4.2

Tables

TABLE 4.2-1
SUMMARY OF GROUND WATER ELEVATIONS AND APPARENT LIGHT NON-AQUEOUS PHASE LIQUID THICKNESS
IAOC C3 - EASTERN WATERFRONT TANKFIELD/PIER AND IAOC C5 - STEAMER DOCK

EXXONMOBIL ENVIRONMENTAL AND PROPERTY SOLUTIONS COMPANY / BAYWAY REFINERY COMPLEX
LINDEN, NEW JERSEY

Monitoring Well ID	Date	Top of Casing Elevation (FMSL)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Corrected GW Elevation (FMSL)	Comments
GMW-653	01/13/2022	6.81	2.85	ND	ND	3.96	
	02/09/2022	6.81	2.29	2.29	FILM	4.52	
	03/16/2022	6.81	2.61	ND	ND	4.20	
	04/27/2022	6.81	2.60	ND	ND	4.21	
	06/06/2022	6.81	2.45	2.45	FILM	4.36	
	06/23/2022	6.81	2.78	ND	ND	4.03	
GMW-654	01/13/2022	7.14	4.49	ND	ND	2.65	
	02/09/2022	7.14	4.45	4.44	0.01	2.70	
	03/16/2022	7.14	3.87	ND	ND	3.27	
	04/27/2022	7.14	4.03	ND	ND	3.11	
	05/31/2022	7.14	4.29	4.29	FILM	2.85	
	06/23/2022	7.14	4.20	ND	ND	2.94	
GMW-785	01/13/2022	10.31	7.41	ND	ND	2.90	
	02/09/2022	10.31	7.36	7.36	FILM	2.95	
	03/16/2022	10.31	7.35	ND	ND	2.96	
	04/27/2022	10.31	7.29	ND	ND	3.02	
	05/31/2022	10.31	7.25	ND	ND	3.06	
	06/22/2022	10.31	7.16	ND	ND	3.15	
WBP-MW-7	01/13/2022	7.94	3.97	ND	ND	3.97	
	02/09/2022	7.94	3.60	ND	ND	4.34	
	03/16/2022	7.94	3.71	ND	ND	4.23	
	04/27/2022	7.94	3.57	ND	ND	4.37	
	05/31/2022	7.94	3.58	ND	ND	4.36	
	06/22/2022	7.94	3.89	ND	ND	4.05	
WBP-MW-10	01/04/2022	7.45	1.75	1.65	0.10	5.79	
	02/09/2022	7.45	1.61	1.54	0.07	5.90	
	02/23/2022	7.45	1.63	1.57	0.06	5.87	
	03/03/2022	7.45	2.21	1.62	0.59	5.77	
	03/09/2022	7.45	1.85	1.80	0.05	5.65	
	03/16/2022	7.45	1.83	1.79	0.04	5.66	
	03/21/2022	7.45	1.83	1.82	0.01	5.63	
	04/04/2022	7.45	1.83	1.78	0.05	5.67	
	04/27/2022	7.45	1.68	1.55	0.13	5.89	
	05/20/2022	7.45	1.55	1.24	0.31	6.18	
WBP-MW-11	01/13/2022	9.42	5.91	1.73	0.07	3.57	
	03/16/2022	9.42	5.78	5.61	0.17	3.79	
	04/27/2022	9.42	5.42	5.42	FILM	4.00	
	05/31/2022	9.42	5.40	ND	ND	4.02	
	06/22/2022	NM	NM	NM	NM	NM	Not accessible

TABLE 4.2-1
SUMMARY OF GROUND WATER ELEVATIONS AND APPARENT LIGHT NON-AQUEOUS PHASE LIQUID THICKNESS
IAOC C3 - EASTERN WATERFRONT TANKFIELD/PIER AND IAOC C5 - STEAMER DOCK

EXXONMOBIL ENVIRONMENTAL AND PROPERTY SOLUTIONS COMPANY / BAYWAY REFINERY COMPLEX
LINDEN, NEW JERSEY

Monitoring Well ID	Date	Top of Casing Elevation (FMSL)	Depth to Water (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Corrected GW Elevation (FMSL)	Comments
WBP-MW-11R	01/13/2022	7.30	2.13	ND	ND	5.17	
	02/09/2022	7.30	1.50	ND	ND	5.80	
	03/16/2022	7.30	1.84	ND	ND	5.46	
	04/27/2022	7.30	1.99	ND	ND	5.31	
	05/31/2022	7.30	1.74	ND	ND	5.56	
	06/22/2022	7.30	2.20	ND	ND	5.10	
WBP-MW-A1	01/13/2022	7.36	2.72	ND	ND	4.64	
	02/09/2022	7.36	2.37	2.37	FILM	4.99	
	03/16/2022	7.36	1.58	ND	ND	5.78	
	04/27/2022	7.36	2.45	ND	ND	4.91	
	05/31/2022	7.36	2.34	ND	ND	5.02	
	06/22/2022	7.36	2.80	ND	ND	4.56	

Notes:

FMSL	Feet above mean sea level
LNAPL	Light non-aqueous phase liquid
GW	Ground water
ND	Not detected
FILM	Apparent LNAPL Thickness less than 0.01 feet
NM	Not measured

If LNAPL is detected, Ground Water Elevation is corrected using the following formula:
Corrected Ground Water Elevation = (Top of Casing Elevation - Depth to Water) + (Specific Gravity x Apparent LNAPL Thickness)
Specific Gravity = 0.90 for wells in IAOCs C3 and C5

TABLE 4.2-2
SUMMARY OF LIGHT NON-AQUEOUS PHASE LIQUID RECOVERY
IAOC C3 - EASTERN WATERFRONT TANKFIELD/PIER AND IAOC C5 - STEAMER DOCK

EXXONMOBIL ENVIRONMENTAL AND PROPERTY SOLUTIONS COMPANY / BAYWAY REFINERY COMPLEX
LINDEN, NEW JERSEY

Designation	Implemented Remedial Action	Total Estimated LNAPL Recovered 1H 22 (gallons)	Total Estimated LNAPL Recovered To Date (gallons)	LNAPL Gauging Frequency
WBP-MW-7	Absorbent Sock	0.00	7.10	Monthly
WBP-MW-10	Pump	0.88	23.69	Weekly
WBP-MW-11	Absorbent Sock	3.01	20.37	Monthly
WBP-MW-11R	Absorbent Sock	0.19	12.79	Monthly
GMW-653	Absorbent Sock	0.43	12.45	Monthly
GMW-654	Absorbent Sock	0.68	10.29	Monthly
WBP-MW-A1	Absorbent Sock	0.00	0.00	Monthly
GMW-785	Absorbent Sock	0.00	0.00	Monthly
	Total	5.20	86.69	

Notes:
LNAPL = Light Non-Aqueous Phase Liquid
LNAPL density = 7.37 pounds per gallon
1H 22 = First half 2022 (January 1, 2022 through June 30, 2022)

Figures

REFERENCES

1. MAP AND WATER BODY LIMITS DERIVED FROM FIGURE ENTITLED "WETLAND DELINEATION SURVEY, BAYWAY REFINERY, CITY OF LINDEN, UNION COUNTY, NEW JERSEY", PREPARED BY KELLER & KIRKPATRICK INC., DATED 9-3-15, LAST UPDATED 9-21-16.
2. BASE MAP TOPOGRAPHIC FEATURES TAKEN FROM A MAP PREPARED BY ATLANTIS AERIAL SURVEY CO., INC. FROM PHOTOGRAPHY DATED OCTOBER 3, 2003.

   HORIZONTAL DATUM: NAVD 1983
   VERTICAL DATUM: NGVD 1929
   DISTANCE MEASUREMENTS ARE EXPRESSED IN U.S. FEET
3. PROPERTY BOUNDARY DERIVED FROM METES AND BOUNDS TAKEN FROM SURVEY, PREPARED BY KELLER & KIRKPATRICK INC., DATED 3-1-93, LAST UPDATED 4-5-93.
4. MEAN HIGH WATER LINE (ELEVATION = 3.44 FT MSL) DERIVED FROM TOPOGRAPHIC SURVEY, PREPARED BY KELLER & KIRKPATRICK INC., DATED 7-22-16, LAST UPDATED 11-02-17.

NOTES

1. SURFACE WATER LIMITS ARE SUBJECT TO SEASONAL AND TIDAL VARIATIONS.
2. IAOC DESIGNATION "H" INCLUDES SURFACE WATER BODIES WITHIN THE REFINERY UP TO THE CONFLUENCE OF THE ARTHUR KILL. THE ARTHUR KILL AND PILES CREEK ARE NOT INCLUDED AS AN IAOC.
3. IAOC BOUNDARY DESIGNATION LINES ABUTTING THE PROPERTY BOUNDARY SHALL BE CONSIDERED SYNONYMOUS WITH THE PROPERTY BOUNDARY.

Legend

- ABANDONED MONITORING WELL
- MONITORING WELL
- LNAPL RECOVERY VIA ABSORBENT SOCK
- LNAPL RECOVERY VIA PUMP
- PROPERTY BOUNDARY
- C3 IAOC BOUNDARY
- OPEN WATER

250 125 0 250 Feet

1 inch = 250 feet

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www.kleinfelder.com

PROJECT NO.	20223959
DRAWN:	7/19/2022
DRAWN BY:	S. WILLIAMS
CHECKED BY:	T. DMYTROW
FILE NAME:	BRC_Fig4.2-1_C3C5.mxd

EASTERN WATERFRONT TANKFIELD/ PIER AND STEAMER DOCK LNAPL RECOVERY LOCATIONS

BAYWAY REFINERY COMPLEX
LINDEN, NEW JERSEY
SEMIANNUAL PROGRESS REPORT JANUARY THROUGH JUNE 2022

FIGURE **4.2-1**

\\azrgisstorp01\GIS_Projects\Client\ExxonMobil\NJ_BRC\MXD_SiteWide\2022_SAPR\2022_1H_Q1Q2\BRC_Fig4.2-1_C3C5.mxd

Appendix B

VEOLIA ENVIRONMENTAL SERVICES 260482

SHIPPING DOCUMENT	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Shipping Document Tracking Number
	NJD062037031	1	(877) 818-0087	ZZ 00986193

5. Generator's Name and Mailing Address: MAUREEN P. FORLENZA
EXXONMOBIL CORP, BW REF
1400 S PARK AVE BLDG 7
LINDEN, NJ 07036-1610
Generator's Phone: 703 963-7132

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: VEOLIA ES TECHNICAL SOLUTIONS — U.S. EPA ID Number: NJD080631369

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
Facility's Phone: 732 469-5100 — U.S. EPA ID Number: NJD002454544

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Codes		
	1. NON RCRA AND DOT NON REGULATED LIQUID	1	DM	200 ~~300~~	P	ID72		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: ER Service Contracted by VESTS -|- Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf. -|- 1) W: 307652 A:MARWATER-NH FINAL DESTINATION: VEOLIA, MIDDLESEX NJ

MVSL 2019

15. **GENERATOR S/OFFEROR S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Maureen Forlenza — Signature: [signature] — Month 03 Day 02 Year 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Mobil Corp.
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Shipment
Transporter 1 Printed/Typed Name: Paul Adriance — Signature: [signature] — Month 3 Day 02 Year 22
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Shipping Document Tracking Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Report Management Method Codes (i.e., codes for treatment, disposal, and recycling systems)

1.	2.	3.	4.
H061			

20. Designated Facility Owner or Operator: Certification of receipt of shipment except as noted in Item 18a
Printed/Typed Name: April WATKINS — Signature: [signature] — Month 03 Day 02 Year 22

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR

VEOLIA

PACKING SUMMARY

SL Acont Id (Gen Num): 755 (327780)
EXXONMOBIL CORP, BW REF
1400 S PARK AVE
LINDEN, NJ 07036-1610
Attn: MAUREEN P. FORLENZA
EPA ID:NJD062037031

Manifest Number: ZZ00986193
Field System ID: JS
Work Order Number: 3899145999
Date Shipped: 03/02/2022

Container#: JS-3899145999-001 Waste Area: Manifest Page/Line: 01 / 1

WIP: 307652 DisposalCode: MARWATER-NH PHY State: L

Date Accumulated: 03/02/2022 Gen Drum ID:

Shipping Name: NON RCRA AND DOT NON REGULATED LIQUID 3042-DM

No. of Commons: 01 Outer Container: ~~551A1-DM~~ Inner Container:

Primary Waste Codes: ID72 PCB Serial # OOS Date: / /

Total Cmns Wt: ~~300~~ 200 SIC: 2911 Source: G49 Form: W205 System: H141 Cubic Ft.: 7.50

Individual Common Weights: 1 @ ~~300~~ (POUNDS)

Units	Container Size	Net Weight	Chemical Name	EPA/State Codes
1	55 GAL		#2 DIESEL FUEL OIL [0-1000000B] WATER [99-100%]	ID72

veolia Activity Report

JOB TRK: J-8AC-888-17BC
JOB NO: 3899145000 WO NO: 3899145000
BILL DOC NO: JS20217296 EPA ID: NJD062037031

BT Acnt ID (Cust#) 16857 (635863)
SL Acnt ID (Gen#): 755 (327700)

BILL TO: KLEINFELDER, INC.
C/O KLEINFELDER, INC.
2 SOUTH GOLD DRIVE, SUITE A
HAMILTON, NJ 08691
(609) 742-4349

CONTACT: TANYA DMYTROW

JOB SITE: EXXONMOBIL CORP, BW REF
1400 S PARK AVE
BLDG 7
LINDEN, NJ 07036-1610
(703) 963-7132

CONTACT: MAUREEN P. FORLENZA

MANIFEST NUMBER(S):
ZZ00986193

CUSTOMER P.O. NUMBER	PROJECT NUMBER	SHIP DATE	TERR.
		03/02/2022	N06

DESCRIPTION	# CONT.	CONT./CODE	QTY	UOM	PG/LN	WASTE AREA
Mani# ZZ00986193 Tkt# WO-3899145999 WIP 307852 / Approval MARWATER-NH WATER W/TRACE DIESEL FUEL/#2 FU	1	~~551A1-DM~~ 30142-DM	~~300~~ 200	P	1 / 1	

Total Hours: 0
# of Containers: 1
Total Pounds: 300

Veolia ES Technical Solutions, L.L.C. is permitted for and has capacity to accept waste listed above in container quantities

Activity Report

JOB TRK: J-8AC-888-17BC
JOB NO: 3899145000 WO NO: 3899145000
BILL DOC NO: JS20217296 EPA ID: NJD062037031

BT Acnt ID (Cust#) 16857 (635863)
SL Acnt ID (Gen#): 755 (327700)

BILL TO: KLEINFELDER, INC.
C/O KLEINFELDER, INC.
2 SOUTH GOLD DRIVE, SUITE A
HAMILTON, NJ 08691
(609) 742-4349

CONTACT: TANYA DMYTROW

JOB SITE: EXXONMOBIL CORP, BW REF
1400 S PARK AVE
BLDG 7
LINDEN, NJ 07036-1610
(703) 963-7132

CONTACT: MAUREEN P. FORLENZA

MANIFEST NUMBER(S):
Non-Disposals

CUSTOMER P.O. NUMBER	PROJECT NUMBER	SHIP DATE	TERR.
		03/02/2022	N06

DESCRIPTION	# CONT.	CONT./CODE	QTY	UOM	PG/LN	WASTE AREA
03/02/2022 Labor.- Technical Supervisor		LBR82	1@1	HOUR	/	
03/02/2022 Labor.- Technical Assistant		LBR32	1@1	HOUR	/	
03/02/2022 Fees. - Veolia Energy, Security & Insurance Surcharge		FEE47	1	EACH	/	
03/02/2022 Fees. - e-Manifest Fee		FEE10	1	EACH	/	
03/02/2022 Fees. - State Regulatory Fee (New Jersey Generators)		FEE81	1	EACH	/	

Total Hours: 2

Veolia ES Technical Solutions, L.L.C. is permitted for and has capacity to accept waste listed above in container quantities

FORM# VES-6

Activity Report

veolia

JOB TRK: J-8AC-888-17BC
JOB NO: 3899145000 WO NO: 3899145000
BILL DOC NO: JS20217296 EPA ID: NJD062037031
SL Acnt ID (Gen#): 755 (327700)

BT Acnt ID (Cust#) 16857 (635863)

BILL TO: KLEINFELDER, INC.
C/O KLEINFELDER, INC.
2 SOUTH GOLD DRIVE, SUITE A
HAMILTON, NJ 08691
(609) 742-4349

CONTACT: TANYA DMYTROW

JOB SITE: EXXONMOBIL CORP, BW REF
1400 S PARK AVE
BLDG 7
LINDEN, NJ 07036-1610
(703) 963-7132

CONTACT: MAUREEN P. FORLENZA

MANIFEST NUMBER(S):
Non-Disposals

CUSTOMER P.O. NUMBER	PROJECT NUMBER	SHIP DATE	TERR.
		03/02/2022	N06

Comments:

Signature: On behalf of Exxon Mobil Corp

Print Name: Tanya Dmytrow

Customer authorizes Contractor to make changes on Customer's behalf in regards to transporters used and to perform th Services, including adding or changing transporters listed on manifests. If Customer provides an approved transporter lis writing to Contractor at the time Customer executes this Agreement, Contractor shall select only those transporters on th when providing transportation services to Customer. If Customer does not provide an approved transporter list in writing Contractor at the time Customer executes this Agreement, Customer authorizes Contractor to select any permitted transp to provide transportation services to Customer.

Veolia ES Technical Solutions, L.L.C. is permitted for and has capacity to accept waste listed above in container quantities

FORM# VES 6