
1,2-Dichloroethane	ND		mg/kg	0.00091	0.00023	1			
Toluene	ND		mg/kg	0.00091	0.00049	1			
1,2-Dibromoethane	ND		mg/kg	0.00045	0.00026	1			
Ethylbenzene	ND		mg/kg	0.00091	0.00013	1			
p/m-Xylene	ND		mg/kg	0.0018	0.00051	1			
o-Xylene	ND		mg/kg	0.00091	0.00026	1			
Xylenes, Total	ND		mg/kg	0.00091	0.00026	1			
Isopropylbenzene	ND		mg/kg	0.00091	0.00009	1			
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1			
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00030	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	94	70-130	
4-Bromofluorobenzene	92	70-130	
Dibromofluoromethane	108	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-04	Date Collected:	12/15/23 15:45
Client ID:	GPR251-03-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 18:18		
Analyst:	JIC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor				
Volatile Organics by EPA 5035 L	Volatile Organics by EPA 5035 Low - Westborough Lab									
Methyl tert butyl ether	ND		mg/kg	0.0019	0.00019	1				
Benzene	ND		mg/kg	0.00047	0.00016	1				
1,2-Dichloroethane	ND		mg/kg	0.00094	0.00024	1				
Toluene	ND		mg/kg	0.00094	0.00051	1				
1,2-Dibromoethane	ND		mg/kg	0.00047	0.00027	1				
Ethylbenzene	ND		mg/kg	0.00094	0.00013	1				
p/m-Xylene	ND		mg/kg	0.0019	0.00052	1				
o-Xylene	ND		mg/kg	0.00094	0.00027	1				
Xylenes, Total	ND		mg/kg	0.00094	0.00027	1				
Isopropylbenzene	ND		mg/kg	0.00094	0.00010	1				
1,3,5-Trimethylbenzene	ND		mg/kg	0.0019	0.00018	1				
1,2,4-Trimethylbenzene	ND		mg/kg	0.0019	0.00031	1				

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	94	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-05	Date Collected:	12/15/23 15:33
Client ID:	GPR251-04-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/21/23 10:48		
Analyst:	JIC		
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0022	0.00022	1
Benzene	ND		mg/kg	0.00054	0.00018	1
1,2-Dichloroethane	ND		mg/kg	0.0011	0.00028	1
Toluene	ND		mg/kg	0.0011	0.00058	1
1,2-Dibromoethane	ND		mg/kg	0.00054	0.00032	1
Ethylbenzene	ND		mg/kg	0.0011	0.00015	1
p/m-Xylene	ND		mg/kg	0.0022	0.00060	1
o-Xylene	ND		mg/kg	0.0011	0.00031	1
Xylenes, Total	ND		mg/kg	0.0011	0.00031	1
Isopropylbenzene	ND		mg/kg	0.0011	0.00012	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0022	0.00021	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0022	0.00036	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	110	70-130	
Toluene-d8	97	70-130	
4-Bromofluorobenzene	94	70-130	
Dibromofluoromethane	107	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-06	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 15:06		
Analyst:	JIC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	Low - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0018	0.00019	1
Benzene	ND		mg/kg	0.00046	0.00015	1
1,2-Dichloroethane	ND		mg/kg	0.00093	0.00024	1
Toluene	ND		mg/kg	0.00093	0.00050	1
1,2-Dibromoethane	ND		mg/kg	0.00046	0.00027	1
Ethylbenzene	ND		mg/kg	0.00093	0.00013	1
p/m-Xylene	ND		mg/kg	0.0018	0.00052	1
o-Xylene	ND		mg/kg	0.00093	0.00027	1
Xylenes, Total	ND		mg/kg	0.00093	0.00027	1
Isopropylbenzene	ND		mg/kg	0.00093	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0018	0.00018	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0018	0.00031	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	106	70-130	
Toluene-d8	94	70-130	
4-Bromofluorobenzene	102	70-130	
Dibromofluoromethane	104	70-130	



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-07	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01D	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Analytical Method:	1,8260D		
Analytical Date:	12/20/23 15:45		
Analyst:	JIC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 L	ow - Westborough Lab					
Methyl tert butyl ether	ND		mg/kg	0.0019	0.00019	1
Benzene	ND		mg/kg	0.00048	0.00016	1
1,2-Dichloroethane	ND		mg/kg	0.00097	0.00025	1
Toluene	ND		mg/kg	0.00097	0.00052	1
1,2-Dibromoethane	ND		mg/kg	0.00048	0.00028	1
Ethylbenzene	ND		mg/kg	0.00097	0.00014	1
p/m-Xylene	ND		mg/kg	0.0019	0.00054	1
o-Xylene	ND		mg/kg	0.00097	0.00028	1
Xylenes, Total	ND		mg/kg	0.00097	0.00028	1
Isopropylbenzene	ND		mg/kg	0.00097	0.00010	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0019	0.00019	1
1,2,4-Trimethylbenzene	ND		mg/kg	0.0019	0.00032	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	93	70-130	
4-Bromofluorobenzene	103	70-130	
Dibromofluoromethane	105	70-130	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-09	Date Collected:	12/15/23 14:38	
Client ID:	GPR250-01-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil			
Analytical Method:	1,8260D			
Analytical Date:	12/20/23 16:24			
Analyst:	JIC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by EPA 5035 Low - Westborough Lab									
Methyl tert butyl ether	ND		mg/kg	0.0017	0.00017	1			
Benzene	0.00028	J	mg/kg	0.00042	0.00014	1			
1,2-Dichloroethane	ND		mg/kg	0.00084	0.00022	1			
Toluene	ND		mg/kg	0.00084	0.00046	1			
1,2-Dibromoethane	ND		mg/kg	0.00042	0.00025	1			
Ethylbenzene	ND		mg/kg	0.00084	0.00012	1			
p/m-Xylene	ND		mg/kg	0.0017	0.00047	1			
o-Xylene	ND		mg/kg	0.00084	0.00024	1			
Xylenes, Total	ND		mg/kg	0.00084	0.00024	1			
Isopropylbenzene	ND		mg/kg	0.00084	0.00009	1			
1,3,5-Trimethylbenzene	ND		mg/kg	0.0017	0.00016	1			
1,2,4-Trimethylbenzene	0.00038	J	mg/kg	0.0017	0.00028	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	104	70-130	
Dibromofluoromethane	104	70-130	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37
Client ID:	FB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/26/23 11:04
Analytical Date:	12/26/23 12:43		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37
Client ID:	FB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 00:59		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor			
Volatile Organics by GC/MS - Westborough Lab									
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1			
Benzene	ND		ug/l	0.50	0.16	1			
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1			
Toluene	ND		ug/l	0.75	0.20	1			
Ethylbenzene	ND		ug/l	0.50	0.17	1			
p/m-Xylene	ND		ug/l	1.0	0.33	1			
o-Xylene	ND		ug/l	1.0	0.39	1			
Xylenes, Total	ND		ug/l	1.0	0.33	1			
Isopropylbenzene	ND		ug/l	0.50	0.19	1			
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1			
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1			

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	100	70-130	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-11	Date Collected:	12/15/23 18:56
Client ID:	TB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method	l: EPA 8011
Analytical Method:	1,8011	Extraction Date:	12/26/23 11:04
Analytical Date:	12/26/23 12:51		
Analyst:	JKH		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	0.005	1	A



		Serial_No	0:12262316:20
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-11	Date Collected:	12/15/23 18:56
Client ID:	TB-231215-1	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260D		
Analytical Date:	12/22/23 01:25		
Analyst:	MJV		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1		
Benzene	ND		ug/l	0.50	0.16	1		
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1		
Toluene	ND		ug/l	0.75	0.20	1		
Ethylbenzene	ND		ug/l	0.50	0.17	1		
p/m-Xylene	ND		ug/l	1.0	0.33	1		
o-Xylene	ND		ug/l	1.0	0.39	1		
Xylenes, Total	ND		ug/l	1.0	0.33	1		
Isopropylbenzene	ND		ug/l	0.50	0.19	1		
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1		
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	106	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	106	70-130	
Dibromofluoromethane	101	70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/20/23 09:50 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MD	L
Volatile Organics by EPA 5035 Low	- Westboro	ugh Lab for	sample(s):	01-04	Batch:	WG1866806-5
Methyl tert butyl ether	ND		mg/kg	0.0020	0.00	020
Benzene	ND		mg/kg	0.00050	0.00	017
1,2-Dichloroethane	ND		mg/kg	0.0010	0.00	026
Toluene	ND		mg/kg	0.0010	0.00	054
1,2-Dibromoethane	ND		mg/kg	0.00050	0.00	029
Ethylbenzene	ND		mg/kg	0.0010	0.00	014
p/m-Xylene	ND		mg/kg	0.0020	0.00	056
o-Xylene	ND		mg/kg	0.0010	0.00	029
Xylenes, Total	ND		mg/kg	0.0010	0.00	029
Isopropylbenzene	ND		mg/kg	0.0010	0.00	011
1,3,5-Trimethylbenzene	ND		mg/kg	0.0020	0.00	019
1,2,4-Trimethylbenzene	ND		mg/kg	0.0020	0.00	033

	Acceptance				
Surrogate	%Recovery	Qualifier	Criteria		
1,2-Dichloroethane-d4	108		70-130		
Toluene-d8	97		70-130		
4-Bromofluorobenzene	93		70-130		
Dibromofluoromethane	102		70-130		



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/20/23 09:58 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	
Volatile Organics by EPA 5035 Low	- Westboro	ugh Lab for	sample(s):	06-07,09	Batch:	WG1866905-5
Methyl tert butyl ether	ND		mg/kg	0.0020	0.0002	0
Benzene	ND		mg/kg	0.00050	0.0001	7
1,2-Dichloroethane	ND		mg/kg	0.0010	0.0002	6
Toluene	ND		mg/kg	0.0010	0.0005	4
1,2-Dibromoethane	ND		mg/kg	0.00050	0.0002	9
Ethylbenzene	ND		mg/kg	0.0010	0.0001	4
p/m-Xylene	ND		mg/kg	0.0020	0.0005	6
o-Xylene	ND		mg/kg	0.0010	0.0002	9
Xylenes, Total	ND		mg/kg	0.0010	0.0002	9
Isopropylbenzene	ND		mg/kg	0.0010	0.0001	1
1,3,5-Trimethylbenzene	ND		mg/kg	0.0020	0.0001	9
1,2,4-Trimethylbenzene	ND		mg/kg	0.0020	0.0003	3

			Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	100		70-130	
Toluene-d8	96		70-130	
4-Bromofluorobenzene	102		70-130	
Dibromofluoromethane	100		70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 09:26 Analyst: LAC

Parameter	Result	Qualifier	Units	RL		MDL
Volatile Organics by EPA 5035 Low	- Westborou	ugh Lab for	sample(s):	05	Batch:	WG1867304-5
Methyl tert butyl ether	ND		mg/kg	0.002	D	0.00020
Benzene	ND		mg/kg	0.0005	0	0.00017
1,2-Dichloroethane	ND		mg/kg	0.001	C	0.00026
Toluene	ND		mg/kg	0.001	C	0.00054
1,2-Dibromoethane	ND		mg/kg	0.0005	0	0.00029
Ethylbenzene	ND		mg/kg	0.001	C	0.00014
p/m-Xylene	ND		mg/kg	0.002	C	0.00056
o-Xylene	ND		mg/kg	0.001	C	0.00029
Xylenes, Total	ND		mg/kg	0.001	C	0.00029
Isopropylbenzene	ND		mg/kg	0.001	C	0.00011
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	C	0.00019
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	C	0.00033

			Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	107		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	92		70-130	
Dibromofluoromethane	105		70-130	



Project Number: P044.001.002

Lab Number: L2374526 **Report Date:** 12/26/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D Analytical Date: 12/21/23 21:06 Analyst: MAG

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS - Wes	tborough Lab	for sample(s): 10-11	Batch:	WG1867314-5
Methyl tert butyl ether	ND	ug/l	1.0	0.17
Benzene	ND	ug/l	0.50	0.16
1,2-Dichloroethane	ND	ug/l	0.50	0.13
Toluene	ND	ug/l	0.75	0.20
Ethylbenzene	ND	ug/l	0.50	0.17
p/m-Xylene	ND	ug/l	1.0	0.33
o-Xylene	ND	ug/l	1.0	0.39
Xylenes, Total	ND	ug/l	1.0	0.33
Isopropylbenzene	ND	ug/l	0.50	0.19
1,3,5-Trimethylbenzene	ND	ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND	ug/l	2.5	0.19

	Acceptance				
Surrogate	%Recovery	Qualifier	Criteria		
1,2-Dichloroethane-d4	101		70-130		
Toluene-d8	108		70-130		
4-Bromofluorobenzene	109		70-130		
Dibromofluoromethane	99		70-130		



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	Method Blank Analysis Batch Quality Control		

Analytical Method:	1,8011	Extraction Method:	EPA 8011
Analytical Date:	12/26/23 12:11	Extraction Date:	12/26/23 11:04
Analyst:	ЈКН		

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westbe	orough Lab f	or sample(s)	: 10-11	Batch: \	NG1868000-1	
1,2-Dibromoethane	ND		ug/l	0.010	0.005	А



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - West	oorough Lab Asso	ciated sample	(s): 01-04 Ba	atch: WG1	866806-3 WG186	6806-4			
Methyl tert butyl ether	130		122		66-130	6		30	
Benzene	106		100		70-130	6		30	
1,2-Dichloroethane	107		101		70-130	6		30	
Toluene	101		96		70-130	5		30	
1,2-Dibromoethane	120		118		70-130	2		30	
Ethylbenzene	102		96		70-130	6		30	
p/m-Xylene	105		100		70-130	5		30	
o-Xylene	102		98		70-130	4		30	
Isopropylbenzene	93		89		70-130	4		30	
1,3,5-Trimethylbenzene	93		90		70-130	3		30	
1,2,4-Trimethylbenzene	94		90		70-130	4		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery 0	Qual %Recovery	Qual Criteria
1,2-Dichloroethane-d4	112	109	70-130
Toluene-d8	99	96	70-130
4-Bromofluorobenzene	93	94	70-130
Dibromofluoromethane	104	104	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	r RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - West	borough Lab Ass	sociated sample(s	s): 06-07,09	Batch:	WG1866905-3	WG1866905-4			
Methyl tert butyl ether	97		98		66-130	1		30	
Benzene	94		94		70-130	0		30	
1,2-Dichloroethane	94		93		70-130	1		30	
Toluene	87		87		70-130	0		30	
1,2-Dibromoethane	91		93		70-130	2		30	
Ethylbenzene	90		90		70-130	0		30	
p/m-Xylene	92		92		70-130	0		30	
o-Xylene	92		92		70-130	0		30	
Isopropylbenzene	91		90		70-130	1		30	
1,3,5-Trimethylbenzene	92		92		70-130	0		30	
1,2,4-Trimethylbenzene	92		91		70-130	1		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery Qu	al %Recovery Qual	Criteria
1,2-Dichloroethane-d4	100	101	70-130
Toluene-d8	94	94	70-130
4-Bromofluorobenzene	102	101	70-130
Dibromofluoromethane	102	103	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by EPA 5035 Low - Westh	oorough Lab Asso	ociated sample	(s): 05 Batch	: WG1867	304-3 WG186730)4-4			
Methyl tert butyl ether	124		126		66-130	2		30	
Benzene	106		103		70-130	3		30	
1,2-Dichloroethane	104		103		70-130	1		30	
Toluene	99	96			70-130	3		30	
1,2-Dibromoethane	119		120		70-130	1		30	
Ethylbenzene	98		95		70-130			30	
p/m-Xylene	102		100		70-130	2		30	
o-Xylene	100		98		70-130	2		30	
Isopropylbenzene	91	88			70-130 3			30	
1,3,5-Trimethylbenzene	91	89			70-130 2			30	
1,2,4-Trimethylbenzene	92		89		70-130	3		30	

	LCS	LCSD	Acceptance
Surrogate	%Recovery	Qual %Recovery	Qual Criteria
1,2-Dichloroethane-d4	109	109	70-130
Toluene-d8	97	95	70-130
4-Bromofluorobenzene	92	92	70-130
Dibromofluoromethane	106	106	70-130



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Parameter	LCS %Recovery	Qual	/ %R	LCSD ecovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	10-11	Batch:	WG1867314-3	WG1867314-4				
Methyl tert butyl ether	89			88		63-130	1		20	
Benzene	98			97		70-130	1		20	
1,2-Dichloroethane	98			96		70-130	2		20	
Toluene	100			100		70-130	0		20	
Ethylbenzene	110			100		70-130	10		20	
p/m-Xylene	105			105		70-130	0		20	
o-Xylene	105			100		70-130	5		20	
Isopropylbenzene	110			100		70-130	10		20	
1,3,5-Trimethylbenzene	110			100		64-130	10		20	
1,2,4-Trimethylbenzene	110			100		70-130	10		20	

Surrogate	LCS %Recovery Qua	LCSD I %Recovery Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101	99	70-130
Toluene-d8	108	107	70-130
4-Bromofluorobenzene	106	106	70-130
Dibromofluoromethane	99	100	70-130



Lab Control Sample Analysis

Project Name:	FORMER PHILAD	EPHIA REFINER	RY	Batch Qu	ality Cont	rol	Lab	Number:	L23745	26
Project Number:	P044.001.002						Repo	ort Date:	12/26/2	3
		LCS	0	LCSD	0(%Recovery		0	RPD	

Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	Column	
Microextractables by GC - Westborough Lab	Associated sam	nple(s): 10-11	Batch: WG	1868000-2						
1,2-Dibromoethane	92		-		80-120	-		20	А	



Project Name:	FORMER PHIL	_ADEPHIA I	REFINERY	Ma	trix Sp Batch Qเ	ike Ana Jality Col	alysis ^{ntrol}		Lab Nun	nber:	L2	2374526	
Project Number:	P044.001.002								Report L	Date:	12	2/26/23	
	Native	MS Addad	MS Found	MS % Pocovory	Qual	MSD Found	MSD % Pocovory	Qual	Recovery		Qual	RPD Limits	Colum

Parameter	Sample	Added	Found	%Reco	very Qua	I Found	%Recovery	Qual	Limits	RPD	Qual	Limits	<u>Column</u>
Microextractables by GC - V	Vestborough Lab	Associated	d sample(s): ´	10-11 Q	C Batch ID:	WG1868000	-3 QC Samp	ole: L237	4526-10	Client ID): FB-23	1215-1	
1,2-Dibromoethane	ND	0.25	0.233	93		-	-		80-120	-		20	А



SEMIVOLATILES



		Serial_No:12262316	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-01	Date Collected:	12/15/23 14:12
Client ID:	GPR251-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 10:00		
Analyst:	EK		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS - Westborough Lab							
Naphthalene	ND		mg/kg	0.039	0.024	1	
Fluorene	ND		mg/kg	0.19	0.019	1	
Phenanthrene	0.092	J	mg/kg	0.12	0.024	1	
Anthracene	ND		mg/kg	0.12	0.038	1	
Pyrene	0.13		mg/kg	0.12	0.019	1	
Benzo(a)anthracene	0.078	J	mg/kg	0.12	0.022	1	
Chrysene	0.077	J	mg/kg	0.12	0.020	1	
Benzo(b)fluoranthene	0.093	J	mg/kg	0.12	0.033	1	
Benzo(a)pyrene	0.081	J	mg/kg	0.16	0.047	1	
Benzo(ghi)perylene	0.043	J	mg/kg	0.16	0.023	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria		
Nitrobenzene-d5	65		23-120		
2-Fluorobiphenyl	58		30-120		
4-Terphenyl-d14	65		18-120		



		Serial_No:12262316		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-02	Date Collected:	12/15/23 16:26	
Client ID:	GPR250-02-SS01	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Soil	Extraction Method:	EPA 3546	
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19	
Analytical Date:	12/19/23 09:11			
Analyst:	EK			
Percent Solids:	84%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Semivolatile Organics by GC/MS - Westborough Lab								
Naphthalene	ND		mg/kg	0.039	0.024	1		
Fluorene	ND		mg/kg	0.20	0.019	1		
Phenanthrene	0.028	J	mg/kg	0.12	0.024	1		
Anthracene	ND		mg/kg	0.12	0.038	1		
Pyrene	0.045	J	mg/kg	0.12	0.020	1		
Benzo(a)anthracene	0.032	J	mg/kg	0.12	0.022	1		
Chrysene	0.039	J	mg/kg	0.12	0.020	1		
Benzo(b)fluoranthene	0.058	J	mg/kg	0.12	0.033	1		
Benzo(a)pyrene	ND		mg/kg	0.16	0.048	1		
Benzo(ghi)perylene	0.038	J	mg/kg	0.16	0.023	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	68	23-120	
2-Fluorobiphenyl	63	30-120	
4-Terphenyl-d14	70	18-120	


		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-03	Date Collected:	12/15/23 16:08
Client ID:	GPR251-02-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 08:21		
Analyst:	EK		
Percent Solids:	87%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Semivolatile Organics by GC/MS - We	Semivolatile Organics by GC/MS - Westborough Lab							
Naphthalene	ND		mg/kg	0.037	0.023	1		
Fluorene	ND		mg/kg	0.19	0.018	1		
Phenanthrene	ND		mg/kg	0.11	0.023	1		
Anthracene	ND		mg/kg	0.11	0.036	1		
Pyrene	0.033	J	mg/kg	0.11	0.018	1		
Benzo(a)anthracene	0.022	J	mg/kg	0.11	0.021	1		
Chrysene	0.022	J	mg/kg	0.11	0.019	1		
Benzo(b)fluoranthene	ND		mg/kg	0.11	0.031	1		
Benzo(a)pyrene	ND		mg/kg	0.15	0.046	1		
Benzo(ghi)perylene	ND		mg/kg	0.15	0.022	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	65	23-120	
2-Fluorobiphenyl	60	30-120	
4-Terphenyl-d14	66	18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-04	Date Collected:	12/15/23 15:45
Client ID:	GPR251-03-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 10:25		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	0.035	J	mg/kg	0.039	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.046	J	mg/kg	0.12	0.024	1
Anthracene	ND		mg/kg	0.12	0.038	1
Pyrene	0.077	J	mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.060	J	mg/kg	0.12	0.022	1
Chrysene	0.063	J	mg/kg	0.12	0.020	1
Benzo(b)fluoranthene	0.084	J	mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.076	J	mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.044	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Nitrobenzene-d5	69		23-120	
2-Fluorobiphenyl	62		30-120	
4-Terphenyl-d14	66		18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-05	Date Collected:	12/15/23 15:33
Client ID:	GPR251-04-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 10:50		
Analyst:	EK		
Percent Solids:	75%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Semivolatile Organics by GC/MS - Westborough Lab							
Naphthalene	0.18		mg/kg	0.043	0.026	1	
Fluorene	ND		mg/kg	0.22	0.021	1	
Phenanthrene	0.12	J	mg/kg	0.13	0.026	1	
Anthracene	ND		mg/kg	0.13	0.042	1	
Pyrene	0.20		mg/kg	0.13	0.021	1	
Benzo(a)anthracene	0.15		mg/kg	0.13	0.024	1	
Chrysene	0.17		mg/kg	0.13	0.022	1	
Benzo(b)fluoranthene	0.23		mg/kg	0.13	0.036	1	
Benzo(a)pyrene	0.21		mg/kg	0.17	0.052	1	
Benzo(ghi)perylene	0.13	J	mg/kg	0.17	0.025	1	

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	83	23-120	
2-Fluorobiphenyl	74	30-120	
4-Terphenyl-d14	81	18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-06	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 09:35		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	ND		mg/kg	0.040	0.024	1
Fluorene	ND		mg/kg	0.20	0.019	1
Phenanthrene	0.28		mg/kg	0.12	0.024	1
Anthracene	0.057	J	mg/kg	0.12	0.039	1
Pyrene	0.48		mg/kg	0.12	0.020	1
Benzo(a)anthracene	0.28		mg/kg	0.12	0.022	1
Chrysene	0.28		mg/kg	0.12	0.021	1
Benzo(b)fluoranthene	0.31		mg/kg	0.12	0.033	1
Benzo(a)pyrene	0.27		mg/kg	0.16	0.048	1
Benzo(ghi)perylene	0.14	J	mg/kg	0.16	0.023	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	72	23-120	
2-Fluorobiphenyl	64	30-120	
4-Terphenyl-d14	70	18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-07	Date Collected:	12/15/23 15:17
Client ID:	GPR250-03-SS01D	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 08:46		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Semivolatile Organics by GC/MS - Westborough Lab								
Naphthalene	ND		mg/kg	0.039	0.024	1		
Fluorene	ND		mg/kg	0.20	0.019	1		
Phenanthrene	0.056	J	mg/kg	0.12	0.024	1		
Anthracene	ND		mg/kg	0.12	0.038	1		
Pyrene	0.069	J	mg/kg	0.12	0.020	1		
Benzo(a)anthracene	0.035	J	mg/kg	0.12	0.022	1		
Chrysene	0.038	J	mg/kg	0.12	0.020	1		
Benzo(b)fluoranthene	0.042	J	mg/kg	0.12	0.033	1		
Benzo(a)pyrene	ND		mg/kg	0.16	0.048	1		
Benzo(ghi)perylene	ND		mg/kg	0.16	0.023	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	72	23-120	
2-Fluorobiphenyl	67	30-120	
4-Terphenyl-d14	78	18-120	



		Serial_No:12262316:20	
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	SAMPLE RESULTS		
Lab ID:	L2374526-09	Date Collected:	12/15/23 14:38
Client ID:	GPR250-01-SS01	Date Received:	12/15/23
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method	: EPA 3546
Analytical Method:	1,8270E	Extraction Date:	12/18/23 09:19
Analytical Date:	12/19/23 12:28		
Analyst:	EK		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Semivolatile Organics by GC/MS - Westborough Lab								
Naphthalene	0.19		mg/kg	0.040	0.024	1		
Fluorene	0.021	J	mg/kg	0.20	0.019	1		
Phenanthrene	0.24		mg/kg	0.12	0.024	1		
Anthracene	0.11	J	mg/kg	0.12	0.039	1		
Pyrene	0.55		mg/kg	0.12	0.020	1		
Benzo(a)anthracene	0.37		mg/kg	0.12	0.022	1		
Chrysene	0.42		mg/kg	0.12	0.020	1		
Benzo(b)fluoranthene	0.58		mg/kg	0.12	0.033	1		
Benzo(a)pyrene	0.45		mg/kg	0.16	0.048	1		
Benzo(ghi)perylene	0.30		mg/kg	0.16	0.023	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	68	23-120	
2-Fluorobiphenyl	57	30-120	
4-Terphenyl-d14	58	18-120	



		Serial_No:12262316:20		
Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526	
Project Number:	P044.001.002	Report Date:	12/26/23	
	SAMPLE RESULTS			
Lab ID:	L2374526-10	Date Collected:	12/15/23 18:37	
Client ID:	FB-231215-1	Date Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.	Field Prep:	Not Specified	
Sample Depth:				
Matrix:	Water	Extraction Method:	EPA 3510C	
Analytical Method:	1,8270E-SIM	Extraction Date:	12/21/23 08:00	
Analytical Date:	12/22/23 11:00			
Analyst:	DV			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Semivolatile Organics by GC/MS-SIM - Westborough Lab								
Naphthalene	ND		ug/l	0.10	0.05	1		
Fluorene	ND		ug/l	0.10	0.01	1		
Phenanthrene	ND		ug/l	0.05	0.02	1		
Anthracene	ND		ug/l	0.10	0.01	1		
Pyrene	ND		ug/l	0.10	0.02	1		
Benzo(a)anthracene	ND		ug/l	0.05	0.02	1		
Chrysene	ND		ug/l	0.10	0.01	1		
Benzo(b)fluoranthene	ND		ug/l	0.05	0.01	1		
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1		
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1		

Surrogate	% Recovery	Acceptance Qualifier Criteria	
Nitrobenzene-d5	48	23-120	
2-Fluorobiphenyl	49	15-120	
4-Terphenyl-d14	52	41-149	



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526		
Project Number:	P044.001.002	Report Date:	12/26/23		
Mathad Blank Analysis					

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E	Extraction Method:	EPA 3546
Analytical Date:	12/19/23 05:54	Extraction Date:	12/18/23 09:19
Analyst:	ЕК		

Parameter	Result	Qualifier	Units	RL	MD	L
Semivolatile Organics by GC/MS	6 - Westboroug	h Lab for s	ample(s):	01-07,09	Batch:	WG1865200-1
Naphthalene	ND		mg/kg	0.033	0.0	20
Fluorene	ND		mg/kg	0.16	0.0	16
Phenanthrene	ND		mg/kg	0.099	0.0	20
Anthracene	ND		mg/kg	0.099	0.0	32
Pyrene	ND		mg/kg	0.099	0.0	16
Benzo(a)anthracene	ND		mg/kg	0.099	0.0	18
Chrysene	ND		mg/kg	0.099	0.0	17
Benzo(b)fluoranthene	ND		mg/kg	0.099	0.0	28
Benzo(a)pyrene	ND		mg/kg	0.13	0.0	40
Benzo(ghi)perylene	ND		mg/kg	0.13	0.0	19

Surrogate	%Recovery	Qualifier	Criteria			
Nitrobenzene-d5	66		23-120			
2-Fluorobiphenyl	62		30-120			
4-Terphenyl-d14	77		18-120			



Project Name:	FORMER PHILADEPHIA REFINERY	Lab Number:	L2374526
Project Number:	P044.001.002	Report Date:	12/26/23
	Mothod Blank Analysis		

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8270E-SIM	Extraction Method:	EPA 3510C
Analytical Date:	12/21/23 17:36	Extraction Date:	12/21/23 08:00
Analyst:	RP		

Parameter	Result	Qualifier Units	RL	MDL	
Semivolatile Organics by GC/M	S-SIM - Westbo	rough Lab for sam	ole(s): 10 E	Batch: WG18667	77-1
Naphthalene	ND	ug/l	0.10	0.05	
Fluorene	ND	ug/l	0.10	0.01	
Phenanthrene	ND	ug/l	0.05	0.02	
Anthracene	ND	ug/l	0.10	0.01	
Pyrene	ND	ug/l	0.10	0.02	
Benzo(a)anthracene	ND	ug/l	0.05	0.02	
Chrysene	ND	ug/l	0.10	0.01	
Benzo(b)fluoranthene	ND	ug/l	0.05	0.01	
Benzo(a)pyrene	ND	ug/l	0.10	0.02	
Benzo(ghi)perylene	ND	ug/l	0.10	0.01	

		Acceptance			
Surrogate	%Recovery	Qualifier	Criteria		
				_	
Nitrobenzene-d5	80		23-120		
2-Fluorobiphenyl	75		15-120		
4-Terphenyl-d14	71		41-149		



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Semivolatile Organics by GC/MS - Westborou	igh Lab Assoc	iated sample(s)	: 01-07,09 E	Batch: WG1	865200-2 WG186	65200-3			
Naphthalene	56		61		40-140	9		50	
Fluorene	56		62		40-140	10		50	
Phenanthrene	57		64		40-140	12		50	
Anthracene	60		66		40-140	10		50	
Pyrene	62		66		35-142	6		50	
Benzo(a)anthracene	57		64		40-140	12		50	
Chrysene	61		68		40-140	11		50	
Benzo(b)fluoranthene	62		66		40-140	6		50	
Benzo(a)pyrene	69		73		40-140	6		50	
Benzo(ghi)perylene	59		64		40-140	8		50	

Surrogate	LCS %Recovery Qu	LCSD Ial %Recovery Qual	Acceptance Criteria
Nitrobenzene-d5	62	67	23-120
2-Fluorobiphenyl	57	64	30-120
4-Terphenyl-d14	67	72	18-120



Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recoverv	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
	,,					14 2	-,		
Semivolatile Organics by GC/MS-SIM - West	orough Lab A	ssociated samp	ole(s): 10 Batc	h: WG1866	6777-2 WG1866	777-3			
Naphthalene	58		75		40-140	26		40	
Fluorene	59		76		40-140	25		40	
Phenanthrene	58		74		40-140	24		40	
Anthracene	59		76		40-140	25		40	
Pyrene	55		68		26-127	21		40	
Benzo(a)anthracene	66		86		40-140	26		40	
Chrysene	61		78		40-140	24		40	
Benzo(b)fluoranthene	59		74		40-140	23		40	
Benzo(a)pyrene	57		72		40-140	23		40	
Benzo(ghi)perylene	66		83		40-140	23		40	

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qual	I %Recovery Qual	Criteria
- Nitrobenzene-d5	67	84	23-120
2-Fluorobiphenyl	61	75	15-120
4-Terphenyl-d14	55	67	41-149



METALS



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	RY		Lab Number: L23			26		
Project Number:	P044.	001.002					Report I	Date:	12/26/2	12/26/23		
-				SAMPL	E RES	ULTS	-					
Lab ID: Client ID:	L2374 GPR2	.2374526-01 GPR251-01-SS01 3144 W. PASSYUNK AVE.					Date Collected: Date Received:		12/15/23 12/15/23			
Sample Location:	3144	N. PASSY	UNK AVE				Field Pre	ep:	Not Spec	cified		
Sample Depth:												
Matrix:	Soil											
Percent Solids:	84%					Dilution	Date	Date	Prop	Analytical		
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst	
Total Metals - Mans	field Lab											
Lead. Total	38.0		ma/ka	2.29	0.123	1	12/19/23 14:53	12/20/23 21:32	EPA 3050B	1,6010D	ТАА	



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	RY		Lab Number: L2374			26		
Project Number:	P044.	001.002					Report I	Date:	12/26/2	12/26/23		
				SAMPL	E RES	ULTS						
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-02 50-02-SS0 N. PASSY	1 UNK AVE				Date Co Date Re Field Pre	llected: ceived: əp:	12/15/23 12/15/23 Not Spec	16:26 cified		
Sample Depth: Matrix: Percent Solids: Parameter	Soil 84% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Total Metals - Mans	field Lab											
Lead. Total	36.3		ma/ka	2.24	0.120	1	12/19/23 14:53	12/20/23 21:37	EPA 3050B	1,6010D	ТАА	



Project Name:	FORM	IER PHILA	DEPHIA F	REFINE	RY		Lab Number: L2374			26		
Project Number:	P044.	001.002					Report I	Date:	12/26/2	12/26/23		
•			:	SAMPL	E RES	ULTS	•					
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-03 51-02-SS0 V. PASSY	1 UNK AVE.				Date Col Date Rec Field Pre	lected: ceived: p:	12/15/23 12/15/23 Not Spec	16:08 cified		
Sample Depth: Matrix: Percent Solids: Parameter	Soil 87% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Total Metals - Mansf	ield Lab											
Lead, Total	21.8		mg/kg	2.28	0.122	1	12/19/23 14:53	12/20/23 21:42	EPA 3050B	1,6010D	TAA	



Project Name:	FORM	IER PHILA	DEPHIA I	REFINE	RY		Lab Nur	nber:	L23745	26	
Project Number:	P044.	001.002					Report I	Date:	12/26/2	3	
				SAMPL	E RES	ULTS					
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-04 51-03-SS0 N. PASSY	1 UNK AVE				Date Co Date Re Field Pre	llected: ceived: ep:	12/15/23 12/15/23 Not Spec	15:45 cified	
Sample Depth: Matrix: Percent Solids: Parameter	Soil 83% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Lead, Total	40.1		mg/kg	2.32	0.124	1	12/19/23 14:53	12/20/23 21:47	EPA 3050B	1,6010D	TAA



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	RY		Lab Nun	nber:	L23745	26	
Project Number:	P044.	001.002					Report I	Date:	12/26/2	3	
				SAMPL	E RES	ULTS					
Lab ID:	L2374	526-05					Date Col	lected:	12/15/23	15:33	
Client ID:	GPR2	51-04-SS0	1				Date Red	ceived:	12/15/23		
Sample Location:	3144 \	N. PASSY	UNK AVE				Field Pre	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Soil										
Percent Solids:	75%					Dilution	Data	Dete	Dron	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mans	field Lab										
Lead, Total	66.7		mg/kg	2.63	0.141	1	12/19/23 14:53	12/20/23 21:51	EPA 3050B	1,6010D	TAA



Project Name:	FORM	IER PHILA		REFINE	RY		Lab Nur	nber:	L23745	26	
Project Number:	P044.	001.002					Report I	Date:	12/26/23	3	
				SAMPL	E RES	ULTS					
Lab ID:	L2374	526-06					Date Col	lected:	12/15/23	15:17	
Client ID:	GPR2	50-03-SS0	1				Date Re	ceived:	12/15/23		
Sample Location:	3144 \	N. PASSY	UNK AVE				Field Pre	ep:	Not Spec	cified	
Sample Depth:											
Matrix:	Soil										
Percent Solids:	83%					Dilution	Data	Dete	Dron	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mans	field Lab										
Lead, Total	19.8		mg/kg	2.36	0.126	1	12/19/23 14:53	12/20/23 21:56	EPA 3050B	1,6010D	TAA



Project Name:	FORM	IER PHILA	DEPHIA	REFINE	ERY		Lab Nu	mber:	L23745	26	
Project Number:	P044.	001.002					Report	Date:	12/26/2	3	
				SAMPI	LE RES	ULTS					
Lab ID:	L2374	526-07					Date Co	ollected:	12/15/23	15:17	
Client ID:	GPR2	50-03-SS0	1D				Date Re	eceived:	12/15/23		
Sample Location:	3144 \	N. PASSY	UNK AVE	•			Field Pr	rep:	Not Spec	cified	
Sample Depth:											
Matrix:	Soil										
Percent Solids:	83%					Dilution	Date	Date	Pren	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mansi	field Lab										
Lead, Total	17.2		mg/kg	2.31	0.124	1	12/19/23 14:5	3 12/20/23 22:24	EPA 3050B	1,6010D	TAA



Project Name:	FORM	IER PHILA		REFINE	RY		Lab Nur	nber:	L23745	26	
Project Number:	P044.	001.002					Report I	Date:	12/26/2	3	
				SAMPL	E RES	ULTS					
Lab ID: Client ID: Sample Location:	L2374 GPR2 3144 \	526-09 50-01-SS0 N. PASSY	1 UNK AVE				Date Col Date Rec Field Pre	llected: ceived: ep:	12/15/23 12/15/23 Not Spec	14:38 cified	
Sample Depth: Matrix: Percent Solids: Parameter	Soil 83% Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Lead. Total	350		mg/kg	2.35	0.126	1	12/19/23 14:53	12/20/23 22:28	EPA 3050B	1,6010D	ТАА



12/20/23 19:10 12/21/23 07:25 EPA 3005A

1,6020B

EJF

Project Name:	FORM	IER PHILA	DEPHIA	REFINE	ERY		Lab Nu	mber:	L2374	526	
Project Number:	P044.	001.002					Report	Date:	12/26/	23	
				SAMP	LE RES	ULTS					
Lab ID:	L2374	526-10					Date Co	ollected:	12/15/2	23 18:37	
Client ID:	FB-23	1215-1					Date Re	eceived:	12/15/2	23	
Sample Location:	3144	W. PASSY	UNK AVE				Field Pr	ep:	Not Sp	ecified	
Sample Depth:											
Matrix:	Water										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										

0.3430

1

ug/l

1.000

Lead, Total

ND

Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield	Lab for sample(s):	01-07,09	Batch:	WG186	65412-1				
Lead, Total	ND	mg/kg	2.00	0.107	1	12/19/23 14:53	12/20/23 19:40) 1,6010D	TAA
			Prep Inf	ormatio	n				
		Digestion	Method:	EPA	3050B				
Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield	Lab for sample(s):	10 Batch	n: WG18	366341-	1				
Lead, Total	ND	ug/l	1.000	0.3430	1	12/20/23 19:10	12/21/23 07:01	1,6020B	EJF

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis Batch Quality Control

Project Name:	FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	/ Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Total Metals - Mansfield Lab Associated sample	(s): 01-07,09	Batch: WG	1865412-2 S	RM Lot Numbe	er: D122-540				
Lead, Total	100		-		83-117	-			
Total Metals - Mansfield Lab Associated sample	(s): 10 Batch	: WG186634	41-2						
Lead, Total	106		-		80-120	-			



		Matrix Spike Analysis		
Project Name:	FORMER PHILADEPHIA REFINERY	Batch Quality Control	Lab Number:	L2374526
Project Number:	P044.001.002		Report Date:	12/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	N Qual Fo	ISD ound	MSD %Recovery	Qual	Recovery Limits	RPD Qu	RPD al Limits
Total Metals - Mansfield Lab	Associated sam	ple(s): 01-0	7,09 QC I	Batch ID: WG1	865412-3	QC S	ample: L237384	43-01	Client ID:	MS Sample	9
Lead, Total	319	49.2	453	272	Q	-	-		75-125	-	20
Total Metals - Mansfield Lab	Associated sam	ple(s): 10	QC Batch I	ID: WG186634	1-3 QC	Sample	: L2374526-10	Client	ID: FB-23	1215-1	
Lead, Total	ND	530	550.3	104		-	-		75-125	-	20



Project Name: Project Number:	FORMER PHILADEPHIA P044.001.002	REFINERY	Lab Duplicate Analy Batch Quality Control	vsis	La Re	ab Number: eport Date:	L2374526 12/26/23
Parameter		Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield	Lab Associated sample(s):	01-07,09 QC Batch I	D: WG1865412-4 QC Sam	ole: L2373843	8-01 Client	ID: DUP Sa	mple
Lead, Total		319	405	mg/kg	24	Q	20
Total Metals - Mansfield	Lab Associated sample(s):	10 QC Batch ID: WC	G1866341-4 QC Sample: L2	2374526-10 C	lient ID: F	B-231215-1	
Lead, Total		ND	ND	ug/l	NC		20



INORGANICS & MISCELLANEOUS



Serial	No:12262316:20
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Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	EFINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR251-01- 3144 W. PA	1 -SS01 SSYUNK	AVE.				Date (Date I Field	Collected: Received: Prep:	12/15/23 14:12 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lat)								
Solids, Total	84.3		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-02 GPR250-02-SS01 3144 W. PASSYUNK AVE.					Date Date Field	Collected: Received: Prep:	12/15/23 16:26 12/15/23 Not Specified		
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	83.8		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	EFINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR251-02 3144 W. PA	3 -SS01 SSYUNK	AVE.				Date Date Field	Collected: Received: Prep:	12/15/23 16:08 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	86.7		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	'HIA RE	FINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-04 GPR251-03-SS01 3144 W. PASSYUNK AVE.						Date Date Field	Collected: Received: Prep:	12/15/23 15:45 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	82.9		%	0.100	NA	1	-	12/16/23 19:0 ⁻	1 121,2540G	SJB



Serial	No:12262316:20
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Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR251-04 3144 W. PA	5 -SS01 SSYUNK	AVE.				Date Date Field	Collected: Received: Prep:	12/15/23 15:33 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat)								
Solids, Total	75.2		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Serial	No:12262316:20
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Project Name: Project Number:	FORMER P P044.001.00	HILADEP)2	HIA RE	FINERY	Lab N Repo	lumber: rt Date:	L2374526 12/26/23			
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-06 GPR250-03-SS01 3144 W. PASSYUNK AVE.					Date Date Field	Collected: Received: Prep:	12/15/23 15:17 12/15/23 Not Specified		
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	C								
Solids, Total	83.4		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Serial_I	No:1226231	6:20
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Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002						Lab N Repo	lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID:	L2374526-0	7					Date	Collected:	12/15/23 15:17	
Client ID:	GPR250-03-	GPR250-03-SS01D						Received:	12/15/23	
Sample Location:	3144 W. PASSYUNK AVE.				Field	Prep:	Not Specified			
Sample Depth:	Soil									
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab)								
Solids, Total	83.4		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Project Name: Project Number:	FORMER PHILADEPHIA REFINERY P044.001.002						Lab N Repo	lumber: rt Date:	L2374526 12/26/23	
				SAMPLE	RESUL	rs				
Lab ID: Client ID: Sample Location:	L2374526-0 GPR250-01- 3144 W. PA	9 -SS01 SSYUNK	AVE.				Date Date Field	Collected: Received: Prep:	12/15/23 14:38 12/15/23 Not Specified	
Sample Depth: Matrix: Parameter	Soil Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lat	D								
Solids, Total	82.8		%	0.100	NA	1	-	12/16/23 19:0	1 121,2540G	SJB



Parameter		Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Project Number:	P044.001.002				R	eport Date	e: 12/26/23
Project Name:	FORMER PHILADEPHIA REFIN	ERY	Batch Quality Control	SIS	La	r: L2374526	

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	nativo oumpio	Duplicate Cample	Unito			
General Chemistry - Westborough Lab Associated	sample(s): 01-07,09 C	QC Batch ID: WG1864892-1	QC Sample:	L2373100-01	1 Client ID: DUP Sample	
Solids, Total	68.9	69.3	%	1	20	



Sample Receipt and Container Information

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
A	Absent
В	Absent

Container Information

Container Information			Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L2374526-01A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-01B	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-01C	Vial water preserved	А	NA		3.9	Υ	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-01D	Plastic 120ml unpreserved	А	NA		3.9	Υ	Absent		TS(7)	
L2374526-01E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Υ	Absent		PB-TI(180)	
L2374526-01F	Glass 120ml/4oz unpreserved	А	NA		3.9	Υ	Absent		PA-PAH(14)	
L2374526-02A	Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-02B	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-02C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-02D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)	
L2374526-02E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)	
L2374526-02F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)	
L2374526-03A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-03B	Vial water preserved	А	NA		3.9	Υ	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-03C	Vial water preserved	А	NA		3.9	Υ	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-03D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)	
L2374526-03E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Υ	Absent		PB-TI(180)	
L2374526-03F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)	
L2374526-04A	Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-04B	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)	
L2374526-04C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)	
L2374526-04D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)	

YES




Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Container	' Information		Initial	Final	Temp			Frozen	
Container	ID Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374526-04E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-04F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-05A	A Vial water preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-05E	3 Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-050	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-05E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-05E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-05F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-06A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-06E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-060	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-06E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-06E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-06F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-07A	Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-07E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-070	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-07D	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-07E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-07F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-08A	Vial MeOH preserved	А	NA		3.9	Y	Absent		HOLD-8260HLW(14)
L2374526-08E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	HOLD-8260HLW(14)
L2374526-080	C Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	HOLD-8260HLW(14)
L2374526-08E	D Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		HOLD-WETCHEM()
L2374526-08E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		HOLD-METAL(180)
L2374526-08F	Glass 120ml/4oz unpreserved	NA	NA			Y	Absent		HOLD-8260HLW(14)
L2374526-09A	A Vial MeOH preserved	А	NA		3.9	Y	Absent		PA-8260HLW(14)
L2374526-09E	3 Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)





Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	pН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)
L2374526-09C	Vial water preserved	А	NA		3.9	Y	Absent	16-DEC-23 10:53	PA-8260HLW(14)
L2374526-09D	Plastic 120ml unpreserved	А	NA		3.9	Y	Absent		TS(7)
L2374526-09E	Metals Only-Glass 60mL/2oz unpreserved	А	NA		3.9	Y	Absent		PB-TI(180)
L2374526-09F	Glass 120ml/4oz unpreserved	А	NA		3.9	Y	Absent		PA-PAH(14)
L2374526-10A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-10B	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14),PA-8260(14)
L2374526-10C	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-10D	Plastic 250ml HNO3 preserved	А	<2	<2	3.9	Y	Absent		PB-6020T-PPB(180)
L2374526-10E	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374526-10F	Amber 250ml unpreserved	А	7	7	3.9	Y	Absent		PA-PAHSIM-LVI(7)
L2374526-11A	Vial HCI preserved	А	NA		3.9	Y	Absent		PA-8260(14)
L2374526-11B	Vial HCI preserved	А	NA		3.9	Y	Absent		8011(14),PA-8260(14)



Project Name: FORMER PHILADEPHIA REFINERY

P044.001.002 **Project Number:**

Acronvms

Lab Number: L2374526

Report Date: 12/26/23

GLOSSARY

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	 Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

- Matrix Spike Sample Duplicate: Refer to MS. MSD

NA - Not Applicable.

- NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NDPA/DPA N-Nitrosodiphenylamine/Diphenylamine.
- NI - Not Ignitable.
- NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
- NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
- RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
- SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
- STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
- TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
- TEO - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
- TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Lab Number:	L2374526
Report Date:	12/26/23

Footnotes

- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(a)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C -Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- **D** Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- **F** The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



¹

Project Name: FORMER PHILADEPHIA REFINERY

Project Number: P044.001.002

Lab Number: L2374526

Report Date: 12/26/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- **P** The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- **S** Analytical results are from modified screening analysis.
- V The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)



Project Name:FORMER PHILADEPHIA REFINERYProject Number:P044.001.002

 Lab Number:
 L2374526

 Report Date:
 12/26/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethvltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H, B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kieldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables)

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: AI, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: AI, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. EPA 245.1 Hg. SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:12262316:20

ALPHA	CHAIN OF	CUSTO	DY	PAGE	OF 2	Date	Rec'd in	Lab:	121	16	12:	3	ALPH	HA JOB #: 237452
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Serial_No:12262316:20

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PADEP Short List 1-5:

Benzene

Cumene

1,2 – Dibromoethane

1,2 - Dichloroethane

Ethyl Benzene

Toluene

1,2,4 – Trimethylbenzene

1,3,5 – Trimethylbenzene

Methyl tert-butyl ether

Xylenes (total)

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Chrysene

Fluorene

Naphthalene

Phenanthrene

Pyrene

Lead

Serial_No:12262316:20

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