January 31, 2023

Via Sharefile

Mr. Sameh Abdellatif
Hazardous Waste Programs Branch
US Environmental Protection Agency Region 2
290 Broadway, 22nd Floor
New York, New York 10007-1866

Re: Fourth Quarter 2022 Progress Report
Hess Corporation – Former Port Reading Complex (HC-PR)
750 Cliff Road
Port Reading, Middlesex County, New Jersey
EPA ID No. NJD045445483
NJPDES Permit NJ0028878 & NJ0102709

Dear Mr. Park:

Enclosed please find the Fourth Quarter 2022 Progress Report for the above referenced site. This report was prepared by Earth Systems, Inc. on behalf of Hess Corporation. As required by Module II (D) of the Hazardous and Solid Waste Amendments (HSWA) Permit number NJD045445483, the enclosed report presents activities associated with the Solid Waste Management Units (SWMUs), including the North Landfarm, South Landfarm, and No. 1 Landfarm, all of the Areas of Concern (AOCs), Historic Spills (HSs), and Remediation Management Units (RMUs) identified at the Former Port Reading Complex.

Should you have any questions or comments relating to this report, please call me at 732-739-6444, extension 2305. I can also be reached via e-mail at ablake@earthsys.net. If you have any questions relating to the project and schedule moving forward, you can also contact Mr. John Schenkewitz of Hess Corporation at 609-406-3969.

Sincerely,
Earth Systems, Inc.

Amy Blake
Senior Project Manager

cc: Ms. Julia Galayda – NJDEP (via sharefile)
Mr. John Schenkewitz – Hess Corporation (electronic copy)
Mr. Shawn Ryan – Earth Systems, Inc. (electronic copy)
Mr. John Virgie – Earth Systems, Inc. (electronic copy)

FOURTH QUARTER 2022 PROGRESS REPORT

HESS CORPORATION - FORMER PORT READING COMPLEX
NORTH LANDFARM, NO. 1 LANDFARM, and SOUTH LANDFARM
SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs), HISTORIC SPILLS (HSs), AND COMBINED REMEDIATION MANAGEMENT UNITS

Hess Corporation – Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County New Jersey
EPA ID# NJD045445483

January 2023

Prepared for:

Hess Corporation
Trenton-Mercer Airport
601 Jack Stephan Way
West Trenton, New Jersey 08628

Prepared by:

Earth Systems
Environmental Engineering

1625 Highway 71
Belmar, New Jersey 07719

Table of Contents

1.0 INTRODUCTION AND SUMMARY TABLE 1

2.0 ISRA AND REGULATORY REQUIREMENTS UPDATE 3

2.1 GROUNDWATER GAUGING 8
2.2 LNAPL IRM 9

3.0 GROUNDWATER MONITORING 9

3.1 ANNUAL GROUNDWATER SAMPLING..... 10
3.2 LOW FLOW SAMPLING METHODOLOGY 11
3.2.1 Annual Sampling Summary – AOC 3 – No. 1 Landfarm……12
3.2.2 Annual Sampling Summary – AOC 5 – Aeration Basins……12
3.2.3 Annual Sampling Summary – AOC 10 – Truck Loading Rack……...13
3.2.4 Annual Sampling Summary – AOC 11a – Administration Building……17
3.2.5 Annual Sampling Summary – AOC 12 – Detention Basin & Smith Creek……20
3.2.6 Annual Sampling Summary – AOC 14a – First Tankfield……22
3.2.7 Annual Sampling Summary – AOC 16b – Marine Terminal Loading Area……23
3.2.8 Annual Sampling Summary – AOC 19 - QC Laboratory……...24
3.2.9 Annual Sampling Summary – AOC 46 – Slop Gasoline Unloading Area……...25
3.2.10 Annual Sampling Summary – AOC 53 – Second Tankfield……..25
3.2.11 Annual Sampling Summary – AOC 54 – Third Tankfield……..26
3.2.12 Annual Sampling Summary – AOC 55 – Fourth Tankfield……...27
3.2.13 Annual Sampling Summary – AOC 56 – Second Reserve Tankfield……..28
3.2.14 Annual Sampling Summary – AOC 57 – Day Tankfield……29
3.2.15 Annual Sampling Summary – Southern Remediation Management Unit (SRMU)...31
3.2.16 Annual Sampling Summary – AOC 103 – Fire Fighting Training Area/Fire Pits…...32

4.0 AREAS OF CONCERN AND SOLID WASTE MANAGEMENT UNITS UPDATE...34

FIGURES

FIGURE 1:	USGS Site Location Map
FIGURE 2:	Site Plan
FIGURE 3:	Tax Map
FIGURE 4:	Historic and Areas of Concern Map (Figures 4.1-4.5)
FIGURE 5a-5c:	Groundwater Contour Map–Shallow/Intermediate/Deep
FIGURE 6:	North Landfarm Groundwater Contour Map (Oct 2022)
FIGURE 7:	South Landfarm Groundwater Contour Map (Oct 2022)
FIGURE 8:	No. 1 Landfarm Groundwater Contour Map (Oct 2022)
FIGURE 9:	AOC 3 – No. 1 Landfarm Annual Groundwater Results
FIGURE 10:	AOC 5 – Aeration Basins Annual Groundwater Results
FIGURE 11a-11d:	AOC 10 – Truck Loading Rack Annual Groundwater Results
FIGURE 12a–12c:	AOC 11a – Administration Building Annual Groundwater Results
FIGURE 13a-13b:	AOC 12 – Detention Basin/Smith Creek Groundwater Results
FIGURE 14:	AOC 14a – First Tankfield Annual Groundwater Results
FIGURE 15a-15b:	AOC 16b – Marine Terminal Loading Annual Groundwater Results
FIGURE 16:	AOC 19 – QC Laboratory Annual Groundwater Results
FIGURE 17:	AOC 46 – Slop Gasoline Unloading Area Annual Groundwater Results
FIGURE 18:	AOC 53 – Second Tankfield Annual Groundwater Results
FIGURE 19:	AOC 54 – Third Tankfield Annual Groundwater Results
FIGURE 20:	AOC 55 – Fourth Tankfield Annual Groundwater Results
FIGURE 21:	AOC 56 – Second Reserve Tankfield Annual Groundwater Results
FIGURE 22:	AOC 57 – Day Tankfield Annual Groundwater Results
FIGURE 23:	SRMU Annual Groundwater Results
FIGURE 24:	AOC 103 – Fire Fighting Training Area/Fire Pits Annual Groundwater Results

TABLES

TABLE 1:	Monthly Groundwater Gauging Table
TABLE 2:	Historic LNAPL Levels Summary Table
TABLE 3:	Annual Gauging Summary Table
TABLE 4:	Quarterly Groundwater Gauging Table
TABLE 5	AOC 3 – No. 1 Landfarm Annual Groundwater Results
TABLE 6:	AOC 5 – Aeration Basins Annual Groundwater Results
TABLE 7a:	AOC 10 – Truck Loading Rack Annual Groundwater Results
TABLE 7b:	PSEG Groundwater Analytical Results (off-site)
TABLE 8:	AOC 11a – Administration Building Annual Groundwater Results
TABLE 9:	AOC 12 – Detention Basin/Smith Creek Groundwater Results
TABLE 10:	AOC 14a – First Tankfield Annual Groundwater Results
TABLE 11:	AOC 16b – Marine Terminal Loading Area Groundwater Results
TABLE 12:	AOC 19 – QC Laboratory Annual Groundwater Results
TABLE 13:	AOC 46 – Slop Gasoline Unloading Area Annual Groundwater Results
TABLE 14:	AOC 53 – Second Tankfield Annual Groundwater Results
TABLE 15:	AOC 54 – Third Tankfield Annual Groundwater Results
TABLE 16:	AOC 55 – Fourth Tankfield Annual Groundwater Results
TABLE 17:	AOC 56 – Second Reserve Tankfield Annual Groundwater Results

TABLE 18: AOC 57 – Day Tankfield Annual Groundwater Results
TABLE 19: SRMU Annual Groundwater Results
TABLE 20: AOC 103 – Fire Fighting Training Area/Fire Pits Groundwater Results

APPENDICES

APPENDIX A: Low Flow Groundwater Sampling Sheets

1.0 Introduction and Summary Table

Earth Systems, Inc. (Earth Systems) has been retained by Hess Corporation (Hess) to provide environmental consulting services for the Hess Corporation – Former Port Reading Complex (HC-PR) facility located at 750 Cliff Road in Port Reading (Woodbridge Township), Middlesex County, New Jersey. A United States Geological Survey (USGS) 7.5-minute series quadrangle map (Arthur Kill, New Jersey) depicting the site location, facility and associated land features is included as **Figure 1**. A Site Plan has been included as **Figure 2** and a tax map of the site is provided as **Figure 3**.

This report documents the investigative and groundwater sampling activities completed in the Fourth Quarter 2022 (Q4 2022) at the Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), Historic Spills (HSs) and Remediation Management Units (RMUs). Investigative and remedial activities included groundwater gauging, groundwater monitoring, Light Non-Aqueous Phase Liquid (LNAPL) monitoring and product recovery.

SUMMARY OF ACTIONS

Location	Case Number/ Description	Description and Dates of Action
AOC 1	North Landfarm	Quarterly Groundwater Monitoring – October 2022
AOC 2	South Landfarm	Quarterly Groundwater Monitoring – October 2022
AOC 3	No. 1 Landfarm	Quarterly Groundwater Monitoring, Remedial Cap Completion October 2022
AOC 10	Truck Loading Rack	Monthly Groundwater Gauging Events, LNAPL Recovery (Passive & Active) – Conducted as Needed, & Annual Groundwater Monitoring – December 2022
AOC 12	Smith Creek and Detention Basin	Site Annual Groundwater Monitoring – December 2022
AOC 14a	TM Monitoring Wells	Monthly Groundwater Gauging Events & Annual Groundwater Monitoring – December 2022
AOC 46	Slop Gasoline Unloading Area	Annual Groundwater Monitoring – December 2022
AOC 53 (TRMU)	Second Tankfield	Annual Groundwater Monitoring – December 2022
AOC 54 (TRMU)	Third Tankfield	Annual Groundwater Monitoring – December 2022
AOC 55 (TRMU)	Fourth Tankfield	Annual Groundwater Monitoring – December 2022
AOC 56 (TRMU)	Second Reserve Tankfield	Annual Groundwater Monitoring – December 2022
AOC 57	Day Tankfield	Annual Groundwater Monitoring – December 2022
AOC 103	Fire Pits / Fire Training Area	Monthly Groundwater Gauging Events, Annual Groundwater Monitoring – December 2022

SRMU	Southern Remediation Management Unit	Monthly Groundwater Gauging Events & Annual Groundwater Monitoring – December 2022
ALL	Industrial Site Recovery Act (ISRA)	Site Annual Groundwater Monitoring – December 2022

2.0 ISRA and Regulatory Requirements Update

A Preliminary Assessment Report (PAR) was submitted to the New Jersey Department of Environmental Protection (NJDEP) and the United States Environmental Protection Agency (USEPA) on October 9, 2015. A total of 117 AOCs were identified in the PAR (**Figures 4.1** through **4.5**). Of the total number of AOCs identified at the site, the PAR indicated 62 AOCs required further investigation. The Site Investigation Report (SIR) was submitted to the NJDEP and the USEPA on November 7, 2015 and approved on August 24, 2021. The NJDEP provided several comment letters on the SIR. The following table lists the dates of the comment letters and responses:

NJDEP Comment Letter Date	Response to Comment (RTC) Date
August 10, 2017	**December 20, 2017**
June 9, 2020	**July 31, 2020**
December 6, 2018 (Ann Charles NJDEP)	**October 19, 2020**
December 6, 2018 (Jill Monroe NJDEP)	**October 19, 2020**
November 17, 2020	**February 17, 2021**

The SIR comments will be addressed in the Site or AOC specific Remedial Investigation Workplan / Remedial Investigation Report (RIW/RIR) report(s).

RIWs summarizing proposed remedial investigation activities for selected priority AOCs were initially submitted in 2016. Several supplemental RIWs were also submitted in 2021. As discussed during the Q3 Quarterly meeting, “At Risk” investigation activities began in October 2021 and are currently ongoing. Please note that “At Risk” work refers to investigation activities that are proposed in a RIW that is submitted to the NJDEP and EPA for review. If the NJDEP and EPA are unable to review the RIW within a 90-day timeframe, the proposed investigation activities may be conducted “At Risk” once the allotted review timeframe concludes. At the completion of all RI activities (once delineation is complete), a final RIR will be submitted that will document all investigation data and observations.

The following is a summary of submittals for all priority AOCs and AOC groupings, which have been identified by the NJDEP and USEPA:

AOC 1 – North Landfarm

- Remedial Investigation Workplan / Remedial Action Workplan (RIW/RAW) submitted to NJDEP/USEPA in the Third Quarter (Q3) 2016
- Comments received from NJDEP/EPA North Landfarm RAW 2018
- 90% Soil Remediation Action Design for the engineering controls submitted to the NJDEP/USEPA April 2020

- 100% Soil Remediation Action Design is currently in process with a targeted submittal in 2023
- Updated Groundwater Sampling Plan being prepared for submittal in 2023

AOC 2 – South Landfarm

- RIW/RAW submitted to NJDEP/USEPA in Q3 2016
- Comments received from NJDEP/USEPA South Landfarm RAW 2019
- Response is being completed and will be submitted once investigation of adjacent area is completed (Former Oily Water Lagoons)
- Updated Groundwater Monitoring Plan being prepared for submittal in 2023

AOC 3 – No. 1 Landfarm

- RIW/RAW submitted to NJDEP/USEPA in Q3 2016
- Comments received from NJDEP/USEPA No. 1 Landfarm RAW 2018
- 100% Soil Remediation Action Design for the engineering controls was submitted to the NJDEP Q3 2019
- NJDEP/USEPA approved the 100% design in April 2020
- Permits were submitted for the final design in June 2020, September 2020, and October 2020 (see **Section 4.3** for permits summary)
- Updated Groundwater Sampling Plan submitted to NJDEP/USEPA in Q3 2021 and approved in Q4 2022
- Construction remedial closure activities began in October 2021 and were completed in October 2022 and final engineering control documents are currently being prepared

AOC 10 – Truck Loading Rack, AOC 57 – Day Tankfield
AREA AOCs – AOC 29 – Mixing Basin, AOC 43 – Truck Unloading Area, AOC 110 – Oil/Water Separator, AOC 111 – Chemical Storage Area, AOC 82 – Former Incinerator Building, AOC 86 - Truck Rack VRU, and AOC 109 – Truck Rack Sump

- RIW/RAW submitted to NJDEP/USEPA in Q3 2016 (AOC 10 only)
- Comments received from NJDEP/USEPA Q1 and Q2 2017
- Response to Comments (RTC) submitted in Q3 2017
- RIW/RAW Approved Q4 2017 and Q3 2018
- RI activities conducted in Q4 2018, Q3 2019, and Q4 2019
- Supplementary revised RIW was submitted in Q2 2021 (all AOCs specified above)
- “At Risk” RI activities began December 2021 and are ongoing
- Groundwater monitoring (existing wells and new wells) was conducted on June 27- 30, 2022 and the analytical results will be provided in the final RIR
- Annual Groundwater sampling conducted December 2022

AOC 11a – Administration Building; AOC 78 – Administration Building Drainage Channel

- RIW/RAW submitted to NJDEP/USEPA in Q1 2016 and approved by NJDEP/USEPA in Q2 2017
- RI activities began in Q3 2017 and are currently ongoing
- Indoor air sampling was conducted in Q3 2020 and Q1 2021
- A meeting was held on March 16, 2022, to discuss delineation activities for AOC 11a and Site drilling constraints. A power point presentation was provided to the NJDEP and USEPA on March 11, 2022, which summarized historic investigation activities and proposed future investigation activities. The NJDEP requested additional information via email on March 17, 2022. The additional requested information was provided to the NJDEP/EPA on April 21, 2022
- A Site visit with the NJDEP/USEPA occurred on April 27, 2022. The purpose of the visit was to observe drilling constraints and discuss off-site delineation. The NJDEP requested additional information regarding drainage plans for the neighboring property (Cypress Recreation Center, 881 West Ave, Port Reading). Earth Systems/Hess is currently reviewing information provided by the neighboring property and will provide the supplemental information to the NJDEP/USEPA once Sitewide groundwater gauging and sampling is complete in December 2022.
- Annual Groundwater sampling conducted December 2022

AOC 12 – Smith Creek and Detention Basin

- RIW/RAW submitted to NJDEP/EPA Q3 2016
- Comments received from the NJDEP/USEPA in Q1 2017
- RTC submitted in Q2 and Q4 2017
- RIW/RAW approved by NJDEP/USEPA Q2 2018
- Sediment and surface water investigation conducted in 2018 and 2019
- Soil investigation and monitoring well installation (on and off-site) conducted in Q3 2019
- Supplementary revised RIW was submitted Q3 2021 (Comments were provided by the NJDEP in Q1 2022 and a response was submitted on October 24, 2022)
- Annual Groundwater sampling conducted December 2022

AOC 19 – QC Laboratory

- RIW/RAW submitted to NJDEP/EPA Q2 2016 and approved Q2 2016
- Remedial Investigation Report / Remedial Action Report (RIR/RAR) submitted to NJDEP/USEPA Q2 2017
- Comments received from the NJDEP/USEPA in Q3 2017
- RTC submitted Q3 2017
- Revised RIR/RAR submitted to NJDEP/USEPA Q1 2018
- NJDEP/USEPA meeting in Q2 2018
- Revised RIR/RAR submitted in Q3 2019 and approved in Q4 2019

- Remedial Action Permits (RAPs) for soil and groundwater submitted to NJDEP Site Remediation (January 6, 2021) for review prior to submittal
- Deed notice approved by NJDEP/USEPA in Q1 2021 and was filed with the Middlesex County Departments
- Meeting was held with NJDEP/USEPA on May 18, 2021 and some additional supplemental sampling was requested prior to submitting the RAPs to NJDEP permitting
- Groundwater sampling was conducted on July 1, 2021
- Final RAPs were submitted to NJDEP Bureau of Remedial Action Permitting in Q3 2021 and comments/revisions were sent via email on March 8, 2022 (from the Site Remediation Case Team). All requested revisions were completed, and the revised documents uploaded to the Earth Systems portal on May 20,2022.
- A revision to Exhibit B-1 of the Classification Exception Area (CEA) packet was requested by the NJDEP on June 16, 2022, and the revised exhibit was uploaded to the Earth Systems portal on June 28, 2022.
- The RAPs and associated appendices were resubmitted to the permitting group, as per direction from the case team, in October 2022.
- The RAPs and associated appendices were approved, and the RAO was issued on January 5, 2023

AOC 103 – Fire Pits/Fire Training Area (Part of AOC Group – Proposed Future Solar Field Area)

- Site Investigation Workplan (SIW) submitted to NJDEP/USEPA Q2 2019
- Comments received from NJDEP/USEPA in Q2 2019
- Teleconference and quarterly progress meeting with NJDEP/USEPA Q2 2019
- RTC submitted on June 24, 2019
- Revised SIW submitted in Q4 2019 and approved by NJDEP/USEPA Q4 2019
- Seven (7) groundwater monitoring wells installed and sampled in Q1 2020
- A PowerPoint presentation summarizing the investigation and recommendations for further investigation was provided to the NJDEP/USEPA on April 9, 2020 and discussed during a teleconference on June 29, 2020
- NJDEP provided additional comments on July 7, 2020 and RTC was submitted to the NJDEP on August 18, 2020
- RIW submitted to NJDEP/EPA in Q1 2021
- NJDEP provided comments on July 28, 2021 and a meeting was held to discuss the comments on August 16, 2021
- RTC was submitted to NJDEP/USEPA on September 28, 2021
- RIW was approved on October 12, 2021
- RI activities began November 2021 and are ongoing
- Annual Groundwater sampling conducted December 2022

AOC 16b – Marine Terminal Loading Area, AOC 85 – Marine VRU (RIW also includes area AOCs)

- Marine Area RIW submitted to NJDEP/USEPA Q3 2021
- "At Risk" RI activities began in Q1 2022 and are ongoing
- Annual Groundwater sampling conducted December 2022

Tankfields – AOC 6 – HSWA UST, AOC 14a – First Tankfield, AOC 46 – Slop Gasoline Unloading Area, AOC 53 – Second Tankfield, AOC 54 – Third Tankfield, and AOC 56 – Second Reserve Tankfield

- RIW/RAW submitted to NJDEP/USEPA Q2 2021
- "At Risk" RI activities began in Q1 2022 and are ongoing
- Groundwater monitoring was conducted in Q2 2022 and the analytical results will be provided in the final RIR
- Annual Groundwater sampling conducted December 2022

Former Refining Area Remediation Management Unit - AOC-9 Alkylation Unit (Sewer Line), AOC-18 Dimersol Unit, AOC-20a T1600-A and T-1600B Transformers, AOC-20b T510-A and T510-B Transformers, AOC-25 X-1950A and X-1950B (Alkylation Neutralization Basin), AOC-26 D-1104 (MEA Sump, AOC-27 EADC Sump, AOC-28 Cooling Water Tower, AOC-30 Sulfur Pit, AOC-31 Brine Pit, AOC-32 X-1951 (SRU Neutralization Basin), AOC-38 NH3 Truck Loading Rack/Ammonia Area, AOC-39 EADC Truck Unloading Area, AOC-40 Fresh Acid Unloading Area, AOC-45 Former Sulfur Recovery Unit Truck Loading Rack, AOC-47 Bleach Truck Unloading Area, AOC-58 Former Chemical Storage Area, AOC-59 API Storage Area, AOC-60 Avenue B Tank Field, AOC-80 Former Crude Topping Unit, AOC-88 Compressor Building, AOC-89 Cracking Tower, AOC-92 TK-701A and TK-701B, AOC-96 Boiler Area, AOC-99 Chemical Storage Area, AOC-117 Diesel Powered Emergency Generator - Millwright's Shop

- RIW/RAW submitted to NJDEP/USEPA Q2 2021
- "At Risk" RI activities initiated in Q3 2021 and are ongoing
- Annual Groundwater sampling conducted December 2022

AOC 13 – Former Oil Water Lagoons, AOC 42 – Methanol Truck Unloading Area, Decontamination Area, AOC 87 – Flare Knock Out Drum

- RIW submitted to NJDEP/EPA on August 8, 2022 (NJDEP review pending submittal of confirmation letter from Buckeye regarding the use of engineering and institutional controls)

AOC 14b – Rundown Tankfield, AOC 41 – Gasoline Additive Truck Unloading Rack, AOC 44 – Truck Unloading (Prover Truck) Area 2, AOC 74 – TEL Building (South)

- RIW is being completed with a Q2 2023 targeted submittal to the NJDEP and EPA

2.1 Groundwater Gauging

HC-PR conducts monthly gauging events as part of the Interim Remedial Measures (IRMs) at the site. Bi-weekly gauging events target monitoring wells with a history of LNAPL or sheen, and wells in close proximity to LNAPL or sheen detections.

Bi-Weekly Gauging

Groundwater gauging is currently conducted for the following thirty-six (36) monitoring wells: (PL-1RR, PL-2, PL-3R, PL-4RR, PL-5R, PL-6R, PL-7, PL-8R, PL-9R, TF-1, TF-2, TF-3, TM-6R, TM-7, TR-1R, TR-2R, TR-3RR, TR-3D, TR-3DD, TR-4R, TR-4D, TR-4DD, TR-5, TR-5D, TR-5DD, TR-6, TR-6D, FA-1, FA-2, FA-3, FA-4, FA-5, FA-6, FA-7, FA-14, and FA-15), two (2) recovery sumps (TR-Sump-1 and TR-Sump-2), the interceptor trench, and six (6) surface water gauges (DB-SW, LN-SW, L1-SW, SC-SG-1A, SC-SG-1B, and SC-SG-C).

All monitoring wells are gauged by utilizing a Solinist oil/water interface probe and measured from a surveyor's mark (present on the top of the inner casing) to the top of the groundwater table.

During the Q4 of 2022, bi-weekly gauging was conducted in October, November, and December (summarized below). The results of the gauging activities are provided in **Table 1**. Historic LNAPL levels are summarized in **Table 2**.

In addition, the semi-annual gauging event was conducted on November 17, 2022. The results of the gauging event are summarized below and in **Table 3**.

For reference purposes, all site monitoring well documentation has been compiled into a comprehensive Well Manual. The Well Manual is continually revised to include new wells installed at the site. The revised Well Manual will be submitted concurrently with this report. The Well Manual includes the following:

- Master Well Construction Details Summary Table
- Well Permits
- Well Records
- Geologic Well Logs
- Form B's

The results of the Q4 2022 monthly groundwater gauging events are summarized below:

- During the October 2022 gauging events, a measurable thickness of LNAPL was encountered in two monitoring wells: FA-5 and PL-2. The LNAPL thickness observed in the monitoring wells ranged from 0.20 (FA-5) to 0.01 feet (PL-2). A discontinuous sheen was encountered in the interceptor trench and monitoring wells FA-3, FA-6, PL-1RR, PL-5R, TF-1, TF-2, and TR-2R. Please note that a discontinuous sheen is defined as an observable amount of product on the surface of the water table that is broken or intermittent and does not cover the majority of the water surface and measures less than 0.25 mm thick.

- During the November 2022 gauging events, a measurable thickness of LNAPL was encountered in two monitoring wells: PL-5R (0.16 feet) and FA-5 (0.02 feet). A discontinuous sheen was encountered in the interceptor trench and monitoring wells PL-1RR, PL-2, TF-1, TF-2, TR-2R, FA-3, and FA-6.

- During the December 2022 gauging events, a measurable thickness of LNAPL was encountered in two monitoring wells: FA-3 (0.02 feet) and FA-5 (0.08 feet). A discontinuous sheen was encountered in the interceptor trench and monitoring wells PL-1RR, PL-2, TF-1, TF-2, and TR-2R.

An analysis of groundwater elevations indicate that groundwater flow direction is generally to the south and east, consistent with historic groundwater flow direction on the Site and the Port Reading Conceptual Site Model (CSM) submitted on March 29, 2021 (see **Figures 5a**, **5b,** and **5c**).

2.2 LNAPL IRM

Currently, passive LNAPL recovery methods and scheduled vacuum extraction events are being utilized at the site. Absorbent socks are placed in impacted wells and replaced as necessary. All used socks are placed in a 55-gallon drum staged on-site. Once at capacity, the drum is removed from the HC-PR site and disposed of at a licensed waste disposal facility. Vacuum extraction events are scheduled, as necessary, to address LNAPL observed in the interceptor trench and any monitoring well with significant measurable product. No vacuum extraction events were conducted during the Q4 of 2022 as there was no measurable LNAPL observed in the interceptor trench. Passive recovery of LNAPL was utilized for monitoring wells in Q4 2022.

3.0 Groundwater Monitoring

On October 18, 19, and 20, 2022, groundwater samples were collected via low-flow sampling methodology in accordance with the NJDEP's *Field Sampling Procedures Manual (FSPM)* at the three (3) Landfarm locations (No.1, North, and South Landfarms).

Samples were collected in laboratory supplied glassware and transferred to SGS Laboratories (SGS) of Dayton, New Jersey (NJ NELAP Certification No. 12129) under strict chain of custody procedures.

Pursuant to NJDEP/USEPA direction (via comment letter dated November 13, 2020), analytical results are no longer included in the Quarterly reports. Analytical results will be provided in the Semi-Annual Report only, with the next submittal being January 2023. Groundwater gauging maps for the landfarms are included as **Figures 9**, **10**, and **11** with groundwater elevations summarized on **Table 4**.

3.1 Annual Groundwater Sampling

The annual groundwater sampling event was conducted in December 2022. The groundwater gauging data is summarized on **Table 3**. Groundwater contour maps are included as **Figures 5a**, **5b**, and **5c**. Annual groundwater samples were collected from the following monitoring wells:

AOC ID	AOC Description	Monitoring Wells Sampled
AOC 3	No. 1 Landfarm	SP-1, SP-2, SP-3
AOC 5	Aeration Basin	AB-1, AB-3, AB-4R, AB-4D AB-5, AB-6
AOC 10	Truck Loading Rack	TR-1R, TR-2R, TR-3RR, TR-3D, TR-3DD, TR-4R, TR-4D, TR-4DD, TR-5, TR-5D, TR-5DD, TR-6, TR-6D, TR-7, TR-7D, TR-8, TR-8D, TR-8DD, PER-1, SC-1, SC-1D, SC-1DD, SC-2, SC-2D, SC-2DD, SC-2DDD, SC-3, SC-3D, SC-3DD, SC-3DDD, SC-4, SC-4D, SC-4DD
AOC 11a	Administration Building	AD-1, AD-2, AD-2DD, AD-3, AD-3D, AD-4, AD-5, AD-5D, AD-6, AD-8, AD-9D, AD-9DD, AD-10, AD-10DD
AOC 12	Detention Basin & Smith Creek	PER-2, PER-2D, PER-2DD, PER-3, PER-3D, PER-9[2], PER-9D[2], PER-9DD[2], PER-10, PER-10D
AOC 14a	First Tankfield	TM-1, TM-2, TM-3, TM-4, TM-8, LPG-1, LPG-2, PER-4, PER-5
AOC 16b	Marine Terminal Loading Area	DPP-1, MRVU-1, PER-7, PER-8, TL-1, TL-2, TL-3, TL-4, TL-5, SRB-1
AOC 19	QC Laboratory	MW-1, MW-2, MW-3, MW-4, PER-6R
AOC 46	Slop Gasoline Unloading Area	SG-1, SG-2, SG-3, SG-4
AOC 53	Second Tankfield	2TF-1, 2TF-2, 2TF-3, 2TF-4, 2TF-5, 2TF-6
AOC 54	Third Tankfield	TF-1, TF-1D, TF-2[1], TF-3, TF-4, TF-4D, TF-5, TF-6 SM-1, SM-1D
AOC 55	Fourth Tankfield	3TF-1, 3TF-1D, 3TF-2, 3TF-3
AOC 56	Second Reserve Tankfield	RTF-1, RTF-2, RTF-3, RTF-4, RTF-5, RTF-6
AOC 57	Day Tankfield	DT-1D, DT-3, DT-3D, DT-5, DT-5D, DT-5DD, DT-6
SRMU	Southern Remediation Mgmt Unit	PL-1RR, PL-2, PL-3R, PL-4RR, PL-5R[1], PL-6R, PL-7R, PL-8R, PL-9R, TM-5, TM-6R, TM-7
AOC 103	Fire Fighting Training Area/Fire Pits	FA-1, FA-2, FA-3, FA-4, FA-5[1], FA-6, FA-7, FA-8, FA-9, FA-10, FA-11, FA-12, FA-13, FA-14, FA-15[3], FA-16, FA-17, FA-18, FA-19, FA-20, FA-21

[1]Groundwater samples were not collected from these monitoring wells due to LNAPL present or the identification of an intermittent sheen.
[2]Groundwater samples were not collected from this monitoring wells due to flooding of area.
[3]Groundwater samples were not collected from this monitoring well due to equipment covering location.

3.2 Low Flow Sampling Methodology

Prior to groundwater purging, the placement of the pump intake was determined by water level, screen depth, and contaminants of concern. The depth of the pump was recorded on the low-flow field worksheets. These field worksheets are included in **Appendix A**. Groundwater purging was conducted at each monitoring well utilizing a Monsoon submersible pump with Teflon-lined ¼ inch polyethylene tubing. Groundwater field parameters were collected using a Horiba U-52 water quality meter and flow cell. The Horiba U-52 was calibrated by both the rental company as well as Earth Systems field personnel. The Horiba was calibrated in accordance with the manufacturer's instructions and in accordance with Earth Systems' Standard Operating Procedures. All calibration documentation is included in **Appendix A**. The field parameters which were monitored include temperature, conductivity, dissolved oxygen, turbidity, redox potential, and pH. Groundwater elevation measurements were collected utilizing a Solinist oil/water interface probe. Groundwater elevations were recorded prior to pump placement and continuously during well purging. The total depth of the well was measured either 48 hours prior to well sampling or at the conclusion of well sampling, as noted in the well sampling field sheets included in **Appendix A**. During well purging, the monitored parameters were measured every 5 minutes until 3 consecutive stable readings were recorded. In accordance with the *FSPM* Section 6.9.2.2.5.2, the following values were utilized to determine stability for the monitored parameters:

- pH +/- 0.1 unit
- Specific Conductance +/- 3%
- Temperature +/- 3%
- Dissolved Oxygen +/- 10%
- Turbidity +/- 10% for values greater than 1 NTU
- ORP +/- 10 millivolts
- Water level drawdown <0.3 feet

The parameter readings and the water level drawdown were recorded on the low-flow field worksheets, which are included in **Appendix A**. No variances were applied during the sampling event.

Prior to, and at the completion of groundwater sampling of each monitoring well, the Horiba U-52 water quality meter, flow cell, and submersible pump were properly decontaminated using Alconox and a distilled or deionized water rinse. Tubing was discarded after the sampling of each monitoring well and was not reused.

Following well water purging and stabilization, groundwater samples were collected and placed into laboratory provided containers. All groundwater samples were collected

directly from the tubing, after being disconnected from the flow cell. All samples were appropriately labeled, logged, and placed into a cooler with ice prior to submittal to the laboratory. Quality control samples, including trip blanks and field blanks, were collected and submitted for analysis to evaluate the potential for cross contamination.

Samples were collected in laboratory supplied glassware and transferred to Alpha Analytical (Alpha) of Westborough, Massachusetts (NJ NELAP Certification No. MA935) under strict chain of custody procedures.

3.2.1 Annual Sampling Summary – AOC 3 – No. 1 Landfarm

In December 2022, groundwater samples were collected from monitoring wells SP-1 through SP-3, and analyzed for Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOCs), metals, and general chemistry parameters. Analytical results from the December 2022 AOC 3 – No. 1 Landfarm groundwater sampling event are summarized in **Table 5** and on **Figure 9**.

Analytical results from the sampling event identified the presence of several metals exceeding their respective Groundwater Quality Standards (GWQS) in all three monitoring wells. VOCs and SVOCs were not identified at concentrations exceeding the GWQS. The following table summarizes the analytical results.

SAMPLE ID:		NJ Groundwater Criteria	SP-1			SP-2			SP-3		
LAB ID:			L2271942-06			L2271942-05			L2268106-07		
COLLECTION DATE:			12/21/2022			12/21/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
TOTAL METALS											
Aluminum, Total	7429-90-5	**200**	**1700**		3.27	**4840**		3.27	79.2		3.27
Arsenic, Total	7440-38-2	**3**	**3.87**		0.165	**3.207**		0.165	2.501		0.165
Iron, Total	7439-89-6	**300**	**3390**		19.1	**10500**		19.1	**33200**		19.1
Lead, Total	7439-92-1	**5**	**7.302**		0.343	**16.63**		0.343	0.7268	J	0.343
Manganese, Total	7439-96-5	**50**	27.62		0.44	**51.5**		0.44	**552**		0.44
Sodium, Total	7440-23-5	**50000**	**64100**		29.3	27600		29.3	**182000**		29.3

J – estimated concentration, ND – non-detect

3.2.2 Annual Sampling Summary – AOC 5 – Aeration Basins

In December 2022, groundwater samples were collected from monitoring wells AB-1, AB-3, AB-4R, AB-4D, AB-5, and AB-6, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Groundwater samples were collected at shallow and intermediate intervals. Analytical results from the December 2022 AOC 5 – Aeration Basins groundwater sampling event are summarized in **Table 6** and on **Figure 10**.

VOCS were not detected at concentrations that exceeded the GWQS in any of the AOC 5 groundwater samples. 1,4-Dioxane and Ammonia were detected in the groundwater sample collected from monitoring well AB-4D at concentrations exceeding the GWQS. No other SVOCs or general chemistry compounds were detected at concentrations exceeding the GWQS. Select metals were detected at concentrations exceeding the

GWQS in groundwater samples collected from all monitoring wells. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	AB-1			AB-3			AB-4D			AB-4R			AB-5			AB-6		
LAB ID:		L2269734-05			L2269734-03			L2269477-09			L2269477-08			L2269734-04			L2271325-05		
COLLECTION DATE:		12/12/2022			12/12/2022			12/9/2022			12/9/2022			12/12/2022			12/19/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
1,4 DIOXANE BY 8270E-SIM																			
1,4-Dioxane	0.4	ND		0.0332	ND		0.0339	1.78		0.0332	ND		0.032	0.0881	J	0.0326	ND		0.0339
TOTAL METALS																			
Aluminum, Total	200	607		3.27	4240		3.27	35.9	J	32.7	8600		32.7	64.6		3.27	1010		3.27
Arsenic, Total	3	7.336		0.165	2.665		0.165	3.163		0.165	1.325		0.165	2.154		0.165	3.987		0.165
Iron, Total	300	3580		19.1	9230		19.1	316		19.1	15100		19.1	384		19.1	2360		19.1
Lead, Total	5	1.414		0.343	12.85		0.343	ND		0.343	0.5442	J	0.343	0.8005	J	0.343	12.32		0.343
Manganese, Total	50	23.37		0.44	67.14		0.44	9.514		0.44	44.16		0.44	7.925		0.44	34.42		0.44
Sodium, Total	50000	20300		29.3	55100		29.3	3340000		293	42100		293	70800		29.3	78700		29.3
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	124		24	227		24	17000		240	ND		24	71.8	J	24	54	J	24

J – estimated concentration, ND – non-detect

3.2.3 Annual Sampling Summary – AOC 10 – Truck Loading Rack

In December 2022, groundwater samples were collected from monitoring wells TR-1R, TR-2R, TR-3RR, TR-3D, TR-3DD, TR-4R, TR-4D, TR-4DD, TR-5, TR-5D, TR-5DD, TR-6, TR-6D, TR-7, TR-7D, TR-8, TR-8D, TR-8DD, PER-1, SC-1, SC-1D, SC-1DD, SC-2, SC-2D, SC-2DD, SC-2DDD, SC-3, SC-3D, SC-3DD, SC-3DDD, SC-4, SC-4D, and SC-4DD, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Groundwater samples were collected from shallow, intermediate, and deep groundwater monitoring wells. Analytical results from the December 2022 AOC 10 – Truck Loading Rack groundwater sampling event are summarized in **Tables 7a** and **7b** and on **Figures 11a through 11d**.

Analytical results identified the presence of targeted VOCs and SVOCs at concentrations exceeding their respective GWQS in groundwater samples collected from several shallow, intermediate, and deep monitoring wells. Targeted metals were identified exceeding the GWQS in all groundwater samples. Ammonia was detected at concentrations exceeding the GWQS in groundwater samples collected from several monitoring wells. The following tables summarize the analytical results.

Shallow Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	TR-1R			TR-2R			TR-3RR			TR-4R			PER-1		
LAB ID:		L2267427-11			L2271613-05			L2267783-14			L2271613-06			L2267427-10		
COLLECTION DATE:		12/1/2022			12/20/2022			12/2/2022			12/20/2022			12/1/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Benzene	1	ND		0.08	3		0.08	0.15	J	0.08	74		0.16	ND		0.08
1,1-Dichloroethene	1	1.2		0.17	ND		0.17	ND		0.17	ND		0.34	ND		0.17
Methyl tert butyl ether	70	ND		0.17	25		0.17	110		0.17	2.1		0.33	ND		0.17
Tert-Butyl Alcohol	100	ND		1.4	8.6	J	1.4	2700	E	1.4	29		2.8	ND		1.4
SEMIVOLATILE ORGANICS BY GC/MS-SIM																
Benzo(a)anthracene	0.1	0.04	J	0.02	0.42		0.02	0.05	J	0.02	0.14	J	0.1	0.04	J	0.02
Benzo(a)pyrene	0.1	ND		0.02	0.29		0.02	ND		0.02	ND		0.08	ND		0.02
Benzo(b)fluoranthene	0.2	ND		0.01	0.4		0.01	ND		0.01	ND		0.06	ND		0.01
TOTAL METALS																
Aluminum, Total	200	95.1		3.27	673		3.27	128		3.27	454		3.27	393		3.27
Iron, Total	300	145		19.1	749		19.1	156		19.1	3530		19.1	580		19.1
Lead, Total	5	0.4905	J	0.343	5.454		0.343	0.8014	J	0.343	4.844		0.343	2.162		0.343
Manganese, Total	50	29.42		0.44	13.21		0.44	171.7		0.44	318.4		0.44	2413		0.44
Sodium, Total	50000	38400		29.3	92100		29.3	21000		29.3	227000		29.3	11800		29.3

SAMPLE ID:	NJ Groundwater Criteria	TR-5			TR-6			TR-7			TR-8		
LAB ID:		L2267783-11			L2267783-06			L2268454-04			L2268729-04		
COLLECTION DATE:		12/2/2022			12/2/2022			12/6/2022			12/7/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
Benzene	1	2000		1.6	1000		0.8	1.1		0.08	0.13	J	0.08
1,1-Dichloroethene	1	ND		3.4	ND		1.7	ND		0.17	1.4		0.17
Trichloroethene	1	ND		3.5	ND		1.8	2		0.18	ND		0.18
Methyl tert butyl ether	70	340		3.3	4800		8.3	0.17	J	0.17	13		0.17
Tert-Butyl Alcohol	100	2000		28	1200		14	3.2	J	1.4	670		1.4
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	0.0986	J	0.0314	ND		0.0314	0.255		0.0332	5.01		0.0339
TOTAL METALS													
Aluminum, Total	200	116		3.27	71.5		3.27	7550		3.27	54.6		3.27
Arsenic, Total	3	0.5992		0.165	3.802		0.165	13.97		0.165	7.111		0.165
Chromium, Total	70	0.8382	J	0.178	0.5405	J	0.178	70.26		0.178	3.2		0.178
Iron, Total	300	4850		19.1	3130		19.1	19200		19.1	10800		19.1
Lead, Total	5	0.4464	J	0.343	0.6566	J	0.343	13.66		0.343	0.4929	J	0.343
Manganese, Total	50	1094		0.44	709.9		0.44	452.6		0.44	6911		0.44
Sodium, Total	50000	186000		29.3	11000		29.3	42300		29.3	414000		29.3
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	653		24	302		24	3620		120	4540		24

J – estimated concentration, ND – non-detect

SAMPLE ID:	NJ Groundwater Criteria	SC-1			SC-2			SC-3			SC-4		
LAB ID:		L2269054-06			L2269054-14			L2269054-03			L2269054-10		
COLLECTION DATE:		12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
Benzene	1	1.2		0.08	9.2		0.08	ND		0.08	ND		0.08
TOTAL METALS													
Aluminum, Total	200	566		32.7	101		3.27	16.4		3.27	1670		3.27
Arsenic, Total	3	5.475		1.65	4.014		0.165	1.156		0.165	4.524		0.165
Iron, Total	300	108000		191	60300		19.1	13900		19.1	17200		19.1
Lead, Total	5	6.541	J	3.43	ND		0.343	ND		0.343	16.49		0.343
Manganese, Total	50	5003		4.4	341.6		0.44	1474		0.44	203.3		0.44
Sodium, Total	50000	1680000		293	753000		293	693000		293	301000		29.3
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	20700		240	10900		24	3340		24	3020		24

J – estimated concentration, ND – non-detect

Intermediate & Deep Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	TR-3D			TR-3DD			TR-4D			TR-4DD		
LAB ID:		L2267783-16			L2267783-15			L2271613-07			L2267783-09		
COLLECTION DATE:		12/2/2022			12/2/2022			12/20/2022			12/2/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
1,1-Dichloroethene	1	ND		34	0.92		0.17	ND		0.17	1.9		0.17
Trichloroethene	1	1900		35	1		0.18	ND		0.18	1.6		0.18
Methyl tert butyl ether	70	42000	E	33	18		0.17	ND		0.17	0.4	J	0.17
Tert-Butyl Alcohol	100	57000		280	44		1.4	9.1	J	1.4	ND		1.4
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	2.32		0.0314	1.67		0.0314	0.0842	J	0.0332	1.18		0.0326
TOTAL METALS													
Aluminum, Total	200	58		3.27	46.7		3.27	370		3.27	170		3.27
Cadmium, Total	4	ND		0.0599	ND		0.0599	5.372		0.0599	ND		0.0599
Iron, Total	300	1450		19.1	3280		19.1	492		19.1	2450		19.1
Manganese, Total	50	2270		0.44	73.15		0.44	28.84		0.44	124.8		0.44
Sodium, Total	50000	150000		29.3	56000		29.3	50400		29.3	70800		29.3

J – estimated concentration, ND – non-detect, E – concentration of analyte exceeds calibration curve

SAMPLE ID:	NJ Groundwater Criteria	TR-5D			TR-5DD			TR-6D			TR-7D			TR-8D			TR-8DD		
LAB ID:		L2267783-12			L2267783-13			L2267783-10			L2267783-08			L2268729-03			L2268729-05		
COLLECTION DATE:		12/2/2022			12/2/2022			12/2/2022			12/2/2022			12/7/2022			12/7/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
1,2-Dichloropropane	1	ND		1.4	ND		0.27	1.3		0.14	34		0.14	5.6		0.68	ND		0.14
Dibromochloromethane	1	ND		1.5	ND		0.3	ND		0.15	1.5		0.15	ND		0.74	ND		0.15
Tetrachloroethene	1	ND		1.8	ND		0.36	2.7		0.18	36		0.18	ND		0.9	ND		0.18
Bromodichloromethane	1	ND		1.9	ND		0.38	ND		0.19	1.4		0.19	ND		0.96	ND		0.19
Bromoform	4	ND		2.5	ND		0.5	ND		0.25	21		0.25	ND		1.2	ND		0.25
Benzene	1	71		0.8	3.4		0.16	ND		0.08	0.84		0.08	ND		0.4	ND		0.08
Vinyl chloride	1	ND		0.71	ND		0.14	0.12	J	0.07	3.5		0.07	1.5		0.36	0.08	J	0.07
1,1-Dichloroethene	1	ND		1.7	ND		0.34	2.2		0.17	20		0.17	10		0.84	ND		0.17
Trichloroethene	1	ND		1.8	ND		0.35	1.1		0.18	2.4		0.18	ND		0.88	ND		0.18
Methyl tert butyl ether	70	1100		1.7	340		0.33	1.1		0.17	0.82	J	0.17	46		0.83	0.77	J	0.17
Tert-Butyl Alcohol	100	16000	E	14	64		2.8	ND		1.4	47		1.4	6300		70	2.9	J	1.4
1,4 DIOXANE BY 8270E-SIM																			
1,4-Dioxane	0.4	5.57		0.0326	2.77		0.0314	1.23		0.0314	19.1		0.326	6.82		0.0339	2.44		0.0346
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	0.32		0.02	0.07	J	0.02	0.04	J	0.02	0.04	J	0.02	0.04	J	0.02	0.05	J	0.02
Benzo(a)pyrene	0.1	0.3		0.02	ND		0.02	ND		0.02	ND		0.02	0.02	J	0.02	0.02	J	0.02
Benzo(b)fluoranthene	0.2	0.53		0.01	ND		0.01	ND		0.01	ND		0.01	0.03	J	0.01	0.04	J	0.01
Indeno(1,2,3-cd)pyrene	0.2	0.28		0.01	ND		0.01	ND		0.01	ND		0.01	0.02	J	0.01	0.02	J	0.01
TOTAL METALS																			
Aluminum, Total	200	32.4		3.27	11.6		3.27	318		3.27	32.5		3.27	20.5		3.27	269		3.27
Arsenic, Total	3	0.3015	J	0.165	0.5557		0.165	0.4925	J	0.165	5.393		0.165	1.843		0.165	0.9435		0.165
Iron, Total	300	2000		19.1	751		19.1	210		19.1	551		19.1	1790		19.1	86.3		19.1
Manganese, Total	50	162.8		0.44	66.97		0.44	6.807		0.44	4954		0.44	1564		0.44	3.688		0.44
Sodium, Total	50000	82400		29.3	45500		29.3	59600		29.3	1760000		293	424000		29.3	33500		29.3

SAMPLE ID:	NJ Groundwater Criteria	SC-1D			SC-2D			SC-3D			SC-4D		
LAB ID:		L2269054-08			L2269054-15			L2269054-12			L2269054-07		
COLLECTION DATE:		12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
Tert-Butyl Alcohol	100	2.4	J	1.4	ND		1.4	290		1.4	88		1.4
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	0.546		0.032	0.683		0.0332	2.8		0.0346	38.2		0.0308
SEMIVOLATILE ORGANICS BY GC/MS-SIM													
Benzo(a)anthracene	0.1	0.1	J	0.02	ND		0.02	0.17		0.02	0.15		0.02
TOTAL METALS													
Aluminum, Total	200	20.1		3.27	358		3.27	5.53	J	3.27	284		3.27
Arsenic, Total	3	0.2068	J	0.165	1.206		0.165	1.818		0.165	3.896		0.165
Iron, Total	300	912		19.1	869		19.1	2480		19.1	943		19.1
Manganese, Total	50	28.31		0.44	60.13		0.44	98.52		0.44	77.01		0.44
Sodium, Total	50000	86700		29.3	590000		293	706000		293	747000		293
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	1360		24	2630		24	4850		24	3450		24

J – estimated concentration, ND – non-detect

SAMPLE ID:	NJ Groundwater Criteria	SC-1DD			SC-2DD			SC-2DDD			SC-3DD			SC-3DDD			SC-4DD		
LAB ID:		L2269054-09			L2269477-03			L2269054-13			L2269054-05			L2269054-04			L2269054-11		
COLLECTION DATE:		12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
1,4 DIOXANE BY 8270E-SIM																			
1,4-Dioxane	0.4	0.623		0.032	ND		0.0332	ND		0.0332	0.869		0.0339	ND		0.0353	5.92		0.032
TOTAL METALS																			
Aluminum, Total	200	83.1		3.27	1300		3.27	61.5		3.27	40.6	J	32.7	ND		32.7	18.1		3.27
Beryllium, Total	1	ND		0.107	0.138	J	0.107	0.5935		0.107	ND		1.07	3.079	J	1.07	ND		0.107
Iron, Total	300	2620		19.1	6920		19.1	40800		19.1	404000		191	862000		191	203		19.1
Lead, Total	5	ND		0.343	10.09		0.343	ND		0.343	ND		3.43	ND		3.43	ND		0.343
Manganese, Total	50	72.31		0.44	267.1		0.44	970.9		0.44	9503		4.4	19810		4.4	58.79		0.44
Sodium, Total	50000	36600		29.3	168000		29.3	89300		29.3	1660000		293	1840000		293	239000		29.3
Thallium, Total	2	ND		0.143	ND		0.143	0.37	J	0.143	1.681	J	1.43	3.384	J	1.43	ND		0.143

J – estimated concentration, ND – non-detect

3.2.4 Annual Sampling Summary – AOC 11a – Administration Building

In December 2022, groundwater samples were collected from monitoring wells AD-1, AD-2, AD-2DD, AD-3, AD-3D, AD-4, AD-5, AD-5D, AD-6, AD-8, AD-9D, AD-9DD, AD-10, and AD-10DD, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Groundwater samples were collected from shallow, intermediate, and deep groundwater monitoring wells. Analytical results from the December 2022 AOC 11a – Administration Building groundwater sampling event are summarized in **Table 8** and on **Figures 12a** through **12c**.

Analytical results identified the presence of targeted VOCs, SVOCs, and metals at concentrations exceeding their respective GWQS in groundwater samples collected from several shallow, intermediate, and deep monitoring wells. Targeted VOCs were not detected above the GWQS in the groundwater samples collected from monitoring wells AD-1, AD-3, AD-6, AD-8, AD-10DD. Targeted SVOCs were not detected above the GWQS in the groundwater samples collected from monitoring wells AD-2DD, AD-3, AD-6, and AD-8. Ammonia was detected in concentrations exceeding the GWQS in the groundwater sample collected from monitoring wells AD-10. The following tables summarize the analytical results.

Shallow Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	AD-1			AD-2			AD-3			AD-4		
LAB ID:		L2266718-07			L2266718-08			L2267783-03			L2266718-11		
COLLECTION DATE:		11/29/2022			11/29/2022			12/2/2022			11/29/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
1,1-Dichloroethane	50	ND		0.21	170		10	ND		0.21	ND		2.1
1,2-Dichloropropane	1	ND		0.14	17	J	6.8	ND		0.14	ND		1.4
Tetrachloroethene	1	ND		0.18	85		9	ND		0.18	ND		1.8
Chlorobenzene	50	ND		0.18	ND		8.9	ND		0.18	1100		1.8
1,2-Dichloroethane	2	ND		0.13	ND		6.6	ND		0.13	2.2	J	1.3
1,1,1-Trichloroethane	30	ND		0.16	6300		7.9	ND		0.16	ND		1.6
Benzene	1	ND		0.08	ND		4	ND		0.08	14		0.8
Ethylbenzene	700	ND		0.17	ND		8.4	ND		0.17	ND		1.7
Vinyl chloride	1	ND		0.07	21		3.6	ND		0.07	ND		0.71
1,1-Dichloroethene	1	ND		0.17	3900		8.4	ND		0.17	ND		1.7
Trichloroethene	1	ND		0.18	28		8.8	ND		0.18	ND		1.8
1,2-Dichlorobenzene	600	ND		0.18	ND		9.2	ND		0.18	90		1.8
1,3-Dichlorobenzene	600	ND		0.19	ND		9.3	ND		0.19	95		1.9
1,4-Dichlorobenzene	75	ND		0.19	ND		9.4	ND		0.19	230		1.9
Xylenes, Total	1000	ND		0.33	ND		17	ND		0.33	ND		3.3
cis-1,2-Dichloroethene	70	ND		0.19	9.5	J	9.4	ND		0.19	2	J	1.9
1,2,4-Trichlorobenzene	9	ND		0.22	ND		11	ND		0.22	4.7	J	2.2
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	27.5		0.032	9400		1.6	ND		0.0326	4.98		0.0332
TOTAL METALS													
Aluminum, Total	200	42.8		3.27	12.6		3.27	710		3.27	60.3		3.27
Arsenic, Total	3	1.066		0.165	4.194		0.165	0.9306		0.165	45.46		0.165
Iron, Total	300	2210		19.1	12500		19.1	1380		19.1	27600		19.1
Manganese, Total	50	241.4		0.44	43680		2.2	80.78		0.44	2125		0.44
Sodium, Total	50000	209000		29.3	613000		146	5320		29.3	526000		146
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	53.4	J	24	125		24	40.6	J	24	2220		24

J – estimated concentration, ND – non-detect

SAMPLE ID:	NJ Groundwater Criteria	AD-5			AD-6			AD-8			AD-10		
LAB ID:		L2267054-05			L2268106-06			L2267783-07			L2266718-13		
COLLECTION DATE:		11/30/2022			12/5/2022			12/2/2022			11/29/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
1,1-Dichloroethane	50	ND		10	ND		0.21	ND		0.21	13	J	10
1,2-Dichloropropane	1	ND		6.8	ND		0.14	ND		0.14	ND		6.8
Tetrachloroethene	1	990		9	ND		0.18	ND		0.18	10	J	9
Chlorobenzene	50	29		8.9	ND		0.18	ND		0.18	4500		8.9
1,2-Dichloroethane	2	ND		6.6	ND		0.13	ND		0.13	ND		6.6
1,1,1-Trichloroethane	30	ND		7.9	ND		0.16	ND		0.16	ND		7.9
Benzene	1	ND		4	ND		0.08	ND		0.08	34		4
Ethylbenzene	700	ND		8.4	ND		0.17	ND		0.17	5600		8.4
Vinyl chloride	1	38		3.6	ND		0.07	ND		0.07	73		3.6
1,1-Dichloroethene	1	ND		8.4	ND		0.17	ND		0.17	36		8.4
Trichloroethene	1	610		8.8	ND		0.18	ND		0.18	16	J	8.8
1,2-Dichlorobenzene	600	390		9.2	ND		0.18	ND		0.18	2100		9.2
1,3-Dichlorobenzene	600	ND		9.3	ND		0.19	ND		0.19	780		9.3
1,4-Dichlorobenzene	75	160		9.4	ND		0.19	ND		0.19	5000		9.4
Xylenes, Total	1000	ND		17	ND		0.33	ND		0.33	17000		17
cis-1,2-Dichloroethene	70	4900		9.4	ND		0.19	ND		0.19	180		9.4
1,2,4-Trichlorobenzene	9	150		11	ND		0.22	ND		0.22	120		11
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	1.27		0.0314	ND		0.0332	ND		0.0326	158		0.628
TOTAL METALS													
Aluminum, Total	200	6.08	J	3.27	37.9		3.27	258		3.27	69.6		3.27
Arsenic, Total	3	0.8272		0.165	1.063		0.165	1.243		0.165	3.363		0.165
Iron, Total	300	33.1	J	19.1	102		19.1	300		19.1	75500		19.1
Manganese, Total	50	3090		0.44	375.6		0.44	112.6		0.44	110900		22
Sodium, Total	50000	193000		29.3	36300		29.3	92500		29.3	496000		146
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	34.1	J	24	87.7		24	115		24	3880		24

J – estimated concentration, ND – non-detect

Intermediate & Deep Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	AD-2DD			AD-3D			AD-5D			AD-9D			AD-9DD			AD-10DD		
LAB ID:		L2266718-09			L2267783-05			L2266718-10			L2267427-04			L2267427-09			L2266718-12		
COLLECTION DATE:		11/29/2022			12/2/2022			11/29/2022			12/1/2022			12/1/2022			11/29/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
1,1-Dichloroethane	50	ND		0.21	4.8		0.21	590		8.4	4.2		0.42	ND		0.21	ND		0.21
1,2-Dichloropropane	1	ND		0.14	ND		0.14	36	J	5.5	0.36	J	0.27	ND		0.14	ND		0.14
1,1,2-Trichloroethane	3	ND		0.14	ND		0.14	10	J	5.8	ND		0.29	ND		0.14	ND		0.14
Tetrachloroethene	1	ND		0.18	0.46	J	0.18	150		7.2	220		0.36	0.24	J	0.18	0.25	J	0.18
1,2-Dichloroethane	2	ND		0.13	ND		0.13	12	J	5.3	ND		0.26	ND		0.13	0.43	J	0.13
1,1,1-Trichloroethane	30	5.6		0.16	ND		0.16	940		6.3	0.4	J	0.32	ND		0.16	ND		0.16
Benzene	1	ND		0.08	ND		0.08	5.4	J	3.2	0.16	J	0.16	ND		0.08	ND		0.08
Vinyl chloride	1	ND		0.07	ND		0.07	60		2.8	4.4		0.14	ND		0.07	0.18	J	0.07
1,1-Dichloroethene	1	3.2		0.17	5.8		0.17	5400		6.8	10		0.34	ND		0.17	0.4	J	0.17
Trichloroethene	1	ND		0.18	2.8		0.18	47		7	59		0.35	1.2		0.18	0.52		0.18
1,4-Dichlorobenzene	75	ND		0.19	ND		0.19	170		7.5	55		0.37	0.58	J	0.19	0.33	J	0.19
cis-1,2-Dichloroethene	70	ND		0.19	1.5		0.19	14	J	7.5	200		0.37	0.41	J	0.19	0.64		0.19
1,2,4-Trichlorobenzene	9	ND		0.22	ND		0.22	100		8.8	32		0.44	0.22	J	0.22	0.72	J	0.22
1,4 DIOXANE BY 8270E-SIM																			
1,4-Dioxane	0.4	ND		1.6	47.6		0.0326	5820		1.6	8.98		0.0326	1.41		0.0314	0.402		0.032
TOTAL METALS																			
Aluminum, Total	200	20700		3.27	6.63	J	3.27	64.7		3.27	19.5		3.27	27.2		3.27	1130		3.27
Arsenic, Total	3	5.956		0.165	0.4363	J	0.165	1.087		0.165	0.5843		0.165	2.223		0.165	3.03		0.165
Iron, Total	300	55800		19.1	22	J	19.1	715		19.1	47.9	J	19.1	17000		19.1	24600		19.1
Manganese, Total	50	4640		0.44	52.41		0.44	7271		0.44	1087		0.44	540.4		0.44	904.9		0.44
Sodium, Total	50000	174000		29.3	260000		29.3	110000		29.3	185000		29.3	58900		29.3	70500		29.3

J – estimated concentration, ND – non-detect

3.2.5 Annual Sampling Summary – AOC 12 – Detention Basin & Smith Creek

In December 2022, groundwater samples were collected from monitoring wells SM-1, SM-1D, PER-2, PER-2D, PER-2DD, PER-3, PER-3D, PER-10, and PER-10D, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Groundwater samples were collected from shallow, intermediate, and deep groundwater monitoring wells. Monitoring wells PER-9, PER-9D, and PER-9DD could not be sampled due to flooding of the well location area. Analytical results from the December 2022 AOC 12 – Detention Basin and Smith Creek groundwater sampling event are summarized in **Table 9** and on **Figure 13a and 13b**.

Analytical results identified the presence of targeted VOCs, SVOCs, and metals at concentrations exceeding their respective GWQS in groundwater samples collected from several shallow, intermediate, and deep monitoring wells. Targeted VOCs and SVOCs were not detected above the GWQS in the groundwater samples collected from monitoring wells PER-2, PER-3, PER-10, SM-1, and SM-1D. The following tables summarize the analytical results.

Shallow Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	PER-2			PER-3			PER-10			SM-1		
LAB ID:		L2268454-07			L2269477-10			L2269477-12			L2270765-07		
COLLECTION DATE:		12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
TOTAL METALS													
Aluminum, Total	200	3640		3.27	2860		32.7	46.2		3.27	1920		3.27
Arsenic, Total	3	8.776		0.165	16.09		0.165	0.5535		0.165	1.391		0.165
Beryllium, Total	1	1.042		0.107	0.131	J	0.107	ND		0.107	ND		0.107
Cadmium, Total	4	7.916		0.0599	0.5611		0.0599	ND		0.0599	0.0717	J	0.0599
Iron, Total	300	14000		19.1	20300		19.1	1010		19.1	4050		19.1
Lead, Total	5	45.18		0.343	13.08		0.343	0.4412	J	0.343	11.15		0.343
Manganese, Total	50	161.4		0.44	1660		0.44	102.7		0.44	55.64		0.44
Sodium, Total	50000	11400		29.3	1290000		293	27200		293	69400		29.3
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	932		48	9520		24	198		24	189		24

J – estimated concentration, ND – non-detect

Intermediate and Deep Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	PER-2D			PER-2DD			PER-3D			PER-10D			SM-1D		
LAB ID:		L2268454-08			L2268454-12			L2269477-11			L2269477-13			L2270765-06		
COLLECTION DATE:		12/6/2022			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Methyl tert butyl ether	70	520		0.83	97		0.17	54		0.17	110		0.17	3.6		0.17
Tert-Butyl Alcohol	100	270		7	1900		1.4	340		1.4	120		1.4	100		1.4
1,4 DIOXANE BY 8270E-SIM																
1,4-Dioxane	0.4	1.25		0.032	1.09		0.0303	1.74		0.0308	13.6		0.0308	0.18		0.0314
TOTAL METALS																
Aluminum, Total	200	ND		3.27	66.2		3.27	4410		32.7	ND		32.7	2470		3.27
Arsenic, Total	3	ND		0.165	1.087		0.165	7.37		0.165	0.2768	J	0.165	4.693		0.165
Chromium, Total	70	0.2896	J	0.178	2.635		0.178	258.8		0.178	1.727		0.178	5.748		0.178
Iron, Total	300	44.2	J	19.1	11200		19.1	14200		19.1	101		19.1	17600		19.1
Manganese, Total	50	124.8		0.44	271.8		0.44	399.1		0.44	854.2		0.44	149.4		0.44
Nickel, Total	100	1.775	J	0.556	2.706		0.556	108.6		0.556	3.518		0.556	3.468		0.556
Sodium, Total	50000	77200		29.3	49600		29.3	1480000		293	1340000		293	424000		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	88.5		24	70.6	J	24	15900		240	23200		240	7170		24

J – estimated concentration, ND – non-detect

3.2.6 Annual Sampling Summary – AOC 14a – First Tankfield

In December 2022, groundwater samples were collected from monitoring wells TM-1, TM-2, TM-3, TM-4, TM-8, LPG-1, LPG-2, PER-4, and PER-5, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 14a – First Tankfield groundwater sampling event are summarized in **Table 10** and on **Figure 14**.

Tetrachloroethene (PCE) was identified at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well TM-2. No other targeted VOCs were detected at concentrations exceeding the GWQS in the AOC 14a monitoring wells. Benzo(a)anthracene was identified at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well PER-4. No other targeted SVOCs were detected at concentrations exceeding the GWQS in the AOC 14a monitoring wells. Several metals were detected at concentrations exceeding the GWQS in all groundwater samples, excluding monitoring well PER-5. Ammonia was identified at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well TM-3. The following tables summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	TM-1			TM-2			TM-3			TM-4			TM-8		
LAB ID:		L2270047-07			L2270047-08			L2270047-09			L2270408-03			L2270408-04		
COLLECTION DATE:		12/13/2022			12/13/2022			12/13/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Tetrachloroethene	**1**	ND		0.18	**1.4**		0.18	ND		0.18	ND		0.18	0.49	J	0.18
TOTAL METALS																
Aluminum, Total	**200**	185		3.27	168		3.27	60.4		3.27	**2730**		3.27	156		3.27
Arsenic, Total	**3**	0.5846		0.165	**39.86**		0.165	**5.173**		0.165	**54.33**		0.165	0.8768		0.165
Iron, Total	**300**	**318**		19.1	**78200**		19.1	**51900**		19.1	**148000**		19.1	**618**		19.1
Lead, Total	**5**	ND		0.343	ND		0.343	ND		0.343	**23.59**		0.343	0.3885	J	0.343
Manganese, Total	**50**	**1460**		0.44	**1670**		0.44	**3638**		0.44	**3882**		0.44	**4102**		0.44
Sodium, Total	**50000**	32700		29.3	35200		29.3	30400		29.3	14100		29.3	**97500**		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	**3000**	40.9	J	24	1090		48	**3270**		24	234	J	120	ND		24

SAMPLE ID:	NJ Groundwater Criteria	LPG-1			LPG-2			PER-4			PER-5		
LAB ID:		L2271942-03			L2271942-04			L2270765-05			L2271613-04		
COLLECTION DATE:		12/21/2022			12/21/2022			12/15/2022			12/20/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
SEMIVOLATILE ORGANICS BY GC/MS-SIM													
Benzo(a)anthracene	**0.1**	ND		0.02	ND		0.02	**0.14**		0.02	0.05	J	0.02
TOTAL METALS													
Aluminum, Total	**200**	**1310**		3.27	40.6		3.27	178		3.27	153		3.27
Arsenic, Total	**3**	1.903		0.165	0.8006		0.165	**17.61**		0.165	0.3059	J	0.165
Iron, Total	**300**	**3220**		19.1	**19800**		19.1	**10500**		19.1	151		19.1
Lead, Total	**5**	**7.933**		0.343	0.4571	J	0.343	1.607		0.343	0.5672	J	0.343
Manganese, Total	**50**	31.45		0.44	**133**		0.44	**163**		0.44	9.426		0.44
Sodium, Total	**50000**	5480		29.3	**74400**		29.3	**295000**		29.3	16600		29.3

J – estimated concentration, ND – non-detect

3.2.7 Annual Sampling Summary – AOC 16b – Marine Terminal Loading Area

In December 2022, groundwater samples were collected from monitoring wells DPP-1, MRVU-1, PER-7, PER-8, SRB-1, TL-1, TL-2, TL-3, TL-4, and TL-5, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 16b – Marine Terminal Loading Area groundwater sampling event are summarized in **Table 11** and on **Figure 15**.

Targeted VOCs were detected at concentrations exceeding the GWQS in monitoring wells TL-1, TL-2, TL-4, and TL-5. Targeted SVOCs were detected at concentrations exceeding the GWQS in the groundwater samples collected from monitoring wells PER-7, PER-8, SRB-1, TL-1, and TL-2. Metals were detected at concentrations exceeding the GWQS in groundwater samples collected from all monitoring wells. Ammonia was detected at concentrations exceeding the GWQS in the groundwater sample collected from monitoring well TL-1. The following tables summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	DPP-1			MRVU-1			PER-7			PER-8			SRB-1		
LAB ID:		L2269734-07			L2270047-12			L2268729-08			L2270047-11			L2268729-07		
COLLECTION DATE:		12/12/2022			12/13/2022			12/7/2022			12/13/2022			12/7/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
SEMIVOLATILE ORGANICS BY GC/MS-SIM																
Benzo(a)anthracene	**0.1**	0.06	J	0.02	0.05	J	0.02	**0.13**		0.02	0.08	J	0.02	**0.16**		0.02
Benzo(b)fluoranthene	**0.2**	0.09	J	0.01	ND		0.01	0.03	J	0.01	**0.21**		0.01	0.02	J	0.01
TOTAL METALS																
Aluminum, Total	**200**	**40400**		3.27	**527**		3.27	**1400**		3.27	**240**		3.27	**1490**		3.27
Arsenic, Total	**3**	**23.28**		0.165	**7.834**		0.165	2.074		0.165	1.313		0.165	**3.858**		0.165
Beryllium, Total	**1**	**3.005**		0.107	ND		0.107	ND		0.107	ND		0.107	0.2851	J	0.107
Cadmium, Total	**4**	**4.193**		0.0599	ND		0.0599	ND		0.0599	0.1118	J	0.0599	0.0615	J	0.0599
Chromium, Total	**70**	**141.5**		0.178	1.931		0.178	3.552		0.178	1.466		0.178	5.428		0.178
Iron, Total	**300**	**94400**		19.1	**9040**		19.1	**3340**		19.1	**645**		19.1	**9310**		19.1
Lead, Total	**5**	**217.3**		0.343	2.073		0.343	**8.588**		0.343	**5.883**		0.343	3.166		0.343
Manganese, Total	**50**	**793.2**		0.44	**105.2**		0.44	22.57		0.44	11.56		0.44	**149.2**		0.44
Mercury, Total	**2**	**3.523**		0.0915	ND		0.0915	0.102	J	0.0915	ND		0.0915	ND		0.0915
Nickel, Total	**100**	**124.1**		0.556	1.992	J	0.556	2.432		0.556	2.504		0.556	4.318		0.556
Sodium, Total	**50000**	**291000**		29.3	**172000**		29.3	42000		29.3	17300		29.3	36600		29.3

J – estimated concentration, ND – non-detect

SAMPLE ID:	NJ Groundwater Criteria	TL-1			TL-2			TL-3			TL-4			TL-5		
LAB ID:		L2268729-09			L2268729-11			L2271325-04			L2268729-10			L2271325-03		
COLLECTION DATE:		12/7/2022			12/7/2022			12/19/2022			12/7/2022			12/19/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Chlorobenzene	50	ND		0.18	1.4		0.18	7.6		0.18	200		0.36	95		0.89
Benzene	1	ND		0.08	28		0.08	0.45	J	0.08	0.64	J	0.16	2.4	J	0.4
Tert-Butyl Alcohol	100	150		1.4	11		1.4	2.6	J	1.4	29		2.8	ND		7
SEMIVOLATILE ORGANICS BY GC/MS-SIM																
Benzo(a)anthracene	0.1	0.42		0.02	0.14		0.02	ND		0.02	0.1	J	0.02	0.04	J	0.02
Benzo(a)pyrene	0.1	0.69		0.02	0.1	J	0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	0.2	1.2		0.01	0.15		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	0.2	0.72		0.01	0.16		0.01	ND		0.01	ND		0.01	ND		0.01
TOTAL METALS																
Aluminum, Total	200	2570		3.27	59.2		3.27	332		3.27	432		3.27	1910		3.27
Arsenic, Total	3	1.302		0.165	8.823		0.165	1.358		0.165	4.619		0.165	24.64		0.165
Iron, Total	300	41500		19.1	27300		19.1	3780		19.1	80500		19.1	52300		19.1
Lead, Total	5	32.61		0.343	0.7156	J	0.343	0.8772	J	0.343	1.529		0.343	7.53		0.343
Manganese, Total	50	1801		0.44	294.8		0.44	115.2		0.44	1426		0.44	313.9		0.44
Sodium, Total	50000	3280000		586	155000		29.3	652000		293	298000		29.3	79200		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	8990		24	451		24	408		24	1290		24	2080		24

J – estimated concentration, ND – non-detect

3.2.8 Annual Sampling Summary – AOC 19 - QC Laboratory

In December 2022, groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3, MW-4, and PER-6R, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 19 – QC Laboratory groundwater sampling event are summarized in **Table 12** and on **Figure 16**.

No targeted VOC or SVOCs compounds were detected at concentrations exceeding the GWQS in the groundwater samples collected from the AOC 19 monitoring wells. Several targeted metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well MW-4. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	MW-1			MW-2			MW-3			MW-4			PER-6R		
LAB ID:		L2267427-07			L2267427-05			L2267427-03			L2267427-06			L2267427-08		
COLLECTION DATE:		12/1/2022			12/1/2022			12/1/2022			12/1/2022			12/1/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
TOTAL METALS																
Aluminum, Total	200	1170		3.27	28.3		3.27	48		3.27	2340		3.27	1480		3.27
Arsenic, Total	3	2.071		0.165	6.807		0.165	2.502		0.165	3.287		0.165	2.054		0.165
Iron, Total	300	441		19.1	1740		19.1	1400		19.1	130		19.1	2360		19.1
Manganese, Total	50	24.98		0.44	354.8		0.44	79.83		0.44	3.292		0.44	8.565		0.44
Sodium, Total	50000	14800		29.3	67300		29.3	5380		29.3	41100		29.3	7780		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	ND		24	766		24	40.1	J	24	4050		24	ND		48

J – estimated concentration, ND – non-detect

3.2.9 Annual Sampling Summary – AOC 46 – Slop Gasoline Unloading Area

In December 2022, groundwater samples were collected from monitoring wells SG-1, SG-2, SG-3, and SG-4, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 46 – Slop Gasoline Unloading Area groundwater sampling event are summarized in **Table 13** and on **Figure 17**.

Benzene was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells SG-2, SG-3, and SG-4. No other targeted VOCs or targeted SVOCs compounds were detected at concentrations exceeding the GWQS in the groundwater samples collected from the AOC 46 monitoring wells. Several targeted metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well SG-1. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	SG-1			SG-2			SG-3			SG-4		
LAB ID:		L2270408-10			L2270408-09			L2270408-08			L2270408-07		
COLLECTION DATE:		12/14/2022			12/14/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
Benzene	1	0.08	J	0.08	6.6		0.08	6.9		0.08	8.3		0.08
TOTAL METALS													
Aluminum, Total	200	3380		32.7	346		3.27	371		3.27	790		3.27
Arsenic, Total	3	22.9		1.65	3.517		0.165	5.009		0.165	5.694		0.165
Iron, Total	300	12500		191	6920		19.1	5520		19.1	13100		19.1
Lead, Total	5	43.84		3.43	3.427		0.343	2.557		0.343	5.801		0.343
Manganese, Total	50	440.1		4.4	451.8		0.44	257.3		0.44	443.3		0.44
Sodium, Total	50000	3190000		293	157000		29.3	454000		146	316000		29.3
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	5340		48	1880		24	2040		48	1620		24

J – estimated concentration, ND – non-detect

3.2.10 Annual Sampling Summary – AOC 53 – Second Tankfield

In December 2022, groundwater samples were collected from monitoring wells 2TF-1, 2TF-2, 2TF-3, 2TF-4, 2TF-5, and 2TF-6 and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 53 – Second Tankfield groundwater sampling event are summarized in **Table 14** and on **Figure 18**.

Benzene and tert-butylalcohol (TBA) were detected at concentrations exceeding their GWQS in the groundwater sample collected from monitoring well 2TF-4. No other targeted VOCs were detected at concentrations exceeding the GWQS in the groundwater samples collected from the remaining AOC 19 monitoring wells. Targeted SVOCs were detected at concentrations exceeding the GWQS in monitoring wells 2TF-3, 2TF-4, and

2TF-6. Several targeted metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells 2TF-4, 2TF-5, and 2TF-6. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	2TF-1			2TF-2			2TF-3			2TF-4			2TF-5			2TF-6		
LAB ID:		L2268106-03			L2270408-05			L2268454-03			L2268106-08			L2268106-05			L2268106-04		
COLLECTION DATE:		12/5/2022			12/14/2022			12/6/2022			12/5/2022			12/5/2022			12/5/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
Benzene	1	ND		0.08	ND		0.08	ND		0.08	36		0.08	ND		0.08	ND		0.08
Tert-Butyl Alcohol	100	ND		1.4	ND		1.4	ND		1.4	190		1.4	ND		1.4	26		1.4
1,4 DIOXANE BY 8270E-SIM																			
1,4-Dioxane	0.4	0.0741	J	0.0339	ND		0.0339	1.96		0.0339	0.755		0.0332	0.195		0.0377	1.06		0.0339
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	0.05	J	0.02	ND		0.02	0.04	J	0.02	0.02	J	0.02	0.06	J	0.02	0.21	J	0.1
Pentachlorophenol	0.3	ND		0.01	ND		0.01	0.17	J	0.01	ND		0.01	ND		0.01	0.51	J	0.07
TOTAL METALS																			
Aluminum, Total	200	61.7		3.27	399		3.27	180		3.27	21.6		3.27	97		3.27	349		3.27
Arsenic, Total	3	0.7473		0.165	0.464	J	0.165	14.56		0.165	29.65		0.165	8.526		0.165	3.983		0.165
Iron, Total	300	210		19.1	726		19.1	4230		19.1	24600		19.1	12500		19.1	25200		19.1
Manganese, Total	50	5808		0.44	30.72		0.44	231		0.44	262.7		0.44	246.5		0.44	357.1		0.44
Sodium, Total	50000	93600		29.3	8820		29.3	99800		29.3	716000		293	112000		29.3	472000		29.3
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	180		24	67.6	J	48	106		24	14300		24	4920		24	10800		24

J – estimated concentration, ND – non-detect

3.2.11 Annual Sampling Summary – AOC 54 – Third Tankfield

In December 2022, groundwater samples were collected from monitoring wells TF-1, TF-1D, TF-3, TF-4, TF-4D, TF-5, TF-6 SM-1, and SM-1D and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 TRMU groundwater sampling event are presented on **Table 15** and **Figure 19**.

Targeted VOCs and SVOCs were detected at a concentration exceeding the GWQS from the groundwater samples collected from monitoring wells TF-1, TF-1D, TF-4, TF-4D, and TF-5. Targeted VOCs and SVOCs were not detected in the remaining AOC 54 wells. Targeted metals were detected at concentrations exceeding the GWQS in all AOC 54 monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in monitoring wells SM-1D, TF-4D, and TF-5. The following tables summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	SM-1			SM-1D			TF-1			TF-1D			TF-2		
LAB ID:		L2270765-07			L2270765-06			L2271613-03			L2271325-07			L2271325-12		
COLLECTION DATE:		12/15/2022			12/15/2022			12/20/2022			12/19/2022			12/19/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
1,1-Dichloroethene	1	ND		0.17	ND		0.17	ND		0.17	2.7		0.17	ND		0.17
1,4 DIOXANE BY 8270E-SIM																
1,4-Dioxane	0.4	ND		0.0326	0.18		0.0314	ND		0.0303	29.5		0.0314	ND		0.0303
SEMIVOLATILE ORGANICS BY GC/MS-SIM																
Benzo(a)anthracene	0.1	0.1		0.02	0.08	J	0.02	0.18	J	0.1	0.08	J	0.02	0.05	J	0.02
TOTAL METALS																
Aluminum, Total	200	1920		3.27	2470		3.27	48.7		3.27	123		3.27	28.6		3.27
Arsenic, Total	3	1.391		0.165	4.693		0.165	13.48		0.165	1.096		0.165	0.9353		0.165
Iron, Total	300	4050		19.1	17600		19.1	14800		19.1	2660		19.1	3440		19.1
Lead, Total	5	11.15		0.343	4.766		0.343	1.197		0.343	0.869	J	0.343	ND		0.343
Manganese, Total	50	55.64		0.44	149.4		0.44	105.8		0.44	92.02		0.44	65.78		0.44
Sodium, Total	50000	69400		29.3	424000		29.3	10300		29.3	190000		29.3	8360		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	189		24	7170		24	1140		24	1960		24	457		24

SAMPLE ID:	NJ Groundwater Criteria	TF-3			TF-4			TF-4D			TF-5			TF-6		
LAB ID:		L2271325-11			L2269734-09			L2269734-10			L2269734-12			L2269734-11		
COLLECTION DATE:		12/19/2022			12/12/2022			12/12/2022			12/12/2022			12/12/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Benzene	1	0.55		0.08	5		0.08	18		0.32	13		0.08	0.17	J	0.08
Vinyl chloride	1	ND		0.07	ND		0.07	1.2		0.28	ND		0.07	ND		0.07
Chloroethane	5	ND		0.13	ND		0.13	5.2		0.54	ND		0.13	ND		0.13
1,1-Dichloroethene	1	ND		0.17	ND		0.17	17		0.68	ND		0.17	ND		0.17
Tert-Butyl Alcohol	100	ND		1.4	83		1.4	62		5.6	200		1.4	2	J	1.4
1,4 DIOXANE BY 8270E-SIM																
1,4-Dioxane	0.4	ND		0.0303	0.155		0.0314	52.2		0.032	0.585		0.0314	ND		0.0314
SEMIVOLATILE ORGANICS BY GC/MS																
Naphthalene	300	ND		0.46	0.67	J	0.46	380		4.6	ND		0.46	0.71	J	0.46
2-Methylnaphthalene	30	ND		0.45	ND		0.45	45		4.5	2.6		0.45	ND		0.45
TOTAL METALS																
Aluminum, Total	200	16.8		3.27	487		3.27	291		3.27	8860		3.27	2350		3.27
Arsenic, Total	3	2.56		0.165	21.71		0.165	2.012		0.165	24.07		0.165	3.454		0.165
Iron, Total	300	1150		19.1	8600		19.1	21100		19.1	83100		19.1	6390		19.1
Lead, Total	5	ND		0.343	5.884		0.343	1.898		0.343	102.9		0.343	44.34		0.343
Manganese, Total	50	19.43		0.44	78.86		0.44	296.7		0.44	688.2		0.44	72.86		0.44
Sodium, Total	50000	12200		29.3	166000		29.3	320000		29.3	58500		29.3	30400		29.3
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	261		24	2800		24	3550		24	4900		24	271		24

J – estimated concentration, ND – non-detect

3.2.12 Annual Sampling Summary – AOC 55 – Fourth Tankfield

In December 2022, groundwater samples were collected from monitoring wells 3TF-1, 3TF-1D, 3TF-2, and 3TF-3, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 55 – Fourth Tankfield groundwater sampling event are summarized in **Table 16** and on **Figure 20**.

Targeted VOCs and SVOCs were detected at concentrations exceeding the GWQS in monitoring wells 3TF-1, 3TF-1D, and 3TF-3. Targeted metals were detected at

concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well 3TF-3. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	3TF-1			3TF-1D			3TF-2			3TF-3		
LAB ID:		L2271325-10			L2271325-09			L2271325-06			L2270408-06		
COLLECTION DATE:		12/19/2022			12/19/2022			12/19/2022			12/14/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
Benzene	1	2800		2	160		0.16	ND		0.08	ND		0.08
Ethylbenzene	700	1600		4.2	2.5		0.33	ND		0.17	ND		0.17
Xylenes, Total	1000	5300		8.3	23		0.66	ND		0.33	ND		0.33
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	ND		0.0314	ND		0.0314	ND		0.0368	1.47		0.0314
SEMIVOLATILE ORGANICS BY GC/MS													
2-Methylnaphthalene	30	40		0.45	ND		0.45	ND		0.45	ND		0.45
TOTAL METALS													
Aluminum, Total	200	209		3.27	205		3.27	155		3.27	13200		32.7
Arsenic, Total	3	11.6		0.165	1.465		0.165	3.816		0.165	42.78		1.65
Iron, Total	300	77600		19.1	5930		19.1	1950		19.1	28800		191
Lead, Total	5	2.748		0.343	0.6104	J	0.343	0.6713	J	0.343	29.25		3.43
Manganese, Total	50	1310		0.44	265.7		0.44	43.05		0.44	226.7		4.4
Sodium, Total	50000	28500		29.3	83700		29.3	37500		29.3	5280000		1460
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	539		24	352		24	598		24	24800		120

J – estimated concentration, ND – non-detect

3.2.13 Annual Sampling Summary – AOC 56 – Second Reserve Tankfield

In December 2022, groundwater samples were collected from monitoring wells RTF-1, RTF-2, RTF-3, RTF-4, RTF-5, and RTF-6 and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 56 – Second Reserve Tankfield groundwater sampling event are summarized in **Table 17** and on **Figure 21**.

Targeted VOCs and SVOCs were detected at concentrations exceeding the GWQS in monitoring wells RTF-1, RTF-2, RTF-3, and RTF-6. Targeted metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater sample collected from monitoring well RTF-6. The following table summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	RTF-1			RTF-2			RTF-3			RTF-4			RTF-5			RTF-6		
LAB ID:		L2270408-11			L2270408-12			L2270765-03			L2270047-10			L2270408-13			L2270765-04		
COLLECTION DATE:		12/14/2022			12/14/2022			12/15/2022			12/13/2022			12/14/2022			12/15/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
Chlorobenzene	50	ND		0.18	ND		1.8	2.7		0.18	ND		0.18	ND		0.18	260		0.44
Benzene	1	20		0.08	55		0.8	4.6		0.08	ND		0.08	ND		0.08	0.38	J	0.2
Ethylbenzene	700	5.7		0.17	1000		1.7	0.44	J	0.17	0.31	J	0.17	ND		0.17	ND		0.42
Methyl tert butyl ether	70	70		0.17	86		1.7	1.2		0.17	0.25	J	0.17	ND		0.17	ND		0.42
Xylenes, Total	1000	6.2	J	0.33	2200		3.3	1.9	J	0.33	ND		0.33	ND		0.33	29	J	0.83
Tert-Butyl Alcohol	100	120		1.4	160		14	5.3	J	1.4	3.9	J	1.4	ND		1.4	ND		3.5
SEMIVOLATILE ORGANICS BY GC/MS																			
Naphthalene	300	16		0.46	680		2.3	2.4		0.46	ND		0.46	ND		0.46	0.57	J	0.46
2-Methylnaphthalene	30	10		0.45	11		0.45	140		0.45	ND		0.45	ND		0.45	0.62	J	0.45
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	0.02	J	0.02	ND		0.02	0.08	J	0.02	0.08	J	0.02	ND		0.02	0.15		0.02
TOTAL METALS																			
Aluminum, Total	200	535		3.27	776		3.27	65.3		3.27	31800		3.27	375		3.27	284		3.27
Arsenic, Total	3	25.46		0.165	14.73		0.165	25.55		0.165	97.9		0.165	4.202		0.165	41		0.165
Beryllium, Total	1	ND		0.107	ND		0.107	ND		0.107	1.978		0.107	ND		0.107	ND		0.107
Chromium, Total	70	2.266		0.178	2.874		0.178	0.549	J	0.178	121.3		0.178	1.082		0.178	1.278		0.178
Iron, Total	300	64000		19.1	52000		19.1	36600		19.1	167000		19.1	13600		19.1	34100		19.1
Lead, Total	5	3.584		0.343	10.12		0.343	0.5279	J	0.343	286.1		0.343	1.84		0.343	2.578		0.343
Manganese, Total	50	316.4		0.44	343.2		0.44	208.3		0.44	2083		0.44	499.6		0.44	268.1		0.44
Nickel, Total	100	2.574		0.556	2.95		0.556	ND		0.556	101.8		0.556	1.303	J	0.556	0.7643	J	0.556
Sodium, Total	50000	68000		29.3	202000		29.3	30400		29.3	244000		29.3	351000		29.3	284000		29.3
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	1400		24	2320		48	1130		24	3000		240	1420		48	3480		24

J – estimated concentration, ND – non-detect

3.2.14 Annual Sampling Summary – AOC 57 – Day Tankfield

In December 2022, groundwater samples were collected from monitoring wells DT-1D, DT-3, DT-3D, DT-5, DT-5D, DT-5DD, and DT-6, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 57 – Day Tankfield groundwater sampling event are summarized in **Table 18** and on **Figure 22**.

Targeted VOCs and SVOCs were detected at concentrations exceeding the GWQS in all wells excluding monitoring well DT-5DD. Targeted metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells DT-5 and DT-6. The following tables summarizes the analytical results.

Shallow Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	DT-3			DT-5			DT-6		
LAB ID:		L2269477-06			L2269477-04			L2268454-10		
COLLECTION DATE:		12/9/2022			12/9/2022			12/6/2022		
SAMPLE MATRIX:		WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS										
1,1,2,2-Tetrachloroethane	1	ND		1.7	1.1	J	0.84	ND		0.17
Benzene	1	ND		0.8	0.42	J	0.4	2.5		0.08
Vinyl chloride	1	ND		0.71	700		0.36	ND		0.07
Methyl tert butyl ether	70	72		1.7	7.3		0.83	17		0.17
Tert-Butyl Alcohol	100	21000		14	2100		7	5500	E	1.4
1,4 DIOXANE BY 8270E-SIM										
1,4-Dioxane	0.4	9.28		0.0353	1.03		0.0332	6.45		0.0326
SEMIVOLATILE ORGANICS BY GC/MS-SIM										
Benzo(a)anthracene	0.1	ND		0.02	ND		0.02	0.19		0.02
Hexachlorobenzene	0.02	ND		0.01	ND		0.01	0.2	B	0.01
TOTAL METALS										
Aluminum, Total	200	1940		32.7	3000		32.7	463		3.27
Arsenic, Total	3	2.495		0.165	18.45		0.165	33.53		0.165
Iron, Total	300	2360		19.1	245000		19.1	58900		19.1
Lead, Total	5	2.832		0.343	19.49		0.343	1.215		0.343
Manganese, Total	50	4670		0.44	3671		0.44	300.6		0.44
Sodium, Total	50000	140000		293	83100		293	197000		29.3
GENERAL CHEMISTRY										
Nitrogen, Ammonia	3000	47.8	J	24	10500		48	12800		24

Intermediate and Deep Groundwater Analytical Results

SAMPLE ID:	NJ Groundwater Criteria	DT-1D			DT-3D			DT-5D			DT-5DD		
LAB ID:		L2267783-04			L2269477-05			L2268454-11			L2268454-09		
COLLECTION DATE:		12/2/2022			12/9/2022			12/6/2022			12/6/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS													
1,2-Dichloroethane	2	3.6		0.13	0.54		0.13	0.6		0.13	ND		0.13
1,1-Dichloroethene	1	5		0.17	0.46	J	0.17	ND		0.17	ND		0.17
Methyl tert butyl ether	70	ND		0.17	54		0.17	300		0.17	3.4		0.17
Tert-Butyl Alcohol	100	ND		1.4	830		1.4	9100		1.4	9.8	J	1.4
1,4 DIOXANE BY 8270E-SIM													
1,4-Dioxane	0.4	5.1		0.0314	1.19		0.0353	1.8		0.0303	0.221		0.032
TOTAL METALS													
Aluminum, Total	200	772		3.27	17.9		3.27	51.7		3.27	66.2		3.27
Iron, Total	300	3300		19.1	1160		19.1	999		19.1	13400		19.1
Manganese, Total	50	59.41		0.44	65.3		0.44	15.89		0.44	349		0.44
Sodium, Total	50000	82200		29.3	78500		293	77700		29.3	17000		29.3
GENERAL CHEMISTRY													
Nitrogen, Ammonia	3000	165	J	120	59.9	J	24	91.2		24	81.2		24

J – estimated concentration, ND – non-detect

3.2.15 Annual Sampling Summary – Southern Remediation Management Unit (SRMU)

In December 2022, groundwater samples were collected from monitoring wells PL-1RR, PL-2, PL-3R, PL-4RR, PL-6RR, PL-7R, PL-8R, PL-9R, TM-5, TM-6R, and TM-7, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 SRMU groundwater sampling event are summarized in **Table 19** and on **Figure 23**.

Benzene was detected at concentrations exceeding the GWQS in the groundwater samples collected from monitoring wells PL-1RR, PL-6RR and TM-6R. Benzo(a)anthracene was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells PL-1RR, PL-2 and PL-8R. No other targeted VOCs or SVOCs were detected in the remaining SRMU monitoring wells. Several metals were detected at concentrations exceeding the GWQS in all groundwater samples. Ammonia was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells PL-2, PL-6RR and TM-6R. The following tables summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	PL-1RR			PL-2			PL-3R			PL-4RR			PL-6RR			PL-7R		
LAB ID:		L2270047-05			L2270047-06			L2270047-03			L2269734-06			L2268454-06			L2271325-08		
COLLECTION DATE:		12/13/2022			12/13/2022			12/13/2022			12/12/2022			12/6/2022			12/19/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																			
Benzene	1	1.4		0.08	0.59		0.08	0.92		0.08	ND		0.08	2.8		0.08	0.46	J	0.08
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	0.13		0.02	0.13		0.02	0.05	J	0.02	0.02	J	0.02	0.07	J	0.02	0.06	J	0.02
TOTAL METALS																			
Aluminum, Total	200	13.6		3.27	12.8		3.27	22.2		3.27	602		3.27	183		3.27	1030		3.27
Arsenic, Total	3	3.038		0.165	2.536		0.165	0.9575		0.165	3.474		0.165	3.206		0.165	51.88		0.165
Iron, Total	300	757		19.1	26300		19.1	1840		19.1	818		19.1	22900		19.1	95600		19.1
Lead, Total	5	0.5635	J	0.343	ND		0.343	ND		0.343	5.65		0.343	0.7541	J	0.343	7.925		0.343
Manganese, Total	50	106.3		0.44	545.4		0.44	33.78		0.44	13.81		0.44	775.9		0.44	1086		0.44
Sodium, Total	50000	182000		29.3	144000		29.3	138000		29.3	38600		29.3	378000		29.3	38100		29.3
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	1630		24	3310		24	1660		24	70.4	J	24	7050		24	1080		24

SAMPLE ID:	NJ Groundwater Criteria	PL-8R			PL-9R			TM-5			TM-6R			TM-7		
LAB ID:		L2270765-08			L2270047-04			L2268454-05			L2268729-06			L2269477-07		
COLLECTION DATE:		12/15/2022			12/13/2022			12/6/2022			12/7/2022			12/9/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																
Benzene	1	ND		0.08	ND		0.08	ND		0.08	3.7		0.08	0.22	J	0.08
SEMIVOLATILE ORGANICS BY GC/MS-SIM																
Benzo(a)anthracene	0.1	0.16		0.02	0.04	J	0.02	0.04	J	0.02	0.08	J	0.02	ND		0.02
TOTAL METALS																
Aluminum, Total	200	506		3.27	77.6		3.27	82.6		3.27	62.4		3.27	6.58	J	3.27
Arsenic, Total	3	1.711		0.165	2.705		0.165	0.6683		0.165	1.988		0.165	6.498		0.165
Iron, Total	300	946		19.1	2390		19.1	136		19.1	21600		19.1	15800		19.1
Lead, Total	5	6.996		0.343	1.298		0.343	0.5762	J	0.343	0.9146	J	0.343	ND		0.343
Manganese, Total	50	16.98		0.44	78.62		0.44	165.8		0.44	835.1		0.44	4000		0.44
Sodium, Total	50000	15600		29.3	15800		29.3	229000		29.3	22900		29.3	67300		293
GENERAL CHEMISTRY																
Nitrogen, Ammonia	3000	66	J	24	97.3	J	48	75.9		24	3050		24	823		24

J – estimated concentration, ND – non-detect

3.2.16 Annual Sampling Summary – AOC 103 – Fire Fighting Training Area/Fire Pits

In December 2022, groundwater samples were collected from monitoring wells FA-1, FA-2, FA-3, FA-4, FA-6, FA-7, FA-8, FA-9, FA-10, FA-11, FA-12, FA-13, FA-14, FA-16, FA-17, FA-18, FA-19, FA-20, and FA-21, and analyzed for VOCs, SVOCs, metals, and general chemistry parameters. Analytical results from the December 2022 AOC 103 groundwater sampling event are summarized in **Table 20** and on **Figure 24**.

Benzene was detected at concentrations exceeding the GWQS in the groundwater sample collected from monitoring well FA-13. Targeted VOCs were not detected in the remaining AOC 103 monitoring wells. Targeted SVOCs were detected at concentrations exceeding the GWQS in monitoring wells FA-6 and FA-18. No other targeted SVOCs were detected at concentrations exceeding the GWQS in the groundwater samples collected from the remaining AOC 103 monitoring wells. Several metals were detected at concentrations exceeding the GWQS in the groundwater samples collected from all AOC 103 monitoring wells. Ammonia was detected at a concentration exceeding the GWQS in the groundwater samples collected from monitoring wells FA-4 and FA-13. The following tables summarizes the analytical results.

SAMPLE ID:	NJ Groundwater Criteria	FA-1			FA-2			FA-3			FA-4			FA-6			FA-7		
LAB ID:		L2266497-08			L2266497-07			L2266497-06			L2266718-03			L2266497-04			L2268106-11		
COLLECTION DATE:		11/28/2022			11/28/2022			11/28/2022			11/28/2022			11/28/2022			12/5/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Benzo(a)anthracene	0.1	ND		0.02	0.02	J	0.02	0.03	J	0.02	0.04	J	0.02	0.16	J	0.1	0.03	J	0.02
TOTAL METALS																			
Aluminum, Total	200	21.6		3.27	393		3.27	31		3.27	30.6		3.27	111		3.27	1320		3.27
Arsenic, Total	3	4.874		0.165	26.7		0.165	52.32		0.165	39.54		0.165	98.52		0.165	3.349		0.165
Iron, Total	300	149		19.1	4780		19.1	78800		19.1	40500		19.1	70000		19.1	5260		19.1
Lead, Total	5	ND		0.343	3.092		0.343	ND		0.343	0.6206	J	0.343	0.683	J	0.343	10.35		0.343
Manganese, Total	50	90.6		0.44	109.3		0.44	362.9		0.44	157		0.44	417.8		0.44	42.8		0.44
Sodium, Total	50000	32900		29.3	24900		29.3	50600		29.3	236000		29.3	44800		29.3	11600		29.3
GENERAL CHEMISTRY																			
Nitrogen, Ammonia	3000	496		24	115		24	2740		24	9340		48	1100		24	64	J	24

SAMPLE ID:	NJ Groundwater Criteria	FA-8			FA-9			FA-10			FA-11			FA-12			FA-13			FA-14		
LAB ID:		L2268106-09			L2268106-12			L2268106-13			L2269734-08			L2267054-06			L2267054-04			L2266497-05		
COLLECTION DATE:		12/5/2022			12/5/2022			12/5/2022			12/12/2022			11/30/2022			11/30/2022			11/28/2022		
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																						
Benzene	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08	0.12	J	0.08	1.2		0.08	0.13	J	0.08
TOTAL METALS																						
Aluminum, Total	200	20.2		3.27	375		3.27	72.3		3.27	773		3.27	55.6		3.27	12.1		3.27	95.4		3.27
Arsenic, Total	3	25.4		0.165	1.131		0.165	0.6163		0.165	15.5		0.165	13.22		0.165	2.168		0.165	63.96		0.165
Iron, Total	300	14100		19.1	1290		19.1	353		19.1	8380		19.1	26600		19.1	19400		19.1	41800		19.1
Manganese, Total	50	182.7		0.44	121.5		0.44	23.12		0.44	152.9		0.44	302.4		0.44	331.4		0.44	206.7		0.44
Sodium, Total	50000	57400		29.3	20100		29.3	8450		29.3	217000		29.3	172000		29.3	78000		29.3	14000		29.3
GENERAL CHEMISTRY																						
Nitrogen, Ammonia	3000	290		24	148		24	66	J	24	257		24	1750		24	3080		24	2640		24

J – estimated concentration, ND – non-detect

SAMPLE ID:	NJ Groundwater Criteria	FA-16			FA-17			FA-18			FA-19			FA-20			FA-21		
LAB ID:		L2266497-03			L2266718-05			L2266718-04			L2267054-03			L2266718-06			L2268106-10		
COLLECTION DATE:		11/28/2022			11/29/2022			11/29/2022			11/30/2022			11/29/2022			12/5/2022		
SAMPLE DEPTH:																			
SAMPLE MATRIX:		WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
SEMIVOLATILE ORGANICS BY GC/MS-SIM																			
Pentachlorophenol	**0.3**	ND		0.01	ND		0.01	**0.74**		0.01	ND		0.01	ND		0.01	ND		0.01
TOTAL METALS																			
Aluminum, Total	**200**	164		3.27	196		3.27	36.5		3.27	24.1		3.27	20.3		3.27	**212**		3.27
Arsenic, Total	**3**	**5.19**		0.165	0.3383	J	0.165	**11.65**		0.165	1.08		0.165	**20.31**		0.165	**10.27**		0.165
Iron, Total	**300**	**2130**		19.1	**459**		19.1	**2290**		19.1	**24300**		19.1	**17200**		19.1	**13400**		19.1
Manganese, Total	**50**	**64.64**		0.44	3.183		0.44	**328.9**		0.44	**409.1**		0.44	**538.9**		0.44	**160.8**		0.44
Sodium, Total	**50000**	22700		29.3	6320		29.3	13400		29.3	**80400**		29.3	**73200**		29.3	39100		29.3

J – estimated concentration, ND – non-detect

4.0 Areas of Concern and Solid Waste Management Units Update

As discussed previously, a PAR and SIR were submitted to the NJDEP and USEPA on October 9, 2015 and November 7, 2015, respectively. The SIR described the soil and groundwater investigation activities conducted on the site. Several RIW's were submitted subsequent to the SI for select AOCs. The following is a brief summary of any remediation and/or RI activities conducted during Q4 2022.

AOC-3 No. 1 Landfarm (SWMU)

A RAW was submitted to the USEPA and NJDEP in September 2016 and comments were received from the USEPA and NJDEP on July 9, 2018. A 100% Soil RAD for the No. 1 Landfarm engineering control was submitted on May 24, 2019. Comments regarding the 100% engineering control design submittal were received from the NJDEP on October 7, 2019. The comments were addressed by Hess/Earth Systems on November 1, 2019 and the NJDEP subsequently approved the response. The NJDEP and USEPA issued an approval letter of the 100% RAD on April 28, 2020.

The following permits were submitted in June 2020 and October 2020 and have been approved by the NJDEP on the dates provided:

- Soil Erosion & Sediment Control Plan (Freehold Soil Conservation District), approved on August 17, 2020
- Flood Hazard Area Individual Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- Waterfront Development GP-11 Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- Freshwater Wetland GP-4 Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- NJPDES B4B Permit (NJDEP Wastewater Program), approved on September 15, 2020
- Treatment Works Approval TWA-1 Permit (NJDEP Wastewater Program), approved on February 18, 2021
- NJPDES Individual Permit (NJDEP Stormwater Program), public comment period is over and approved on August 1, 2021.

The Pre & Post Closure Groundwater Sampling Plan for the No. 1 Landfarm was submitted on August 25, 2021 to the NJDEP and USEPA. The NJDEP provided comments on January 26, 2022 and a response was provided on April 22, 2022. The NJDEP provided additional comments on July 6, 2022 and a response was provided on October 18, 2022. The NJDEP approved the plan on November 14, 2022. The sampling plan will be implemented in 2023 and the analytical results documented in the July 2023 Semi-Annual Report.

Landfarm capping and construction activities were initiated in October 2021 and completed in October 2022. Closure documents, including a draft Deed Notice, are currently being prepared.

Site-wide LNAPL Monitoring & Recovery

Bi-weekly gauging events continue to be conducted as part of the IRM at the site. In addition, LNAPL will continue to be removed via vacuum truck from both the interceptor trench and select monitoring wells, as necessary. Absorbent socks and booms will also continue to be deployed in both the interceptor trench and select monitoring wells, as necessary.

AOC 10 – Truck Loading Rack and AOC 57 – Day Tankfield

As discussed during the Q3 Quarterly meeting, "At Risk" investigation activities began in October 2021 and are currently ongoing. At the completion of all AOC RI activities, a final AOC 10 and AOC 57 RIR will be submitted that will document all investigation data and observations.

As summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC group.

AOC 12 – Smith Creek and Detention Basin

A Supplemental RIR/RIW was submitted in Q1 2020. Based upon subsequent discussions with NJDEP/USEPA pertaining to the Port Reading June 9, 2020 memo (i.e. the "over-arching issues" memo), the RIR/RIW was rescinded and revised to incorporate the additional requested information. The revised RIR/RIW was submitted on July 30, 2021. The NJDEP provided comments on February 23, 2022, and Earth Systems/Hess submitted a response on October 24, 2022. The supplemental RI activities will be conducted once the NJDEP completes their review of the October 2022 RTC.

In addition, as summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC.

AOC 103 – Fire Pits/Fire Training Area (Part of AOC Group – Proposed Future Solar Field Area)

The RIW was approved on October 12, 2021 and RI activities began in November 2021 and are ongoing. At the completion of all AOC RI activities, a final RIR, for this AOC group, will be submitted that will document all investigation data and observations.

As summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC group.

AOC 11a – Administration Building

A meeting was held on March 16, 2022, to discuss delineation activities for AOC 11a and Site drilling constraints. A power point presentation was provided to the NJDEP and USEPA on March 11, 2022, which summarized historic investigation activities and proposed future investigation activities. The NJDEP requested additional information via

email dated March 17, 2022. The additional information was provided to the NJDEP/USEPA on April 21, 2022. A Site visit with the NJDEP/USEPA occurred on April 27, 2022. The NJDEP requested additional information regarding drainage plans for the neighboring property. Earth Systems/Hess is currently reviewing information provided by the neighboring property and will provide the supplemental information to the NJDEP/USEPA in Q1 2023.

As summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC group.

Former Marine Loading Dock Area

The Marine Loading Dock Area RIW was submitted on July 12, 2021. As discussed during the Q3 Quarterly meeting, “At Risk” investigation activities began during Q1 2022 and are currently ongoing. At the completion of all AOC RI activities, a final RIR, for this AOC group, will be submitted that will document all investigation data and observations.

As summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC group.

Tankfields

As discussed during the Q3 USEPA/NJDEP/Hess/Earth Systems meeting, “At Risk” investigation activities began during Q1 2022 and are currently ongoing. At the completion of all AOC RI activities, a final RIR, for this AOC group, will be submitted that will document all investigation data and observations.

As summarized in this report, annual groundwater sampling was conducted in December 2022. Annual groundwater sampling results will be incorporated into the final RIR for this AOC group.

Landfarms

The next quarterly sampling event for the landfarms is scheduled for January 2023.

AOC 1 – North Landfarm (SWMU)

Routine groundwater monitoring will continue at the North Landfarm, pending approval and execution of the proposed Closure Plan. A RAW was submitted to the USEPA and NJDEP for the North Landfarm in September 2016. Comments were received from the USEPA and NJDEP on June 7, 2018. A 90% Soil Remediation Action Design (RAD) for the North Landfarm engineering control was submitted to the USEPA and NJDEP on October 24, 2019. The NJDEP and USEPA issued an approval letter for the 90% design on April 28, 2020. The current owner, Buckeye, completed the lining of the tankfield located directly adjacent to the North Landfarm. The 100% RAD is in the process of being finalized for 2023 submittal.

The updated Groundwater Sampling Plan for the North Landfarm is being prepared with a targeted submittal in 2023.

AOC 2 – South Landfarm (SWMU)

Routine groundwater monitoring will continue at the South Landfarm, pending approval and execution of the proposed Closure Plan. A RAW was submitted to the USEPA and NJDEP for the South Landfarm in September 2016. Comments were received from the USEPA and NJDEP on March 20, 2019. A RIW was submitted for AOC 13- Former Oily Water Lagoon Area on August 8, 2022, which is adjacent to the South Landfarm. A response will be provided to the NJDEP South Landfarm comments once an investigation of the AOC 13 area is complete.

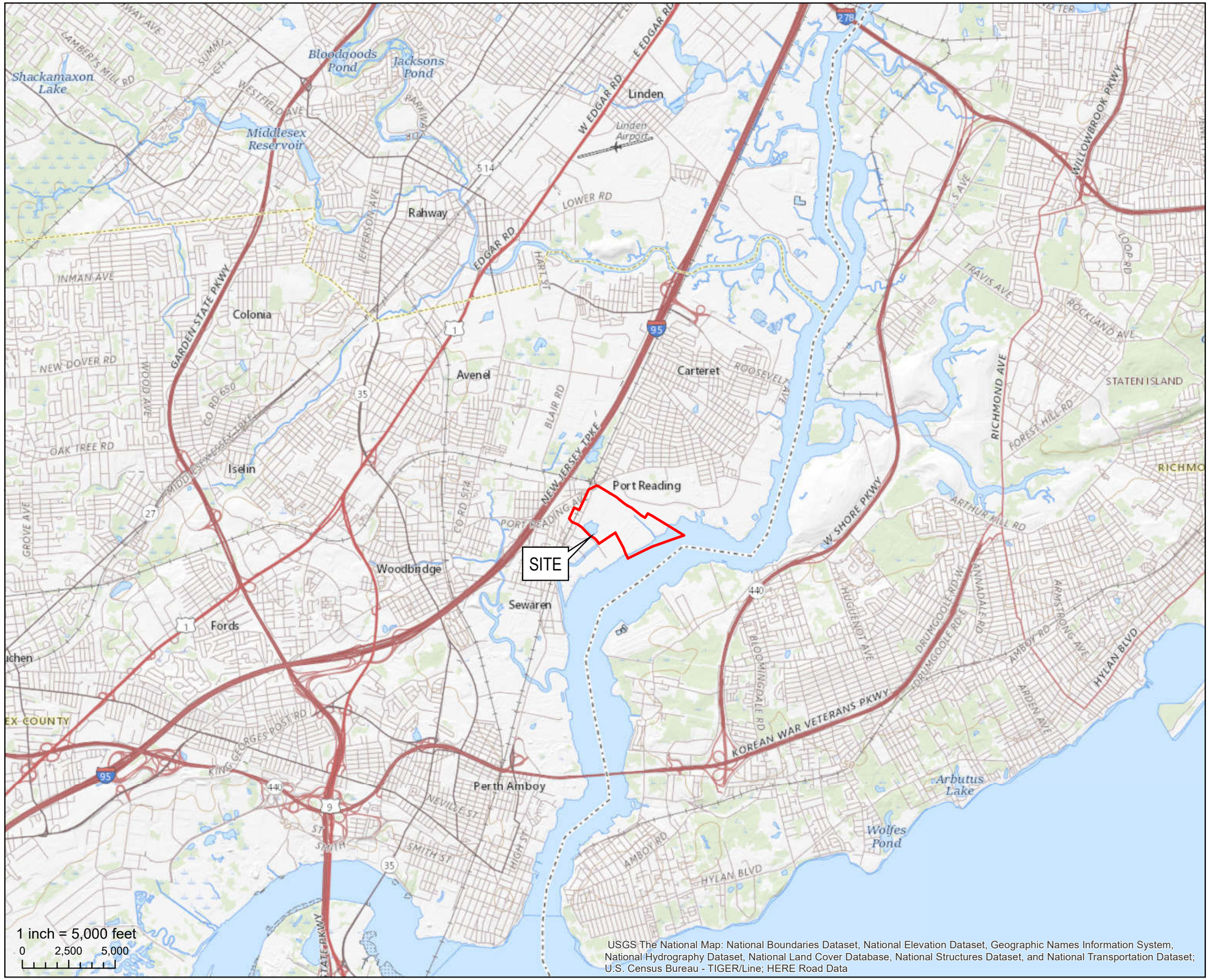
The updated Groundwater Sampling Plan for the South Landfarm is being prepared and will be submitted once the RI is complete for AOC 13.

AOC 3 – No. 1 Landfarm (SWMU)

The Pre & Post Closure Groundwater Sampling Plan for the No. 1 Landfarm was submitted on August 25, 2021 to the NJDEP and USEPA and approved on November 14, 2022. Groundwater monitoring will be conducted in accordance with the approved plan in 2023 and going forward. Analytical results will continue to be documented in the Semi-Annual Reports.

Remedial capping activities began in October 2021 for the No. 1 Landfarm and were completed in October 2022. Closure documents are currently being prepared to document the remedial action.

Figures



N

LEGEND

Port Reading Site Boundary

NEW JERSEY QUADRANGLE LOCATION:
53 - JERSEY CITY, NEW JERSEY

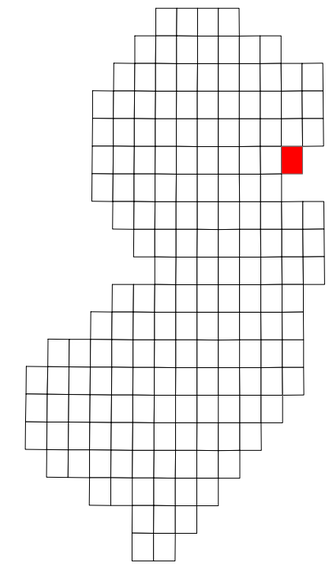


FIGURE 1:
USGS SITE LOCATION MAP

HESS CORPORATION
FORMER PORT READING TERMINAL
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	4/16/2020
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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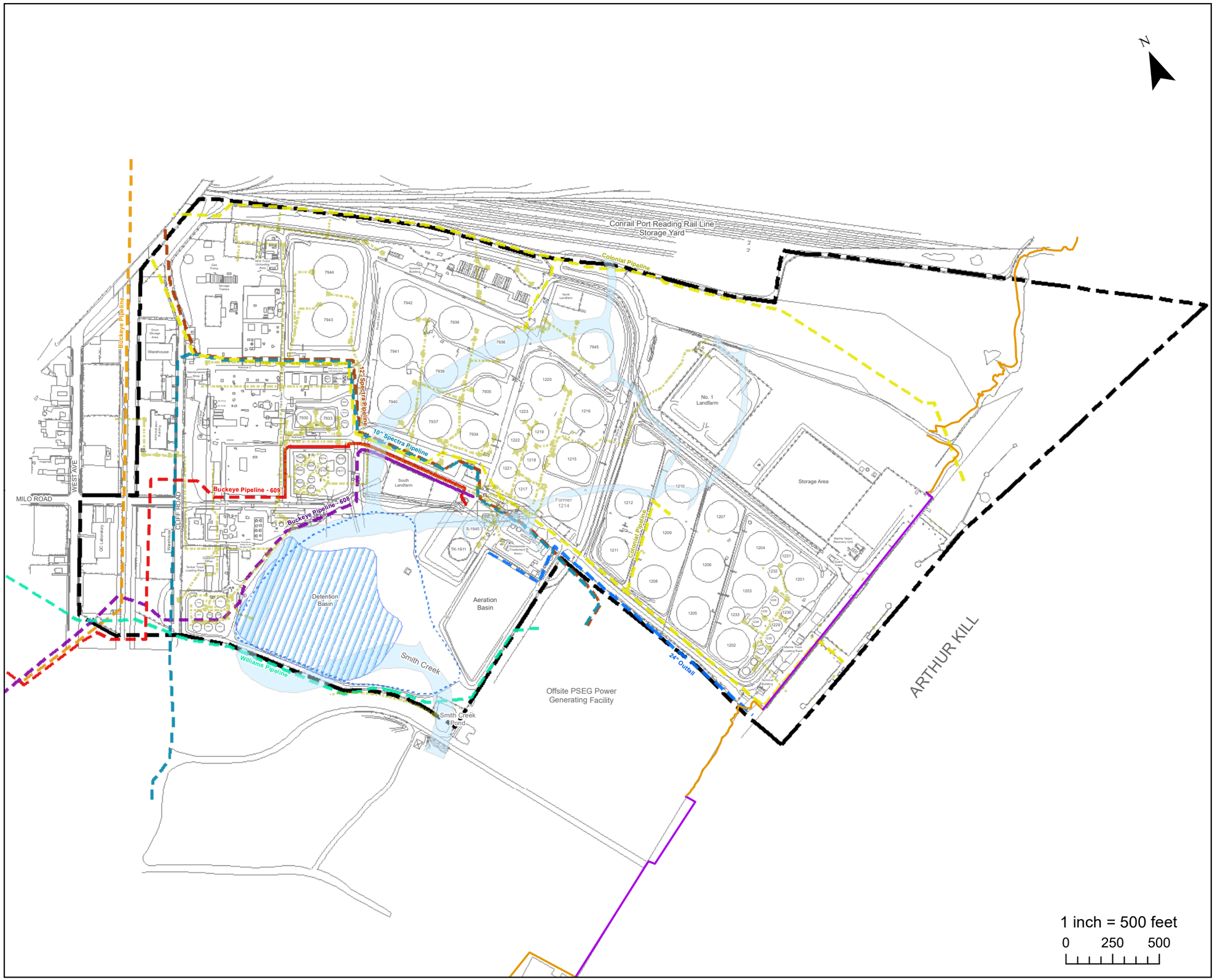
Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

Document Path: P:\ArcGIS\HESS Projects\1114J00 - Port Reading Hess\1114J01 - Sitewide\GIS\Port Reading - USGS Site Location Figure.mxd



LEGEND

- Site Boundary
- AOC 12 Extent
- Basin Present Extents
- Former Smith Creek Channel
- Shoreline
- Bulkhead

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Williams Pipeline
- Sitewide Utilities/Wastewater

Utility and Pipe Line Note:
- Solid Line: Above-ground
- Dotted Line: Underground

FIGURE: 2

Site Plan

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	03/25/2021
SRP PI#:	006148	**Drawn By:**	AE

Earth Systems
Environmental Engineering
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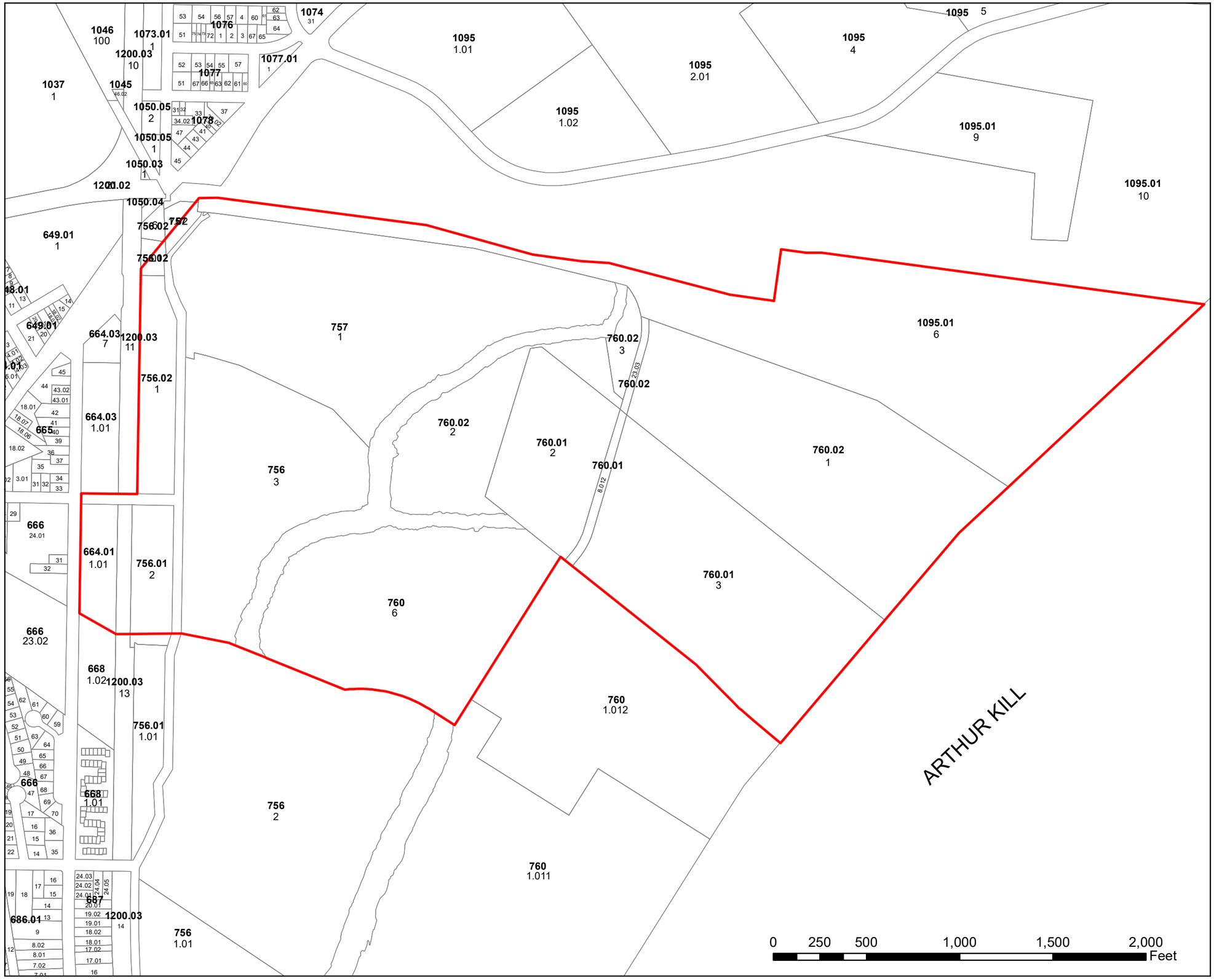

LEGEND

Site Boundary

Tax Parcels

N

FIGURE: 3

TAX MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	04/22/2022
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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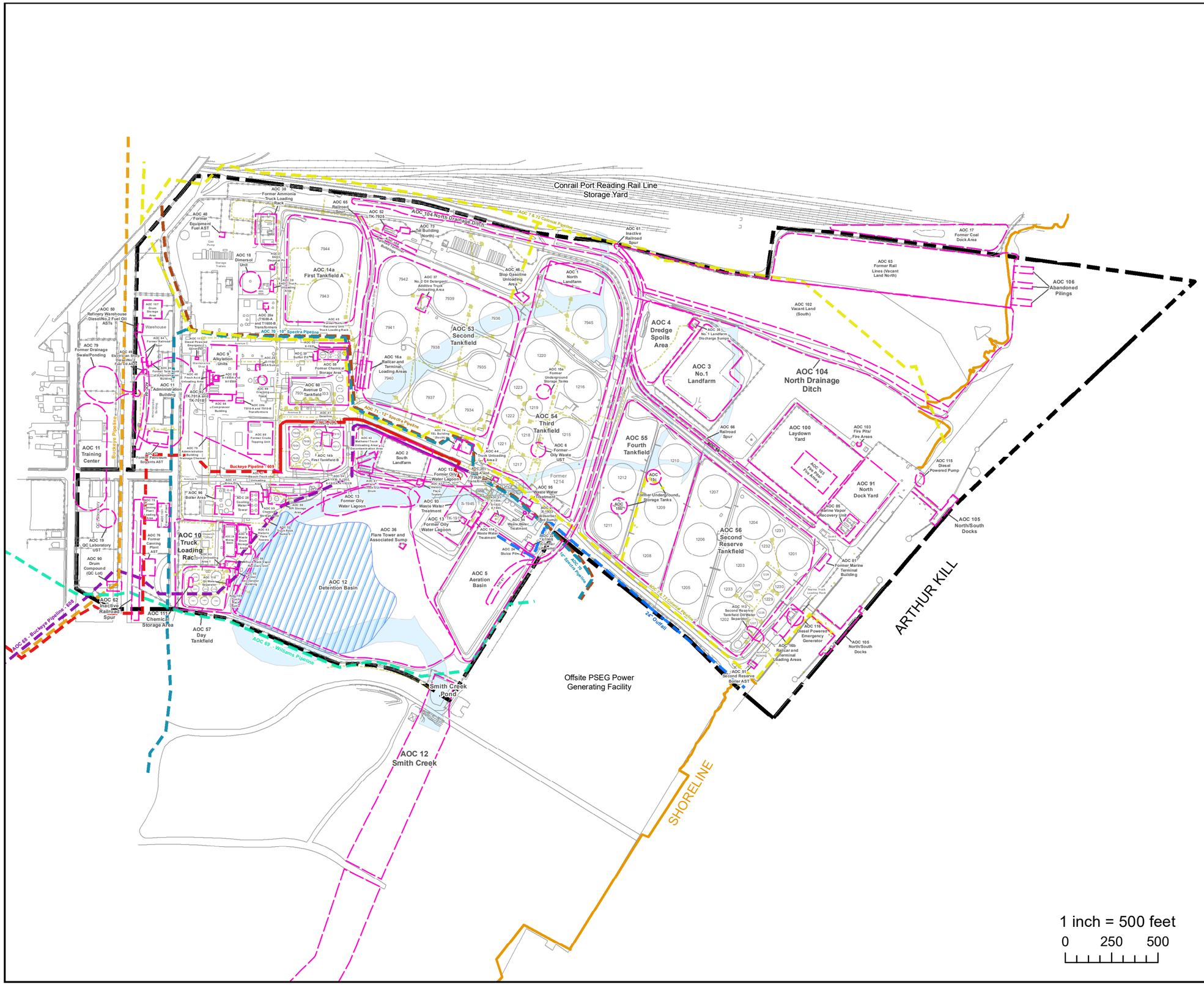
Document Path: P:\ArcGIS\HESS Projects\1114J00 - Port Reading Hess\1114J01 - Sitewide\GIS\Port Reading - Tax Map.mxd


Conrail Port Reading Rail Line Storage Yard
AOC 104 North Drainage Ditch
AOC 7 & 72 Colonial Pipeline
AOC 70 - 10" Spectra Pipeline
AOC 71 - 12" Spectra Pipeline
AOC 69 - Williams Pipeline
Buckeye Pipeline - 609
Buckeye Pipeline
AOC 68 - Buckeye Pipeline - 608
24" Outfall
AOC 14a First Tankfield A
AOC 53 Second Tankfield
AOC 54 Third Tankfield
AOC 55 Fourth Tankfield
AOC 56 Second Reserve Tankfield
AOC 4 Dredge Spoils Area
AOC 3 No.1 Landfarm
AOC 104 North Drainage Ditch
AOC 2 South Landfarm
AOC 12 Detention Basin
AOC 5 Aeration Basin
AOC 36 Flare Tower and Associated Sump
AOC 10 Truck Loading Rac
AOC 11 Training Center
AOC 57 Day Tankfield
AOC 12 Smith Creek
Smith Creek Pond
Offsite PSEG Power Generating Facility
ARTHUR KILL
SHORELINE
AOC 105 North/South Docks
AOC 106 Abandoned Pilings
AOC 91 North Dock Yard
AOC 100 Laydown Yard
AOC 63 Former Rail Lines (Vacant Land North)
AOC 102 Vacant Land (South)
AOC 17 Former Coal Dock Area
AOC 115 Diesel Powered Pump
AOC 116 Diesel Powered Emergency Generator
AOC 81 Former Marine Terminal Building
AOC 88 Marine Vapor Recovery Unit
AOC 103 Fire Pits/ Fire Areas
AOC 66 Railroad Spur
AOC 16b Railcar and Terminal Loading Areas
AOC 61 Second Reserve Boiler AST
AOC 112 Second Reserve Tankfield Oil/Water Separator
AOC 62 Inactive Railroad Spur
AOC 111 Chemical Storage Area
AOC 19 QC Laboratory UST
AOC 90 Drum Compound (QC Lot)
AOC 50 Refinery Warehouse Diesel/No.2 Fuel Oil ASTs
AOC 79 Former Drainage Swale/Ponding
AOC 11 Administration Building
AOC 9 Alkylation Units
AOC 96 Boiler Area
AOC 76 Former Cleaning Plant AST
AOC 48 Former Equipment Fuel AST
AOC 18 Dimersol Unit
AOC 38 Former Ammonia Truck Loading Rack
AOC 65 Railroad Spur
AOC 52 TK-7925
AOC 73 Oil Building (North)
AOC 37 No. 2 Oil Detergent Additive Truck Unloading Area
AOC 46 Slop Gasoline Unloading Area
AOC 1 North Landfarm
AOC 61 Inactive Railroad Spur
AOC 16a Railcar and Terminal Loading Areas
AOC 15a Former Underground Storage Tanks
AOC 6 Former Oily Waste UST
AOC 15c
AOC 15b
Former Underground Storage Tanks
AOC 95 Waste Water Treatment
AOC 93 Waste Water Treatment
AOC 13 Former Oily Water Lagoon
AOC 15 Former Oily Water Lagoon
AOC 24 Waste Water Treatment
AOC 25 Absorber Oil Sump
AOC 34 Sluice Pipe
AOC 35 No. 1 Landfarm Discharge Sumps
AOC 8 Former Chemical Storage Area
AOC 60 Avenue D Tankfield
AOC 14b First Tankfield B
AOC 28 Cooling Water Tower
AOC 29a (T1600-A and T1600-B) Transformers
AOC 29b T910-A and T910-B Transformers
AOC 88 Former Crude Topping Unit
AOC 44 Truck Unloading Area 2
AOC 42 Refinery Truck Unloading Area 2
AOC 74 HDL Building Drum
AOC 75 Administration Building Drainage Channel
AOC 77 Petroleum Solvents AST
AOC 107 Oil Storage Area
AOC 64 Former Railroad Spur
AOC 49 Electrical Sub Station
AOC 110 Diesel Powered Emergency Generator
AOC 39 Truck Unloading Area
AOC 45 Recovery Unit Truck Loading Rack
AOC 68 - Buckeye Pipeline - 608
Former 1214
Former 1215
Former 1216
Former 1217
Former 1218
Former 1219
Former 1220
Former 1221
Former 1222
Former 1223
Former 1224
Former 1225
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Former S-1943
Former S-1944
Former TK-1919
Former TK-7919
Former TK-7918
Former TK-7917
Former TK-7916
Former TK-7915
Former TK-7914
Former TK-7913
Former TK-7912
Former TK-7911
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Former TK-7909
Former TK-7908
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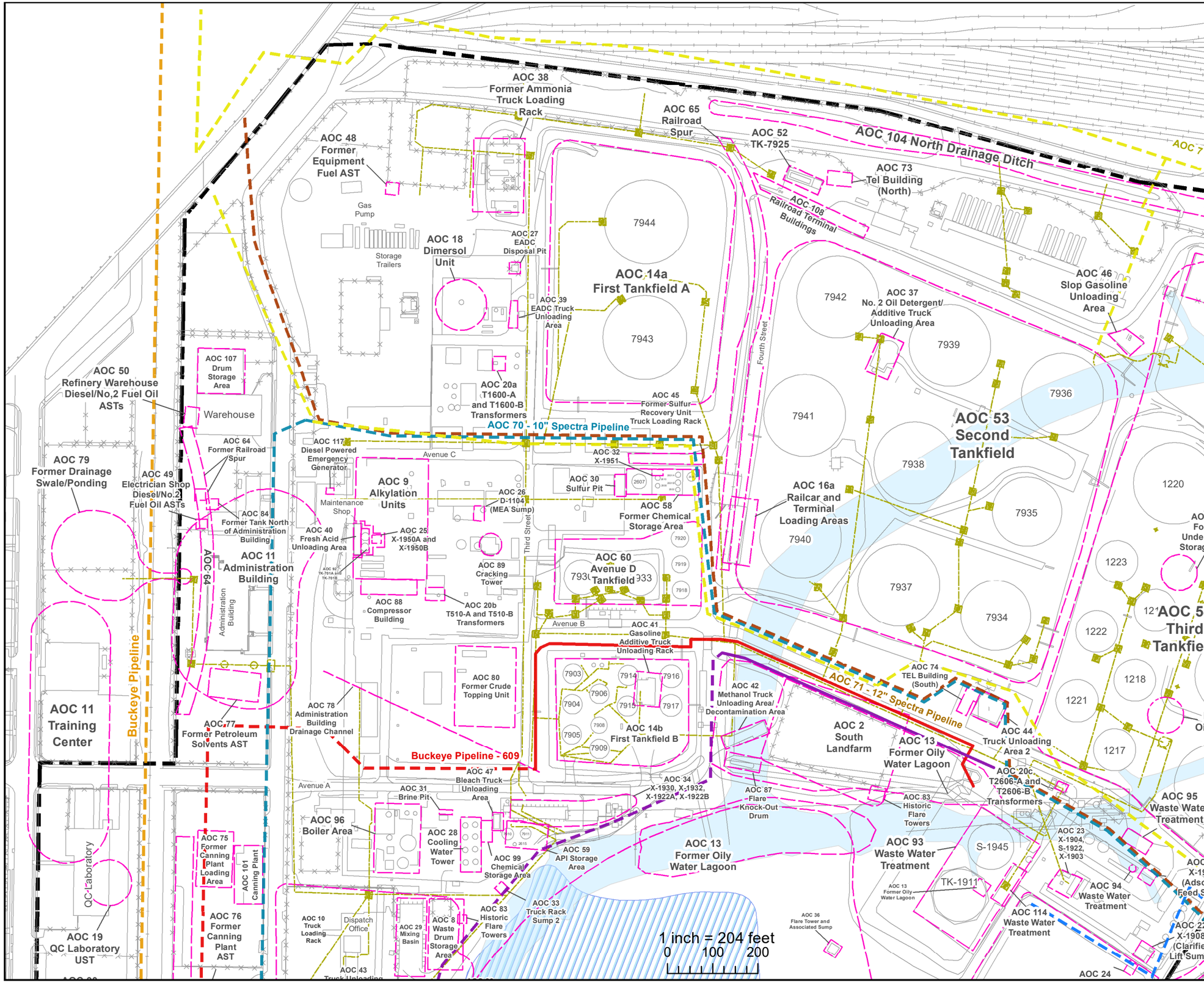
Former TK-7900
Former



LEGEND

- AOC Boundary
- Sitewide Utilities
- Underground Utility Lines
- Detention Basin Current Extents
- Site Boundary

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Pipelines:
Solid Line: Aboveground
Dotted Line: Underground

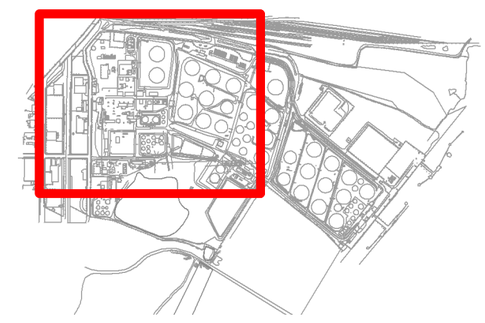


FIGURE: 4.1

AREAS OF CONCERN MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	2/25/2021
SRP PI#:	006148	**Drawn By:**	KJ,RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

AOC 7 & 72 Colonial Pipeline
AOC 61 Inactive Railroad Spur
AOC 17 Former Coal Dock Area
AOC 63 Former Rail Lines (Vacant Land North)
AOC 1 North Landfarm
7945
AOC 102 Vacant Land (South)
AOC 35 No. 1 Landfarm Discharge Sumps
AOC 4 Dredge Spoils Area
1220
AOC 3 No.1 Landfarm
AOC 104 North Drainage Ditch
AOC 15a Former Underground Storage Tanks
1216
Fifth Street
AOC 54 Third Tankfield
1215
AOC 6 Former Oily Waste UST
AOC 55 Fourth Tankfield
AOC 66 Railroad Spur
AOC 66
AOC 100 Laydown Yard
AOC 103 Fire Pits/ Fire Areas
AOC 103 Fire Pits/ Fire Areas
1210
AOC 115 Diesel Powered Pump
1212
AOC 15c
AOC 95 Waste Water Treatment
Former Underground Storage Tanks
1207
AOC 91 North Dock Yard
AOC 15b
1209
AOC 85 Marine Vapor Recovery Unit
AOC 21 X-1933 (Adsorber Feed Sump)
1211
1204
AOC 105 North/South Docks
AOC 22 X-1908 (Clarifier Lift Sump)
1206
AOC 56 Second Reserve Tankfield
1231
Guard Tower
1232
1208
1201
AOC 81 Former Marine Terminal Building
10" Spectra Pipeline
AOC 70
24" Outfall
AOC 7 & 72 Colonial Pipeline
1203
1224
Arthur Kill
1205
1233
1225
1230
Marine Truck Loading Rack
1226

1 inch = 200 feet
0 100 200

LEGEND

N

- AOC Boundary
- Underground Utility/Wastewater System
- Detention Basin Current Extents
- Site Boundary

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Pipelines:
- Solid Line: Aboveground
- Dotted Line: Underground

FIGURE: 4.2
AREAS OF CONCERN MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	2/26/2021
SRP PI#:	006148	**Drawn By:**	KJ,RC

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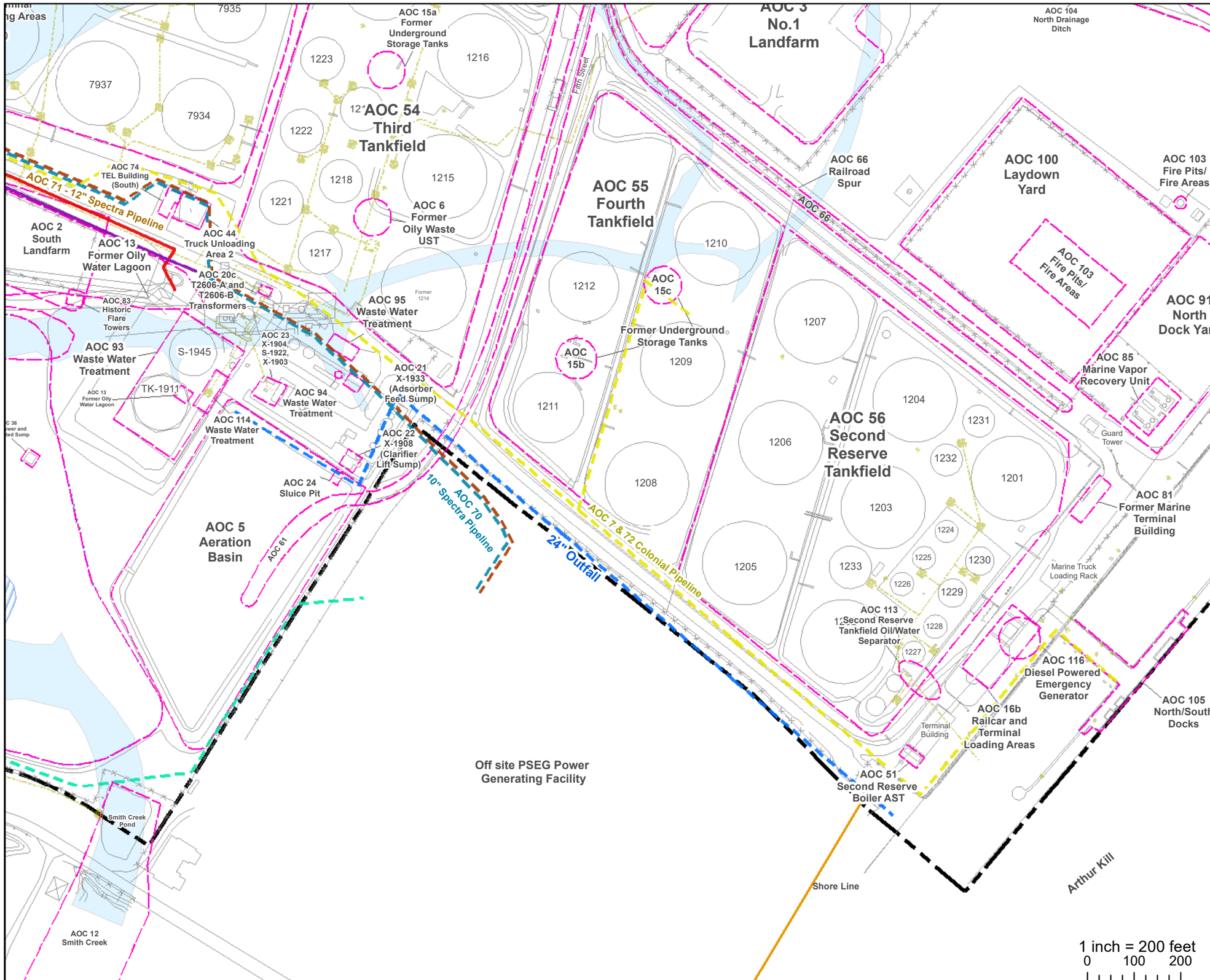

LEGEND

- AOC Boundary
- Underground Utility/Wastewater System
- Detention Basin Current Extents
- Site Boundary

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Pipelines:
- Solid Line: Aboveground
- Dotted Line: Underground

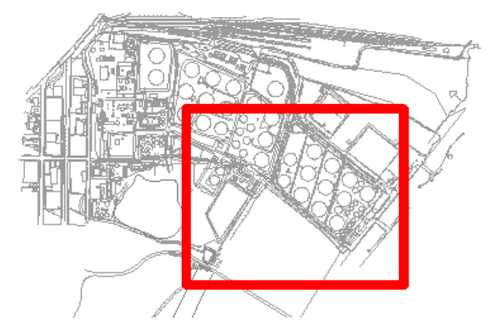

FIGURE: 4.3

AREAS OF CONCERN MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	2/23/2021
SRP PI#:	006148	**Drawn By:**	KJ,RC

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Environmental Engineering
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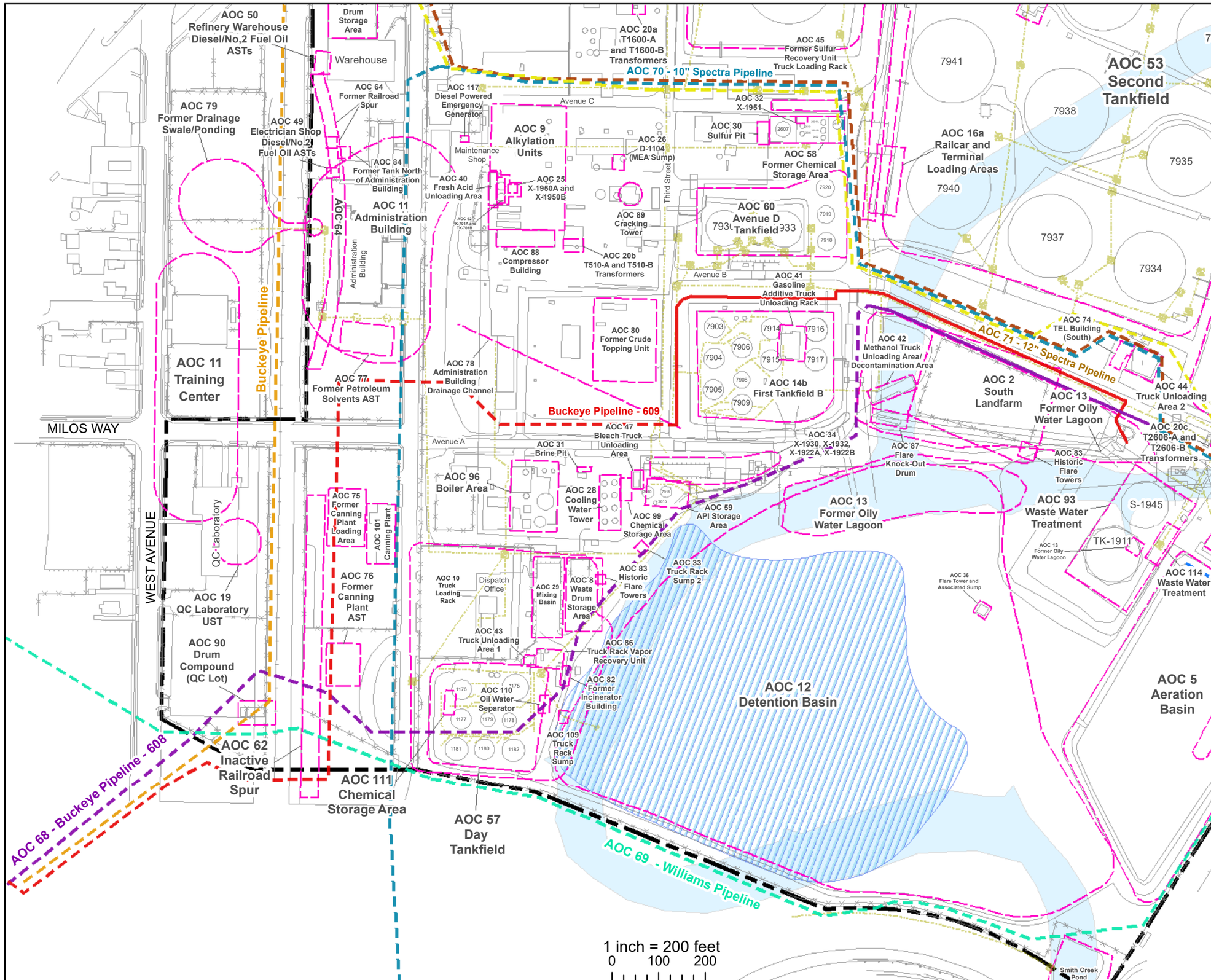

LEGEND

- AOC Boundary
- Underground Utility/Wastewater System
- Detention Basin Current Extents
- Site Boundary

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Pipelines:
- Solid Line: Aboveground
- Dotted Line: Underground

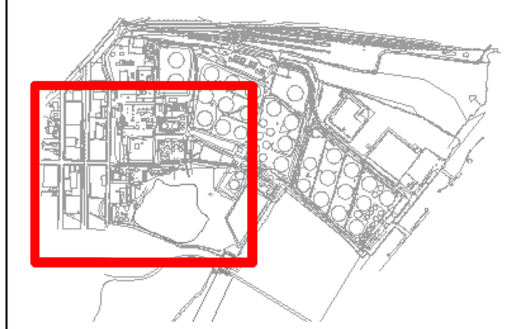

FIGURE: 4.4

AREAS OF CONCERN MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	2/23/2021
SRP PI#:	006148	**Drawn By:**	KJ,RC

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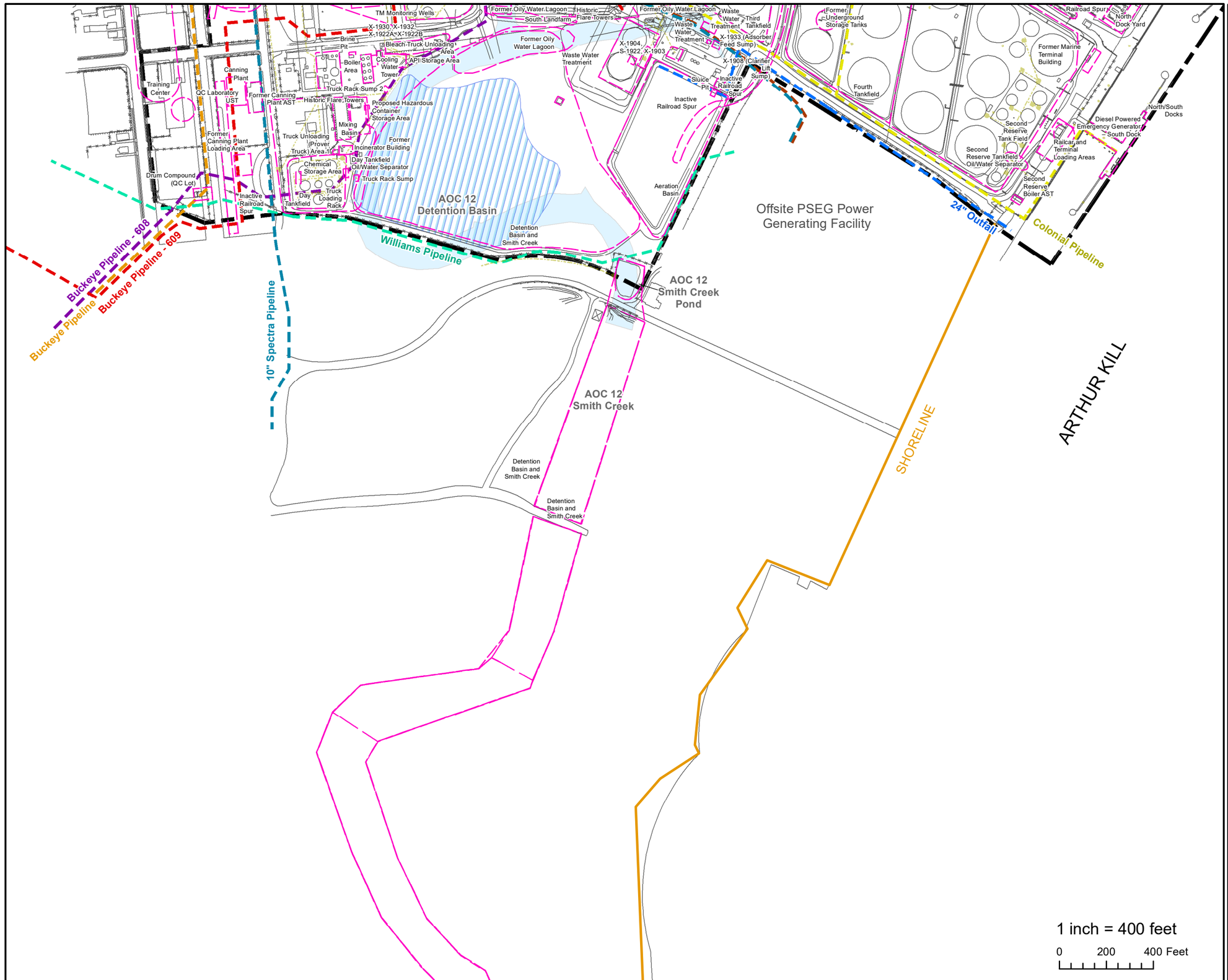

LEGEND

- AOC Boundary
- Sitewide Utility/Wastewater System
- Shoreline
- Site Boundary
- Detention Basin Current Extents

Pipelines

- 10" Spectra Natural Gas Pipeline
- 12" Spectra Pipeline
- 24" Outfall
- Buckeye Pipeline
- Buckeye Petroleum Pipeline - 608
- Buckeye Petroleum Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Pipelines:
- Solid Line: Aboveground
- Dotted Line: Underground

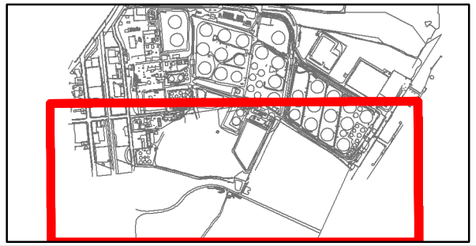

FIGURE: 4.5
AREAS OF CONCERN MAP

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	2/25/2021
SRP PI#:	006148	**Drawn By:**	KJ,AE

Earth Systems
Environmental Engineering
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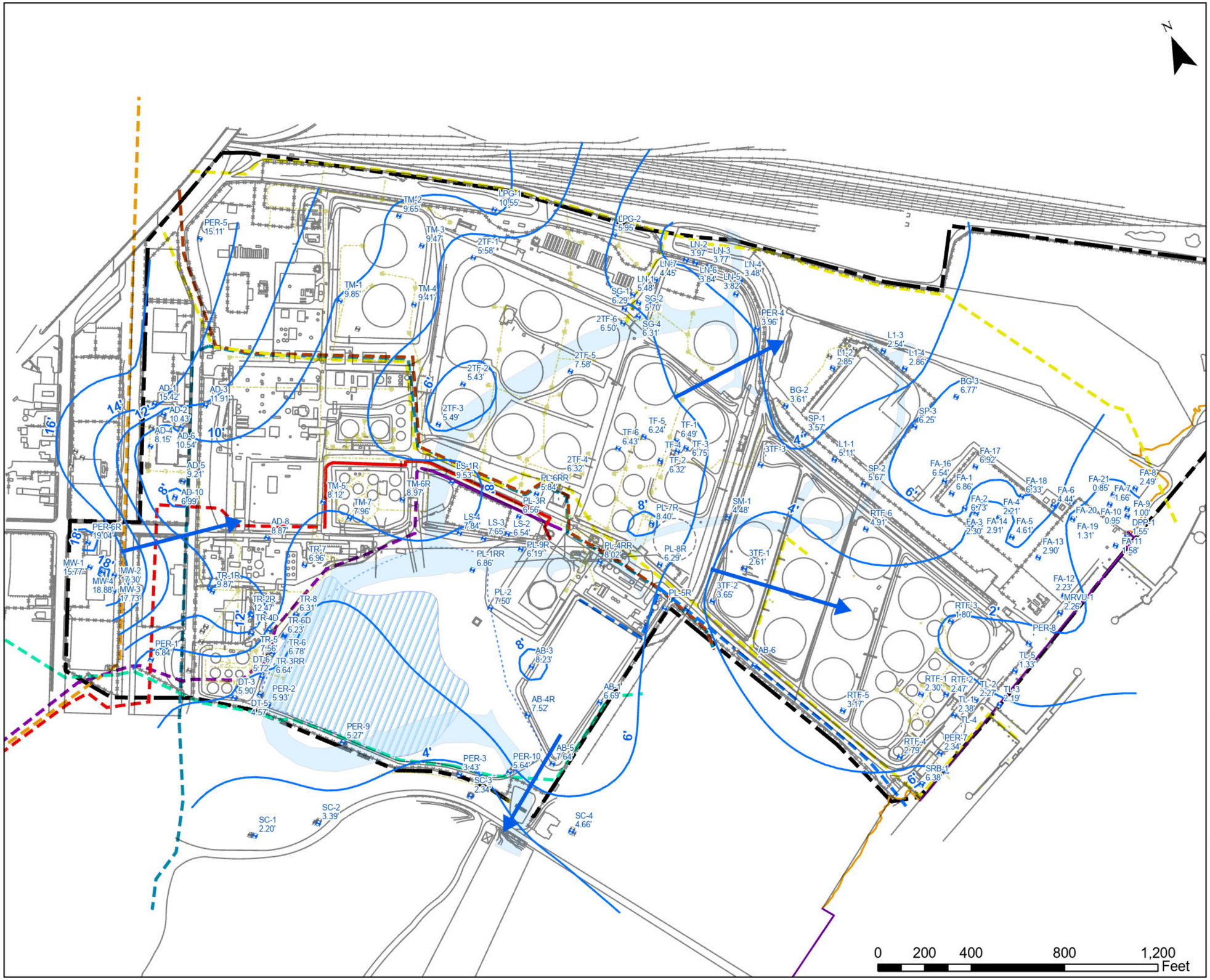

LEGEND

- Shallow Monitoring Well
- Monitoring Well
- Water Elevation Contour
- Groundwater Flow Direction
- Sitewide Utilities
- Shoreline
- Bulkhead
- Former Smith Creek Channel
- Site Boundary
- AOC 12 Extent
- Basin Present Extents

Pipelines

- 10" Spectra Pipeline
- 12" Spectra Pipeline
- Buckeye Pipeline
- Buckeye Pipeline - 608
- Buckeye Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Dotted Line: Underground
Solid Line: Above-Ground

FIGURE: 5a

November 2022
Groundwater Elevation Contour
Shallow Wells

HESS CORPORATION
FORMER PORT READING TERMINAL
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01.23	**Date:**	1/25/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444

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Document Path: P:\ArcGIS\HESS Projects\1114J00 - Port Reading Hess\1114J01 - Sitewide\GIS 2.0_Projects\2022_PR_Sitewide_Contours\2022_PR_Sitewide_Contours.aprx

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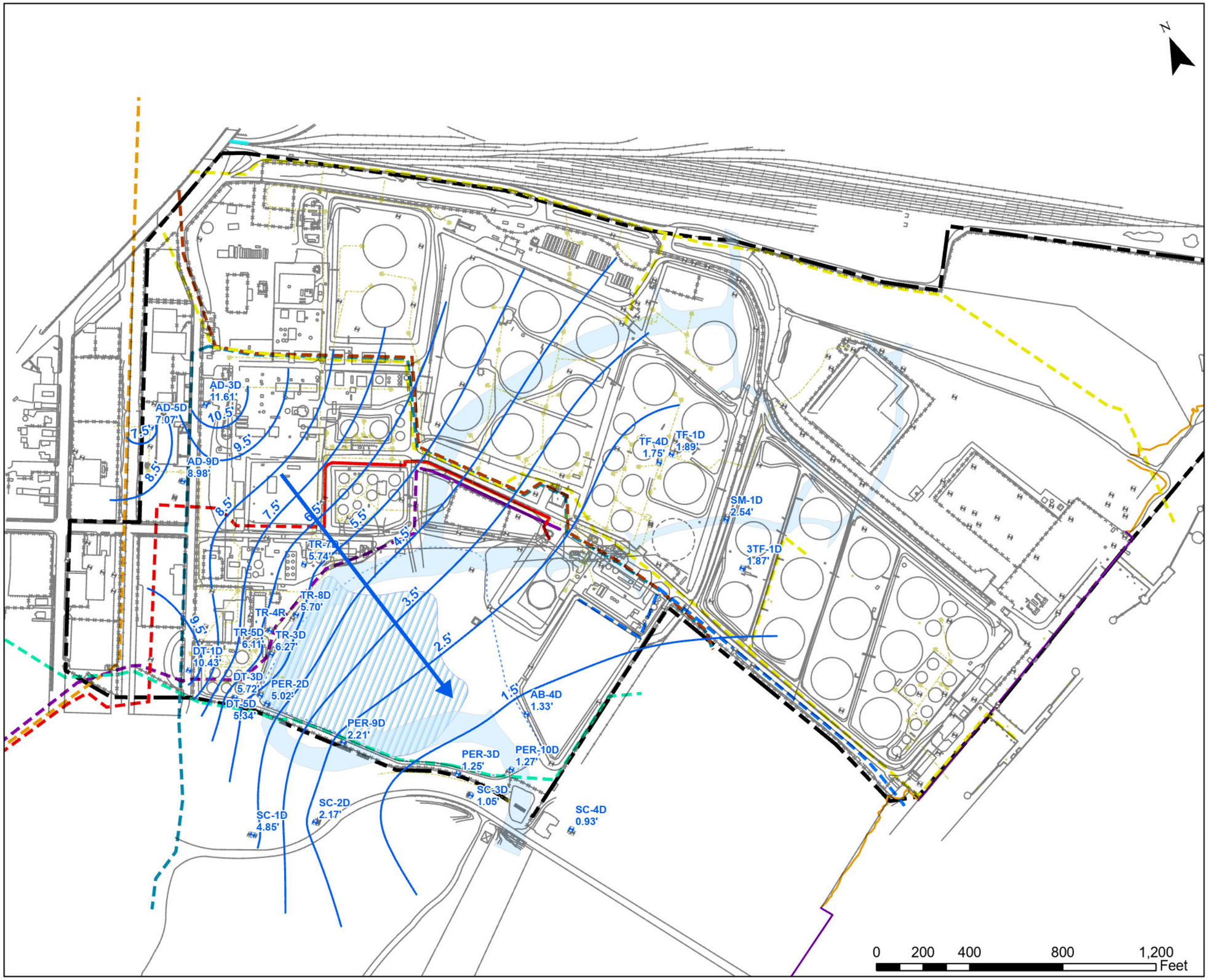

LEGEND

- Intermediate Monitoring Well
- Monitoring Well
- Water Elevation Contour
- Flow Direction
- Sitewide Utilities
- Shoreline
- Bulkhead
- Former Smith Creek Channel
- Site Boundary
- AOC 12 Extent
- Basin Present Extents

Pipelines

- 10" Spectra Pipeline
- 12" Spectra Pipeline
- Buckeye Pipeline
- Buckeye Pipeline - 608
- Buckeye Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Dotted Line: Underground
Solid Line: Above-Ground

FIGURE: 5b

November 2022
Groundwater Elevation Contour
Intermediate Wells

HESS CORPORATION
FORMER PORT READING TERMINAL
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01.23	**Date:**	1/9/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444

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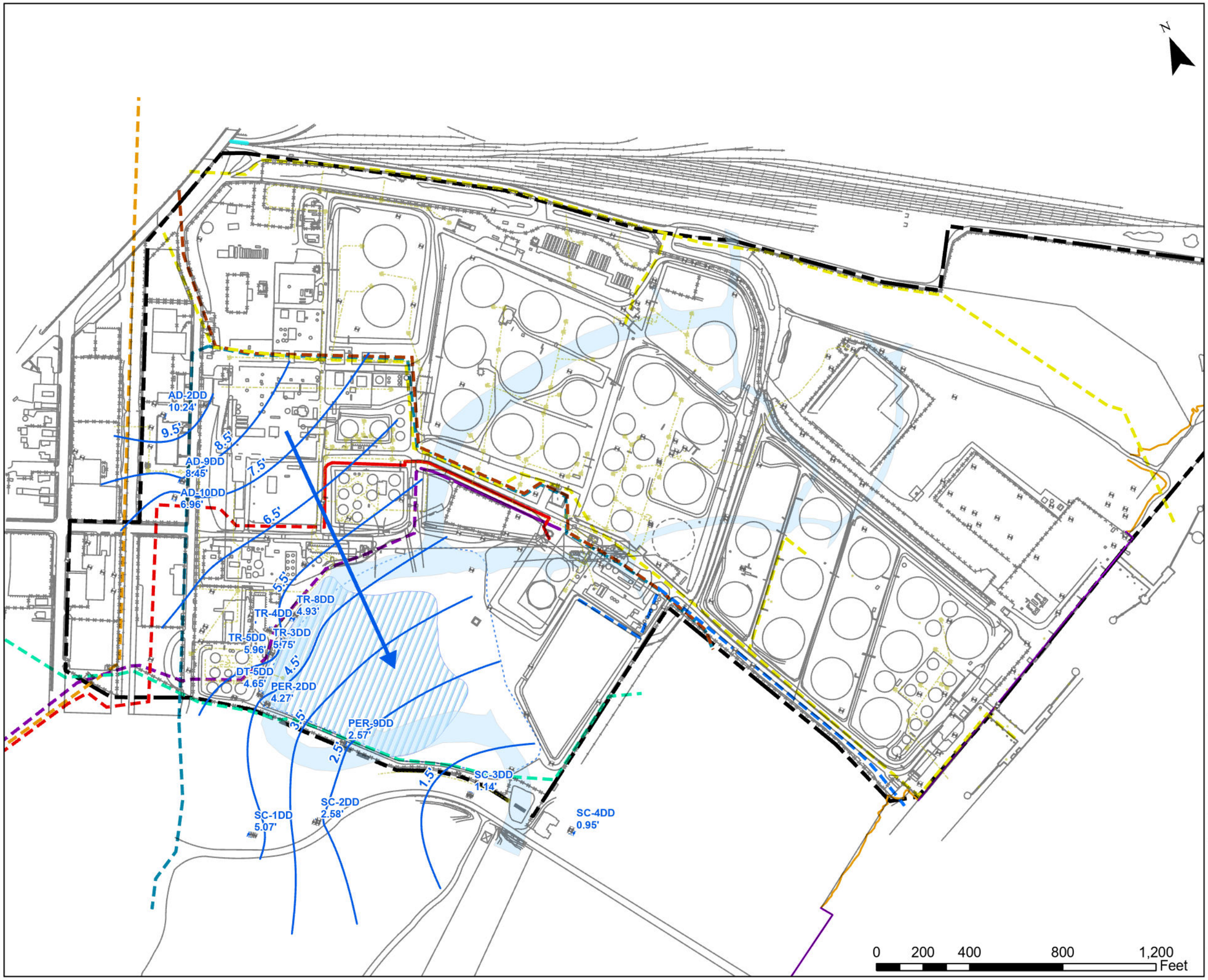

LEGEND

- Deep Monitoring Well
- Monitoring Well
- Water Elevation Contour
- Flow Direction
- Sitewide Utilities
- Shoreline
- Bulkhead
- Former Smith Creek Channel
- Site Boundary
- AOC 12 Extent
- Basin Present Extents

Pipelines

- 10" Spectra Pipeline
- 12" Spectra Pipeline
- Buckeye Pipeline
- Buckeye Pipeline - 608
- Buckeye Pipeline - 609
- Colonial Pipeline
- Unknown Pipeline/ Utility
- Williams Pipeline

Dotted Line: Underground
Solid Line: Above-Ground

FIGURE: 5c

November 2022
Groundwater Elevation Contour
Deep Wells

HESS CORPORATION
FORMER PORT READING TERMINAL
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01.23	**Date:**	1/25/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444

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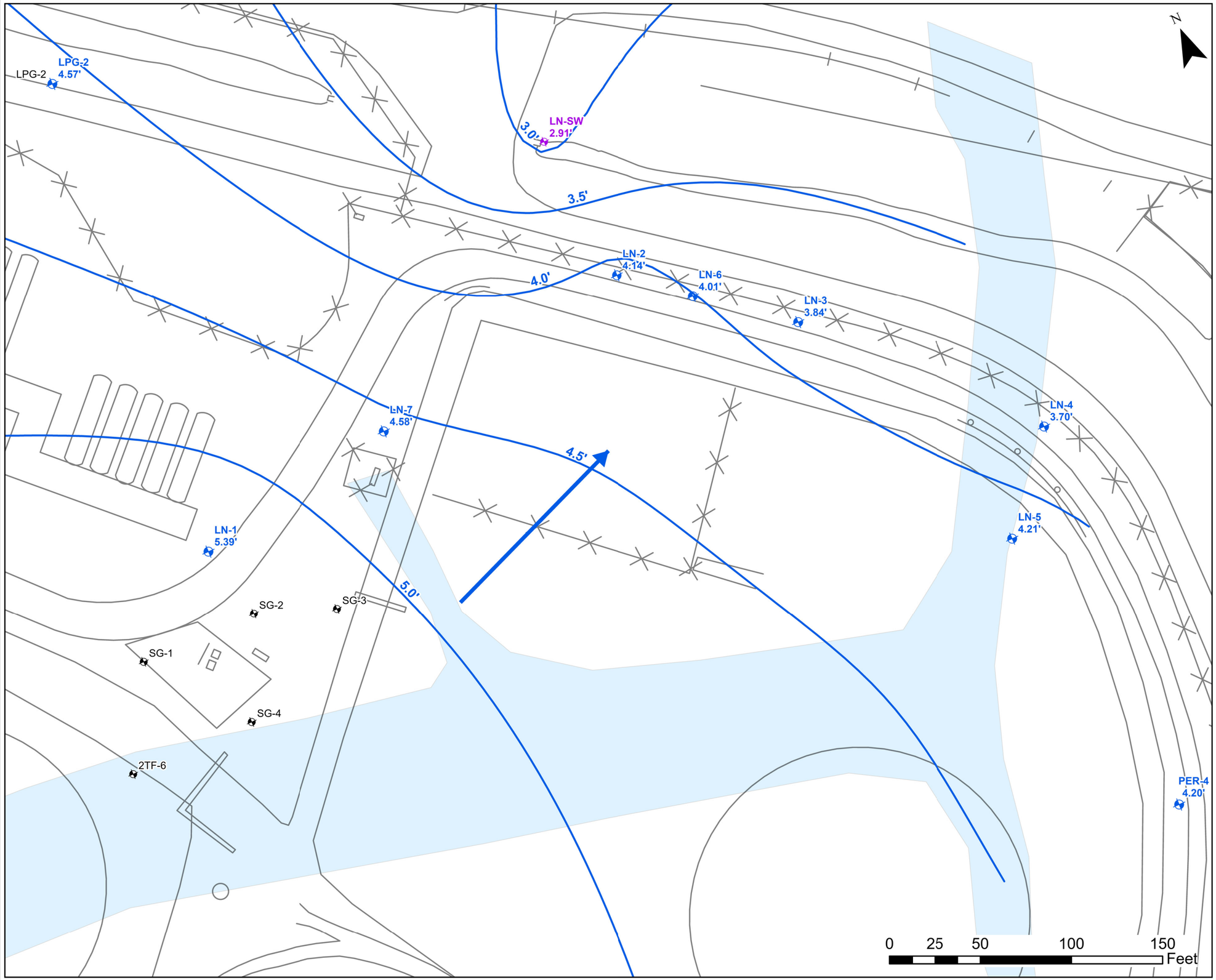

LEGEND

- Surface Water Gauge
- Gauged Monitoring Well
- Monitoring Well
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Former Smith Creek Channel
- Underground Utility Lines

LN-1 **WELL I.D.**
5.39' **GROUNDWATER ELEVATION (FT BGS)**

NOTE:
1. All wells gauged on October 12, 2022

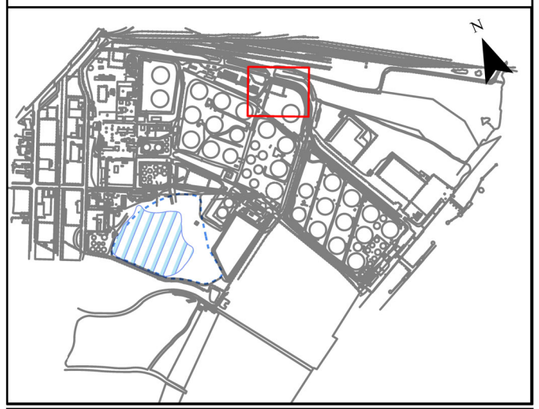

FIGURE: 6
Groundwater Contour Map
North Landfarm
October 2022

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	8/8/2022
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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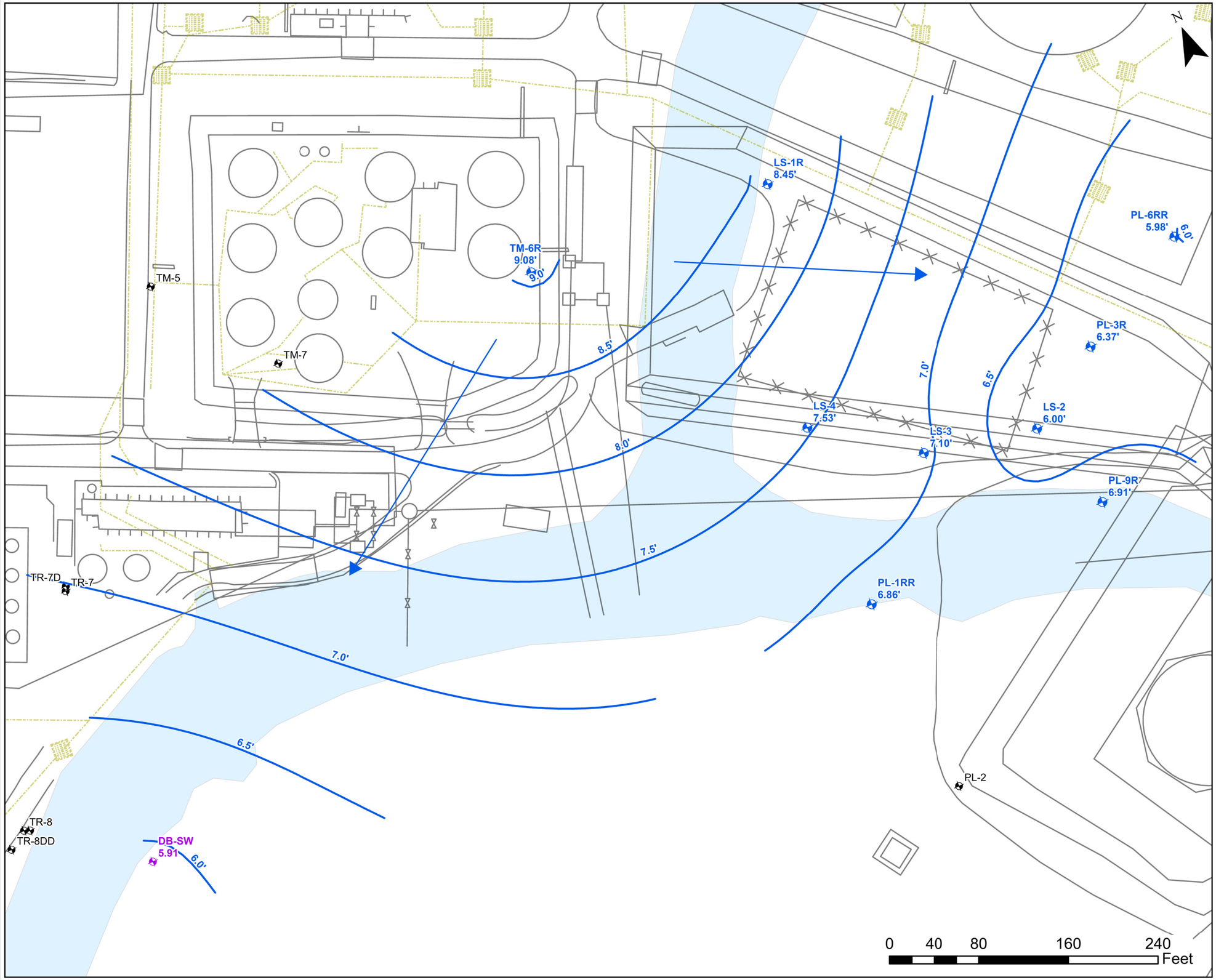

LEGEND

- Surface Water Gauge
- Gauged Monitoring Well
- Monitoring Well
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Former Smith Creek Channel
- Underground Utility Lines

LS-1R **WELL I.D.**
8.45' **GROUNDWATER ELEVATION (FT BGS)**

NOTE:
1. All wells gauged on October 12, 2022

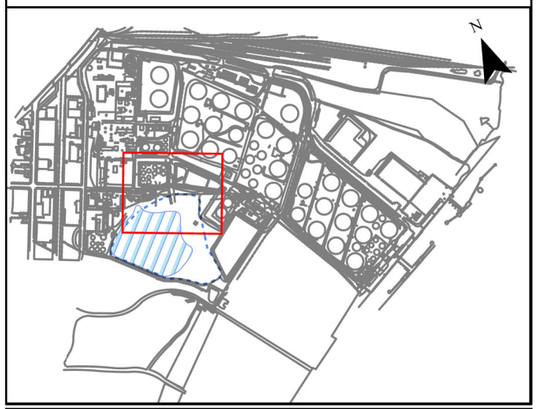

FIGURE: 7
Groundwater Contour Map
South Landfarm
October 2022

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	8/8/2022
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
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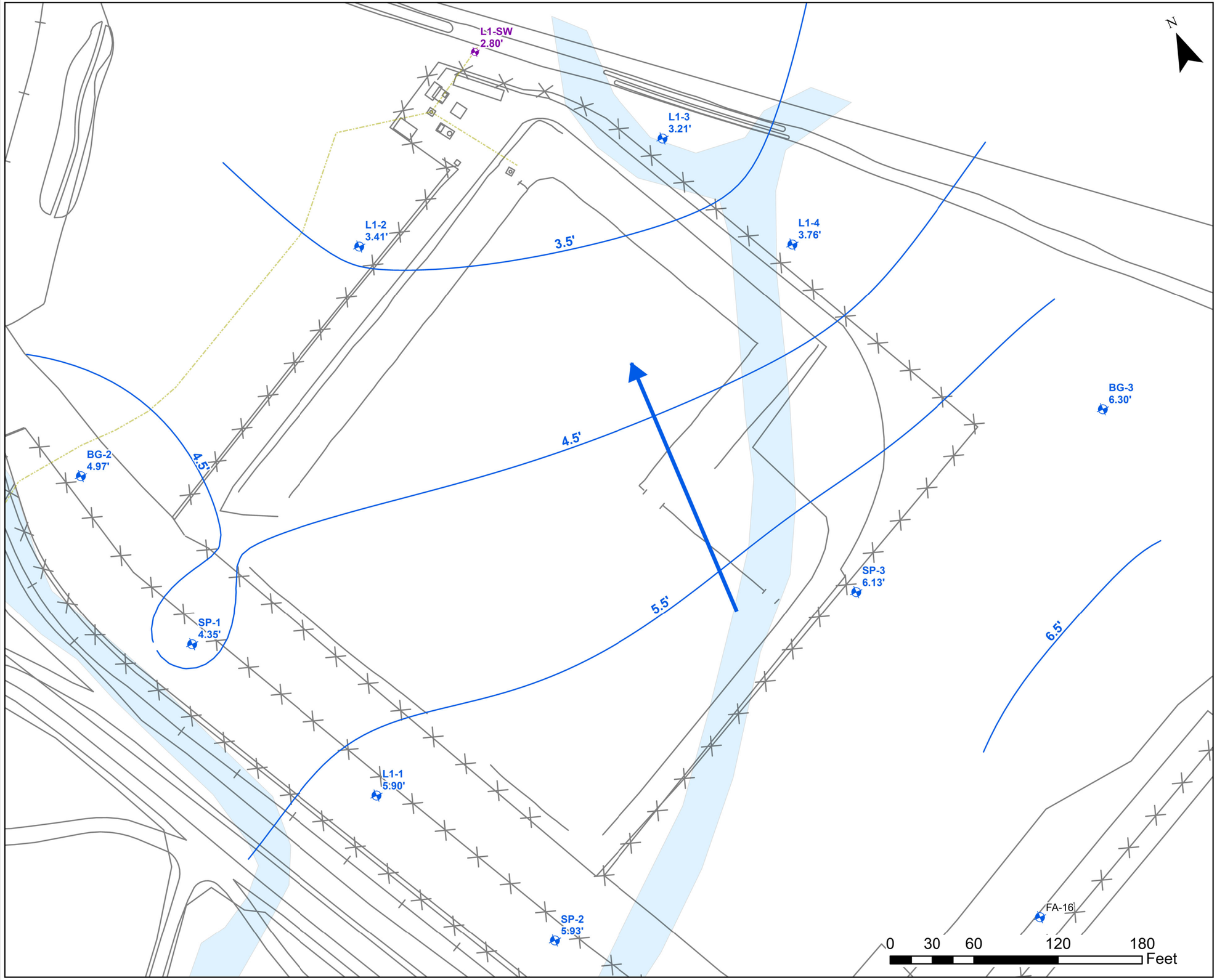

LEGEND

- Surface Water Gauge
- Gauged Monitoring Well
- Monitoring Well
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Former Smith Creek Channel
- Underground Utility Lines

L1-1 **WELL I.D.**
5.90' **GROUNDWATER ELEVATION (FT BGS)**

NOTE:
1. All wells gauged on October 12, 2022

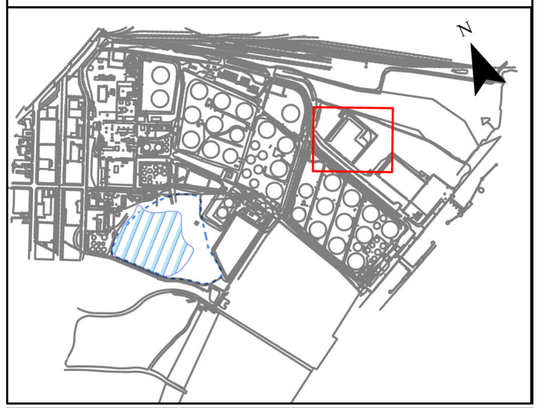

FIGURE: 8
Groundwater Contour Map
No. 1 Landfarm
October 2022

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/19/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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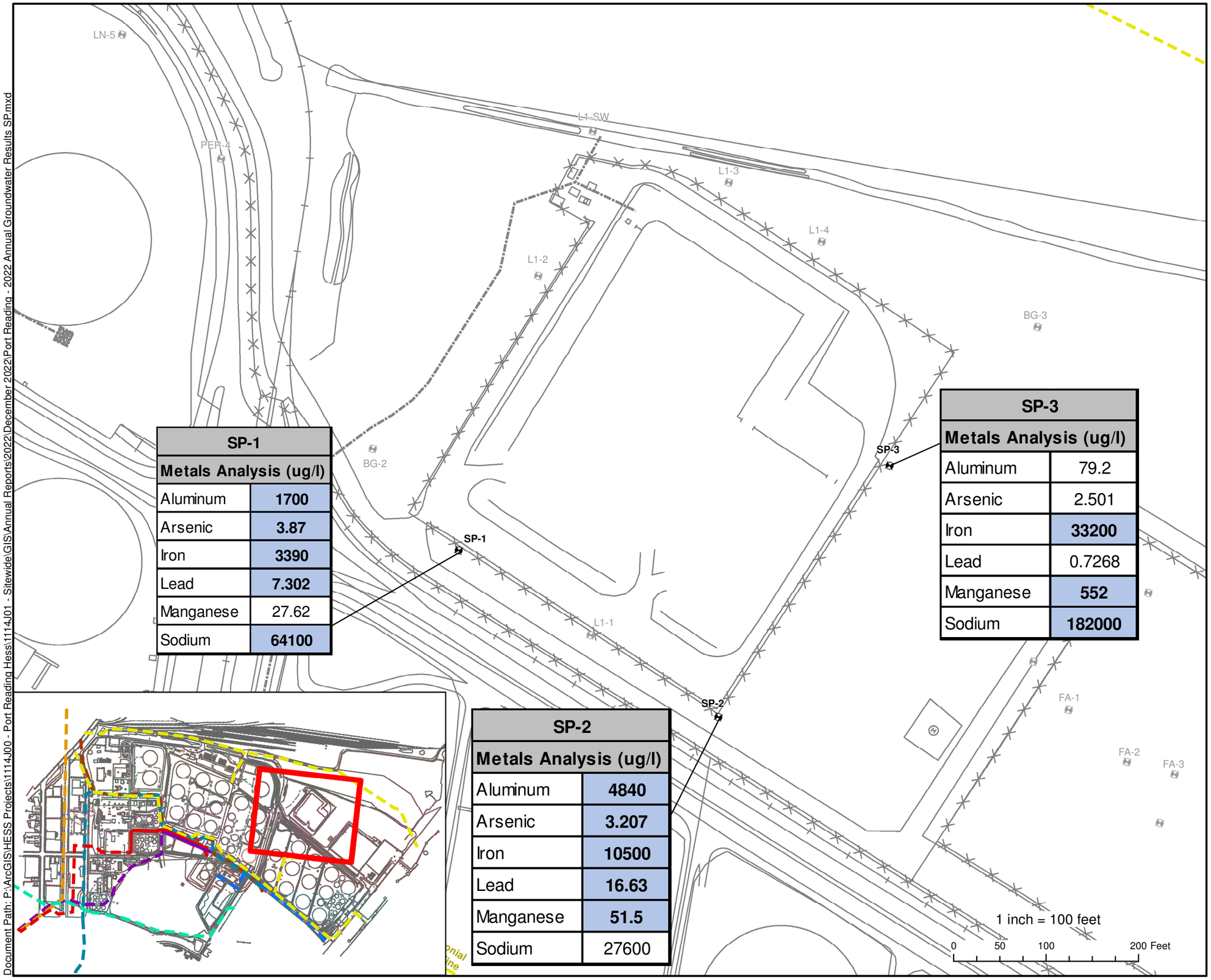

SP-1	
Metals Analysis (ug/l)	
Aluminum	**1700**
Arsenic	**3.87**
Iron	**3390**
Lead	**7.302**
Manganese	27.62
Sodium	**64100**

SP-2	
Metals Analysis (ug/l)	
Aluminum	**4840**
Arsenic	**3.207**
Iron	**10500**
Lead	**16.63**
Manganese	**51.5**
Sodium	27600

SP-3	
Metals Analysis (ug/l)	
Aluminum	79.2
Arsenic	2.501
Iron	**33200**
Lead	0.7268
Manganese	**552**
Sodium	**182000**

LEGEND

Monitoring Well

NJGWQS	
Metals Analysis (ug/l)	
Aluminum	**200**
Arsenic	**3**
Iron	**300**
Lead	**5**
Manganese	**50**
Sodium	**50000**

FIGURE: 9
AOC 3 No.1 Landfarm
2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/11/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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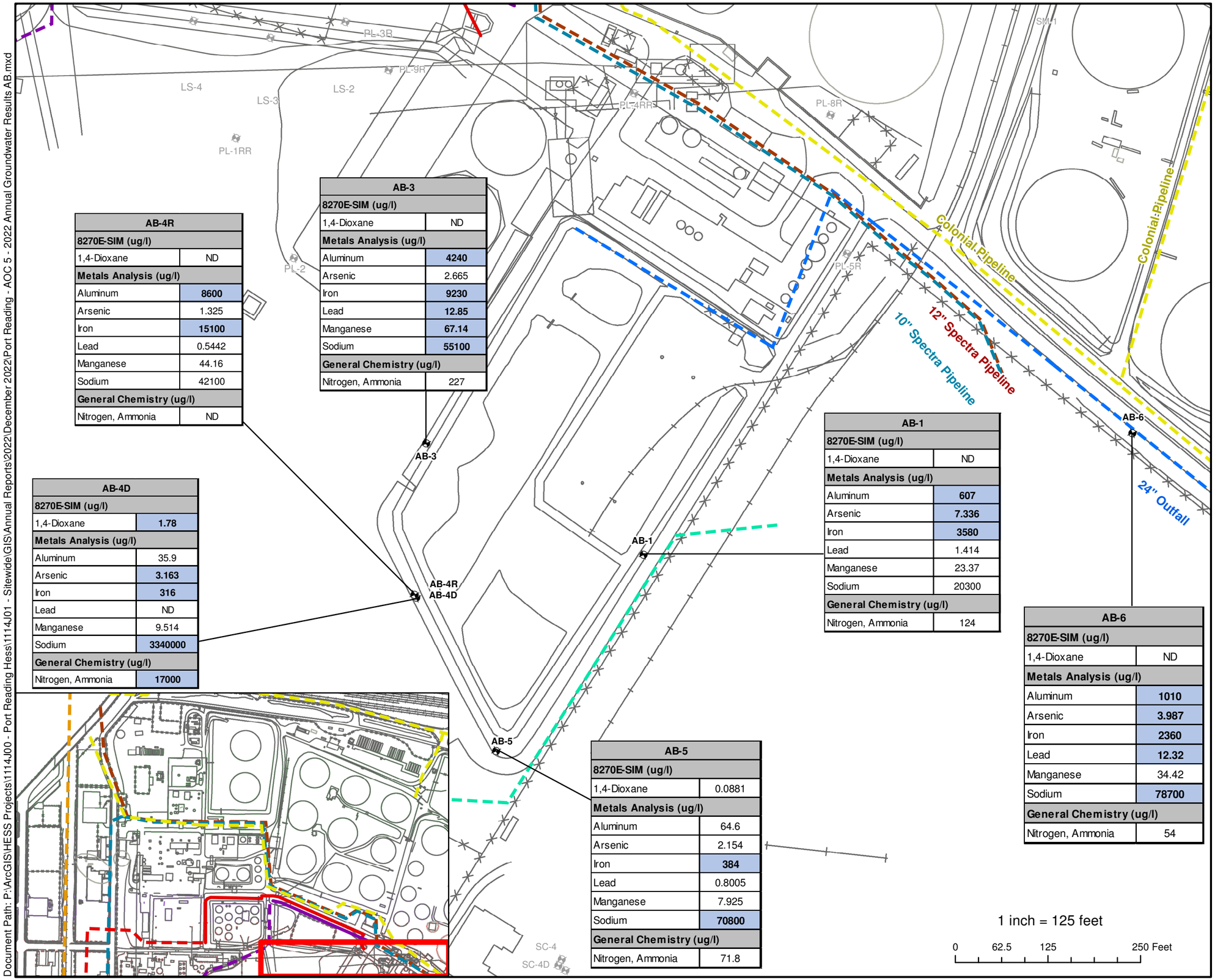

AB-4R	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
Metals Analysis (ug/l)	
Aluminum	**8600**
Arsenic	1.325
Iron	**15100**
Lead	0.5442
Manganese	44.16
Sodium	42100
General Chemistry (ug/l)	
Nitrogen, Ammonia	ND

AB-3	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
Metals Analysis (ug/l)	
Aluminum	**4240**
Arsenic	2.665
Iron	**9230**
Lead	**12.85**
Manganese	**67.14**
Sodium	**55100**
General Chemistry (ug/l)	
Nitrogen, Ammonia	227

AB-4D	
8270E-SIM (ug/l)	
1,4-Dioxane	**1.78**
Metals Analysis (ug/l)	
Aluminum	35.9
Arsenic	**3.163**
Iron	**316**
Lead	ND
Manganese	9.514
Sodium	**3340000**
General Chemistry (ug/l)	
Nitrogen, Ammonia	**17000**

AB-1	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
Metals Analysis (ug/l)	
Aluminum	**607**
Arsenic	**7.336**
Iron	**3580**
Lead	1.414
Manganese	23.37
Sodium	20300
General Chemistry (ug/l)	
Nitrogen, Ammonia	124

AB-6	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
Metals Analysis (ug/l)	
Aluminum	**1010**
Arsenic	**3.987**
Iron	**2360**
Lead	**12.32**
Manganese	34.42
Sodium	**78700**
General Chemistry (ug/l)	
Nitrogen, Ammonia	54

AB-5	
8270E-SIM (ug/l)	
1,4-Dioxane	0.0881
Metals Analysis (ug/l)	
Aluminum	64.6
Arsenic	2.154
Iron	**384**
Lead	0.8005
Manganese	7.925
Sodium	**70800**
General Chemistry (ug/l)	
Nitrogen, Ammonia	71.8

LEGEND

Monitoring Well

N

NJGWQS	
8270E-SIM (ug/l)	
1,4-Dioxane	**0.4**
Metals Analysis (ug/l)	
Aluminum	**200**
Arsenic	**3**
Iron	**300**
Lead	**5**
Manganese	**50**
Sodium	**50000**
General Chemistry (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 10
AOC 5 Aeration Basins 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/11/2023
	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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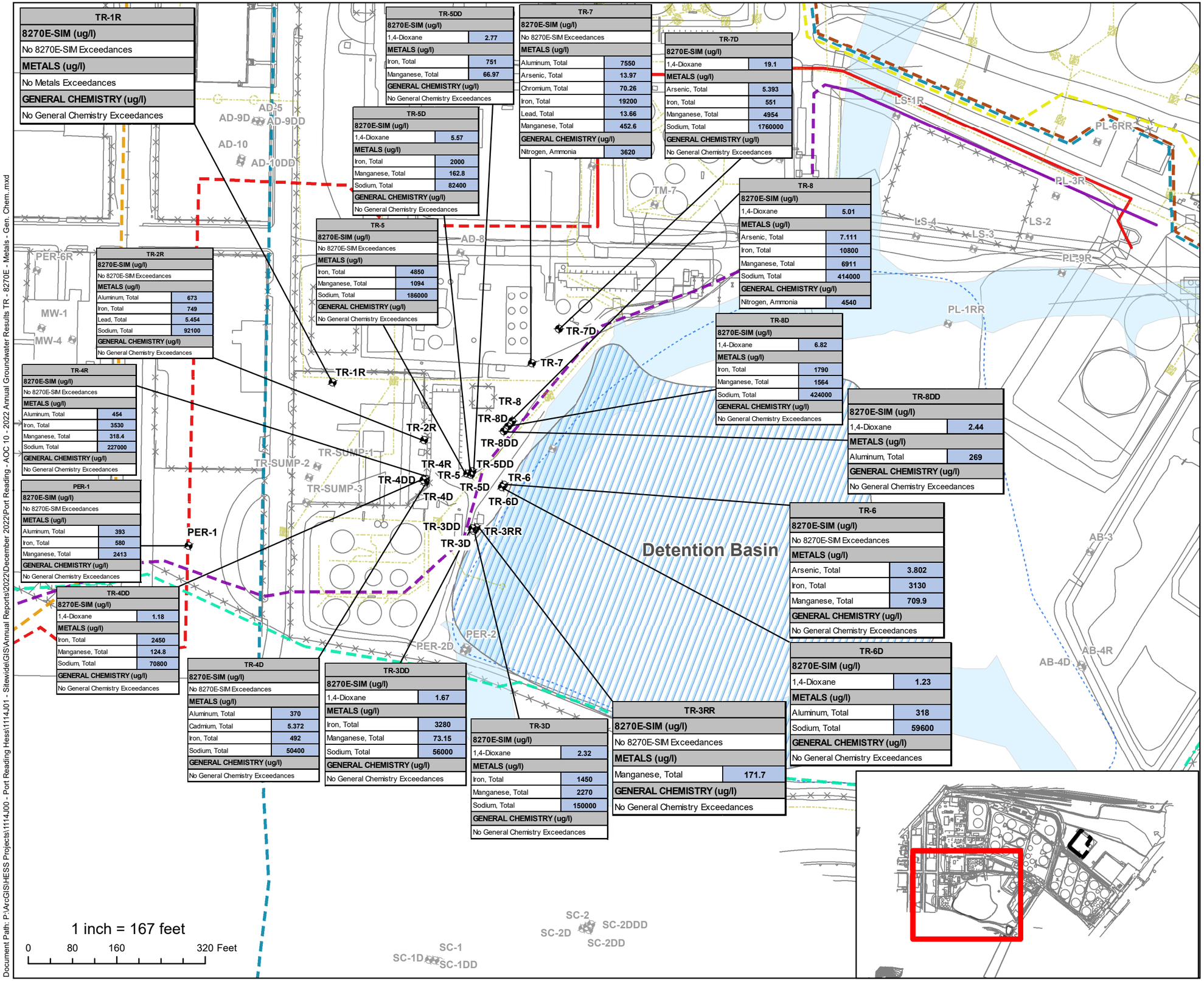

TR-1R	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
No Metals Exceedances	
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-5DD	
8270E-SIM (ug/l)	
1,4-Dioxane	2.77
METALS (ug/l)	
Iron, Total	751
Manganese, Total	66.97
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-7	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Aluminum, Total	7550
Arsenic, Total	13.97
Chromium, Total	70.26
Iron, Total	19200
Lead, Total	13.66
Manganese, Total	452.6
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3620

TR-7D	
8270E-SIM (ug/l)	
1,4-Dioxane	19.1
METALS (ug/l)	
Arsenic, Total	5.393
Iron, Total	551
Manganese, Total	4954
Sodium, Total	1760000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-5D	
8270E-SIM (ug/l)	
1,4-Dioxane	5.57
METALS (ug/l)	
Iron, Total	2000
Manganese, Total	162.8
Sodium, Total	82400
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-5	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Iron, Total	4850
Manganese, Total	1094
Sodium, Total	186000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-8	
8270E-SIM (ug/l)	
1,4-Dioxane	5.01
METALS (ug/l)	
Arsenic, Total	7.111
Iron, Total	10800
Manganese, Total	6911
Sodium, Total	414000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	4540

TR-2R	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Aluminum, Total	673
Iron, Total	749
Lead, Total	5.454
Sodium, Total	92100
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-8D	
8270E-SIM (ug/l)	
1,4-Dioxane	6.82
METALS (ug/l)	
Iron, Total	1790
Manganese, Total	1564
Sodium, Total	424000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-4R	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Aluminum, Total	454
Iron, Total	3530
Manganese, Total	318.4
Sodium, Total	227000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-8DD	
8270E-SIM (ug/l)	
1,4-Dioxane	2.44
METALS (ug/l)	
Aluminum, Total	269
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

PER-1	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Aluminum, Total	393
Iron, Total	580
Manganese, Total	2413
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-6	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Arsenic, Total	3.802
Iron, Total	3130
Manganese, Total	709.9
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-4DD	
8270E-SIM (ug/l)	
1,4-Dioxane	1.18
METALS (ug/l)	
Iron, Total	2450
Manganese, Total	124.8
Sodium, Total	70800
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-6D	
8270E-SIM (ug/l)	
1,4-Dioxane	1.23
METALS (ug/l)	
Aluminum, Total	318
Sodium, Total	59600
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-4D	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Aluminum, Total	370
Cadmium, Total	5.372
Iron, Total	492
Sodium, Total	50400
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-3DD	
8270E-SIM (ug/l)	
1,4-Dioxane	1.67
METALS (ug/l)	
Iron, Total	3280
Manganese, Total	73.15
Sodium, Total	56000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-3D	
8270E-SIM (ug/l)	
1,4-Dioxane	2.32
METALS (ug/l)	
Iron, Total	1450
Manganese, Total	2270
Sodium, Total	150000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

TR-3RR	
8270E-SIM (ug/l)	
No 8270E-SIM Exceedances	
METALS (ug/l)	
Manganese, Total	171.7
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

LEGEND

Site Boundary

Detention Basin

- AOC 12 Extent
- Basin Present Extents
- Former Smith Creek Channel
- Monitoring Well

Pipelines

- Buckeye Petroleum Pipeline - 608
- Williams Pipeline
- Sitewide Utilities

NJGWQS	
8270E-SIM (ug/l)	
1,4-Dioxane	0.4
METALS (ug/l)	
Aluminum, Total	200
Arsenic, Total	3
Cadmium, Total	4
Chromium, Total	70
Iron, Total	300
Lead, Total	5
Manganese, Total	50
Sodium, Total	50000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3000

FIGURE: 11a
AOC 10 Truck Loading Rack 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	01/18/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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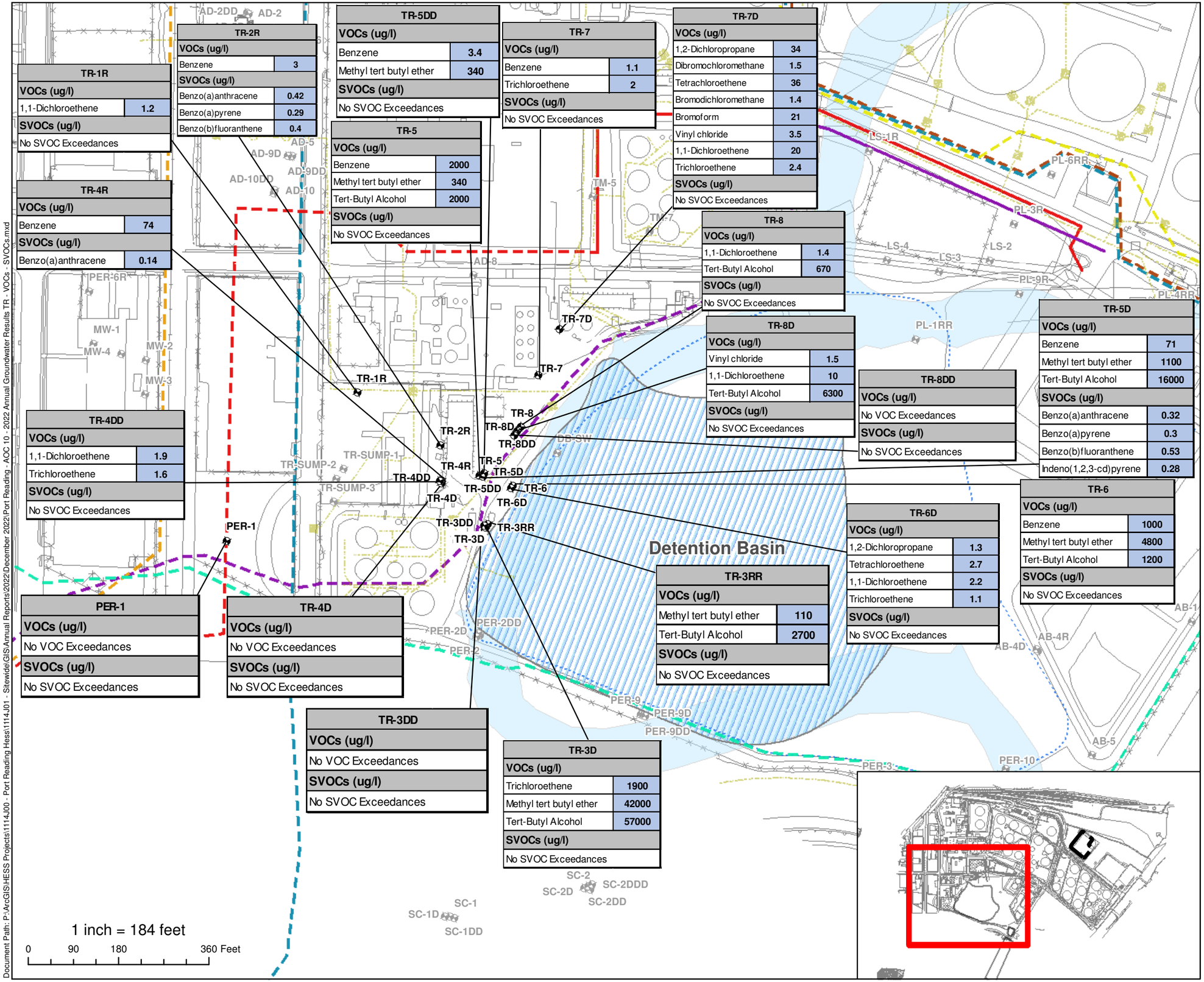

TR-1R	
VOCs (ug/l)	
1,1-Dichloroethene	1.2
SVOCs (ug/l)	
No SVOC Exceedances	

TR-2R	
VOCs (ug/l)	
Benzene	3
SVOCs (ug/l)	
Benzo(a)anthracene	0.42
Benzo(a)pyrene	0.29
Benzo(b)fluoranthene	0.4

TR-4R	
VOCs (ug/l)	
Benzene	74
SVOCs (ug/l)	
Benzo(a)anthracene	0.14

TR-4DD	
VOCs (ug/l)	
1,1-Dichloroethene	1.9
Trichloroethene	1.6
SVOCs (ug/l)	
No SVOC Exceedances	

TR-5DD	
VOCs (ug/l)	
Benzene	3.4
Methyl tert butyl ether	340
SVOCs (ug/l)	
No SVOC Exceedances	

TR-5	
VOCs (ug/l)	
Benzene	2000
Methyl tert butyl ether	340
Tert-Butyl Alcohol	2000
SVOCs (ug/l)	
No SVOC Exceedances	

TR-7	
VOCs (ug/l)	
Benzene	1.1
Trichloroethene	2
SVOCs (ug/l)	
No SVOC Exceedances	

TR-7D	
VOCs (ug/l)	
1,2-Dichloropropane	34
Dibromochloromethane	1.5
Tetrachloroethene	36
Bromodichloromethane	1.4
Bromoform	21
Vinyl chloride	3.5
1,1-Dichloroethene	20
Trichloroethene	2.4
SVOCs (ug/l)	
No SVOC Exceedances	

TR-8	
VOCs (ug/l)	
1,1-Dichloroethene	1.4
Tert-Butyl Alcohol	670
SVOCs (ug/l)	
No SVOC Exceedances	

TR-8D	
VOCs (ug/l)	
Vinyl chloride	1.5
1,1-Dichloroethene	10
Tert-Butyl Alcohol	6300
SVOCs (ug/l)	
No SVOC Exceedances	

TR-8DD	
VOCs (ug/l)	
No VOC Exceedances	
SVOCs (ug/l)	
No SVOC Exceedances	

TR-5D	
VOCs (ug/l)	
Benzene	71
Methyl tert butyl ether	1100
Tert-Butyl Alcohol	16000
SVOCs (ug/l)	
Benzo(a)anthracene	0.32
Benzo(a)pyrene	0.3
Benzo(b)fluoranthene	0.53
Indeno(1,2,3-cd)pyrene	0.28

TR-6	
VOCs (ug/l)	
Benzene	1000
Methyl tert butyl ether	4800
Tert-Butyl Alcohol	1200
SVOCs (ug/l)	
No SVOC Exceedances	

TR-6D	
VOCs (ug/l)	
1,2-Dichloropropane	1.3
Tetrachloroethene	2.7
1,1-Dichloroethene	2.2
Trichloroethene	1.1
SVOCs (ug/l)	
No SVOC Exceedances	

TR-3RR	
VOCs (ug/l)	
Methyl tert butyl ether	110
Tert-Butyl Alcohol	2700
SVOCs (ug/l)	
No SVOC Exceedances	

PER-1	
VOCs (ug/l)	
No VOC Exceedances	
SVOCs (ug/l)	
No SVOC Exceedances	

TR-4D	
VOCs (ug/l)	
No VOC Exceedances	
SVOCs (ug/l)	
No SVOC Exceedances	

TR-3DD	
VOCs (ug/l)	
No VOC Exceedances	
SVOCs (ug/l)	
No SVOC Exceedances	

TR-3D	
VOCs (ug/l)	
Trichloroethene	1900
Methyl tert butyl ether	42000
Tert-Butyl Alcohol	57000
SVOCs (ug/l)	
No SVOC Exceedances	

LEGEND

Site Boundary

Detention Basin

- AOC 12 Extent
- Basin Present Extents
- Former Smith Creek Channel
- Monitoring Well

Pipelines

- Buckeye Petroleum Pipeline - 608
- Williams Pipeline
- Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
1,2-Dichloropropane	1
Dibromochloromethane	1
Tetrachloroethene	1
Bromodichloromethane	1
Bromoform	4
Benzene	1
Vinyl chloride	1
1,1-Dichloroethene	1
Trichloroethene	1
Methyl tert butyl ether	70
Tert-Butyl Alcohol	100
SVOCs (ug/l)	
Benzo(a)anthracene	0.1
Benzo(a)pyrene	0.1
Benzo(b)fluoranthene	0.2
Indeno(1,2,3-cd)pyrene	0.2

FIGURE: 11b
AOC 10 Truck Loading Rack 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	01/18/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

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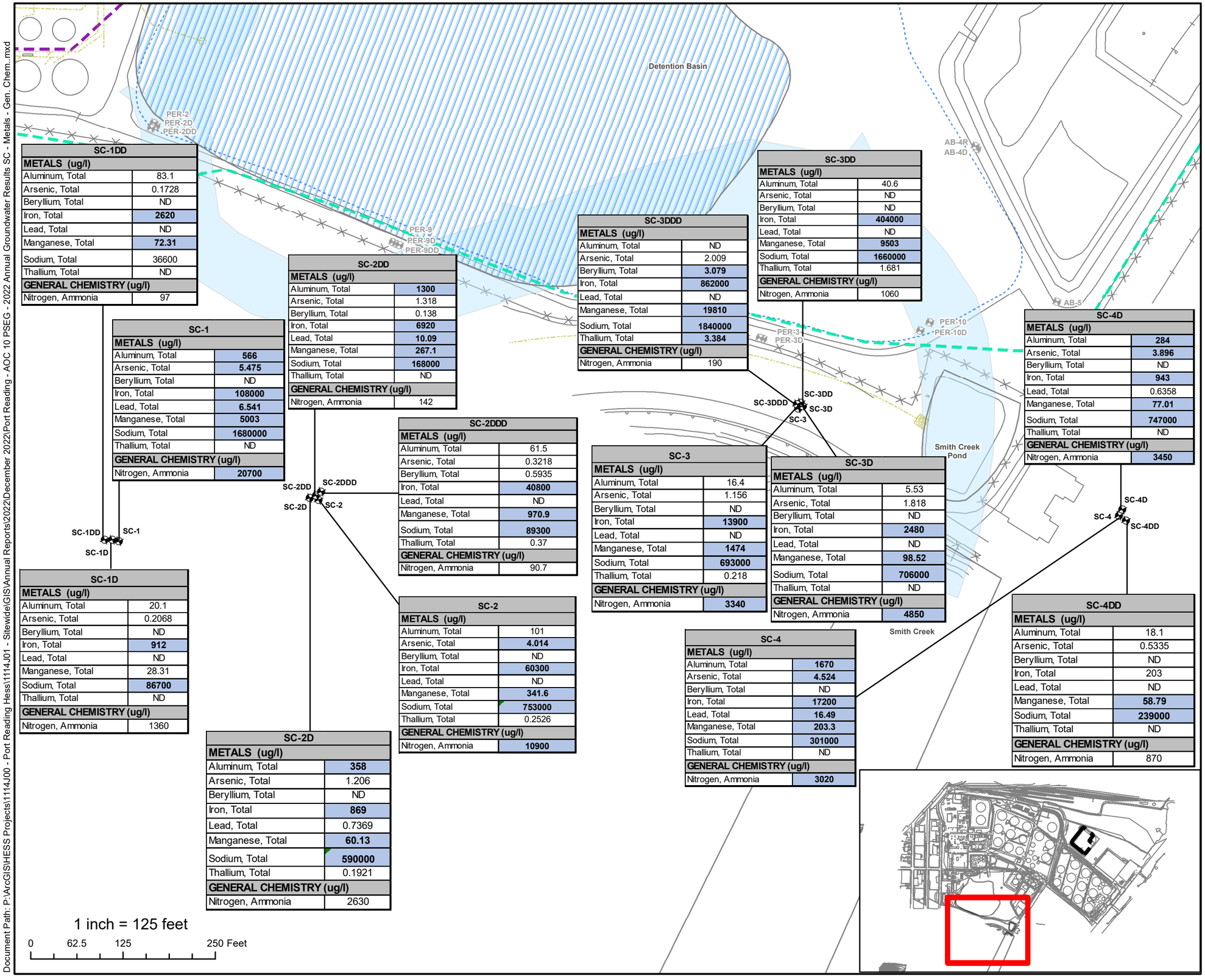

SC-1DD	
METALS (ug/l)	
Aluminum, Total	83.1
Arsenic, Total	0.1728
Beryllium, Total	ND
Iron, Total	**2620**
Lead, Total	ND
Manganese, Total	**72.31**
Sodium, Total	36600
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	97

SC-1	
METALS (ug/l)	
Aluminum, Total	**566**
Arsenic, Total	**5.475**
Beryllium, Total	ND
Iron, Total	**108000**
Lead, Total	**6.541**
Manganese, Total	**5003**
Sodium, Total	**1680000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**20700**

SC-2DD	
METALS (ug/l)	
Aluminum, Total	**1300**
Arsenic, Total	1.318
Beryllium, Total	0.138
Iron, Total	**6920**
Lead, Total	**10.09**
Manganese, Total	**267.1**
Sodium, Total	**168000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	142

SC-3DDD	
METALS (ug/l)	
Aluminum, Total	ND
Arsenic, Total	2.009
Beryllium, Total	**3.079**
Iron, Total	**862000**
Lead, Total	ND
Manganese, Total	**19810**
Sodium, Total	**1840000**
Thallium, Total	**3.384**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	190

SC-3DD	
METALS (ug/l)	
Aluminum, Total	40.6
Arsenic, Total	ND
Beryllium, Total	ND
Iron, Total	**404000**
Lead, Total	ND
Manganese, Total	**9503**
Sodium, Total	**1660000**
Thallium, Total	1.681
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	1060

SC-4D	
METALS (ug/l)	
Aluminum, Total	**284**
Arsenic, Total	**3.896**
Beryllium, Total	ND
Iron, Total	**943**
Lead, Total	0.6358
Manganese, Total	**77.01**
Sodium, Total	**747000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3450**

SC-2DDD	
METALS (ug/l)	
Aluminum, Total	61.5
Arsenic, Total	0.3218
Beryllium, Total	0.5935
Iron, Total	**40800**
Lead, Total	ND
Manganese, Total	**970.9**
Sodium, Total	**89300**
Thallium, Total	0.37
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	90.7

SC-3	
METALS (ug/l)	
Aluminum, Total	16.4
Arsenic, Total	1.156
Beryllium, Total	ND
Iron, Total	**13900**
Lead, Total	ND
Manganese, Total	**1474**
Sodium, Total	**693000**
Thallium, Total	0.218
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3340**

SC-3D	
METALS (ug/l)	
Aluminum, Total	5.53
Arsenic, Total	1.818
Beryllium, Total	ND
Iron, Total	**2480**
Lead, Total	ND
Manganese, Total	**98.52**
Sodium, Total	**706000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**4850**

SC-1D	
METALS (ug/l)	
Aluminum, Total	20.1
Arsenic, Total	0.2068
Beryllium, Total	ND
Iron, Total	**912**
Lead, Total	ND
Manganese, Total	28.31
Sodium, Total	**86700**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	1360

SC-2	
METALS (ug/l)	
Aluminum, Total	101
Arsenic, Total	**4.014**
Beryllium, Total	ND
Iron, Total	**60300**
Lead, Total	ND
Manganese, Total	**341.6**
Sodium, Total	**753000**
Thallium, Total	0.2526
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**10900**

SC-4	
METALS (ug/l)	
Aluminum, Total	**1670**
Arsenic, Total	**4.524**
Beryllium, Total	ND
Iron, Total	**17200**
Lead, Total	**16.49**
Manganese, Total	**203.3**
Sodium, Total	**301000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3020**

SC-4DD	
METALS (ug/l)	
Aluminum, Total	18.1
Arsenic, Total	0.5335
Beryllium, Total	ND
Iron, Total	203
Lead, Total	ND
Manganese, Total	**58.79**
Sodium, Total	**239000**
Thallium, Total	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	870

SC-2D	
METALS (ug/l)	
Aluminum, Total	**358**
Arsenic, Total	1.206
Beryllium, Total	ND
Iron, Total	**869**
Lead, Total	0.7369
Manganese, Total	**60.13**
Sodium, Total	**590000**
Thallium, Total	0.1921
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	2630

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Beryllium, Total	**1**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Sodium, Total	**50000**
Thallium, Total	**2**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 11c
PSEG Off-Site Wells
2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/13/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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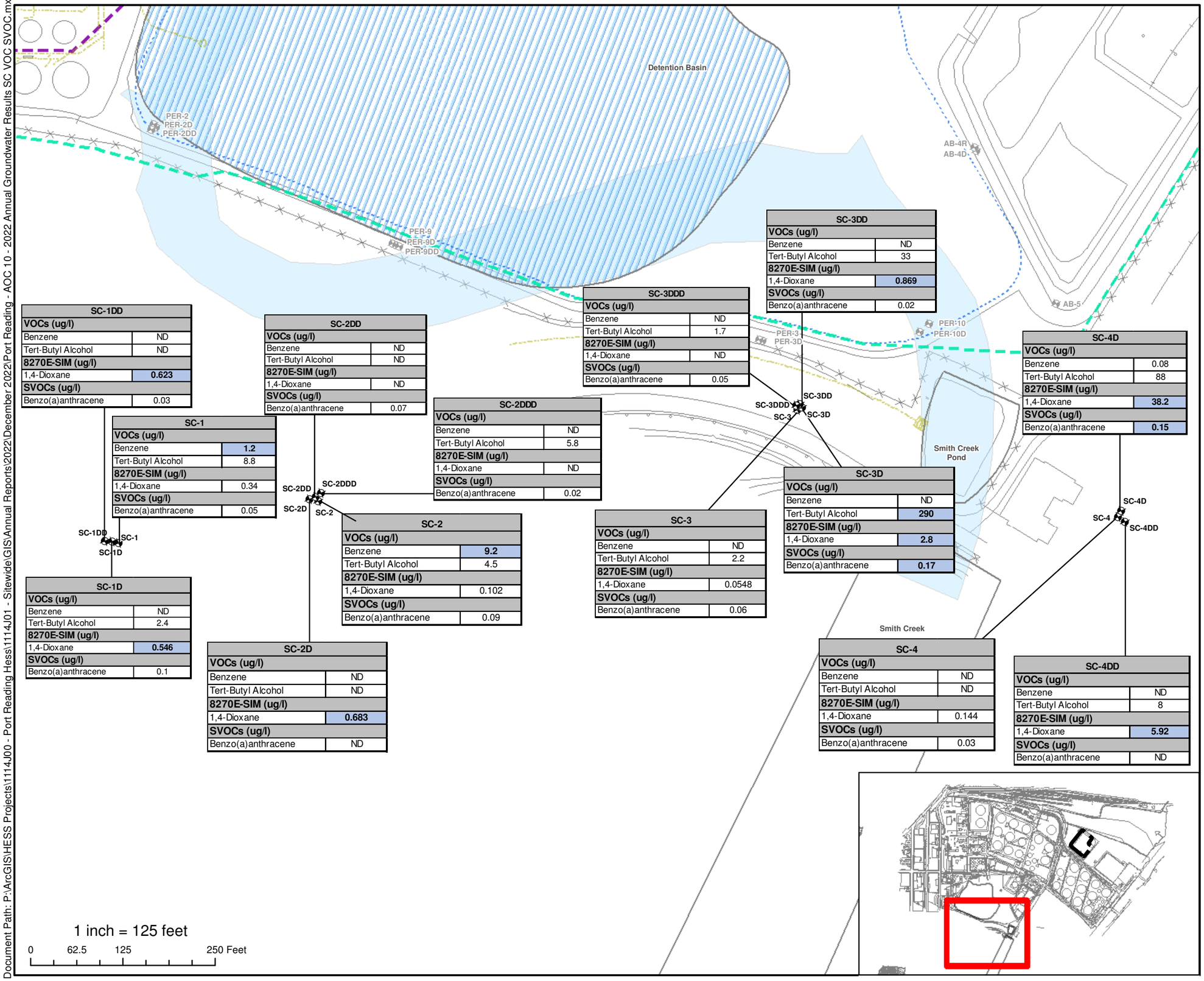

SC-1DD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	**0.623**
SVOCs (ug/l)	
Benzo(a)anthracene	0.03

SC-1	
VOCs (ug/l)	
Benzene	**1.2**
Tert-Butyl Alcohol	8.8
8270E-SIM (ug/l)	
1,4-Dioxane	0.34
SVOCs (ug/l)	
Benzo(a)anthracene	0.05

SC-1D	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	2.4
8270E-SIM (ug/l)	
1,4-Dioxane	**0.546**
SVOCs (ug/l)	
Benzo(a)anthracene	0.1

SC-2DD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.07

SC-2DDD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	5.8
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02

SC-2	
VOCs (ug/l)	
Benzene	**9.2**
Tert-Butyl Alcohol	4.5
8270E-SIM (ug/l)	
1,4-Dioxane	0.102
SVOCs (ug/l)	
Benzo(a)anthracene	0.09

SC-2D	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	**0.683**
SVOCs (ug/l)	
Benzo(a)anthracene	ND

SC-3DDD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	1.7
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.05

SC-3	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	2.2
8270E-SIM (ug/l)	
1,4-Dioxane	0.0548
SVOCs (ug/l)	
Benzo(a)anthracene	0.06

SC-3DD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	33
8270E-SIM (ug/l)	
1,4-Dioxane	**0.869**
SVOCs (ug/l)	
Benzo(a)anthracene	0.02

SC-3D	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	**290**
8270E-SIM (ug/l)	
1,4-Dioxane	**2.8**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.17**

SC-4	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	0.144
SVOCs (ug/l)	
Benzo(a)anthracene	0.03

SC-4D	
VOCs (ug/l)	
Benzene	0.08
Tert-Butyl Alcohol	88
8270E-SIM (ug/l)	
1,4-Dioxane	**38.2**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.15**

SC-4DD	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	8
8270E-SIM (ug/l)	
1,4-Dioxane	**5.92**
SVOCs (ug/l)	
Benzo(a)anthracene	ND

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
Tert-Butyl Alcohol	**100**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.4**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.1**

FIGURE: 11d
PSEG Off-site Wells 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/13/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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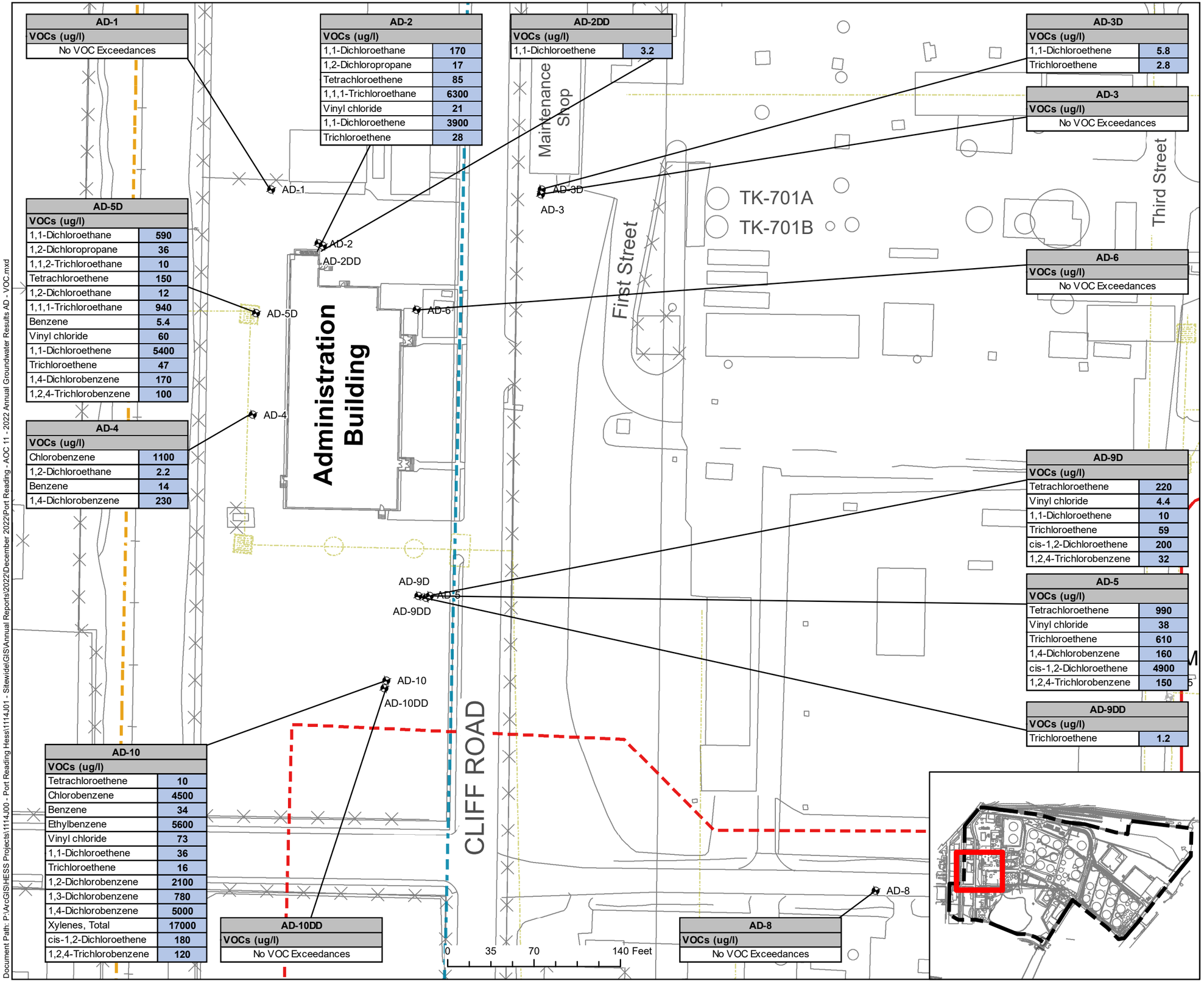

AD-1	
VOCs (ug/l)	
No VOC Exceedances	

AD-2	
VOCs (ug/l)	
1,1-Dichloroethane	170
1,2-Dichloropropane	17
Tetrachloroethene	85
1,1,1-Trichloroethane	6300
Vinyl chloride	21
1,1-Dichloroethene	3900
Trichloroethene	28

AD-2DD	
VOCs (ug/l)	
1,1-Dichloroethene	3.2

AD-3D	
VOCs (ug/l)	
1,1-Dichloroethene	5.8
Trichloroethene	2.8

AD-3
VOCs (ug/l)
No VOC Exceedances

AD-5D	
VOCs (ug/l)	
1,1-Dichloroethane	590
1,2-Dichloropropane	36
1,1,2-Trichloroethane	10
Tetrachloroethene	150
1,2-Dichloroethane	12
1,1,1-Trichloroethane	940
Benzene	5.4
Vinyl chloride	60
1,1-Dichloroethene	5400
Trichloroethene	47
1,4-Dichlorobenzene	170
1,2,4-Trichlorobenzene	100

AD-6
VOCs (ug/l)
No VOC Exceedances

AD-4	
VOCs (ug/l)	
Chlorobenzene	1100
1,2-Dichloroethane	2.2
Benzene	14
1,4-Dichlorobenzene	230

AD-9D	
VOCs (ug/l)	
Tetrachloroethene	220
Vinyl chloride	4.4
1,1-Dichloroethene	10
Trichloroethene	59
cis-1,2-Dichloroethene	200
1,2,4-Trichlorobenzene	32

AD-5	
VOCs (ug/l)	
Tetrachloroethene	990
Vinyl chloride	38
Trichloroethene	610
1,4-Dichlorobenzene	160
cis-1,2-Dichloroethene	4900
1,2,4-Trichlorobenzene	150

AD-9DD	
VOCs (ug/l)	
Trichloroethene	1.2

AD-10	
VOCs (ug/l)	
Tetrachloroethene	10
Chlorobenzene	4500
Benzene	34
Ethylbenzene	5600
Vinyl chloride	73
1,1-Dichloroethene	36
Trichloroethene	16
1,2-Dichlorobenzene	2100
1,3-Dichlorobenzene	780
1,4-Dichlorobenzene	5000
Xylenes, Total	17000
cis-1,2-Dichloroethene	180
1,2,4-Trichlorobenzene	120

AD-10DD
VOCs (ug/l)
No VOC Exceedances

AD-8
VOCs (ug/l)
No VOC Exceedances

LEGEND

Monitoring Well

Pipelines

Buckeye Pipeline

Buckeye Petroleum Pipeline - 609

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
1,1-Dichloroethane	50
1,2-Dichloropropane	1
1,1,2-Trichloroethane	3
Tetrachloroethene	1
Chlorobenzene	50
1,2-Dichloroethane	2
1,1,1-Trichloroethane	30
Benzene	1
Ethylbenzene	700
Vinyl chloride	1
1,1-Dichloroethene	1
Trichloroethene	1
1,2-Dichlorobenzene	600
1,3-Dichlorobenzene	600
1,4-Dichlorobenzene	75
Xylenes, Total	1000
cis-1,2-Dichloroethene	70
1,2,4-Trichlorobenzene	9

FIGURE: 12a
AOC 11a - Administration Building 2022 Annual Groundwater Sampling Exceedances - VOCs

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/19/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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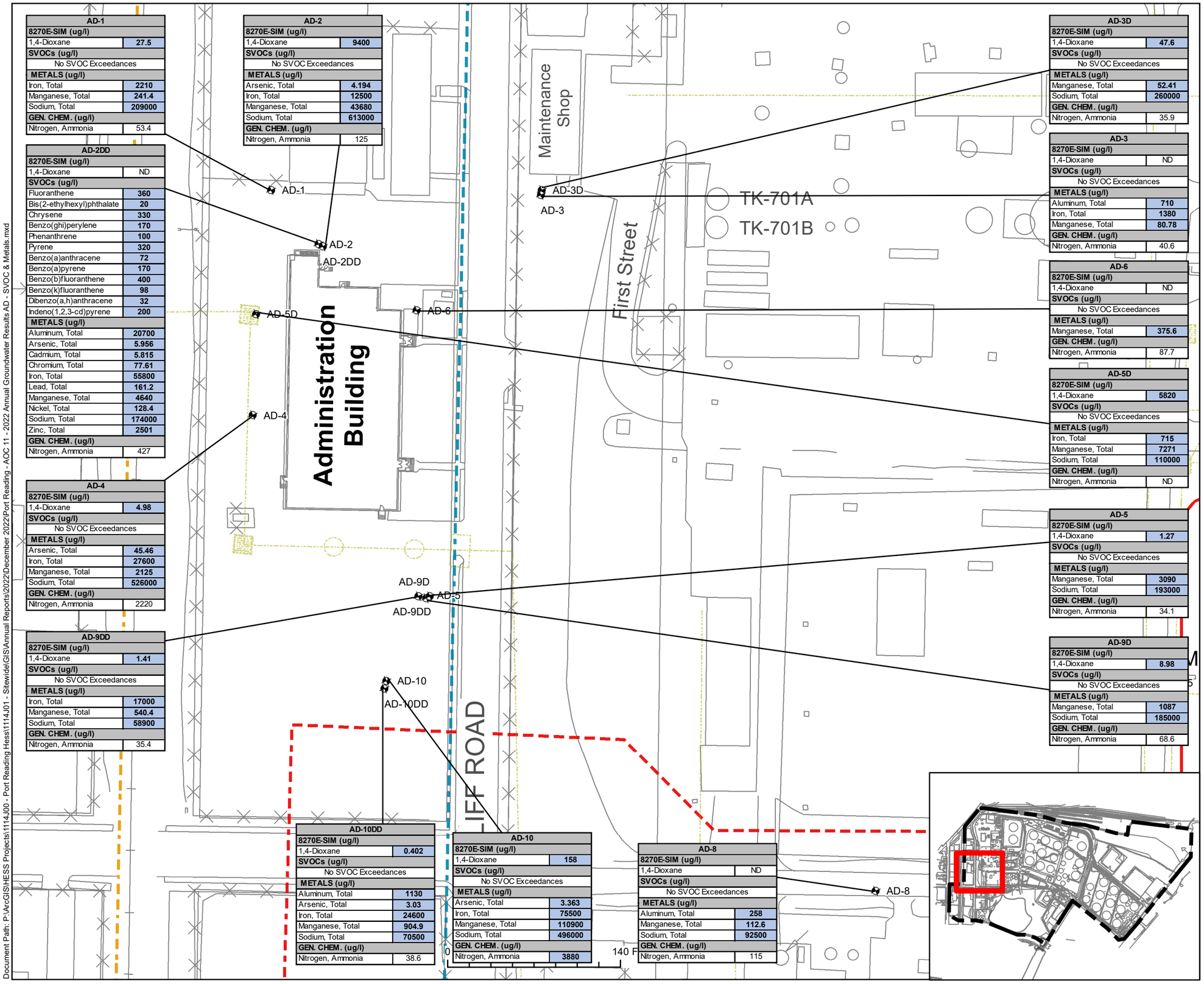

AD-1	
8270E-SIM (ug/l)	
1,4-Dioxane	27.5
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Iron, Total	2210
Manganese, Total	241.4
Sodium, Total	209000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	53.4

AD-2	
8270E-SIM (ug/l)	
1,4-Dioxane	9400
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Arsenic, Total	4.194
Iron, Total	12500
Manganese, Total	43680
Sodium, Total	613000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	125

AD-2DD	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Fluoranthene	360
Bis(2-ethylhexyl)phthalate	20
Chrysene	330
Benzo(ghi)perylene	170
Phenanthrene	100
Pyrene	320
Benzo(a)anthracene	72
Benzo(a)pyrene	170
Benzo(b)fluoranthene	400
Benzo(k)fluoranthene	98
Dibenzo(a,h)anthracene	32
Indeno(1,2,3-cd)pyrene	200
METALS (ug/l)	
Aluminum, Total	20700
Arsenic, Total	5.956
Cadmium, Total	5.815
Chromium, Total	77.61
Iron, Total	55800
Lead, Total	161.2
Manganese, Total	4640
Nickel, Total	128.4
Sodium, Total	174000
Zinc, Total	2501
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	427

AD-4	
8270E-SIM (ug/l)	
1,4-Dioxane	4.98
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Arsenic, Total	45.46
Iron, Total	27600
Manganese, Total	2125
Sodium, Total	526000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	2220

AD-9DD	
8270E-SIM (ug/l)	
1,4-Dioxane	1.41
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Iron, Total	17000
Manganese, Total	540.4
Sodium, Total	58900
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	35.4

AD-3D	
8270E-SIM (ug/l)	
1,4-Dioxane	47.6
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Manganese, Total	52.41
Sodium, Total	260000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	35.9

AD-3	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Aluminum, Total	710
Iron, Total	1380
Manganese, Total	80.78
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	40.6

AD-6	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Manganese, Total	375.6
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	87.7

AD-5D	
8270E-SIM (ug/l)	
1,4-Dioxane	5820
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Iron, Total	715
Manganese, Total	7271
Sodium, Total	110000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	ND

AD-5	
8270E-SIM (ug/l)	
1,4-Dioxane	1.27
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Manganese, Total	3090
Sodium, Total	193000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	34.1

AD-9D	
8270E-SIM (ug/l)	
1,4-Dioxane	8.98
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Manganese, Total	1087
Sodium, Total	185000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	68.6

AD-10DD	
8270E-SIM (ug/l)	
1,4-Dioxane	0.402
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Aluminum, Total	1130
Arsenic, Total	3.03
Iron, Total	24600
Manganese, Total	904.9
Sodium, Total	70500
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	38.6

AD-10	
8270E-SIM (ug/l)	
1,4-Dioxane	158
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Arsenic, Total	3.363
Iron, Total	75500
Manganese, Total	110900
Sodium, Total	496000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	3880

AD-8	
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
No SVOC Exceedances	
METALS (ug/l)	
Aluminum, Total	258
Manganese, Total	112.6
Sodium, Total	92500
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	115

LEGEND

Monitoring Well

Pipelines

Buckeye Pipeline

Buckeye Petroleum Pipeline - 609

Sitewide Utilities

NJGWQS	
8270E-SIM (ug/l)	
1,4-Dioxane	0.4
SVOCs (ug/l)	
Fluoranthene	300
Bis(2-ethylhexyl)phthalate	3
Chrysene	5
Benzo(ghi)perylene	100
Phenanthrene	100
Pyrene	200
Benzo(a)anthracene	0.1
Benzo(a)pyrene	0.1
Benzo(b)fluoranthene	0.2
Benzo(k)fluoranthene	0.5
Dibenzo(a,h)anthracene	0.3
Indeno(1,2,3-cd)pyrene	0.2
METALS (ug/l)	
Aluminum, Total	200
Arsenic, Total	3
Cadmium, Total	4
Chromium, Total	70
Iron, Total	300
Lead, Total	5
Manganese, Total	50
Nickel, Total	100
Sodium, Total	50000
Zinc, Total	2000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	3000

FIGURE: 12b

AOC 11a - Administration Building 2022 Annual Groundwater Sampling Exceedances - VOCs & Metals

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/19/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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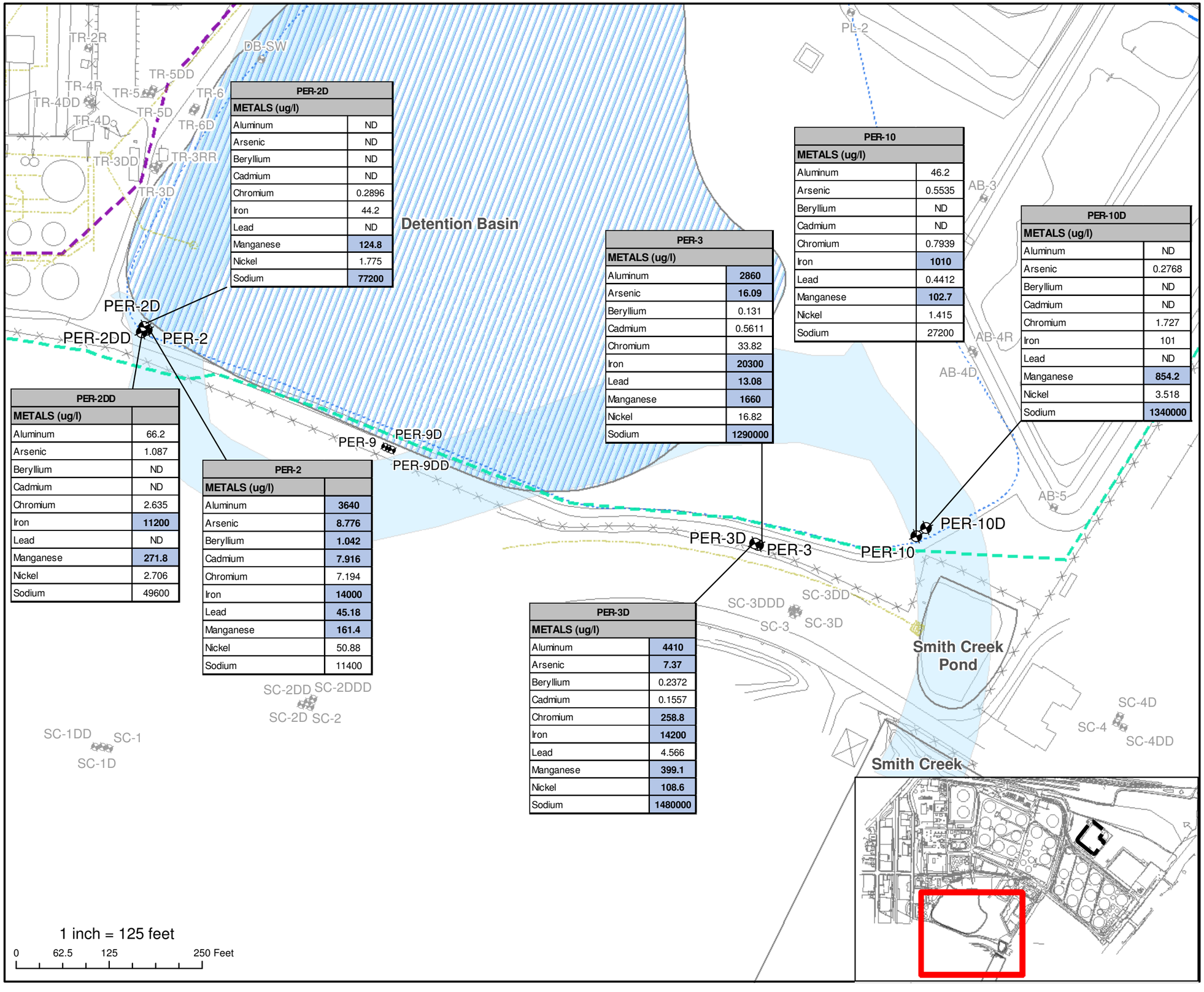

PER-2D	
METALS (ug/l)	
Aluminum	ND
Arsenic	ND
Beryllium	ND
Cadmium	ND
Chromium	0.2896
Iron	44.2
Lead	ND
Manganese	**124.8**
Nickel	1.775
Sodium	**77200**

PER-2DD	
METALS (ug/l)	
Aluminum	66.2
Arsenic	1.087
Beryllium	ND
Cadmium	ND
Chromium	2.635
Iron	**11200**
Lead	ND
Manganese	**271.8**
Nickel	2.706
Sodium	49600

PER-2	
METALS (ug/l)	
Aluminum	**3640**
Arsenic	**8.776**
Beryllium	**1.042**
Cadmium	**7.916**
Chromium	7.194
Iron	**14000**
Lead	**45.18**
Manganese	**161.4**
Nickel	50.88
Sodium	11400

PER-3	
METALS (ug/l)	
Aluminum	**2860**
Arsenic	**16.09**
Beryllium	0.131
Cadmium	0.5611
Chromium	33.82
Iron	**20300**
Lead	**13.08**
Manganese	**1660**
Nickel	16.82
Sodium	**1290000**

PER-3D	
METALS (ug/l)	
Aluminum	**4410**
Arsenic	**7.37**
Beryllium	0.2372
Cadmium	0.1557
Chromium	**258.8**
Iron	**14200**
Lead	4.566
Manganese	**399.1**
Nickel	**108.6**
Sodium	**1480000**

PER-10	
METALS (ug/l)	
Aluminum	46.2
Arsenic	0.5535
Beryllium	ND
Cadmium	ND
Chromium	0.7939
Iron	**1010**
Lead	0.4412
Manganese	**102.7**
Nickel	1.415
Sodium	27200

PER-10D	
METALS (ug/l)	
Aluminum	ND
Arsenic	0.2768
Beryllium	ND
Cadmium	ND
Chromium	1.727
Iron	101
Lead	ND
Manganese	**854.2**
Nickel	3.518
Sodium	**1340000**

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
METALS (ug/l)	
Aluminum	**200**
Arsenic	**3**
Beryllium	**1**
Cadmium	**4**
Chromium	**70**
Iron	**300**
Lead	**5**
Manganese	**50**
Nickel	**100**
Sodium	**50000**

NOTE:
1. PER-9, PER-9D, PER-9DD could not be sampled due to inaccessibility.

FIGURE: 13a
AOC 12 Detention Basin/Smith Creek 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/13/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
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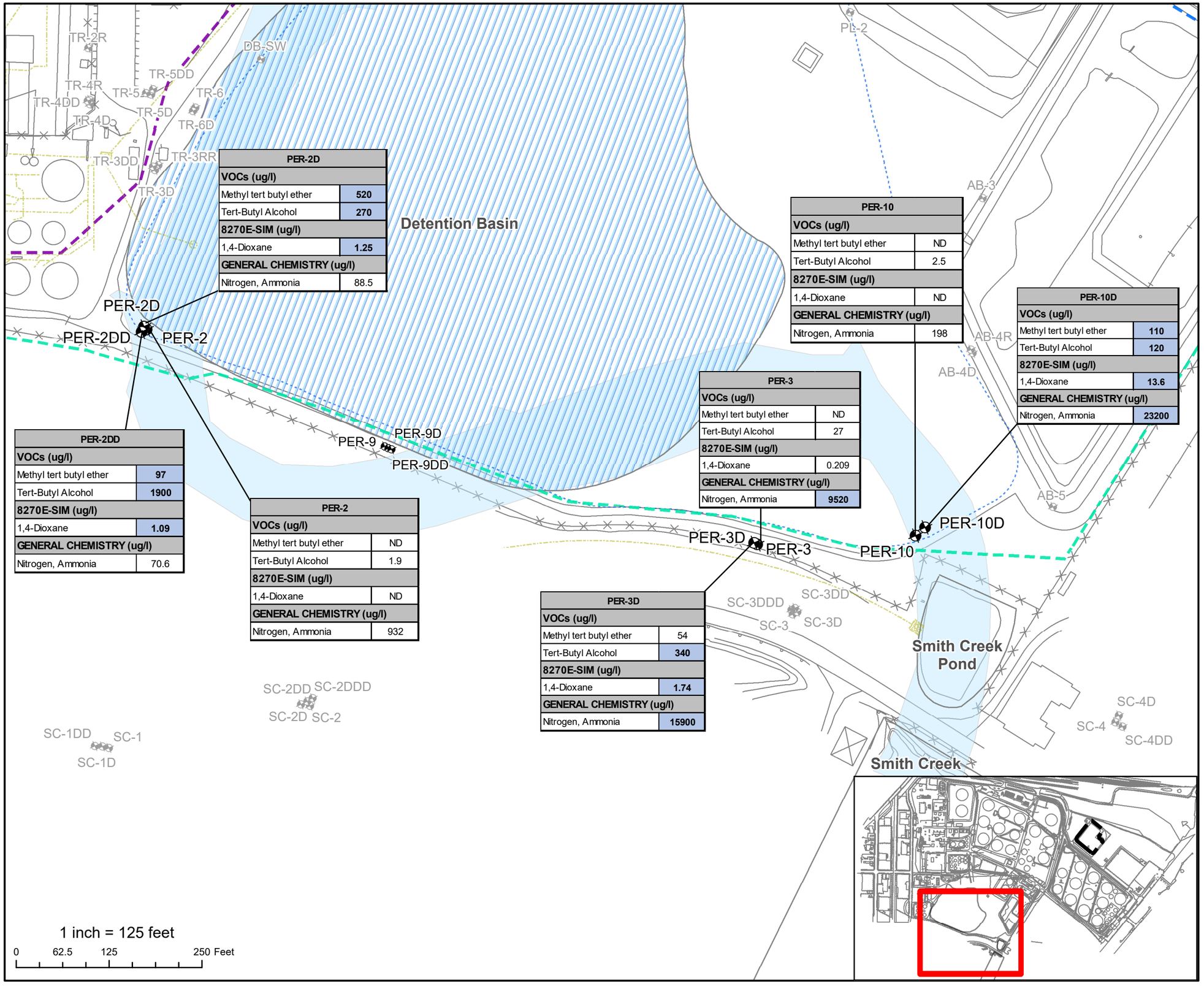

PER-2D	
VOCs (ug/l)	
Methyl tert butyl ether	520
Tert-Butyl Alcohol	270
8270E-SIM (ug/l)	
1,4-Dioxane	1.25
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	88.5

PER-10	
VOCs (ug/l)	
Methyl tert butyl ether	ND
Tert-Butyl Alcohol	2.5
8270E-SIM (ug/l)	
1,4-Dioxane	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	198

PER-10D	
VOCs (ug/l)	
Methyl tert butyl ether	110
Tert-Butyl Alcohol	120
8270E-SIM (ug/l)	
1,4-Dioxane	13.6
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	23200

PER-3	
VOCs (ug/l)	
Methyl tert butyl ether	ND
Tert-Butyl Alcohol	27
8270E-SIM (ug/l)	
1,4-Dioxane	0.209
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	9520

PER-2DD	
VOCs (ug/l)	
Methyl tert butyl ether	97
Tert-Butyl Alcohol	1900
8270E-SIM (ug/l)	
1,4-Dioxane	1.09
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	70.6

PER-2	
VOCs (ug/l)	
Methyl tert butyl ether	ND
Tert-Butyl Alcohol	1.9
8270E-SIM (ug/l)	
1,4-Dioxane	ND
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	932

PER-3D	
VOCs (ug/l)	
Methyl tert butyl ether	54
Tert-Butyl Alcohol	340
8270E-SIM (ug/l)	
1,4-Dioxane	1.74
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	15900

LEGEND

Site Boundary

Detention Basin

- AOC 12 Extent
- Basin Present Extents
- Former Smith Creek Channel
- Monitoring Well

Pipelines

- Buckeye Petroleum Pipeline - 608
- Williams Pipeline
- Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Methyl tert butyl ether	70
Tert-Butyl Alcohol	100
8270E-SIM (ug/l)	
1,4-Dioxane	0.4
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3000

NOTE:
1. PER-9, PER-9D, PER-9DD could not be sampled due to inaccessibility.

FIGURE: 13b
AOC 12 Detention Basin/Smith Creek 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/13/2023
SRP PI#:	006148	**Drawn By:**	NS

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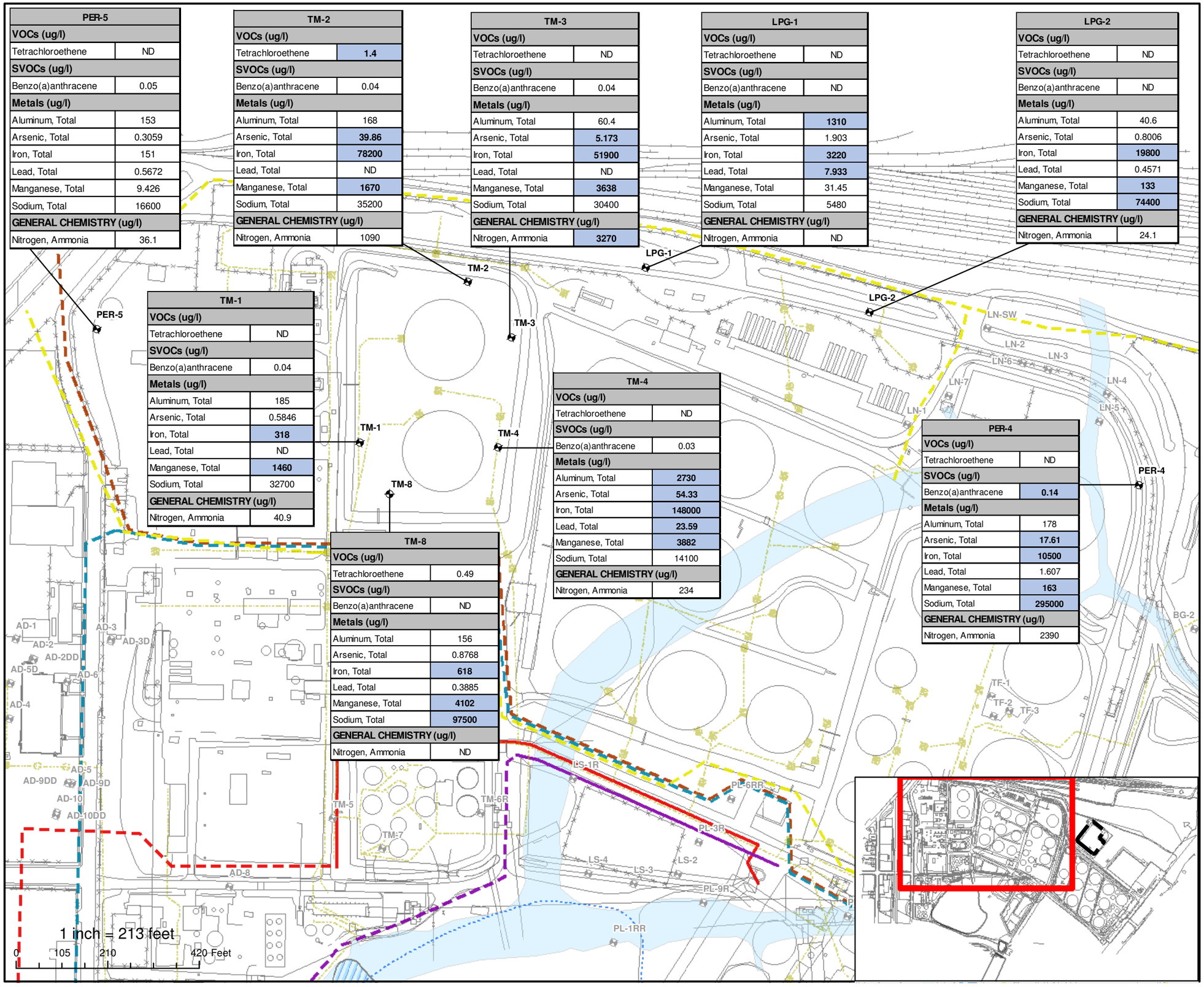

PER-5	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
Metals (ug/l)	
Aluminum, Total	153
Arsenic, Total	0.3059
Iron, Total	151
Lead, Total	0.5672
Manganese, Total	9.426
Sodium, Total	16600
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	36.1

TM-2	
VOCs (ug/l)	
Tetrachloroethene	1.4
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Metals (ug/l)	
Aluminum, Total	168
Arsenic, Total	39.86
Iron, Total	78200
Lead, Total	ND
Manganese, Total	1670
Sodium, Total	35200
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	1090

TM-3	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Metals (ug/l)	
Aluminum, Total	60.4
Arsenic, Total	5.173
Iron, Total	51900
Lead, Total	ND
Manganese, Total	3638
Sodium, Total	30400
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3270

LPG-1	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Metals (ug/l)	
Aluminum, Total	1310
Arsenic, Total	1.903
Iron, Total	3220
Lead, Total	7.933
Manganese, Total	31.45
Sodium, Total	5480
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	ND

LPG-2	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Metals (ug/l)	
Aluminum, Total	40.6
Arsenic, Total	0.8006
Iron, Total	19800
Lead, Total	0.4571
Manganese, Total	133
Sodium, Total	74400
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	24.1

TM-1	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Metals (ug/l)	
Aluminum, Total	185
Arsenic, Total	0.5846
Iron, Total	318
Lead, Total	ND
Manganese, Total	1460
Sodium, Total	32700
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	40.9

TM-4	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.03
Metals (ug/l)	
Aluminum, Total	2730
Arsenic, Total	54.33
Iron, Total	148000
Lead, Total	23.59
Manganese, Total	3882
Sodium, Total	14100
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	234

PER-4	
VOCs (ug/l)	
Tetrachloroethene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.14
Metals (ug/l)	
Aluminum, Total	178
Arsenic, Total	17.61
Iron, Total	10500
Lead, Total	1.607
Manganese, Total	163
Sodium, Total	295000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	2390

TM-8	
VOCs (ug/l)	
Tetrachloroethene	0.49
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Metals (ug/l)	
Aluminum, Total	156
Arsenic, Total	0.8768
Iron, Total	618
Lead, Total	0.3885
Manganese, Total	4102
Sodium, Total	97500
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	ND

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Tetrachloroethene	1
SVOCs (ug/l)	
Benzo(a)anthracene	0.1
Metals (ug/l)	
Aluminum, Total	200
Arsenic, Total	3
Iron, Total	300
Lead, Total	5
Manganese, Total	50
Sodium, Total	50000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3000

FIGURE: 14
AOC 14a - First Tankfield 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/16/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
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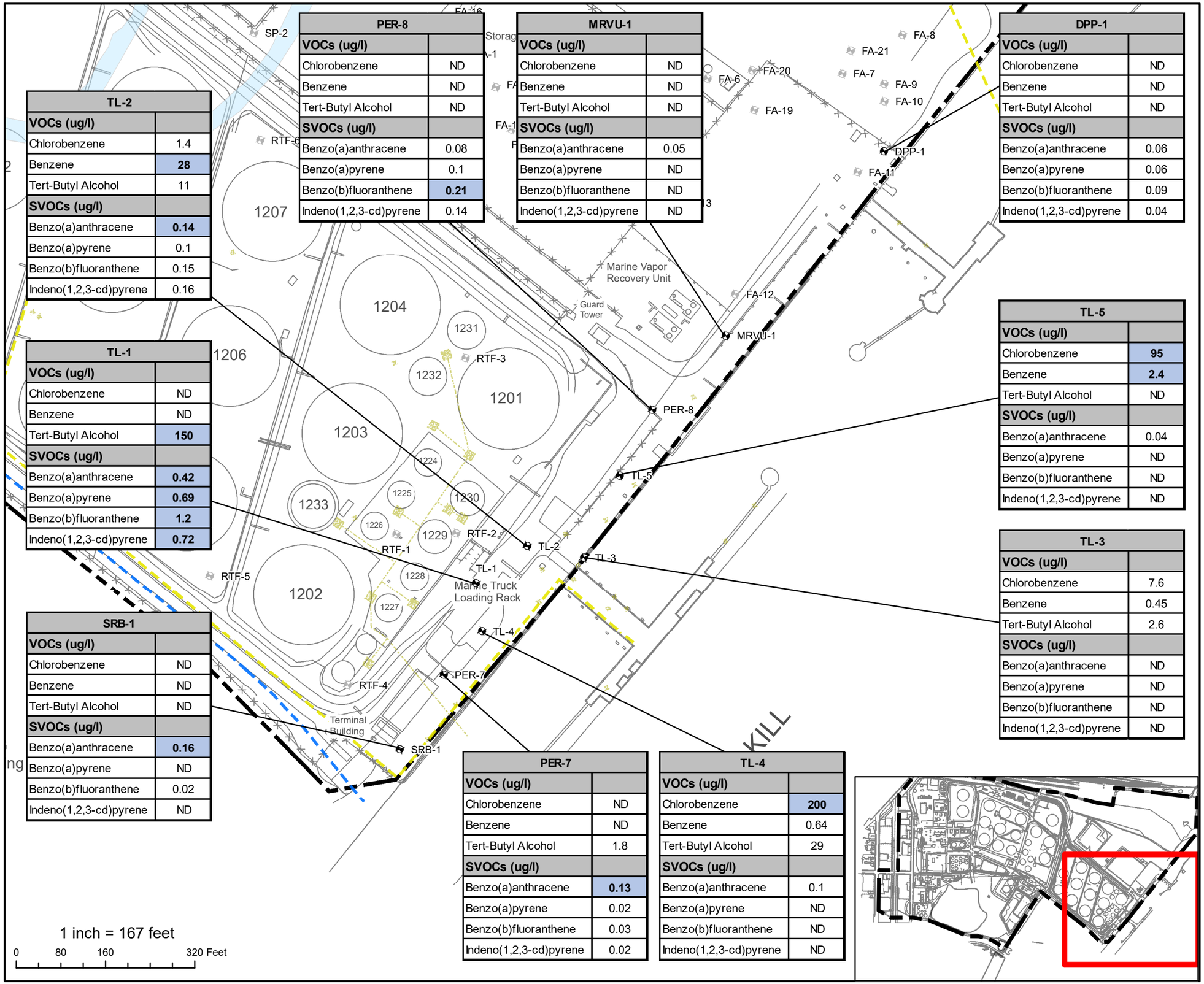

TL-2	
VOCs (ug/l)	
Chlorobenzene	1.4
Benzene	**28**
Tert-Butyl Alcohol	11
SVOCs (ug/l)	
Benzo(a)anthracene	**0.14**
Benzo(a)pyrene	0.1
Benzo(b)fluoranthene	0.15
Indeno(1,2,3-cd)pyrene	0.16

PER-8	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.08
Benzo(a)pyrene	0.1
Benzo(b)fluoranthene	**0.21**
Indeno(1,2,3-cd)pyrene	0.14

MRVU-1	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Indeno(1,2,3-cd)pyrene	ND

DPP-1	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Benzo(a)pyrene	0.06
Benzo(b)fluoranthene	0.09
Indeno(1,2,3-cd)pyrene	0.04

TL-1	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	**150**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.42**
Benzo(a)pyrene	**0.69**
Benzo(b)fluoranthene	**1.2**
Indeno(1,2,3-cd)pyrene	**0.72**

TL-5	
VOCs (ug/l)	
Chlorobenzene	**95**
Benzene	**2.4**
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Indeno(1,2,3-cd)pyrene	ND

TL-3	
VOCs (ug/l)	
Chlorobenzene	7.6
Benzene	0.45
Tert-Butyl Alcohol	2.6
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Indeno(1,2,3-cd)pyrene	ND

SRB-1	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Benzo(a)anthracene	**0.16**
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	0.02
Indeno(1,2,3-cd)pyrene	ND

PER-7	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Tert-Butyl Alcohol	1.8
SVOCs (ug/l)	
Benzo(a)anthracene	**0.13**
Benzo(a)pyrene	0.02
Benzo(b)fluoranthene	0.03
Indeno(1,2,3-cd)pyrene	0.02

TL-4	
VOCs (ug/l)	
Chlorobenzene	**200**
Benzene	0.64
Tert-Butyl Alcohol	29
SVOCs (ug/l)	
Benzo(a)anthracene	0.1
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Indeno(1,2,3-cd)pyrene	ND

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Colonial Pipeline

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Chlorobenzene	**50**
Benzene	**1**
Tert-Butyl Alcohol	**100**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.1**
Benzo(a)pyrene	**0.1**
Benzo(b)fluoranthene	**0.2**
Indeno(1,2,3-cd)pyrene	**0.2**

FIGURE: 15a
AOC 16b Marine Loading Area 2022 Annual Groundwater Sampling Exceedances - Metals

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/16/2023
SRP PI#:	006148	**Drawn By:**	NS

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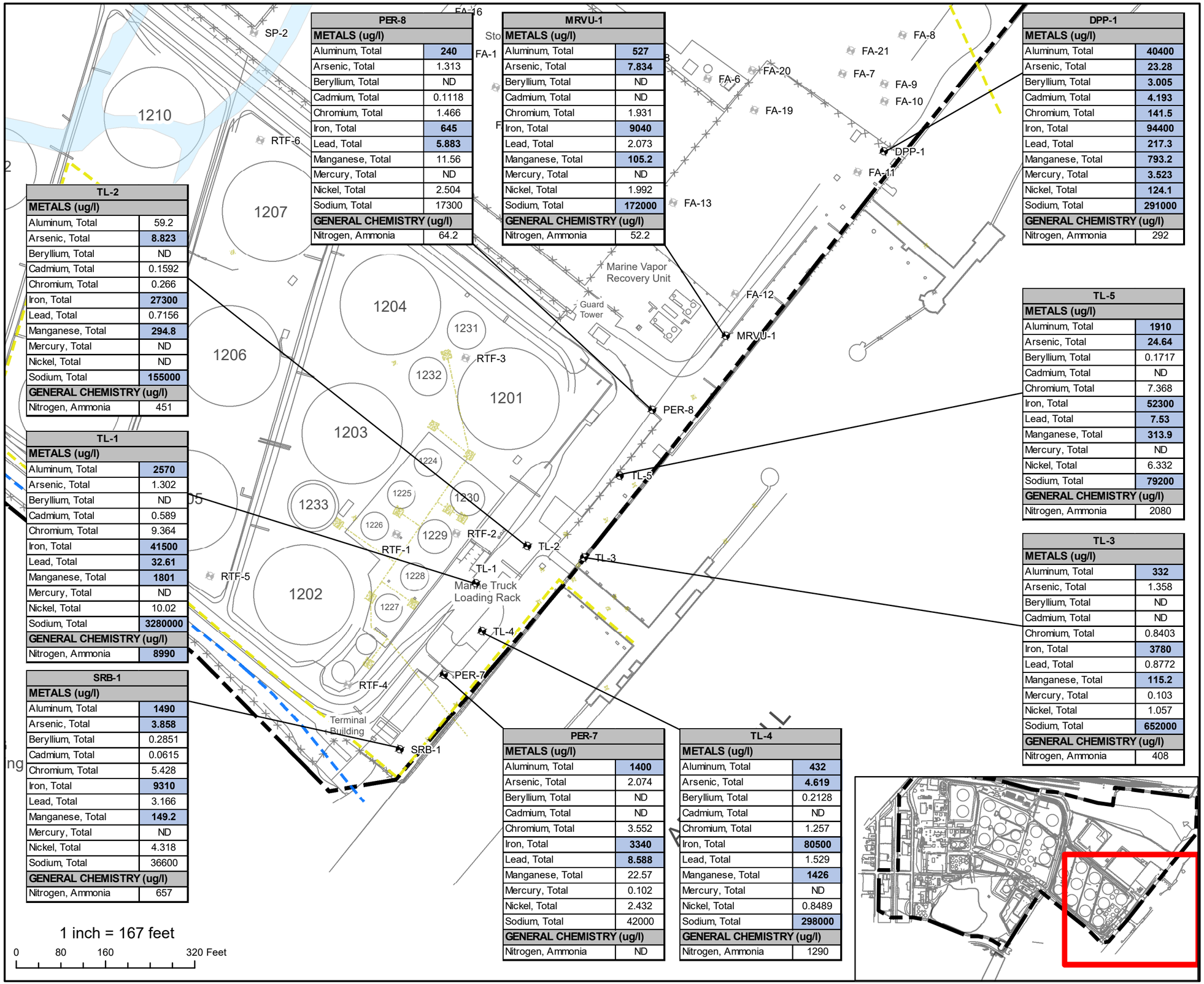

PER-8	
METALS (ug/l)	
Aluminum, Total	**240**
Arsenic, Total	1.313
Beryllium, Total	ND
Cadmium, Total	0.1118
Chromium, Total	1.466
Iron, Total	**645**
Lead, Total	**5.883**
Manganese, Total	11.56
Mercury, Total	ND
Nickel, Total	2.504
Sodium, Total	17300
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	64.2

MRVU-1	
METALS (ug/l)	
Aluminum, Total	**527**
Arsenic, Total	**7.834**
Beryllium, Total	ND
Cadmium, Total	ND
Chromium, Total	1.931
Iron, Total	**9040**
Lead, Total	2.073
Manganese, Total	**105.2**
Mercury, Total	ND
Nickel, Total	1.992
Sodium, Total	**172000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	52.2

DPP-1	
METALS (ug/l)	
Aluminum, Total	**40400**
Arsenic, Total	**23.28**
Beryllium, Total	**3.005**
Cadmium, Total	**4.193**
Chromium, Total	**141.5**
Iron, Total	**94400**
Lead, Total	**217.3**
Manganese, Total	**793.2**
Mercury, Total	**3.523**
Nickel, Total	**124.1**
Sodium, Total	**291000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	292

TL-2	
METALS (ug/l)	
Aluminum, Total	59.2
Arsenic, Total	**8.823**
Beryllium, Total	ND
Cadmium, Total	0.1592
Chromium, Total	0.266
Iron, Total	**27300**
Lead, Total	0.7156
Manganese, Total	**294.8**
Mercury, Total	ND
Nickel, Total	ND
Sodium, Total	**155000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	451

TL-5	
METALS (ug/l)	
Aluminum, Total	**1910**
Arsenic, Total	**24.64**
Beryllium, Total	0.1717
Cadmium, Total	ND
Chromium, Total	7.368
Iron, Total	**52300**
Lead, Total	**7.53**
Manganese, Total	**313.9**
Mercury, Total	ND
Nickel, Total	6.332
Sodium, Total	**79200**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	2080

TL-1	
METALS (ug/l)	
Aluminum, Total	**2570**
Arsenic, Total	1.302
Beryllium, Total	ND
Cadmium, Total	0.589
Chromium, Total	9.364
Iron, Total	**41500**
Lead, Total	**32.61**
Manganese, Total	**1801**
Mercury, Total	ND
Nickel, Total	10.02
Sodium, Total	**3280000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**8990**

TL-3	
METALS (ug/l)	
Aluminum, Total	**332**
Arsenic, Total	1.358
Beryllium, Total	ND
Cadmium, Total	ND
Chromium, Total	0.8403
Iron, Total	**3780**
Lead, Total	0.8772
Manganese, Total	**115.2**
Mercury, Total	0.103
Nickel, Total	1.057
Sodium, Total	**652000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	408

SRB-1	
METALS (ug/l)	
Aluminum, Total	**1490**
Arsenic, Total	**3.858**
Beryllium, Total	0.2851
Cadmium, Total	0.0615
Chromium, Total	5.428
Iron, Total	**9310**
Lead, Total	3.166
Manganese, Total	**149.2**
Mercury, Total	ND
Nickel, Total	4.318
Sodium, Total	36600
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	657

PER-7	
METALS (ug/l)	
Aluminum, Total	**1400**
Arsenic, Total	2.074
Beryllium, Total	ND
Cadmium, Total	ND
Chromium, Total	3.552
Iron, Total	**3340**
Lead, Total	**8.588**
Manganese, Total	22.57
Mercury, Total	0.102
Nickel, Total	2.432
Sodium, Total	42000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	ND

TL-4	
METALS (ug/l)	
Aluminum, Total	**432**
Arsenic, Total	**4.619**
Beryllium, Total	0.2128
Cadmium, Total	ND
Chromium, Total	1.257
Iron, Total	**80500**
Lead, Total	1.529
Manganese, Total	**1426**
Mercury, Total	ND
Nickel, Total	0.8489
Sodium, Total	**298000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	1290

1 inch = 167 feet

0 80 160 320 Feet

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Beryllium, Total	**1**
Cadmium, Total	**4**
Chromium, Total	**70**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Mercury, Total	**2**
Nickel, Total	**100**
Sodium, Total	**50000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 15b

AOC 16b Marine Loading Area 2022 Annual Groundwater Sampling Exceedances - Metals

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/16/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

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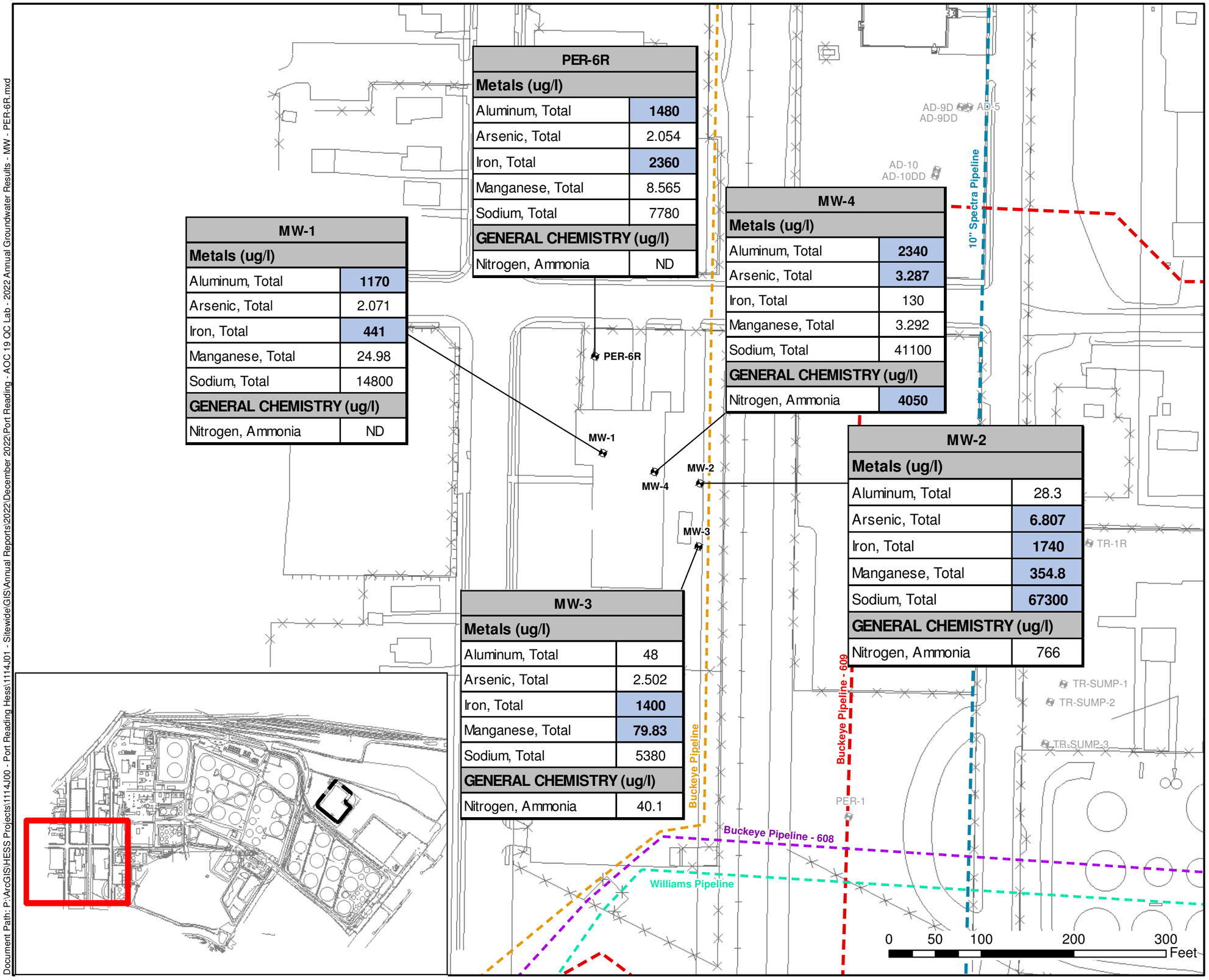

PER-6R	
Metals (ug/l)	
Aluminum, Total	**1480**
Arsenic, Total	2.054
Iron, Total	**2360**
Manganese, Total	8.565
Sodium, Total	7780
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	ND

MW-1	
Metals (ug/l)	
Aluminum, Total	**1170**
Arsenic, Total	2.071
Iron, Total	**441**
Manganese, Total	24.98
Sodium, Total	14800
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	ND

MW-4	
Metals (ug/l)	
Aluminum, Total	**2340**
Arsenic, Total	**3.287**
Iron, Total	130
Manganese, Total	3.292
Sodium, Total	41100
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**4050**

MW-2	
Metals (ug/l)	
Aluminum, Total	28.3
Arsenic, Total	**6.807**
Iron, Total	**1740**
Manganese, Total	**354.8**
Sodium, Total	**67300**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	766

MW-3	
Metals (ug/l)	
Aluminum, Total	48
Arsenic, Total	2.502
Iron, Total	**1400**
Manganese, Total	**79.83**
Sodium, Total	5380
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	40.1

LEGEND

Monitoring Well

NJGWQS	
Metals (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Manganese, Total	**50**
Sodium, Total	**50000**
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 16
AOC 19 QC Labs
2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	01/13/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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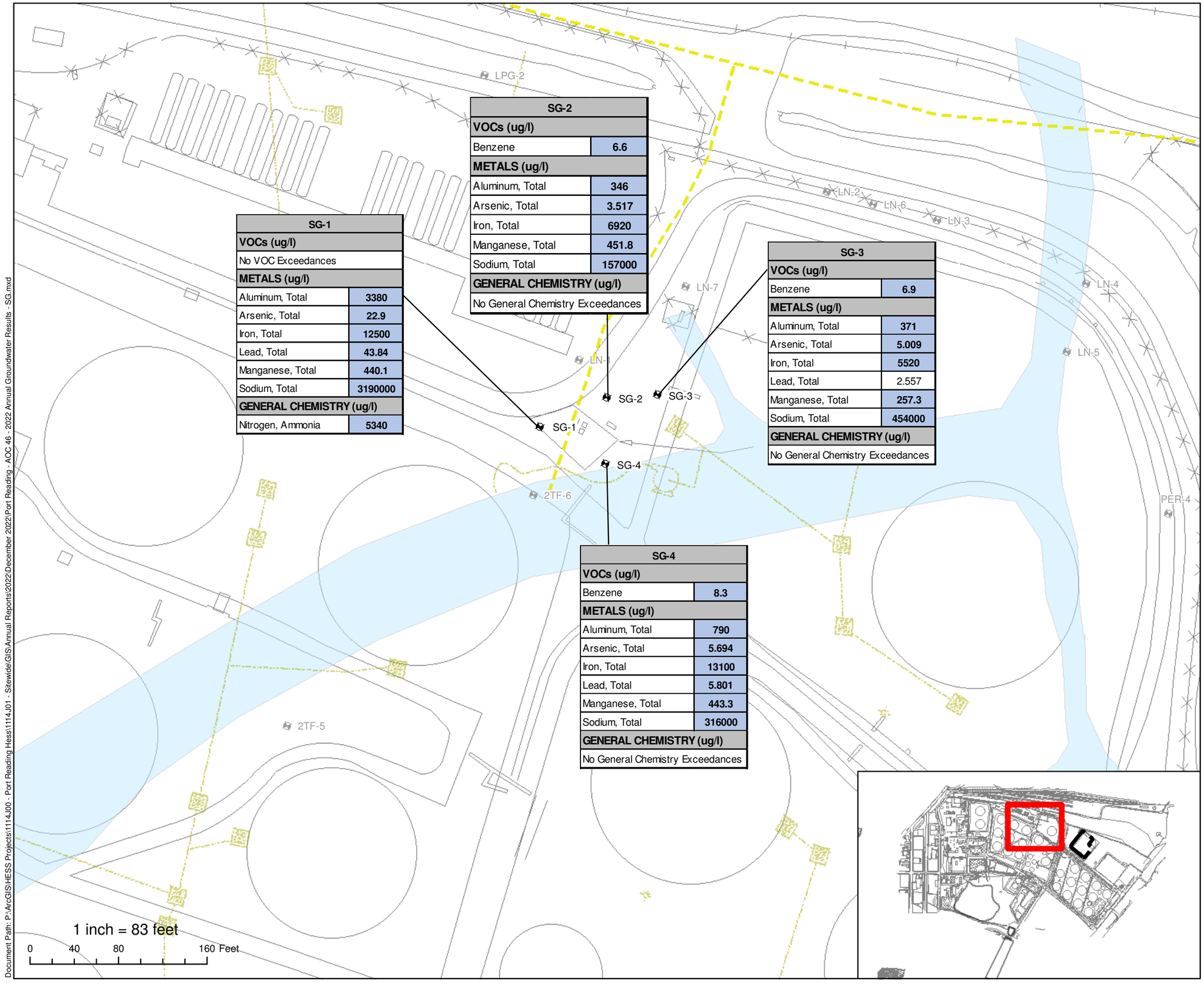

SG-1	
VOCs (ug/l)	
No VOC Exceedances	
METALS (ug/l)	
Aluminum, Total	3380
Arsenic, Total	22.9
Iron, Total	12500
Lead, Total	43.84
Manganese, Total	440.1
Sodium, Total	3190000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	5340

SG-2	
VOCs (ug/l)	
Benzene	6.6
METALS (ug/l)	
Aluminum, Total	346
Arsenic, Total	3.517
Iron, Total	6920
Manganese, Total	451.8
Sodium, Total	157000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

SG-3	
VOCs (ug/l)	
Benzene	6.9
METALS (ug/l)	
Aluminum, Total	371
Arsenic, Total	5.009
Iron, Total	5520
Lead, Total	2.557
Manganese, Total	257.3
Sodium, Total	454000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

SG-4	
VOCs (ug/l)	
Benzene	8.3
METALS (ug/l)	
Aluminum, Total	790
Arsenic, Total	5.694
Iron, Total	13100
Lead, Total	5.801
Manganese, Total	443.3
Sodium, Total	316000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

LEGEND

Site Boundary

Detention Basin

AOC 12 Extent

Basin Present Extents

Former Smith Creek Channel

Monitoring Well

Pipelines

Buckeye Petroleum Pipeline - 608

Williams Pipeline

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Benzene	1
METALS (ug/l)	
Aluminum, Total	200
Arsenic, Total	3
Iron, Total	300
Lead, Total	5
Manganese, Total	50
Sodium, Total	50000
GENERAL CHEMISTRY (ug/l)	
No General Chemistry Exceedances	

FIGURE: 17

AOC 46 Slop Gasoline Unloading Rack 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	01/18/2023
SRP PI#:	006148	**Drawn By:**	NS

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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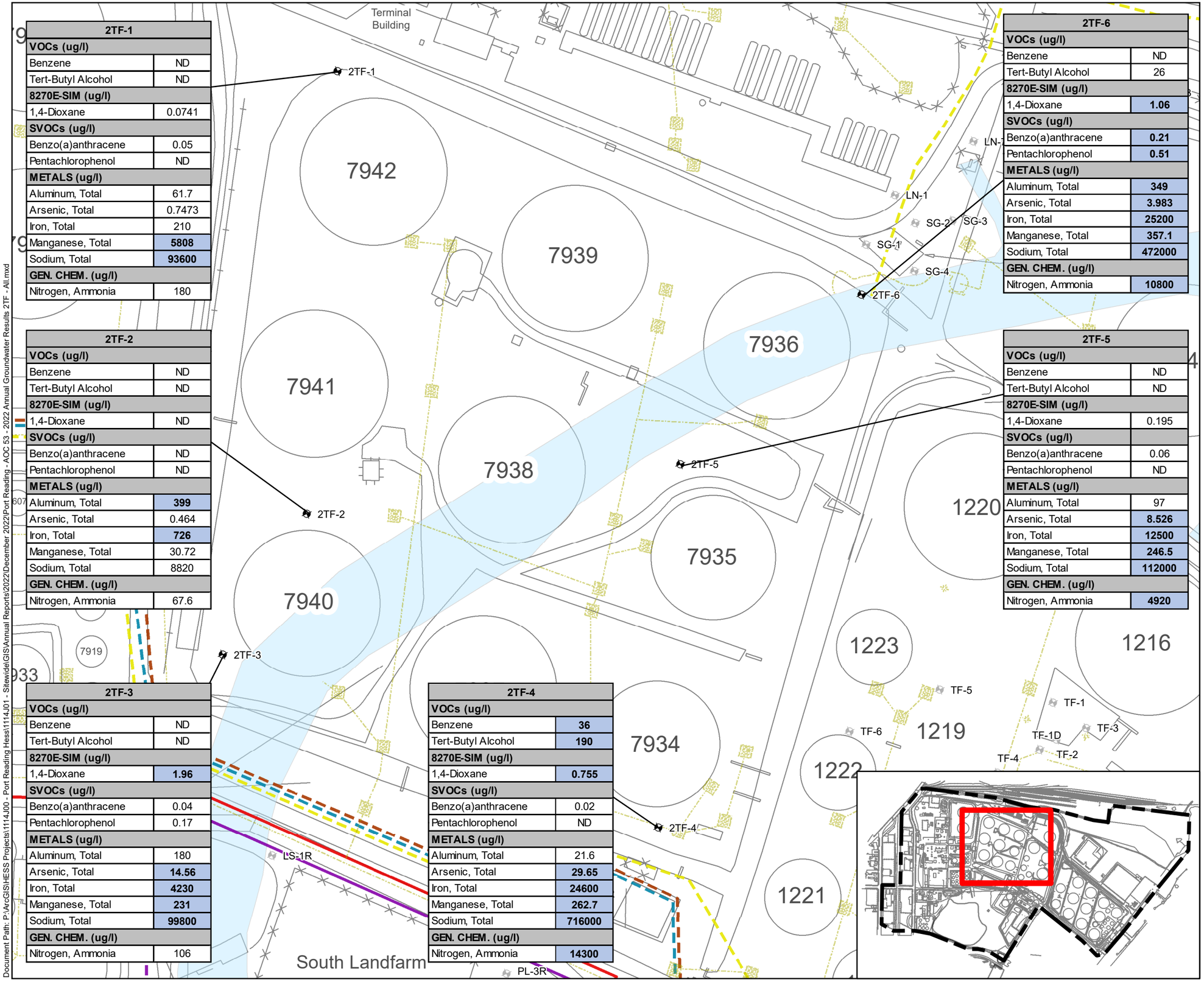

2TF-1	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	0.0741
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	61.7
Arsenic, Total	0.7473
Iron, Total	210
Manganese, Total	**5808**
Sodium, Total	**93600**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	180

2TF-2	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**399**
Arsenic, Total	0.464
Iron, Total	**726**
Manganese, Total	30.72
Sodium, Total	8820
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	67.6

2TF-3	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	**1.96**
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Pentachlorophenol	0.17
METALS (ug/l)	
Aluminum, Total	180
Arsenic, Total	**14.56**
Iron, Total	**4230**
Manganese, Total	**231**
Sodium, Total	**99800**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	106

2TF-4	
VOCs (ug/l)	
Benzene	**36**
Tert-Butyl Alcohol	**190**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.755**
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	21.6
Arsenic, Total	**29.65**
Iron, Total	**24600**
Manganese, Total	**262.7**
Sodium, Total	**716000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**14300**

2TF-5	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	0.195
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	97
Arsenic, Total	**8.526**
Iron, Total	**12500**
Manganese, Total	**246.5**
Sodium, Total	**112000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**4920**

2TF-6	
VOCs (ug/l)	
Benzene	ND
Tert-Butyl Alcohol	26
8270E-SIM (ug/l)	
1,4-Dioxane	**1.06**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.21**
Pentachlorophenol	**0.51**
METALS (ug/l)	
Aluminum, Total	**349**
Arsenic, Total	**3.983**
Iron, Total	**25200**
Manganese, Total	**357.1**
Sodium, Total	**472000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**10800**

LEGEND

Monitoring Well

Pipelines

- 24" Outfall
- 12" Spectra Pipeline
- Colonial Pipeline
- 10" Spectra Pipeline
- Buckeye Petroleum Pipeline 608
- Sitewide Utilities
- Former Smith Creek Channel

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
Tert-Butyl Alcohol	**100**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.4**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.1**
Pentachlorophenol	**0.3**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Manganese, Total	**50**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 18
AOC 53 - Second Tankfield 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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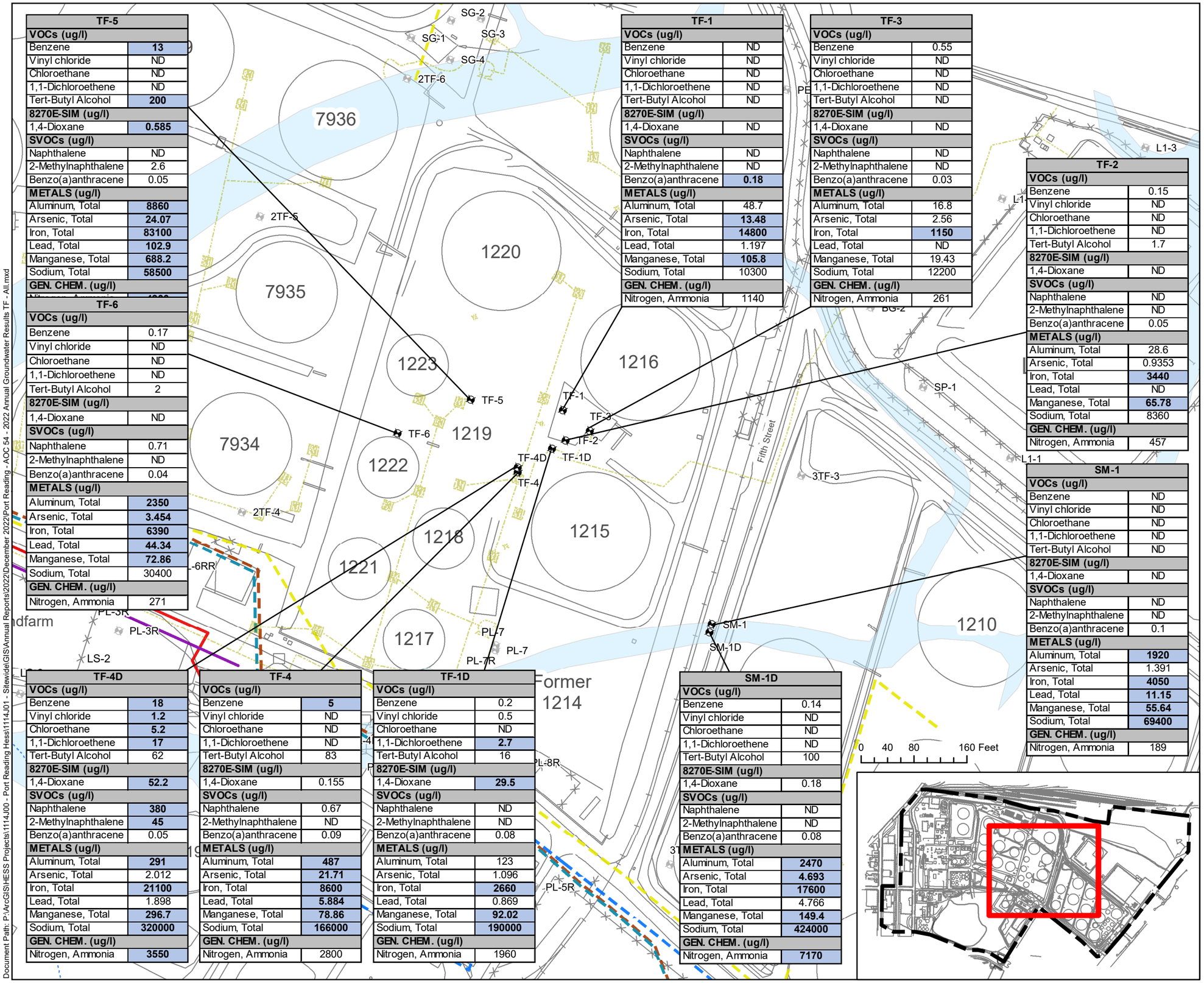

TF-5	
VOCs (ug/l)	
Benzene	**13**
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	**200**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.585**
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	2.6
Benzo(a)anthracene	0.05
METALS (ug/l)	
Aluminum, Total	**8860**
Arsenic, Total	**24.07**
Iron, Total	**83100**
Lead, Total	**102.9**
Manganese, Total	**688.2**
Sodium, Total	**58500**
GEN. CHEM. (ug/l)	

TF-6	
VOCs (ug/l)	
Benzene	0.17
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	2
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Naphthalene	0.71
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.04
METALS (ug/l)	
Aluminum, Total	**2350**
Arsenic, Total	**3.454**
Iron, Total	**6390**
Lead, Total	**44.34**
Manganese, Total	**72.86**
Sodium, Total	30400
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	271

TF-1	
VOCs (ug/l)	
Benzene	ND
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	**0.18**
METALS (ug/l)	
Aluminum, Total	48.7
Arsenic, Total	**13.48**
Iron, Total	**14800**
Lead, Total	1.197
Manganese, Total	**105.8**
Sodium, Total	10300
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1140

TF-3	
VOCs (ug/l)	
Benzene	0.55
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.03
METALS (ug/l)	
Aluminum, Total	16.8
Arsenic, Total	2.56
Iron, Total	**1150**
Lead, Total	ND
Manganese, Total	19.43
Sodium, Total	12200
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	261

TF-2	
VOCs (ug/l)	
Benzene	0.15
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	1.7
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.05
METALS (ug/l)	
Aluminum, Total	28.6
Arsenic, Total	0.9353
Iron, Total	**3440**
Lead, Total	ND
Manganese, Total	**65.78**
Sodium, Total	8360
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	457

SM-1	
VOCs (ug/l)	
Benzene	ND
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.1
METALS (ug/l)	
Aluminum, Total	**1920**
Arsenic, Total	1.391
Iron, Total	**4050**
Lead, Total	**11.15**
Manganese, Total	**55.64**
Sodium, Total	**69400**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	189

TF-4D	
VOCs (ug/l)	
Benzene	**18**
Vinyl chloride	**1.2**
Chloroethane	**5.2**
1,1-Dichloroethene	**17**
Tert-Butyl Alcohol	62
8270E-SIM (ug/l)	
1,4-Dioxane	**52.2**
SVOCs (ug/l)	
Naphthalene	**380**
2-Methylnaphthalene	**45**
Benzo(a)anthracene	0.05
METALS (ug/l)	
Aluminum, Total	**291**
Arsenic, Total	2.012
Iron, Total	**21100**
Lead, Total	1.898
Manganese, Total	**296.7**
Sodium, Total	**320000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3550**

TF-4	
VOCs (ug/l)	
Benzene	**5**
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	83
8270E-SIM (ug/l)	
1,4-Dioxane	0.155
SVOCs (ug/l)	
Naphthalene	0.67
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.09
METALS (ug/l)	
Aluminum, Total	**487**
Arsenic, Total	**21.71**
Iron, Total	**8600**
Lead, Total	**5.884**
Manganese, Total	**78.86**
Sodium, Total	**166000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	2800

TF-1D	
VOCs (ug/l)	
Benzene	0.2
Vinyl chloride	0.5
Chloroethane	ND
1,1-Dichloroethene	**2.7**
Tert-Butyl Alcohol	16
8270E-SIM (ug/l)	
1,4-Dioxane	**29.5**
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.08
METALS (ug/l)	
Aluminum, Total	123
Arsenic, Total	1.096
Iron, Total	**2660**
Lead, Total	0.869
Manganese, Total	**92.02**
Sodium, Total	**190000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1960

SM-1D	
VOCs (ug/l)	
Benzene	0.14
Vinyl chloride	ND
Chloroethane	ND
1,1-Dichloroethene	ND
Tert-Butyl Alcohol	100
8270E-SIM (ug/l)	
1,4-Dioxane	0.18
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.08
METALS (ug/l)	
Aluminum, Total	**2470**
Arsenic, Total	**4.693**
Iron, Total	**17600**
Lead, Total	4.766
Manganese, Total	**149.4**
Sodium, Total	**424000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**7170**

LEGEND

Monitoring Well

Pipelines

- 24" Outfall
- 12" Spectra Pipeline
- Colonial Pipeline
- 10" Spectra Pipeline
- Sitewide Utilities
- Former Smith Creek Channel

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
Vinyl chloride	**1**
Chloroethane	**5**
1,1-Dichloroethene	**1**
Tert-Butyl Alcohol	**100**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.4**
SVOCs (ug/l)	
Naphthalene	**300**
2-Methylnaphthalene	**30**
Benzo(a)anthracene	**0.1**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 19
AOC 54 - Third Tankfield 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

This map was developed using New Jersey Department of Environmental Protection Geographic Information System Digital Data, but this secondary product has not been verified by NJDEP and is not state Authorized.
Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

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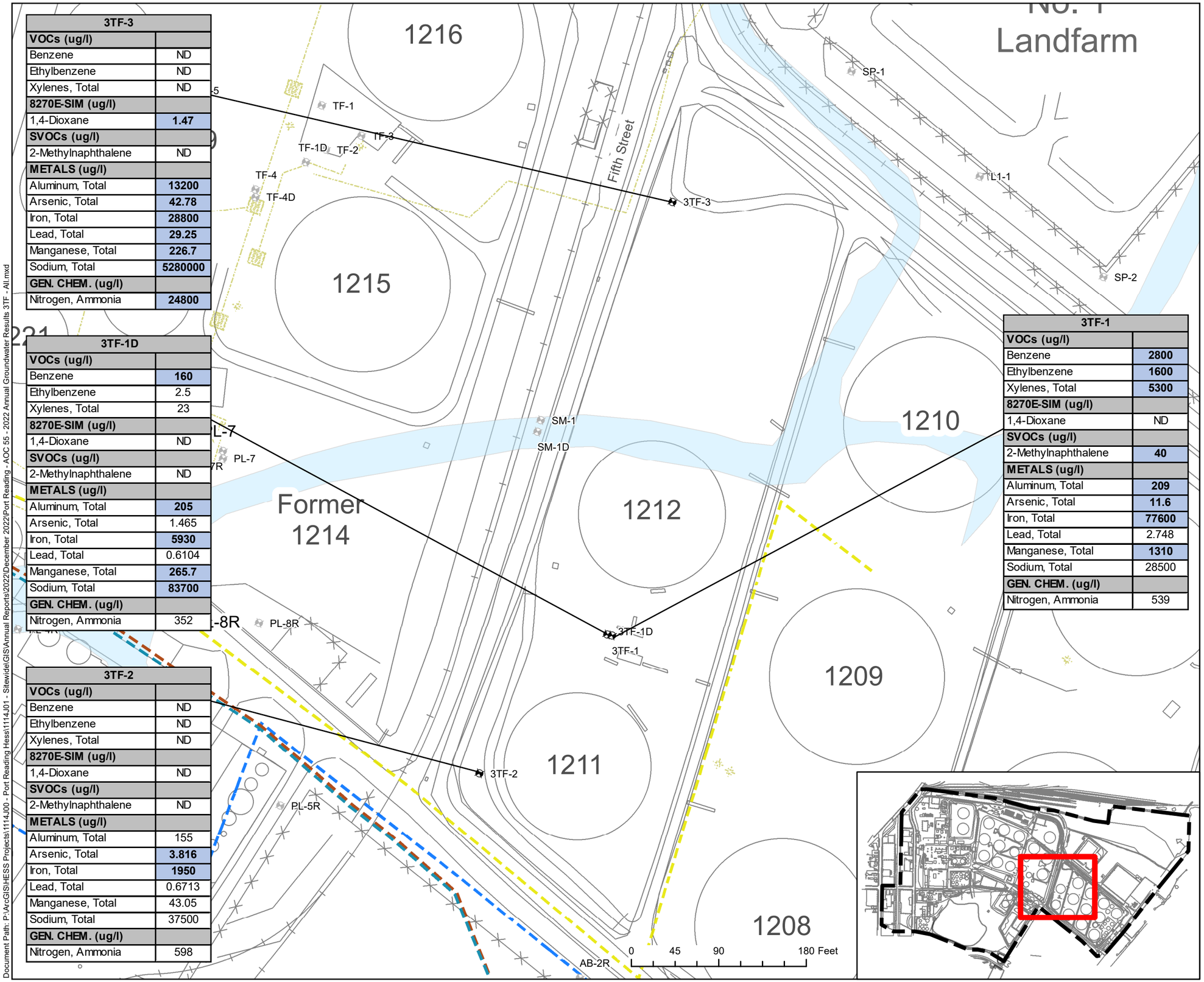

3TF-3	
VOCs (ug/l)	
Benzene	ND
Ethylbenzene	ND
Xylenes, Total	ND
8270E-SIM (ug/l)	
1,4-Dioxane	**1.47**
SVOCs (ug/l)	
2-Methylnaphthalene	ND
METALS (ug/l)	
Aluminum, Total	**13200**
Arsenic, Total	**42.78**
Iron, Total	**28800**
Lead, Total	**29.25**
Manganese, Total	**226.7**
Sodium, Total	**5280000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**24800**

3TF-1D	
VOCs (ug/l)	
Benzene	**160**
Ethylbenzene	2.5
Xylenes, Total	23
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
2-Methylnaphthalene	ND
METALS (ug/l)	
Aluminum, Total	**205**
Arsenic, Total	1.465
Iron, Total	**5930**
Lead, Total	0.6104
Manganese, Total	**265.7**
Sodium, Total	**83700**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	352

3TF-2	
VOCs (ug/l)	
Benzene	ND
Ethylbenzene	ND
Xylenes, Total	ND
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
2-Methylnaphthalene	ND
METALS (ug/l)	
Aluminum, Total	155
Arsenic, Total	**3.816**
Iron, Total	**1950**
Lead, Total	0.6713
Manganese, Total	43.05
Sodium, Total	37500
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	598

3TF-1	
VOCs (ug/l)	
Benzene	**2800**
Ethylbenzene	**1600**
Xylenes, Total	**5300**
8270E-SIM (ug/l)	
1,4-Dioxane	ND
SVOCs (ug/l)	
2-Methylnaphthalene	**40**
METALS (ug/l)	
Aluminum, Total	**209**
Arsenic, Total	**11.6**
Iron, Total	**77600**
Lead, Total	2.748
Manganese, Total	**1310**
Sodium, Total	28500
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	539

LEGEND

Monitoring Well

Pipelines

- 24" Outfall
- 12" Spectra Pipeline
- Colonial Pipeline
- 10" Spectra Pipeline
- Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
Ethylbenzene	**700**
Xylenes, Total	**1000**
8270E-SIM (ug/l)	
1,4-Dioxane	**0.4**
SVOCs (ug/l)	
2-Methylnaphthalene	**30**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 20
AOC 55 - Fourth TankField 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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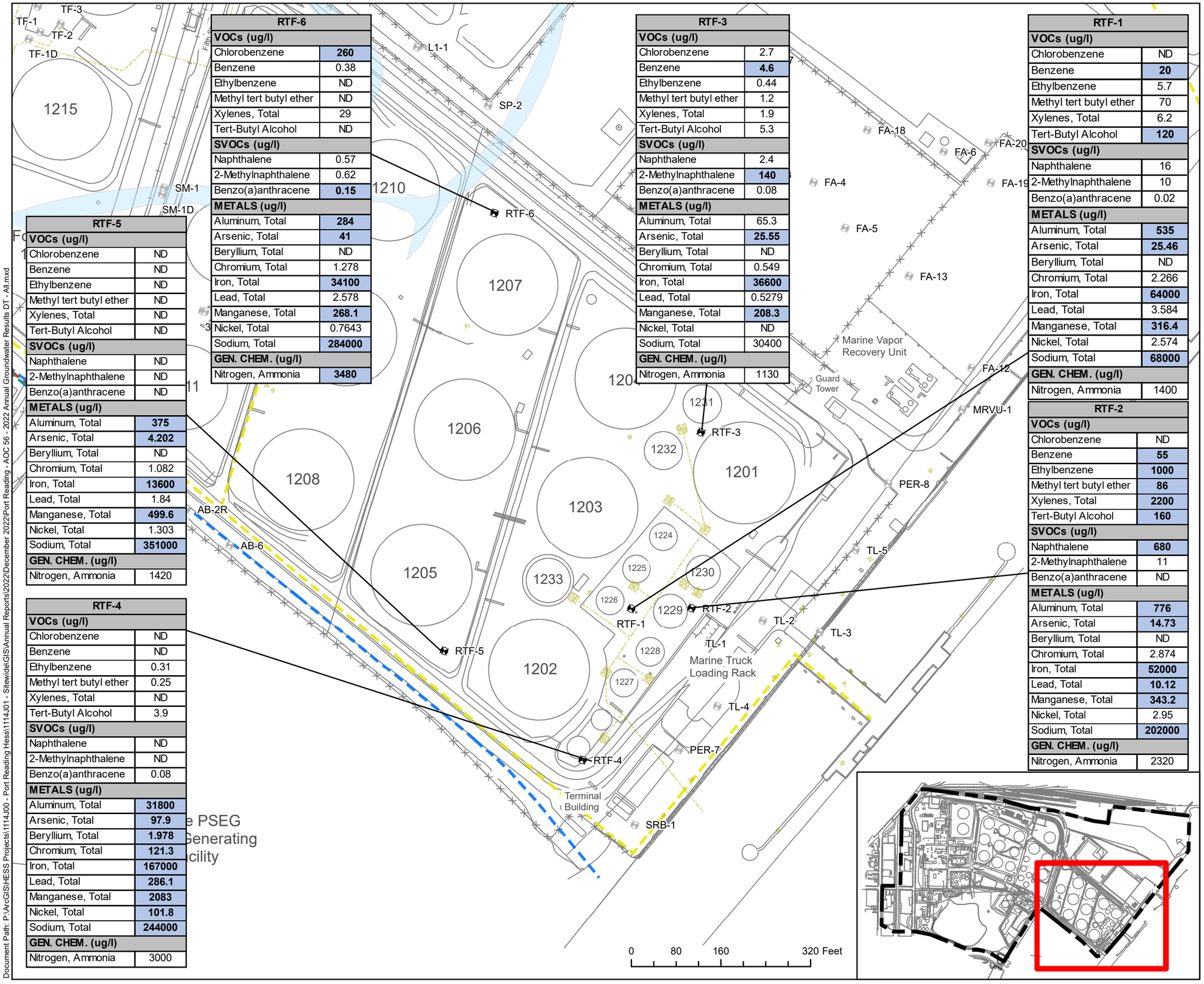

RTF-6	
VOCs (ug/l)	
Chlorobenzene	**260**
Benzene	0.38
Ethylbenzene	ND
Methyl tert butyl ether	ND
Xylenes, Total	29
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Naphthalene	0.57
2-Methylnaphthalene	0.62
Benzo(a)anthracene	**0.15**
METALS (ug/l)	
Aluminum, Total	**284**
Arsenic, Total	**41**
Beryllium, Total	ND
Chromium, Total	1.278
Iron, Total	**34100**
Lead, Total	2.578
Manganese, Total	**268.1**
Nickel, Total	0.7643
Sodium, Total	**284000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3480**

RTF-3	
VOCs (ug/l)	
Chlorobenzene	2.7
Benzene	**4.6**
Ethylbenzene	0.44
Methyl tert butyl ether	1.2
Xylenes, Total	1.9
Tert-Butyl Alcohol	5.3
SVOCs (ug/l)	
Naphthalene	2.4
2-Methylnaphthalene	**140**
Benzo(a)anthracene	0.08
METALS (ug/l)	
Aluminum, Total	65.3
Arsenic, Total	**25.55**
Beryllium, Total	ND
Chromium, Total	0.549
Iron, Total	**36600**
Lead, Total	0.5279
Manganese, Total	**208.3**
Nickel, Total	ND
Sodium, Total	30400
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1130

RTF-1	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	**20**
Ethylbenzene	5.7
Methyl tert butyl ether	70
Xylenes, Total	6.2
Tert-Butyl Alcohol	**120**
SVOCs (ug/l)	
Naphthalene	16
2-Methylnaphthalene	10
Benzo(a)anthracene	0.02
METALS (ug/l)	
Aluminum, Total	**535**
Arsenic, Total	**25.46**
Beryllium, Total	ND
Chromium, Total	2.266
Iron, Total	**64000**
Lead, Total	3.584
Manganese, Total	**316.4**
Nickel, Total	2.574
Sodium, Total	**68000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1400

RTF-2	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	**55**
Ethylbenzene	**1000**
Methyl tert butyl ether	**86**
Xylenes, Total	**2200**
Tert-Butyl Alcohol	**160**
SVOCs (ug/l)	
Naphthalene	**680**
2-Methylnaphthalene	11
Benzo(a)anthracene	ND
METALS (ug/l)	
Aluminum, Total	**776**
Arsenic, Total	**14.73**
Beryllium, Total	ND
Chromium, Total	2.874
Iron, Total	**52000**
Lead, Total	**10.12**
Manganese, Total	**343.2**
Nickel, Total	2.95
Sodium, Total	**202000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	2320

RTF-5	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Ethylbenzene	ND
Methyl tert butyl ether	ND
Xylenes, Total	ND
Tert-Butyl Alcohol	ND
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	ND
METALS (ug/l)	
Aluminum, Total	**375**
Arsenic, Total	**4.202**
Beryllium, Total	ND
Chromium, Total	1.082
Iron, Total	**13600**
Lead, Total	1.84
Manganese, Total	**499.6**
Nickel, Total	1.303
Sodium, Total	**351000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1420

RTF-4	
VOCs (ug/l)	
Chlorobenzene	ND
Benzene	ND
Ethylbenzene	0.31
Methyl tert butyl ether	0.25
Xylenes, Total	ND
Tert-Butyl Alcohol	3.9
SVOCs (ug/l)	
Naphthalene	ND
2-Methylnaphthalene	ND
Benzo(a)anthracene	0.08
METALS (ug/l)	
Aluminum, Total	**31800**
Arsenic, Total	**97.9**
Beryllium, Total	**1.978**
Chromium, Total	**121.3**
Iron, Total	**167000**
Lead, Total	**286.1**
Manganese, Total	**2083**
Nickel, Total	**101.8**
Sodium, Total	**244000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	3000

LEGEND

Monitoring Well

Pipelines

24" Outfall

Colonial Pipeline

Sitewide Utilities

Former Smith Creek Channel

NJGWQS	
VOCs (ug/l)	
Chlorobenzene	**50**
Benzene	**1**
Ethylbenzene	**700**
Methyl tert butyl ether	**70**
Xylenes, Total	**1000**
Tert-Butyl Alcohol	**100**
SVOCs (ug/l)	
Naphthalene	**300**
2-Methylnaphthalene	**30**
Benzo(a)anthracene	**0.1**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Beryllium, Total	**1**
Chromium, Total	**70**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Nickel, Total	**100**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 21
AOC 56 - Second Reserve TankField 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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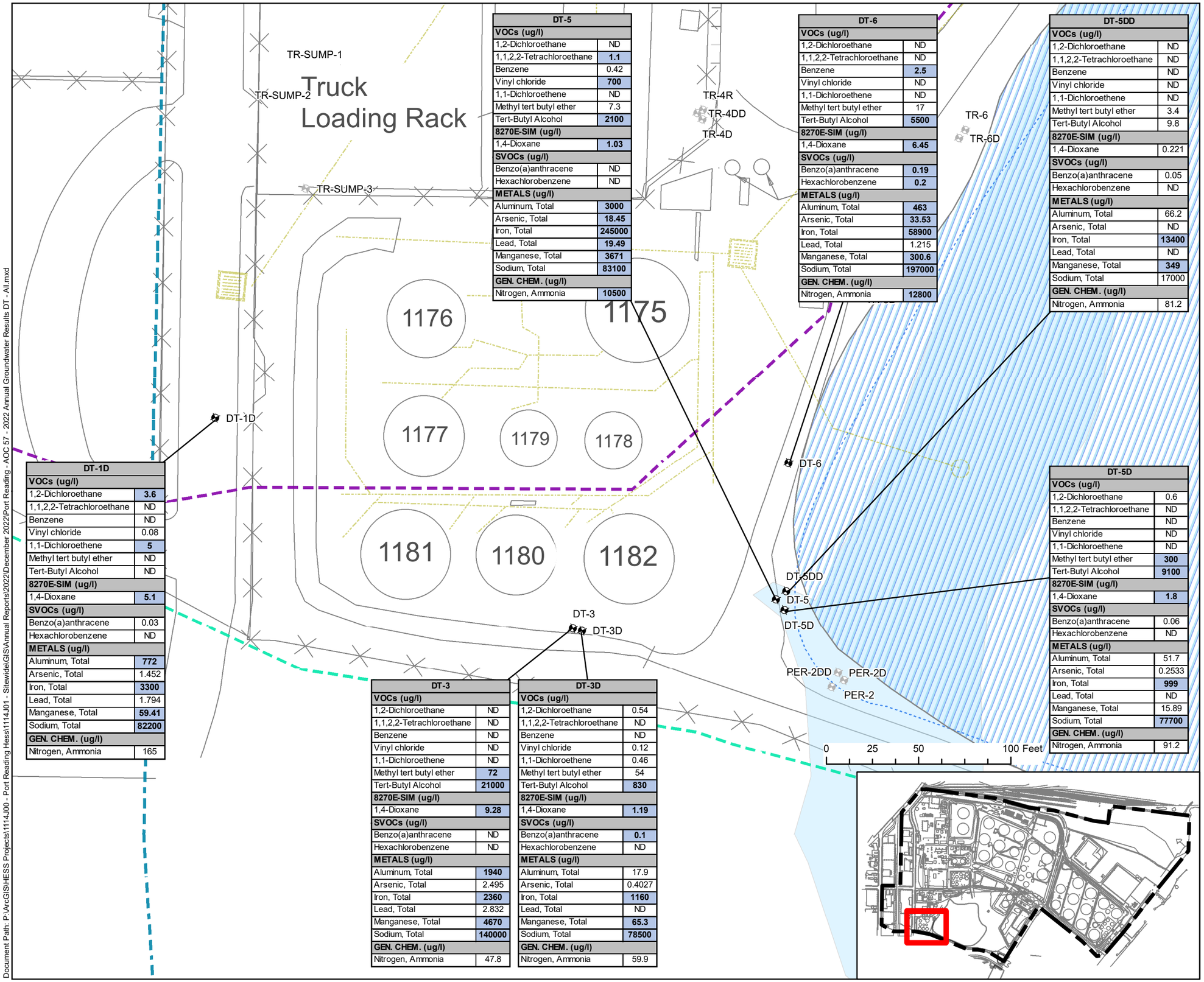

DT-5	
VOCs (ug/l)	
1,2-Dichloroethane	ND
1,1,2,2-Tetrachloroethane	1.1
Benzene	0.42
Vinyl chloride	700
1,1-Dichloroethene	ND
Methyl tert butyl ether	7.3
Tert-Butyl Alcohol	2100
8270E-SIM (ug/l)	
1,4-Dioxane	1.03
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	3000
Arsenic, Total	18.45
Iron, Total	245000
Lead, Total	19.49
Manganese, Total	3671
Sodium, Total	83100
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	10500

DT-6	
VOCs (ug/l)	
1,2-Dichloroethane	ND
1,1,2,2-Tetrachloroethane	ND
Benzene	2.5
Vinyl chloride	ND
1,1-Dichloroethene	ND
Methyl tert butyl ether	17
Tert-Butyl Alcohol	5500
8270E-SIM (ug/l)	
1,4-Dioxane	6.45
SVOCs (ug/l)	
Benzo(a)anthracene	0.19
Hexachlorobenzene	0.2
METALS (ug/l)	
Aluminum, Total	463
Arsenic, Total	33.53
Iron, Total	58900
Lead, Total	1.215
Manganese, Total	300.6
Sodium, Total	197000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	12800

DT-5DD	
VOCs (ug/l)	
1,2-Dichloroethane	ND
1,1,2,2-Tetrachloroethane	ND
Benzene	ND
Vinyl chloride	ND
1,1-Dichloroethene	ND
Methyl tert butyl ether	3.4
Tert-Butyl Alcohol	9.8
8270E-SIM (ug/l)	
1,4-Dioxane	0.221
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	66.2
Arsenic, Total	ND
Iron, Total	13400
Lead, Total	ND
Manganese, Total	349
Sodium, Total	17000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	81.2

DT-1D	
VOCs (ug/l)	
1,2-Dichloroethane	3.6
1,1,2,2-Tetrachloroethane	ND
Benzene	ND
Vinyl chloride	0.08
1,1-Dichloroethene	5
Methyl tert butyl ether	ND
Tert-Butyl Alcohol	ND
8270E-SIM (ug/l)	
1,4-Dioxane	5.1
SVOCs (ug/l)	
Benzo(a)anthracene	0.03
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	772
Arsenic, Total	1.452
Iron, Total	3300
Lead, Total	1.794
Manganese, Total	59.41
Sodium, Total	82200
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	165

DT-5D	
VOCs (ug/l)	
1,2-Dichloroethane	0.6
1,1,2,2-Tetrachloroethane	ND
Benzene	ND
Vinyl chloride	ND
1,1-Dichloroethene	ND
Methyl tert butyl ether	300
Tert-Butyl Alcohol	9100
8270E-SIM (ug/l)	
1,4-Dioxane	1.8
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	51.7
Arsenic, Total	0.2533
Iron, Total	999
Lead, Total	ND
Manganese, Total	15.89
Sodium, Total	77700
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	91.2

DT-3	
VOCs (ug/l)	
1,2-Dichloroethane	ND
1,1,2,2-Tetrachloroethane	ND
Benzene	ND
Vinyl chloride	ND
1,1-Dichloroethene	ND
Methyl tert butyl ether	72
Tert-Butyl Alcohol	21000
8270E-SIM (ug/l)	
1,4-Dioxane	9.28
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	1940
Arsenic, Total	2.495
Iron, Total	2360
Lead, Total	2.832
Manganese, Total	4670
Sodium, Total	140000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	47.8

DT-3D	
VOCs (ug/l)	
1,2-Dichloroethane	0.54
1,1,2,2-Tetrachloroethane	ND
Benzene	ND
Vinyl chloride	0.12
1,1-Dichloroethene	0.46
Methyl tert butyl ether	54
Tert-Butyl Alcohol	830
8270E-SIM (ug/l)	
1,4-Dioxane	1.19
SVOCs (ug/l)	
Benzo(a)anthracene	0.1
Hexachlorobenzene	ND
METALS (ug/l)	
Aluminum, Total	17.9
Arsenic, Total	0.4027
Iron, Total	1160
Lead, Total	ND
Manganese, Total	65.3
Sodium, Total	78500
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	59.9

LEGEND

Monitoring Well

Pipelines

- Buckeye Pipeline - 608
- Williams Pipeline
- Colonial Pipeline
- Sitewide Utilities
- Detention Basin
- Former Smith Creek Channel

NJGWQS	
VOCs (ug/l)	
1,2-Dichloroethane	2
1,1,2,2-Tetrachloroethane	1
Benzene	1
Vinyl chloride	1
1,1-Dichloroethene	1
Methyl tert butyl ether	70
Tert-Butyl Alcohol	100
8270E-SIM (ug/l)	
1,4-Dioxane	0.4
SVOCs (ug/l)	
Benzo(a)anthracene	0.1
Hexachlorobenzene	0.02
METALS (ug/l)	
Aluminum, Total	200
Arsenic, Total	3
Iron, Total	300
Lead, Total	5
Manganese, Total	50
Sodium, Total	50000
GENERAL CHEMISTRY (ug/l)	
Nitrogen, Ammonia	3000

FIGURE: 22
AOC 57 - Day Tankfield 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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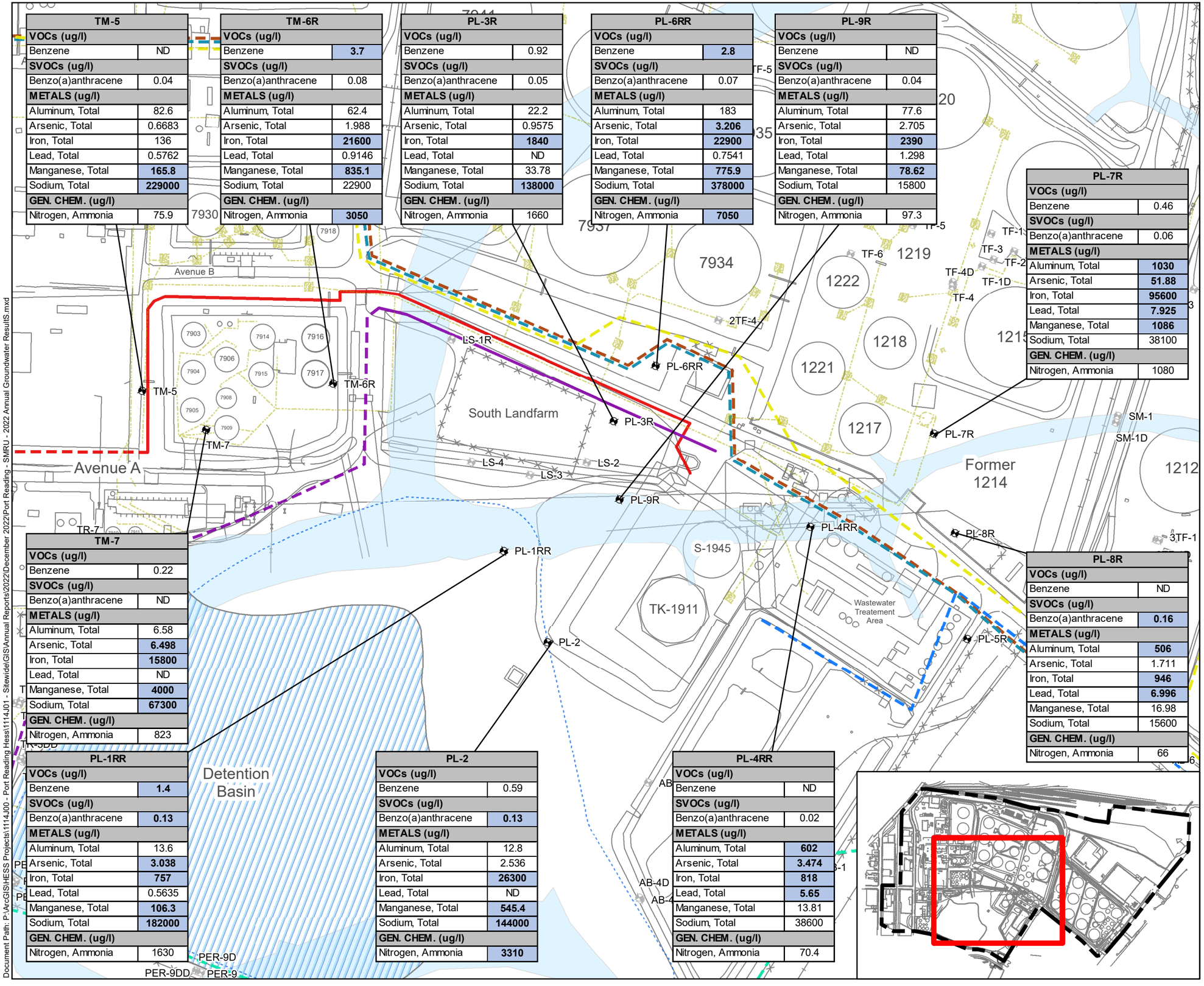

TM-5	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
METALS (ug/l)	
Aluminum, Total	82.6
Arsenic, Total	0.6683
Iron, Total	136
Lead, Total	0.5762
Manganese, Total	**165.8**
Sodium, Total	**229000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	75.9

TM-6R	
VOCs (ug/l)	
Benzene	**3.7**
SVOCs (ug/l)	
Benzo(a)anthracene	0.08
METALS (ug/l)	
Aluminum, Total	62.4
Arsenic, Total	1.988
Iron, Total	**21600**
Lead, Total	0.9146
Manganese, Total	**835.1**
Sodium, Total	22900
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3050**

PL-3R	
VOCs (ug/l)	
Benzene	0.92
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
METALS (ug/l)	
Aluminum, Total	22.2
Arsenic, Total	0.9575
Iron, Total	**1840**
Lead, Total	ND
Manganese, Total	33.78
Sodium, Total	**138000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1660

PL-6RR	
VOCs (ug/l)	
Benzene	**2.8**
SVOCs (ug/l)	
Benzo(a)anthracene	0.07
METALS (ug/l)	
Aluminum, Total	183
Arsenic, Total	**3.206**
Iron, Total	**22900**
Lead, Total	0.7541
Manganese, Total	**775.9**
Sodium, Total	**378000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**7050**

PL-9R	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
METALS (ug/l)	
Aluminum, Total	77.6
Arsenic, Total	2.705
Iron, Total	**2390**
Lead, Total	1.298
Manganese, Total	**78.62**
Sodium, Total	15800
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	97.3

PL-7R	
VOCs (ug/l)	
Benzene	0.46
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
METALS (ug/l)	
Aluminum, Total	**1030**
Arsenic, Total	**51.88**
Iron, Total	**95600**
Lead, Total	**7.925**
Manganese, Total	**1086**
Sodium, Total	38100
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1080

TM-7	
VOCs (ug/l)	
Benzene	0.22
SVOCs (ug/l)	
Benzo(a)anthracene	ND
METALS (ug/l)	
Aluminum, Total	6.58
Arsenic, Total	**6.498**
Iron, Total	**15800**
Lead, Total	ND
Manganese, Total	**4000**
Sodium, Total	**67300**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	823

PL-8R	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	**0.16**
METALS (ug/l)	
Aluminum, Total	**506**
Arsenic, Total	1.711
Iron, Total	**946**
Lead, Total	**6.996**
Manganese, Total	16.98
Sodium, Total	15600
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	66

PL-1RR	
VOCs (ug/l)	
Benzene	**1.4**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.13**
METALS (ug/l)	
Aluminum, Total	13.6
Arsenic, Total	**3.038**
Iron, Total	**757**
Lead, Total	0.5635
Manganese, Total	**106.3**
Sodium, Total	**182000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1630

PL-2	
VOCs (ug/l)	
Benzene	0.59
SVOCs (ug/l)	
Benzo(a)anthracene	**0.13**
METALS (ug/l)	
Aluminum, Total	12.8
Arsenic, Total	2.536
Iron, Total	**26300**
Lead, Total	ND
Manganese, Total	**545.4**
Sodium, Total	**144000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3310**

PL-4RR	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
METALS (ug/l)	
Aluminum, Total	**602**
Arsenic, Total	**3.474**
Iron, Total	**818**
Lead, Total	**5.65**
Manganese, Total	13.81
Sodium, Total	38600
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	70.4

LEGEND

Monitoring Well

Pipelines

- 24" Outfall
- 12" Spectra Pipeline
- Colonial Pipeline
- 10" Spectra Pipeline
- Buckeye Petroleum Pipeline 608
- Sitewide Utilities
- Former Smith Creek Channel

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.1**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

NOTE:
1. PL-5R not sampled due to presence of LNAPL.

FIGURE: 23
SRMU
2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

This map was developed using New Jersey Department of Environmental Protection Geographic Information System Digital Data, but this secondary product has not been verified by NJDEP and is not state Authorized.
Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

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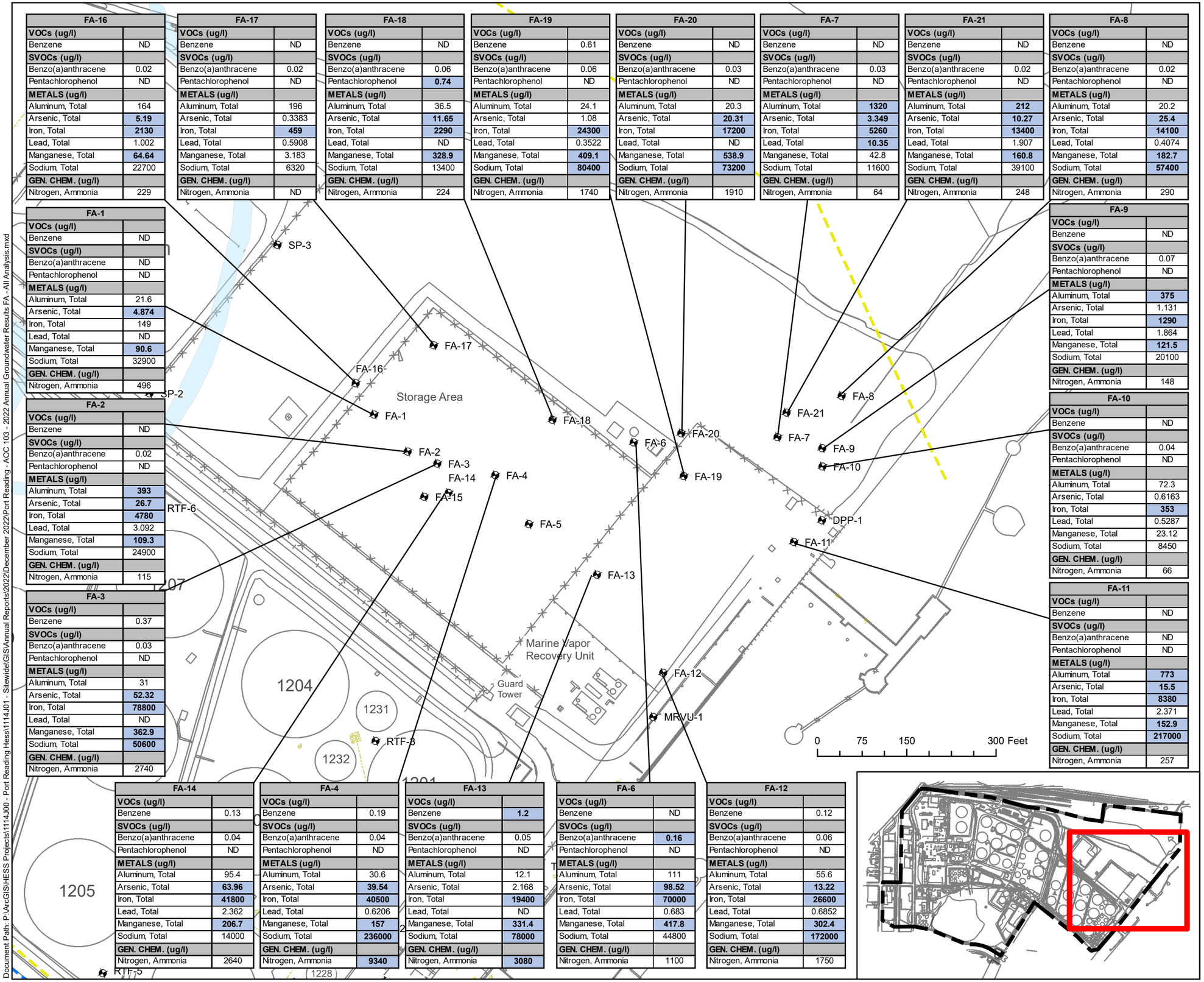

FA-16	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	164
Arsenic, Total	**5.19**
Iron, Total	**2130**
Lead, Total	1.002
Manganese, Total	**64.64**
Sodium, Total	22700
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	229

FA-17	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	196
Arsenic, Total	0.3383
Iron, Total	**459**
Lead, Total	0.5908
Manganese, Total	3.183
Sodium, Total	6320
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	ND

FA-18	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Pentachlorophenol	**0.74**
METALS (ug/l)	
Aluminum, Total	36.5
Arsenic, Total	**11.65**
Iron, Total	**2290**
Lead, Total	ND
Manganese, Total	**328.9**
Sodium, Total	13400
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	224

FA-19	
VOCs (ug/l)	
Benzene	0.61
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	24.1
Arsenic, Total	1.08
Iron, Total	**24300**
Lead, Total	0.3522
Manganese, Total	**409.1**
Sodium, Total	**80400**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1740

FA-20	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.03
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	20.3
Arsenic, Total	**20.31**
Iron, Total	**17200**
Lead, Total	ND
Manganese, Total	**538.9**
Sodium, Total	**73200**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1910

FA-7	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.03
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**1320**
Arsenic, Total	**3.349**
Iron, Total	**5260**
Lead, Total	**10.35**
Manganese, Total	42.8
Sodium, Total	11600
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	64

FA-21	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**212**
Arsenic, Total	**10.27**
Iron, Total	**13400**
Lead, Total	1.907
Manganese, Total	**160.8**
Sodium, Total	39100
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	248

FA-8	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	20.2
Arsenic, Total	**25.4**
Iron, Total	**14100**
Lead, Total	0.4074
Manganese, Total	**182.7**
Sodium, Total	**57400**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	290

FA-1	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	21.6
Arsenic, Total	**4.874**
Iron, Total	149
Lead, Total	ND
Manganese, Total	**90.6**
Sodium, Total	32900
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	496

FA-2	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.02
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**393**
Arsenic, Total	**26.7**
Iron, Total	**4780**
Lead, Total	3.092
Manganese, Total	**109.3**
Sodium, Total	24900
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	115

FA-3	
VOCs (ug/l)	
Benzene	0.37
SVOCs (ug/l)	
Benzo(a)anthracene	0.03
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	31
Arsenic, Total	**52.32**
Iron, Total	**78800**
Lead, Total	ND
Manganese, Total	**362.9**
Sodium, Total	**50600**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	2740

FA-9	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.07
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**375**
Arsenic, Total	1.131
Iron, Total	**1290**
Lead, Total	1.864
Manganese, Total	**121.5**
Sodium, Total	20100
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	148

FA-10	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	72.3
Arsenic, Total	0.6163
Iron, Total	**353**
Lead, Total	0.5287
Manganese, Total	23.12
Sodium, Total	8450
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	66

FA-11	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	ND
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	**773**
Arsenic, Total	**15.5**
Iron, Total	**8380**
Lead, Total	2.371
Manganese, Total	**152.9**
Sodium, Total	**217000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	257

FA-14	
VOCs (ug/l)	
Benzene	0.13
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	95.4
Arsenic, Total	**63.96**
Iron, Total	**41800**
Lead, Total	2.362
Manganese, Total	**206.7**
Sodium, Total	14000
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	2640

FA-4	
VOCs (ug/l)	
Benzene	0.19
SVOCs (ug/l)	
Benzo(a)anthracene	0.04
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	30.6
Arsenic, Total	**39.54**
Iron, Total	**40500**
Lead, Total	0.6206
Manganese, Total	**157**
Sodium, Total	**236000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**9340**

FA-13	
VOCs (ug/l)	
Benzene	**1.2**
SVOCs (ug/l)	
Benzo(a)anthracene	0.05
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	12.1
Arsenic, Total	2.168
Iron, Total	**19400**
Lead, Total	ND
Manganese, Total	**331.4**
Sodium, Total	**78000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3080**

FA-6	
VOCs (ug/l)	
Benzene	ND
SVOCs (ug/l)	
Benzo(a)anthracene	**0.16**
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	111
Arsenic, Total	**98.52**
Iron, Total	**70000**
Lead, Total	0.683
Manganese, Total	**417.8**
Sodium, Total	44800
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1100

FA-12	
VOCs (ug/l)	
Benzene	0.12
SVOCs (ug/l)	
Benzo(a)anthracene	0.06
Pentachlorophenol	ND
METALS (ug/l)	
Aluminum, Total	55.6
Arsenic, Total	**13.22**
Iron, Total	**26600**
Lead, Total	0.6852
Manganese, Total	**302.4**
Sodium, Total	**172000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	1750

LEGEND

Monitoring Well

Pipelines

Colonial Pipeline

Sitewide Utilities

NJGWQS	
VOCs (ug/l)	
Benzene	**1**
SVOCs (ug/l)	
Benzo(a)anthracene	**0.1**
Pentachlorophenol	**0.3**
METALS (ug/l)	
Aluminum, Total	**200**
Arsenic, Total	**3**
Iron, Total	**300**
Lead, Total	**5**
Manganese, Total	**50**
Sodium, Total	**50000**
GEN. CHEM. (ug/l)	
Nitrogen, Ammonia	**3000**

FIGURE: 24

AOC 103 - Fire Fighting Training Area/Fire Pits 2022 Annual Groundwater Sampling Exceedances

HESS CORPORATION
FORMER PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

Project #:	1114J01	**Drawn:**	1/18/2023
SRP PI#:	006148	**Drawn By:**	RC

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.739.6444 | F. 732.739.0451

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

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Tables

Table 1
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
4th Quarter Monthly Groundwater Gauging

Groundwater Gauging Data									
Well I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thicknes s (ft)	DTB from TOC (ft)	TOC Elevation (ft amsl)	Groundwater Elevation (ft amsl)	PID	Notes
PL-1RR	10/12/2022	-	0.50	0.00	15.20	7.36	6.86	14.1	Sock 1/4 saturated, replaced
	10/27/2022	-	0.40	0.00	15.20	7.36	6.96	1.0	Sock 1/2 saturated, replaced
	11/8/2022	-	1.72	0.00	15.20	7.36	5.64	21.0	Globules, sock 1/4 saturated, replaced
	11/17/2022	-	0.50	0.00	15.00	7.36	6.86	3.2	Globules, sock 1/4 saturated, replaced
	12/13/2022	-	0.50	0.00	14.90	7.36	6.86	0.0	
	12/29/2022	-	1.99	0.00	14.90	7.36	5.37	5.4	
PL-2	10/12/2022	2.2	2.21	0.01	17.40	9.58	7.38	30.9	Sock, 1/2 saturated, replaced sock
	10/27/2022	-	2.28	0.00	17.39	9.58	7.30	73.5	Sock 1/2 saturated, replaced
	11/8/2022	-	2.62	0.00	16.86	9.58	6.96	13.1	Globules, sock 1/4 saturated, replaced
	11/17/2022	-	2.08	0.00	17.40	9.58	7.50	23.1	
	12/13/2022	-	2.04	0.00	17.40	9.58	7.54	5.6	
	12/29/2022	-	2.42	0.00	17.40	9.58	7.16	21.9	
PL-3R	10/12/2022	-	3.79	0.00	19.30	10.16	6.37	13.2	
	10/27/2022	-	3.70	0.00	19.30	10.16	6.46	30.1	
	11/8/2022	-	4.15	0.00	19.30	10.16	6.01	41.2	
	11/17/2022	-	3.60	0.00	19.10	10.16	6.56	22.1	
	12/13/2022	-	3.87	0.00	19.08	10.16	6.29	7.7	
	12/29/2022	-	4.12	0.00	19.09	10.16	6.04	48.3	
PL-4RR	10/12/2022	-	4.15	0.00	13.00	11.56	7.41	0.0	
	10/27/2022	-	3.58	0.00	13.00	11.56	7.98	0.0	
	11/8/2022	-	4.53	0.00	13.00	11.56	7.03	0.0	
	11/17/2022	-	3.54	0.00	13.00	11.56	8.02	0.0	
	12/13/2022	-	3.53	0.00	13.00	11.56	8.03	0.0	
	12/29/2022	-	4.08	0.00	13.00	11.56	7.48	0.0	
PL-5R	10/12/2022	-	3.11	0.00	9.80	6.54	3.43	9.8	Sock fully saturated, replaced sock
	10/27/2022	-	1.40	0.00	9.80	6.54	5.14	55.7	Sock fully saturated, replaced sock
	11/8/2022	1.79	1.95	0.16	9.80	6.54	4.71	187.0	Sock fully saturated, replaced sock
	11/17/2022	-	-	0.00	9.80	6.54	-	-	Not accessible
	12/13/2022	-	-	0.00	9.80	6.54	-	-	Not accessible
	12/29/2022	-	-	0.00	9.80	6.54	-	-	Ice in manhole
PL-6RR	10/12/2022	-	0.90	0.00	15.10	6.88	5.98	0.0	
	10/27/2022	-	1.20	0.00	15.10	6.88	5.68	0.2	
	11/8/2022	-	1.48	0.00	15.20	6.88	5.40	0.0	
	11/17/2022	-	1.04	0.00	15.20	6.88	5.84	0.0	
	12/13/2022	-	1.13	0.00	15.20	6.88	5.75	0.0	
	12/29/2022	-	-	0.00	15.20	6.88	-	-	Ice in manhole
PL-7R	10/12/2022	-	2.62	0.00	15.01	8.41	5.79	0.0	
	10/27/2022	-	2.70	0.00	15.01	8.41	5.71	0.0	
	11/8/2022	-	3.12	0.00	15.01	8.41	5.29	0.0	
	11/17/2022	-	2.35	0.00	15.01	8.41	6.06	0.0	
	12/13/2022	-	2.29	0.00	15.01	8.41	6.12		
	12/29/2022	-	2.55	0.00	15.01	8.41	5.86	0.3	
PL-8R	10/12/2022	-	3.78	0.00	22.40	9.91	6.13	0.0	
	10/27/2022	-	4.05	0.00	22.40	9.91	5.86	0.0	
	11/8/2022	-	4.78	0.00	21.82	9.91	5.13	0.0	
	11/17/2022	-	3.62	0.00	21.75	9.91	6.29	0.0	
	12/13/2022	-	4.27	0.00	21.75	9.91	5.64	0.0	
	12/29/2022	-	4.38	0.00	21.75	9.91	5.53	0.00	
PL-9R	10/12/2022	-	2.20	0.00	20.47	9.11	6.91	0.0	
	10/27/2022	-	2.09	0.00	20.45	9.11	7.02	0.1	
	11/8/2022	-	2.37	0.00	20.50	9.11	6.74	0.0	
	11/17/2022	-	2.92	0.00	22.48	9.11	6.19	0.0	
	12/13/2022	-	2.39	0.00	22.48	9.11	6.72	0.0	
	12/29/2022	-	2.80	0.00	22.48	9.11	6.31	0.0	
TF-1	10/12/2022	-	1.72	0.00	12.10	8.60	6.88	111.8	Globules, sock 1/4 saturated
	10/27/2022	-	2.74	0.00	12.10	8.60	5.86	16.8	Globules, sock 1/4 saturated
	11/8/2022	-	2.25	0.00	12.10	8.60	6.35	22.9	Globules, sock 1/4 saturated, replaced
	11/17/2022	-	2.11	0.00	12.10	8.60	6.49	12.7	
	12/13/2022	-	2.09	0.00	12.10	8.60	6.51	0.0	
	12/29/2022	-	2.59	0.00	12.10	8.60	6.01	9.30	
TF-2	10/12/2022	-	1.25	0.00	11.60	7.50	6.25	245.0	Sock 1/4 saturated, replaced
	10/27/2022	-	1.78	0.00	11.60	7.50	5.72	32.4	Sock 1/2 saturated, replaced
	11/8/2022	-	3.10	0.00	11.60	7.50	4.40	21.2	Sock 1/2 saturated, replaced
	11/17/2022	-	1.37	0.00	11.60	7.50	6.13	67.3	Sock 1/2 saturated, replaced
	12/13/2022	-	1.2	0.00	11.60	7.50	6.30	11.3	Sock 1/2 saturated, replaced
	12/29/2022	-	1.78	0.00	11.60	7.50	5.72	115.00	Sock 1/2 saturated, replaced; globules
TF-3	10/12/2022	-	1.60	0.00	11.97	8.58	6.98	0.0	
	10/27/2022	-	2.11	0.00	11.95	8.58	6.47	0.0	
	11/8/2022	-	3.07	0.00	12.00	8.58	5.51	0.0	
	11/17/2022	-	1.83	0.00	11.95	8.58	6.75	0.0	
	12/13/2022	-	1.5	0.00	11.95	8.58	7.08	0.0	
	12/29/2022	-	2.66	0.00	11.95	8.58	5.92	0.00	
TM-6R	10/12/2022	-	5.18	0.00	20.61	14.26	9.08	11.1	Sock 1/8 absorbed
	10/27/2022	-	5.36	0.00	20.70	14.26	8.90	55.1	
	11/8/2022	-	6.02	0.00	20.55	14.26	8.24	37.5	
	11/17/2022	-	5.29	0.00	20.70	14.26	8.97	277.0	
	12/13/2022	-	5.3	0.00	20.70	14.26	8.96	146.0	
	12/29/2022	-	5.74	0.00	20.70	14.26	8.52	31.9	
TM-7	10/12/2022	-	6.98	0.00	21.98	14.81	7.83	42.8	Sock 1/8 absorbed
	10/27/2022	-	7.02	0.00	21.98	14.81	7.79	176.3	Sock 1/4 saturated, replaced
	11/8/2022	-	7.18	0.00	21.98	14.81	7.63	96.4	
	11/17/2022	-	6.85	0.00	21.98	14.81	7.96	654.0	
	12/13/2022	-	6.93	0.00	21.98	14.81	7.88	222.1	
	12/29/2022	-	7.2	0.00	21.98	14.81	7.61	306.8	
	10/12/2022	-	6.79	0.00	15.00	13.68	6.89	0.0	
	10/27/2022	-	6.87	0.00	15.00	13.68	6.81	0.0	

Table 1
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
4th Quarter Monthly Groundwater Gauging

TR-1R	11/8/2022	-	7.06	0.00	15.00	13.68	6.62	0.0	
	11/17/2022	-	6.81	0.00	14.98	13.68	6.87	0.0	
	12/13/2022	-	6.9	0.00	14.98	13.68	6.78	0.0	
	12/29/2022	-	6.70	0.00	14.98	13.68	6.98	0.0	
TR-2R	10/12/2022	-	0.00	0.00	20.30	12.47	12.47	0.0	Discontinuous Sheen
	10/27/2022	-	0.00	0.00	19.74	12.47	12.47	1.9	Discontinuous Sheen
	11/8/2022	-	0.10	0.00	19.75	12.47	12.37	11.4	Discontinuous Sheen
	11/17/2022	-	0.00	0.00	19.75	12.47	12.47	0.0	Discontinuous Sheen
	12/13/2022	-	0.08	0.00	19.75	12.47	12.39	0.0	Discontinuous Sheen
	12/29/2022	-	-	0.00	19.75	12.47	-	-	Flooded/Ice
TR-3RR	10/12/2022	-	3.36	0.00	15.10	9.63	6.27	0.0	
	10/27/2022	-	3.14	0.00	15.00	9.63	6.49	0.0	
	11/8/2022	-	3.23	0.00	14.90	9.63	6.40	0.0	
	11/17/2022	-	2.99	0.00	15.00	9.63	6.64	0.0	
	12/13/2022	-	3.22	0.00	15.00	9.63	6.41	0.0	
	12/29/2022	-	2.76	0.00	15.00	9.63	6.87	0.0	
TR-3D	10/12/2022	-	3.59	0.00	24.90	9.33	5.74	42.1	
	10/27/2022	-	3.13	0.00	24.91	9.33	6.20	40.1	
	11/8/2022	-	3.13	0.00	24.89	9.33	6.20	48.9	
	11/17/2022	-	3.06	0.00	24.90	9.33	6.27	7.2	
	12/13/2022	-	3.03	0.00	24.90	9.33	6.30	5.5	
	12/29/2022	-	2.72	0.00	24.90	9.33	6.61	395.6	
TR-3DD	10/12/2022	-	4.11	0.00	60.00	9.59	5.48	0.0	
	10/27/2022	-	3.76	0.00	59.20	9.59	5.83	0.9	
	11/8/2022	-	3.82	0.00	60.20	9.59	5.77	0.6	
	11/17/2022	-	3.84	0.00	60.20	9.59	5.75	0.0	
	12/13/2022	-	3.9	0.00	60.20	9.59	5.69	0.0	
	12/29/2022	-	3.85	0.00	60.20	9.59	5.74	0.6	
TR-4R	10/12/2022	-	3.45	0.00	13.50	12.48	9.03	208.2	
	10/27/2022	-	3.30	0.00	13.61	12.48	9.18	176.5	
	11/8/2022	-	3.85	0.00	13.61	12.48	8.63	199.6	
	11/17/2022	-	-	0.00	13.61	12.48	-	-	Underwater
	12/13/2022	-	3.64	0.00	13.61	12.48	8.84	1.0	
	12/29/2022	-	-	0.00	13.61	12.48	-	-	Flooded/Ice
TR-4D	10/12/2022	-	5.65	0.00	24.60	12.18	6.53	0.0	
	10/27/2022	-	-	0.00	24.00	12.18	-	-	Underwater
	11/8/2022	-	5.65	0.00	24.00	12.18	6.53	0.0	
	11/17/2022	-	-	0.00	24.00	12.18	-	-	
	12/13/2022	-	5.70	0.00	24.00	12.18	6.48	0.0	
	12/29/2022	-	-	0.00	24.00	12.18	-	-	Flooded/Ice
TR-4DD	10/12/2022	-	6.04	0.00	57.50	12.58	6.54	0.0	
	10/27/2022	-	6.03	0.00	56.70	12.58	6.55	0.0	
	11/8/2022	-	6.16	0.00	56.70	12.58	6.42	0.0	Underwater
	11/17/2022	-	-	0.00	56.70	12.58	-	-	
	12/13/2022	-	6.10	0.00	56.70	12.58	6.48	0.0	
	12/29/2022	-	-	0.00	56.70	12.58	-	-	Flooded/Ice
TR-5	10/12/2022	-	5.00	0.00	10.64	11.99	6.99	120.3	
	10/27/2022	-	4.04	0.00	10.65	11.99	7.95	147.6	
	11/8/2022	-	4.66	0.00	10.68	11.99	7.33	179.7	
	11/17/2022	-	4.43	0.00	10.68	11.99	7.56	378.0	
	12/13/2022	-	4.90	0.00	10.68	11.99	7.09	135.5	
	12/29/2022	-	4.42	0.00	10.68	11.99	7.57	53.0	
TR-5D	10/12/2022	-	5.45	0.00	23.40	12.01	6.56	32.8	
	10/27/2022	-	5.53	0.00	23.31	12.01	6.48	16.0	
	11/8/2022	-	5.71	0.00	23.25	12.01	6.30	15.7	
	11/17/2022	-	5.46	0.00	23.30	12.01	6.55	2.7	
	12/13/2022	-	4.76	0.00	23.30	12.01	7.25	0.4	
	12/29/2022	-	5.44	0.00	23.30	12.01	6.57	26.7	
TR-5DD	10/12/2022	-	5.15	0.00	60.00	11.64	6.49	0.0	
	10/27/2022	-	5.28	0.00	59.30	11.64	6.36	4.9	
	11/8/2022	-	5.35	0.00	59.30	11.64	6.29	0.2	
	11/17/2022	-	5.32	0.00	60.04	11.64	6.32	0.0	
	12/13/2022	-	5.48	0.00	60.04	11.64	6.16	0.0	
	12/29/2022	-	5.48	0.00	60.04	11.64	6.16	0.0	
TR-6	10/12/2022	-	4.35	0.00	12.60	10.78	6.43	0.0	
	10/27/2022	-	4.28	0.00	12.60	10.78	6.50	359.4	
	11/8/2022	-	4.63	0.00	13.00	10.78	6.15	88.0	
	11/17/2022	-	4.00	0.00	12.60	10.78	6.78	0.0	
	12/13/2022	-	4.58	0.00	12.60	10.78	6.20	0.0	
	12/29/2022	-	4.33	0.00	12.60	10.78	6.45	0.2	
TR-6D	10/12/2022	-	4.82	0.00	28.20	10.81	5.99	0.0	
	10/27/2022	-	4.66	0.00	28.20	10.81	6.15	0.0	
	11/8/2022	-	4.83	0.00	29.30	10.81	5.98	0.0	
	11/17/2022	-	4.58	0.00	28.20	10.81	6.23	0.0	
	12/13/2022	-	4.89	0.00	28.20	10.81	5.92	0.0	
	12/29/2022	-	4.57	0.00	28.20	10.81	6.24	0.2	
TR-Sump-1	10/12/2022	-	5.03	0.00	7.30	12.62	7.59	0.0	
	10/27/2022	-	5.36	0.00	7.30	12.62	7.26	0.0	
	11/8/2022	-	5.43	0.00	7.30	12.62	7.19	0.0	
	11/17/2022	-	4.91	0.00	7.30	12.62	7.71	0.0	
	12/13/2022	-	5.40	0.00	7.30	12.62	7.22	0.0	
	12/29/2022	-	5.41	0.00	7.30	12.62	7.21	0.0	
TR-Sump-2	10/12/2022	-	5.01	0.00	7.20	12.35	7.34	0.0	
	10/27/2022	-	5.06	0.00	7.20	12.35	7.29	0.0	
	11/8/2022	-	5.11	0.00	7.20	12.35	7.24	0.0	
	11/17/2022	-	4.98	0.00	7.20	12.35	7.37	0.0	
	12/13/2022	-	5.00	0.00	7.20	12.35	7.35	0.0	
	12/29/2022	-	5.08	0.00	7.20	12.35	7.27	0.0	
Interceptor	10/12/2022	-	0.75	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.
	10/27/2022	-	0.90	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.
	11/8/2022	-	1.10	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.

Table 1
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
4th Quarter Monthly Groundwater Gauging

Trench	11/17/2022	-	1.00	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.
	12/13/2022	-	1.00	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.
	12/29/2022	-	1.00	0.00	5.00	-	-	NA	Intermittent sheen on top of water. No measurable product.
DB-SW	10/12/2022	-	5.80	0.00	-	1.08	-4.72	NA	
	10/27/2022	-	6.60	0.00	-	1.08	-5.52	NA	
	11/8/2022	-	6.50	0.00	-	1.08	-5.42	NA	
	11/17/2022	-	6.50	0.00	-	1.08	-5.42	NA	
	12/13/2022	-	6.00	0.00	-	1.08	-4.92	NA	
	12/29/2022	-	5.8	0.00		1.08	-4.72	NA	Pond frozen
LN-SW	10/12/2022	-	2.60	0.00	-	-0.31	-2.91	NA	
	10/27/2022	-	2.60	0.00	-	-0.31	-2.91	NA	
	11/8/2022	-	2.60	0.00	-	-0.31	-2.91	NA	
	11/17/2022	-	2.80	0.00	-	-0.31	-3.11	NA	
	12/13/2022	-	2.80	0.00	-	-0.31	-3.11	NA	
	12/29/2022	-	2.60	0.00		-0.31	-2.91	NA	
L1-SW	10/12/2022	-	2.60	0.00	-	-0.20	-2.80	NA	
	10/27/2022	-	-	0.00	-	-0.20	-	NA	
	11/8/2022	-	-	0.00	-	-0.20	-	NA	
	11/17/2022	-	-	0.00	-	-0.20	-	NA	
	12/13/2022	-	-	0.00	-	-0.20	-	NA	
	12/29/2022	-	-	0.00		-0.20	-	NA	
SC-SG-A	10/12/2022	-	2.40	0.00	-	-0.98	-3.38	NA	
	10/27/2022	-	1.88	0.00	-	-0.98	-2.86	NA	
	11/8/2022	-	-	0.00	-	-0.98	-	NA	Too shallow
	11/17/2022	-	5.70	0.00	-	-0.98	-6.68	NA	
	12/13/2022	-	5.70	0.00	-	-0.98	-6.68	NA	
	12/29/2022	-	5.70	0.00	-	-0.98	-6.68	NA	
SC-SG-B	10/12/2022	-	2.40	0.00	-	-1.10	-3.50	NA	
	10/27/2022	-	-	0.00	-	-1.10	-	NA	Too shallow
	11/8/2022	-	-	0.00	-	-1.10	-	NA	Too shallow
	11/17/2022	-	2.60	0.00	-	-1.10	-3.70	NA	
	12/13/2022	-	2.40	0.00	-	-1.10	-3.50	NA	
	12/29/2022	-	-	0.00	-	-1.10	-	NA	Stream gauge knocked over
SC-SG-C	10/12/2022	-	2.40	0.00	-	-1.64	-4.04	NA	
	10/27/2022	-	-	0.00	-	-1.64	-	NA	Too shallow
	11/8/2022	-	-	0.00	-	-1.64	-	NA	Too shallow
	11/17/2022	-	2.60	0.00	-	-1.64	-4.24	NA	
	12/13/2022	-	2.70	0.00	-	-1.64	-4.34	NA	
	12/29/2022	-	-	0.00	-	-1.64	-	NA	Stream gauge knocked over
FA-1	10/12/2022	-	4.08	0.00	12.25	9.67	5.59	0.0	
	10/27/2022	-	3.06	0.00	12.05	9.67	6.61	0.0	
	11/8/2022	-	3.47	0.00	12.00	9.67	6.20	0.0	
	11/17/2022	-	3.16	0.00	12.10	9.67	6.51	0.0	
	12/13/2022	-	3.53	0.00	12.10	9.67	6.14	0.0	
	12/29/2022	-	2.73	0.00	12.10	9.67	6.94	0.0	
FA-2	10/12/2022	-	3.68	0.00	13.60	10.39	6.71	0.0	
	10/27/2022	-	3.88	0.00	13.40	10.39	6.51	0.0	
	11/8/2022	-	4.29	0.00	13.40	10.39	6.10	0.0	
	11/17/2022	-	4.03	0.00	13.41	10.39	6.36	0.0	
	12/13/2022	-	4.58	0.00	13.41	10.39	5.81	0.0	
	12/29/2022	-	3.62	0.00	13.41	10.39	6.77	0.0	
FA-3	10/12/2022	-	8.45	0.00	14.60	10.84	2.39	5.8	Sock 1/4 absorbed
	10/27/2022	-	8.83	0.00	14.50	10.84	2.01	10.4	Sock 1/2 saturated, replaced
	11/8/2022	-	9.04	0.00	14.50	10.84	1.80	17.4	Sock 1/2 saturated, replaced
	11/17/2022	-	8.98	0.00	14.50	10.84	1.86	0.0	
	12/13/2022	-	9.20	0.00	14.50	10.84	1.64	3.4	
	12/29/2022	8.63	8.65	0.02	14.50	10.84	2.21	4.3	Sock 3/4 saturated, replaced
FA-4	10/12/2022	-	8.99	0.00	14.50	10.98	1.99	0.0	Sock 1/8 saturated, sheen
	10/27/2022	-	9.03	0.00	14.50	10.98	1.95	11.9	
	11/8/2022	-	9.17	0.00	14.40	10.98	1.81	1.8	
	11/17/2022	-	9.18	0.00	14.97	10.98	1.80	2.5	
	12/13/2022	-	9.35	0.00	14.90	10.98	1.63	0.0	
	12/29/2022	-	8.86	0.00	14.90	10.98	2.12	6.7	
FA-5	10/12/2022	-	5.40	0.00	14.50	10.22	4.82	0.0	Sock fully saturated, replaced sock
	10/27/2022	5.44	5.64	0.2	14.50	10.22	4.73	39.7	Sock 1/2 saturated, replaced
	11/8/2022	-	5.60	0.00	14.50	10.22	4.62	26.2	Globules, sock 1/2 saturated, replaced
	11/17/2022	5.9	5.92	0.02	14.50	10.22	4.32	0.4	Sock fully saturated, replaced sock
	12/13/2022	5.71	5.79	0.08	14.50	10.22	4.49	12.9	Sock fully saturated, replaced sock
	12/29/2022	5.87	5.90	0.03	14.50	10.22	4.34	9.5	Sock fully saturated, replaced sock
FA-6	10/12/2022	-	8.45	0.00	18.20	12.13	3.68	0.0	Sock 1/8 saturated
	10/27/2022	-	8.87	0.00	18.20	12.13	3.26	14.2	Sock covered in red silt with sheen, replaced
	11/8/2022	-	9.14	0.00	18.10	12.13	2.99	7.7	Sock covered in red silt with sheen, replaced
	11/17/2022	-	9.45	0.00	18.10	12.13	2.68	0.0	Sheen
	12/13/2022	-	9.69	0.00	18.10	12.13	2.44	0.0	Sheen
	12/29/2022	-	9.13	0.00	18.10	12.13	3.00	7.2	Sock covered in red silt with sheen, replaced
FA-7	10/12/2022	-	8.65	0.00	18.15	10.14	1.49	0.0	
	10/27/2022	-	8.86	0.00	18.00	10.14	1.28	0.0	
	11/8/2022	-	9.18	0.00	18.00	10.14	0.96	0.0	
	11/17/2022	-	9.28	0.00	18.15	10.14	0.86	0.0	
	12/13/2022	-	9.43	0.00	18.15	10.14	0.71	0.0	
	12/29/2022	-	9.03	0.00	18.15	10.14	1.11	0.0	
FA-14	10/12/2022	-	8.85	0.00	15.00	11.33	2.48	0.00	
	10/27/2022	-	9.21	0.00	15.00	11.33	2.12	4.0	Sock 1/4 saturated, replaced
	11/8/2022	-	9.40	0.00	15.00	11.33	1.93	2.1	
	11/17/2022	-	8.42	0.00	15.00	11.33	2.91	0.0	
	12/13/2022	-	9.65	0.00	15.00	11.33	1.68	0.2	
	12/29/2022	-	-	0.00	15.00	11.33	-	-	Ice in manhole
FA-15	10/12/2022	-	8.72	0.00	15.00	11.29	2.57	0.0	
	10/27/2022	-	9.10	0.00	15.00	11.29	2.19	0.1	
	11/8/2022	-	-	0.00	15.00	11.29	-	-	MW covered by conex box
	11/17/2022	-	-	0.00	15.00	11.29	-	-	MW covered by conex box

Table 1
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
4th Quarter Monthly Groundwater Gauging

	12/13/2022	-	-	0.00	15.00	11.29	-	-	MW covered by conex box
	12/29/2022	-	-	0.00	15.00	11.29	-	-	Ice in manhole

Table 2
Monitoring Well Gauging Table - Historic LNAPL Hess Corporation - Former Port Reading Complex 750 Cliff Road
Port Reading, Middlesex County, New Jersey
Fourth Quarter

Fourth Quarter	2015						2016					
	October	IRM Actions	November	IRM Actions	December	IRM Actions	October	IRM Actions	November	RIM Actions	December	IRM Actions
FA-3	NI	NA	NI	NA	NA	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NA	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.11	Sock deployed	0.10	Sock deployed	0.01	Socky Deployed	Sheen	NA	0.01	Sock deployed	Sheen	NA
PL-2	0.02	Sock deployed	0.10	Sock deployed	0.01	Socky Deployed	0.03	Sock deployed	0.01	Sock deployed	0.00	NA
PL-5/PL-5R	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA
PL-8R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Sheen	NA
PL-9R	Sheen	NA	0.00	NA	NA	NA	0.00	0.00	NM	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	NA	NA	0.00	NA	NM	NA	0.00	NA
TF-2	NM	NA	0.00	NA	0.10	Socky Deployed	0.20	Sock deployed	0.40	Sock deployed	0.02	Sock Deployed
TM-7	0.01	Sock deployed	0.00	NA	NA	NA	0.00	NA	NM	NA	0.00	NA
TR-2R	0.03	Sock deployed	0.00	NA	0.01	Socky Deployed	0.00	NA	NM	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	NA	NA	NM	NA	0.6	30 Gallons Removed	NM	NA

Fourth Quarter	2017						2018					
	October	IRM Actions	November	IRM Actions	December	IRM Actions	October	IRM Actions	November	RIM Actions	December	IRM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.01	NA	0.02	Sock deployed	0.02	Sock deployed	NM	NA	NM	NA	NM	NA
PL-2	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
PL-5/PL-5R	0.00	NA	1.10	Sock deployed	0.57	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA
PL-8R	0.00	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
PL-9R	0.00	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-2	NM	NA	0.03	Sock deployed	0.03	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA
TM-7	0.00	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-2R	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA	NM	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.50	NA	Indeterminable	NA	Indeterminable	Interceptor Trench Vacuumed Out	NM	1336 Gallons Removed	NM	11 Gallons Removed	NM	NA

Fourth Quarter	2019						2020					
	October	IRM Actions	November	IRM Actions	December	IRM Actions	October	IRM Actions	November	RIM Actions	December	IRM Actions
FA-3	NI	NA	NI	NA	NI	NA	0.00	NA	NM	NA	Sheen	Sock deployed
FA-5	NI	NA	NI	NA	NI	NA	Sheen	Sock deployed	NM	NA	Sheen	Sock deployed
PL-1RR	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA
PL-2	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA	Orange Rust	Sock deployed	0.00	NA	0.00	NA
PL-5/PL-5R	indeterminable	Sock deployed	0.50	Sock deployed	0.02	Sock deployed	0.30	Sock deployed	Sheen	Sock deployed	Sheen	NA
PL-8R	0.00	NA	0.00	NA	NM	NA	0.00	NA	0.00	NA	0.00	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	NM	NA	0.01	Sock deployed	0.00	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA
TF-2	NM	NA	Sheen	Sock deployed	0.00	NA	Sheen	NA	Sheen	Sock deployed	0.03	Sock deployed
TM-7	Globules	Sock deployed	Globules	Sock deployed	NM	NA	Sheen	NA	Sheen	NA	Sheen	NA
TR-2R	0.00	NA	0.00	NA	NM	NA	Sheen	Sock deployed	NM	NA	Sheen	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	N/A	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	N/A	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	1.20	278 Gallons Removed from PL-5R and Interceptor Trench	1.7	157 Gallons Removed from Interceptor Trench and PL-5R	1.6	NA	1.2	1114 Gallons Removed from Interceptor Trench andFA-3

Fourth Quarter	2021						2021					
	October	IRM Actions	November	IRM Actions	December	IRM Actions	October	IRM Actions	November	IRM Actions	December	IRM Actions
FA-3	Sheen	NA	0.00	NA	0.00	NA	Sheen	Sock deployed	0.00	NA	Sheen	Sock deployed
FA-5	0.03	Sock deployed	0.04	Sock deployed	0.12	Sock deployed	0.20	Sock deployed	0.02	Sock deployed	0.08	Sock deployed
PL-1RR	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA
PL-2	0.00	NA	0.00	NA	0.00	NA	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA
PL-5/PL-5R	0.30	Sock deployed	0.03	Sock deployed	0.02	Sock deployed	Sheen	Sock deployed	0.16	Sock deployed	NA	Inaccessible
PL-8R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA
TF-2	Sheen	NA	0.02	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
TM-7	0.00	Sock deployed	0.00	Sock deployed	0.00	NA	Sheen	Sock deployed	0.00	NA	0.00	NA
TR-2R	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA

NM = Not Measured
N/A = Not Applicable
NI = Not Installed

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November 2022 Annual Groundwater Gauging

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AB-1	11/17/2022	--	4.99	--	13.00	12.60	11.68	6.69	--	0.0	
AB-3	11/17/2022	--	4.10	--	13.00	13.30	12.33	8.23	--	0.0	
AB-4R	11/17/2022	--	4.53	--	15.50	16.00	12.05	7.52	--	0.0	
AB-4D	11/17/2022	--	10.48	--	33.00	34.00	11.81	1.33	--	0.0	
AB-5	11/17/2022	--	3.54	--	13.00	13.50	11.18	7.64	--	0.0	
AB-6	11/17/2022	--	--	--	10.50	9.90	6.95	--	--	--	Blocked - no access
AD-1	11/17/2022	--	0.70	--	13.00	11.90	16.12	15.42	--	0.0	
AD-2	11/17/2022	--	6.21	--	18.00	16.85	16.64	10.43	--	1038.0	
AD-2DD	11/17/2022	--	6.34	--	45.00	44.98	16.58	10.24	--	20.1	
AD-3	11/17/2022	--	8.05	--	14.00	13.85	19.96	11.91	--	0.1	
AD-3D	11/17/2022	--	8.10	--	29.00	29.00	19.71	11.61	--	0.3	
AD-4	11/17/2022	--	7.30	--	15.00	14.84	15.45	8.15	--	0.2	
AD-5	11/17/2022	--	6.38	--	15.00	14.54	15.59	9.21	--	0.7	
AD-5D	11/17/2022	--	8.41	--	30.00	29.81	15.48	7.07	--	5.1	
AD-6	11/17/2022	--	6.59	--	15.00	14.41	17.13	10.54	--	0.0	
AD-8	11/17/2022	--	6.98	--	15.00	15.10	15.85	8.87	--	0.0	
AD-9D	11/17/2022	--	6.52	--	28.00	26.90	15.50	8.98	--	0.0	
AD-9DD	11/17/2022	--	6.98	--	60.00	58.50	15.43	8.45	--	1.0	
AD-10	11/17/2022	--	9.06	--	20.00	19.42	16.05	6.99	--	4.2	
AD-10DD	11/17/2022	--	9.18	--	64.00	64.70	16.14	6.96	--	0.3	
DPP-1	11/17/2022	--	6.35	--	15.00	15.00	7.90	1.55	--	0.0	
FA-1	11/17/2022	--	3.16	--	13.00	12.10	10.02	6.86	--	0.0	
FA-2	11/17/2022	--	4.03	--	14.00	13.41	10.76	6.73	--	0.2	
FA-3	11/17/2022	--	8.98	--	15.00	14.50	11.28	2.30	--	0.0	
FA-4	11/17/2022	--	9.18	--	15.00	14.97	11.39	2.21	--	2.5	
FA-5	11/17/2022	--	5.92	--	15.00	14.94	10.53	4.61	--	0.4	Sock saturated; replaced
FA-6	11/17/2022	--	9.45	--	15.00	18.30	12.46	3.01	--	0.0	
FA-7	11/17/2022	--	9.28	--	18.00	18.10	10.94	1.66	--	0.0	
FA-8	11/17/2022	--	8.93	--	18.00	18.08	11.42	2.49	--	0.0	
FA-9	11/17/2022	--	8.73	--	18.00	18.42	9.73	1.00	--	0.0	
FA-10	11/17/2022	--	8.78	--	18.00	18.78	9.73	0.95	--	0.0	

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FA-11	11/17/2022	--	6.70	--	15.00	14.90	8.28	1.58	--	0.0	
FA-12	11/17/2022	--	10.03	--	15.00	18.35	12.26	2.23	--	0.0	
FA-13	11/17/2022	--	10.24	--	18.00	18.40	13.14	2.90	--	0.0	
FA-14	11/17/2022	--	8.42	--	15.00	14.88	11.33	2.91	--	0.0	
FA-15	11/17/2022	--	--	--	15.00	14.99	11.29	--	--	--	Blocked - no access
FA-16	11/17/2022	--	2.98	--	15.00	14.70	9.52	6.54	--	0.0	
FA-17	11/17/2022	--	1.91	--	15.00	14.74	8.83	6.92	--	0.0	
FA-18	11/17/2022	--	4.43	--	15.00	15.10	10.76	6.33	--	0.3	
FA-19	11/17/2022	--	10.95	--	18.00	18.10	12.26	1.31	--	0.0	
FA-20	11/17/2022	--	10.91	--	18.00	18.15	8.04	-2.87	--	0.0	
FA-21	11/17/2022	--	10.29	--	18.00	18.39	11.14	0.85	--	0.0	
LPG-1	11/17/2022	--	1.05	--	9.00	7.99	11.60	10.55	--	0.0	
LPG-2	11/17/2022	--	1.10	--	10.00	9.62	7.05	5.95	--	0.0	
MRVU-1	11/17/2022	--	6.63	--	15.00	15.00	8.89	2.26	--	0.0	
PER-1	11/17/2022	--	10.34	--	18.00	17.75	17.18	6.84	--	0.0	
PER-2	11/17/2022	--	4.83	--	12.00	12.40	10.76	5.93	--	0.0	
PER-2D	11/17/2022	--	6.28	--	33.00	33.10	11.30	5.02	--	0.0	
PER-2DD	11/17/2022	--	6.26	--	63.00	63.75	10.53	4.27	--	0.0	
PER-3	11/17/2022	--	3.89	--	12.16	12.17	7.32	3.43	--	0.0	
PER-3D	11/17/2022	--	6.05	--	33.00	33.00	7.30	1.25	--	0.0	
PER-4	11/17/2022	--	6.34	--	15.00	15.65	10.30	3.96	--	0.0	Damaged vault
PER-5	11/17/2022	--	3.38	--	15.00	14.10	18.49	15.11	--	0.0	
PER-6R	11/17/2022	--	2.50	--	22.00	21.65	21.54	19.04	--	0.0	
PER-7	11/17/2022	--	6.60	--	18.00	15.65	8.94	2.34	--	0.0	
PER-8	11/17/2022	--	8.29	--	15.00	14.32	7.74	-0.55	--	0.0	
PER-9	11/17/2022	--	2.75	--	17.50	17.50	8.02	5.27	--	0.00	
PER-9D	11/17/2022	--	5.64	--	37.50	37.50	7.85	2.21	--	0.00	
PER-9DD	11/17/2022	--	5.34	--	68.50	68.00	7.91	2.57	--	0.00	
PER-10	11/17/2022	--	6.55	--	19.00	19.00	12.19	5.64	--	0.0	
PER-10D	11/17/2022	--	10.67	--	33.00	33.50	11.94	1.27	--	0.0	
PL-1RR	11/17/2022	--	0.50	--	15.00	15.00	7.36	6.86	--	0.0	

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PL-2	11/17/2022	--	2.08	--	17.00	17.40	9.58	7.50	--	0.0	
PL-3R	11/17/2022	--	3.60	--	22.50	19.10	10.16	6.56	--	0.0	
PL-4RR	11/17/2020	--	3.54	--	13.00	13.20	11.56	8.02	--	0.0	
PL-5R	11/17/2022	--	--	--	9.80	9.80	6.54	--	--	--	
PL-6RR	11/17/2022	--	1.04	--	15.00	14.98	6.88	5.84	--	0.0	
PL-7R	11/17/2022	--	2.35	--	20.00	20.35	10.75	8.40	--	0.0	
PL-8R	11/17/2022	--	3.62	--	22.50	21.63	9.91	6.29	--	0.0	
PL-9R	11/17/2022	--	2.92	--	22.50	22.50	9.11	6.19	--	0.0	
SG-1	11/17/2022	--	2.91	--	15.00	15.05	9.20	6.29	--	0.0	
SG-2	11/17/2022	--	3.00	--	15.00	15.03	8.70	5.70	--	0.0	
SG-3	11/17/2022	--	3.40	--	15.00	15.09	8.77	5.37	--	0.0	
SG-4	11/17/2022	--	2.46	--	15.00	15.30	8.77	6.31	--	0.0	
SM-1	11/17/2022	--	4.11	--	15.00	13.65	8.59	4.48	--	1.0	
SM-1D	11/17/2022	--	7.05	--	35.00	35.00	9.59	2.54	--	0.0	
SP-1	11/17/2022	--	5.38	--	13.00	11.75	8.95	3.57	--	0.0	
SP-2	11/17/2022	--	4.51	--	13.00	14.00	10.18	5.67	--	0.0	
SP-3	11/17/2022	--	3.08	--	13.00	13.08	9.33	6.25	--	0.0	
SRB-1	11/17/2022	--	6.38	--	15.00	15.00	7.55	1.17	--	0.0	
TF-1	11/17/2022	--	2.11	--	12.00	12.01	8.60	6.49	--	1.6	
TF-1D	11/17/2022	--	4.75	--	35.23	35.25	6.64	1.89	--	0.7	
TF-2	11/17/2022	--	1.37	--	12.00	12.00	7.69	6.32	--	15.9	
TF-3	11/17/2022	--	1.83	--	12.00	11.77	8.58	6.75	--	0.0	Sheen. Sock replaced
TF-4	11/17/2022	--	NA	--	13.00	13.23	6.34	--	--	na	
TF-4D	11/17/2022	--	4.54	--	35.00	34.88	6.29	1.75	--	2.2	
TF-5	11/17/2022	--	1.89	--	13.00	13.10	8.13	6.24	--	2.2	
TF-6	11/17/2022	--	0.38	--	13.00	13.05	6.80	6.43	--	na	
TL-1	11/17/2022	--	6.43	--	14.00	14.30	8.81	2.38	--	0.0	
TL-2	11/17/2022	--	6.21	--	15.00	12.65	8.48	2.27	--	0.0	
TL-3	11/17/2022	--	6.49	--	10.00	9.90	8.68	2.19	--	0.0	
TL-4	11/17/2022	--	--	--	15.00	15.00	7.56	--	--	--	Blocked - no access
TL-5	11/17/2022	--	6.86	--	15.00	15.00	8.19	1.33	--	599.7	

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TM-1	11/17/2022	--	10.21	--	20.50	20.05	20.06	9.85	--	3.1	
TM-2	11/17/2022	--	10.49	--	21.00	21.50	20.14	9.65	--	0.0	
TM-3	11/17/2022	--	10.72	--	20.50	20.86	20.19	9.47	--	1.4	
TM-4	11/17/2022	--	9.60	--	18.50	15.10	19.01	9.41	--	0.9	
TM-5	11/17/2022	--	8.01	--	20.50	23.00	16.13	8.12	--	0.0	
TM-6R	11/17/2022	--	5.29	--	20.00	20.70	14.26	8.97	--	277.0	Sock 1/4 absorbed
TM-7	11/17/2022	--	6.85	--	22.00	21.98	14.81	7.96	--	654.0	Sock 1/8 absorbed
TM-8	11/17/2022	--	5.94	--	20.00	20.10	15.44	9.50	--	0.7	
TR-1R	11/17/2022	--	6.81	--	16.00	14.98	13.68	6.87	--	1.0	
TR-2R	11/17/2022	--	0.00	--	20.00	19.75	12.47	12.47	--	0.0	
TR-3RR	11/17/2022	--	2.99	--	15.00	14.80	9.63	6.64	--	0.0	
TR-3D	11/17/2022	--	3.06	--	25.00	24.90	9.33	6.27	--	7.2	
TR-3DD	11/17/2022	--	3.84	--	60.00	60.00	9.59	5.75	--	0.0	
TR-4R	11/17/2022	--	NA	--	15.00	13.61	12.18	#VALUE!	--	NA	Underwater
TR-4D	11/17/2022	--	NA	--	25.00	24.56	12.48	#VALUE!	--	NA	Underwater
TR-4DD	11/17/2022	--	NA	--	56.00	56.70	12.58	#VALUE!	--	NA	Underwater
TR-5	11/17/2022	--	4.43	--	12.00	10.68	11.99	7.56	--	378.0	
TR-5D	11/17/2022	--	5.46	--	25.00	23.20	11.57	6.11	--	2.7	
TR-5DD	11/17/2022	--	5.32	--	60.00	59.30	11.28	5.96	--	0.0	
TR-6	11/17/2022	--	4.00	--	12.50	12.60	10.78	6.78	--	0.0	
TR-6D	11/17/2022	--	4.58	--	28.30	28.20	10.81	6.23	--	0.0	
TR-7	11/17/2022	--	5.48	--	15.00	15.00	12.44	6.96	--	165.9	Globules, added sock
TR-7D	11/17/2022	--	6.73	--	30.00	30.00	12.47	5.74	--	1.2	
TR-8	11/17/2022	--	2.55	--	18.00	18.00	8.86	6.31	--	0.0	
TR-8D	11/17/2022	--	3.03	--	30.00	29.99	8.73	5.70	--	3.0	
TR-8DD	11/17/2022	--	4.11	--	55.00	55.00	9.04	4.93	--	0.0	
DB-SW	11/17/2022	--	6.60	--	--	--	1.08	-5.52	--	-	
L1-SW	11/17/2022	--	3.00	--	--	--	-0.2	-3.20	--	--	
LN-SW	11/17/2022	--	3.00	--	--	--	-0.31	-3.31	--	--	
TR-SUMP-1	11/17/2022	--	4.91	--	--	7.20	12.62	7.71	--	0.00	
TR-SUMP-2	11/17/2022	--	4.98	--	--	7.20	12.35	7.37	--	0.00	

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MW-1	11/17/2022	--	8.71	--	13.00	16.34	24.48	15.77	--	0.0	
MW-2	11/17/2022	--	1.71	--	13.00	12.72	19.01	17.30	--	0.0	
MW-3	11/17/2022	--	1.18	--	13.00	12.98	18.91	17.73	--	0.0	
MW-4	11/17/2022	--	5.19	--	15.00	17.98	24.07	18.88	--	0.0	
LN-1	11/17/2022	--	4.89	--	16.00	14.45	10.37	5.48	--	0.0	
LN-2	11/17/2022	--	5.68	--	13.00	11.48	9.65	3.97	--	0.0	
LN-3	11/17/2022	--	5.15	--	11.30	12.10	8.92	3.77	--	0.0	
LN-4	11/17/2022	--	7.21	--	14.00	14.50	10.69	3.48	--	6.9	
LN-5	11/17/2022	--	6.75	--	15.00	16.72	10.57	3.82	--	1.0	
LN-6	11/17/2022	--	8.31	--	15.00	17.10	12.15	3.84	--	1.8	
LN-7	11/17/2022	--	8.85	--	15.00	17.10	13.3	4.45	--	0.0	
LS-1R	11/17/2022	--	2.72	--	16.00	16.40	12.25	9.53	--	0.1	
LS-2	11/17/2022	--	3.21	--	12.01	12.65	9.75	6.54	--	0.00	
LS-3	11/17/2022	--	0.75	--	12.00	11.90	8.4	7.65	--	0.00	
LS-4	11/17/2022	--	1.44	--	14.00	13.80	9.28	7.84	--	0.00	
L1-1	11/17/2022	--	4.8	--	15.00	13.40	9.91	5.11	--	0.0	
L1-2	11/17/2022	--	6.20	--	14.00	13.97	9.05	2.85	--	0.0	
L1-3	11/17/2022	--	6.79	--	9.40	10.90	9.33	2.54	--	0.0	
L1-4	11/17/2022	--	7.99	--	9.00	11.00	10.85	2.86	--	0.0	
BG-2	11/17/2022	--	3.35	--	9.20	8.90	6.96	3.61	--	0.0	
BG-3	11/17/2022	--	3.54	--	10.00	10.91	10.31	6.77	--	0.0	
DT-1D	11/17/2022	--	0.25	--	30.00	29.95	10.68	10.43	--	0.0	
DT-3	11/17/2022	--	3.97	--	18.00	18.00	9.87	5.90	--	0.0	
DT-3D	11/17/2022	--	4.18	--	28.50	28.50	9.9	5.72	--	0.0	
DT-5	11/17/2022	--	3.21	--	15.00	15.00	7.78	4.57	--	9.7	
DT-5D	11/17/2022	--	2.42	--	30.21	30.21	7.76	5.34	--	0.0	
DT-5DD	11/17/2022	--	2.90	--	51.00	51.00	7.55	4.65	--	0.0	
DT-6	11/17/2022	--	2.73	--	15.00	15.00	8.45	5.72	--	0.0	
2TF-1	11/17/2022	--	5.66	--	19.55	19.55	11.24	5.58	--	0.9	
2TF-2	11/17/2022	--	5.13	--	15.00	15.05	10.56	5.43	--	0.0	
2TF-3	11/17/2022	--	5.51	--	15.00	15.05	11	5.49	--	0.0	

Table 3
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
November 2022 Annual Groundwater Gauging

WELL I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB Original (ft)	DTB from TOC (ft)	TOC Elevation (ft)	Water Elevation (ft)	LNAPL Corrected Water Level (ρ = 0.82)	PID	Notes
2TF-4	11/17/2022	--	2.41	--	18.00	17.89	8.73	6.32	--	0.0	
2TF-5	11/17/2022	--	0.41	--	15.00	15.28	7.99	7.58	--	0.0	
2TF-6	11/17/2022	--	2.15	--	15.00	15.20	8.65	6.50	--	0.0	
3TF-1	11/17/2022	--	6.81	--	15.00	15.00	9.42	2.61	--	102.4	
3TF-1D	11/17/2022	--	7.53	--	30.00	30.00	9.4	1.87	--	25.5	
3TF-2	11/17/2022	--	8.93	--	18.00	18.00	12.58	3.65	--	0.7	
3TF-3	11/17/2022	--	11.15	--	20.00	20.00	7.31	-3.84	--	133.6	
RTF-1	11/17/2022	--	6.45	--	15.00	15.00	8.75	2.30	--	21.3	Sock saturated; replaced
RTF-2	11/17/2022	--	6.59	--	15.00	15.00	9.06	2.47	--	506.4	
RTF-3	11/17/2022	--	7.35	--	15.00	15.00	9.15	1.80	--	235.0	
RTF-4	11/17/2022	--	6.17	--	15.00	15.00	8.96	2.79	--	22.2	
RTF-5	11/17/2022	--	6.55	--	15.00	15.00	9.72	3.17	--	0.0	
RTF-6	11/17/2022	--	7.73	--	18.00	18.00	12.64	4.91	--	0.0	
SC-1	11/17/2022	--	2.54	--	15.00	15.40	4.74	2.20	--	0.0	
SC-1D	11/17/2022	--	0.10	--	30.00	33.60	4.95	4.85	--	0.0	
SC-1DD	11/17/2022	--	0.00	--	60.00	60.00	5.07	5.07	--	0.0	
SC-2	11/17/2022	--	1.50	--	15.00	15.80	4.89	3.39	--	0.0	
SC-2D	11/17/2022	--	2.51	--	35.00	34.50	4.68	2.17	--	0.0	
SC-2DD	11/17/2022	--	2.11	--	60.00	62.00	4.69	2.58	--	0.0	
SC-2DDD	11/17/2022	--	1.85	--	78.00	78.90	4.54	2.69	--	0.0	
SC-3	11/17/2022	--	4.69	--	14.00	17.58	7.03	2.34	--	15.7	
SC-3D	11/17/2022	--	5.37	--	35.00	39.00	6.42	1.05	--	0.0	
SC-3DD	11/17/2022	--	5.60	--	65.00	68.05	6.74	1.14	--	0.0	
SC-3DDD	11/17/2022	--	5.43	--	81.00	84.04	6.84	1.41	--	0.0	
SC-4	11/17/2022	--	2.45	--	15.00	15.20	7.11	4.66	--	0.0	
SC-4D	11/17/2022	--	6.15	--	35.00	34.70	7.08	0.93	--	0.0	
SC-4DD	11/17/2022	--	5.97	--	60.00	59.90	6.92	0.95	--	0.0	
SC-SG-1	11/17/2022	--	--	--	--	--	-0.98	--	--	--	Tide too low
SC-SG-1A	11/17/2022	--	--	--	--	--	-1.10	--	--	--	Tide too low
SC-SG-2	11/17/2022	--	--	--	--	--	-1.64	--	--	--	Tide too low

-- Not Applicable DTB - Depth to Bottom LNAPL - Light Non-Aqueous Phase Liquids

Table 4
Quarterly Landfarms Monitoring Well Gauging Data
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Groundwater Gauging Data							
Well I.D.	**Date**	**Depth to LNAPL**	**Depth to Water**	**DTB from TOC**	**TOC Elevation**	**Water Elevation**	**PID**
LN-SW	7/7/2022	-	2.80	NA	-0.31	3.11	NA
LN-1	7/7/2022	-	5.48	14.86	10.37	4.89	1.4
LN-2	7/7/2022	-	6.06	12.00	9.65	3.59	0.0
LN-3	7/7/2022	-	6.63	13.12	8.92	2.29	0.5
LN-4	7/7/2022	-	7.62	15.20	10.69	3.07	0.0
LN-5	7/7/2022	-	7.11	17.55	10.57	3.46	0.0
LN-6	7/7/2022	-	8.69	17.80	12.15	3.46	0.0
LN-7	7/7/2022	-	9.17	17.90	13.30	4.13	0.0
PER-4	7/7/2022	-	6.70	16.45	10.30	3.60	0.0
LPG-2	7/7/2022	-	2.13	9.60	7.05	NA	0.0
DB-SW	7/7/2022	-	7.00	NA	-0.11	7.11	NA
LS-1R	7/7/2022	-	3.81	15.75	12.25	8.44	0.0
LS-2	7/7/2022	-	2.06	12.00	9.75	7.69	0.0
LS-3	7/7/2022	-	1.59	12.60	8.40	6.81	0.0
LS-4	7/7/2022	-	2.27	13.13	9.28	7.01	0.0
TM-6R	7/7/2022	-	5.65	19.80	14.26	8.61	46.1
PL-1RR	7/7/2022	0.99	1.00	14.70	7.36	6.36	15.2
PL-3R	7/7/2022	-	3.73	18.80	10.16	6.43	1.0
PL-6RR	7/7/2022	-	1.47	15.00	6.88	5.41	0.0
PL-9R	7/7/2022	-	2.59	19.90	9.11	6.52	0.1
L1-SW	7/7/2022	-	NM	NA	-0.20	NA	NA
L1-1	7/7/2022	-	4.89	NM	9.91	5.02	0.0
L1-2	7/7/2022	-	6.32	14.90	9.05	2.73	0.0
L1-3	7/7/2022	-	6.88	10.90	9.33	2.45	0.0
L1-4	7/7/2022	-	8.03	10.95	10.85	2.82	0.0
BG-2	7/7/2022	-	2.30	9.20	6.96	4.66	0.0
BG-3	7/7/2022	-	4.01	10.70	10.31	6.30	0.0
SP-1	7/7/2022	-	5.49	NM	8.95	3.46	0.0
SP-2	7/7/2022	-	4.68	NM	10.18	5.50	0.0
SP-3	7/7/2022	-	2.71	16.90	9.33	6.62	0.0

*Anomalous measurement/not used in contour figure
NA - Not Applicable
All Measurements are in feet

LNAPL - Light non Aqueous Phase Liquids
DTB - Depth to Bottom
TOC - Top of Casing
NM - Not Measured

Table 4
Quarterly Landfarms Monitoring Well Gauging Data
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Groundwater Gauging Data							
Well I.D.	**Date**	**Depth to LNAPL**	**Depth to Water**	**DTB from TOC**	**TOC Elevation**	**Water Elevation**	**PID**
LN-SW	10/12/2022	-	2.60	NA	-0.31	2.91	NA
LN-1	10/12/2022	-	4.98	14.86	10.37	5.39	0.0
LN-2	10/12/2022	-	5.51	12.00	9.65	4.14	0.0
LN-3	10/12/2022	-	5.08	13.12	8.92	3.84	0.0
LN-4	10/12/2022	-	6.99	15.20	10.69	3.70	0.0
LN-5	10/12/2022	-	6.36	17.55	10.57	4.21	0.0
LN-6	10/12/2022	-	8.14	17.80	12.15	4.01	0.0
LN-7	10/12/2022	-	8.72	17.90	13.30	4.58	0.0
PER-4	10/12/2022	-	6.10	16.45	10.30	4.20	0.0
LPG-2	10/12/2022	-	2.48	9.60	7.05	4.57	0.0
DB-SW	10/12/2022	-	5.80	NA	-0.11	5.91	NA
LS-1R	10/12/2022	-	3.8	15.75	12.25	8.45	34.1
LS-2	10/12/2022	-	3.75	12.00	9.75	6.00	12.5
LS-3	10/12/2022	-	1.30	12.60	8.40	7.10	0.0
LS-4	10/12/2022	-	1.75	13.13	9.28	7.53	0.0
TM-6R	10/12/2022	-	5.18	19.80	14.26	9.08	11.1
PL-1RR	10/12/2022	-	0.50	14.70	7.36	6.86	14.1
PL-3R	10/12/2022	-	3.79	18.80	10.16	6.37	13.2
PL-6RR	10/12/2022	-	0.90	15.00	6.88	5.98	0.0
PL-9R	10/12/2022	-	2.20	19.90	9.11	6.91	0.0
L1-SW	10/12/2022	-	2.60	NA	-0.20	NA	NA
L1-1	10/12/2022	-	4.01	NM	9.91	5.90	0.0
L1-2	10/12/2022	-	5.64	14.90	9.05	3.41	0.0
L1-3	10/12/2022	-	6.12	10.90	9.33	3.21	0.0
L1-4	10/12/2022	-	7.09	10.95	10.85	3.76	0.0
BG-2	10/12/2022	-	1.99	9.20	6.96	4.97	0.0
BG-3	10/12/2022	-	4.01	10.70	10.31	6.30	0.0
SP-1	10/12/2022	-	4.60	NM	8.95	4.35	0.0
SP-2	10/12/2022	-	4.25	NM	10.18	5.93	0.0
SP-3	10/12/2022	-	3.20	16.90	9.33	6.13	0.0

*Anomalous measurement/not used in contour figure
NA - Not Applicable
All Measurements are in feet

LNAPL - Light non Aqueous Phase Liquids
DTB - Depth to Bottom
TOC - Top of Casing
NM - Not Measured

Table 5

Hess Corporation Former Port Reading Complex

750 Cliff Road, Port Reading, New Jersey

Groundwater Analytical Results

AOC 3 - No. 1 Landfarm

SAMPLE ID:		NJ Groundwater Criteria	SP-1			SP-2			SP-3		
LAB ID:			L2271942-06			L2271942-05			L2268106-07		
COLLECTION DATE:			12/21/2022			12/21/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS											
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND	-	0.35	ND	-	0.35	ND	-	0.35
1,4-Dioxane	123-91-1	**0.4**	ND	-	61	ND	-	61	ND	-	61
1,2-Dibromoethane	106-93-4	**0.03**	ND	-	0.19	ND	-	0.19	ND	-	0.19
Methylene chloride	75-09-2	**3**	ND	-	0.68	ND	-	0.68	ND	-	0.68
1,1-Dichloroethane	75-34-3	**50**	ND	-	0.21	ND	-	0.21	ND	-	0.21
Chloroform	67-66-3	**70**	ND	-	0.22	ND	-	0.22	ND	-	0.22
Carbon tetrachloride	56-23-5	**1**	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,2-Dichloropropane	78-87-5	**1**	ND	-	0.14	ND	-	0.14	ND	-	0.14
Dibromochloromethane	124-48-1	**1**	ND	-	0.15	ND	-	0.15	ND	-	0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND	-	0.14	ND	-	0.14	ND	-	0.14
Tetrachloroethene	127-18-4	**1**	ND	-	0.18	1	-	0.18	ND	-	0.18
Chlorobenzene	108-90-7	**50**	ND	-	0.18	ND	-	0.18	ND	-	0.18
Trichlorofluoromethane	75-69-4	**2000**	ND	-	0.16	ND	-	0.16	ND	-	0.16
1,2-Dichloroethane	107-06-2	**2**	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND	-	0.16	ND	-	0.16	ND	-	0.16
Bromodichloromethane	75-27-4	**1**	ND	-	0.19	ND	-	0.19	ND	-	0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND	-	0.16	ND	-	0.16	ND	-	0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND	-	0.14	ND	-	0.14	ND	-	0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND	-	0.14	ND	-	0.14	ND	-	0.14
Bromoform	75-25-2	**4**	ND	-	0.25	ND	-	0.25	ND	-	0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND	-	0.17	ND	-	0.17	ND	-	0.17
Benzene	71-43-2	**1**	ND	-	0.08	ND	-	0.08	ND	-	0.08
Toluene	108-88-3	**600**	ND	-	0.2	ND	-	0.2	ND	-	0.2
Ethylbenzene	100-41-4	**700**	ND	-	0.17	ND	-	0.17	ND	-	0.17
Chloromethane	74-87-3	**-**	ND	-	0.2	ND	-	0.2	ND	-	0.2
Bromomethane	74-83-9	**10**	ND	-	0.26	ND	-	0.26	ND	-	0.26
Vinyl chloride	75-01-4	**1**	ND	-	0.07	ND	-	0.07	ND	-	0.07
Chloroethane	75-00-3	**5**	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,1-Dichloroethene	75-35-4	**1**	ND	-	0.17	ND	-	0.17	ND	-	0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND	-	0.16	ND	-	0.16	ND	-	0.16
Trichloroethene	79-01-6	**1**	ND	-	0.18	0.28	J	0.18	ND	-	0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND	-	0.18	ND	-	0.18	ND	-	0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND	-	0.19	ND	-	0.19	ND	-	0.19
Methyl tert butyl ether	1634-04-4	**70**	ND	-	0.17	ND	-	0.17	ND	-	0.17
p/m-Xylene	179601-23-1	**-**	ND	-	0.33	ND	-	0.33	ND	-	0.33
o-Xylene	95-47-6	**-**	ND	-	0.39	ND	-	0.39	ND	-	0.39
Xylenes, Total	1330-20-7	**1000**	ND	-	0.33	ND	-	0.33	ND	-	0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND	-	0.16	ND	-	0.16	ND	-	0.16
Styrene	100-42-5	**100**	ND	-	0.36	ND	-	0.36	ND	-	0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND	-	0.24	ND	-	0.24	ND	-	0.24
Acetone	67-64-1	**6000**	ND	-	1.5	3.6	J	1.5	ND	-	1.5
Carbon disulfide	75-15-0	**700**	ND	-	0.3	ND	-	0.3	ND	-	0.3
2-Butanone	78-93-3	**300**	ND	-	1.9	ND	-	1.9	ND	-	1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND	-	0.42	ND	-	0.42	ND	-	0.42
2-Hexanone	591-78-6	**40**	ND	-	0.52	ND	-	0.52	ND	-	0.52
Bromochloromethane	74-97-5	**-**	ND	-	0.15	ND	-	0.15	ND	-	0.15
Isopropylbenzene	98-82-8	**700**	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND	-	0.23	ND	-	0.23	ND	-	0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND	-	0.22	ND	-	0.22	ND	-	0.22
Methyl Acetate	79-20-9	**7000**	ND	-	0.23	ND	-	0.23	ND	-	0.23
Cyclohexane	110-82-7	**-**	ND	-	0.27	ND	-	0.27	ND	-	0.27

Tert-Butyl Alcohol	75-65-0	**100**	ND	-	1.4	ND	-	1.4	ND	-	1.4
Methyl cyclohexane	108-87-2	**-**	ND	-	0.4	ND	-	0.4	ND	-	0.4
Freon-113	76-13-1	**20000**	ND	-	0.15	ND	-	0.15	ND	-	0.15
Total VOCs	-	**-**	-	-	-	4.88	-	-	-	-	-

VOLATILE ORGANICS BY GC/MS-TIC

No Tentatively Identified Compounds	-	**-**	-	-	-	-	-	-	ND	-	0
Total TIC Compounds	-	**-**	-	-	-	-	-	-	-	-	-

1,4 DIOXANE BY 8270E-SIM

1,4-Dioxane	123-91-1	**0.4**	ND	-	0.0332	ND	-	0.0332	ND	-	0.032

SEMIVOLATILE ORGANICS BY GC/MS

Acenaphthene	83-32-9	**400**	ND	-	0.44	ND	-	0.44	ND	-	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND	-	0.48	ND	-	0.48	ND	-	0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND	-	0.5	ND	-	0.5	ND	-	0.5
2-Chloronaphthalene	91-58-7	**600**	ND	-	0.44	ND	-	0.44	ND	-	0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND	-	1.2	ND	-	1.2	ND	-	1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND	-	0.93	ND	-	0.93	ND	-	0.93
Fluoranthene	206-44-0	**300**	ND	-	0.26	ND	-	0.26	ND	-	0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND	-	0.49	ND	-	0.49	ND	-	0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND	-	0.53	ND	-	0.53	ND	-	0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND	-	0.69	ND	-	0.69	ND	-	0.69
Hexachloroethane	67-72-1	**7**	ND	-	0.58	ND	-	0.58	ND	-	0.58
Isophorone	78-59-1	**40**	ND	-	1.2	ND	-	1.2	ND	-	1.2
Naphthalene	91-20-3	**300**	ND	-	0.46	ND	-	0.46	ND	-	0.46
Nitrobenzene	98-95-3	**6**	ND	-	0.77	ND	-	0.77	ND	-	0.77
NDPA/DPA	86-30-6	**10**	ND	-	0.42	ND	-	0.42	ND	-	0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND	-	0.64	ND	-	0.64	ND	-	0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND	-	1.5	ND	-	1.5	ND	-	1.5
Butyl benzyl phthalate	85-68-7	**100**	ND	-	1.2	ND	-	1.2	ND	-	1.2
Di-n-butylphthalate	84-74-2	**700**	ND	-	0.39	ND	-	0.39	0.42	J	0.39
Di-n-octylphthalate	117-84-0	**100**	ND	-	1.3	ND	-	1.3	ND	-	1.3
Diethyl phthalate	84-66-2	**6000**	ND	-	0.38	ND	-	0.38	ND	-	0.38
Dimethyl phthalate	131-11-3	**100**	ND	-	1.8	ND	-	1.8	ND	-	1.8
Chrysene	218-01-9	**5**	ND	-	0.34	ND	-	0.34	ND	-	0.34
Acenaphthylene	208-96-8	**100**	ND	-	0.46	ND	-	0.46	ND	-	0.46
Anthracene	120-12-7	**2000**	ND	-	0.33	ND	-	0.33	ND	-	0.33
Benzo(ghi)perylene	191-24-2	**100**	ND	-	0.3	ND	-	0.3	ND	-	0.3
Fluorene	86-73-7	**300**	ND	-	0.41	ND	-	0.41	ND	-	0.41
Phenanthrene	85-01-8	**100**	ND	-	0.33	ND	-	0.33	ND	-	0.33
Pyrene	129-00-0	**200**	ND	-	0.28	ND	-	0.28	ND	-	0.28
4-Chloroaniline	106-47-8	**30**	ND	-	1.1	ND	-	1.1	ND	-	1.1
2-Nitroaniline	88-74-4	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5
3-Nitroaniline	99-09-2	**-**	ND	-	0.81	ND	-	0.81	ND	-	0.81
4-Nitroaniline	100-01-6	**-**	ND	-	0.8	ND	-	0.8	ND	-	0.8
Dibenzofuran	132-64-9	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5
2-Methylnaphthalene	91-57-6	**30**	ND	-	0.45	ND	-	0.45	ND	-	0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND	-	0.61	ND	-	0.61	ND	-	0.61
p-Chloro-m-cresol	59-50-7	**100**	ND	-	0.35	ND	-	0.35	ND	-	0.35
2-Chlorophenol	95-57-8	**40**	ND	-	0.48	ND	-	0.48	ND	-	0.48
2,4-Dichlorophenol	120-83-2	**20**	ND	-	0.41	ND	-	0.41	ND	-	0.41
2,4-Dimethylphenol	105-67-9	**100**	ND	-	1.8	ND	-	1.8	ND	-	1.8
2-Nitrophenol	88-75-5	**-**	ND	-	0.85	ND	-	0.85	ND	-	0.85
4-Nitrophenol	100-02-7	**-**	ND	-	0.67	ND	-	0.67	ND	-	0.67
2,4-Dinitrophenol	51-28-5	**40**	ND	-	6.6	ND	-	6.6	ND	-	6.6
Phenol	108-95-2	**2000**	ND	-	0.57	ND	-	0.57	ND	-	0.57
2-Methylphenol	95-48-7	**50**	ND	-	0.49	ND	-	0.49	ND	-	0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND	-	0.77	ND	-	0.77	ND	-	0.77
Carbazole	86-74-8	**-**	ND	-	0.49	ND	-	0.49	ND	-	0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND	-	0.38	ND	-	0.38	ND	-	0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND	-	1.6	ND	-	1.6	ND	-	1.6
Benzaldehyde	100-52-7	**-**	ND	-	0.53	ND	-	0.53	ND	-	0.53
Acetophenone	98-86-2	**700**	ND	-	0.53	ND	-	0.53	ND	-	0.53

Caprolactam	105-60-2	**4000**	ND	-	3.3	ND	-	3.3	ND	-	3.3
Biphenyl	92-52-4	**400**	ND	-	0.46	ND	-	0.46	ND	-	0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND	-	0.44	ND	-	0.44	ND	-	0.44
Atrazine	1912-24-9	**3**	ND	-	0.76	ND	-	0.76	ND	-	0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND	-	0.84	ND	-	0.84	ND	-	0.84
Total SVOCs			-	-	-	-	-	-	0.42	-	-

SEMIVOLATILE ORGANICS BY GC/MS-SIM

4,6-Dinitro-o-cresol	534-52-1	**-**	ND	-	0.09	ND	-	0.09	ND	-	0.09
Benzo(a)anthracene	56-55-3	**0.1**	ND	-	0.02	0.03	J	0.02	0.06	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND	-	0.02	0.02	J	0.02	0.02	J	0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND	-	0.01	0.04	J	0.01	0.02	J	0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND	-	0.01	0.02	J	0.01	ND	-	0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND	-	0.01	ND	-	0.01	ND	-	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND	-	0.01	0.03	J	0.01	ND	-	0.01
Hexachlorobenzene	118-74-1	**0.02**	ND	-	0.01	ND	-	0.01	ND	-	0.01
Pentachlorophenol	87-86-5	**0.3**	ND	-	0.01	ND	-	0.01	ND	-	0.01
Hexachlorobutadiene	87-68-3	**1**	ND	-	0.05	ND	-	0.05	ND	-	0.05
Total SVOCs	-	**-**	-	-	-	0.14	-	-	0.1	-	-

SEMIVOLATILE ORGANICS BY GC/MS-TIC

Unknown	-	**-**	8.94	JB	0	7.38	JB	0	-		-
Unknown	-	**-**	1.74	JB	0	2.04	J	0	-		-
Unknown Alkane	-	**-**	-		-	-		-	2.22	JB	0
Unknown Alkane	-	**-**	-		-	-		-	1.89	J	0
Unknown Organic Acid	-	**-**	-	-	-	14.3	J	0	-		-
Unknown Organic Acid	-	**-**	-		-	-		-	18.5	JB	0
Unknown Organic Acid	-	**-**	-		-	-		-	4.29	JB	0
Unknown	-	**-**	1.6	J	0	3.78	J	0	2.98	J	0
Unknown	-	**-**	2.14	J	0	2.8	J	0	3.67	J	0
Unknown	-	**-**	1.49	J	0	2.54	J	0	2.54	JB	0
Unknown	-	**-**	12.7	JB	0	1.53	J	0	2.73	JB	0
Unknown	-	**-**	1.93	J	0	1.45	J	0	2.33	JB	0
Unknown	-	**-**	2.54	J	0	2.29	J	0	3.05	J	0
Unknown	-	**-**	1.6	J	0	1.71	J	0	2.62	JB	0
Unknown	-	**-**	-		-	-		-	2.14	JB	0
Unknown	-	**-**	-		-	-		-	6.58	JB	0
Unknown	-	**-**	-		-	-		-	2.04	JB	0
Unknown	-	**-**	-		-	-		-	2.29	JB	0
Total TIC Compounds	-	**-**	34.7	J	0	39.8	J	0	59.9	J	0

TOTAL METALS

Aluminum, Total	7429-90-5	**200**	**1700**	-	3.27	**4840**	-	3.27	79.2	-	3.27
Antimony, Total	7440-36-0	**6**	ND	-	0.429	ND	-	0.429	ND	-	0.429
Arsenic, Total	7440-38-2	**3**	**3.87**	-	0.165	**3.207**	-	0.165	2.501	-	0.165
Barium, Total	7440-39-3	**6000**	22.14	-	0.173	45.92	-	0.173	144	-	0.173
Beryllium, Total	7440-41-7	**1**	0.1188	J	0.107	0.1821	J	0.107	ND	-	0.107
Cadmium, Total	7440-43-9	**4**	ND	-	0.0599	0.0632	J	0.0599	1.06	-	0.0599
Calcium, Total	7440-70-2	**-**	1370	-	39.4	1770	-	39.4	23800	-	39.4
Chromium, Total	7440-47-3	**70**	5.234	-	0.178	12.49	-	0.178	0.531	J	0.178
Cobalt, Total	7440-48-4	**100**	1.568	-	0.163	3.575	-	0.163	0.9789	-	0.163
Copper, Total	7440-50-8	**1300**	12.06	-	0.384	23.93	-	0.384	11.66	-	0.384
Iron, Total	7439-89-6	**300**	**3390**	-	19.1	**10500**	-	19.1	**33200**	-	19.1
Lead, Total	7439-92-1	**5**	**7.302**	-	0.343	**16.63**	-	0.343	0.7268	J	0.343
Magnesium, Total	7439-95-4	**-**	704	-	24.2	2120	-	24.2	11700	-	24.2
Manganese, Total	7439-96-5	**50**	27.62	-	0.44	**51.5**	-	0.44	**552**	-	0.44
Mercury, Total	7439-97-6	**2**	0.135	J	0.0915	0.272	-	0.0915	ND	-	0.0915
Nickel, Total	7440-02-0	**100**	3.417	-	0.556	9.932	-	0.556	7.024	-	0.556
Potassium, Total	7440-09-7	**-**	970	-	30.9	1320	-	30.9	12900	-	30.9
Selenium, Total	7782-49-2	**40**	ND	-	1.73	ND	-	1.73	ND	-	1.73
Silver, Total	7440-22-4	**40**	ND	-	0.163	0.2413	J	0.163	ND	-	0.163
Sodium, Total	7440-23-5	**50000**	**64100**	-	29.3	27600	-	29.3	**182000**	-	29.3
Thallium, Total	7440-28-0	**2**	ND	-	0.143	ND	-	0.143	ND	-	0.143
Vanadium, Total	7440-62-2	**-**	6.231	-	1.57	16.34	-	1.57	ND	-	1.57
Zinc, Total	7440-66-6	**2000**	22.1	-	3.41	54	-	3.41	74.23	-	3.41

GENERAL CHEMISTRY											
Nitrogen, Ammonia	7664-41-7	**3000**	ND	-	48	ND	-	120	268	-	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 6

Hess Corporation Former Port Reading Complex

750 Cliff Road, Port Reading, New Jersey

Groundwater Analytical Results

AOC 5 - No. 1 Landfarm

SAMPLE ID:		NJ Groundwater Criteria	AB-1			AB-3			AB-4D			AB-4R			AB-5			AB-6		
LAB ID:			L2269734-05			L2269734-03			L2269477-09			L2269477-08			L2269734-04			L2271325-05		
COLLECTION DATE:			12/12/2022			12/12/2022			12/9/2022			12/9/2022			12/12/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	**CAS**	**(ug/l)**	**Conc**	**Q**	**MDL**	**Conc**	**Q**	**MDL**	**Conc**	**Q**	**MDL**	**Conc**	**Q**	**MDL**	**Conc**	**Q**	**MDL**	**Conc**	**Q**	**MDL**
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35
1,4-Dioxane	123-91-1	**0.4**	ND	-	61	ND	-	61	ND	-	61	ND	-	61	ND	-	61	ND	-	61
1,2-Dibromoethane	106-93-4	**0.03**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
Methylene chloride	75-09-2	**3**	ND	-	0.68	ND	-	0.68	ND	-	0.68	ND	-	0.68	ND	-	0.68	ND	-	0.68
1,1-Dichloroethane	75-34-3	**50**	ND	-	0.21	ND	-	0.21	ND	-	0.21	ND	-	0.21	ND	-	0.21	ND	-	0.21
Chloroform	67-66-3	**70**	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22
Carbon tetrachloride	56-23-5	**1**	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,2-Dichloropropane	78-87-5	**1**	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14
Dibromochloromethane	124-48-1	**1**	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14
Tetrachloroethene	127-18-4	**1**	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18
Chlorobenzene	108-90-7	**50**	ND	-	0.18	0.39	J	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18
Trichlorofluoromethane	75-69-4	**2000**	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16
1,2-Dichloroethane	107-06-2	**2**	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16
Bromodichloromethane	75-27-4	**1**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14	ND	-	0.14
Bromoform	75-25-2	**4**	ND	-	0.25	ND	-	0.25	ND	-	0.25	ND	-	0.25	ND	-	0.25	ND	-	0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17
Benzene	71-43-2	**1**	ND	-	0.08	ND	-	0.08	ND	-	0.08	ND	-	0.08	ND	-	0.08	ND	-	0.08
Toluene	108-88-3	**600**	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2
Ethylbenzene	100-41-4	**700**	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17
Chloromethane	74-87-3	**-**	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2	ND	-	0.2
Bromomethane	74-83-9	**10**	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26
Vinyl chloride	75-01-4	**1**	ND	-	0.07	ND	-	0.07	ND	-	0.07	ND	-	0.07	ND	-	0.07	ND	-	0.07
Chloroethane	75-00-3	**5**	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13	ND	-	0.13
1,1-Dichloroethene	75-35-4	**1**	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16
Trichloroethene	79-01-6	**1**	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18	ND	-	0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
Methyl tert butyl ether	1634-04-4	**70**	ND	-	0.17	0.45	J	0.17	5	-	0.17	ND	-	0.17	ND	-	0.17	ND	-	0.17
p/m-Xylene	179601-23-1	**-**	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33
o-Xylene	95-47-6	**-**	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39
Xylenes, Total	1330-20-7	**1000**	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16	ND	-	0.16
Styrene	100-42-5	**100**	ND	-	0.36	ND	-	0.36	ND	-	0.36	ND	-	0.36	ND	-	0.36	ND	-	0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND	-	0.24	ND	-	0.24	ND	-	0.24	ND	-	0.24	ND	-	0.24	ND	-	0.24
Acetone	67-64-1	**6000**	1.8	J	1.5	ND	-	1.5	ND	-	1.5	ND	-	1.5	1.9	J	1.5	ND	-	1.5
Carbon disulfide	75-15-0	**700**	ND	-	0.3	ND	-	0.3	0.51	J	0.3	ND	-	0.3	ND	-	0.3	ND	-	0.3
2-Butanone	78-93-3	**300**	ND	-	1.9	ND	-	1.9	ND	-	1.9	ND	-	1.9	ND	-	1.9	ND	-	1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42
2-Hexanone	591-78-6	**40**	ND	-	0.52	ND	-	0.52	ND	-	0.52	ND	-	0.52	ND	-	0.52	ND	-	0.52
Bromochloromethane	74-97-5	**-**	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15
Isopropylbenzene	98-82-8	**700**	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19	ND	-	0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22	ND	-	0.22
Methyl Acetate	79-20-9	**7000**	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23	ND	-	0.23
Cyclohexane	110-82-7	**-**	ND	-	0.27	ND	-	0.27	ND	-	0.27	ND	-	0.27	ND	-	0.27	ND	-	0.27
Tert-Butyl Alcohol	75-65-0	**100**	ND	-	1.4	ND	-	1.4	69	-	1.4	ND	-	1.4	ND	-	1.4	ND	-	1.4
Methyl cyclohexane	108-87-2	**-**	ND	-	0.4	ND	-	0.4	ND	-	0.4	ND	-	0.4	ND	-	0.4	ND	-	0.4
Freon-113	76-13-1	**20000**	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15	ND	-	0.15
Total VOCs	-		1.8	-	-	0.84	-	-	74.51	-	-	-	-	-	1.9	-	-	-	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
No Tentatively Identified Compounds	-	**-**	ND	-	0	ND	-	0	ND	-	0	ND	-	0	ND	-	0	ND	-	0
Total TIC Compounds	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	**0.4**	ND	-	0.0332	ND	-	0.0339	**1.78**	-	0.0332	ND	-	0.032	0.0881	J	0.0326	ND	-	0.0339
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	**400**	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	**50**	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5
2-Chloronaphthalene	91-58-7	**600**	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND	-	0.93	ND	-	0.93	ND	-	0.93	ND	-	0.93	ND	-	0.93	ND	-	0.93
Fluoranthene	206-44-0	**300**	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26	ND	-	0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND	-	0.69	ND	-	0.69	ND	-	0.69	ND	-	0.69	ND	-	0.69	ND	-	0.69
Hexachloroethane	67-72-1	**7**	ND	-	0.58	ND	-	0.58	ND	-	0.58	ND	-	0.58	ND	-	0.58	ND	-	0.58
Isophorone	78-59-1	**40**	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2
Naphthalene	91-20-3	**300**	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46
Nitrobenzene	98-95-3	**6**	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77

NDPA/DPA	86-30-6	**10**	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42	ND	-	0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND	-	0.64	ND	-	0.64	ND	-	0.64	ND	-	0.64	ND	-	0.64	ND	-	0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND	-	1.5	ND	-	1.5	ND	-	1.5	ND	-	1.5	ND	-	1.5	ND	-	1.5
Butyl benzyl phthalate	85-68-7	**100**	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2	ND	-	1.2
Di-n-butylphthalate	84-74-2	**700**	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39	ND	-	0.39
Di-n-octylphthalate	117-84-0	**100**	ND	-	1.3	ND	-	1.3	ND	-	1.3	ND	-	1.3	ND	-	1.3	ND	-	1.3
Diethyl phthalate	84-66-2	**6000**	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38
Dimethyl phthalate	131-11-3	**100**	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8
Chrysene	218-01-9	**5**	ND	-	0.34	ND	-	0.34	ND	-	0.34	ND	-	0.34	ND	-	0.34	ND	-	0.34
Acenaphthylene	208-96-8	**100**	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46
Anthracene	120-12-7	**2000**	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33
Benzo(ghi)perylene	191-24-2	**100**	ND	-	0.3	ND	-	0.3	ND	-	0.3	ND	-	0.3	ND	-	0.3	ND	-	0.3
Fluorene	86-73-7	**300**	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41
Phenanthrene	85-01-8	**100**	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33	ND	-	0.33
Pyrene	129-00-0	**200**	ND	-	0.28	ND	-	0.28	ND	-	0.28	ND	-	0.28	ND	-	0.28	ND	-	0.28
4-Chloroaniline	106-47-8	**30**	ND	-	1.1	ND	-	1.1	ND	-	1.1	ND	-	1.1	ND	-	1.1	ND	-	1.1
2-Nitroaniline	88-74-4	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5
3-Nitroaniline	99-09-2	**-**	ND	-	0.81	ND	-	0.81	ND	-	0.81	ND	-	0.81	ND	-	0.81	ND	-	0.81
4-Nitroaniline	100-01-6	**-**	ND	-	0.8	ND	-	0.8	ND	-	0.8	ND	-	0.8	ND	-	0.8	ND	-	0.8
Dibenzofuran	132-64-9	**-**	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5	ND	-	0.5
2-Methylnaphthalene	91-57-6	**30**	ND	-	0.45	ND	-	0.45	ND	-	0.45	ND	-	0.45	ND	-	0.45	ND	-	0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND	-	0.61	ND	-	0.61	ND	-	0.61	ND	-	0.61	ND	-	0.61	ND	-	0.61
p-Chloro-m-cresol	59-50-7	**100**	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35	ND	-	0.35
2-Chlorophenol	95-57-8	**40**	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48	ND	-	0.48
2,4-Dichlorophenol	120-83-2	**20**	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41	ND	-	0.41
2,4-Dimethylphenol	105-67-9	**100**	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8	ND	-	1.8
2-Nitrophenol	88-75-5	**-**	ND	-	0.85	ND	-	0.85	ND	-	0.85	ND	-	0.85	ND	-	0.85	ND	-	0.85
4-Nitrophenol	100-02-7	**-**	ND	-	0.67	ND	-	0.67	ND	-	0.67	ND	-	0.67	ND	-	0.67	ND	-	0.67
2,4-Dinitrophenol	51-28-5	**40**	ND	-	6.6	ND	-	6.6	ND	-	6.6	ND	-	6.6	ND	-	6.6	ND	-	6.6
Phenol	108-95-2	**2000**	ND	-	0.57	ND	-	0.57	ND	-	0.57	ND	-	0.57	ND	-	0.57	ND	-	0.57
2-Methylphenol	95-48-7	**50**	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77	ND	-	0.77
Carbazole	86-74-8	**-**	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49	ND	-	0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38	ND	-	0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND	-	1.6	ND	-	1.6	ND	-	1.6	ND	-	1.6	ND	-	1.6	ND	-	1.6
Benzaldehyde	100-52-7	**-**	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53
Acetophenone	98-86-2	**700**	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53	ND	-	0.53
Caprolactam	105-60-2	**4000**	ND	-	3.3	ND	-	3.3	ND	-	3.3	ND	-	3.3	ND	-	3.3	ND	-	3.3
Biphenyl	92-52-4	**400**	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46	ND	-	0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44	ND	-	0.44
Atrazine	1912-24-9	**3**	ND	-	0.76	ND	-	0.76	ND	-	0.76	ND	-	0.76	ND	-	0.76	ND	-	0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND	-	0.84	ND	-	0.84	ND	-	0.84	ND	-	0.84	ND	-	0.84	ND	-	0.84
Total SVOCs	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SEMIVOLATILE ORGANICS BY GC/MS-SIM

4,6-Dinitro-o-cresol	534-52-1	**-**	ND	-	0.09	ND	-	0.09	ND	-	0.09	ND	-	0.09	ND	-	0.09	ND	-	0.09
Benzo(a)anthracene	56-55-3	**0.1**	ND	-	0.02	ND	-	0.02	ND	-	0.02	ND	-	0.02	ND	-	0.02	0.08	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND	-	0.02	ND	-	0.02	ND	-	0.02	ND	-	0.02	ND	-	0.02	0.08	J	0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	0.15	-	0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	0.14	-	0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	0.17	-	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	0.18	-	0.01
Hexachlorobenzene	118-74-1	**0.02**	0.02	J	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01
Pentachlorophenol	87-86-5	**0.3**	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01	ND	-	0.01
Hexachlorobutadiene	87-68-3	**1**	ND	-	0.05	ND	-	0.05	ND	-	0.05	ND	-	0.05	ND	-	0.05	ND	-	0.05
Total SVOCs	-	**-**	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-

SEMIVOLATILE ORGANICS BY GC/MS-TIC

Sulfur	013798-23-7	**-**	-	-	-	-	-	-	24	NJ	0	-	-	-	-	-	-	-	-	-
Unknown Organic Acid	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.8	JB	0
Unknown Siloxane	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.27	JB	0
Unknown Siloxane	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.71	JB	0
Unknown Siloxane	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.22	JB	0
Unknown Siloxane	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	JB	0
Unknown	-	**-**	3.64	J	0	3.16	J	0	-	-	-	7.78	J	0	2.47	J	0	9.24	J	0
Unknown	-	**-**	9.2	J	0	8.36	J	0	-	-	-	1.96	J	0	5.82	J	0	5.38	J	0
Unknown	-	**-**	1.93	J	0	2.98	J	0	-	-	-	4.91	J	0	8.8	J	0	5.2	JB	0
Unknown	-	**-**	2.36	J	0	9.93	J	0	-	-	-	3.49	J	0	2.04	J	0	5.6	J	0
Unknown	-	**-**	1.67	J	0	3.05	J	0	-	-	-	3.27	J	0	1.78	J	0	12.2	J	0
Unknown	-	**-**	3.93	J	0	3.85	J	0	-	-	-	2.18	J	0	1.89	J	0	5.38	JB	0
Unknown	-	**-**	4.44	J	0	2.18	J	0	-	-	-	1.64	J	0	2.14	J	0	6.58	J	0
Unknown	-	**-**	2.29	J	0	-	-	-	-	-	-	5.13	J	0	-	-	-	11	J	0
Unknown	-	**-**	2.8	J	0	-	-	-	-	-	-	1.64	J	0	-	-	-	-	-	-
Diisoamylene	054063-09-1	**-**	7.2	NJ	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alkene	-	**-**	-	-	-	-	-	-	-	-	-	2.33	J	0	-	-	-	-	-	-
Unknown Alcohol	-	**-**	-	-	-	-	-	-	-	-	-	1.78	J	0	-	-	-	-	-	-
Unknown Alkane	-	**-**	2.36	J	0	4.29	J	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alkane	-	**-**	2.18	J	0	4.69	J	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Alkane	-	**-**	-	-	-	2.62	J	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown Benzene	-	**-**	-	-	-	4.33	J	0	-	-	-	-	-	-	-	-	-	-	-	-
Unknown	-	**-**	10.1	J	0	7.38	J	0	8.69	J	0	8.14	J	0	2.69	J	0	-	-	-
Unknown	-	**-**	2.18	J	0	2.07	J	0	27.7	J	0	1.74	J	0	3.34	J	0	-	-	-
Cyclic Octaatomic Sulfur	010544-50-0	**-**	-	-	-	-	-	-	526	NJ	0	-	-	-	2.22	NJ	0	-	-	-
Unknown Organic Acid	-	**-**	-	-	-	-	-	-	72.4	JB	0	-	-	-	-	-	-	8.36	J	0
Unknown Organic Acid	-	**-**	23.1	J	0	21.7	J	0	43.3	JB	0	48.9	J	0	25.9	J	0	187	JB	0
Unknown Organic Acid	-	**-**	7.6	J	0	9.34	J	0	6.94	JB	0	23	J	0	14.6	J	0	-	-	-
Unknown Thiophene	-	**-**	-	-	-	-	-	-	10.8	J	0	-	-	-	-	-	-	-	-	-
Total TIC Compounds	-	**-**	87	J	0	89.9	J	0	720	J	0	118	J	0	73.7	J	0	300	J	0

TOTAL METALS

Aluminum, Total	7429-90-5	**200**	**607**	-	3.27	**4240**	-	3.27	35.9	J	32.7	**8600**	-	32.7	64.6	-	3.27	**1010**	-	3.27
Antimony, Total	7440-36-0	**6**	ND	-	0.429	ND	-	0.429	ND	-	0.429	3.779	J	0.429	0.5362	J	0.429	1.379	J	0.429
Arsenic, Total	7440-38-2	**3**	**7.336**	-	0.165	2.665	-	0.165	**3.163**	-	0.165	1.325	-	0.165	2.154	-	0.165	**3.987**	-	0.165
Barium, Total	7440-39-3	**6000**	44.19	-	0.173	20.33	-	0.173	116.1	-	0.173	19.31	-	0.173	21.38	-	0.173	24.91	-	0.173
Beryllium, Total	7440-41-7	**1**	ND	-	0.107	0.311	J	0.107	ND	-	0.107	0.7047	-	0.107	ND	-	0.107	ND	-	0.107

Cadmium, Total	7440-43-9	**4**	ND	-	0.0599	0.0997	J	0.0599	ND	-	0.0599	0.4085	-	0.0599	0.2301	-	0.0599	ND	-	0.0599
Calcium, Total	7440-70-2	**-**	32400	-	39.4	4090	-	39.4	159000	-	394	28000	-	394	39000	-	39.4	15800	-	39.4
Chromium, Total	7440-47-3	**70**	1.599	-	0.178	29.14	-	0.178	60.28	-	0.178	4.413	-	0.178	1.301	-	0.178	3.401	-	0.178
Cobalt, Total	7440-48-4	**100**	1.111	-	0.163	1.112	-	0.163	0.741	-	0.163	4.009	-	0.163	0.5675	-	0.163	1.001	-	0.163
Copper, Total	7440-50-8	**1300**	4.727	-	0.384	13.84	-	0.384	0.8778	J	0.384	15.09	-	0.384	4.011	-	0.384	16.8	-	0.384
Iron, Total	7439-89-6	**300**	**3580**	-	19.1	**9230**	-	19.1	**316**	-	19.1	**15100**	-	19.1	**384**	-	19.1	**2360**	-	19.1
Lead, Total	7439-92-1	**5**	1.414	-	0.343	**12.85**	-	0.343	ND	-	0.343	0.5442	J	0.343	0.8005	J	0.343	**12.32**	-	0.343
Magnesium, Total	7439-95-4	**-**	3130	-	24.2	1890	-	24.2	352000	-	242	4140	-	242	3180	-	24.2	3170	-	24.2
Manganese, Total	7439-96-5	**50**	23.37	-	0.44	**67.14**	-	0.44	9.514	-	0.44	44.16	-	0.44	7.925	-	0.44	34.42	-	0.44
Mercury, Total	7439-97-6	**2**	ND	-	0.0915	ND	-	0.0915	ND	-	0.0915	ND	-	0.0915	ND	-	0.0915	0.096	J	0.0915
Nickel, Total	7440-02-0	**100**	1.11	J	0.556	5.044	-	0.556	15.96	-	0.556	9.934	-	0.556	1.869	J	0.556	3.263	-	0.556
Potassium, Total	7440-09-7	**-**	14300	-	30.9	27700	-	30.9	266000	-	309	10800	-	309	6520	-	30.9	3750	-	30.9
Selenium, Total	7782-49-2	**40**	ND	-	1.73	ND	-	1.73	ND	-	1.73	ND	-	1.73	ND	-	1.73	ND	-	1.73
Silver, Total	7440-22-4	**40**	ND	-	0.163	ND	-	0.163	ND	-	0.163	ND	-	0.163	ND	-	0.163	ND	-	0.163
Sodium, Total	7440-23-5	**50000**	20300	-	29.3	**55100**	-	29.3	**3340000**	-	293	42100	-	293	**70800**	-	29.3	**78700**	-	29.3
Thallium, Total	7440-28-0	**2**	0.172	J	0.143	0.4588	J	0.143	ND	-	0.143	ND	-	0.143	0.262	J	0.143	ND	-	0.143
Vanadium, Total	7440-62-2	**-**	3.692	J	1.57	19.2	-	1.57	28.93	-	1.57	4.229	J	1.57	4.033	J	1.57	6.53	-	1.57
Zinc, Total	7440-66-6	**2000**	5.04	J	3.41	36.19	-	3.41	ND	-	3.41	58.44	-	3.41	ND	-	3.41	27.48	-	3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	**3000**	124	-	24	227	-	24	**17000**	-	240	ND	-	24	71.8	J	24	54	J	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater Criteria	PER-1			TR-1R			TR-2R			TR-3RR			TR-4R		
LAB ID:			L2267427-10			L2267427-11			L2271613-05			L2267783-14			L2271613-06		
COLLECTION DATE:			12/1/2022			12/1/2022			12/20/2022			12/2/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.71
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		120
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.39
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		1.4
1,1-Dichloroethane	75-34-3	50	ND		0.21	0.24	J	0.21	ND		0.21	ND		0.21	ND		0.42
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.44
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.27
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.27
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.3
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.29
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.36
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.36
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.32
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.26
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	0.38	J	0.16	ND		0.16	ND		0.16	ND		0.32
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.38
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.33
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.29
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.29
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.5
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.33
Benzene	71-43-2	1	ND		0.08	ND		0.08	3		0.08	0.15	J	0.08	74		0.16
Toluene	108-88-3	600	ND		0.2	ND		0.2	4.9		0.2	ND		0.2	3.8		0.41
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	7		0.17	ND		0.17	10		0.33
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.4
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.51
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.14
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.27
1,1-Dichloroethene	75-35-4	1	ND		0.17	1.2		0.17	ND		0.17	ND		0.17	ND		0.34
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.33
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.35
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.37
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.37
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.37
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		0.17	25		0.17	110		0.17	2.1		0.33
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	14		0.33	0.36	J	0.33	7.6		0.66
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	9.7		0.39	ND		0.39	8.3		0.78
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	24		0.33	0.36	J	0.33	16		0.66
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.37
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.33
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.72
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.49
Acetone	67-64-1	6000	ND		1.5	ND		1.5	17		1.5	ND		1.5	ND		2.9
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.6
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		3.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	3.1	J	0.42	ND		0.42	2.8	J	0.83
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		1
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.3
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	0.3	J	0.19	ND		0.19	3.9		0.37
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.47
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	0.96	J	0.44
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.47
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	13		0.27	ND		0.27	68		0.54
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	8.6	J	1.4	2700	E	1.4	29		2.8
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	19		0.4	ND		0.4	58		0.79
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.3
Total VOCs		-	-	-	-	1.82	-	-	124.6	-	-	2810.51	-	-	268.46	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	-		-	-		-	893	J	0	1.93	J	0	1930	J	0
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	0.4	ND		0.0314	0.293		0.0314	0.0555	J	0.0332	0.128	J	0.0314	0.067	J	0.0332
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	1.1	J	0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	0.68	J	0.26	ND		0.26	ND		0.26

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater Criteria	PER-1			TR-1R			TR-2R			TR-3RR			TR-4R		
LAB ID:			L2267427-10			L2267427-11			L2271613-05			L2267783-14			L2271613-06		
COLLECTION DATE:			12/1/2022			12/1/2022			12/20/2022			12/2/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	1.3	J	0.46	ND		0.46	4.6		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	0.98	J	0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	0.35	J	0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	1.4	J	0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	1.2	J	0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	0.77	J	0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	2.5		0.45	ND		0.45	0.52	J	0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	5.5		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	15.78	-	-	-	-	-	5.12	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.46
Benzo(a)anthracene	56-55-3	**0.1**	0.04	J	0.02	0.04	J	0.02	**0.42**		0.02	0.05	J	0.02	**0.14**	J	0.1
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	**0.29**		0.02	ND		0.02	ND		0.08
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	**0.4**		0.01	ND		0.01	ND		0.06
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	0.12		0.01	ND		0.01	ND		0.04
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	0.03	J	0.01	ND		0.01	ND		0.06
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	0.14		0.01	ND		0.01	ND		0.06
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.05
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.07
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.23
Total SVOCs		-	0.04	-	-	0.04	-	-	1.4	-	-	0.05	-	-	0.14	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	238	J	0	102	J	0	247	J	0	51	J	0	209	J	0
TOTAL METALS																	
Aluminum, Total	7429-90-5	**200**	**393**		3.27	95.1		3.27	**673**		3.27	128		3.27	**454**		3.27
Antimony, Total	7440-36-0	**6**	1.456	J	0.429	ND		0.429	1.41	J	0.429	0.7657	J	0.429	0.4299	J	0.429
Arsenic, Total	7440-38-2	**3**	1.169		0.165	0.6758		0.165	1.114		0.165	0.4569	J	0.165	1.65		0.165
Barium, Total	7440-39-3	**6000**	96.52		0.173	91.48		0.173	10.62		0.173	104.4		0.173	63.93		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	0.8445		0.0599	0.1569	J	0.0599	0.2531		0.0599	0.0614	J	0.0599	0.0963	J	0.0599
Calcium, Total	7440-70-2	-	21700		39.4	46100		39.4	7090		39.4	53400		39.4	26400		39.4

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater Criteria	PER-1			TR-1R			TR-2R			TR-3RR			TR-4R		
LAB ID:			L2267427-10			L2267427-11			L2271613-05			L2267783-14			L2271613-06		
COLLECTION DATE:			12/1/2022			12/1/2022			12/20/2022			12/2/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Chromium, Total	7440-47-3	**70**	1.093		0.178	0.689	J	0.178	3.98		0.178	0.3491	J	0.178	1.901		0.178
Cobalt, Total	7440-48-4	**100**	1.13		0.163	ND		0.163	0.4722	J	0.163	ND		0.163	0.3702	J	0.163
Copper, Total	7440-50-8	**1300**	17.03		0.384	1.622		0.384	8.55		0.384	4.83		0.384	5.287		0.384
Iron, Total	7439-89-6	**300**	**580**		19.1	145		19.1	**749**		19.1	156		19.1	**3530**		19.1
Lead, Total	7439-92-1	**5**	2.162		0.343	0.4905	J	0.343	**5.454**		0.343	0.8014	J	0.343	4.844		0.343
Magnesium, Total	7439-95-4	**-**	3390		24.2	11800		24.2	443		24.2	4520		24.2	2750		24.2
Manganese, Total	7439-96-5	**50**	**2413**		0.44	29.42		0.44	13.21		0.44	**171.7**		0.44	**318.4**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	0.107	J	0.0915	ND		0.0915	0.108	J	0.0915
Nickel, Total	7440-02-0	**100**	7.733		0.556	ND		0.556	3.307		0.556	1.123	J	0.556	1.582	J	0.556
Potassium, Total	7440-09-7	**-**	1170		30.9	564		30.9	5700		30.9	1540		30.9	9370		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	11800		29.3	38400		29.3	**92100**		29.3	21000		29.3	**227000**		29.3
Thallium, Total	7440-28-0	**2**	0.1516	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	**-**	3.957	J	1.57	2.948	J	1.57	9.778		1.57	2.021	J	1.57	2.528	J	1.57
Zinc, Total	7440-66-6	**2000**	20.8		3.41	23.17		3.41	48.33		3.41	20.57		3.41	52.62		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	**3000**	72.7	J	24	55.9	J	24	283		24	33.2	J	24	1290		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack Shallow

SAMPLE ID:		NJ Groundwater	TR-5			TR-6			TR-7			TR-8		
LAB ID:		Criteria	L2267783-11			L2267783-06			L2268454-04			L2268729-04		
COLLECTION DATE:			12/2/2022			12/2/2022			12/6/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		7.1	ND		3.5	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		1200	ND		610	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		3.9	ND		1.9	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		14	ND		6.8	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		4.2	ND		2.1	ND		0.21	0.49	J	0.21
Chloroform	67-66-3	70	ND		4.4	ND		2.2	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		2.7	ND		1.3	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		2.7	ND		1.4	ND		0.14	1		0.14
Dibromochloromethane	124-48-1	1	ND		3	ND		1.5	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		2.9	ND		1.4	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		3.6	ND		1.8	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		3.6	ND		1.8	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		3.2	ND		1.6	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		2.6	ND		1.3	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		3.2	ND		1.6	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		3.8	ND		1.9	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		3.3	ND		1.6	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		2.9	ND		1.4	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		2.9	ND		1.4	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		5	ND		2.5	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		3.3	ND		1.7	ND		0.17	ND		0.17
Benzene	71-43-2	1	2000		1.6	1000		0.8	1.1		0.08	0.13	J	0.08
Toluene	108-88-3	600	65		4.1	45		2	0.24	J	0.2	ND		0.2
Ethylbenzene	100-41-4	700	81		3.3	240		1.7	0.62		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		4	2.3	J	2	ND		0.2	0.2	J	0.2
Bromomethane	74-83-9	10	ND		5.1	ND		2.6	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		1.4	ND		0.71	0.15	J	0.07	0.08	J	0.07
Chloroethane	75-00-3	5	ND		2.7	ND		1.3	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		3.4	ND		1.7	ND		0.17	1.4		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		3.3	ND		1.6	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		3.5	ND		1.8	2		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		3.7	ND		1.8	0.24	J	0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		3.7	ND		1.9	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		3.7	ND		1.9	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	340		3.3	4800		8.3	0.17	J	0.17	13		0.17
p/m-Xylene	179601-23-1	-	87		6.6	320		3.3	1.3		0.33	ND		0.33
o-Xylene	95-47-6	-	24		7.8	17		3.9	0.86	J	0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	110		6.6	340		3.3	2.2	J	0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		3.7	ND		1.9	2		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		3.3	ND		1.6	2		0.16	ND		0.16
Styrene	100-42-5	100	ND		7.2	ND		3.6	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		4.9	ND		2.4	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		29	170		15	1.5	J	1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		6	ND		3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		39	ND		19	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		8.3	ND		4.2	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		10	ND		5.2	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		3	ND		1.5	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	29		3.7	8.1		1.9	2.2		0.19	0.9		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		4.7	ND		2.3	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		4.4	ND		2.2	0.44	J	0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		4.7	ND		2.3	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	47	J	5.4	15	J	2.7	0.44	J	0.27	0.51	J	0.27
Tert-Butyl Alcohol	75-65-0	100	2000		28	1200		14	3.2	J	1.4	670		1.4
Methyl cyclohexane	108-87-2	-	27	J	7.9	7.9	J	4	0.72	J	0.4	ND		0.4
Freon-113	76-13-1	20000	ND		3	ND		1.5	ND		0.15	ND		0.15
Total VOCs		-	4700	-	-	7725.3	-	-	17.18	-	-	687.71	-	-
VOLATILE ORGANICS BY GC/MS-TIC														

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack Shallow

SAMPLE ID:		NJ Groundwater	TR-5			TR-6			TR-7			TR-8		
LAB ID:		Criteria	L2267783-11			L2267783-06			L2268454-04			L2268729-04		
COLLECTION DATE:			12/2/2022			12/2/2022			12/6/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Total TIC Compounds		-	2050	J	0	831	J	0	170	J	0	30.1	J	0
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	0.0986	J	0.0314	ND		0.0314	0.255		0.0332	**5.01**		0.0339
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	1.2	J	0.44	0.66	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-4	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	22		0.46	30		0.46	0.72	J	0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	1.6	J	1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	0.54	J	0.41	ND		0.41	2.6		0.41	0.97	J	0.41
Phenanthrene	85-01-8	**100**	0.63	J	0.33	ND		0.33	ND		0.33	0.42	J	0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	0.6	J	0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	3.3		0.45	9		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	11		0.57	4.3	J	0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	0.6	J	0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack Shallow

SAMPLE ID:		NJ Groundwater	TR-5			TR-6			TR-7			TR-8		
LAB ID:		Criteria	L2267783-11			L2267783-06			L2268454-04			L2268729-04		
COLLECTION DATE:			12/2/2022			12/2/2022			12/6/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		**-**	37.47	-	-	43.9	-	-	6.72	-	-	2.05	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	**-**	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.03	J	0.02	0.05	J	0.02	0.06	J	0.02	ND		0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	0.23	J	0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		**-**	0.03	-	-	0.05	-	-	0.06	-	-	0.23	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		**-**	473	J	0	708	J	0	341	J	0	859	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	116		3.27	71.5		3.27	**7550**		3.27	54.6		3.27
Antimony, Total	7440-36-0	**6**	0.6843	J	0.429	2.82	J	0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	0.5992		0.165	**3.802**		0.165	**13.97**		0.165	**7.111**		0.165
Barium, Total	7440-39-3	**6000**	136.3		0.173	38.16		0.173	152.6		0.173	216.2		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	0.6314		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.0599	ND		0.0599	0.0719	J	0.0599	ND		0.0599
Calcium, Total	7440-70-2	**-**	39300		39.4	24700		39.4	8840		39.4	205000		39.4
Chromium, Total	7440-47-3	**70**	0.8382	J	0.178	0.5405	J	0.178	**70.26**		0.178	3.2		0.178
Cobalt, Total	7440-48-4	**100**	0.1677	J	0.163	ND		0.163	4.896		0.163	5.039		0.163
Copper, Total	7440-50-8	**1300**	1.021		0.384	4.987		0.384	22.18		0.384	2.911		0.384
Iron, Total	7439-89-6	**300**	**4850**		19.1	**3130**		19.1	**19200**		19.1	**10800**		19.1
Lead, Total	7439-92-1	**5**	0.4464	J	0.343	0.6566	J	0.343	**13.66**		0.343	0.4929	J	0.343
Magnesium, Total	7439-95-4	**-**	10000		24.2	3720		24.2	4110		24.2	54300		24.2
Manganese, Total	7439-96-5	**50**	**1094**		0.44	**709.9**		0.44	**452.6**		0.44	**6911**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.183	ND		0.0915
Nickel, Total	7440-02-0	**100**	0.579	J	0.556	1.086	J	0.556	11.49		0.556	5.667		0.556
Potassium, Total	7440-09-7	**-**	1720		30.9	1620		30.9	3040		30.9	8560		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	2.28	J	1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**186000**		29.3	11000		29.3	42300		29.3	**414000**		29.3
Thallium, Total	7440-28-0	**2**	0.2208	J	0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	**-**	3.43	J	1.57	5.594		1.57	34.06		1.57	3.561	J	1.57
Zinc, Total	7440-66-6	**2000**	10.14		3.41	27.65		3.41	62.45		3.41	8.959	J	3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	653		24	302		24	**3620**		120	**4540**		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater	TR-5D			TR-6D			TR-7D			TR-8D			TR-5DD			TR-8DD		
LAB ID:		Criteria	L2267783-12			L2267783-10			L2267783-08			L2268729-03			L2267783-13			L2268729-05		
COLLECTION DATE:			12/2/2022			12/2/2022			12/2/2022			12/7/2022			12/2/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		3.5	ND		0.35	ND		0.35	ND		1.8	ND		0.71	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		610	ND		61	ND		61	ND		300	ND		120	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		1.9	ND		0.19	ND		0.19	ND		0.96	ND		0.39	ND		0.19
Methylene chloride	75-09-2	**3**	ND		6.8	ND		0.68	2.8		0.68	ND		3.4	ND		1.4	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		2.1	0.57	J	0.21	8.2		0.21	2.8	J	1	ND		0.42	ND		0.21
Chloroform	67-66-3	**70**	ND		2.2	ND		0.22	58		0.22	ND		1.1	ND		0.44	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		1.3	ND		0.13	ND		0.13	ND		0.67	ND		0.27	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		1.4	**1.3**		0.14	**34**		0.14	5.6		0.68	ND		0.27	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		1.5	ND		0.15	**1.5**		0.15	ND		0.74	ND		0.3	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		1.4	ND		0.14	ND		0.14	ND		0.72	ND		0.29	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		1.8	**2.7**		0.18	**36**		0.18	ND		0.9	ND		0.36	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		1.8	0.21	J	0.18	0.9		0.18	ND		0.89	ND		0.36	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		1.6	ND		0.16	ND		0.16	ND		0.8	ND		0.32	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		1.3	0.65		0.13	0.3	J	0.13	ND		0.66	ND		0.26	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		1.6	ND		0.16	0.38	J	0.16	ND		0.79	ND		0.32	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		1.9	ND		0.19	**1.4**		0.19	ND		0.96	ND		0.38	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		1.6	ND		0.16	ND		0.16	ND		0.82	ND		0.33	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		1.4	ND		0.14	ND		0.14	ND		0.72	ND		0.29	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		1.4	ND		0.14	ND		0.14	ND		0.72	ND		0.29	ND		0.14
Bromoform	75-25-2	**4**	ND		2.5	ND		0.25	**21**		0.25	ND		1.2	ND		0.5	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		1.7	ND		0.17	ND		0.17	ND		0.84	ND		0.33	ND		0.17
Benzene	71-43-2	**1**	**71**		0.8	ND		0.08	0.84		0.08	ND		0.4	**3.4**		0.16	ND		0.08
Toluene	108-88-3	**600**	ND		2	ND		0.2	ND		0.2	ND		1	ND		0.41	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		1.7	0.41	J	0.17	ND		0.17	ND		0.84	ND		0.33	ND		0.17
Chloromethane	74-87-3	**-**	ND		2	ND		0.2	ND		0.2	ND		1	ND		0.4	ND		0.2
Bromomethane	74-83-9	**10**	ND		2.6	ND		0.26	ND		0.26	ND		1.3	ND		0.51	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.71	0.12	J	0.07	**3.5**		0.07	**1.5**		0.36	ND		0.14	0.08	J	0.07
Chloroethane	75-00-3	**5**	ND		1.3	ND		0.13	ND		0.13	ND		0.67	ND		0.27	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		1.7	**2.2**		0.17	**20**		0.17	**10**		0.84	ND		0.34	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		1.6	ND		0.16	ND		0.16	ND		0.82	ND		0.33	ND		0.16
Trichloroethene	79-01-6	**1**	ND		1.8	**1.1**		0.18	**2.4**		0.18	ND		0.88	ND		0.35	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		1.8	0.63	J	0.18	1.2	J	0.18	ND		0.92	ND		0.37	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		1.9	ND		0.19	ND		0.19	ND		0.93	ND		0.37	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		1.9	0.93	J	0.19	0.33	J	0.19	ND		0.94	ND		0.37	ND		0.19
Methyl tert butyl ether	1634-04-4	**70**	**1100**		1.7	1.1		0.17	0.82	J	0.17	46		0.83	**340**		0.33	0.77	J	0.17
p/m-Xylene	179601-23-1	**-**	ND		3.3	1.2		0.33	ND		0.33	ND		1.7	ND		0.66	ND		0.33
o-Xylene	95-47-6	**-**	ND		3.9	ND		0.39	ND		0.39	ND		2	ND		0.78	ND		0.39
Xylenes, Total	1330-20-7	**1000**	ND		3.3	1.2		0.33	ND		0.33	ND		1.7	ND		0.66	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		1.9	3.9		0.19	29		0.19	ND		0.94	ND		0.37	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		1.6	3.9		0.16	29		0.16	ND		0.82	ND		0.33	ND		0.16
Styrene	100-42-5	**100**	ND		3.6	ND		0.36	ND		0.36	ND		1.8	ND		0.72	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		2.4	ND		0.24	ND		0.24	ND		1.2	ND		0.49	ND		0.24
Acetone	67-64-1	**6000**	ND		15	ND		1.5	2.1	J	1.5	ND		7.3	ND		2.9	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		3	ND		0.3	1.1	J	0.3	ND		1.5	ND		0.6	6		0.3
2-Butanone	78-93-3	**300**	ND		19	ND		1.9	ND		1.9	ND		9.7	ND		3.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		4.2	ND		0.42	ND		0.42	ND		2.1	ND		0.83	ND		0.42
2-Hexanone	591-78-6	**40**	ND		5.2	ND		0.52	ND		0.52	ND		2.6	ND		1	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		1.5	ND		0.15	0.76	J	0.15	ND		0.76	ND		0.3	ND		0.15
Isopropylbenzene	98-82-8	**700**	ND		1.9	ND		0.19	ND		0.19	ND		0.94	ND		0.37	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		2.3	ND		0.23	ND		0.23	ND		1.2	ND		0.47	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		2.2	0.22	J	0.22	ND		0.22	ND		1.1	ND		0.44	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		2.3	ND		0.23	ND		0.23	ND		1.2	ND		0.47	ND		0.23
Cyclohexane	110-82-7	**-**	ND		2.7	ND		0.27	ND		0.27	ND		1.4	ND		0.54	ND		0.27
Tert-Butyl Alcohol	75-65-0	**100**	**16000**	E	14	ND		1.4	47		1.4	**6300**		70	64		2.8	2.9	J	1.4
Methyl cyclohexane	108-87-2	**-**	ND		4	ND		0.4	ND		0.4	ND		2	ND		0.79	ND		0.4
Freon-113	76-13-1	**20000**	ND		1.5	ND		0.15	ND		0.15	ND		0.74	ND		0.3	ND		0.15
Total VOCs		**-**	17171	-	-	17.24	-	-	273.53	-	-	5865.9	-	-	407.4	-	-	9.75	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		**-**	-		-	1.41	J	0	21.2	J	0	-		-	-		-	1.03	J	0
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	**0.4**	**5.57**		0.0326	**1.23**		0.0314	**19.1**		0.326	**6.82**		0.0339	**2.77**		0.0314	**2.44**		0.0346
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater	TR-5D			TR-6D			TR-7D			TR-8D			TR-5DD			TR-8DD		
LAB ID:		Criteria	L2267783-12			L2267783-10			L2267783-08			L2268729-03			L2267783-13			L2268729-05		
COLLECTION DATE:			12/2/2022			12/2/2022			12/2/2022			12/7/2022			12/2/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	**-**	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	**-**	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	**-**	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	**-**	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	**-**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	**-**	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	**0.32**		0.02	0.04	J	0.02	0.04	J	0.02	0.04	J	0.02	0.07	J	0.02	0.05	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	**0.3**		0.02	ND		0.02	ND		0.02	0.02	J	0.02	ND		0.02	0.02	J	0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	**0.53**		0.01	ND		0.01	ND		0.01	0.03	J	0.01	ND		0.01	0.04	J	0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	0.19		0.01	ND		0.01	ND		0.01	0.01	J	0.01	ND		0.01	0.02	J	0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	0.07	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	**0.28**		0.01	ND		0.01	ND		0.01	0.02	J	0.01	ND		0.01	0.02	J	0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	0.19	J	0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		**-**	1.69	-	-	0.04	-	-	0.04	-	-	0.31	-	-	0.07	-	-	0.15	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		**-**	65.9	J	0	50.9	J	0	372	J	0	110	J	0	83.5	J	0	115	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	**200**	32.4		3.27	**318**		3.27	32.5		3.27	20.5		3.27	11.6		3.27	**269**		3.27
Antimony, Total	7440-36-0	**6**	ND		0.429	1.416	J	0.429	0.4708	J	0.429	ND		0.429	1.563	J	0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	0.3015	J	0.165	0.4925	J	0.165	**5.393**		0.165	1.843		0.165	0.5557		0.165	0.9435		0.165
Barium, Total	7440-39-3	**6000**	319.6		0.173	124		0.173	68.48		0.173	128.9		0.173	183.1		0.173	91.56		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.0599	0.1701	J	0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	**-**	119000		39.4	78200		39.4	591000		394	274000		39.4	81200		39.4	62000		39.4
Chromium, Total	7440-47-3	**70**	ND		0.178	0.9982	J	0.178	0.2731	J	0.178	ND		0.178	ND		0.178	0.6951	J	0.178
Cobalt, Total	7440-48-4	**100**	1.461		0.163	0.4708	J	0.163	9.07		0.163	6.906		0.163	0.2574	J	0.163	ND		0.163
Copper, Total	7440-50-8	**1300**	1.012		0.384	5.666		0.384	0.3867	J	0.384	4.312		0.384	ND		0.384	0.537	J	0.384
Iron, Total	7439-89-6	**300**	**2000**		19.1	210		19.1	**551**		19.1	**1790**		19.1	**751**		19.1	86.3		19.1
Lead, Total	7439-92-1	**5**	ND		0.343	1.849		0.343	0.367	J	0.343	ND		0.343	ND		0.343	ND		0.343
Magnesium, Total	7439-95-4	**-**	26800		24.2	20500		24.2	80400		24.2	61900		24.2	10400		24.2	693		24.2
Manganese, Total	7439-96-5	**50**	**162.8**		0.44	6.807		0.44	**4954**		0.44	**1564**		0.44	**66.97**		0.44	3.688		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	3.762		0.556	2.608		0.556	13.68		0.556	6.15		0.556	1.416	J	0.556	ND		0.556
Potassium, Total	7440-09-7	**-**	1380		30.9	1790		30.9	10600		30.9	2580		30.9	12800		30.9	17000		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**82400**		29.3	**59600**		29.3	**1760000**		293	**424000**		29.3	45500		29.3	33500		29.3
Thallium, Total	7440-28-0	**2**	0.1669	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	**-**	ND		1.57	7.194		1.57	ND		1.57	ND		1.57	ND		1.57	ND		1.57
Zinc, Total	7440-66-6	**2000**	5.555	J	3.41	23.81		3.41	ND		3.41	22.15		3.41	ND		3.41	ND		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	**3000**	43.1	J	24	71.2	J	24	1640		24	346		24	57.8	J	24	94.2		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater	TR-3D			TR-4D			TR-3DD			TR-4DD		
LAB ID:		Criteria	L2267783-16			L2271613-07			L2267783-15			L2267783-09		
COLLECTION DATE:			12/2/2022			12/20/2022			12/2/2022			12/2/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		71	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		12000	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		39	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		140	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		42	ND		0.21	0.43	J	0.21	0.41	J	0.21
Chloroform	67-66-3	70	ND		44	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		27	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		27	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		30	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		29	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		36	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		36	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		32	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		26	ND		0.13	ND		0.13	0.16	J	0.13
1,1,1-Trichloroethane	71-55-6	30	ND		32	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		38	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		33	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		29	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		29	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		50	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		33	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		16	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		41	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		33	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		40	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		51	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		14	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		27	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		34	ND		0.17	0.92		0.17	1.9		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		33	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	1900		35	ND		0.18	1		0.18	1.6		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		37	ND		0.18	ND		0.18	0.19	J	0.18
1,3-Dichlorobenzene	541-73-1	600	ND		37	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		37	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	42000	E	33	ND		0.17	18		0.17	0.4	J	0.17
p/m-Xylene	179601-23-1	-	ND		66	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		78	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		66	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	41	J	37	ND		0.19	2.2		0.19	3.8		0.19
1,2-Dichloroethene, Total	540-59-0	-	41	J	33	ND		0.16	2.2		0.16	3.8		0.16
Styrene	100-42-5	100	ND		72	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		49	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		290	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		60	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		390	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		83	0.71	J	0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		100	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		30	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		37	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		47	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		44	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		47	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		54	0.28	J	0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	57000		280	9.1	J	1.4	44		1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		79	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		30	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	100941	-	-	10.09	-	-	66.55	-	-	8.46	-	-
VOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	-		-	10.4	J	0	-		-	1.7	J	0
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	0.4	2.32		0.0314	0.0842	J	0.0332	1.67		0.0314	1.18		0.0326

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater	TR-3D			TR-4D			TR-3DD			TR-4DD		
LAB ID:		Criteria	L2267783-16			L2271613-07			L2267783-15			L2267783-09		
COLLECTION DATE:			12/2/2022			12/20/2022			12/2/2022			12/2/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	**-**	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	**-**	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	**-**	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	**-**	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	**-**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		**-**	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	**-**	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.03	J	0.02	0.08	J	0.02	0.08	J	0.02	0.02	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	0.02	J	0.02	0.06	J	0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	0.05	J	0.01	0.11		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	0.01	J	0.01	0.04	J	0.01	ND		0.01

Table 7a
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Truck Loading Rack

SAMPLE ID:		NJ Groundwater	TR-3D			TR-4D			TR-3DD			TR-4DD		
LAB ID:		Criteria	L2267783-16			L2271613-07			L2267783-15			L2267783-09		
COLLECTION DATE:			12/2/2022			12/20/2022			12/2/2022			12/2/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	0.03	J	0.01	0.06	J	0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.03	-	-	0.19	-	-	0.35	-	-	0.02	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	120	J	0	95.1	J	0	59.9	J	0	92.7	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	58		3.27	**370**		3.27	46.7		3.27	170		3.27
Antimony, Total	7440-36-0	**6**	ND		0.429	2.022	J	0.429	0.5787	J	0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	1.417		0.165	0.5186		0.165	0.231	J	0.165	0.6114		0.165
Barium, Total	7440-39-3	**6000**	154.2		0.173	34.36		0.173	180.5		0.173	209.1		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.0599	**5.372**		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	204000		39.4	24700		39.4	120000		39.4	112000		39.4
Chromium, Total	7440-47-3	**70**	0.3566	J	0.178	1.951		0.178	0.5971	J	0.178	0.8427	J	0.178
Cobalt, Total	7440-48-4	**100**	0.9324		0.163	0.3162	J	0.163	0.8604		0.163	6.005		0.163
Copper, Total	7440-50-8	**1300**	3.341		0.384	8.216		0.384	3.632		0.384	2.157		0.384
Iron, Total	7439-89-6	**300**	**1450**		19.1	**492**		19.1	**3280**		19.1	**2450**		19.1
Lead, Total	7439-92-1	**5**	ND		0.343	3.903		0.343	ND		0.343	1.967		0.343
Magnesium, Total	7439-95-4	-	28400		24.2	2560		24.2	21400		24.2	20900		24.2
Manganese, Total	7439-96-5	**50**	**2270**		0.44	28.84		0.44	**73.15**		0.44	**124.8**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	0.094	J	0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	8.696		0.556	2.032		0.556	1.348	J	0.556	5.019		0.556
Potassium, Total	7440-09-7	-	16700		30.9	3560		30.9	1890		30.9	2210		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**150000**		29.3	**50400**		29.3	**56000**		29.3	**70800**		29.3
Thallium, Total	7440-28-0	**2**	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	2.792	J	1.57	ND		1.57	ND		1.57
Zinc, Total	7440-66-6	**2000**	18.83		3.41	92.8		3.41	13.67		3.41	57.47		3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	50.7	J	24	ND		24	35	J	24	58.9	J	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater Criteria	SC-1			SC-2			SC-3			SC-4		
LAB ID:			L2269054-06			L2269054-14			L2269054-03			L2269054-10		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	**70**	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	**1.2**		0.08	**9.2**		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	**600**	ND		0.2	1.7		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		0.17	24		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	**-**	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	**5**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	**70**	ND		0.17	ND		0.17	ND		0.17	0.24	J	0.17
p/m-Xylene	179601-23-1	**-**	ND		0.33	71		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	**-**	ND		0.39	8		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	**1000**	ND		0.33	79		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		0.3	0.66	J	0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		1.9	3.8	J	1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	0.36	J	0.19	9.1		0.19	0.49	J	0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	**-**	ND		0.27	11		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	**100**	8.8	J	1.4	4.5	J	1.4	2.2	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	**-**	ND		0.4	18		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	**20000**	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		**-**	10.36	-	-	160.96	-	-	2.69	-	-	0.24	-	-
VOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		**-**	9.19	J	0	168	J	0	1.33	J	0	-		-
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	0.34		0.0308	0.102	J	0.032	0.0548	J	0.0353	0.144		0.032
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	0.44	J	0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	7.4		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater Criteria	SC-1			SC-2			SC-3			SC-4		
LAB ID:			L2269054-06			L2269054-14			L2269054-03			L2269054-10		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	1	J	0.41	0.92	J	0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	1	J	0.33	0.73	J	0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	10		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	56		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	0.48	J	0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	2.44	-	-	75.53	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.05	J	0.02	0.09	J	0.02	0.06	J	0.02	0.03	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	0.06	J	0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	0.08	J	0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	0.03	J	0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	0.02	J	0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	0.06	J	0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.05	-	-	0.34	-	-	0.06	-	-	0.03	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	195	J	0	1710	J	0	314	J	0	170	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	**566**		32.7	101		3.27	16.4		3.27	**1670**		3.27
Antimony, Total	7440-36-0	**6**	ND		4.29	ND		0.429	ND		0.429	0.4538	J	0.429
Arsenic, Total	7440-38-2	**3**	**5.475**		1.65	**4.014**		0.165	1.156		0.165	**4.524**		0.165
Barium, Total	7440-39-3	**6000**	245.2		1.73	1139		0.173	621.5		0.173	51.91		0.173
Beryllium, Total	7440-41-7	**1**	ND		1.07	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	74900		394	26300		39.4	70600		39.4	54700		39.4
Chromium, Total	7440-47-3	**70**	2.537	J	1.78	3.682		0.178	0.9639	J	0.178	5.324		0.178
Cobalt, Total	7440-48-4	**100**	32.77		1.63	2.252		0.163	0.1969	J	0.163	1.428		0.163
Copper, Total	7440-50-8	**1300**	13.7		3.84	0.7812	J	0.384	0.6953	J	0.384	12.45		0.384
Iron, Total	7439-89-6	**300**	**108000**		191	**60300**		19.1	**13900**		19.1	**17200**		19.1
Lead, Total	7439-92-1	**5**	**6.541**	J	3.43	ND		0.343	ND		0.343	**16.49**		0.343
Magnesium, Total	7439-95-4	-	194000		242	48700		24.2	68200		24.2	20700		24.2
Manganese, Total	7439-96-5	**50**	**5003**		4.4	**341.6**		0.44	**1474**		0.44	**203.3**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.0915	0.113	J	0.0915
Nickel, Total	7440-02-0	**100**	ND		5.56	1.455	J	0.556	ND		0.556	3.478		0.556
Potassium, Total	7440-09-7	-	66000		309	35400		30.9	24000		30.9	59900		30.9
Selenium, Total	7782-49-2	**40**	ND		17.3	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		1.63	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**1680000**		293	**753000**		293	**693000**		293	**301000**		29.3
Thallium, Total	7440-28-0	**2**	ND		1.43	0.2526	J	0.143	0.218	J	0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		15.7	4.344	J	1.57	2.15	J	1.57	7.328		1.57
Zinc, Total	7440-66-6	**2000**	ND		34.1	4.301	J	3.41	8.496	J	3.41	33.32		3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	**20700**		240	**10900**		24	**3340**		24	**3020**		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater	SC-1D			SC-2D			SC-3D			SC-4D		
LAB ID:		Criteria	L2269054-08			L2269054-15			L2269054-12			L2269054-07		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		0.21	0.32	J	0.21	3.6		0.21
Chloroform	67-66-3	**70**	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		0.14	ND		0.14	0.23	J	0.14
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	ND		0.08	ND		0.08	ND		0.08	0.08	J	0.08
Toluene	108-88-3	**600**	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.07	ND		0.07	ND		0.07	0.22		0.07
Chloroethane	75-00-3	**5**	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	**70**	1		0.17	1.4		0.17	66		0.17	0.56	J	0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	**1000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	ND		0.19	ND		0.19	ND		0.19	0.2	J	0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	**100**	2.4	J	1.4	ND		1.4	**290**		1.4	88		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	**20000**	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	3.4	-	-	1.4	-	-	356.32	-	-	92.89	-	-
VOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	1.06	J	0	1.07	J	0	-		-	1.03	J	0
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	**0.546**		0.032	**0.683**		0.0332	**2.8**		0.0346	**38.2**		0.0308
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater	SC-1D			SC-2D			SC-3D			SC-4D		
LAB ID:		Criteria	L2269054-08			L2269054-15			L2269054-12			L2269054-07		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	1.8	J	1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	1.8	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.1	J	0.02	ND		0.02	**0.17**		0.02	**0.15**		0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.1	-	-	-	-	-	0.17	-	-	0.15	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	139	J	0	1750	J	0	339	J	0	1480	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	20.1		3.27	**358**		3.27	5.53	J	3.27	**284**		3.27
Antimony, Total	7440-36-0	**6**	ND		0.429	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	0.2068	J	0.165	1.206		0.165	1.818		0.165	**3.896**		0.165
Barium, Total	7440-39-3	**6000**	296.5		0.173	115.4		0.173	22.68		0.173	17.42		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	77100		39.4	97400		39.4	51200		39.4	38500		39.4
Chromium, Total	7440-47-3	**70**	ND		0.178	1.351		0.178	0.517	J	0.178	1.86		0.178
Cobalt, Total	7440-48-4	**100**	ND		0.163	0.3026	J	0.163	ND		0.163	0.2348	J	0.163
Copper, Total	7440-50-8	**1300**	ND		0.384	1.227		0.384	ND		0.384	1.274		0.384
Iron, Total	7439-89-6	**300**	**912**		19.1	**869**		19.1	**2480**		19.1	**943**		19.1
Lead, Total	7439-92-1	**5**	ND		0.343	0.7369	J	0.343	ND		0.343	0.6358	J	0.343
Magnesium, Total	7439-95-4	-	13900		24.2	86900		24.2	129000		24.2	115000		24.2
Manganese, Total	7439-96-5	**50**	28.31		0.44	**60.13**		0.44	**98.52**		0.44	**77.01**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	ND		0.556	0.692	J	0.556	ND		0.556	5.178		0.556
Potassium, Total	7440-09-7	-	4130		30.9	20800		30.9	51000		30.9	55700		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**86700**		29.3	**590000**		293	**706000**		293	**747000**		293
Thallium, Total	7440-28-0	**2**	ND		0.143	0.1921	J	0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	1.702	J	1.57	ND		1.57	2.888	J	1.57
Zinc, Total	7440-66-6	**2000**	ND		3.41	3.767	J	3.41	ND		3.41	ND		3.41
GENERAL CHEMISTRY														

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater	SC-1D		SC-2D		SC-3D		SC-4D	
LAB ID:		Criteria	L2269054-08		L2269054-15		L2269054-12		L2269054-07	
COLLECTION DATE:			12/8/2022		12/8/2022		12/8/2022		12/8/2022	
SAMPLE MATRIX:			WATER		WATER		WATER		WATER	
Nitrogen, Ammonia	7664-41-7	**3000**	1360	24	2630	24	**4850**	24	**3450**	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.
ND = Nondetect

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater	SC-1DD			SC-2DD			SC-2DDD			SC-3DD			SC-3DDD			SC-4DD		
LAB ID:		Criteria	L2269054-09			L2269477-03			L2269054-13			L2269054-05			L2269054-04			L2269054-11		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	0.21	J	0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	0.09	J	0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	0.82	J	0.17	ND		0.17	ND		0.17	6		0.17	ND		0.17	0.77	J	0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	5.8	J	1.4	33		1.4	1.7	J	1.4	8	J	1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	0.91	-	-	-	-	-	5.8	-	-	39	-	-	1.7	-	-	8.98	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
No Tentatively Identified Compounds		-	ND		0	ND		0	ND		0	ND		0	ND		0	ND		0
Total TIC Compounds		-	-		-	-		-	-		-	-		-	-		-	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	0.4	0.623		0.032	ND		0.0332	ND		0.0332	0.869		0.0339	ND		0.0353	5.92		0.032
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.68	J	0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8

Table 7b
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 10 - Offsite PSEG Wells

SAMPLE ID:		NJ Groundwater	SC-1DD			SC-2DD			SC-2DDD			SC-3DD			SC-3DDD			SC-4DD		
LAB ID:		Criteria	L2269054-09			L2269477-03			L2269054-13			L2269054-05			L2269054-04			L2269054-11		
COLLECTION DATE:			12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022			12/8/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.68	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.03	J	0.02	0.07	J	0.02	0.02	J	0.02	0.02	J	0.02	0.05	J	0.02	ND		0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	0.05	J	0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	0.01	J	0.01	0.08	J	0.01	0.01	J	0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	0.03	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	0.01	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	0.06	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.04	-	-	0.3	-	-	0.03	-	-	0.02	-	-	0.05	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	262	J	0	96.5	J	0	121	J	0	89	J	0	122	J	0	150	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	83.1		3.27	1300		3.27	61.5		3.27	40.6	J	32.7	ND		32.7	18.1		3.27
Antimony, Total	7440-36-0	6	ND		0.429	1.792	J	0.429	ND		0.429	ND		4.29	ND		4.29	1.119	J	0.429
Arsenic, Total	7440-38-2	3	0.1728	J	0.165	1.318		0.165	0.3218	J	0.165	ND		1.65	2.009	J	1.65	0.5335		0.165
Barium, Total	7440-39-3	6000	371.8		0.173	86.05		0.173	73.11		0.173	59.01		1.73	123.1		1.73	28.94		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	0.138	J	0.107	0.5935		0.107	ND		1.07	3.079	J	1.07	ND		0.107
Cadmium, Total	7440-43-9	4	ND		0.0599	0.2178		0.0599	ND		0.0599	ND		0.599	ND		0.599	ND		0.0599
Calcium, Total	7440-70-2	-	107000		39.4	47800		39.4	53900		39.4	604000		394	1390000		394	19800		39.4
Chromium, Total	7440-47-3	70	0.8875	J	0.178	3.48		0.178	0.3667	J	0.178	ND		1.78	ND		1.78	0.3386	J	0.178
Cobalt, Total	7440-48-4	100	0.244	J	0.163	1.436		0.163	14.14		0.163	2.39	J	1.63	ND		1.63	ND		0.163
Copper, Total	7440-50-8	1300	0.6895	J	0.384	31.68		0.384	3.227		0.384	ND		3.84	11.65		3.84	3.306		0.384
Iron, Total	7439-89-6	300	2620		19.1	6920		19.1	40800		19.1	404000		191	862000		191	203		19.1
Lead, Total	7439-92-1	5	ND		0.343	10.09		0.343	ND		0.343	ND		3.43	ND		3.43	ND		0.343
Magnesium, Total	7439-95-4	-	16400		24.2	7020		24.2	14100		24.2	196000		242	312000		242	35600		24.2
Manganese, Total	7439-96-5	50	72.31		0.44	267.1		0.44	970.9		0.44	9503		4.4	19810		4.4	58.79		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	0.157	J	0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	1.251	J	0.556	3.682		0.556	ND		0.556	ND		5.56	ND		5.56	1.326	J	0.556
Potassium, Total	7440-09-7	-	1680		30.9	5410		30.9	5170		30.9	52000		309	28900		309	16000		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		17.3	ND		17.3	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	0.9248		0.163	ND		0.163	ND		1.63	ND		1.63	ND		0.163
Sodium, Total	7440-23-5	50000	36600		29.3	168000		29.3	89300		29.3	1660000		293	1840000		293	239000		29.3
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	0.37	J	0.143	1.681	J	1.43	3.384	J	1.43	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	3.029	J	1.57	ND		1.57	ND		15.7	ND		15.7	ND		1.57
Zinc, Total	7440-66-6	2000	4.459	J	3.41	21.54		3.41	35.44		3.41	ND		34.1	ND		34.1	19.94		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	97		24	142	J	48	90.7		24	1060		24	190		24	870		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 8
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 11 - Administration Building

SAMPLE ID:		NJ Groundwater	AD-1			AD-2			AD-3			AD-4			AD-5			AD-6			AD-8			AD-10		
LAB ID:		Criteria	L2266718-07			L2266718-08			L2267783-03			L2266718-11			L2267054-05			L2268106-06			L2267783-07			L2266718-13		
COLLECTION DATE:			11/29/2022			11/29/2022			12/2/2022			11/29/2022			11/30/2022			12/5/2022			12/2/2022			11/29/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																										
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		18	ND		0.35	ND		3.5	ND		18	ND		0.35	ND		0.35	ND		18
1,4-Dioxane	123-91-1	0.4	ND		61	7300	J	3000	ND		61	ND		610	ND		3000	ND		61	ND		61	ND		3000
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		9.6	ND		0.19	ND		1.9	ND		9.6	ND		0.19	ND		0.19	ND		9.6
Methylene chloride	75-09-2	3	ND		0.68	ND		34	ND		0.68	ND		6.8	ND		34	ND		0.68	ND		0.68	ND		34
1,1-Dichloroethane	75-34-3	50	ND		0.21	170		10	ND		0.21	ND		2.1	ND		10	ND		0.21	ND		0.21	13	J	10
Chloroform	67-66-3	70	ND		0.22	ND		11	ND		0.22	ND		2.2	ND		11	ND		0.22	ND		0.22	ND		11
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		6.7	ND		0.13	ND		1.3	ND		6.7	ND		0.13	ND		0.13	ND		6.7
1,2-Dichloropropane	78-87-5	1	ND		0.14	17	J	6.8	ND		0.14	ND		1.4	ND		6.8	ND		0.14	ND		0.14	ND		6.8
Dibromochloromethane	124-48-1	1	ND		0.15	ND		7.4	ND		0.15	ND		1.5	ND		7.4	ND		0.15	ND		0.15	ND		7.4
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		7.2	ND		0.14	ND		1.4	ND		7.2	ND		0.14	ND		0.14	ND		7.2
Tetrachloroethene	127-18-4	1	ND		0.18	85		9	ND		0.18	ND		1.8	990		9	ND		0.18	ND		0.18	10	J	9
Chlorobenzene	108-90-7	50	ND		0.18	ND		8.9	ND		0.18	1100		1.8	29		8.9	ND		0.18	ND		0.18	4500		8.9
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		8	ND		0.16	ND		1.6	ND		8	ND		0.16	ND		0.16	ND		8
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		6.6	ND		0.13	2.2	J	1.3	ND		6.6	ND		0.13	ND		0.13	ND		6.6
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	6300		7.9	ND		0.16	ND		1.6	ND		7.9	ND		0.16	ND		0.16	ND		7.9
Bromodichloromethane	75-27-4	1	ND		0.19	ND		9.6	ND		0.19	ND		1.9	ND		9.6	ND		0.19	ND		0.19	ND		9.6
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		8.2	ND		0.16	ND		1.6	ND		8.2	ND		0.16	ND		0.16	ND		8.2
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		7.2	ND		0.14	ND		1.4	ND		7.2	ND		0.14	ND		0.14	ND		7.2
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		7.2	ND		0.14	ND		1.4	ND		7.2	ND		0.14	ND		0.14	ND		7.2
Bromoform	75-25-2	4	ND		0.25	ND		12	ND		0.25	ND		2.5	ND		12	ND		0.25	ND		0.25	ND		12
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		8.4	ND		0.17	ND		1.7	ND		8.4	ND		0.17	ND		0.17	ND		8.4
Benzene	71-43-2	1	ND		0.08	ND		4	ND		0.08	14		0.8	ND		4	ND		0.08	ND		0.08	34		4
Toluene	108-88-3	600	ND		0.2	19	J	10	ND		0.2	ND		2	ND		10	ND		0.2	ND		0.2	380		10
Ethylbenzene	100-41-4	700	ND		0.17	ND		8.4	ND		0.17	ND		1.7	ND		8.4	ND		0.17	ND		0.17	5600		8.4
Chloromethane	74-87-3	-	ND		0.2	ND		10	ND		0.2	ND		2	ND		10	ND		0.2	ND		0.2	ND		10
Bromomethane	74-83-9	10	ND		0.26	ND		13	ND		0.26	ND		2.6	ND		13	ND		0.26	ND		0.26	ND		13
Vinyl chloride	75-01-4	1	ND		0.07	21		3.6	ND		0.07	ND		0.71	38		3.6	ND		0.07	ND		0.07	73		3.6
Chloroethane	75-00-3	5	ND		0.13	ND		6.7	ND		0.13	ND		1.3	ND		6.7	ND		0.13	ND		0.13	ND		6.7
1,1-Dichloroethene	75-35-4	1	ND		0.17	3900		8.4	ND		0.17	ND		1.7	ND		8.4	ND		0.17	ND		0.17	36		8.4
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		8.2	ND		0.16	ND		1.6	22	J	8.2	ND		0.16	ND		0.16	ND		8.2
Trichloroethene	79-01-6	1	ND		0.18	28		8.8	ND		0.18	ND		1.8	610		8.8	ND		0.18	ND		0.18	16	J	8.8
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		9.2	ND		0.18	90		1.8	390		9.2	ND		0.18	ND		0.18	2100		9.2
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		9.3	ND		0.19	95		1.9	ND		9.3	ND		0.19	ND		0.19	780		9.3
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		9.4	ND		0.19	230		1.9	160		9.4	ND		0.19	ND		0.19	5000		9.4
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		8.3	ND		0.17	ND		1.7	ND		8.3	ND		0.17	ND		0.17	ND		8.3
p/m-Xylene	179601-23-1	-	ND		0.33	ND		17	ND		0.33	ND		3.3	ND		17	ND		0.33	ND		0.33	14000		17
o-Xylene	95-47-6	-	ND		0.39	ND		20	ND		0.39	ND		3.9	ND		20	ND		0.39	ND		0.39	2800		20
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		17	ND		0.33	ND		3.3	ND		17	ND		0.33	ND		0.33	17000		17
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	9.5	J	9.4	ND		0.19	2	J	1.9	4900		9.4	ND		0.19	ND		0.19	180		9.4
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	9.5	J	8.2	ND		0.16	2	J	1.6	4900	J	8.2	ND		0.16	ND		0.16	180		8.2
Styrene	100-42-5	100	ND		0.36	ND		18	ND		0.36	ND		3.6	ND		18	ND		0.36	ND		0.36	ND		18
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		12	ND		0.24	ND		2.4	ND		12	ND		0.24	ND		0.24	ND		12
Acetone	67-64-1	6000	ND		1.5	ND		73	ND		1.5	ND		15	ND		73	ND		1.5	ND		1.5	ND		73
Carbon disulfide	75-15-0	700	ND		0.3	ND		15	ND		0.3	ND		3	ND		15	ND		0.3	ND		0.3	ND		15
2-Butanone	78-93-3	300	ND		1.9	ND		97	ND		1.9	ND		19	ND		97	ND		1.9	ND		1.9	ND		97
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		21	ND		0.42	ND		4.2	ND		21	ND		0.42	ND		0.42	ND		21
2-Hexanone	591-78-6	40	ND		0.52	ND		26	ND		0.52	ND		5.2	ND		26	ND		0.52	ND		0.52	ND		26
Bromochloromethane	74-97-5	-	ND		0.15	ND		7.6	ND		0.15	ND		1.5	ND		7.6	ND		0.15	ND		0.15	ND		7.6
Isopropylbenzene	98-82-8	700	ND		0.19	ND		9.4	ND		0.19	ND		1.9	ND		9.4	ND		0.19	ND		0.19	160		9.4
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		12	ND		0.23	ND		2.3	29	J	12	ND		0.23	ND		0.23	34	J	12
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		11	ND		0.22	4.7	J	2.2	150		11	ND		0.22	ND		0.22	120		11
Methyl Acetate	79-20-9	7000	ND		0.23	ND		12	ND		0.23	ND		2.3	ND		12	ND		0.23	ND		0.23	ND		12
Cyclohexane	110-82-7	-	ND		0.27	ND		14	ND		0.27	ND		2.7	ND		14	ND		0.27	ND		0.27	ND		14
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		70	ND		1.4	ND		14	ND		70	ND		1.4	ND		1.4	ND		70
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		20	ND		0.4	ND		4	ND		20	ND		0.4	ND		0.4	ND		20
Freon-113	76-13-1	20000	ND		0.15	ND		7.4	ND		0.15	ND		1.5	19	J	7.4	ND		0.15	ND		0.15	13	J	7.4
Total VOCs		-	-	-	-	17849.5	-	-	-	-	-	1537.9	-	-	7337	-	-	-	-	-	-	-	-	35849	-	-
VOLATILE ORGANICS BY GC/MS-TIC																										
No Tentatively Identified Compounds		-	ND		0	ND		0	-		-	ND		0	ND		0	ND		0	ND		0	ND		0
Unknown		-	-		-	-		-	1.96	J	0	-		-	-		-	-		-	-		-	-		-
Total TIC Compounds		-	-		-	-		-	1.96	J	0	-		-	-		-	-		-	-		-	-		-
1,4 DIOXANE BY 8270E-SIM																										
1,4-Dioxane	123-91-1	0.4	27.5		0.032	9400		1.6	ND		0.0326	4.98		0.0332	1.27		0.0314	ND		0.0332	ND		0.0326	158		0.628
SEMIVOLATILE ORGANICS BY GC/MS																										
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		4.4
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	4.9	J	4.8
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		4.4
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		9.3
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		2.6
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		4.9
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		5.3
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		6.9
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		5.8
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12
Naphthalene	91-20-3	300	ND		0.46	2.6		0.46	ND		0.46	7.9		0.46	ND		0.46	ND		0.46	ND		0.46	ND		4.6
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		7.7
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		4.2
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		6.4
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	1.5	J	1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		15
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		3.9
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		13
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		3.8
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		18
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		3.4
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		4.6
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		3.3
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		4.1
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		3.3
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	0.37	J	0.28	ND		0.28	ND		0.28	ND		0.28	ND		2.8
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		11
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		8.1
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5
2-Methylnaphthalene	91-57-6	30	ND		0.45	1.4	J	0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		4.5
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		6.1

Table 8
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 11 - Administration Building

SAMPLE ID:		NJ Groundwater	AD-1			AD-2			AD-3			AD-4			AD-5			AD-6			AD-8			AD-10		
LAB ID:		Criteria	L2266718-07			L2266718-08			L2267783-03			L2266718-11			L2267054-05			L2268106-06			L2267783-07			L2266718-13		
COLLECTION DATE:			11/29/2022			11/29/2022			12/2/2022			11/29/2022			11/30/2022			12/5/2022			12/2/2022			11/29/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		3.5
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	4.1	J	0.48	ND		0.48	ND		0.48	ND		0.48	ND		4.8
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	0.84	J	0.41	ND		0.41	ND		0.41	ND		0.41	ND		4.1
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		18
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		8.5
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		6.7
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		66
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	5.8	J	5.7
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		4.9
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		7.7
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		4.9
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		3.8
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		16
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		5.3
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	12	J	5.3
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		33
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		4.6
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	0.91	J	0.44	ND		0.44	ND		0.44	ND		4.4
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		7.6
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		8.4
Total SVOCs		-	-	-	-	5.5	-	-	-	-	-	3.95	-	-	0.91	-	-	-	-	-	-	-	-	22.7	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																										
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.02	J	0.02	0.04	J	0.02	0.04	J	0.02	0.06	J	0.02	0.04	J	0.02	0.04	J	0.02	0.03	J	0.02	0.03	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	0.03	J	0.02	ND		0.02	0.04	J	0.02	ND		0.02	ND		0.02	ND		0.02	0.02	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	0.03	J	0.01	ND		0.01	0.04	J	0.01	ND		0.01	ND		0.01	ND		0.01	0.01	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	0.03	J	0.01	ND		0.01	0.01	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	0.03	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	0.03	J	0.01	ND		0.01	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	0.15	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.02	-	-	0.34	-	-	0.04	-	-	0.17	-	-	0.04	-	-	0.04	-	-	0.03	-	-	0.06	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																										
Total TIC Compounds		-	89.5	J	0	148	J	0	62.9	J	0	105	J	0	150	J	0	89	J	0	61.4	J	0	1010	J	0
TOTAL METALS																										
Aluminum, Total	7429-90-5	200	42.8		3.27	12.6		3.27	710		3.27	60.3		3.27	6.08	J	3.27	37.9		3.27	258		3.27	69.6		3.27
Antimony, Total	7440-36-0	6	0.4947	J	0.429	ND		0.429	0.4821	J	0.429	ND		0.429	ND		0.429	2.525	J	0.429	0.5196	J	0.429	ND		0.429
Arsenic, Total	7440-38-2	3	1.066		0.165	4.194		0.165	0.9306		0.165	45.46		0.165	0.8272		0.165	1.063		0.165	1.243		0.165	3.363		0.165
Barium, Total	7440-39-3	6000	84.22		0.173	1100		0.173	21.81		0.173	321.5		0.173	397.5		0.173	48.78		0.173	14.27		0.173	1013		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	0.1292	J	0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	0.6715		0.107
Cadmium, Total	7440-43-9	4	0.3375		0.0599	0.0942	J	0.0599	1.097		0.0599	0.3747		0.0599	0.3494		0.0599	0.17	J	0.0599	0.1352	J	0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	79800		39.4	343000		39.4	17900		39.4	73400		39.4	152000		39.4	24300		39.4	11800		39.4	143000		39.4
Chromium, Total	7440-47-3	70	0.599	J	0.178	0.1949	J	0.178	1.916		0.178	1.076		0.178	0.4017	J	0.178	0.6076	J	0.178	0.5585	J	0.178	0.3833	J	0.178
Cobalt, Total	7440-48-4	100	0.6482		0.163	83.96		0.163	0.9584		0.163	4.204		0.163	1.774		0.163	1.1		0.163	0.4056	J	0.163	7.673		0.163
Copper, Total	7440-50-8	1300	18.81		0.384	7.379		0.384	9.786		0.384	6.899		0.384	4.447		0.384	13.53		0.384	3.956		0.384	0.5727	J	0.384
Iron, Total	7439-89-6	300	2210		19.1	12500		19.1	1380		19.1	27600		19.1	33.1	J	19.1	102		19.1	300		19.1	75500		19.1
Lead, Total	7439-92-1	5	0.6261	J	0.343	ND		0.343	4.657		0.343	0.7923	J	0.343	ND		0.343	0.3618	J	0.343	0.655	J	0.343	ND		0.343
Magnesium, Total	7439-95-4	-	8930		24.2	110000		24.2	4460		24.2	32900		24.2	43400		24.2	5000		24.2	1750		24.2	75900		24.2
Manganese, Total	7439-96-5	50	241.4		0.44	43680		2.2	80.78		0.44	2125		0.44	3090		0.44	375.6		0.44	112.6		0.44	110900		22
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	5.853		0.556	29.11		0.556	2.587		0.556	3.387		0.556	5.831		0.556	5.393		0.556	0.8654	J	0.556	3.266		0.556
Potassium, Total	7440-09-7	-	6180		30.9	1480		30.9	1080		30.9	6070		30.9	1380		30.9	5100		30.9	776		30.9	4760		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	2.07	J	1.73	ND		1.73	1.75	J	1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	209000		29.3	613000		146	5320		29.3	526000		146	193000		29.3	36300		29.3	92500		29.3	496000		146
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	0.2073	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	2.33	J	1.57	ND		1.57	3.479	J	1.57	1.589	J	1.57	ND		1.57	ND		1.57	2.055	J	1.57	1.71	J	1.57
Zinc, Total	7440-66-6	2000	77.68		3.41	44.52		3.41	16.29		3.41	71.29		3.41	38.05		3.41	37.96		3.41	21.32		3.41	11.56		3.41
GENERAL CHEMISTRY																										
Nitrogen, Ammonia	7664-41-7	3000	53.4	J	24	125		24	40.6	J	24	2220		24	34.1	J	24	87.7		24	115		24	3880		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 8
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 11 - Administration Building

SAMPLE ID:		NJ Groundwater	AD-2DD			AD-3D			AD-5D			AD-9D			AD-9DD			AD-10DD		
LAB ID:		Criteria	L2266718-09			L2267783-05			L2266718-10			L2267427-04			L2267427-09			L2266718-12		
COLLECTION DATE:			11/29/2022			12/2/2022			11/29/2022			12/1/2022			12/1/2022			11/29/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		14	ND		0.71	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	5200	J	2400	ND		120	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		7.7	ND		0.39	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		27	ND		1.4	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	4.8		0.21	590		8.4	4.2		0.42	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	9.3	J	8.9	ND		0.44	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		5.4	ND		0.27	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	36	J	5.5	0.36	J	0.27	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		6	ND		0.3	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	10	J	5.8	ND		0.29	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	0.46	J	0.18	150		7.2	220		0.36	0.24	J	0.18	0.25	J	0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	30		7.1	16		0.36	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		6.4	ND		0.32	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	12	J	5.3	ND		0.26	ND		0.13	0.43	J	0.13
1,1,1-Trichloroethane	71-55-6	30	5.6		0.16	ND		0.16	940		6.3	0.4	J	0.32	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		7.7	ND		0.38	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		6.6	ND		0.33	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		5.8	ND		0.29	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		5.8	ND		0.29	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		9.9	ND		0.5	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		6.7	ND		0.33	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	5.4	J	3.2	0.16	J	0.16	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		8.1	ND		0.41	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	30		6.7	ND		0.33	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		8	ND		0.4	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		10	ND		0.51	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	60		2.8	4.4		0.14	ND		0.07	0.18	J	0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		5.4	ND		0.27	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	3.2		0.17	5.8		0.17	5400		6.8	10		0.34	ND		0.17	0.4	J	0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		6.5	0.93	J	0.33	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	2.8		0.18	47		7	59		0.35	1.2		0.18	0.52		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	520		7.4	100		0.37	1.8	J	0.18	0.84	J	0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		7.4	3	J	0.37	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	170		7.5	55		0.37	0.58	J	0.19	0.33	J	0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	0.25	J	0.17	ND		6.6	0.34	J	0.33	0.28	J	0.17	0.26	J	0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	13	J	13	ND		0.66	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		16	ND		0.78	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	13	J	13	ND		0.66	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	1.5		0.19	14	J	7.5	200		0.37	0.41	J	0.19	0.64		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	1.5		0.16	14	J	6.5	200	J	0.33	0.41	J	0.16	0.64		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		14	ND		0.72	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		9.8	ND		0.49	ND		0.24	ND		0.24
Acetone	67-64-1	6000	3.8	J	1.5	ND		1.5	ND		58	ND		2.9	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		12	ND		0.6	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		78	ND		3.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	0.6	J	0.42	ND		0.42	ND		17	ND		0.83	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		21	ND		1	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		6.1	ND		0.3	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	7.6	J	7.5	ND		0.37	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	16	J	9.4	5.4		0.47	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	100		8.8	32		0.44	0.22	J	0.22	0.72	J	0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		9.4	ND		0.47	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		11	ND		0.54	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	ND		56	ND		2.8	ND		1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		16	ND		0.79	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	110		5.9	14		0.3	ND		0.15	ND		0.15
Total VOCs		-	13.2	-	-	15.61	-	-	13470.3	-	-	725.19	-	-	4.73	-	-	4.57	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
No Tentatively Identified Compounds		-	ND		0	-		-	ND		0	ND		0	ND		0	ND		0
Sulfur Dioxide	007446-09-5	-	-		-	1.19	NJ	0	-		-	-		-	-		-	-		-
Total TIC Compounds		-	-		-	1.19	J	0	-		-	-		-	-		-	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	0.4	ND		1.6	47.6		0.0326	5820		1.6	8.98		0.0326	1.41		0.0314	0.402		0.032
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	400	1.4	J	0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	0.55	J	0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	360		1.3	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	0.51	J	0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	20		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	330		1.7	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34

Table 8
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 11 - Administration Building

SAMPLE ID:		NJ Groundwater	AD-2DD			AD-3D			AD-5D			AD-9D			AD-9DD			AD-10DD		
LAB ID:		Criteria	L2266718-09			L2267783-05			L2266718-10			L2267427-04			L2267427-09			L2266718-12		
COLLECTION DATE:			11/29/2022			12/2/2022			11/29/2022			12/1/2022			12/1/2022			11/29/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Acenaphthylene	208-96-8	100	1.6	J	0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	4.9		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	170		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	2.2		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	100		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	320		1.4	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	1.6	J	0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	23		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	1234.7	-	-	-	-	-	1.06	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.93	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	72		0.2	0.09	J	0.02	0.05	J	0.02	0.05	J	0.02	0.07	J	0.02	0.05	J	0.02
Benzo(a)pyrene	50-32-8	0.1	170		0.15	0.07	J	0.02	0.06	J	0.02	0.03	J	0.02	0.08	J	0.02	0.06	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	400		0.12	0.12		0.01	0.05	J	0.01	0.05	J	0.01	0.14		0.01	0.07	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	98		0.09	0.05	J	0.01	0.02	J	0.01	0.02	J	0.01	0.04	J	0.01	0.02	J	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	32		0.13	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	200		0.12	0.08	J	0.01	0.03	J	0.01	0.04	J	0.01	0.09	J	0.01	0.04	J	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.09	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.14	ND		0.01	0.19	J	0.01	0.18	J	0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.47	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	972	-	-	0.43	-	-	0.4	-	-	0.37	-	-	0.42	-	-	0.24	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	2470	J	0	61.9	J	0	158	J	0	77.9	J	0	55.3	J	0	128	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	20700		3.27	6.63	J	3.27	64.7		3.27	19.5		3.27	27.2		3.27	1130		3.27
Antimony, Total	7440-36-0	6	3.872	J	0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429	0.8571	J	0.429
Arsenic, Total	7440-38-2	3	5.956		0.165	0.4363	J	0.165	1.087		0.165	0.5843		0.165	2.223		0.165	3.03		0.165
Barium, Total	7440-39-3	6000	316.2		0.173	174.9		0.173	382.6		0.173	305.1		0.173	260		0.173	265		0.173
Beryllium, Total	7440-41-7	1	0.7042		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	0.221	J	0.107
Cadmium, Total	7440-43-9	4	5.815		0.0599	ND		0.0599	0.5452		0.0599	0.3476		0.0599	0.0688	J	0.0599	0.105	J	0.0599
Calcium, Total	7440-70-2	-	56900		39.4	108000		39.4	245000		39.4	165000		39.4	99200		39.4	88400		39.4
Chromium, Total	7440-47-3	70	77.61		0.178	ND		0.178	0.6275	J	0.178	0.3776	J	0.178	0.4835	J	0.178	5.007		0.178
Cobalt, Total	7440-48-4	100	26.24		0.163	0.248	J	0.163	2.788		0.163	0.3318	J	0.163	1.414		0.163	4.31		0.163
Copper, Total	7440-50-8	1300	211.8		0.384	3.745		0.384	5.779		0.384	8.639		0.384	20.93		0.384	33.12		0.384
Iron, Total	7439-89-6	300	55800		19.1	22	J	19.1	715		19.1	47.9	J	19.1	17000		19.1	24600		19.1
Lead, Total	7439-92-1	5	161.2		0.343	ND		0.343	0.8447	J	0.343	ND		0.343	0.9546	J	0.343	3.075		0.343
Magnesium, Total	7439-95-4	-	55100		24.2	24100		24.2	43500		24.2	42400		24.2	20500		24.2	25200		24.2
Manganese, Total	7439-96-5	50	4640		0.44	52.41		0.44	7271		0.44	1087		0.44	540.4		0.44	904.9		0.44
Mercury, Total	7439-97-6	2	0.359		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	128.4		0.556	2.962		0.556	3.986		0.556	8.041		0.556	2.808		0.556	8.835		0.556
Potassium, Total	7440-09-7	-	2770		30.9	1420		30.9	1790		30.9	1760		30.9	2760		30.9	4000		30.9
Selenium, Total	7782-49-2	40	2.74	J	1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	1.317		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	174000		29.3	260000		29.3	110000		29.3	185000		29.3	58900		29.3	70500		29.3
Thallium, Total	7440-28-0	2	0.7873	J	0.143	ND		0.143	ND		0.143	0.4867	J	0.143	0.156	J	0.143	ND		0.143
Vanadium, Total	7440-62-2	-	48.82		1.57	ND		1.57	ND		1.57	ND		1.57	ND		1.57	4.406	J	1.57
Zinc, Total	7440-66-6	2000	2501		3.41	12.68		3.41	74.79		3.41	151.4		3.41	167		3.41	74.81		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	427	J	240	35.9	J	24	ND		24	68.6	J	24	35.4	J	24	38.6	J	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater	PER-2			PER-3			PER-10			SM-1		
LAB ID:		Criteria	L2268454-07			L2269477-10			L2269477-12			L2270765-07		
COLLECTION DATE:			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		0.17	ND		0.17	ND		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	10		1.5	ND		1.5	8.2		1.5	2.3	J	1.5
Carbon disulfide	75-15-0	700	ND		0.3	0.84	J	0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	1.9	J	1.4	27		1.4	2.5	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	11.9	-	-	27.84	-	-	10.7	-	-	2.3	-	-
VOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	-		-	11.8	J	0	1.9	J	0	-		-
1,4 DIOXANE BY 8270E-SIM														

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater Criteria	PER-2			PER-3			PER-10			SM-1		
LAB ID:			L2268454-07			L2269477-10			L2269477-12			L2270765-07		
COLLECTION DATE:			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
1,4-Dioxane	123-91-1	**0.4**	ND		0.0332	0.209		0.0308	ND		0.0308	ND		0.0326
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	2.4	J	1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	0.39	J	0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	**-**	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	**-**	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	**-**	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	**-**	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	**-**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		**-**	0.39	-	-	-	-	-	-	-	-	2.4	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	**-**	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.07	J	0.02	ND		0.02	ND		0.02	0.1		0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	ND		0.02	0.05	J	0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	ND		0.01	0.11		0.01

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater	PER-2			PER-3			PER-10			SM-1		
LAB ID:		Criteria	L2268454-07			L2269477-10			L2269477-12			L2270765-07		
COLLECTION DATE:			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	ND		0.01	0.07	J	0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	0.07	J	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	ND		0.01	0.09	J	0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.07	-	-	-	-	-	-	-	-	0.49	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	123	J	0	162	J	0	85.3	J	0	72.6	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	**3640**		3.27	**2860**		32.7	46.2		3.27	**1920**		3.27
Antimony, Total	7440-36-0	**6**	1.728	J	0.429	0.7939	J	0.429	0.4677	J	0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	**8.776**		0.165	**16.09**		0.165	0.5535		0.165	1.391		0.165
Barium, Total	7440-39-3	**6000**	50.19		0.173	78.36		0.173	35.01		0.173	73.05		0.173
Beryllium, Total	7440-41-7	**1**	**1.042**		0.107	0.131	J	0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	**7.916**		0.0599	0.5611		0.0599	ND		0.0599	0.0717	J	0.0599
Calcium, Total	7440-70-2	-	36400		39.4	80500		394	51700		394	12800		39.4
Chromium, Total	7440-47-3	**70**	7.194		0.178	33.82		0.178	0.7939	J	0.178	4.498		0.178
Cobalt, Total	7440-48-4	**100**	7.847		0.163	2.957		0.163	ND		0.163	1.666		0.163
Copper, Total	7440-50-8	**1300**	154.8		0.384	42		0.384	7.364		0.384	22.56		0.384
Iron, Total	7439-89-6	**300**	**14000**		19.1	**20300**		19.1	**1010**		19.1	**4050**		19.1
Lead, Total	7439-92-1	**5**	**45.18**		0.343	**13.08**		0.343	0.4412	J	0.343	**11.15**		0.343
Magnesium, Total	7439-95-4	-	5080		24.2	156000		242	8580		242	8370		24.2
Manganese, Total	7439-96-5	**50**	**161.4**		0.44	**1660**		0.44	**102.7**		0.44	**55.64**		0.44
Mercury, Total	7439-97-6	**2**	0.157	J	0.0915	0.163	J	0.0915	ND		0.0915	0.129	J	0.0915
Nickel, Total	7440-02-0	**100**	50.88		0.556	16.82		0.556	1.415	J	0.556	6.258		0.556
Potassium, Total	7440-09-7	-	3900		30.9	61400		309	1890		309	5750		30.9
Selenium, Total	7782-49-2	**40**	3.28	J	1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	0.3632	J	0.163	0.2086	J	0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	11400		29.3	**1290000**		293	27200		293	**69400**		29.3
Thallium, Total	7440-28-0	**2**	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	14.98		1.57	16.57		1.57	ND		1.57	7.753		1.57
Zinc, Total	7440-66-6	**2000**	481.6		3.41	30.52		3.41	6.588	J	3.41	92.06		3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	932		48	**9520**		24	198		24	189		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater	PER-2D			PER-2DD			PER-3D			PER-10D			SM-1D		
LAB ID:		Criteria	L2268454-08			L2268454-12			L2269477-11			L2269477-13			L2270765-06		
COLLECTION DATE:			12/6/2022			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		1.8	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		300	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.96	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		3.4	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		1	0.22	J	0.21	ND		0.21	0.64	J	0.21	ND		0.21
Chloroform	67-66-3	**70**	ND		1.1	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.67	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.68	ND		0.14	ND		0.14	0.52	J	0.14	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		0.74	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.72	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.9	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		0.89	ND		0.18	ND		0.18	ND		0.18	2.1		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.8	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.66	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.79	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.96	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.82	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.72	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.72	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		1.2	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.84	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	ND		0.4	ND		0.08	ND		0.08	ND		0.08	0.14	J	0.08
Toluene	108-88-3	**600**	1.4	J	1	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	1.6	J	0.84	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	**-**	ND		1	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		1.3	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.36	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	**5**	ND		0.67	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.84	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.82	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.88	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.92	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.93	ND		0.19	ND		0.19	ND		0.19	0.21	J	0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.94	ND		0.19	ND		0.19	ND		0.19	1.1	J	0.19
Methyl tert butyl ether	1634-04-4	**70**	**520**		0.83	**97**		0.17	54		0.17	**110**		0.17	3.6		0.17
p/m-Xylene	179601-23-1	**-**	3.1	J	1.7	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	**-**	ND		2	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	**1000**	3.1	J	1.7	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.94	0.48	J	0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.82	0.48	J	0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		1.8	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		1.2	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	ND		7.3	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		1.5	ND		0.3	1.4	J	0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		9.7	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		2.1	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		2.6	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		0.76	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	ND		0.94	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		1.2	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		1.1	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		1.2	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	**-**	ND		1.4	ND		0.27	ND		0.27	ND		0.27	1.7	J	0.27
Tert-Butyl Alcohol	75-65-0	**100**	**270**		7	**1900**	E	1.4	**340**		1.4	**120**		1.4	100		1.4
Methyl cyclohexane	108-87-2	**-**	ND		2	ND		0.4	ND		0.4	ND		0.4	0.58	J	0.4
Freon-113	76-13-1	**20000**	ND		0.74	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		**-**	796.1	-	-	1997.7	-	-	395.4	-	-	231.16	-	-	109.43	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		**-**	-		-	17.5	J	0	4.23	J	0	-		-	14.3	J	0
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	**0.4**	**1.25**		0.032	**1.09**		0.0303	**1.74**		0.0308	**13.6**		0.0308	0.18		0.0314
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	7.5		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater Criteria	PER-2D			PER-2DD			PER-3D			PER-10D			SM-1D		
LAB ID:			L2268454-08			L2268454-12			L2269477-11			L2269477-13			L2270765-06		
COLLECTION DATE:			12/6/2022			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	0.35	J	0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	ND		0.41	4.4		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	2.5		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	-	-	-	-	-	-	14.75	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.05	J	0.02	0.1		0.02	ND		0.02	ND		0.02	0.08	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	0.06	J	0.02	ND		0.02	ND		0.02	0.03	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	0.1		0.01	ND		0.01	ND		0.01	0.06	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	0.1		0.01	ND		0.01	ND		0.01	0.05	J	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	0.13		0.01	ND		0.01	ND		0.01	0.06	J	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	0.12		0.01	ND		0.01	ND		0.01	0.05	J	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	0.02	JB	0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.05	-	-	0.63	-	-	-	-	-	-	-	-	0.33	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	99.4	J	0	134	J	0	124	J	0	517	J	0	75.9	J	0
TOTAL METALS																	
Aluminum, Total	7429-90-5	200	ND		3.27	66.2		3.27	4410		32.7	ND		32.7	2470		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	ND		0.165	1.087		0.165	7.37		0.165	0.2768	J	0.165	4.693		0.165
Barium, Total	7440-39-3	6000	176.3		0.173	307.3		0.173	33.56		0.173	36.92		0.173	35.04		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	0.2372	J	0.107	ND		0.107	0.1602	J	0.107
Cadmium, Total	7440-43-9	4	ND		0.0599	ND		0.0599	0.1557	J	0.0599	ND		0.0599	ND		0.0599

Table 9
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 12 - Detention Basin/Smith Creek

SAMPLE ID:		NJ Groundwater Criteria	PER-2D			PER-2DD			PER-3D			PER-10D			SM-1D		
LAB ID:			L2268454-08			L2268454-12			L2269477-11			L2269477-13			L2270765-06		
COLLECTION DATE:			12/6/2022			12/6/2022			12/9/2022			12/9/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Calcium, Total	7440-70-2	-	122000		39.4	111000		39.4	86000		394	90500		394	35000		39.4
Chromium, Total	7440-47-3	**70**	0.2896	J	0.178	2.635		0.178	**258.8**		0.178	1.727		0.178	5.748		0.178
Cobalt, Total	7440-48-4	**100**	0.3048	J	0.163	0.2542	J	0.163	7.886		0.163	0.436	J	0.163	3.444		0.163
Copper, Total	7440-50-8	**1300**	ND		0.384	1.682		0.384	41.05		0.384	1.504		0.384	8.183		0.384
Iron, Total	7439-89-6	**300**	44.2	J	19.1	**11200**		19.1	**14200**		19.1	101		19.1	**17600**		19.1
Lead, Total	7439-92-1	**5**	ND		0.343	ND		0.343	4.566		0.343	ND		0.343	4.766		0.343
Magnesium, Total	7439-95-4	-	24800		24.2	17400		24.2	213000		242	230000		242	32100		24.2
Manganese, Total	7439-96-5	**50**	**124.8**		0.44	**271.8**		0.44	**399.1**		0.44	**854.2**		0.44	**149.4**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	0.119	J	0.0915
Nickel, Total	7440-02-0	**100**	1.775	J	0.556	2.706		0.556	**108.6**		0.556	3.518		0.556	3.468		0.556
Potassium, Total	7440-09-7	-	1510		30.9	2570		30.9	87300		309	90100		309	25700		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**77200**		29.3	49600		29.3	**1480000**		293	**1340000**		293	**424000**		29.3
Thallium, Total	7440-28-0	**2**	0.323	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	ND		1.57	23.66		1.57	4.586	J	1.57	8.958		1.57
Zinc, Total	7440-66-6	**2000**	4.4	J	3.41	6.268	J	3.41	70.86		3.41	ND		3.41	32.18		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	**3000**	88.5		24	70.6	J	24	**15900**		240	**23200**		240	**7170**		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

ND = Nondetect

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	LPG-1			LPG-2			PER-4			PER-5		
LAB ID:		Criteria	L2271942-03			L2271942-04			L2270765-05			L2271613-04		
COLLECTION DATE:			12/21/2022			12/21/2022			12/15/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		0.17	0.97	J	0.17	0.33	J	0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	1.9	J	1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	9.9	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	-	-	-	-	-	-	10.87	-	-	2.23	-	-
VOLATILE ORGANICS BY GC/MS-TIC														

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	LPG-1			LPG-2			PER-4			PER-5		
LAB ID:		Criteria	L2271942-03			L2271942-04			L2270765-05			L2271613-04		
COLLECTION DATE:			12/21/2022			12/21/2022			12/15/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
No Tentatively Identified Compounds		-	ND		0	ND		0	ND		0	-	-	-
Unknown		-	-		-	-		-	-	-	-	2.52	J	0
Total TIC Compounds		-	-		-	-		-	-		-	2.52	J	0
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	ND		0.0326	ND		0.0332	0.0798	J	0.0353	ND		0.0332
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	1.4	J	0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	**-**	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	**-**	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	**-**	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	**-**	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	**-**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND		0.44	ND		0.44	ND		0.44	ND		0.44

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	LPG-1			LPG-2			PER-4			PER-5		
LAB ID:		Criteria	L2271942-03			L2271942-04			L2270765-05			L2271613-04		
COLLECTION DATE:			12/21/2022			12/21/2022			12/15/2022			12/20/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	1.4	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	ND		0.02	ND		0.02	0.14		0.02	0.05	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	0.04	J	0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	ND		0.01	0.07	J	0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	0.06	J	0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	0.07	J	0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	ND		0.01	0.07	J	0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	-	-	-	-	-	-	0.45	-	-	0.05	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	32.3	J	0	13	J	0	110	J	0	61.8	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	200	1310		3.27	40.6		3.27	178		3.27	153		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	1.331	J	0.429
Arsenic, Total	7440-38-2	3	1.903		0.165	0.8006		0.165	17.61		0.165	0.3059	J	0.165
Barium, Total	7440-39-3	6000	22.07		0.173	27.04		0.173	164.8		0.173	17.88		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	0.1685	J	0.0599	0.2965		0.0599	0.3112		0.0599	0.2515		0.0599
Calcium, Total	7440-70-2	-	1230		39.4	7350		39.4	22100		39.4	40400		39.4
Chromium, Total	7440-47-3	70	2.615		0.178	0.371	J	0.178	1.122		0.178	0.557	J	0.178
Cobalt, Total	7440-48-4	100	0.8577		0.163	ND		0.163	0.196	J	0.163	ND		0.163
Copper, Total	7440-50-8	1300	16.93		0.384	4.001		0.384	2.443		0.384	48.38		0.384
Iron, Total	7439-89-6	300	3220		19.1	19800		19.1	10500		19.1	151		19.1
Lead, Total	7439-92-1	5	7.933		0.343	0.4571	J	0.343	1.607		0.343	0.5672	J	0.343
Magnesium, Total	7439-95-4	-	943		24.2	4360		24.2	19200		24.2	7360		24.2
Manganese, Total	7439-96-5	50	31.45		0.44	133		0.44	163		0.44	9.426		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	0.112	J	0.0915	0.102	J	0.0915
Nickel, Total	7440-02-0	100	2.409		0.556	ND		0.556	1.279	J	0.556	4.109		0.556
Potassium, Total	7440-09-7	-	672		30.9	3820		30.9	13600		30.9	1040		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	5480		29.3	74400		29.3	295000		29.3	16600		29.3
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	4.819	J	1.57	ND		1.57	1.68	J	1.57	2.134	J	1.57
Zinc, Total	7440-66-6	2000	46.67		3.41	28.12		3.41	8.852	J	3.41	51.41		3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	3000	ND		120	24.1	J	24	2390		24	36.1	J	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	TM-1			TM-2			TM-3			TM-4			TM-8		
LAB ID:		Criteria	L2270047-07			L2270047-08			L2270047-09			L2270408-03			L2270408-04		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21	0.26	J	0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	1.4		0.18	ND		0.18	ND		0.18	0.49	J	0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	0.31	J	0.18	ND		0.18	ND		0.18	0.86		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	0.52	J	0.17	1.1		0.17	ND		0.17	25		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	2.3		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	2.3		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	1.7	J	1.4	ND		1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	-	-	-	2.23	-	-	2.8	-	-	-	-	-	28.91	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
No Tentatively Identified Compounds		-	ND		0	ND		0	ND		0	ND		0	ND		0
Total TIC Compounds		-	-		-	-		-	-		-	-		-	-		-
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	0.4	ND		0.0326	ND		0.0326	ND		0.0326	ND		0.0339	0.377		0.0339
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	TM-1			TM-2			TM-3			TM-4			TM-8		
LAB ID:		Criteria	L2270047-07			L2270047-08			L2270047-09			L2270408-03			L2270408-04		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.04	J	0.02	0.04	J	0.02	0.04	J	0.02	0.03	J	0.02	ND		0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.04	-	-	0.04	-	-	0.04	-	-	0.03	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	31	J	0	50.3	J	0	34.4	J	0	41.6	J	0	41.3	J	0
TOTAL METALS																	
Aluminum, Total	7429-90-5	200	185		3.27	168		3.27	60.4		3.27	2730		3.27	156		3.27

Table 10
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 14a - First Tankfield

SAMPLE ID:		NJ Groundwater	TM-1			TM-2			TM-3			TM-4			TM-8		
LAB ID:		Criteria	L2270047-07			L2270047-08			L2270047-09			L2270408-03			L2270408-04		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	1.902	J	0.429	ND		0.429
Arsenic, Total	7440-38-2	3	0.5846		0.165	39.86		0.165	5.173		0.165	54.33		0.165	0.8768		0.165
Barium, Total	7440-39-3	6000	34.8		0.173	54.42		0.173	65.82		0.173	153.8		0.173	44.72		0.173
Beryllium, Total	7440-41-7	1	0.6493		0.107	ND		0.107	ND		0.107	0.5887		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	0.3319		0.0599	ND		0.0599	0.2265		0.0599	0.8246		0.0599	0.2025		0.0599
Calcium, Total	7440-70-2	-	9940		39.4	33900		39.4	37200		39.4	11700		39.4	81000		39.4
Chromium, Total	7440-47-3	70	0.6694	J	0.178	0.6767	J	0.178	1.262		0.178	7.296		0.178	0.3884	J	0.178
Cobalt, Total	7440-48-4	100	4.392		0.163	3.69		0.163	0.3111	J	0.163	4.42		0.163	3.167		0.163
Copper, Total	7440-50-8	1300	14.11		0.384	2.468		0.384	3.61		0.384	42.7		0.384	2.52		0.384
Iron, Total	7439-89-6	300	318		19.1	78200		19.1	51900		19.1	148000		19.1	618		19.1
Lead, Total	7439-92-1	5	ND		0.343	ND		0.343	ND		0.343	23.59		0.343	0.3885	J	0.343
Magnesium, Total	7439-95-4	-	4830		24.2	15100		24.2	15600		24.2	3850		24.2	27200		24.2
Manganese, Total	7439-96-5	50	1460		0.44	1670		0.44	3638		0.44	3882		0.44	4102		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	11.94		0.556	3.88		0.556	0.7976	J	0.556	11.31		0.556	4.763		0.556
Potassium, Total	7440-09-7	-	2540		30.9	4240		30.9	10800		30.9	2830		30.9	1150		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	4.8	J	1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	0.2806	J	0.163	ND		0.163
Sodium, Total	7440-23-5	50000	32700		29.3	35200		29.3	30400		29.3	14100		29.3	97500		29.3
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	0.3885	J	0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	ND		1.57	ND		1.57	11.92		1.57	ND		1.57
Zinc, Total	7440-66-6	2000	265.2		3.41	61.04		3.41	108.7		3.41	116.8		3.41	17.67		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	3000	40.9	J	24	1090		48	3270		24	234	J	120	ND		24

NJ-GW IIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	DPP-1			MRVU-1			PER-7			PER-8			SRB-1		
LAB ID:			L2269734-07			L2270047-12			L2268729-08			L2270047-11			L2268729-07		
COLLECTION DATE:			12/12/2022			12/13/2022			12/7/2022			12/13/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	**70**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	ND		0.08	ND		0.08	ND		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	**600**	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	**-**	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	**5**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	0.19	J	0.19
Methyl tert butyl ether	1634-04-4	**70**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
p/m-Xylene	179601-23-1	**-**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	**-**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	**1000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	8.4		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	**-**	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	**100**	ND		1.4	ND		1.4	1.8	J	1.4	ND		1.4	ND		1.4
Methyl cyclohexane	108-87-2	**-**	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	**20000**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		**-**	-	-	-	-	-	-	1.8	-	-	-	-	-	8.59	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		**-**	-		-	-		-	-		-	-		-	117	J	0
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	**0.4**	ND		0.0314	ND		0.0326	ND		0.032	ND		0.0314	ND		0.0339
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	0.55	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	DPP-1			MRVU-1			PER-7			PER-8			SRB-1		
LAB ID:			L2269734-07			L2270047-12			L2268729-08			L2270047-11			L2268729-07		
COLLECTION DATE:			12/12/2022			12/13/2022			12/7/2022			12/13/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	2.2	J	1.5	ND		1.5	1.5	J	1.5	ND		1.5	1.6	J	1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	1.7	J	1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	1.4	J	0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	2.2	-	-	-	-	-	3.2	-	-	-	-	-	3.55	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.06	J	0.02	0.05	J	0.02	**0.13**		0.02	0.08	J	0.02	**0.16**		0.02
Benzo(a)pyrene	50-32-8	**0.1**	0.06	J	0.02	ND		0.02	0.02	J	0.02	0.1		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	0.09	J	0.01	ND		0.01	0.03	J	0.01	**0.21**		0.01	0.02	J	0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	0.04	J	0.01	ND		0.01	ND		0.01	0.06	J	0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	0.02	J	0.01	ND		0.01	ND		0.01	0.02	J	0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	0.04	J	0.01	ND		0.01	0.02	J	0.01	0.14		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.31	-	-	0.05	-	-	0.2	-	-	0.61	-	-	0.18	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	134	J	0	59.2	J	0	160	J	0	80	J	0	281	J	0
TOTAL METALS																	
Aluminum, Total	7429-90-5	**200**	**40400**		3.27	**527**		3.27	**1400**		3.27	**240**		3.27	**1490**		3.27
Antimony, Total	7440-36-0	**6**	0.8276	J	0.429	ND		0.429	ND		0.429	0.5923	J	0.429	0.5003	J	0.429
Arsenic, Total	7440-38-2	**3**	**23.28**		0.165	**7.834**		0.165	2.074		0.165	1.313		0.165	**3.858**		0.165
Barium, Total	7440-39-3	**6000**	439.1		0.173	102.3		0.173	26.76		0.173	8.565		0.173	15.7		0.173
Beryllium, Total	7440-41-7	**1**	**3.005**		0.107	ND		0.107	ND		0.107	ND		0.107	0.2851	J	0.107
Cadmium, Total	7440-43-9	**4**	**4.193**		0.0599	ND		0.0599	ND		0.0599	0.1118	J	0.0599	0.0615	J	0.0599

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	DPP-1			MRVU-1			PER-7			PER-8			SRB-1		
LAB ID:			L2269734-07			L2270047-12			L2268729-08			L2270047-11			L2268729-07		
COLLECTION DATE:			12/12/2022			12/13/2022			12/7/2022			12/13/2022			12/7/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Calcium, Total	7440-70-2	-	28800		39.4	19700		39.4	1390		39.4	7720		39.4	11900		39.4
Chromium, Total	7440-47-3	**70**	**141.5**		0.178	1.931		0.178	3.552		0.178	1.466		0.178	5.428		0.178
Cobalt, Total	7440-48-4	**100**	58.1		0.163	1.291		0.163	1.602		0.163	0.3079	J	0.163	2.503		0.163
Copper, Total	7440-50-8	**1300**	281.7		0.384	2.798		0.384	6.412		0.384	7.788		0.384	5.853		0.384
Iron, Total	7439-89-6	**300**	**94400**		19.1	**9040**		19.1	**3340**		19.1	**645**		19.1	**9310**		19.1
Lead, Total	7439-92-1	**5**	**217.3**		0.343	2.073		0.343	**8.588**		0.343	**5.883**		0.343	3.166		0.343
Magnesium, Total	7439-95-4	-	48800		24.2	13600		24.2	1260		24.2	1440		24.2	2840		24.2
Manganese, Total	7439-96-5	**50**	**793.2**		0.44	**105.2**		0.44	22.57		0.44	11.56		0.44	**149.2**		0.44
Mercury, Total	7439-97-6	**2**	**3.523**		0.0915	ND		0.0915	0.102	J	0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	**124.1**		0.556	1.992	J	0.556	2.432		0.556	2.504		0.556	4.318		0.556
Potassium, Total	7440-09-7	-	20900		30.9	7050		30.9	3320		30.9	915		30.9	3330		30.9
Selenium, Total	7782-49-2	**40**	12		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	1.778		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**291000**		29.3	**172000**		29.3	42000		29.3	17300		29.3	36600		29.3
Thallium, Total	7440-28-0	**2**	0.6176	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	112.1		1.57	1.948	J	1.57	5.373		1.57	3.037	J	1.57	2.082	J	1.57
Zinc, Total	7440-66-6	**2000**	827.1		3.41	6.298	J	3.41	19.02		3.41	60.74		3.41	18.67		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	**3000**	292		24	52.2	J	48	ND		48	64.2	J	24	657		48

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	TL-1			TL-2			TL-3			TL-4			TL-5		
LAB ID:			L2268729-09			L2268729-11			L2271325-04			L2268729-10			L2271325-03		
COLLECTION DATE:			12/7/2022			12/7/2022			12/19/2022			12/7/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.71	ND		1.8
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		120	ND		300
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.39	ND		0.96
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		1.4	ND		3.4
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.42	ND		1
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.44	ND		1.1
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.27	ND		0.67
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.27	ND		0.68
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.3	ND		0.74
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.29	ND		0.72
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.36	ND		0.9
Chlorobenzene	108-90-7	50	ND		0.18	1.4		0.18	7.6		0.18	200		0.36	95		0.89
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.32	ND		0.8
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.26	ND		0.66
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.32	ND		0.79
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.38	ND		0.96
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.33	ND		0.82
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.29	ND		0.72
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.29	ND		0.72
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.5	ND		1.2
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.33	ND		0.84
Benzene	71-43-2	1	ND		0.08	28		0.08	0.45	J	0.08	0.64	J	0.16	2.4	J	0.4
Toluene	108-88-3	600	ND		0.2	2.3		0.2	0.2	J	0.2	ND		0.41	1.4	J	1
Ethylbenzene	100-41-4	700	ND		0.17	13		0.17	0.19	J	0.17	0.85	J	0.33	6.4		0.84
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.4	ND		1
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.51	ND		1.3
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.14	ND		0.36
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.27	ND		0.67
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.34	ND		0.84
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.33	ND		0.82
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.35	ND		0.88
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	0.19	J	0.18	ND		0.37	ND		0.92
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	0.28	J	0.19	ND		0.37	1.3	J	0.93
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	0.35	J	0.19	0.97	J	0.19	0.74	J	0.37	6.8	J	0.94
Methyl tert butyl ether	1634-04-4	70	3.4		0.17	0.54	J	0.17	ND		0.17	0.44	J	0.33	ND		0.83
p/m-Xylene	179601-23-1	-	ND		0.33	2.8		0.33	ND		0.33	ND		0.66	3.1	J	1.7
o-Xylene	95-47-6	-	ND		0.39	1.6		0.39	ND		0.39	ND		0.78	5.8		2
Xylenes, Total	1330-20-7	1000	ND		0.33	4.4		0.33	ND		0.33	ND		0.66	8.9	J	1.7
cis-1,2-Dichloroethene	156-59-2	70	0.37	J	0.19	ND		0.19	ND		0.19	ND		0.37	ND		0.94
1,2-Dichloroethene, Total	540-59-0	-	0.37	J	0.16	ND		0.16	ND		0.16	ND		0.33	ND		0.82
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.72	ND		1.8
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.49	ND		1.2
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	ND		2.9	ND		7.3
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.6	ND		1.5
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	56		3.9	ND		9.7
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.83	ND		2.1
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		1	ND		2.6
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.3	ND		0.76
Isopropylbenzene	98-82-8	700	ND		0.19	58		0.19	21		0.19	60		0.37	500		0.94
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.47	ND		1.2
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.44	ND		1.1
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.47	ND		1.2
Cyclohexane	110-82-7	-	ND		0.27	56		0.27	0.42	J	0.27	1	J	0.54	ND		1.4
Tert-Butyl Alcohol	75-65-0	100	150		1.4	11		1.4	2.6	J	1.4	29		2.8	ND		7
Methyl cyclohexane	108-87-2	-	ND		0.4	26		0.4	0.51	J	0.4	2.1	J	0.79	3	J	2
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.3	ND		0.74
Total VOCs		-	153.77	-	-	200.99	-	-	34.41	-	-	350.77	-	-	625.2	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	8.44	J	0	1380	J	0	95.5	J	0	504	J	0	2930	J	0
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	0.4	0.0826	J	0.032	ND		0.0308	ND		0.0339	ND		0.032	ND		0.339
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	400	ND		0.44	0.7	J	0.44	ND		0.44	0.66	J	0.44	6.3		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	TL-1			TL-2			TL-3			TL-4			TL-5		
LAB ID:			L2268729-09			L2268729-11			L2271325-04			L2268729-10			L2271325-03		
COLLECTION DATE:			12/7/2022			12/7/2022			12/19/2022			12/7/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Fluoranthene	206-44-0	**300**	0.91	J	0.26	ND		0.26	ND		0.26	ND		0.26	0.74	J	0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	26		0.46	ND		0.46	ND		0.46	1.7	J	0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.5	J	0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	0.64	J	0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33	0.59	J	0.33
Benzo(ghi)perylene	191-24-2	**100**	0.6	J	0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	1	J	0.41	ND		0.41	0.54	J	0.41	4.9		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	0.75	J	0.33	ND		0.33	0.46	J	0.33	4.2		0.33
Pyrene	129-00-0	**200**	0.82	J	0.28	0.3	J	0.28	ND		0.28	ND		0.28	0.51	J	0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	3.1		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	12		0.45	ND		0.45	1.4	J	0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	0.99	J	0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	2	J	0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	2.97	-	-	40.75	-	-	-	-	-	4.05	-	-	24.54	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	**0.42**		0.02	**0.14**		0.02	ND		0.02	0.1	J	0.02	0.04	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	**0.69**		0.02	0.1	J	0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	**1.2**		0.01	0.15		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	0.37		0.01	0.14		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	0.15		0.01	0.15		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	**0.72**		0.01	0.16		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	3.55	-	-	0.84	-	-	-	-	-	0.1	-	-	0.04	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	142	J	0	1130	J	0	67.7	J	0	341	J	0	2250	J	0
TOTAL METALS																	
Aluminum, Total	7429-90-5	**200**	**2570**		3.27	59.2		3.27	**332**		3.27	**432**		3.27	**1910**		3.27
Antimony, Total	7440-36-0	**6**	0.5113	J	0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	1.302		0.165	**8.823**		0.165	1.358		0.165	**4.619**		0.165	**24.64**		0.165
Barium, Total	7440-39-3	**6000**	593.8		0.173	49.4		0.173	65.18		0.173	173.6		0.173	191		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	0.2128	J	0.107	0.1717	J	0.107
Cadmium, Total	7440-43-9	**4**	0.589		0.0599	0.1592	J	0.0599	ND		0.0599	ND		0.0599	ND		0.0599

Table 11
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 16b - Marine Terminal Loading Area

SAMPLE ID:		NJ Groundwater Criteria	TL-1			TL-2			TL-3			TL-4			TL-5		
LAB ID:			L2268729-09			L2268729-11			L2271325-04			L2268729-10			L2271325-03		
COLLECTION DATE:			12/7/2022			12/7/2022			12/19/2022			12/7/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
Calcium, Total	7440-70-2	-	349000		39.4	14400		39.4	114000		39.4	75100		39.4	38400		39.4
Chromium, Total	7440-47-3	**70**	9.364		0.178	0.266	J	0.178	0.8403	J	0.178	1.257		0.178	7.368		0.178
Cobalt, Total	7440-48-4	**100**	5.844		0.163	ND		0.163	0.5446		0.163	0.6056		0.163	3.12		0.163
Copper, Total	7440-50-8	**1300**	40.6		0.384	1.364		0.384	5.836		0.384	6.407		0.384	27.09		0.384
Iron, Total	7439-89-6	**300**	**41500**		19.1	**27300**		19.1	**3780**		19.1	**80500**		19.1	**52300**		19.1
Lead, Total	7439-92-1	**5**	**32.61**		0.343	0.7156	J	0.343	0.8772	J	0.343	1.529		0.343	**7.53**		0.343
Magnesium, Total	7439-95-4	-	363000		24.2	16500		24.2	62900		24.2	22600		24.2	17200		24.2
Manganese, Total	7439-96-5	**50**	**1801**		0.44	**294.8**		0.44	**115.2**		0.44	**1426**		0.44	**313.9**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	0.103	J	0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	10.02		0.556	ND		0.556	1.057	J	0.556	0.8489	J	0.556	6.332		0.556
Potassium, Total	7440-09-7	-	96000		30.9	16600		30.9	15500		30.9	15400		30.9	20300		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	1.85	J	1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**3280000**		586	**155000**		29.3	**652000**		293	**298000**		29.3	**79200**		29.3
Thallium, Total	7440-28-0	**2**	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	9.778		1.57	ND		1.57	ND		1.57	1.598	J	1.57	10.07		1.57
Zinc, Total	7440-66-6	**2000**	155.6		3.41	13.91		3.41	24.13		3.41	15.46		3.41	117.4		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	**3000**	**8990**		24	451		24	408		24	1290		24	2080		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 12
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 19 0 QC Laboratory

SAMPLE ID:		NJ Groundwater Criteria	MW-1			MW-2			MW-3			MW-4			PER-6R		
LAB ID:			L2267427-07			L2267427-05			L2267427-03			L2267427-06			L2267427-08		
COLLECTION DATE:			12/1/2022			12/1/2022			12/1/2022			12/1/2022			12/1/2022		
SAMPLE DEPTH:																	
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																	
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	0.19	J	0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	0.69		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	1.2		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	2.2		0.17	0.26	J	0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	0.32	J	0.18	ND		0.18	ND		0.18	0.2	J	0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19	0.5	J	0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	0.17	J	0.17	ND		0.17	0.53	J	0.17	ND		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	3.5		0.33	0.64	J	0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	1.4		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	4.9		0.33	0.64	J	0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	0.95	J	0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	11		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	1.9	J	1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	0.54		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	0.44	J	0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	0.39	J	0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	ND		1.4	6	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	2.1	J	0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	-	-	-	0.93	-	-	-	-	-	32.4	-	-	1.79	-	-
VOLATILE ORGANICS BY GC/MS-TIC																	
Total TIC Compounds		-	-		-	-		-	-		-	40.9	J	0	-		-
1,4 DIOXANE BY 8270E-SIM																	
1,4-Dioxane	123-91-1	0.4	ND		0.0332	ND		0.0326	ND		0.0326	0.137	J	0.0314	ND		0.0314
SEMIVOLATILE ORGANICS BY GC/MS																	
Acenaphthene	83-32-9	400	0.8	J	0.59	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	50	ND		0.63	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.67	ND		0.5	ND		0.5	ND		0.5	ND		0.5

Table 12
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 19 0 QC Laboratory

SAMPLE ID:		NJ Groundwater Criteria	MW-1			MW-2			MW-3			MW-4			PER-6R		
LAB ID:			L2267427-07			L2267427-05			L2267427-03			L2267427-06			L2267427-08		
COLLECTION DATE:			12/1/2022			12/1/2022			12/1/2022			12/1/2022			12/1/2022		
SAMPLE DEPTH:																	
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
2-Chloronaphthalene	91-58-7	600	ND		0.58	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.5	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		1.2	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.34	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.64	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.7	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.66	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.91	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.77	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.6	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.62	ND		0.46	ND		0.46	0.65	J	0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		1	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.55	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.85	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		2	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.5	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	0.8	J	0.51	0.6	J	0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.7	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.5	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		2.4	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.45	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.62	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.44	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.39	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	0.59	J	0.55	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	0.7	J	0.44	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.37	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.4	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.66	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		1.1	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		1	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.66	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.6	ND		0.45	ND		0.45	1.8	J	0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.81	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.46	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.63	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.54	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		2.4	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		1.1	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.89	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		8.8	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.75	ND		0.57	ND		0.57	2.2	J	0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.65	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		1	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.65	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.5	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		2.1	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.7	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.7	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		4.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.6	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.58	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		1	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		1.1	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	2.89	-	-	0.6	-	-	-	-	-	4.65	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																	
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.12	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.06	J	0.03	0.04	J	0.02	0.04	J	0.02	0.05	J	0.02	0.04	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	0.24	J	0.02	ND		0.01	ND		0.01	0.17	J	0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.06	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.3	-	-	0.04	-	-	0.04	-	-	0.22	-	-	0.04	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																	
Naphthalene, 1-methyl-	000090-12-0	-	-		-	-		-	-		-	2.29	NJ	0	-		-
Unknown		-	7.31	J	0	-		-	-		-	-		-	-		-
Total TIC Compounds		-	87.4	J	0	88.3	J	0	58	J	0	84	J	0	184	J	0

Table 12
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 19 0 QC Laboratory

SAMPLE ID:		NJ Groundwater Criteria	MW-1			MW-2			MW-3			MW-4			PER-6R		
LAB ID:			L2267427-07			L2267427-05			L2267427-03			L2267427-06			L2267427-08		
COLLECTION DATE:			12/1/2022			12/1/2022			12/1/2022			12/1/2022			12/1/2022		
SAMPLE DEPTH:																	
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER		
TOTAL METALS																	
Aluminum, Total	7429-90-5	**200**	**1170**		3.27	28.3		3.27	48		3.27	**2340**		3.27	**1480**		3.27
Antimony, Total	7440-36-0	**6**	1.599	J	0.429	ND		0.429	0.5206	J	0.429	0.5623	J	0.429	1.263	J	0.429
Arsenic, Total	7440-38-2	**3**	2.071		0.165	**6.807**		0.165	2.502		0.165	**3.287**		0.165	2.054		0.165
Barium, Total	7440-39-3	**6000**	44.54		0.173	36.34		0.173	13.63		0.173	20.06		0.173	39.93		0.173
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	0.132	J	0.0599
Calcium, Total	7440-70-2	**-**	77000		39.4	15200		39.4	8550		39.4	56400		39.4	50600		39.4
Chromium, Total	7440-47-3	**70**	15.02		0.178	0.6188	J	0.178	0.3479	J	0.178	0.3521	J	0.178	4.25		0.178
Cobalt, Total	7440-48-4	**100**	1.039		0.163	0.4957	J	0.163	ND		0.163	0.197	J	0.163	0.4573	J	0.163
Copper, Total	7440-50-8	**1300**	10.65		0.384	6.237		0.384	5.678		0.384	1.04		0.384	32.1		0.384
Iron, Total	7439-89-6	**300**	**441**		19.1	**1740**		19.1	**1400**		19.1	130		19.1	**2360**		19.1
Lead, Total	7439-92-1	**5**	1.574		0.343	ND		0.343	ND		0.343	ND		0.343	3.885		0.343
Magnesium, Total	7439-95-4	**-**	217		24.2	2020		24.2	1500		24.2	58.9	J	24.2	6910		24.2
Manganese, Total	7439-96-5	**50**	24.98		0.44	**354.8**		0.44	**79.83**		0.44	3.292		0.44	8.565		0.44
Mercury, Total	7439-97-6	**2**	0.133	J	0.0915	ND		0.0915	ND		0.0915	0.143	J	0.0915	0.093	J	0.0915
Nickel, Total	7440-02-0	**100**	1.661	J	0.556	0.6807	J	0.556	ND		0.556	3.879		0.556	3.142		0.556
Potassium, Total	7440-09-7	**-**	15900		30.9	4660		30.9	863		30.9	26800		30.9	4960		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	2.67	J	1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	14800		29.3	**67300**		29.3	5380		29.3	41100		29.3	7780		29.3
Thallium, Total	7440-28-0	**2**	0.2192	J	0.143	0.3474	J	0.143	0.8644	J	0.143	0.2696	J	0.143	0.1964	J	0.143
Vanadium, Total	7440-62-2	**-**	9.759		1.57	ND		1.57	1.627	J	1.57	4.929	J	1.57	5.753		1.57
Zinc, Total	7440-66-6	**2000**	8.247	J	3.41	25.06		3.41	15.09		3.41	ND		3.41	41.83		3.41
GENERAL CHEMISTRY																	
Nitrogen, Ammonia	7664-41-7	**3000**	ND		24	766		24	40.1	J	24	**4050**		24	ND		48

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 13
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 46 - Slop Gasoline Unloading Area

SAMPLE ID:		NJ Groundwater Criteria	SG-1			SG-2			SG-3			SG-4		
LAB ID:			L2270408-10			L2270408-09			L2270408-08			L2270408-07		
COLLECTION DATE:			12/14/2022			12/14/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	0.08	J	0.08	**6.6**		0.08	**6.9**		0.08	**8.3**		0.08
Toluene	108-88-3	600	ND		0.2	1.5		0.2	0.54	J	0.2	1.6		0.2
Ethylbenzene	100-41-4	700	ND		0.17	53		0.17	0.4	J	0.17	2.8		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	1.1		0.17	0.87	J	0.17	1.5		0.17	1.4		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	8.7		0.33	0.84	J	0.33	2.4		0.33
o-Xylene	95-47-6	-	ND		0.39	0.43	J	0.39	ND		0.39	0.41	J	0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	9.1	J	0.33	0.84	J	0.33	2.8	J	0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	1.4	J	0.3	ND		0.3	ND		0.3	0.32	J	0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	53		0.19	17		0.19	11		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	17		0.27	9.5	J	0.27	9.8	J	0.27
Tert-Butyl Alcohol	75-65-0	100	31		1.4	6.8	J	1.4	11		1.4	8.2	J	1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	12		0.4	3.3	J	0.4	5.1	J	0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	33.58	-	-	159.9	-	-	50.98	-	-	51.33	-	-
VOLATILE ORGANICS BY GC/MS-TIC														

Table 13
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 46 - Slop Gasoline Unloading Area

SAMPLE ID:		NJ Groundwater Criteria	SG-1			SG-2			SG-3			SG-4		
LAB ID:			L2270408-10			L2270408-09			L2270408-08			L2270408-07		
COLLECTION DATE:			12/14/2022			12/14/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Total TIC Compounds		-	1.22	J	0	1040	J	0	182	J	0	295	J	0
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	0.114	J	0.0314	ND		0.0314	ND		0.0303	ND		0.0314
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	1.4	J	0.44	ND		0.44	0.87	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	ND		0.46	27		0.46	ND		0.46	5.3		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	0.49	J	0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	ND		0.45	8.5		0.45	ND		0.45	3.2		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	**400**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84

Table 13
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 46 - Slop Gasoline Unloading Area

SAMPLE ID:		NJ Groundwater Criteria	SG-1			SG-2			SG-3			SG-4		
LAB ID:			L2270408-10			L2270408-09			L2270408-08			L2270408-07		
COLLECTION DATE:			12/14/2022			12/14/2022			12/14/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
Total SVOCs		-	-	-	-	37.39	-	-	-	-	-	9.37	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.03	J	0.02	ND		0.02	ND		0.02	0.02	J	0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.03	-	-	-	-	-	-	-	-	0.02	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	152	J	0	416	J	0	173	J	0	178	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	**3380**		32.7	**346**		3.27	**371**		3.27	**790**		3.27
Antimony, Total	7440-36-0	**6**	ND		4.29	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	**3**	**22.9**		1.65	**3.517**		0.165	**5.009**		0.165	**5.694**		0.165
Barium, Total	7440-39-3	**6000**	108.8		1.73	48.86		0.173	37.46		0.173	51.9		0.173
Beryllium, Total	7440-41-7	**1**	ND		1.07	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	**4**	ND		0.599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	138000		394	44700		39.4	32400		39.4	39300		39.4
Chromium, Total	7440-47-3	**70**	25.7		1.78	2.391		0.178	3.103		0.178	3.46		0.178
Cobalt, Total	7440-48-4	**100**	4.798	J	1.63	0.5038		0.163	0.6352		0.163	0.84		0.163
Copper, Total	7440-50-8	**1300**	54.69		3.84	4.49		0.384	6.988		0.384	7.318		0.384
Iron, Total	7439-89-6	**300**	**12500**		191	**6920**		19.1	**5520**		19.1	**13100**		19.1
Lead, Total	7439-92-1	**5**	**43.84**		3.43	3.427		0.343	2.557		0.343	**5.801**		0.343
Magnesium, Total	7439-95-4	-	399000		242	22600		24.2	51400		24.2	38700		24.2
Manganese, Total	7439-96-5	**50**	**440.1**		4.4	**451.8**		0.44	**257.3**		0.44	**443.3**		0.44
Mercury, Total	7439-97-6	**2**	0.374		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	**100**	13.61	J	5.56	1.328	J	0.556	1.9	J	0.556	2.335		0.556
Potassium, Total	7440-09-7	-	125000		309	13000		30.9	27600		30.9	17600		30.9
Selenium, Total	7782-49-2	**40**	ND		17.3	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		1.63	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**3190000**		293	**157000**		29.3	**454000**		146	**316000**		29.3
Thallium, Total	7440-28-0	**2**	ND		1.43	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	49.4	J	15.7	2.893	J	1.57	5.264		1.57	7.079		1.57
Zinc, Total	7440-66-6	**2000**	53.55	J	34.1	12.17		3.41	47.33		3.41	18.66		3.41
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	**5340**		48	1880		24	2040		48	1620		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 14
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 53 - Second Tankfield

SAMPLE ID:		NJ Groundwater Criteria	2TF-1			2TF-2			2TF-3			2TF-4			2TF-5			2TF-6		
LAB ID:			L2268106-03			L2270408-05			L2268454-03			L2268106-08			L2268106-05			L2268106-04		
COLLECTION DATE:			12/5/2022			12/14/2022			12/6/2022			12/5/2022			12/5/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	0.77		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	0.87		0.18	ND		0.18	0.76		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	0.21	J	0.18	ND		0.18	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	36		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	0.43	J	0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	0.43	J	0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	0.48		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	0.31	J	0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	0.2	J	0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	0.61		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	2.8		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	0.21	J	0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	1.4	J	0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	2.2		0.17	ND		0.17	0.19	J	0.17	4.4		0.17	0.2	J	0.17	0.99	J	0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	2.5		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	1.3		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	3.8		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	3.8		0.19	0.37	J	0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	3.8		0.16	0.57	J	0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	1.5		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	0.41	J	0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	1.5	J	0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	ND		1.4	190		1.4	ND		1.4	26		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	0.6	J	0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	3.07	-	-	-	-	-	11.95	-	-	239.23	-	-	0.2	-	-	26.99	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	-		-	-		-	-		-	99.1	J	0	18.5	J	0	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	0.4	0.0741	J	0.0339	ND		0.0339	1.96		0.0339	0.755		0.0332	0.195		0.0377	1.06		0.0339
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	ND		0.44	17		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2

Table 14
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 53 - Second Tankfield

SAMPLE ID:		NJ Groundwater Criteria	2TF-1			2TF-2			2TF-3			2TF-4			2TF-5			2TF-6		
LAB ID:			L2268106-03			L2270408-05			L2268454-03			L2268106-08			L2268106-05			L2268106-04		
COLLECTION DATE:			12/5/2022			12/14/2022			12/6/2022			12/5/2022			12/5/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	0.55	J	0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.58	J	0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	3.9		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	0.92	J	0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	1.4	J	0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	2.4		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	-	-	-	26.17	-	-	0.58	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.46
Benzo(a)anthracene	56-55-3	0.1	0.05	J	0.02	ND		0.02	0.04	J	0.02	0.02	J	0.02	0.06	J	0.02	**0.21**	J	0.1
Benzo(a)pyrene	50-32-8	0.1	0.02	J	0.02	ND		0.02	ND		0.02	ND		0.02	0.06	J	0.02	ND		0.08
Benzo(b)fluoranthene	205-99-2	0.2	0.03	J	0.01	ND		0.01	ND		0.01	ND		0.01	0.1		0.01	ND		0.06
Benzo(k)fluoranthene	207-08-9	0.5	0.01	J	0.01	ND		0.01	ND		0.01	ND		0.01	0.04	J	0.01	ND		0.04
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.06
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	0.06	J	0.01	ND		0.06
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.05
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	0.17	J	0.01	ND		0.01	ND		0.01	**0.51**	J	0.07
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.23
Total SVOCs		-	0.13	-	-	-	-	-	0.21	-	-	0.02	-	-	0.32	-	-	0.72	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	129	J	0	25.2	J	0	64	J	0	191	J	0	73.3	J	0	140	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	61.7		3.27	**399**		3.27	180		3.27	21.6		3.27	97		3.27	**349**		3.27
Antimony, Total	7440-36-0	6	ND		0.429	0.4561	J	0.429	ND		0.429	0.6535	J	0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	0.7473		0.165	0.464	J	0.165	**14.56**		0.165	**29.65**		0.165	**8.526**		0.165	**3.983**		0.165
Barium, Total	7440-39-3	6000	24.77		0.173	30.17		0.173	130.2		0.173	326.3		0.173	60.19		0.173	262.5		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	0.1443	J	0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	0.3076		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	67300		39.4	8620		39.4	31200		39.4	24000		39.4	26200		39.4	78500		39.4
Chromium, Total	7440-47-3	70	0.3089	J	0.178	2.66		0.178	0.9163	J	0.178	1.994	J	0.178	0.701	J	0.178	1.465	J	0.178
Cobalt, Total	7440-48-4	100	1.641		0.163	0.7347		0.163	1.017		0.163	1.483		0.163	0.2054	J	0.163	0.6707		0.163
Copper, Total	7440-50-8	1300	5.322		0.384	11.24		0.384	1.278		0.384	2.618		0.384	1.205		0.384	14.39		0.384
Iron, Total	7439-89-6	300	210		19.1	**726**		19.1	**4230**		19.1	**24600**		19.1	**12500**		19.1	**25200**		19.1
Lead, Total	7439-92-1	5	ND		0.343	0.672	J	0.343	0.688	J	0.343	ND		0.343	0.8534	J	0.343	2.629		0.343
Magnesium, Total	7439-95-4	-	35600		24.2	5040		24.2	19900		24.2	53500		24.2	18600		24.2	58100		24.2
Manganese, Total	7439-96-5	50	**5808**		0.44	30.72		0.44	**231**		0.44	**262.7**		0.44	**246.5**		0.44	**357.1**		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	11.49		0.556	1.875	J	0.556	1.112	J	0.556	0.6588	J	0.556	ND		0.556	1.364	J	0.556
Potassium, Total	7440-09-7	-	1050		30.9	954		30.9	1080		30.9	34900		30.9	16900		30.9	39300		30.9
Selenium, Total	7782-49-2	40	ND		1.73	1.95	J	1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	**93600**		29.3	8820		29.3	**99800**		29.3	**716000**		293	**112000**		29.3	**472000**		29.3

Table 14
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 53 - Second Tankfield

SAMPLE ID:		NJ Groundwater Criteria	2TF-1			2TF-2			2TF-3			2TF-4			2TF-5			2TF-6		
LAB ID:			L2268106-03			L2270408-05			L2268454-03			L2268106-08			L2268106-05			L2268106-04		
COLLECTION DATE:			12/5/2022			12/14/2022			12/6/2022			12/5/2022			12/5/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Thallium, Total	7440-28-0	2	0.2095	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	4.048	J	1.57	ND		1.57	3.19	J	1.57	ND		1.57	1.888	J	1.57
Zinc, Total	7440-66-6	2000	43.63		3.41	17.3		3.41	12.66		3.41	6.024	J	3.41	9.808	J	3.41	23.92		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	180		24	67.6	J	48	106		24	14300		24	4920		24	10800		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 15
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 54 - Third Tankfield

SAMPLE ID:		NJ Groundwater Criteria	SM-1			SM-1D			TF-1			TF-1D			TF-2			TF-3			TF-4			TF-4D			TF-5			TF-6		
LAB ID:			L2270765-07			L2270765-06			L2271613-03			L2271325-07			L2271325-12			L2271325-11			L2269734-09			L2269734-10			L2269734-12			L2269734-11		
COLLECTION DATE:			12/15/2022			12/15/2022			12/20/2022			12/19/2022			12/19/2022			12/19/2022			12/12/2022			12/12/2022			12/12/2022			12/12/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																																
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		1.4	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61	ND		240	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.77	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	1.7	J	0.68	ND		0.68	ND		0.68	ND		0.68	ND		2.7	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	0.22	J	0.21	3.8		0.21	ND		0.21	ND		0.21	ND		0.21	2.6	J	0.84	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.89	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.54	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	0.23	J	0.14	ND		0.14	ND		0.14	ND		0.14	1	J	0.55	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.6	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.58	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.72	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	2.1		0.18	ND		0.18	ND		0.18	1.4		0.18	0.58		0.18	ND		0.18	ND		0.71	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.64	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.53	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.63	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.77	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.66	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.58	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.58	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.99	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.67	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	0.14	J	0.08	ND		0.08	0.2	J	0.08	0.15	J	0.08	0.55		0.08	5		0.08	18		0.32	13		0.08	0.17	J	0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.81	1.2		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	0.21	J	0.17	0.27	J	0.17	ND		0.17	ND		0.17	12		0.67	0.36	J	0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	0.23	J	0.2	ND		0.8	0.39	J	0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		1	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	0.5		0.07	ND		0.07	ND		0.07	ND		0.07	1.2		0.28	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	5.2		0.54	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	2.7		0.17	ND		0.17	ND		0.17	ND		0.17	17		0.68	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.65	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	0.2	J	0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.7	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.74	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	0.21	J	0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.74	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	1.1	J	0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.75	0.2	J	0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	3.6		0.17	ND		0.17	4.5		0.17	ND		0.17	ND		0.17	2.6		0.17	9.6		0.66	20		0.17	ND		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	0.47	J	0.33	0.72	J	0.33	ND		0.33	0.74	J	0.33	20		1.3	3.6		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.43	J	0.39	ND		0.39	ND		0.39	12		1.6	2.2		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	0.47	J	0.33	1.2	J	0.33	ND		0.33	0.74	J	0.33	32		1.3	5.8		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	0.4	J	0.19	ND		0.19	ND		0.19	ND		0.19	2.6		0.75	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	0.4	J	0.16	ND		0.16	ND		0.16	ND		0.16	2.6		0.65	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		1.4	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.98	ND		0.24	ND		0.24
Acetone	67-64-1	6000	2.3	J	1.5	ND		1.5	ND		1.5	1.7	J	1.5	ND		1.5	ND		1.5	4.5	J	1.5	ND		5.8	5.7		1.5	3.2	J	1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	30		0.3	ND		0.3	ND		0.3	ND		0.3	ND		1.2	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		7.8	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		1.7	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		2.1	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.61	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	1.5		0.19	ND		0.19	9.2		0.19	3.9		0.19	0.72		0.19	1.5	J	0.75	25		0.19	1.6		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.94	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.88	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.94	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	1.7	J	0.27	ND		0.27	ND		0.27	0.4	J	0.27	ND		0.27	1.4	J	0.27	3.1	J	1.1	4.6	J	0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	100		1.4	ND		1.4	16		1.4	1.7	J	1.4	ND		1.4	83		1.4	62		5.6	200		1.4	2	J	1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	0.58	J	0.4	0.46	J	0.4	ND		0.4	1	J	0.4	ND		0.4	0.52	J	0.4	2.9	J	1.6	52		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.59	ND		0.15	ND		0.15
Total VOCs		-	2.3	-	-	109.43	-	-	2.18	-	-	62.61	-	-	15.27	-	-	5.03	-	-	98.71	-	-	170.7	-	-	328.25	-	-	6.97	-	-
VOLATILE ORGANICS BY GC/MS-TIC																																
Total TIC Compounds		-	-	-	-	14.3	J	0	47	J	0	2.24	J	0	91.6	J	0	21.4	J	0	105	J	0	372	J	0	96.1	J	0	9.34	J	0
1,4 DIOXANE BY 8270E-SIM																																
1,4-Dioxane	123-91-1	0.4	ND		0.0326	0.18		0.0314	ND		0.0303	29.5		0.0314	ND		0.0303	ND		0.0303	0.155		0.0314	52.2		0.032	0.585		0.0314	ND		0.0314
SEMIVOLATILE ORGANICS BY GC/MS																																
Acenaphthene	83-32-9	400	ND		0.44	7.5		0.44	ND		0.44	33		0.44	ND		0.44	ND		0.44	17		0.44	95		4.4	23		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		4.8	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		4.4	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		9.3	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	0.45	J	0.26	ND		0.26	ND		0.26	0.5	J	0.26	ND		2.6	0.44	J	0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		4.9	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		5.3	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		6.9	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		5.8	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	0.67	J	0.46	380		4.6	ND		0.46	0.71	J	0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		7.7	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		4.2	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		6.4	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	2.4	J	1.5	ND		1.5	ND		1.5	1.5	J	1.5	ND		1.5	ND		1.5	ND		1.5	ND		15	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		12	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		3.9	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		13	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		3.8	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		18	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		3.4	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		4.6	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	0.35	J	0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		3.3	0.4	J	0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	4.4		0.41	ND		0.41	0.54	J	0.41	ND		0.41	ND		0.41	6.8		0.41	21		4.1	8.6		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	2.5		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	1.5	J	0.33	8.3	J	3.3	6.2		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	0.31	J	0.28	ND		2.8	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		11	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		8.1	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	1.1	J	0.5	ND		0.5	ND		0.5	1.7	J	0.5	25		5	5.1		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	45		4.5	2.6		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		6.1	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		3.5	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		4.8	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		4.1	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	24	J	18	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		8.5	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		6.7	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		66	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		5.7	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		4.9	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		7.7	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	19	J	4.9	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		3.8	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		16	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		5.3	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		5.3	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		33	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		4.6	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		4.4	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		7.6	ND		0.76	ND		0.76
2,3,4,6-Trichlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		8.4	ND		0.84	ND		0.84
Total SVOCs		-	2.4	-	-	14.75	-	-	-	-	-	36.59	-	-	-	-	-	-	-	-	28.48	-	-	617.3	-	-	46.34	-	-	0.71	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																																

Table 15
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 54 - Third Tankfield

SAMPLE ID:		NJ Groundwater Criteria	SM-1			SM-1D			TF-1			TF-1D			TF-2			TF-3			TF-4			TF-4D			TF-5			TF-6		
LAB ID:			L2270765-07			L2270765-06			L2271613-03			L2271325-07			L2271325-12			L2271325-11			L2269734-09			L2269734-10			L2269734-12			L2269734-11		
COLLECTION DATE:			12/15/2022			12/15/2022			12/20/2022			12/19/2022			12/19/2022			12/19/2022			12/12/2022			12/12/2022			12/12/2022			12/12/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.46	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.1		0.02	0.08	J	0.02	0.18	J	0.1	0.08	J	0.02	0.05	J	0.02	0.03	J	0.02	0.09	J	0.02	0.05	J	0.02	0.05	J	0.02	0.04	J	0.02
Benzo(a)pyrene	50-32-8	0.1	0.05	J	0.02	0.03	J	0.02	ND		0.08	0.03	J	0.02	0.02	J	0.02	ND		0.02	0.06	J	0.02	0.03	J	0.02	0.03	J	0.02	0.04	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	0.11		0.01	0.06	J	0.01	ND		0.06	0.05	J	0.01	0.03	J	0.01	0.02	J	0.01	0.08	J	0.01	0.04	J	0.01	0.03	J	0.01	0.07	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	0.07	J	0.01	0.05	J	0.01	ND		0.04	0.04	J	0.01	0.02	J	0.01	0.01	J	0.01	0.02	J	0.01	0.02	J	0.01	0.01	J	0.01	0.02	J	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	0.07	J	0.01	0.06	J	0.01	ND		0.06	0.04	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	0.09	J	0.01	0.05	J	0.01	ND		0.06	0.04	J	0.01	ND		0.01	ND		0.01	0.04	J	0.01	0.03	J	0.01	ND		0.01	0.04	J	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.05	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.07	ND		0.01	ND		0.01	ND		0.01	0.11	J	0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.23	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.49	-	-	0.33	-	-	0.18	-	-	0.28	-	-	0.12	-	-	0.06	-	-	0.4	-	-	0.17	-	-	0.12	-	-	0.21	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																																
Total TIC Compounds		-	72.6	J	0	75.9	J	0	120	J	0	98.3	J	0	212	J	0	148	J	0	251	J	0	98.5	J	0	846	J	0	77.1	J	0
TOTAL METALS																																
Aluminum, Total	7429-90-5	200	1920		3.27	2470		3.27	48.7		3.27	123		3.27	28.6		3.27	16.8		3.27	487		3.27	291		3.27	8860		3.27	2350		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	0.4987	J	0.429	ND		0.429	ND		0.429	0.4743	J	0.429	ND		0.429	0.647	J	0.429	0.7937	J	0.429
Arsenic, Total	7440-38-2	3	1.391		0.165	4.693		0.165	13.48		0.165	1.096		0.165	0.9353		0.165	2.56		0.165	21.71		0.165	2.012		0.165	24.07		0.165	3.454		0.165
Barium, Total	7440-39-3	6000	73.05		0.173	35.04		0.173	12.9		0.173	91.89		0.173	13.8		0.173	10.45		0.173	126.5		0.173	94.05		0.173	167.3		0.173	35.88		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	0.1602	J	0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	0.6271		0.107	0.1396	J	0.107
Cadmium, Total	7440-43-9	4	0.0717	J	0.0599	ND		0.0599	0.1573	J	0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	1.038		0.0599	0.1113	J	0.0599
Calcium, Total	7440-70-2	-	12800		39.4	35000		39.4	25200		39.4	71200		39.4	20000		39.4	21300		39.4	38700		39.4	59000		39.4	45200		39.4	27500		39.4
Chromium, Total	7440-47-3	70	4.498		0.178	5.748		0.178	0.5238	J	0.178	1.742		0.178	ND		0.178	0.2979	J	0.178	3.052		0.178	2.264		0.178	63.16		0.178	8.198		0.178
Cobalt, Total	7440-48-4	100	1.666		0.163	3.444		0.163	0.2771	J	0.163	0.202	J	0.163	ND		0.163	ND		0.163	0.7586		0.163	0.471	J	0.163	10.46		0.163	2.159		0.163
Copper, Total	7440-50-8	1300	22.56		0.384	8.183		0.384	1.321		0.384	3.619		0.384	0.5794	J	0.384	1.49		0.384	6.065		0.384	5.996		0.384	150.8		0.384	31.33		0.384
Iron, Total	7439-89-6	300	4050		19.1	17600		19.1	14800		19.1	2660		19.1	3440		19.1	1150		19.1	8600		19.1	21100		19.1	83100		19.1	6390		19.1
Lead, Total	7439-92-1	5	11.15		0.343	4.766		0.343	1.197		0.343	0.869	J	0.343	ND		0.343	ND		0.343	5.884		0.343	1.898		0.343	102.9		0.343	44.34		0.343
Magnesium, Total	7439-95-4	-	8370		24.2	32100		24.2	3270		24.2	25300		24.2	1810		24.2	2490		24.2	19000		24.2	62200		24.2	10500		24.2	4900		24.2
Manganese, Total	7439-96-5	50	55.64		0.44	149.4		0.44	105.8		0.44	92.02		0.44	65.78		0.44	19.43		0.44	78.86		0.44	296.7		0.44	688.2		0.44	72.86		0.44
Mercury, Total	7439-97-6	2	0.129	J	0.0915	0.119	J	0.0915	ND		0.0915	0.112	J	0.0915	0.102	J	0.0915	0.102	J	0.0915	ND		0.0915	ND		0.0915	1.276		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	6.258		0.556	3.468		0.556	0.9523	J	0.556	6.895		0.556	2.659		0.556	0.8646	J	0.556	1.956	J	0.556	1.858	J	0.556	36.76		0.556	7.881		0.556
Potassium, Total	7440-09-7	-	5750		30.9	25700		30.9	2300		30.9	28000		30.9	1870		30.9	2500		30.9	15400		30.9	26600		30.9	7910		30.9	3040		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	2.36	J	1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	0.5968		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	69400		29.3	424000		29.3	10300		29.3	190000		29.3	8360		29.3	12200		29.3	166000		29.3	320000		29.3	58500		29.3	30400		29.3
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	0.1837	J	0.143	ND		0.143
Vanadium, Total	7440-62-2	-	7.753		1.57	8.958		1.57	ND		1.57	ND		1.57	ND		1.57	ND		1.57	3.848	J	1.57	ND		1.57	40.36		1.57	9.471		1.57
Zinc, Total	7440-66-6	2000	92.06		3.41	32.18		3.41	124.8		3.41	4.772	J	3.41	19.01		3.41	7.835	J	3.41	19.5		3.41	45.83		3.41	169.5		3.41	107.9		3.41
GENERAL CHEMISTRY																																
Nitrogen, Ammonia	7664-41-7	3000	189		24	7170		24	1140		24	1960		24	457		24	261		24	2800		24	3550		24	4900		24	271		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 16
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 55 - Fourth Tankfield

SAMPLE ID:		NJ Groundwater Criteria	3TF-1			3TF-1D			3TF-2			3TF-3		
LAB ID:			L2271325-10			L2271325-09			L2271325-06			L2270408-06		
COLLECTION DATE:			12/19/2022			12/19/2022			12/19/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		8.8	ND		0.71	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		1500	ND		120	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		4.8	ND		0.39	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		17	ND		1.4	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		5.2	ND		0.42	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		5.6	0.71	J	0.44	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		3.4	ND		0.27	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		3.4	ND		0.27	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		3.7	ND		0.3	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		3.6	ND		0.29	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		4.5	ND		0.36	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	22		4.4	5.4		0.36	ND		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		4	ND		0.32	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		3.3	ND		0.26	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		4	ND		0.32	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		4.8	ND		0.38	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		4.1	ND		0.33	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		3.6	ND		0.29	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		3.6	ND		0.29	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		6.2	ND		0.5	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		4.2	ND		0.33	ND		0.17	ND		0.17
Benzene	71-43-2	1	2800		2	160		0.16	ND		0.08	ND		0.08
Toluene	108-88-3	600	260		5.1	1.8		0.41	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	1600		4.2	2.5		0.33	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		5	ND		0.4	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		6.4	ND		0.51	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		1.8	ND		0.14	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		3.4	ND		0.27	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		4.2	ND		0.34	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		4.1	ND		0.33	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		4.4	ND		0.35	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		4.6	ND		0.37	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		4.6	ND		0.37	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		4.7	ND		0.37	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		4.2	4.2		0.33	ND		0.17	0.56	J	0.17
p/m-Xylene	179601-23-1	-	4500		8.3	21		0.66	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	820		9.8	2		0.78	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	5300		8.3	23		0.66	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		4.7	ND		0.37	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		4.1	ND		0.33	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		9	ND		0.72	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		6.1	ND		0.49	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		36	ND		2.9	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		7.5	ND		0.6	ND		0.3	1	J	0.3
2-Butanone	78-93-3	300	ND		48	ND		3.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		10	ND		0.83	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		13	ND		1	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		3.8	ND		0.3	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	74		4.7	0.77	J	0.37	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		5.8	ND		0.47	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		5.5	ND		0.44	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		5.8	ND		0.47	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	610		6.8	14	J	0.54	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		35	4.4	J	2.8	ND		1.4	13		1.4
Methyl cyclohexane	108-87-2	-	630		9.9	3.5	J	0.79	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		3.7	ND		0.3	ND		0.15	ND		0.15
Total VOCs		-	11316	-	-	220.28	-	-	-	-	-	14.56	-	-
VOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	3100	J	0	40.2	J	0	-		-	11.2	J	0

Table 16
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 55 - Fourth Tankfield

SAMPLE ID:		NJ Groundwater Criteria	3TF-1			3TF-1D			3TF-2			3TF-3		
LAB ID:			L2271325-10			L2271325-09			L2271325-06			L2270408-06		
COLLECTION DATE:			12/19/2022			12/19/2022			12/19/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
1,4 DIOXANE BY 8270E-SIM														
1,4-Dioxane	123-91-1	**0.4**	ND		0.0314	ND		0.0314	ND		0.0368	**1.47**		0.0314
SEMIVOLATILE ORGANICS BY GC/MS														
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	**50**	2.9	J	0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	**40**	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	**7**	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	**40**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	**300**	96		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	**6**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	**10**	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	**-**	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	**3**	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	**100**	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	**700**	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	**100**	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	**6000**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	**100**	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	**5**	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	**100**	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	**2000**	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	**100**	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	**300**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	**100**	ND		0.33	ND		0.33	ND		0.33	0.38	J	0.33
Pyrene	129-00-0	**200**	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	**30**	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	**-**	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	**-**	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	**30**	**40**		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	**20**	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	**100**	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	**40**	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	**20**	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	**100**	11		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	**-**	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	**-**	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	**40**	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	**2000**	19		0.57	1.2	J	0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	**50**	1.2	J	0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	**700**	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	**-**	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	**30**	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	**-**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	**700**	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	**4000**	ND		3.3	ND		3.3	ND		3.3	5.1	J	3.3
Biphenyl	92-52-4	**400**	0.59	J	0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	**-**	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	**3**	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	**200**	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		**-**	170.69	-	-	1.2	-	-	-	-	-	5.48	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM														

Table 16
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 55 - Fourth Tankfield

SAMPLE ID:		NJ Groundwater Criteria	3TF-1			3TF-1D			3TF-2			3TF-3		
LAB ID:			L2271325-10			L2271325-09			L2271325-06			L2270408-06		
COLLECTION DATE:			12/19/2022			12/19/2022			12/19/2022			12/14/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER		
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	**0.1**	0.03	J	0.02	ND		0.02	0.02	J	0.02	ND		0.02
Benzo(a)pyrene	50-32-8	**0.1**	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	**0.5**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	**0.2**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	**0.02**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	**0.3**	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	**1**	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.03	-	-	-	-	-	0.02	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC														
Total TIC Compounds		-	2770	J	0	106	J	0	59.1	J	0	939	J	0
TOTAL METALS														
Aluminum, Total	7429-90-5	**200**	**209**		3.27	**205**		3.27	155		3.27	**13200**		32.7
Antimony, Total	7440-36-0	**6**	ND		0.429	ND		0.429	ND		0.429	ND		4.29
Arsenic, Total	7440-38-2	**3**	**11.6**		0.165	1.465		0.165	**3.816**		0.165	**42.78**		1.65
Barium, Total	7440-39-3	**6000**	329.6		0.173	3.61		0.173	19.11		0.173	110.2		1.73
Beryllium, Total	7440-41-7	**1**	ND		0.107	ND		0.107	ND		0.107	ND		1.07
Cadmium, Total	7440-43-9	**4**	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.599
Calcium, Total	7440-70-2	-	34900		39.4	10200		39.4	23400		39.4	240000		394
Chromium, Total	7440-47-3	**70**	1.448		0.178	1.815		0.178	0.9557	J	0.178	29.87		1.78
Cobalt, Total	7440-48-4	**100**	0.8195		0.163	0.2918	J	0.163	0.2203	J	0.163	9.325		1.63
Copper, Total	7440-50-8	**1300**	5.832		0.384	3.264		0.384	1.989		0.384	52.12		3.84
Iron, Total	7439-89-6	**300**	**77600**		19.1	**5930**		19.1	**1950**		19.1	**28800**		191
Lead, Total	7439-92-1	**5**	2.748		0.343	0.6104	J	0.343	0.6713	J	0.343	**29.25**		3.43
Magnesium, Total	7439-95-4	-	10800		24.2	7130		24.2	5270		24.2	768000		242
Manganese, Total	7439-96-5	**50**	**1310**		0.44	**265.7**		0.44	43.05		0.44	**226.7**		4.4
Mercury, Total	7439-97-6	**2**	0.111	J	0.0915	0.106	J	0.0915	0.112	J	0.0915	0.13	J	0.0915
Nickel, Total	7440-02-0	**100**	0.9188	J	0.556	ND		0.556	0.8112	J	0.556	23.08		5.56
Potassium, Total	7440-09-7	-	8440		30.9	6530		30.9	6770		30.9	222000		309
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		17.3
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		1.63
Sodium, Total	7440-23-5	**50000**	28500		29.3	**83700**		29.3	37500		29.3	**5280000**		1460
Thallium, Total	7440-28-0	**2**	ND		0.143	ND		0.143	ND		0.143	ND		1.43
Vanadium, Total	7440-62-2	-	ND		1.57	3.462	J	1.57	ND		1.57	73.89		15.7
Zinc, Total	7440-66-6	**2000**	15.05		3.41	13.3		3.41	16.92		3.41	76.69	J	34.1
GENERAL CHEMISTRY														
Nitrogen, Ammonia	7664-41-7	**3000**	539		24	352		24	598		24	**24800**		120

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 17
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 56 - Second Reserve Tankfield

SAMPLE ID:		NJ Groundwater Criteria	RTF-1			RTF-2			RTF-3			RTF-4			RTF-5			RTF-6		
LAB ID:			L2270408-11			L2270408-12			L2270765-03			L2270047-10			L2270408-13			L2270765-04		
COLLECTION DATE:			12/14/2022			12/14/2022			12/15/2022			12/13/2022			12/14/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		3.5	ND		0.35	ND		0.35	ND		0.35	ND		0.88
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		610	ND		61	ND		61	ND		61	ND		150
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		1.9	ND		0.19	ND		0.19	ND		0.19	ND		0.48
Methylene chloride	75-09-2	**3**	ND		0.68	ND		6.8	ND		0.68	ND		0.68	ND		0.68	ND		1.7
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		2.1	ND		0.21	ND		0.21	ND		0.21	ND		0.52
Chloroform	67-66-3	**70**	ND		0.22	ND		2.2	ND		0.22	ND		0.22	ND		0.22	ND		0.56
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		1.3	ND		0.13	ND		0.13	ND		0.13	ND		0.34
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		1.4	ND		0.14	ND		0.14	ND		0.14	ND		0.34
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		1.5	ND		0.15	ND		0.15	ND		0.15	ND		0.37
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		1.4	ND		0.14	ND		0.14	ND		0.14	ND		0.36
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		1.8	ND		0.18	ND		0.18	ND		0.18	ND		0.45
Chlorobenzene	108-90-7	**50**	ND		0.18	ND		1.8	2.7		0.18	ND		0.18	ND		0.18	**260**		0.44
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		1.6	ND		0.16	ND		0.16	ND		0.16	ND		0.4
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		1.3	ND		0.13	ND		0.13	ND		0.13	ND		0.33
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		1.6	ND		0.16	ND		0.16	ND		0.16	ND		0.4
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		1.9	ND		0.19	ND		0.19	ND		0.19	ND		0.48
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.16	ND		1.6	ND		0.16	ND		0.16	ND		0.16	ND		0.41
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.14	ND		1.4	ND		0.14	ND		0.14	ND		0.14	ND		0.36
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		1.4	ND		0.14	ND		0.14	ND		0.14	ND		0.36
Bromoform	75-25-2	**4**	ND		0.25	ND		2.5	ND		0.25	ND		0.25	ND		0.25	ND		0.62
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		1.7	ND		0.17	ND		0.17	ND		0.17	ND		0.42
Benzene	71-43-2	**1**	**20**		0.08	**55**		0.8	**4.6**		0.08	ND		0.08	ND		0.08	0.38	J	0.2
Toluene	108-88-3	**600**	1		0.2	16		2	0.9		0.2	ND		0.2	ND		0.2	3		0.51
Ethylbenzene	100-41-4	**700**	5.7		0.17	**1000**		1.7	0.44	J	0.17	0.31	J	0.17	ND		0.17	ND		0.42
Chloromethane	74-87-3	**-**	ND		0.2	ND		2	ND		0.2	ND		0.2	ND		0.2	ND		0.5
Bromomethane	74-83-9	**10**	ND		0.26	ND		2.6	ND		0.26	ND		0.26	ND		0.26	ND		0.64
Vinyl chloride	75-01-4	**1**	0.13	J	0.07	ND		0.71	0.17	J	0.07	0.18	J	0.07	ND		0.07	0.96		0.18
Chloroethane	75-00-3	**5**	ND		0.13	ND		1.3	ND		0.13	ND		0.13	ND		0.13	ND		0.34
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		1.7	ND		0.17	ND		0.17	ND		0.17	ND		0.42
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		1.6	ND		0.16	ND		0.16	ND		0.16	2.5		0.41
Trichloroethene	79-01-6	**1**	ND		0.18	ND		1.8	ND		0.18	ND		0.18	ND		0.18	ND		0.44
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	ND		1.8	ND		0.18	ND		0.18	ND		0.18	5.7	J	0.46
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.19	ND		1.9	ND		0.19	ND		0.19	ND		0.19	13		0.46
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.19	ND		1.9	ND		0.19	ND		0.19	ND		0.19	56		0.47
Methyl tert butyl ether	1634-04-4	**70**	70		0.17	**86**		1.7	1.2		0.17	0.25	J	0.17	ND		0.17	ND		0.42
p/m-Xylene	179601-23-1	**-**	5.8		0.33	2000		3.3	1		0.33	ND		0.33	ND		0.33	1.8	J	0.83
o-Xylene	95-47-6	**-**	0.4	J	0.39	230		3.9	0.94	J	0.39	ND		0.39	ND		0.39	27		0.98
Xylenes, Total	1330-20-7	**1000**	6.2	J	0.33	**2200**		3.3	1.9	J	0.33	ND		0.33	ND		0.33	29	J	0.83
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		1.9	0.36	J	0.19	0.36	J	0.19	ND		0.19	2.2		0.47
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.16	ND		1.6	0.36	J	0.16	0.36	J	0.16	ND		0.16	4.7		0.41
Styrene	100-42-5	**100**	ND		0.36	ND		3.6	ND		0.36	ND		0.36	ND		0.36	ND		0.9
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		2.4	ND		0.24	ND		0.24	ND		0.24	ND		0.61
Acetone	67-64-1	**6000**	ND		1.5	ND		15	ND		1.5	ND		1.5	ND		1.5	ND		3.6
Carbon disulfide	75-15-0	**700**	ND		0.3	ND		3	ND		0.3	ND		0.3	ND		0.3	ND		0.75
2-Butanone	78-93-3	**300**	ND		1.9	ND		19	ND		1.9	ND		1.9	ND		1.9	ND		4.8
4-Methyl-2-pentanone	108-10-1	**-**	ND		0.42	ND		4.2	ND		0.42	ND		0.42	ND		0.42	ND		1
2-Hexanone	591-78-6	**40**	ND		0.52	ND		5.2	ND		0.52	ND		0.52	ND		0.52	ND		1.3
Bromochloromethane	74-97-5	**-**	ND		0.15	ND		1.5	ND		0.15	ND		0.15	ND		0.15	ND		0.38
Isopropylbenzene	98-82-8	**700**	15		0.19	40		1.9	78		0.19	0.56		0.19	ND		0.19	5		0.47
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		0.23	ND		2.3	ND		0.23	ND		0.23	ND		0.23	ND		0.58
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		2.2	ND		0.22	ND		0.22	ND		0.22	ND		0.55
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		2.3	ND		0.23	ND		0.23	ND		0.23	ND		0.58
Cyclohexane	110-82-7	**-**	6	J	0.27	56	J	2.7	16		0.27	0.98	J	0.27	ND		0.27	1.5	J	0.68
Tert-Butyl Alcohol	75-65-0	**100**	**120**		1.4	**160**		14	5.3	J	1.4	3.9	J	1.4	ND		1.4	ND		3.5
Methyl cyclohexane	108-87-2	**-**	2.2	J	0.4	26	J	4	25		0.4	ND		0.4	ND		0.4	ND		0.99
Freon-113	76-13-1	**20000**	ND		0.15	ND		1.5	ND		0.15	ND		0.15	ND		0.15	ND		0.37
Total VOCs		**-**	246.23	-	-	3669	-	-	136.61	-	-	6.54	-	-	-	-	-	379.04	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		**-**	134	J	0	1550	J	0	86.9	J	0	18.8	J	0	-		-	16.8	J	0
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	**0.4**	ND		0.032	0.0802	J	0.0339	ND		0.0353	0.158		0.0326	0.235		0.0326	ND		0.0339
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	5.5		0.44	ND		0.44	ND		0.44	1.1	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-4	**50**	ND		0.48	8.4		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49

Table 17
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 56 - Second Reserve Tankfield

SAMPLE ID:		NJ Groundwater Criteria	RTF-1			RTF-2			RTF-3			RTF-4			RTF-5			RTF-6		
LAB ID:			L2270408-11			L2270408-12			L2270765-03			L2270047-10			L2270408-13			L2270765-04		
COLLECTION DATE:			12/14/2022			12/14/2022			12/15/2022			12/13/2022			12/14/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	16		0.46	680		2.3	2.4		0.46	ND		0.46	ND		0.46	0.57	J	0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	1.1	J	0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	0.64	J	0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	0.92	J	0.41	ND		0.41	7.1		0.41	ND		0.41	ND		0.41	3.5		0.41
Phenanthrene	85-01-8	100	0.69	J	0.33	ND		0.33	8.5		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	4.2		0.5	ND		0.5	ND		0.5	1.3	J	0.5
2-Methylnaphthalene	91-57-6	30	10		0.45	11		0.45	140		0.45	ND		0.45	ND		0.45	0.62	J	0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	0.52	J	0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	3.4	J	1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	3.5	J	0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	68		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	0.61	J	0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	27.61	-	-	674.91	-	-	169.44	-	-	-	-	-	-	-	-	7.61	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.02	J	0.02	ND		0.02	0.08	J	0.02	0.08	J	0.02	ND		0.02	0.15		0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	0.03	J	0.02	0.04	J	0.02	ND		0.02	0.04	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	ND		0.01	0.06	J	0.01	0.07	J	0.01	ND		0.01	0.07	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	0.06	J	0.01	0.02	J	0.01	ND		0.01	0.07	J	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	0.06	J	0.01	ND		0.01	ND		0.01	0.07	J	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	ND		0.01	0.06	J	0.01	0.04	J	0.01	ND		0.01	0.07	J	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.02	-	-	-	-	-	0.35	-	-	0.25	-	-	-	-	-	0.47	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	805	J	0	2410	J	0	693	J	0	367	J	0	76.6	J	0	285	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	535		3.27	776		3.27	65.3		3.27	31800		3.27	375		3.27	284		3.27
Antimony, Total	7440-36-0	6	ND		0.429	0.4621	J	0.429	ND		0.429	1.372	J	0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	25.46		0.165	14.73		0.165	25.55		0.165	97.9		0.165	4.202		0.165	41		0.165
Barium, Total	7440-39-3	6000	159.4		0.173	121.3		0.173	76.71		0.173	264.2		0.173	150.3		0.173	613.8		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	1.978		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	ND		0.0599	ND		0.0599	ND		0.0599	2.926		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	43800		39.4	38300		39.4	35300		39.4	67200		39.4	36300		39.4	64900		39.4
Chromium, Total	7440-47-3	70	2.266		0.178	2.874		0.178	0.549	J	0.178	121.3		0.178	1.082		0.178	1.278		0.178
Cobalt, Total	7440-48-4	100	1.194		0.163	1.065		0.163	0.2274	J	0.163	52.36		0.163	0.5656		0.163	0.3676	J	0.163
Copper, Total	7440-50-8	1300	6.471		0.384	11.24		0.384	2.379		0.384	365.2		0.384	1.43		0.384	3.414		0.384

Table 17
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 56 - Second Reserve Tankfield

SAMPLE ID:		NJ Groundwater Criteria	RTF-1			RTF-2			RTF-3			RTF-4			RTF-5			RTF-6		
LAB ID:			L2270408-11			L2270408-12			L2270765-03			L2270047-10			L2270408-13			L2270765-04		
COLLECTION DATE:			12/14/2022			12/14/2022			12/15/2022			12/13/2022			12/14/2022			12/15/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Iron, Total	7439-89-6	300	64000		19.1	52000		19.1	36600		19.1	167000		19.1	13600		19.1	34100		19.1
Lead, Total	7439-92-1	5	3.584		0.343	10.12		0.343	0.5279	J	0.343	286.1		0.343	1.84		0.343	2.578		0.343
Magnesium, Total	7439-95-4	-	14500		24.2	40500		24.2	8010		24.2	47400		24.2	37200		24.2	15700		24.2
Manganese, Total	7439-96-5	50	316.4		0.44	343.2		0.44	208.3		0.44	2083		0.44	499.6		0.44	268.1		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	0.108	J	0.0915	1.001		0.0915	ND		0.0915	0.135	J	0.0915
Nickel, Total	7440-02-0	100	2.574		0.556	2.95		0.556	ND		0.556	101.8		0.556	1.303	J	0.556	0.7643	J	0.556
Potassium, Total	7440-09-7	-	8880		30.9	17100		30.9	5630		30.9	18800		30.9	26300		30.9	14000		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	8.8		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	2.245		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	68000		29.3	202000		29.3	30400		29.3	244000		29.3	351000		29.3	284000		29.3
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	0.4248	J	0.143	0.8245	J	0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	4.65	J	1.57	7.224		1.57	ND		1.57	177.3		1.57	1.597	J	1.57	ND		1.57
Zinc, Total	7440-66-6	2000	8.834	J	3.41	7.245	J	3.41	25.86		3.41	471.1		3.41	ND		3.41	16.92		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	1400		24	2320		48	1130		24	3000		240	1420		48	3480		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 18
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 57 - Day Tankfield

SAMPLE ID:		NJ Groundwater Criteria	DT-1D				DT-3				DT-3D				DT-5				DT-5D				DT-5DD				DT-6			
LAB ID:			L2267783-04				L2269477-06				L2269477-05				L2269477-04				L2268454-11				L2268454-09				L2268454-10			
COLLECTION DATE:			12/2/2022				12/9/2022				12/9/2022				12/9/2022				12/6/2022				12/6/2022				12/6/2022			
SAMPLE DEPTH:																														
SAMPLE MATRIX:			WATER				WATER				WATER				WATER				WATER				WATER				WATER			
ANALYTE	CAS	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY GC/MS																														
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		2.5	0.35	ND		25	3.5	ND		2.5	0.35	ND		12	1.8	ND		2.5	0.35	ND		2.5	0.35	ND		2.5	0.35
1,4-Dioxane	123-91-1	0.4	ND		250	61	ND		2500	610	ND		250	61	ND		1200	300	ND		250	61	ND		250	61	ND		250	61
1,2-Dibromoethane	106-93-4	0.03	ND		2	0.19	ND		20	1.9	ND		2	0.19	ND		10	0.96	ND		2	0.19	ND		2	0.19	ND		2	0.19
Methylene chloride	75-09-2	3	ND		2.5	0.68	ND		25	6.8	ND		2.5	0.68	ND		12	3.4	ND		2.5	0.68	ND		2.5	0.68	ND		2.5	0.68
1,1-Dichloroethane	75-34-3	50	1.6		0.75	0.21	ND		7.5	2.1	0.42	J	0.75	0.21	ND		3.8	1	0.47	J	0.75	0.21	ND		0.75	0.21	ND		0.75	0.21
Chloroform	67-66-3	70	0.42	J	0.75	0.22	ND		7.5	2.2	ND		0.75	0.22	4.8		3.8	1.1	ND		0.75	0.22	1		0.75	0.22	ND		0.75	0.22
Carbon tetrachloride	56-23-5	1	ND		0.5	0.13	ND		5	1.3	ND		0.5	0.13	ND		2.5	0.67	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloropropane	78-87-5	1	ND		1	0.14	ND		10	1.4	ND		1	0.14	ND		5	0.68	ND		1	0.14	ND		1	0.14	ND		1	0.14
Dibromochloromethane	124-48-1	1	ND		0.5	0.15	ND		5	1.5	ND		0.5	0.15	ND		2.5	0.74	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.75	0.14	ND		7.5	1.4	ND		0.75	0.14	ND		3.8	0.72	ND		0.75	0.14	ND		0.75	0.14	ND		0.75	0.14
Tetrachloroethene	127-18-4	1	ND		0.5	0.18	ND		5	1.8	ND		0.5	0.18	1	J	2.5	0.9	ND		0.5	0.18	ND		0.5	0.18	ND		0.5	0.18
Chlorobenzene	108-90-7	50	ND		0.5	0.18	ND		5	1.8	ND		0.5	0.18	ND		2.5	0.89	ND		0.5	0.18	ND		0.5	0.18	1.4		0.5	0.18
Trichlorofluoromethane	75-69-4	2000	ND		2.5	0.16	ND		25	1.6	ND		2.5	0.16	ND		12	0.8	ND		2.5	0.16	ND		2.5	0.16	ND		2.5	0.16
1,2-Dichloroethane	107-06-2	2	3.6		0.5	0.13	ND		5	1.3	0.54		0.5	0.13	ND		2.5	0.66	0.6		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.5	0.16	ND		5	1.6	ND		0.5	0.16	ND		2.5	0.79	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
Bromodichloromethane	75-27-4	1	ND		0.5	0.19	ND		5	1.9	ND		0.5	0.19	ND		2.5	0.96	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19
trans-1,3-Dichloropropene	10061-02-6		ND		0.5	0.16	ND		5	1.6	ND		0.5	0.16	ND		2.5	0.82	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
cis-1,3-Dichloropropene	10061-01-5		ND		0.5	0.14	ND		5	1.4	ND		0.5	0.14	ND		2.5	0.72	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.5	0.14	ND		5	1.4	ND		0.5	0.14	ND		2.5	0.72	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14
Bromoform	75-25-2	4	ND		2	0.25	ND		20	2.5	ND		2	0.25	ND		10	1.2	ND		2	0.25	ND		2	0.25	ND		2	0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.5	0.17	ND		5	1.7	ND		0.5	0.17	1.1	J	2.5	0.84	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
Benzene	71-43-2	1	ND		0.5	0.08	ND		5	0.8	ND		0.5	0.08	0.42	J	2.5	0.4	ND		0.5	0.08	ND		0.5	0.08	2.5		0.5	0.08
Toluene	108-88-3	600	ND		0.75	0.2	ND		7.5	2	ND		0.75	0.2	9.7		3.8	1	ND		0.75	0.2	ND		0.75	0.2	1.5		0.75	0.2
Ethylbenzene	100-41-4	700	ND		0.5	0.17	ND		5	1.7	ND		0.5	0.17	ND		2.5	0.84	ND		0.5	0.17	ND		0.5	0.17	0.52		0.5	0.17
Chloromethane	74-87-3		ND		2.5	0.2	ND		25	2	ND		2.5	0.2	ND		12	1	ND		2.5	0.2	ND		2.5	0.2	ND		2.5	0.2
Bromomethane	74-83-9	10	ND		1	0.26	ND		10	2.6	ND		1	0.26	ND		5	1.3	ND		1	0.26	ND		1	0.26	ND		1	0.26
Vinyl chloride	75-01-4	1	0.08	J	0.2	0.07	ND		2	0.71	0.12	J	0.2	0.07	700		1	0.36	ND		0.2	0.07	ND		0.2	0.07	ND		0.2	0.07
Chloroethane	75-00-3	5	ND		1	0.13	ND		10	1.3	ND		1	0.13	ND		5	0.67	0.57	J	1	0.13	ND		1	0.13	ND		1	0.13
1,1-Dichloroethene	75-35-4	1	5		0.5	0.17	ND		5	1.7	0.46	J	0.5	0.17	ND		2.5	0.84	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.75	0.16	ND		7.5	1.6	ND		0.75	0.16	6.9		3.8	0.82	ND		0.75	0.16	ND		0.75	0.16	ND		0.75	0.16
Trichloroethene	79-01-6	1	0.34	J	0.5	0.18	ND		5	1.8	0.33	J	0.5	0.18	ND		2.5	0.88	0.33	J	0.5	0.18	ND		0.5	0.18	ND		0.5	0.18
1,2-Dichlorobenzene	95-50-1	600	ND		2.5	0.18	ND		25	1.8	ND		2.5	0.18	ND		12	0.92	ND		2.5	0.18	ND		2.5	0.18	0.3	J	2.5	0.18
1,3-Dichlorobenzene	541-73-1	600	ND		2.5	0.19	ND		25	1.9	ND		2.5	0.19	ND		12	0.93	ND		2.5	0.19	ND		2.5	0.19	ND		2.5	0.19
1,4-Dichlorobenzene	106-46-7	75	ND		2.5	0.19	ND		25	1.9	ND		2.5	0.19	ND		12	0.94	0.21	J	2.5	0.19	ND		2.5	0.19	ND		2.5	0.19
Methyl tert butyl ether	1634-04-4	70	ND		1	0.17	72		10	1.7	54		1	0.17	7.3		5	0.83	300	E	1	0.17	3.4		1	0.17	17		1	0.17
p/m-Xylene	179601-23-1		ND		1	0.33	ND		10	3.3	ND		1	0.33	ND		5	1.7	ND		1	0.33	ND		1	0.33	1.1		1	0.33
o-Xylene	95-47-6		ND		1	0.39	ND		10	3.9	ND		1	0.39	ND		5	2	ND		1	0.39	ND		1	0.39	0.57	J	1	0.39
Xylenes, Total	1330-20-7	1000	ND		1	0.33	ND		10	3.3	ND		1	0.33	ND		5	1.7	ND		1	0.33	ND		1	0.33	1.7	J	1	0.33
cis-1,2-Dichloroethene	156-59-2	70	5		0.5	0.19	ND		5	1.9	0.56		0.5	0.19	34		2.5	0.94	0.87		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19
1,2-Dichloroethene, Total	540-59-0		5		0.5	0.16	ND		5	1.6	0.56		0.5	0.16	41		2.5	0.82	0.87		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
Styrene	100-42-5	100	ND		1	0.36	ND		10	3.6	ND		1	0.36	ND		5	1.8	ND		1	0.36	ND		1	0.36	ND		1	0.36
Dichlorodifluoromethane	75-71-8	1000	ND		5	0.24	ND		50	2.4	ND		5	0.24	ND		25	1.2	ND		5	0.24	ND		5	0.24	ND		5	0.24
Acetone	67-64-1	6000	ND		5	1.5	ND		50	15	ND		5	1.5	26		25	7.3	ND		5	1.5	ND		5	1.5	2.3	J	5	1.5
Carbon disulfide	75-15-0	700	ND		5	0.3	ND		50	3	32		5	0.3	ND		25	1.5	ND		5	0.3	ND		5	0.3	ND		5	0.3
2-Butanone	78-93-3	300	ND		5	1.9	ND		50	19	ND		5	1.9	ND		25	9.7	ND		5	1.9	ND		5	1.9	ND		5	1.9
4-Methyl-2-pentanone	108-10-1		ND		5	0.42	ND		50	4.2	ND		5	0.42	ND		25	2.1	ND		5	0.42	ND		5	0.42	ND		5	0.42
2-Hexanone	591-78-6	40	ND		5	0.52	ND		50	5.2	ND		5	0.52	ND		25	2.6	ND		5	0.52	ND		5	0.52	ND		5	0.52
Bromochloromethane	74-97-5		ND		2.5	0.15	ND		25	1.5	ND		2.5	0.15	ND		12	0.76	ND		2.5	0.15	ND		2.5	0.15	ND		2.5	0.15
Isopropylbenzene	98-82-8	700	ND		0.5	0.19	ND		5	1.9	ND		0.5	0.19	ND		2.5	0.94	ND		0.5	0.19	ND		0.5	0.19	30		0.5	0.19
1,2,3-Trichlorobenzene	87-61-6		ND		2.5	0.23	ND		25	2.3	ND		2.5	0.23	ND		12	1.2	ND		2.5	0.23	ND		2.5	0.23	ND		2.5	0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		2.5	0.22	ND		25	2.2	ND		2.5	0.22	ND		12	1.1	ND		2.5	0.22	ND		2.5	0.22	ND		2.5	0.22
Methyl Acetate	79-20-9	7000	ND		2	0.23	ND		20	2.3	ND		2	0.23	ND		10	1.2	ND		2	0.23	ND		2	0.23	ND		2	0.23
Cyclohexane	110-82-7		ND		10	0.27	ND		100	2.7	ND		10	0.27	ND		50	1.4	ND		10	0.27	ND		10	0.27	19		10	0.27
Tert-Butyl Alcohol	75-65-0	100	ND		10	1.4	21000	E	100	14	830		10	1.4	2100		50	7	9100	E	10	1.4	9.8	J	10	1.4	5500	E	10	1.4
Methyl cyclohexane	108-87-2		ND		10	0.4	ND		100	4	ND		10	0.4	ND		50	2	ND		10	0.4	ND		10	0.4	9.2	J	10	0.4
Freon-113	76-13-1	20000	ND		2.5	0.15	ND		25	1.5	ND		2.5	0.15	ND		12	0.74	ND		2.5	0.15	ND		2.5	0.15	ND		2.5	0.15
Total VOCs			16.04	-	-	-	21072	-	-	-	918.43	-	-	-	2891.22	-	-	-	9403.05	-	-	-	14.2	-	-	-	5585.39	-	-	-
VOLATILE ORGANICS BY GC/MS-TIC																														
Total TIC Compounds			1.47	J	0	0	50.4	J	0	0	-		-	-	87.9	J	0	0	6.03	J	0	0	-		-	-	26.6	J	0	0
1,4 DIOXANE BY 8270E-SIM																														
1,4-Dioxane	123-91-1	0.4	5.1		0.139	0.0314	9.28		0.156	0.0353	1.19		0.156	0.0353	1.03		0.147	0.0332	1.8		0.134	0.0303	0.221		0.142	0.032	6.45		0.144	0.0326
SEMIVOLATILE ORGANICS BY GC/MS																														
Acenaphthene	83-32-9	400	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	1.1	J	2	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	50	ND		5	0.48	ND		5	0.48	ND		5	0.48	14		5	0.48	ND		5	0.48	ND		5	0.48	ND		5	0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5
2-Chloronaphthalene	91-58-7	600	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44	ND		2	0.44
2,4-Dinitrotoluene	121-14-2	10	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2
2,6-Dinitrotoluene	606-20-2	10	ND		5	0.93	ND		5	0.93	ND		5	0.93	ND		5	0.93	ND		5	0.93	ND		5	0.93	ND		5	0.93
Fluoranthene	206-44-0	300	ND		2	0.26	ND		2	0.26	ND		2	0.26	ND		2	0.26	ND		2	0.26	ND		2	0.26	ND		2	0.26
4-Chlorophenyl phenyl ether	7005-72-3		ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		2	0.53	ND		2	0.53	ND		2	0.53	ND		2	0.53	ND		2	0.53	ND		2	0.53	ND		2	0.53
Bis(2-chloroethoxy)methane	111-91-1		ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		20	0.69	ND		20	0.69	ND		20	0.69	ND		20	0.69	ND		20	0.69	ND		20	0.69	ND		20	0.69
Hexachloroethane	67-72-1	7	ND		2	0.58	ND		2	0.58	ND		2	0.58	ND		2	0.58	ND		2	0.58	ND		2	0.58	ND		2	0.58
Isophorone	78-59-1	40	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2
Naphthalene	91-20-3	300	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	0.9	J	2	0.46
Nitrobenzene	98-95-3	6	ND		2	0.77	ND		2	0.77	ND		2	0.77	ND		2	0.77	ND		2	0.77	ND		2	0.77	ND		2	0.77
NDPA/DPA	86-30-6	10	ND		2	0.42	ND		2	0.42	ND		2	0.42	ND		2	0.42	ND		2	0.42	ND		2	0.42	ND		2	0.42
n-Nitrosodi-n-propylamine	621-64-7		ND		5	0.64	ND		5	0.64	ND		5	0.64	ND		5	0.64	ND		5	0.64	ND		5	0.64	ND		5	0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		3	1.5	ND		3	1.5	1.6	J	3	1.5	ND		3	1.5	ND		3	1.5	ND		3	1.5	ND		3	1.5
Butyl benzyl phthalate	85-68-7	100	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2	ND		5	1.2
Di-n-butylphthalate	84-74-2	700	ND		5	0.39	ND		5	0.39	ND		5	0.39	ND		5	0.39	ND		5	0.39	ND		5	0.39	ND		5	0.39
Di-n-octylphthalate	117-84-0	100	ND		5	1.3	ND		5	1.3	ND		5	1.3	ND		5	1.3	ND		5	1.3	ND		5	1.3	ND		5	1.3
Diethyl phthalate	84-66-2	6000	ND		5	0.38	ND		5	0.38	ND		5	0.38	ND		5	0.38	ND		5	0.38	ND		5	0.38	ND		5	0.38
Dimethyl phthalate	131-11-3	100	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8
Chrysene	218-01-9	5	ND		2	0.34	ND		2	0.34	ND		2	0.34	ND		2	0.34	ND		2	0.34	ND		2	0.34	ND		2	0.34
Acenaphthylene	208-96-8	100	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46
Anthracene	120-12-7	2000	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33
Benzo(ghi)perylene	191-24-2	100	ND		2	0.3	ND		2	0.3	ND		2	0.3	ND		2	0.3	ND		2	0.3	ND		2	0.3	ND		2	0.3
Fluorene	86-73-7	300	ND		2	0.41	ND		2	0.41	ND		2	0.41	ND		2	0.41	ND		2	0.41	ND		2	0.41	1.5	J	2	0.41
Phenanthrene	85-01-8	100	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	ND		2	0.33	0.79	J	2	0.33
Pyrene	129-00-0	200	ND		2	0.28	ND		2	0.28	ND		2	0.28	ND		2	0.28	ND		2	0.28	ND		2	0.28	ND		2	0.28
4-Chloroaniline	106-47-8	30	ND		5	1.1	ND		5	1.1	ND		5	1.1	ND		5	1.1	ND		5	1.1	ND		5	1.1	ND		5	1.1
2-Nitroaniline	88-74-4		ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5	ND		5	0.5
3-Nitroaniline	99-09-2		ND		5	0.81	ND		5	0.81	ND		5	0.81	ND		5	0.81	ND		5	0.81	ND		5	0.81	ND		5	0.81
4-Nitroaniline	100-01-6		ND		5	0.8	ND		5	0.8	ND		5	0.8	ND		5	0.8	ND		5	0.8	ND		5	0.8	ND		5	0.8
Dibenzofuran	132-64-9		ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5	ND		2	0.5
2-Methylnaphthalene	91-57-6	30	ND		2	0.45	ND		2	0.45	ND		2	0.45	ND		2	0.45	ND		2	0.45	ND		2	0.45	0.89	J	2	0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		5	0.61	ND		5	0.61	ND		5	0.61	ND		5	0.61	ND		5	0.61	ND		5	0.61	ND		5	0.61
p-Chloro-m-cresol	59-50-7	100	ND		2	0.35	ND		2	0.35	ND		2	0.35	ND		2	0.35	ND		2	0.35	ND		2	0.35	ND		2	0.35
2-Chlorophenol	95-57-8	40	ND		2	0.48	ND		2	0.48	ND		2	0.48	ND		2	0.48	ND		2	0.48	ND		2	0.48	ND		2	0.48
2,4-Dichlorophenol	120-83-2	20	ND		5	0.41	ND		5	0.41	ND		5	0.41	ND		5	0.41	ND		5	0.41	ND		5	0.41	ND		5	0.41
2,4-Dimethylphenol	105-67-9	100	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8	ND		5	1.8
2-Nitrophenol	88-75-5		ND		10	0.85	ND		10	0.85	ND		10	0.85	ND		10	0.85	ND		10	0.85	ND		10	0.85	ND		10	0.85
4-Nitrophenol	100-02-7		ND		10	0.67	ND		10	0.67	ND		10	0.67	ND		10	0.67	ND		10	0.67	ND		10	0.67	ND		10	0.67
2,4-Dinitrophenol	51-28-5	40	ND		20	6.6	ND		20	6.6	ND		20	6.6	ND		20	6.6	ND		20	6.6	ND		20	6.6	ND		20	6.6
Phenol	108-95-2	2000	ND		5	0.57	ND		5	0.57	ND		5	0.57	ND		5	0.57	ND		5	0.57	ND		5	0.57	ND		5	0.57
2-Methylphenol	95-48-7	50	ND		5	0.49	ND		5	0.49	ND		5	0.49	ND		5	0.49	ND		5	0.49	ND		5	0.49	ND		5	0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		5	0.77	ND		5	0.77	ND		5	0.77	ND		5	0.77	ND		5	0.77	ND		5	0.77	ND		5	0.77
Carbazole	86-74-8		ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49	ND		2	0.49
4-Bromophenyl phenyl ether	101-55-3		ND		2	0.38	ND		2	0.38	ND		2	0.38	ND		2	0.38	ND		2	0.38	ND		2	0.38	ND		2	0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		5	1.6	ND		5	1.6	ND		5	1.6	ND		5	1.6	ND		5	1.6	ND		5	1.6	ND		5	1.6
Benzaldehyde	100-52-7		ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53
Acetophenone	98-86-2	700	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53	ND		5	0.53
Caprolactam	105-60-2	4000	ND		10	3.3	ND		10	3.3	ND		10	3.3	ND		10	3.3	ND		10	3.3	ND		10	3.3	ND		10	3.3
Biphenyl	92-52-4	400	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46	ND		2	0.46
1,2,4,5-Tetrachlorobenzene	95-94-3		ND		10	0.44	ND		10	0.44	ND		10	0.44	ND		10	0.44	ND		10	0.44	ND		10	0.44	ND		10	0.44
Atrazine	1912-24-9	3	ND		3	0.76	ND		3	0.76	ND		3	0.76	ND		3	0.76	ND		3	0.76	ND		3	0.76	ND		3	0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		5	0.84	ND		5	0.84	ND		5	0.84	ND		5	0.84	ND		5	0.84	ND		5	0.84	ND		5	0.84
Total SVOCs			-	-	-	-	-	-	-	-	1.6	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	5.18	-	-	-

Table 18
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 57 - Day Tankfield

SAMPLE ID:		NJ Groundwater Criteria	DT-1D				DT-3				DT-3D				DT-5				DT-5D				DT-5DD				DT-6			
LAB ID:			L2267783-04				L2269477-06				L2269477-05				L2269477-04				L2268454-11				L2268454-09				L2268454-10			
COLLECTION DATE:			12/2/2022				12/9/2022				12/9/2022				12/9/2022				12/6/2022				12/6/2022				12/6/2022			
SAMPLE DEPTH:																														
SAMPLE MATRIX:			WATER				WATER				WATER				WATER				WATER				WATER				WATER			
SEMIVOLATILE ORGANICS BY GC/MS-SIM																														
4,6-Dinitro-o-cresol	534-52-1		ND		0.7	0.09	ND		0.7	0.09	ND		0.7	0.09	ND		0.7	0.09	ND		0.7	0.09	ND		0.7	0.09	ND		0.7	0.09
Benzo(a)anthracene	56-55-3	0.1	0.03	J	0.1	0.02	ND		0.1	0.02	0.1	J	0.1	0.02	ND		0.1	0.02	0.06	J	0.1	0.02	0.05	J	0.1	0.02	0.19		0.1	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.1	0.02	ND		0.1	0.02	ND		0.1	0.02	ND		0.1	0.02	ND		0.1	0.02	ND		0.1	0.02	0.04	J	0.1	0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	0.03	J	0.1	0.01	ND		0.1	0.01	0.08	J	0.1	0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	0.01	J	0.1	0.01	ND		0.1	0.01	0.06	J	0.1	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	0.03	J	0.1	0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	ND		0.1	0.01	0.02	J	0.1	0.01	ND		0.1	0.01	0.04	J	0.1	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.02	0.01	ND		0.02	0.01	ND		0.02	0.01	ND		0.02	0.01	ND		0.02	0.01	ND		0.02	0.01	0.2	B	0.02	0.01
Pentachlorophenol	87-86-5	0.3	ND		0.3	0.01	ND		0.3	0.01	ND		0.3	0.01	ND		0.3	0.01	ND		0.3	0.01	ND		0.3	0.01	0.19	J	0.3	0.01
Hexachlorobutadiene	87-68-3	1	ND		1	0.05	ND		1	0.05	ND		1	0.05	ND		1	0.05	ND		1	0.05	ND		1	0.05	ND		1	0.05
Total SVOCs			0.03	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	0.12	-	-	-	0.05	-	-	-	0.78	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																														
Total TIC Compounds			41.9	J	0	0	518	J	0	0	192	J	0	0	272	J	0	0	113	J	0	0	71.8	J	0	0	364	J	0	0
TOTAL METALS																														
Aluminum, Total	7429-90-5	200	772		10	3.27	1940		100	32.7	17.9		10	3.27	3000		100	32.7	51.7		10	3.27	66.2		10	3.27	463		10	3.27
Antimony, Total	7440-36-0	6	ND		4	0.429	ND		4	0.429	ND		4	0.429	1.173	J	4	0.429	ND		4	0.429	ND		4	0.429	ND		4	0.429
Arsenic, Total	7440-38-2	3	1.452		0.5	0.165	2.495		0.5	0.165	0.4027	J	0.5	0.165	18.45		0.5	0.165	0.2533	J	0.5	0.165	ND		0.5	0.165	33.53		0.5	0.165
Barium, Total	7440-39-3	6000	379		0.5	0.173	275.2		0.5	0.173	212.2		0.5	0.173	272.7		0.5	0.173	223.7		0.5	0.173	133.4		0.5	0.173	155.8		0.5	0.173
Beryllium, Total	7440-41-7	1	0.5805		0.5	0.107	0.3198	J	0.5	0.107	ND		0.5	0.107	0.2002	J	0.5	0.107	ND		0.5	0.107	0.2586	J	0.5	0.107	ND		0.5	0.107
Cadmium, Total	7440-43-9	4	ND		0.2	0.0599	0.4643		0.2	0.0599	ND		0.2	0.0599	0.0647	J	0.2	0.0599	ND		0.2	0.0599	ND		0.2	0.0599	ND		0.2	0.0599
Calcium, Total	7440-70-2		89900		100	39.4	213000		1000	394	110000		1000	394	47500		1000	394	126000		100	39.4	33800		100	39.4	48200		100	39.4
Chromium, Total	7440-47-3	70	5.827		1	0.178	5.558		1	0.178	0.1928	J	1	0.178	11.54		1	0.178	0.794	J	1	0.178	0.5726	J	1	0.178	2.62		1	0.178
Cobalt, Total	7440-48-4	100	2.534		0.5	0.163	14.04		0.5	0.163	1.766		0.5	0.163	2.813		0.5	0.163	0.8428		0.5	0.163	0.5066		0.5	0.163	1.13		0.5	0.163
Copper, Total	7440-50-8	1300	7.68		1	0.384	12.89		1	0.384	1.47		1	0.384	21.89		1	0.384	2.409		1	0.384	1.146		1	0.384	2.426		1	0.384
Iron, Total	7439-89-6	300	3300		50	19.1	2360		50	19.1	1160		50	19.1	245000		50	19.1	999		50	19.1	13400		50	19.1	58900		50	19.1
Lead, Total	7439-92-1	5	1.794		1	0.343	2.832		1	0.343	ND		1	0.343	19.49		1	0.343	ND		1	0.343	ND		1	0.343	1.215		1	0.343
Magnesium, Total	7439-95-4		19500		70	24.2	54800		700	242	22800		700	242	39000		700	242	24600		70	24.2	7680		70	24.2	35900		70	24.2
Manganese, Total	7439-96-5	50	59.41		1	0.44	4670		1	0.44	65.3		1	0.44	3671		1	0.44	15.89		1	0.44	349		1	0.44	300.6		1	0.44
Mercury, Total	7439-97-6	2	ND		0.2	0.0915	0.28		0.2	0.0915	ND		0.2	0.0915	0.112	J	0.2	0.0915	ND		0.2	0.0915	ND		0.2	0.0915	ND		0.2	0.0915
Nickel, Total	7440-02-0	100	3.756		2	0.556	12.68		2	0.556	3.142		2	0.556	4.973		2	0.556	1.03	J	2	0.556	ND		2	0.556	ND		2	0.556
Potassium, Total	7440-09-7		1360		100	30.9	1500		1000	309	1270		1000	309	9570		1000	309	1380		100	30.9	5620		100	30.9	19600		100	30.9
Selenium, Total	7782-49-2	40	2.3	J	5	1.73	ND		5	1.73	ND		5	1.73	2.14	J	5	1.73	ND		5	1.73	ND		5	1.73	ND		5	1.73
Silver, Total	7440-22-4	40	ND		0.4	0.163	ND		0.4	0.163	ND		0.4	0.163	ND		0.4	0.163	ND		0.4	0.163	ND		0.4	0.163	ND		0.4	0.163
Sodium, Total	7440-23-5	50000	82200		100	29.3	140000		1000	293	78500		1000	293	83100		1000	293	77700		100	29.3	17000		100	29.3	197000		100	29.3
Thallium, Total	7440-28-0	2	0.2042	J	1	0.143	ND		1	0.143	ND		1	0.143	0.149	J	1	0.143	ND		1	0.143	ND		1	0.143	ND		1	0.143
Vanadium, Total	7440-62-2		19.72		5	1.57	12.7		5	1.57	ND		5	1.57	18.79		5	1.57	ND		5	1.57	ND		5	1.57	4.23	J	5	1.57
Zinc, Total	7440-66-6	2000	55.36		10	3.41	32.12		10	3.41	14.62		10	3.41	74.96		10	3.41	38.54		10	3.41	12.18		10	3.41	13.96		10	3.41
GENERAL CHEMISTRY																														
Nitrogen, Ammonia	7664-41-7	3000	165	J	375	120	47.8	J	75	24	59.9	J	75	24	10500		150	48	91.2		75	24	81.2		75	24	12800		75	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.
NJ-VIGWS: New Jersey 2021 Vapor Intrusion Groundwater Screening Levels Criteria per May 2021 Version 5.0 Guidance Document.

Table 19
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
Southern Remediation Management Unit (SRMU)

SAMPLE ID:		NJ Groundwater Criteria	PL-1RR			PL-2			PL-3R			PL-4RR			PL-6RR			PL-7R		
LAB ID:			L2270047-05			L2270047-06			L2270047-03			L2269734-06			L2268454-06			L2271325-08		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/12/2022			12/6/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	**70**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	15		0.18	2.9		0.18	ND		0.18	ND		0.18	0.23	J	0.18	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	**1.4**		0.08	0.59		0.08	0.92		0.08	ND		0.08	**2.8**		0.08	0.46	J	0.08
Toluene	108-88-3	**600**	ND		0.2	0.23	J	0.2	ND		0.2	ND		0.2	0.38	J	0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	0.2	J	0.17	1.4		0.17
Chloromethane	74-87-3	**-**	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	**5**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	1.5		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	0.34	J	0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	0.52	J	0.19	0.42	J	0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	1.3	J	0.19	0.84	J	0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	**70**	ND		0.17	0.42	J	0.17	0.57	J	0.17	ND		0.17	0.71	J	0.17	ND		0.17
p/m-Xylene	179601-23-1	**-**	ND		0.33	ND		0.33	0.39	J	0.33	ND		0.33	1.2		0.33	4.8		0.33
o-Xylene	95-47-6	**-**	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.75	J	0.39	1		0.39
Xylenes, Total	1330-20-7	**1000**	ND		0.33	ND		0.33	0.39	J	0.33	ND		0.33	2	J	0.33	5.8		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	ND		1.5	1.7	J	1.5	1.5	J	1.5	2.4	J	1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	0.53		0.19	2.6		0.19	0.21	J	0.19	ND		0.19	11		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	**-**	ND		0.27	2	J	0.27	10		0.27	ND		0.27	8	J	0.27	0.66	J	0.27
Tert-Butyl Alcohol	75-65-0	**100**	5.5	J	1.4	1.4	J	1.4	5	J	1.4	ND		1.4	6.6	J	1.4	1.5	J	1.4
Methyl cyclohexane	108-87-2	**-**	0.42	J	0.4	1.2	J	0.4	6.2	J	0.4	ND		0.4	9.8	J	0.4	1.1	J	0.4
Freon-113	76-13-1	**20000**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		**-**	24.67	-	-	14.64	-	-	24.79	-	-	2.4	-	-	43.17	-	-	10.92	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		**-**	5.42	J	0	62.4	J	0	24.2	J	0	-		-	386	J	0	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	**0.4**	ND		0.0353	0.0865	J	0.0326	0.366		0.0339	ND		0.032	0.354		0.0332	0.0503	J	0.0314
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	**400**	0.63	J	0.44	2.2		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-4	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	**-**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5

Table 19
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
Southern Remediation Management Unit (SRMU)

SAMPLE ID:		NJ Groundwater Criteria	PL-1RR			PL-2			PL-3R			PL-4RR			PL-6RR			PL-7R		
LAB ID:			L2270047-05			L2270047-06			L2270047-03			L2269734-06			L2268454-06			L2271325-08		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/12/2022			12/6/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	1.5	J	1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	0.77	J	0.39	0.41	J	0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	0.37	J	0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	0.44	J	0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	0.91	J	0.41	3.2		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	0.46	J	0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	0.72	J	0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	0.62	J	0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	1.54	-	-	7.02	-	-	-	-	-	0.77	-	-	2.53	-	-	0.37	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	**0.13**		0.02	**0.13**		0.02	0.05	J	0.02	0.02	J	0.02	0.07	J	0.02	0.06	J	0.02
Benzo(a)pyrene	50-32-8	0.1	0.07	J	0.02	0.06	J	0.02	ND		0.02	ND		0.02	ND		0.02	0.06	J	0.02
Benzo(b)fluoranthene	205-99-2	0.2	0.06	J	0.01	0.05	J	0.01	ND		0.01	ND		0.01	ND		0.01	0.07	J	0.01
Benzo(k)fluoranthene	207-08-9	0.5	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	0.04	J	0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	0.05	J	0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.3	-	-	0.24	-	-	0.05	-	-	0.02	-	-	0.07	-	-	0.28	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Benzene, Propyl-	000103-65-1	-	-		-	-		-	-		-	-		-	10.3	NJ	0	-		-
Total TIC Compounds		-	43.4	J	0	77.9	J	0	103	J	0	68.8	J	0	154	J	0	233	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	13.6		3.27	12.8		3.27	22.2		3.27	**602**		3.27	183		3.27	**1030**		3.27
Antimony, Total	7440-36-0	6	0.9782	J	0.429	ND		0.429	ND		0.429	3.46	J	0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	**3.038**		0.165	2.536		0.165	0.9575		0.165	**3.474**		0.165	**3.206**		0.165	**51.88**		0.165
Barium, Total	7440-39-3	6000	89.77		0.173	73.82		0.173	33.94		0.173	8.415		0.173	93.76		0.173	102.2		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	0.2261		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	0.072	J	0.0599
Calcium, Total	7440-70-2	-	74100		39.4	41300		39.4	27000		39.4	17900		39.4	38500		39.4	35800		39.4
Chromium, Total	7440-47-3	70	0.7172	J	0.178	0.6768	J	0.178	1.212		0.178	11.54		0.178	1.246		0.178	4.325		0.178
Cobalt, Total	7440-48-4	100	0.2063	J	0.163	ND		0.163	ND		0.163	0.5662		0.163	0.3461	J	0.163	2.476		0.163
Copper, Total	7440-50-8	1300	6.236		0.384	0.8076	J	0.384	1.713		0.384	8.754		0.384	1.27		0.384	42.09		0.384
Iron, Total	7439-89-6	300	**757**		19.1	**26300**		19.1	**1840**		19.1	**818**		19.1	**22900**		19.1	**95600**		19.1
Lead, Total	7439-92-1	5	0.5635	J	0.343	ND		0.343	ND		0.343	**5.65**		0.343	0.7541	J	0.343	**7.925**		0.343
Magnesium, Total	7439-95-4	-	24400		24.2	20200		24.2	17400		24.2	2490		24.2	32000		24.2	8520		24.2

Table 19
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
Southern Remediation Management Unit (SRMU)

SAMPLE ID:		NJ Groundwater Criteria	PL-1RR			PL-2			PL-3R			PL-4RR			PL-6RR			PL-7R		
LAB ID:			L2270047-05			L2270047-06			L2270047-03			L2269734-06			L2268454-06			L2271325-08		
COLLECTION DATE:			12/13/2022			12/13/2022			12/13/2022			12/12/2022			12/6/2022			12/19/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Manganese, Total	7439-96-5	**50**	**106.3**		0.44	**545.4**		0.44	33.78		0.44	13.81		0.44	**775.9**		0.44	**1086**		0.44
Mercury, Total	7439-97-6	**2**	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	0.099	J	0.0915	0.115	J	0.0915
Nickel, Total	7440-02-0	**100**	1.625	J	0.556	ND		0.556	0.794	J	0.556	2.832		0.556	ND		0.556	3.382		0.556
Potassium, Total	7440-09-7	**-**	12200		30.9	9020		30.9	8400		30.9	3340		30.9	20500		30.9	6700		30.9
Selenium, Total	7782-49-2	**40**	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	**40**	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	**50000**	**182000**		29.3	**144000**		29.3	**138000**		29.3	38600		29.3	**378000**		29.3	38100		29.3
Thallium, Total	7440-28-0	**2**	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	**-**	4.713	J	1.57	ND		1.57	ND		1.57	14.6		1.57	ND		1.57	4.839	J	1.57
Zinc, Total	7440-66-6	**2000**	14.27		3.41	5.552	J	3.41	13.82		3.41	17.69		3.41	6.942	J	3.41	45.98		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	**3000**	1630		24	**3310**		24	1660		24	70.4	J	24	**7050**		24	1080		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-1			FA-2			FA-3			FA-4			FA-6			FA-7		
LAB ID:			L2266497-08			L2266497-07			L2266497-06			L2266718-03			L2266497-04			L2268106-11		
COLLECTION DATE:			11/28/2022			11/28/2022			11/28/2022			11/28/2022			11/28/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	2.8		0.18	1.1		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	0.37	J	0.08	0.19	J	0.08	ND		0.08	ND		0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	0.29	J	0.18	0.47	J	0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	1.1	J	0.19	0.28	J	0.19	ND		0.19	0.32	J	0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	1.9		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	1.9		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	ND		1.5	5.5		1.5	2.4	J	1.5	ND		1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	0.43	J	0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	0.42	J	0.19	ND		0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	-	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	ND		1.4	2.8	J	1.4	4.4	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	-	-	-	-	-	-	2.18	-	-	13.94	-	-	8.33	-	-	0.32	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	-		-	1.42	J	0	39.6	J	0	48.4	J	0	86.3	J	0	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	0.4	ND		0.0303	ND		0.0314	ND		0.0314	0.196		0.032	ND		0.0339	ND		0.032
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	1.5	J	0.44	1.4		0.44	ND		0.44	ND		0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-1			FA-2			FA-3			FA-4			FA-6			FA-7		
LAB ID:			L2266497-08			L2266497-07			L2266497-06			L2266718-03			L2266497-04			L2268106-11		
COLLECTION DATE:			11/28/2022			11/28/2022			11/28/2022			11/28/2022			11/28/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	2.7		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	1.8	J	0.41	5.2		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	0.38	J	0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	3		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	6.3	-	-	9.3	-	-	0.38	-	-	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.46	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	ND		0.02	0.02	J	0.02	0.03	J	0.02	0.04	J	0.02	**0.16**	J	0.1	0.03	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	0.02	J	0.02	ND		0.02	0.04	J	0.02	ND		0.08	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	0.03	J	0.01	0.02	J	0.01	0.09	J	0.01	ND		0.06	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	0.01	J	0.01	ND		0.01	0.03	J	0.01	ND		0.04	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.06	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	0.02	J	0.01	ND		0.01	0.03	J	0.01	ND		0.06	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.05	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.07	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.23	ND		0.05
Total SVOCs		-	-	-	-	0.1	-	-	0.05	-	-	0.23	-	-	0.16	-	-	0.03	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	124	J	0	46.5	J	0	290	J	0	216	J	0	1150	J	0	128	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	21.6		3.27	**393**		3.27	31		3.27	30.6		3.27	111		3.27	**1320**		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429	0.5322	J	0.429
Arsenic, Total	7440-38-2	3	**4.874**		0.165	**26.7**		0.165	**52.32**		0.165	**39.54**		0.165	**98.52**		0.165	**3.349**		0.165
Barium, Total	7440-39-3	6000	108.6		0.173	103.4		0.173	208		0.173	88.75		0.173	339.5		0.173	45.16		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	0.1238	J	0.107
Cadmium, Total	7440-43-9	4	0.1812	J	0.0599	0.1823	J	0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	14700		39.4	21300		39.4	47400		39.4	32000		39.4	16700		39.4	2500		39.4
Chromium, Total	7440-47-3	70	0.5221	J	0.178	1.814		0.178	1.283		0.178	5.926		0.178	2.247		0.178	3.075		0.178
Cobalt, Total	7440-48-4	100	1.88		0.163	1.387		0.163	0.1688	J	0.163	0.312	J	0.163	0.5841		0.163	1.414		0.163
Copper, Total	7440-50-8	1300	5.708		0.384	11.31		0.384	9.034		0.384	2.39		0.384	13		0.384	21.27		0.384
Iron, Total	7439-89-6	300	149		19.1	**4780**		19.1	**78800**		19.1	**40500**		19.1	**70000**		19.1	**5260**		19.1
Lead, Total	7439-92-1	5	ND		0.343	3.092		0.343	ND		0.343	0.6206	J	0.343	0.683	J	0.343	**10.35**		0.343
Magnesium, Total	7439-95-4	-	4830		24.2	4040		24.2	10900		24.2	17300		24.2	13600		24.2	1420		24.2
Manganese, Total	7439-96-5	50	**90.6**		0.44	**109.3**		0.44	**362.9**		0.44	**157**		0.44	**417.8**		0.44	42.8		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	0.114	J	0.0915
Nickel, Total	7440-02-0	100	4.847		0.556	2.45		0.556	1.239	J	0.556	0.9388	J	0.556	4.918		0.556	3.338		0.556
Potassium, Total	7440-09-7	-	5690		30.9	2490		30.9	8460		30.9	21000		30.9	21700		30.9	1650		30.9
Selenium, Total	7782-49-2	40	ND		1.73	3.79	J	1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	32900		29.3	24900		29.3	**50600**		29.3	**236000**		29.3	44800		29.3	11600		29.3

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-1			FA-2			FA-3			FA-4			FA-6			FA-7		
LAB ID:			L2266497-08			L2266497-07			L2266497-06			L2266718-03			L2266497-04			L2268106-11		
COLLECTION DATE:			11/28/2022			11/28/2022			11/28/2022			11/28/2022			11/28/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Thallium, Total	7440-28-0	2	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	1.8	J	1.57	ND		1.57	3.85	J	1.57	1.58	J	1.57	5.683		1.57
Zinc, Total	7440-66-6	2000	37.13		3.41	47.34		3.41	103.8		3.41	7.937	J	3.41	39.51		3.41	41.23		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	496		24	115		24	2740		24	9340		48	1100		24	64	J	24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-8			FA-9			FA-10			FA-11			FA-12			FA-13			FA-14		
LAB ID:			L2268106-09			L2268106-12			L2268106-13			L2269734-08			L2267054-06			L2267054-04			L2266497-05		
COLLECTION DATE:			12/5/2022			12/5/2022			12/5/2022			12/12/2022			11/30/2022			11/30/2022			11/28/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																							
1,2-Dibromo-3-chloropropane	96-12-8	0.02	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	0.4	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	0.03	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	3	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	50	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	70	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	1	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	1	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	3	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	50	ND		0.18	ND		0.18	ND		0.18	ND		0.18	3.2		0.18	0.72		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	2000	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	2	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	30	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	1	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	-	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	1	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	4	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	1	ND		0.08	ND		0.08	ND		0.08	ND		0.08	0.12	J	0.08	1.2		0.08	0.13	J	0.08
Toluene	108-88-3	600	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	0.88		0.2	ND		0.2
Ethylbenzene	100-41-4	700	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	-	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	10	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	1	ND		0.07	ND		0.07	ND		0.07	ND		0.07	0.08	J	0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	5	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	1	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	100	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	1	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	600	ND		0.18	ND		0.18	ND		0.18	ND		0.18	0.23	J	0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	600	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	75	ND		0.19	ND		0.19	ND		0.19	ND		0.19	0.32	J	0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	70	ND		0.17	ND		0.17	ND		0.17	ND		0.17	0.33	J	0.17	0.3	J	0.17	ND		0.17
p/m-Xylene	179601-23-1	-	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	2.5		0.33	ND		0.33
o-Xylene	95-47-6	-	ND		0.39	ND		0.39	ND		0.39	ND		0.39	0.54	J	0.39	1.5		0.39	0.42	J	0.39
Xylenes, Total	1330-20-7	1000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	0.54	J	0.33	4		0.33	0.42	J	0.33
cis-1,2-Dichloroethene	156-59-2	70	ND		0.19	ND		0.19	ND		0.19	ND		0.19	0.42	J	0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	-	ND		0.16	ND		0.16	ND		0.16	ND		0.16	0.42	J	0.16	ND		0.16	ND		0.16
Styrene	100-42-5	100	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	1000	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	6000	ND		1.5	ND		1.5	2.2	J	1.5	ND		1.5	ND		1.5	ND		1.5	2.5	J	1.5
Carbon disulfide	75-15-0	700	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	300	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	-	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	40	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	-	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	700	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	2.1		0.19	0.2	J	0.19
1,2,3-Trichlorobenzene	87-61-6	-	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	9	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	7000	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7		ND		0.27	ND		0.27	ND		0.27	ND		0.27	ND		0.27	10		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	100	ND		1.4	ND		1.4	ND		1.4	ND		1.4	ND		1.4	1.8	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	-	ND		0.4	ND		0.4	ND		0.4	ND		0.4	ND		0.4	5.7	J	0.4	ND		0.4
Freon-113	76-13-1	20000	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		-	-	-	-	-	-	-	2.2	-	-	-	-	-	5.24	-	-	26.7	-	-	3.25	-	-
VOLATILE ORGANICS BY GC/MS-TIC																							
Total TIC Compounds		-	-		-	1.08	J	0	-		-	5.12	J	0	8.93	J	0	107	J	0	6	J	0
1,4 DIOXANE BY 8270E-SIM																							
1,4-Dioxane	123-91-1	0.4	ND		0.032	ND		0.032	ND		0.032	ND		0.032	ND		0.0326	ND		0.0339	ND		0.0314
SEMIVOLATILE ORGANICS BY GC/MS																							
Acenaphthene	83-32-9	400	ND		0.44	ND		0.44	ND		0.44	ND		0.44	6.1		0.44	64		0.44	1.8	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106-4	50	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	7	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	600	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	10	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	10	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	300	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	300	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	0.74	J	0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-8			FA-9			FA-10			FA-11			FA-12			FA-13			FA-14		
LAB ID:			L2268106-09			L2268106-12			L2268106-13			L2269734-08			L2267054-06			L2267054-04			L2266497-05		
COLLECTION DATE:			12/5/2022			12/5/2022			12/5/2022			12/12/2022			11/30/2022			11/30/2022			11/28/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	0.57	J	0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	ND		0.41	0.78	J	0.41	33		0.41	5.4		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	ND		0.33	ND		0.33	19		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	1.9	J	0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	1.7	J	0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	-	-	-	-	-	-	0.74	-	-	6.88	-	-	116.57	-	-	10.8	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																							
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.02	J	0.02	0.07	J	0.02	0.04	J	0.02	ND		0.02	0.06	J	0.02	0.05	J	0.02	0.04	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	0.02	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	0.01	J	0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.02	-	-	0.09	-	-	0.05	-	-	-	-	-	0.06	-	-	0.05	-	-	0.04	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																							
Total TIC Compounds		-	78.6	J	0	109	J	0	90	J	0	84.6	J	0	136	J	0	194	J	0	107	J	0
TOTAL METALS																							
Aluminum, Total	7429-90-5	200	20.2		3.27	**375**		3.27	72.3		3.27	**773**		3.27	55.6		3.27	12.1		3.27	95.4		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	**25.4**		0.165	1.131		0.165	0.6163		0.165	**15.5**		0.165	**13.22**		0.165	2.168		0.165	**63.96**		0.165
Barium, Total	7440-39-3	6000	41.97		0.173	12.3		0.173	25.03		0.173	58.96		0.173	117.3		0.173	101.6		0.173	227		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	ND		0.0599	0.0607	J	0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	17400		39.4	3710		39.4	5330		39.4	21500		39.4	37500		39.4	38400		39.4	40200		39.4
Chromium, Total	7440-47-3	70	0.3197	J	0.178	1.007	J	0.178	0.2531	J	0.178	1.911		0.178	0.5573	J	0.178	0.6749	J	0.178	1.398		0.178
Cobalt, Total	7440-48-4	100	0.6933		0.163	1.333		0.163	0.4192	J	0.163	0.8628		0.163	0.233	J	0.163	ND		0.163	0.1814	J	0.163
Copper, Total	7440-50-8	1300	3.109		0.384	3.081		0.384	1.231		0.384	3.196		0.384	0.7999	J	0.384	0.5191	J	0.384	8.811		0.384
Iron, Total	7439-89-6	300	**14100**		19.1	**1290**		19.1	**353**		19.1	**8380**		19.1	**26600**		19.1	**19400**		19.1	**41800**		19.1
Lead, Total	7439-92-1	5	0.4074	J	0.343	1.864		0.343	0.5287	J	0.343	2.371		0.343	0.6852	J	0.343	ND		0.343	2.362		0.343
Magnesium, Total	7439-95-4	-	12500		24.2	3050		24.2	3460		24.2	8880		24.2	33200		24.2	13500		24.2	5900		24.2
Manganese, Total	7439-96-5	50	**182.7**		0.44	**121.5**		0.44	23.12		0.44	**152.9**		0.44	**302.4**		0.44	**331.4**		0.44	**206.7**		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	1.072	J	0.556	2.828		0.556	1.065	J	0.556	1.55	J	0.556	ND		0.556	ND		0.556	2.276		0.556
Potassium, Total	7440-09-7	-	3690		30.9	2480		30.9	3640		30.9	6420		30.9	23200		30.9	11800		30.9	5480		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	**57400**		29.3	20100		29.3	8450		29.3	**217000**		29.3	**172000**		29.3	**78000**		29.3	14000		29.3
Thallium, Total	7440-28-0	2	0.2554	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	1.666	J	1.57	ND		1.57	2.313	J	1.57	ND		1.57	ND		1.57	ND		1.57
Zinc, Total	7440-66-6	2000	11.45		3.41	26		3.41	14.7		3.41	5.816	J	3.41	11.47		3.41	9.198	J	3.41	44.13		3.41
GENERAL CHEMISTRY																							
Nitrogen, Ammonia	7664-41-7	3000	290		24	148		24	66	J	24	257		24	1750		24	**3080**		24	2640		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-16			FA-17			FA-18			FA-19			FA-20			FA-21		
LAB ID:			L2266497-03			L2266718-05			L2266718-04			L2267054-03			L2266718-06			L2268106-10		
COLLECTION DATE:			11/28/2022			11/29/2022			11/29/2022			11/30/2022			11/29/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
ANALYTE	CAS	(ug/l)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
VOLATILE ORGANICS BY GC/MS																				
1,2-Dibromo-3-chloropropane	96-12-8	**0.02**	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
1,4-Dioxane	123-91-1	**0.4**	ND		61	ND		61	ND		61	ND		61	ND		61	ND		61
1,2-Dibromoethane	106-93-4	**0.03**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methylene chloride	75-09-2	**3**	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68	ND		0.68
1,1-Dichloroethane	75-34-3	**50**	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21	ND		0.21
Chloroform	67-66-3	**70**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Carbon tetrachloride	56-23-5	**1**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,2-Dichloropropane	78-87-5	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Dibromochloromethane	124-48-1	**1**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
1,1,2-Trichloroethane	79-00-5	**3**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Tetrachloroethene	127-18-4	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
Chlorobenzene	108-90-7	**50**	ND		0.18	ND		0.18	ND		0.18	0.78		0.18	5		0.18	ND		0.18
Trichlorofluoromethane	75-69-4	**2000**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
1,2-Dichloroethane	107-06-2	**2**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1,1-Trichloroethane	71-55-6	**30**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Bromodichloromethane	75-27-4	**1**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
trans-1,3-Dichloropropene	10061-02-6	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
cis-1,3-Dichloropropene	10061-01-5	**-**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
1,3-Dichloropropene, Total	542-75-6	**1**	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14	ND		0.14
Bromoform	75-25-2	**4**	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25	ND		0.25
1,1,2,2-Tetrachloroethane	79-34-5	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Benzene	71-43-2	**1**	ND		0.08	ND		0.08	ND		0.08	0.61		0.08	ND		0.08	ND		0.08
Toluene	108-88-3	**600**	ND		0.2	ND		0.2	ND		0.2	0.66	J	0.2	ND		0.2	ND		0.2
Ethylbenzene	100-41-4	**700**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
Chloromethane	74-87-3	**-**	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2	ND		0.2
Bromomethane	74-83-9	**10**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
Vinyl chloride	75-01-4	**1**	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07	ND		0.07
Chloroethane	75-00-3	**5**	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13	ND		0.13
1,1-Dichloroethene	75-35-4	**1**	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17	ND		0.17
trans-1,2-Dichloroethene	156-60-5	**100**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Trichloroethene	79-01-6	**1**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,2-Dichlorobenzene	95-50-1	**600**	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18	ND		0.18
1,3-Dichlorobenzene	541-73-1	**600**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,4-Dichlorobenzene	106-46-7	**75**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
Methyl tert butyl ether	1634-04-4	**70**	ND		0.17	ND		0.17	ND		0.17	0.93	J	0.17	0.3	J	0.17	ND		0.17
p/m-Xylene	179601-23-1	**-**	ND		0.33	ND		0.33	ND		0.33	1.7		0.33	ND		0.33	ND		0.33
o-Xylene	95-47-6	**-**	ND		0.39	ND		0.39	ND		0.39	1		0.39	ND		0.39	ND		0.39
Xylenes, Total	1330-20-7	**1000**	ND		0.33	ND		0.33	ND		0.33	2.7		0.33	ND		0.33	ND		0.33
cis-1,2-Dichloroethene	156-59-2	**70**	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19	ND		0.19
1,2-Dichloroethene, Total	540-59-0	**-**	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16	ND		0.16
Styrene	100-42-5	**100**	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36	ND		0.36
Dichlorodifluoromethane	75-71-8	**1000**	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24	ND		0.24
Acetone	67-64-1	**6000**	11		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5	ND		1.5
Carbon disulfide	75-15-0	**700**	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
2-Butanone	78-93-3	**300**	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9	ND		1.9
4-Methyl-2-pentanone	108-10-1	**-**	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
2-Hexanone	591-78-6	**40**	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52	ND		0.52
Bromochloromethane	74-97-5	**-**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Isopropylbenzene	98-82-8	**700**	ND		0.19	ND		0.19	ND		0.19	0.2	J	0.19	ND		0.19	ND		0.19
1,2,3-Trichlorobenzene	87-61-6	**-**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
1,2,4-Trichlorobenzene	120-82-1	**9**	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22	ND		0.22
Methyl Acetate	79-20-9	**7000**	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23	ND		0.23
Cyclohexane	110-82-7	**-**	ND		0.27	ND		0.27	ND		0.27	15		0.27	ND		0.27	ND		0.27
Tert-Butyl Alcohol	75-65-0	**100**	ND		1.4	ND		1.4	ND		1.4	1.7	J	1.4	2.9	J	1.4	ND		1.4
Methyl cyclohexane	108-87-2	**-**	ND		0.4	ND		0.4	ND		0.4	5.5	J	0.4	ND		0.4	ND		0.4
Freon-113	76-13-1	**20000**	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15	ND		0.15
Total VOCs		**-**	11	-	-	-	-	-	-	-	-	28.08	-	-	8.2	-	-	-	-	-
VOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		**-**	-		-	-		-	-		-	119	J	0	1.88	J	0	-		-
1,4 DIOXANE BY 8270E-SIM																				
1,4-Dioxane	123-91-1	**0.4**	ND		0.0326	ND		0.0339	ND		0.0339	ND		0.0339	ND		0.0353	ND		0.032
SEMIVOLATILE ORGANICS BY GC/MS																				
Acenaphthene	83-32-9	**400**	ND		0.44	ND		0.44	ND		0.44	79		0.44	ND		0.44	0.76	J	0.44
3-Methylphenol/4-Methylphenol	108-39-4/106	**50**	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
Bis(2-chloroethyl)ether	111-44-4	**7**	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Chloronaphthalene	91-58-7	**600**	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
2,4-Dinitrotoluene	121-14-2	**10**	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
2,6-Dinitrotoluene	606-20-2	**10**	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93	ND		0.93
Fluoranthene	206-44-0	**300**	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26	ND		0.26
4-Chlorophenyl phenyl ether	7005-72-3	**-**	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
Bis(2-chloroisopropyl)ether	108-60-1	**300**	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-16			FA-17			FA-18			FA-19			FA-20			FA-21		
LAB ID:			L2266497-03			L2266718-05			L2266718-04			L2267054-03			L2266718-06			L2268106-10		
COLLECTION DATE:			11/28/2022			11/29/2022			11/29/2022			11/30/2022			11/29/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Bis(2-chloroethoxy)methane	111-91-1	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
Hexachlorocyclopentadiene	77-47-4	40	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69	ND		0.69
Hexachloroethane	67-72-1	7	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58	ND		0.58
Isophorone	78-59-1	40	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Naphthalene	91-20-3	300	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Nitrobenzene	98-95-3	6	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
NDPA/DPA	86-30-6	10	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42	ND		0.42
n-Nitrosodi-n-propylamine	621-64-7	-	ND		0.64	1.3		0.64	ND		0.64	ND		0.64	ND		0.64	ND		0.64
Bis(2-ethylhexyl)phthalate	117-81-7	3	ND		1.5	ND		1.5	2.1		1.5	ND		1.5	1.5		1.5	ND		1.5
Butyl benzyl phthalate	85-68-7	100	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2	ND		1.2
Di-n-butylphthalate	84-74-2	700	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39	ND		0.39
Di-n-octylphthalate	117-84-0	100	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3	ND		1.3
Diethyl phthalate	84-66-2	6000	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
Dimethyl phthalate	131-11-3	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
Chrysene	218-01-9	5	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34	ND		0.34
Acenaphthylene	208-96-8	100	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
Anthracene	120-12-7	2000	ND		0.33	ND		0.33	ND		0.33	0.48	J	0.33	ND		0.33	ND		0.33
Benzo(ghi)perylene	191-24-2	100	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3	ND		0.3
Fluorene	86-73-7	300	ND		0.41	ND		0.41	ND		0.41	38		0.41	ND		0.41	ND		0.41
Phenanthrene	85-01-8	100	ND		0.33	ND		0.33	ND		0.33	16		0.33	ND		0.33	ND		0.33
Pyrene	129-00-0	200	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28	ND		0.28
4-Chloroaniline	106-47-8	30	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1	ND		1.1
2-Nitroaniline	88-74-4	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
3-Nitroaniline	99-09-2	-	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81	ND		0.81
4-Nitroaniline	100-01-6	-	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8	ND		0.8
Dibenzofuran	132-64-9	-	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5	ND		0.5
2-Methylnaphthalene	91-57-6	30	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45	ND		0.45
2,4,6-Trichlorophenol	88-06-2	20	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61	ND		0.61
p-Chloro-m-cresol	59-50-7	100	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35	ND		0.35
2-Chlorophenol	95-57-8	40	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48	ND		0.48
2,4-Dichlorophenol	120-83-2	20	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41	ND		0.41
2,4-Dimethylphenol	105-67-9	100	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8	ND		1.8
2-Nitrophenol	88-75-5	-	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85	ND		0.85
4-Nitrophenol	100-02-7	-	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67	ND		0.67
2,4-Dinitrophenol	51-28-5	40	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6	ND		6.6
Phenol	108-95-2	2000	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57	ND		0.57
2-Methylphenol	95-48-7	50	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
2,4,5-Trichlorophenol	95-95-4	700	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77	ND		0.77
Carbazole	86-74-8	-	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49	ND		0.49
4-Bromophenyl phenyl ether	101-55-3	-	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38	ND		0.38
3,3'-Dichlorobenzidine	91-94-1	30	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6	ND		1.6
Benzaldehyde	100-52-7	-	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Acetophenone	98-86-2	700	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53	ND		0.53
Caprolactam	105-60-2	4000	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3	ND		3.3
Biphenyl	92-52-4	400	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46	ND		0.46
1,2,4,5-Tetrachlorobenzene	95-94-3	-	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44	ND		0.44
Atrazine	1912-24-9	3	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76	ND		0.76
2,3,4,6-Tetrachlorophenol	58-90-2	200	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84	ND		0.84
Total SVOCs		-	-	-	-	1.3	-	-	2.1	-	-	133.48	-	-	1.5	-	-	0.76	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																				
4,6-Dinitro-o-cresol	534-52-1	-	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09	ND		0.09
Benzo(a)anthracene	56-55-3	0.1	0.02	J	0.02	0.02	J	0.02	0.06	J	0.02	0.06	J	0.02	0.03	J	0.02	0.02	J	0.02
Benzo(a)pyrene	50-32-8	0.1	ND		0.02	ND		0.02	0.05	J	0.02	ND		0.02	ND		0.02	ND		0.02
Benzo(b)fluoranthene	205-99-2	0.2	ND		0.01	0.01	J	0.01	0.08	J	0.01	0.01	J	0.01	0.04	J	0.01	ND		0.01
Benzo(k)fluoranthene	207-08-9	0.5	ND		0.01	ND		0.01	0.03	J	0.01	ND		0.01	0.02	J	0.01	ND		0.01
Dibenzo(a,h)anthracene	53-70-3	0.3	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01	ND		0.01
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND		0.01	ND		0.01	0.05	J	0.01	ND		0.01	0.02	J	0.01	ND		0.01
Hexachlorobenzene	118-74-1	0.02	ND		0.01	ND		0.01	ND		0.01	0.01	J	0.01	ND		0.01	ND		0.01
Pentachlorophenol	87-86-5	0.3	ND		0.01	ND		0.01	**0.74**		0.01	ND		0.01	ND		0.01	ND		0.01
Hexachlorobutadiene	87-68-3	1	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05	ND		0.05
Total SVOCs		-	0.02	-	-	0.03	-	-	1.01	-	-	0.08	-	-	0.11	-	-	0.02	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																				
Total TIC Compounds		-	61.3	J	0	88.8	J	0	61.3	J	0	286	J	0	122	J	0	96.2	J	0
TOTAL METALS																				
Aluminum, Total	7429-90-5	200	164		3.27	196		3.27	36.5		3.27	24.1		3.27	20.3		3.27	**212**		3.27
Antimony, Total	7440-36-0	6	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429	ND		0.429
Arsenic, Total	7440-38-2	3	**5.19**		0.165	0.3383	J	0.165	**11.65**		0.165	1.08		0.165	**20.31**		0.165	**10.27**		0.165
Barium, Total	7440-39-3	6000	24.42		0.173	7.046		0.173	57		0.173	98.19		0.173	269.7		0.173	36.96		0.173
Beryllium, Total	7440-41-7	1	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107	ND		0.107
Cadmium, Total	7440-43-9	4	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599	ND		0.0599
Calcium, Total	7440-70-2	-	2700		39.4	5760		39.4	35600		39.4	41700		39.4	26200		39.4	20500		39.4
Chromium, Total	7440-47-3	70	0.678	J	0.178	0.5466	J	0.178	0.2758	J	0.178	0.5268	J	0.178	0.6559	J	0.178	0.9866	J	0.178
Cobalt, Total	7440-48-4	100	0.8711		0.163	0.2092	J	0.163	0.5208		0.163	ND		0.163	0.247	J	0.163	0.6272		0.163
Copper, Total	7440-50-8	1300	15.26		0.384	1.638		0.384	1.433		0.384	2.156		0.384	1.224		0.384	2.546		0.384
Iron, Total	7439-89-6	300	**2130**		19.1	**459**		19.1	**2290**		19.1	**24300**		19.1	**17200**		19.1	**13400**		19.1
Lead, Total	7439-92-1	5	1.002		0.343	0.5908	J	0.343	ND		0.343	0.3522	J	0.343	ND		0.343	1.907		0.343

Table 20
Hess Corporation Former Port Reading Complex
750 Cliff Road, Port Reading, New Jersey
Groundwater Analytical Results
AOC 103 - Fire Fighting Training Area/Fire Pits

SAMPLE ID:		NJ Groundwater Criteria	FA-16			FA-17			FA-18			FA-19			FA-20			FA-21		
LAB ID:			L2266497-03			L2266718-05			L2266718-04			L2267054-03			L2266718-06			L2268106-10		
COLLECTION DATE:			11/28/2022			11/29/2022			11/29/2022			11/30/2022			11/29/2022			12/5/2022		
SAMPLE MATRIX:			WATER			WATER			WATER			WATER			WATER			WATER		
Magnesium, Total	7439-95-4	-	1800		24.2	1850		24.2	6570		24.2	15500		24.2	16100		24.2	8760		24.2
Manganese, Total	7439-96-5	50	**64.64**		0.44	3.183		0.44	**328.9**		0.44	**409.1**		0.44	**538.9**		0.44	**160.8**		0.44
Mercury, Total	7439-97-6	2	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915	ND		0.0915
Nickel, Total	7440-02-0	100	1.745	J	0.556	0.6288	J	0.556	1.343	J	0.556	ND		0.556	ND		0.556	1.596	J	0.556
Potassium, Total	7440-09-7	-	3050		30.9	1210		30.9	3960		30.9	11100		30.9	12300		30.9	5240		30.9
Selenium, Total	7782-49-2	40	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73	ND		1.73
Silver, Total	7440-22-4	40	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163	ND		0.163
Sodium, Total	7440-23-5	50000	22700		29.3	6320		29.3	13400		29.3	**80400**		29.3	**73200**		29.3	39100		29.3
Thallium, Total	7440-28-0	2	ND		0.143	0.2082	J	0.143	ND		0.143	ND		0.143	ND		0.143	ND		0.143
Vanadium, Total	7440-62-2	-	ND		1.57	ND		1.57	ND		1.57	ND		1.57	ND		1.57	ND		1.57
Zinc, Total	7440-66-6	2000	67.18		3.41	12.19		3.41	22.15		3.41	13.87		3.41	17.85		3.41	20.54		3.41
GENERAL CHEMISTRY																				
Nitrogen, Ammonia	7664-41-7	3000	229		24	ND		24	224		24	1740		24	1910		24	248		24

NJ-GWIIA: New Jersey Groundwater Quality Class IIA Criteria Criteria per Ground Water Quality Standards amended March 11, 2022.

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.

J - 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.

B - The analyte was detected above the reporting limit in the associated method blank.

ND = Nondetect

Appendix A

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/5/22
FIELD PERSONNEL: KP
WEATHER: Sunny, 35
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: 2TF-1
WELL DEPTH: 20'
SCREENED/OPEN INTERVAL: 10-20'
WELL PERMIT #: E202201991
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.2

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.93 ft below TOC

TIME	PURGING	SAMPLING	pH ± 0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ± 3 (mS/cm) (EPA 120.1)		REDOX POTENTIAL ± 10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY 10% (NTU) (EPA 180.1)		TEMPERATURE 3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1020			6.78	NA	1.01	NA	97	NA	0.0	NA	137	NA	14.99	NA	200	5.98
1025			6.63	-0.15	1.04	2.97	114	17	0.0	—	123	-10.22	15.03	0.27	200	5.98
1030			6.62	-0.01	1.04	—	115	1	0.0	—	120	-2.44	15.08	0.33	200	5.98
1035			6.61	-0.01	1.05	0.96	119	4	0.0	—	101	-15.83	15.01	-0.53	200	5.98
1040			6.57	-0.04	1.05	—	124	5	0.0	—	91.6	-9.31	15.22	1.47	200	5.98
1045			6.54	-0.03	1.06	0.95	127	3	0.0	—	85.3	-6.88	15.27	0.33	200	5.98
1050			6.51	-0.03	1.06	—	129	2	0.0	—	80.9	-5.16	15.24	-0.20	200	5.99
1055		✓														
1100			6.47	-0.04	1.07	0.94	133	4	0.0	—	74.1	-8.41	15.29	0.33	200	5.99

COMMENTS: Sample @ 1055

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	~~12/6/22~~ 12/14/22	FIELD PERSONNEL:	KF
WEATHER:	~~Cloudy, Rain, 45~~ Sunny, 30	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	2TF-2	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202201992	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7.16 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.16 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1225			7.19	NA	0.109	NA	115	NA	0.76	NA	777	NA	10.95	NA	175	5.19
1230			7.09	-0.10	0.108	-0.92	120	5	0.54	-28.95	519	-33.21	11.01	0.55	175	5.20
1235			7.06	-0.03	0.106	-1.85	122	2	0.63	16.67	403	-22.35	10.96	-0.45	175	5.20
1240			7.05	-0.01	0.104	-1.89	123	1	0.67	6.35	329	-18.36	11.02	0.55	175	5.20
1245			7.02	-0.03	0.104	—	126	3	0.66	-1.49	261	-20.67	10.99	-0.27	175	5.20
1250	~~1250~~		7.01	-0.01	0.105	0.96	127	1	0.58	-12.12	217	-16.86	11.05	0.55	175	5.20
1255	~~1305~~		7.00	-0.01	0.105	—	128	1	0.53	-8.62	199	-8.30	11.05	—	175	5.20
1300	~~1310~~		6.99	-0.01	0.105	—	129	1	0.49	-7.55	192	-3.52	11.10	0.45	175	5.21
1305			6.99	—	0.106	0.95	129	—	0.45	-8.16	180	-6.25	11.14	0.36	175	5.21
1310		✓														
1315			6.98	-0.01	0.106	—	130	1	0.42	-6.67	169	-6.11	11.10	-0.40	175	5.21

COMMENTS: Sample @ 1310

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/6/22	FIELD PERSONNEL:	KL
WEATHER:	Cloudy, Rain 45	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	2TF-3	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202201993	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 1.8

PUMP INTAKE DEPTH: 7.74 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.74 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1020			7.02	NA	0.713	NA	-27	NA	0.0	NA	263	NA	15.53	NA	200	5.76
1025			6.97	-0.05	0.733	2.81	-26	1	0.0	—	236	-9.13	15.62	0.58	200	5.75
1030			6.94	-0.03	0.749	2.18	-25	1	0.0	—	200	-15.25	15.79	1.09	200	5.75
1035			6.92	-0.02	0.756	0.94	-24	1	0.0	—	207	3.5	15.80	0.06	200	5.75
1040			6.92	—	0.759	0.40	-24	—	0.0	—	193	-6.76	15.91	0.70	200	5.75
1045			6.90	-0.02	0.764	0.66	-24	—	0.0	—	181	-6.22	15.93	0.13	200	5.57
1050		✓														
1055			6.89	-0.01	0.771	0.92	-24	—	0.0	—	177	-2.21	15.99	0.38	200	5.75

COMMENTS: Sample @ 1050

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/5/22	FIELD PERSONNEL:	KV
WEATHER:	Sunny, 40	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	2TF-4	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	8-18'
WELL PERMIT #:	E202201996	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0; BENEATH OUTER CAP: 0.0; BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 10 ft below TOC

DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.70 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1345			7.27	NA	3.03	NA	-125	NA	0.0	NA	64.9	NA	15.77	NA	300	2.75
1350			7.31	.04	3.52	16.17	-135	-10	0.0	—	45.1	-30.51	15.89	0.76	300	2.77
1355			7.32	.01	3.57	1.42	-137	-2	0.0	—	41.2	-8.65	15.81	-0.50	300	2.78
1400			7.32	—	3.64	1.96	-140	-3	0.0	—	27.9	-32.28	15.90	0.57	300	2.78
1405			7.35	.03	3.70	1.65	-143	-3	0.0	—	16.9	-39.43	15.99	0.57	300	2.78
1410			7.36	.01	3.75	1.35	-145	-2	0.0	—	10.6	-37.28	15.96	-0.19	300	2.78
1415			7.35	-.01	3.77	0.53	-146	-1	0.0	—	10.1	-4.72	15.98	0.13	300	2.78
1420			7.36	.01	3.78	0.27	-148	-2	0.0	—	9.4	-6.93	16.07	0.56	300	2.79
1425		✓	7.36	—	3.80	0.53	-147	1	0.0	—	9.7	3.19	16.11	0.25	300	2.79
1430		✓														
1435			7.36	—	3.83	0.79	-150	-3	0.0	—	9.0	-7.22	16.21	0.62	300	2.79

COMMENTS: Sample @ 1430

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/5/22
FIELD PERSONNEL: KV
WEATHER: Sunny, 35
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #: 2TF-5
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202201997
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 0.85 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1235			7.44	NA	0.929	NA	-103	NA	0.0	NA	34.6	NA	11.75	NA	275	0.84
1240			7.39	-0.05	0.930	.11	-108	-5	0.0	—	23.1	-33.24	11.83	0.68	275	0.85
1245			7.34	-0.05	0.920	-1.08	-112	-4	0.0	—	8.7	-62.34	12.27	3.72	275	0.85
1250			7.32	-0.02	0.917	-0.33	-116	-4	0.0	—	0.0	—	12.37	0.82	275	0.85
1255			7.30	-0.02	0.913	-0.44	-118	-2	0.0	—	0.0	—	12.41	0.32	275	0.85
1300			7.29	-0.01	0.911	-0.22	-119	-1	0.0	—	0.0	—	12.43	0.16	275	0.85
1305			7.29	—	0.912	0.11	-121	-2	0.0	—	0.0	—	12.47	0.32	275	0.85
1310		✓														
1315			7.27	-0.02	0.910	-0.22	-123	-2	0.0	—	0.0	—	12.49	0.16	275	0.85

COMMENTS: Sample @ 1310

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/5/22	FIELD PERSONNEL:	KC
WEATHER:	Sunny, 35	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	2TF-6	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202202284	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 7 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.54 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1120			7.37	NA	3.52	NA	-138	NA	0.0	NA	315	NA	15.15	NA	250	2.54
1125			7.39	0.02	3.48	-1.14	-143	-5	0.0	—	248	-21.27	15.11	-0.26	250	2.55
1130			7.39	—	3.38	-2.87	-146	-3	0.0	—	215	-13.31	15.51	2.65	250	2.55
1135			7.40	0.01	3.43	1.48	-149	-3	0.0	—	161	-25.12	15.59	0.52	250	2.55
1140			7.40	—	3.45	0.58	-151	-2	0.0	—	130	-19.26	15.61	0.13	250	2.55
1145			7.40	—	3.47	0.58	-152	-1	0.0	—	96.8	-25.54	15.70	0.58	250	2.55
1150			7.40	—	3.55	2.31	-154	-2	0.0	—	61.8	-36.16	15.74	0.26	250	2.55
1155			7.40	—	3.55	—	-155	-1	0.0	—	64.1	3.72	15.78	0.25	250	2.55
1200			7.41	0.01	3.56	0.28	-155	—	0.0	—	64.4	0.47	15.75	-0.19	250	2.55
1205			7.41	—	3.55	-0.28	-156	-1	0.0	—	63.5	-1.40	15.71	-0.25	250	2.55
1210		✓														

COMMENTS: Sample @ 1210

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

		pH		SC		Redox		DO		NTU		Temp		PR	DTW
post sample	1215	7.41	—	3.55	—	-156	—	0.0	—	61.6	-2.99	15.71	—	250	2.55

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/16/22	FIELD PERSONNEL:	JY
WEATHER:	30° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48986 P-48987		

MONITOR WELL #:	3TF-1	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202202023	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH:	9.51	ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION :	6.51	ft below TOC
	BENEATH INNER CAP:	364.1			

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1010			6.95	NA	.464	NA	-71	NA	15.52	NA	950	NA	11.22	NA	250	6.53
1015			6.36	.59	.387	18.1	-43	28	14.27	8.39	404	80.65	10.01	11.4	250	6.56
1020			6.34	.02	.385	.52	-40	3	13.84	3.06	388	4.04	10.24	2.27	250	6.58
1025			6.41	.07	.387	.52	-48	8	13.31	3.8	359	7.76	10.41	1.65	250	6.60
1030			6.41	0	.387	0	-53	5	13.07	1.82	327	9.32	10.22	1.84	250	6.62
1035		X														
1045			6.43	.02	.385	.52	-62	9	12.24	6.56	284	14.08	10.04	1.78	250	6.71

COMMENTS:

Sampled @ 1035

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	~~12/15/22~~ 12/19/22	FIELD PERSONNEL:	SH + JT
WEATHER:	32° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48880 P-41987		

MONITOR WELL #:	3TF-1D	WELL DEPTH:	35'	SCREENED/OPEN INTERVAL:	25-35'
WELL PERMIT #:	E202202024	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 27 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: ~~6.99~~ 7.39 ft below TOC	
	BENEATH INNER CAP:	~~5.6~~ 7.2		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1055			7.15	NA	.232	NA	8	NA	3.85	NA	412	NA	12.51	NA	200	7.41
1100			7.09	.06	.237	2.13	20	12	3.42	11.83	318	25.75	12.94	3.78	200	7.42
1105			7.11	.02	.234	1.27	-2	22	1.52	76.92	92.1	110.17	13.23	2.22	200	7.46
1110			7.13	.02	.235	.43	-11	9	1.54	1.31	88.3	4.21	13.04	1.45	200	7.51
1115			7.15	.02	.237	.85	-16	5	1.32	1.31	83.9	5.11	13.05	.08	200	7.55
1120			7.13	.02	.239	.84	-18	2	1.48	2.62	79.8	5.01	13.21	1.22	200	7.58
1125		X														
1135			7.12	.01	.251	4.9	-12	6	0	NA	58.4	30.97	13.25	.3	200	7.64

COMMENTS:

Sampled @ 1125

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 445416 (p) 33470 (m)		

MONITOR WELL #: 3TF-2 WELL DEPTH: 15' SCREENED/OPEN INTERVAL: 5-15'

WELL PERMIT #: E202202025 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 10.74 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 8.74 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1320			7.17	NA	0.445	NA	25	NA	0.0	NA	193	NA	9.31	NA	200	8.85
1325			7.12	-0.05	0.381	-14.38	6	-19	0.0	—	121	-37.31	9.26	-0.54	200	8.87
1330			7.18	0.06	0.324	-14.96	-14	-20	0.0	—	50.6	-58.18	9.48	2.38	200	8.89
1335			7.17	0.01	0.318	-1.85	-12	-2	0.0	—	48.6	-3.95	9.40	-0.84	200	8.89
1340			7.16	-0.01	0.310	-2.52	-24	-12	0.0	—	45.4	-6.58	9.34	-0.64	200	8.89
1345			7.17	0.01	0.305	-1.61	-30	-6	0.0	—	42.7	-5.95	9.31	-0.32	200	8.89
1350			7.18	0.01	0.299	-1.97	-31	-1	0.0	—	41.7	-2.34	9.24	-0.75	200	8.90
1355			7.19	0.01	0.298	-0.53	-33	-2	0.0	—	39.9	-4.32	9.16	-0.87	200	8.90
1400		✓														
1405			7.19	—	0.297	-0.34	-35	-2	0.0	—	39.2	-1.75	9.14	-0.22	200	8.91

COMMENTS: Sample @ 1400

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	KP
WEATHER:	Sunny, 30	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	3TF-3	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	10-20'
WELL PERMIT #:	E202202026	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 12 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.21 ft below TOC
	BENEATH INNER CAP:	40.1	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1340			7.10	NA	32.4	NA	-332	NA	15.65	NA	178	NA	16.89	NA	150	7.20
1345			7.10	—	32.9	1.54	-335	-3	16.38	4.67	170	-4.49	16.56	-1.95	150	7.23
1350			7.11	0.01	33.3	1.22	-337	-2	16.47	0.55	162	-4.71	16.61	0.30	150	7.23
1355			7.11	—	33.9	1.80	-341	-4	16.56	0.55	151	-6.79	16.51	-0.61	150	7.23
1400		✓														
1405			7.12	0.01	34.5	1.77	-343	-2	16.76	1.21	147	-2.65	16.42	-0.55	150	7.23

COMMENTS: Sampled @ 1400

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/12/22
WEATHER: Cloudy, 35
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KP
CERTIFICATION #: 13040
Horiba U52 44546(p) 33470(m)

MONITOR WELL #: AB-1
WELL PERMIT #: 2600063927
WELL DEPTH: 13'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 5-13'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.62 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1240			6.98	NA	0.246	NA	112	NA	0.0	NA	112	NA	12.25	NA	200	4.77
1245			7.09	0.11	0.267	8.54	94	-18	0.0	—	75.9	-32.23	12.19	-0.49	200	4.81
1250			7.18	0.09	0.309	15.73	80	-14	0.0	—	52.3	-31.09	12.13	-0.49	200	4.86
1255			7.17	-0.01	0.310	0.32	77	-3	0.0	—	42.8	-18.16	11.66	-3.88	200	4.89
1300			7.20	0.03	0.313	0.97	75	-2	0.0	—	37.5	-12.38	11.44	-1.89	200	4.90
1305			7.14	-0.06	0.313	—	75	—	0.0	—	32.3	-13.87	11.14	-2.62	200	4.90
1310			7.08	-0.06	0.314	0.32	69	-6	0.0	—	33.5	3.72	11.25	0.99	200	4.91
1315			7.13	0.05	0.312	-0.64	64	-5	0.0	—	32.0	-4.48	11.30	0.44	200	4.91
1320			7.15	0.02	0.316	1.28	62	-2	0.0	—	32.7	2.19	11.37	0.62	200	4.91
1325		✓														
1330			7.13	-0.02	0.315	-0.32	62	—	0.0	—	33.3	1.84	11.41	0.35	200	4.92

COMMENTS: Sample @ 1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	KL
WEATHER:	Cloudy / 35	CERTIFICATION #:	13040

Horizon UTZ 44546 (E) 33470 (m)

MONITOR WELL #:	AB - 3	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	5-13'
WELL PERMIT #:	2600063928	WELL DIAMETER:	4 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.80 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1040			7.31	NA	0.270	NA	120	NA	0.0	NA	242	NA	10.02	NA	150	4.01
1045			7.03	-0.28	0.274	1.48	128	8	0.0	—	230	-4.96	9.66	-3.59	150	4.05
1050			6.92	-0.11	0.282	2.92	136	8	0.0	—	221	-3.91	9.55	-1.14	150	4.07
1055			6.76	-0.16	0.315	11.70	141	5	0.0	—	211	-4.53	9.49	-0.63	150	4.09
1100			6.73	-0.03	0.376	19.37	142	1	0.0	—	210	-0.47	9.51	0.21	150	4.10
1105			6.72	-0.01	0.440	17.02	141	-1	0.0	—	208	-0.95	9.56	0.53	150	4.11
1110			6.71	-0.01	0.468	6.36	140	-1	0.0	—	208	—	9.65	0.94	150	4.11
1115			6.72	0.01	0.479	2.35	137	-3	0.0	—	205	-1.44	9.77	1.24	150	4.12
1120			6.71	-0.01	0.492	2.71	137	—	0.0	—	206	0.49	9.80	0.31	150	4.12
1125			6.72	0.01	0.501	1.83	134	-3	0.0	—	205	-0.49	9.91	1.02	150	4.13
1130		✓														

COMMENTS: Sample @ 1130

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

	pH		Sc		Redox		DO		NTU		Temp		Pump rate	DTW
1135	6.71	-0.01	0.511	2.00	134	—	0.0	—	205	—	9.95	0.40	150	4.14

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	JY
WEATHER:	40° (rain)	CERTIFICATION #:	13040

Horiba U-52 pH ~ 29744 pH ~ 213110

MONITOR WELL #:	AB - 4R	WELL DEPTH:	15.5'	SCREENED/OPEN INTERVAL:	5.5-15.5
WELL PERMIT #:	E201407933	WELL DIAMETER:	4' Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.15 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1305	X		7.84	NA	.481	NA	-158	NA	1.02	NA	450	NA	12.72	NA	100	4.22
1310	X		7.81	.03	.476	1.04	-150	8	1.03	.88	418	7.37	12.38	.49	100	4.25
1315	X		7.79	.02	.471	1.06	-144	6	1.0	2.96	399	4.65	12.42	.32	100	4.26
1320	X		7.71	.08	.462	1.93	-139	5	.88	2.02	379	5.14	12.48	.48	100	4.28
1325		X														
1335			7.58	.13	.451	2.41	-132	7	.79	21.47	312	19.39	12.61	1.04	100	4.36

COMMENTS:

Sampled @ 1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	JP
WEATHER:	40° Sunny	CERTIFICATION #:	13040

Horiba U52 M-297849 P-213160

MONITOR WELL #:	AB - 4D	WELL DEPTH:	33'	SCREENED/OPEN INTERVAL:	28-33'
WELL PERMIT #:	E201309746	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.15 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1215	X		7.49	NA	12.2	NA	-289	NA	1.62	NA	0	NA	13.43	NA	150	10.27
1220	X		7.43	.06	12.4	1.63	-292	3	1.01	.99	0	0	13.41	.15	150	10.29
1225	X		7.41	.02	12.5	.8	-300	8	1.0	1	0	0	13.36	.37	150	10.31
1230	X		7.4	.01	12.5	0	-308	8	.98	2.02	0	0	13.39	.22	150	10.33
1235	X		7.4	0	12.5	0	-311	3	.98	0	0	0	13.47	.6	150	10.35
1240		X														
1250			7.39	.01	12.5	0	-318	7	.92	6.32	0	0	13.52	.37	150	10.4

COMMENTS:

Sampled @ 1240

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	KJ
WEATHER:	Cloudy, 35	CERTIFICATION #:	13040

Horizon USZ 44546(p) 33470(m)

MONITOR WELL #:	AB - 5	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	5-13'
WELL PERMIT #:	2600063930	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.50 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1150			7.13	NA	0.559	NA	72	NA	0.0	NA	32.0	NA	10.90	NA	175	3.71
1155			7.14	0.01	0.562	0.54	47	-25	0.0	—	27.7	-13.44	10.66	-2.20	175	3.74
1200			7.15	0.01	0.561	-0.18	43	-4	0.0	—	26.5	-4.33	10.59	-0.66	175	3.76
1205			7.15	—	0.563	0.36	39	-4	0.0	—	26.4	-0.38	10.40	-1.79	175	3.76
1210			7.16	0.01	0.563	—	35	-4	0.0	—	23.9	-9.47	10.31	-0.87	175	3.77
1215		✓														
1220			7.16	—	0.563	—	35	—	0.0		24.5	2.51	10.28	-0.29	175	3.78

COMMENTS: Sample @ 1215

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	KF
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #:	AB-6	WELL DEPTH:	10'	SCREENED/OPEN INTERVAL:	1.5 - 10.5
WELL PERMIT #:	E201708820	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 4.35 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.35 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1220			8.12	NA	0.502	NA	32	NA	5.01	NA	125	NA	10.75	NA	100	2.38
1225			8.09	-0.03	0.475	-5.38	40	8	4.92	-1.80	123	-1.6	10.69	-0.56	100	2.37
1230			8.06	-0.03	0.463	-2.53	46	6	4.99	1.42	120	-2.44	10.68	-0.09	100	2.37
1235			8.04	-0.02	0.462	-0.22	53	7	4.91	-1.60	108	-10.00	10.71	0.28	100	2.37
1240			8.02	-0.02	0.459	-0.65	57	4	4.96	1.02	105	-2.78	10.74	0.28	100	2.37
1245		✓														
1300			8.01	-0.01	0.458	-0.22	58	1	4.93	-0.61	103	-1.91	10.75	0.09	100	2.37

COMMENTS: Sampled @ 1245

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	JP
WEATHER:	48° Sunny	CERTIFICATION #:	13040

Horiba U52 M - 21831 P - 48800

MONITOR WELL #:	AD - 1	WELL DEPTH:	12.2'	SCREENED/OPEN INTERVAL:	3 - 16'
WELL PERMIT #:	2500025391	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 6.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.35 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0955			7.37	NA	1.27	NA	99	NA	2.96	NA	58.3	NA	15.84	NA	100	4.90
1000			7.35	.02	1.27	0	104	5	3.0	1.34	58.7	0.68	15.62	1.4	200	5.0
1005			7.29	.06	1.26	0.79	110	6	3.0	0	58.4	0.51	16.01	2.5	200	5.02
1010			7.31	.02	1.26	0	118	8	3.0	0	57.8	1.03	16.06	0.31	200	5.05
1015		X														
1025			7.35	.04	1.27	0.58	132	14	2.98	0.67	42.7	30.05	11.12	0.37	200	5.17

COMMENTS:

Sample @ 1015

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	JP
WEATHER:	48° Sunny	CERTIFICATION #:	13040

Horiba U52 Mn-2/831 p-488 00

MONITOR WELL #:	AD - 2	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	3-18'
WELL PERMIT #:	2600025392	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: ~~65.5~~ 65.5

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.92 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1045			6.91	NA	5.24	NA	-34	NA	0	NA	7.5	NA	17.21	NA	150	7.61
1050			6.97	.06	5.27	0.57	-39	5	0	0	8.0	6.45	17.26	0.29	200	7.65
1055			6.97	0	5.28	0.19	-45	6	0	0	8.2	2.47	17.01	1.46	200	7.69
1100			6.98	.01	5.28	0	-50	5	0	0	8.4	2.41	17.13	0.7	250	7.80
1105		✓														
1115			7.0	.02	5.27	0.19	-65	15	0.01	NA	8.1	8	17.22	0.52	200	7.96

COMMENTS:

Sampled @1105

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	JP
WEATHER:	48° Sunny	CERTIFICATION #:	13040
	Horiba U52 M-2183		P-4880

MONITOR WELL #:	AD - 2DD	WELL DEPTH:	44.60'	SCREENED/OPEN INTERVAL:	40-45'
WELL PERMIT #:	E201305268	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 42 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.98 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE ±3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1125			11.36	NA	0.863	NA	-165	NA	7.32	NA	820	NA	15.26	NA	200	10.08
1130			11.44	0.08	0.818	5.35	-192	27	6.96	5.04	650	23.13	15.12	0.82	200	10.12
1135			11.52	.08	.816	0.24	-198	6	7.25	4.08	670	3.03	15.15	0.2	200	10.15
1140			11.58	.06	.81	0.74	-202	4	6.87	5.38	681	1.62	15.25	0.65	200	10.18
1145			11.65	.07	.80	1.24	-208	6	6.62	3.71	643	5.74	15.18	0.41	200	10.24
1150		X														
1205			11.87	.22	.807	0.87	-222	14	5.68	15.28	784	19.76	15.26	0.52	250	10.54'

COMMENTS:

Sampled @ 1150

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	ILY
WEATHER:	Sunny, 35	CERTIFICATION #:	13040

Horiba 052 44546(p) 33470(m)

MONITOR WELL #:	AD - 3	WELL DEPTH:	14'	SCREENED/OPEN INTERVAL:	4-14'
WELL PERMIT #:	2600025394	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11.39 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.39 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1010			8.19	NA	0.120	NA	119	NA	6.91	NA	129	NA	16.47	NA	225	9.69
1015			8.18	-0.01	0.121	0.83	121	2	6.79	-1.74	123	-4.65	16.46	-0.06	225	9.73
1020			8.17	-0.01	0.122	0.83	123	2	6.32	-6.92	108	-12.20	16.57	0.67	225	9.75
1025			8.18	0.01	0.123	0.82	125	2	5.98	-5.38	97.6	-9.63	16.32	-1.51	225	9.75
1030			8.19	0.01	0.124	0.81	126	1	6.29	5.18	88.9	-8.91	16.32	—	225	9.76
1035			8.17	-0.02	0.124	—	127	1	5.99	-4.77	81.6	-8.21	16.37	0.31	225	9.75
1040		✓														
1045			8.18	0.01	0.124	—	130	3	5.65	-5.68	75.4	-7.60	16.31	-0.37	225	9.76

COMMENTS: STICK-UP Sample @ 1040

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny 35	CERTIFICATION #:	13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #:	AD - 3D	WELL DEPTH:	29.00'	SCREENED/OPEN INTERVAL:	24-29'
WELL PERMIT #:	E201305261	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 28 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 10.68 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1100			7.07	NA	2.06	NA	166	NA	0.0	NA	0.0	NA	16.41	NA	250	10.76
1105			7.05	-0.02	2.06	—	162	-4	0.0	—	0.0	—	16.66	1.52	250	10.76
1110			7.05	—	2.06	—	162	—	0.0	—	0.0	—	16.59	-0.42	250	10.76
1115			7.05	—	2.05	-0.49	160	-2	0.0	—	0.0	—	16.73	0.84	25	10.76
1120		✓														
1125			7.05	—	2.05	—	160	—	0.0	—	0.0	—	16.81	0.48	250	10.76

COMMENTS: STICK-UP Sample @ 1120

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	JP
WEATHER:	52° sunny	CERTIFICATION #:	13040

Horiba U52 M-21831 P-48800

MONITOR WELL #:	AD - 4	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	2 - 15'
WELL PERMIT #:	2600063937	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 9.55 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 7.55 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1335			7.29	NA	2.78	NA	-42	NA	0.08	NA	378	NA	17.68	NA	200	7.84
1340			7.17	.12	2.81	1.07	-42	0	0	NA	278	30.49	17.81	0.73	200	7.96
1345			7.10	.07	2.81	0	-44	2	0	0	259	7.08	17.53	1.58	250	8.0
1350			7.07	.03	2.80	0.36	-45	1	0	0	241	7.2	17.42	0.51	250	8.17
1355			7.06	.01	2.80	0	-44	1	0	0	229	5.11	17.57	1.97	250	8.23
1400		X														
1406			7.04	.02	2.81	0.36	-49	5	0	0	323	34.1	17.82	0.84	300	8.58

COMMENTS:

Sampled @ 1400

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	JT
WEATHER:	50° Sunny	CERTIFICATION #:	13040

Horiba U52 µ - 24831 ℉ - 48800

MONITOR WELL #:	AD - 5D	WELL DEPTH:	30'	SCREENED/OPEN INTERVAL:	25 - 30'
WELL PERMIT #:	E201116252	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 27 ft below TOC
	BENEATH OUTER CAP:	0.1	DEPTH TO WATER BEFORE PUMP INSTALLATION : 8.66 ft below TOC
	BENEATH INNER CAP:	5.3	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1235	X		8.54	NA	2.0	NA	40	NA	0	NA	13.7	NA	16.16	NA	200	8.69
1240	X		8.48	.06	2.0	0	32	8	0	0	13.1	4.48	16.42	1.8	200	8.72
1250	X		7.80	.68	2.0	0	18	14	0	0	21.7	49.42	16.84	2.53	200	8.91
1255	X		7.71	.09	2.01	0.5	14	4	0	0	20.3	6.7	17.09	1.47	200	8.98
1300	X		7.64	.07	2.01	0	9	5	0	0	18.8	2.5	17.01	0.49	200	9.04
1305	X		7.59	.05	2.0	0.5	6	3	0	0	18.9	4.65	17.02	0.06	200	9.07
1310		X														
1320		X	7.44	.15	2.0	0	-2	8	0	0	11.7	47.1	17.42	2.32	200	9.16

COMMENTS:

Sampled @ 1310

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 11/30/22
WEATHER: 50° rain
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

Horiba U52 M-22187 P-33110

MONITOR WELL #: AD - 5
WELL PERMIT #: 2600063938
WELL DEPTH: 15'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 2 - 15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 8.59 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.59 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1105	X		8.14	NA	1.13	NA	92	NA	2.56	NA	30.8	NA	19.16	NA	300	6.80
1110	X		7.28	.86	1.16	2.65	108	16	1.20	53.12	27.2	11.69	19.2	.209	300	6.71
1115	X		6.95	.33	1.33	14.65	121	13	0	NA	15.2	44.12	19.44	1.25	300	6.73
1120	X		6.77	.18	1.45	9.02	131	10	0	0	2.5	83.55	19.66	1.13	175	6.72
1125	X		6.68	.09	1.53	5.52	136	5	0	0	0	NA	19.73	.36	175	6.71
1130	X		6.59	.09	1.65	7.84	144	8	0	0	0	0	19.85	.61	200	6.73
1135	X		6.56	.03	1.70	3.0	147	3	0	0	0	0	19.84	.05	200	6.72
1140	X		6.54	.02	1.75	2.94	148	1	0	0	0	0	19.84	0	200	6.72
1145	X		6.53	.01	1.79	2.27	149	1	0	0	0	0	19.93	.45	200	6.72
1150		X	6.52	.01	1.81	1.12	150	1	0	0	0	0	19.95	.1	200	6.73

COMMENTS:
Sampled @ 1150

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/5/22	FIELD PERSONNEL:	RC
WEATHER:	Cloudy 30°	CERTIFICATION #:	13040

Horiba U52 M - 48986 P - 48987

MONITOR WELL #:	AD - 6	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	2 - 15'
WELL PERMIT #:	2600063939	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 8.84 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1025	X		7.13	NA	0.454	NA	164	NA	5.35	NA	31.6	NA	15.96	NA	250	8.05
1030	X		6.85	.28	0.312	31	188	24	5.02	6.1	30.2	4.4	15.98	0.125	250	7.99
1035	X		6.71	.14	0.308	1.28	220	32	4.45	11.3	25.1	16.8	15.99	0.06	250	7.98
1040	X		6.66	.05	0.305	0.97	216	4	4.39	1.34	24.0	4.3	15.99	0	250	7.95
1045	X		6.66	0	0.310	1.63	217	1	4.40	0.22	24.2	0.8	15.99	0	250	7.95
1050	X		6.64	.02	0.308	0.64	218	1	4.42	0.45	24.1	0.41	16.01	.125	250	7.95
1055	X		6.64	0	0.309	0.32	217	1	4.41	0.22	24.0	0.41	16.0	.06	250	7.95
1100		X	6.64	0	0.310	0.32	217	0	4.41	0	24.0	0	16.0	0	250	7.95

COMMENTS:

Sampled @ 1100

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 40	CERTIFICATION #:	13040

Harbor USZ 44546 (p) 33470 (m)

MONITOR WELL #:	AD - 8	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	1 - 15'
WELL PERMIT #:	E201305260	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9.28 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 7.28 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1145			7.28	NA	0.493	NA	141	NA	1.74	NA	27.1	NA	16.47	NA	150	7.74
1150			7.25	-0.03	0.496	0.61	144	3	1.61	-7.47	22.2	-18.08	16.03	-2.67	150	7.75
1155			7.22	-0.03	0.485	-2.22	146	2	1.81	12.42	20.0	-9.91	16.83	4.99	150	7.75
1200			7.22	—	0.484	-0.21	147	1	1.71	-5.53	20.5	2.5	17.03	1.19	150	7.75
1205			7.21	-0.01	0.483	-0.21	147	—	1.86	8.77	19.1	-6.83	17.01	-0.12	150	7.75
1210			7.22	0.01	0.485	0.41	148	1	1.72	-7.53	18.1	-5.24	16.74	-1.41	150	7.75
1213		✓														
1220			7.22	—	0.485	—	148	—	1.58	-8.14	18.2	6.55	16.70	-0.42	150	7.76

COMMENTS: Sample @ 1215

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	SH, RC
WEATHER:	37°F Mostly Cloudy	CERTIFICATION #:	13040

Horiba U52 m: 29744 D: 213160

MONITOR WELL #:	AD - 9D	WELL DEPTH:	28'	SCREENED/OPEN INTERVAL:	23-28'
WELL PERMIT #:	E201305262	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 25 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 8.55 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1000	✓		6.21	NA	1.95	NA	173	NA	5.85	NA	32.4	NA	18.44	NA	~~500~~ 360	8.70
10:05			6.26	.05	1.95	0	182	9	5.85	0	35.3	8.95	18.71	1.46		8.70
10:10			6.27	.01	1.96	.51	181	1	5.46	6.67	29.0	17.85	18.53	.96		8.68
10:15			6.27	0	1.96	0	185	4	4.72	13.55	~~18~~ 17.7	38.97	19.26	3.94	~~8~~ 490	8.73
10:20			6.27	0	1.96	0	185	0	4.40	6.78	3.9	77.97	18.54	3.74		8.66
10:25			6.27	0	1.95	.51	187	2	3.85	12.5	~~8~~ 1.4	64.10	18.69	.80		8.66
10:30			6.28	.01	1.95	0	187	0	3.45	10.39	0	Na	19.08	2.09	300	8.65
10:35			6.28	0	1.95	0	187	0	3.40	1.45	0	Na	18.76	1.68		8.65
10:40			6.28	0	1.97	0	187	0	3.10	8.82	0	Na	18.20	2.98		8.65
10:45		X	6.28	0	1.97	0	187	0	3.01	2.90	0	Na	18.25	.27	300	8.65
10:55			6.27	.01	2.10	6.6	194	7	0	Na	0	Na	18.72	2.57		8.68

COMMENTS: Sampled @ 10:45 am

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 12/1/22
WEATHER: 40°F Cloudy
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH, RC
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: 29744 P: 213160

MONITOR WELL #: AD-9DD
WELL PERMIT #: ~~E201305762~~ E201713813
WELL DEPTH: ~~28'~~ 60'
WELL DIAMETER: ~~4"~~ 2" Inches
SCREENED/OPEN INTERVAL: ~~23-28'~~ 55-60'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: ~~25~~ 57.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.72 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
11:15			6.68	NA	.799	NA	28	NA	8.08	NA	75.5	NA	16.76	NA	340	10.82
11:20			6.73	.05	.804	.626	33	5	7.34	9.16	122	61.59	16.86	.597		11.25
11:25			6.79	.06	.804	0	39	6	6.57	10.49	247	98.36	16.75	.65		11.95
11:30			6.77	.02	.805	.124	29	10	5.87	10.65	92.0	61.98	16.99	1.43	320	12.20
11:35			6.75	.02	.807	.248	18	11	5.15	12.27	63.3	31.17	16.98	.06		12.20
11:40			6.74	.01	.810	.372	12	6	4.56	11.456	43.3	31.57	17.09	.65		12.23
11:45			6.72	.02	.812	.247	9	3	4.08	10.53	38.4	11.32	17.52	2.52	330	12.96
11:50			6.72	0	.820	.985	3	6	3.43	15.93	11.8	69.27	17.22	1.71		12.85
11:55			6.72	0	.821	.122	7	4	3.20	6.7	17.9	51.69	17.13	.52		12.85
12:00			6.72	0	.828	.853	6	1	3.0	6.25	19.0	6.14	17.09	.234	330	12.57
12:05			6.71	.01	.838	1.208	2	4	2.81	6.33	17.2	9.47	17.04	.293		12.55

COMMENTS: Sampled @ 12:10 ... continue on p. 2

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 12/1/22
WEATHER: 40°F Cloudy
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH, RC
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: 29744 P: 213160

MONITOR WELL #: AD-9DD
WELL PERMIT #: E2017 13813
WELL DEPTH: 60'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 55-60'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 57.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.72 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
12:05			6.71	NA	.838	NA	2	NA	2.81	NA	17.2	NA	17.04	NA		12.55
12:10		X	6.70	.01	.845	.835	1	1	2.55	9.25	15.65	9.01	17.04	0	330	12.44
12:24			6.63	.07	.904	6.98	-5	6	0.00	Na	11.4	27.16	16.03	5.93		12.36

COMMENTS: Sampled @ 12:10 pm

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SITE: Former Hess - Port Reading
DATE: 11/29/22
WEATHER: 43°F Cloudy

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

MONITOR WELL #: AD - 10
WELL PERMIT #: E201713815
WELL DEPTH: 19'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 5-20'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 12.3

PUMP INTAKE DEPTH: 11.19 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.19 ft below TOC

TIME	PURGING	SAMPLING	pH ± .1 (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ± 3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ± 10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ± 10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ± 10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ± 3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
~~14~~ 13:40			6.02	NA	4.24	NA	-35	NA	0	NA	27.3	NA	20.25	NA	225	9.67
13:45			6.06	.04	4.26	.47	-45	10	0	Na	5.9	78.39	20.99	23.65		9.78
13:50			6.06	0	4.30	.939	-42	3	.11	Na	26.4	352.54	20.83	.76		9.78
13:55			5.97	.09	4.37	1.63	-40	2	0	Na	18.0	31.82	20.76	.34	450	9.77
14:00			5.95	.02	4.41	.915	-42	2	0	Na	13.2	26.67	20.73	.145		9.73
14:05			5.96	.01	4.37	.907	-45	3	0	Na	10.4	21.21	20.76	.145		9.74
14:10			5.99	.03	4.33	.915	-49	4	0	Na	7.9	24.04	20.76	0	450	9.74
14:15			6.01	.02	4.27	1.39	-52	3	0	Na	6.3	20.25	20.83	.34		9.74
14:20			6.03	.02	4.21	1.405	-55	3	0	Na	5.0	20.63	20.91	.38		9.73
14:25			6.06	.03	4.14	1.66	-57	2	0	Na	4.6	8	20.88	.14	475	9.73
14:30			6.08	.02	4.07	1.69	-59	2	0	Na	4.4	4.35	20.88	0		9.72

COMMENTS:
Continue to p. 2 of 2 →

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

LOW FLOW SAMPLING
DATA SHEET

SITE: Port Reading
DATE: 11/29/22
WEATHER: 43°F Cloudy

CONSULTING FIRM: Earth Systems
FIELD PERSONNEL: SH

MONITOR WELL #: AD-10
WELL PERMIT #: E20171381 5

WELL DEPTH: 19'
WELL DIAMETER: 2 inches

SCREENED/OPEN INTERVAL: 5-20'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 12.3

PUMP INTAKE DEPTH: 11.19 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.19 ft below TOC
MAKE/MODEL OF PUMP:

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
14:30			6.08	NA	4.07	NA	-59	NA	0	NA	4.4	NA	20.88	NA		9.72
14:35		X	6.1	.02	4.02	1.23	-62	3	0	Na	4.0	9	20.88	0		9.73
14:45			6.13	.03	3.92	2.49	-65	3	0	Na	3.0	25%	20.83	.24	450	9.75

COMMENTS: Sampled @ 14:35

*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 11/29/22
WEATHER: 42°F Cloudy

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

MONITOR WELL #: AD - 10DD
WELL PERMIT #: E201713816
WELL DEPTH: 64'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 59-64'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 61 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.19 ft below TOC

TIME	PURGING	SAMPLING	pH ± .1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ± 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ± 10 (mv)		DISSOLVED OXYGEN ± 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ± 10% (EPA 180.1)		TEMPERATURE (degrees C) ± 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:30			7.84	NA	.840	NA	-24	NA	0	NA	0	NA	17.03	NA	400	9.19
11:35			7.10	.74	.841	.119	-26	2	0	Na	930	Na	17.2	.99		13.59
11:40			6.76	.34	.829	1.43	-29	3	0	Na	640	31.18	17.29	.52		14.29
11:45			6.61	.15 ~~.25~~	.829	0	-32	3	0	Na	440	31.25	17.37	.46	200	14.70
11:50			6.54	.07	.833	.483	-32	0	0	Na	395	10.23	17.61	1.38		16.37
11:55			6.52	.02	.846	1.561	-33	1	0	Na	203	48.6	16.91	3.97		16.26
12:00			6.51	.01	.838	.946	-34	1	0	Na	220	8.37	17.2	1.71	200	16.38
12:05			6.50	.01	.845	.835	-35	1	0	Na	221	.45	17.28	.46		16.49
12:10		X	6.49	.01	.849	.473	-34	1	0	Na	215	2.71	16.78	2.89		16.27
12:25			6.47	.02	.866		-32	2	0	Na	73.5		17.23		200	16.82

COMMENTS: Sampled @ 12:10

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/12/22
FIELD PERSONNEL: TES
WEATHER: 37°, Part Cldy
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: T/29744 P/2131160

MONITOR WELL #: DPP-1
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202200692
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0 ppm

PUMP INTAKE DEPTH: 8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.95 ft below TOC

TIME	PURGING	SAMPLING	pH ± 0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX ± 10 POTENTIAL (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1202			7.29	NA	2.04	NA	0	NA	1.09	NA	1000	NA	16.22	NA	275	6.03
1210			7.29	—	2.50	20%	-23	23	0.0	—	1000	—	16.46	1.4	275	6.10
1218			7.30	0.01	2.57	2.7%	-26	3	0.0	—	1000	—	16.14	1.9	275	6.17
1225			7.40	0.1	0.701	+100	-25	1	0.0	—	1000	—	16.52	2.3	275	6.25
1231			7.33	.07	0.780	10%	-17	8	0.0	—	1000	—	16.46	0.3	275	6.19
1238			7.23	.1	0.787	0.8	13	30	0.0	—	1000	—	16.51	0.3	275	6.13
① 1245			7.25	.02	0.793	0.7	15	2	0.0	—	1000	—	16.49	0.1	275	6.17
② 1253			7.26	.01	0.797	0.5	15	—	0.0	—	1000	—	16.49	—	275	6.23
③ 1300			7.25	.01	0.795	0.2	17	2	0.0	—	1000	—	16.47	0.1	275	6.19

COMMENTS:
ST: 13:05

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	RC
WEATHER:	Clear 30°	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	29744 / 213160 (probe)		

MONITOR WELL #:	DT-1D	WELL DEPTH:	30'	SCREENED/OPEN INTERVAL:	20-30'
WELL PERMIT #:	E202112793	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP:

PUMP INTAKE DEPTH: 23 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.49 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1000	✓		6.45	NA	.894	NA	255	NA	8.19	NA	1000	NA	14.57	NA	380	4.55
1005	✓		6.51	0.06	.900	.6%	250	5	6.98	14%	1000	—	15.27	4%	380	4.56
1010	✓		6.52	0.01	.899	<1%	247	3	6.36	8%	1000	—	14.98	1.8%	380	4.56
1015	✓		6.51	0.01	.898	<1%	244	3	5.61	11%	1000	—	14.96	<1%	380	4.56
1020	✓		6.51	—	.898	—	242	2	5.16	8%	1000	—	14.95	<1%	380	4.56
1025	✓		6.50	0.01	.900	<1%	238	4	4.76	7%	1000	—	14.90	<1%	380	4.57
1030	✓		6.50	—	.897	<1%	234	4	4.33	9%	1000	—	14.95	<1%	380	4.57
1035		✓	6.50	—	.896	<1%	230	4	3.98	8%	1000	—	15.01	<1%	380	4.57
Post 1045			6.51		.899		234		9.25		1000		14.89			4.57

COMMENTS: water initially turbid

water did not clear during purge

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	KF
WEATHER:	Sunny, 40	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546(p) 33470(m)		

MONITOR WELL #:	DT-3	WELL DEPTH:	18	SCREENED/OPEN INTERVAL:	8-18'
WELL PERMIT #:	E202112795	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 10.0 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.01 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1205	✓		6.92	NA	2.10	NA	29	NA	0.0	NA	975	NA	16.81	NA	100	4.39
1210	✓		6.91	-0.01	2.09	-0.48	29	—	0.0	—	956	-1.95	16.86	0.30	100	4.41
1215	✓		6.91	—	2.08	-0.48	29	—	0.0	—	928	-2.93	16.96	0.59	100	4.43
1220	✓		6.90	-0.01	2.07	-0.48	28	-1	0.0	—	903	-2.69	17.11	0.88	100	4.47
1225		✓														
1230			6.90	—	2.07	—	27	-1	0.0	—	885	-1.99	17.23	0.70	100	4.49

COMMENTS: Sample @ 1225 Slow recharge

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/4/22
FIELD PERSONNEL: KF
WEATHER: Sunny, 40
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #: DT-3D
WELL DEPTH: 30'
SCREENED/OPEN INTERVAL: 20-30'
WELL PERMIT #: E202112796
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 22 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.23 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1115	✓		6.76	NA	1.18	NA	-6	NA	0.02	NA	39.9	NA	12.98	NA	125	4.22
1120	✓		6.75	-0.01	1.19	0.85	-6	—	0.00	—	30.5	-23.56	13.47	3.78	125	4.22
1125	✓		6.75	—	1.18	-0.84	-4	2	0.0	—	26.5	-13.12	14.43	7.13	125	4.22
1130	✓		6.75	—	1.18	—	-4	—	0.0	—	28.8	8.68	14.71	1.94	125	4.22
1135	✓		6.75	—	1.18	—	-2	2	0.0	—	28.5	-1.04	14.94	1.56	125	4.22
1140	✓		6.74	-0.01	1.18	—	-2	—	0.0	—	27.7	-2.81	15.02	0.54	125	4.22
1145		✓														
1150			6.74	—	1.18	—	-2	—	0.0	—	27.1	-2.17	15.06	0.27	125	4.22

COMMENTS: Sample @ 1145

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
DATE: 12/9/22
WEATHER: Sunny, 40
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KP
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 37470(m)

MONITOR WELL #: DT-5
WELL PERMIT #: E202112799
WELL DEPTH: 15'
WELL DIAMETER: ~~4~~ 2 Inches
SCREENED/OPEN INTERVAL: 5-15

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : ~~[illegible]~~ 4.41 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1030	✓		6.32	NA	1.74	NA	-38	NA	0.0	NA	0.0	NA	13.65	NA	100	4.43
1035	✓		6.29	-0.03	1.74	—	-45	-7	0.0	—	0.0	—	13.95	2.20	100	4.46
1040	✓		6.28	-0.01	1.75	0.58	-48	-3	0.0	—	0.0	—	14.01	0.43	100	4.50
1045	✓		6.27	-0.01	1.74	-0.57	-51	-3	0.0	—	0.0	—	14.39	2.71	100	4.53
1050		✓														
1055			6.27	—	1.75	0.58	-51	—	0.0	—	0.0	—	14.40	0.07	100	4.57

COMMENTS: Sample (P) 1050 Slow recharge

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/6/22
FIELD PERSONNEL: SH
WEATHER: 46° X Cloudy / Rain Showers
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: R19224 P: 41072

MONITOR WELL #: DT-5D
WELL DEPTH: 30'
SCREENED/OPEN INTERVAL: 20-30'
WELL PERMIT #: E202112800
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 22 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.65 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE ±3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:25	X		6.75	NA	.811	NA	128	NA	.62	NA	319	NA	14.17	NA	150	2.7
10:30	X		6.79	.04 ~~.897~~	.823	1.48	125	3	.35	43.55	186	41.693	14.42	1.764		2.7
10:35	X		6.81	.03	.831	.972	102	23	.20	42.86	114	38.71	14.67	1.734		2.71
10:40	X		6.80	.01	.834	.361	97	5	.13	35	85.8	24.74	14.79	.818	150	2.7
10:45	X		6.80	0	.837	.36	87	10	.08	38.46	59.9	30.19	14.90	.744		2.7
10:50	X		6.80	0	.838	.119	83	4	.04	50	52.1	13.02	14.95	.336		2.71
10:55	X		6.79	.01	.840	.239	80	3	.02	50	44.9	13.82	15.08	.87	125	2.7
11:00	X		6.79	0	.844	.476	77	3	.00	/	40.5	9.8	15.11	.199		2.7
11:05	X		6.79	0	.844	0	74	3	0	/	36.5	9.87	15.15	.265		2.7
11:10		X	6.79	0	.844	0	72	2	0	/	33.1	9.315	15.19	.264	125	2.7
11:25			6.85	.06	.844	0	99		0	/	42.0		15.20			2.7

COMMENTS: Sampled @ 11:10

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/6/22
FIELD PERSONNEL: JP
WEATHER: 42 Cloudy
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: M-29744 P-213766

MONITOR WELL #: DT-5DD
WELL DEPTH: 51'
SCREENED/OPEN INTERVAL: 41-51'
WELL PERMIT #: E202205203
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 43 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.1 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1105	✓		6.13	NA	.347	NA	-120	NA	2.61	NA	19.7	NA	14.78	NA	150	3.27
1110	✓		6.01	.12	.326	6.24	-50	70	1.22	72.58	30.7	43.65	14.92	.94	250	3.29
1115	✓		8.77	1.24	.312	4.39	-152	102	0	NA	0	NA	14.97	.33	200	3.32
1120	✓		7.31	1.46	.31	.64	-45	107	0	0	0	0	15.02	.33	200	3.32
1125	✓		7.24	.07	.31	0	-40	5	0	0	0	0	14.99	.2	200	3.33
1130	✓		7.15	.09	.308	.65	-32	8	0	0	0	0	15.02	.2	200	3.35
1135	✓		7.09	.06	.306	.65	-28	4	0	0	0	0	15.02	0	200	3.36
1140		X														
1145			6.92	.17	.298	2.31	5	33	0	0	21.0	NA	15.14	.8	250	3.42

COMMENTS:

Sampled @ 1140

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/6/22	FIELD PERSONNEL:	JP
WEATHER:	49° Rain	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-28744	P-213166	

MONITOR WELL #: DT-6 WELL DEPTH: 15' SCREENED/OPEN INTERVAL: 5-15'

WELL PERMIT #: E202112801 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.1

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.65 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1015	X		6.72	NA	1.44	NA	-67	NA	0	NA	181	NA	14.0	NA	150	3.69
1020	X		6.74	.02	1.34	9.25	-79	12	0	0	107	56.38	14.06	.43	150	3.71
1025	X		6.77	.03	1.31	2.26	-84	5	0	0	101	5.77	14.2	.99	150	3.73
1030	X		6.78	.01	1.3	~~.76~~ .77	-80	4	0	0	95.8	5.28	14.42	1.54	100	3.76
1035	X		6.79	.01	1.3	0	-82	2	0	0	90.7	5.47	14.63	1.45	100	3.78
1040		X														
1050			6.27	.02	1.32	1.53	-73	9	.2	NA	105	14.6	15.05	2.83	250	4.02

COMMENTS:

Sampled @ 1040

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 11/28/22
WEATHER: Sunny, 55

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

Horiba U52

MONITOR WELL #: FA-1
WELL PERMIT #: E202000100
WELL DEPTH: 12'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 2-13'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5-13 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.53 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:55			6.81	NA	.246	NA	98	NA	0	NA	8.1	NA	19.9	NA	300	3.53
11:00			6.62	.19	.245	.407%	100	2	0	ø	2.5	69.13	19.97	.352		3.69
11:05			6.58	.04	.243	.816	102	2	0	ø	1.6	36	19.95	.1		3.61
11:10			6.57	.01	.242	.412	103	1	0	ø	.5	68.75	19.97	.1	350	3.67
11:15			6.57	0	.241	.413	105	2	0	ø	.3	40	19.89	.401		3.64
11:20			6.60	.03	.243	.83	101	4	0	ø	0	ø	19.95	.302		3.65
11:25			6.61	.01	.241	.873	102	1	0	ø	0	ø	19.95	ø	300	3.65
11:30		✓	6.63		.241		100		0		0	0	20.03			3.65
11:45			6.67		.240		96		0		0		19.97			3.66

COMMENTS: Sampled @ 11:30

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/28/22	FIELD PERSONNEL:	JP
WEATHER:	52° Sunny	CERTIFICATION #:	13040
	Horiba U52		

MONITOR WELL #:	FA-2	WELL DEPTH:	14'	SCREENED/OPEN INTERVAL:	2-14'
WELL PERMIT #:	E202000101	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 6.55 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.55 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE ±1 (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1115			6.65	NA	.32	NA	136	NA	6.06	NA	363	NA	17.78	NA	150	4.57
1120			6.58	.07	.229	33.15	145	9	6.09	.484	228	46.5	17.57	1.19	150	4.58
1125			6.60	.02	.227	0.88	144	1	6.01	1.32	207	8.78	17.53	0.23	100	4.58
1130			6.62	.02	.229	0.88	140	4	5.82	0.67	188	4.44	17.64	0.63	100	4.62
1135			6.63	.01	.229	0	132	8	5.95	1.18	190	4.12	17.61	0.17	100	4.69
1140		X														
1155			6.60	.03	.212	7.41	118	14	4.81	20.35	187	1.57	17.89	1.08	100	4.78

COMMENTS:

Sampled @ 1140

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Port Reading - Jersey	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/28/22	FIELD PERSONNEL:	SP
WEATHER:	50° Sunny	CERTIFICATION #:	13040

Hydra 052 M - 21831 P - 48800

MONITOR WELL #:	FA-3	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	2-15'
WELL PERMIT #:	E202000102	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.1
BENEATH INNER CAP: 3.4

PUMP INTAKE DEPTH: 11.2 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.2 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) ±3% READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1220			6.23	NA	.691	NA	-100	NA	0.0	NA	119	NA	20.01	NA	100	9.22
1225			6.17	.06	.641	7.51	-108	8	0	0	57.2	70.15	21.02	4.9	100	9.25
1230			6.12	.05	.633	1.26	-107	1	0	0	56.9	0.53	21.02	0	100	9.31
1235			6.07	.05	.630	0.48	-109	2	0	0	54.7	3.84	21.02	0	100	9.35
1246			6.05	.02	.630	0	-107	2	0	0	52.8	3.35	21.14	0.57	100	9.38
1245		X														
1255			6.02	.03	.618	1.76	-118	11	0	0	38.9	30.5	21.08	0.28	150	9.58

COMMENTS:

Sampled @ 1245

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE: Port Reading
DATE: 11/28/22
WEATHER: 53°F Cloudy

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

Horiba U 52 M: 22187 P: 33110

MONITOR WELL #: FA-4
WELL PERMIT #: E202000103.
WELL DEPTH: 15'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 2-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11.35 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.35 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) ±.1 (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
14:15	✓		7.05	NA	1.49	NA	-143	NA	2.24	NA	154	NA	21.63	NA	300	9.39
14:20	✓		7.13	.08	1.44	3.36	-148	5	1.32	41.07	90.1	41.49	21.82	0.88		9.39
14:25	✓		7.18	.05	1.44	Na	-152	4	.02	98.49	54.0	40.07	21.70	.55		9.41
14:30	✓		7.18	0	1.46	1.39	-154	2	0	Na	36.1	33.15	21.69	.05	300	9.40
14:35	✓		7.2	.02	1.45	.685	-156	2	0	Na	29.6	18.01	21.62	.32		9.39
14:40	✓		7.2	0	1.48	2.07	-156	0	0	Na	23.2	21.62	21.62	0		9.41
14:45	✓		7.24	.04	1.54	4.05	-158	4	0	Na	16.6	28.45	21.79	.79	300	9.40
14:50	✓		7.2	.04	1.57	1.95	-158	0	0	Na	15.5	7.09	21.78	.05		9.41
14:55	✓		7.21	.01	1.56	0.64	-159	1	0	Na	13.6	12.26	21.68	.46		9.41
15:00	✓		7.21	0	1.60	2.56	-159	0	0	Na	12.4	8.8	21.15	2.44	250	9.39
15:05	✓		7.23	.02	1.49	6.86	-158	1	0	Na	11.6	6.45	21.31	.76		9.39

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 11/28/22
WEATHER: 53°F Cloudy
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: 22187 P: 33110

MONITOR WELL #: FA-4
WELL PERMIT #: E202000103
WELL DEPTH: 15
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 2-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 11.35 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.35 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
15:05	✓		7.23	NA	1.49	NA	-158	NA	0	NA	11.6	NA	21.31	NA		
15:10	✓		7.23	0	1.43	4.03	-157	1	0	Na	11.5	.86	21.26	.23		9.40
15:15	✓		7.23	0	1.42	.69	-157	0	0	Na	11.5	0	21.35	.42	200	9.39
15:20	✓		7.23	0	1.43	.70	-157	0	0	Na	11.2	1.74	21.31	.19		9.40
15:25		X	7.23	0	1.45	1.39	-157	0	0	Na	10.9	3.54	21.22	.42		9.40
15:35			7.19	.04	1.78		-159	2	0	Na	13.9		21.83			9.41

COMMENTS: Sampled @ 3:25

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/21/22	FIELD PERSONNEL:	KV
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #:	FA-5	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	2-15'
WELL PERMIT #:	E202000104.	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 12.9

PUMP INTAKE DEPTH: _____ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		

COMMENTS: More than 0.01 LNAPL in well - No sample DTP: 5.71 DTW: 5.79

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Port Hueneme
DATE: 11/28/22
WEATHER: Cloudy, 55
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: LY
CERTIFICATION #: 13040

Horiba U52 44546(p) 33470(M)

MONITOR WELL #: FA-6
WELL PERMIT #: E202000105.
WELL DEPTH: 18'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: ~~8-18'~~ 8-18'

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11.69 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.69 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1250			6.02	NA	0.536	NA	-3	NA	0.0	NA	1000+	NA	15.44	NA	275	10.15
1255			6.08	0.06	0.523	-2.43	-28	-25	0.0	—	1000+		15.50	0.39	275	10.18
1300			6.18	0.10	0.555	6.12	-36	-8	0.0	—	1000+		15.68	1.16	275	10.20
1305			6.20	0.02	0.515	-7.21	-44	-8	0.0	—	1000+		15.87	1.21	200	10.20
1310			6.27	0.07	0.523	1.55	-49	-5	0.0	—	1000+		16.29	2.65	200	10.17
1315			6.31	0.05	0.510	-2.49	-49	—	0.0	—	921		16.52	1.41	200	10.16
1320			6.32	0.01	0.506	-0.78	-51	-2	0.0	—	611	-33.66	16.58	0.36	200	10.17
1325			6.33	0.01	0.504	-0.40	-51	—	0.0	—	308	-49.59	16.63	0.30	200	10.18
1330			6.35	0.02	0.512	1.59	-52	-1	0.0	—	290	-5.84	16.64	0.06	200	10.20
1335			6.37	0.02	0.512	—	-54	-2	0.0	—	279	-3.79	16.72	0.48	200	10.20
1340			6.38	0.01	0.510	-0.39	-54	—	0.0	—	300	7.53	16.77	0.30	200	10.20

COMMENTS: Sample @ 1345 water is very silty (red-brown) w/ sheen No odor

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

	pH		Spec Cond		Redox		DO		Turbidity		Temp		Pump	DTW
1345 ✓ Sample														
1350	6.38	—	0.511	0.20%	-53	1	0.0	—	311	3.67%	16.74	-0.18%	200	10.22

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/5/22
WEATHER: 42° Sunny

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

Horiba U52 M-R19224 P-041072

MONITOR WELL #: FA-7
WELL PERMIT #: E202000106
WELL DEPTH: 18'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 5-18'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.43 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1020	X		5.88	NA	.137	NA	215	NA	2.79	NA	298	NA	14.22	NA	250	9.81
1025	X		5.94	.06	.101	30.25	208	7	3.07	10.27	181	48.85	14.6	2.64	250	9.82
1030	X		5.94	0	.099	2	206	2	2.89	6.04	172	5.09	14.48	.83	200	9.83
1035	X		5.97	.03	.098	1.02	211	5	2.8	3.16	164	4.76	14.82	2.32	250	9.85
1040	X		5.99	.02	.098	0	213	2	2.74	2.17	159	3.1	15.02	1.34	250	9.87
1045		X														
1055			5.99	0	.096	2.06	212	1	2.47	10.36	109	36.09	15.32	1.98	250	9.98

COMMENTS:

Sampled @ 1045

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	JP
WEATHER:	43° Sunny	CERTIFICATION #:	13040

METER & PROBE SERIAL NUMBERS: A-219224 P-041072

MONITOR WELL #: FA-8 WELL DEPTH: 15' SCREENED/OPEN INTERVAL: 5-15' (STICK-UP)

WELL PERMIT #: E202112493 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 13 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 11.0 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1200	X		6.54	NA	.377	NA	53	NA	7.91	NA	301	NA	14.93	NA	150	11.11
1205	X		6.44	.1	.38	.79	64	11	7.41	6.53	198	41.28	14.86	.47	150	11.15
1210	X		6.36	.08	.38	0	63	1	6.98	5.98	47.7	127.13	15.11	1.67	150	11.16
1215	X		6.3	.06	.381	.26	65	2	6.79	2.76	45.7	3.02	14.86	1	150	11.16
1220	X		6.22	.08	.383	.52	68	3	6.57	3.29	43.5	4.93	15.06	.67	150	11.17
1225	X		6.19	.03	.384	.26	66	2	6.32	3.88	41.8	3.99	15.11	.33	150	11.18
1230		X														
1245			6.16	.03	.385	.26	60	6	5.12	20.98	0	NA	15.4	1.9	150	11.27

COMMENTS:

Sampled @ 1230

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/5/22
FIELD PERSONNEL: SH
WEATHER: 41°F Sunny
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: 29744 P: 213160

MONITOR WELL #: FA-9
WELL PERMIT #: E202112494
WELL DEPTH: 18.5
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 18.5-8.5 (STICK-UP)
5-0: riser, 6L9-riser 18.5-8.5

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 10.8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: ~~9.15~~ 8.8 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
10:55	X		6.61	NA	.153	NA	129	NA	10.21	NA	423	NA	13.58	NA	450	9.02
11:00	X		6.51	.1	.143	6.536	79	50	9.65	5.48	348	17.73	13.93	2.58		9.25
11:05	X		6.48	.03	.145	1.399	54	25	7.97	17.409	83.1	76.121	14.44	3.66		9.05
11:10	X		6.47	.01	.157	8.276	46	8	6.95	12.798	73.4	11.67	14.45	.07	250	9.06
11:15	X		6.49	.02	.157	/	40	6	6.04	13.09	53.0	27.79	14.75	2.08		9.02
11:20	X		6.49	/	.149	5.096	43	3	5.19	14.07	37.5	29.24	14.91	1.08		9.01
11:25	X		6.49	/	.145	2.685	45	2	4.64	10.597	34.0	9.333	14.99	.54	225	9.01
11:30	X		6.50	.01	.141	2.76	46	1	4.09	11.853	27.3	19.71	15.14	1.001		9.04
11:35	X		6.49	.01	.139	1.418	48	2	3.53	13.69	25.7	5.86	15.21	.462		9.05
11:40	X		6.49	/	.136	2.16	49	1	3.18	9.91	24.3	5.45	15.25	.263	250	9.05
11:45	X		6.49	/	.134	1.47	51	2	2.89	9.12	22.2	8.64	15.35	.66		9.05

COMMENTS: Sampled @ 11:55

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Total Depth

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 12/5/22
WEATHER: 41° Sunny
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: 29744 P: 213160

MONITOR WELL #: FA-9
WELL PERMIT #: E202112494
WELL DEPTH: 18.5
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 18.5 - 8.5

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 10.8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.8 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
11:45	X		6.49	NA	.134	NA	51	NA	2.89	NA	22.2	NA	15.35	NA		9.05
11:50	X		6.49	/	.132	1.493	52	1	2.61	9.69	21.0	5.4	15.42	.46		9.06
11:55		X	6.48	.01	.131	.758	53	1	2.35	9.96	~~18.9~~	~~10%~~	15.46	.259	300	9.06
12:10			6.59	1.698	.129	1.527	78	25	3.07	36.638	19.2 / 17.5	8.57 / 8.85	15.74	1.811		9.04

COMMENTS: Sampled @ 11:55

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/5/22	FIELD PERSONNEL:	SH
WEATHER:	46 °F Mostly Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 M: 29744 P: 213160		

MONITOR WELL #:	FA-10	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15' (STICK-UP)
WELL PERMIT #:	E202112495	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 10.8 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.79 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ~~±10%~~ 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
12:40			6.57	NA	.110	NA	74	NA	1.03	NA	182	NA	15.52	NA	500	8.92
12:45			6.48	.09	.107	2.23	84	10	1.05	1.94	142	~~.58~~ 21.48	15.61	.58		8.88
12:50			6.45	.03	.103	3.74	96	12	~~.047~~	83.81	53.3	62.46	15.66	.32		8.92
12:55			6.44	.01	.098	4.85	105	9	0	/	23.9	55.16	15.68	.128	400	8.90
13:00			6.44	0	.095	3.06	108	3	0	/	18.1	24.27	15.69	.06		8.90
13:05			6.45	.01	.093	2.105	112	4	0	/	9.1	49.72	15.64	.319		8.90
13:10			6.44	.01	.091	2.151	113	1	0	/	8.2	9.89	15.66	.128	350	8.90
13:15			6.45	.01	.090	1.09	115	2	0	/	7.4	9.76	15.56	.639		8.90
13:20		X	6.45	0	0.089	1.111	116	1	0	/	6.7	9.46	15.54	.129		8.91
13:35			6.40	.05	0.087	2.247	130	14	7.58	Na	6.7	/	15.21	2.124	500	8.96

COMMENTS: Sampled @ 13:20

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/12/22
FIELD PERSONNEL: MFS
WEATHER: 37°, Part Cloudy
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: M129744 P/213/160

MONITOR WELL #: FA-11
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15' (STICK-UP)
WELL PERMIT #: E202112496
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP:

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.4 ft below TOC

TIME	PURGING	SAMPLING	pH ±0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1045			7.45	NA	0.848	NA	-117	NA	.01	NA	1000	NA	15.78	NA	275	6.68
1050			7.55	0.1	0.817	3.7%	-131	14	0.0	—	921	8.2	15.68	0.6	275	6.74
1058			7.58	0.03	0.805	1.4	-134	3	0.0	—	725	24%	15.84	1%	275	6.63
1105			7.60	0.02	0.806	0.1	-135	1	0.0	—	613	16%	16.05	1.3%	275	6.55
1113			7.59	0.01	0.808	0.2	-137	2	0.0	—	353	53%	16.03	0.1	275	6.50
1120			7.62	.03	0.804	0.4	-137	—	0.0	—	173	68%	16.13	0.6	275	6.47
① 1125			7.65	.03	0.801	0.3	-139	2	0.0	—	166	4.1	16.18	0.3	275	6.44
② 1133			7.63	.02	0.803	0.2	-135	4	0.0	—	158	4.9	16.26	0.4	275	6.50
③ 1140			7.66	.03	0.805	0.2	-133	2	0.0	—	163	3.1	16.20	0.3	275	6.46

COMMENTS:
ST: 11:45

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 11/30
FIELD PERSONNEL: KJ
WEATHER: Rain, wind, 55
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(M)

MONITOR WELL #: FA-12
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15' (STICK-UP)
WELL PERMIT #: E202112497
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 12.24 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.24 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1345			6.95	NA	1.40	NA	-84	NA	0.0	NA	16.8	NA	17.38	NA	350	10.63
1350			7.02	0.07	1.39	-0.71	-97	-13	0.0	—	6.6	-60.71	17.67	1.67	350	10.66
1355			7.04	0.02	1.40	-0.72	-104	-7	0.0	—	0.0	—	17.67	—	350	10.67
1400			7.05	0.01	1.37	-2.14	-106	-2	0.0	—	0.0	—	17.67	—	350	10.67
1405			7.05	—	1.38	0.73	-107	-1	0.0	—	0.0	—	17.68	0.06	350	10.68
1410			7.06	0.01	1.37	-0.73	-108	-1	0.0	—	0.0	—	17.70	0.11	350	10.68
1415		✓														
1420			7.06	—	1.37	—	-108	—	0.0	—	0.0	—	17.71	0.06	350	10.69

COMMENTS: Sample @ 1415

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/30/22	FIELD PERSONNEL:	KY
WEATHER:	Rain, wind, 55	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (M)		

MONITOR WELL #:	FA-13	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15' (STICK-UP)
WELL PERMIT #:	E202112498	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 13.43 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 11.43 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1255			6.80	NA	0.748	NA	-78	NA	0.38	NA	3.7	NA	18.56	NA	350	11.57
1300			6.83	0.03	0.734	-1.87	-84	-6	0.69	81.58	3.8	2.70	18.35	-1.13	350	11.59
1305			6.85	0.02	0.732	-0.27	-87	-3	0.71	2.90	2.5	-34.21	18.22	-0.71	350	11.60
1310			6.86	0.01	0.731	-0.14	-87	—	0.73	2.82	2.3	-8.00	18.13	-0.49	350	11.60
1315			6.86	—	0.730	-0.14	-87	—	0.73	—	2.4	4.35	18.07	-0.33	350	11.62
1320			6.86	—	0.731	0.14	-88	-1	0.68	-6.85	2.3	-4.17	17.99	-0.44	350	11.63
1325		✓														
1330			6.86	—	0.732	0.14	-88	—	0.62	-8.82	2.1	-8.70	17.94	-0.28	350	11.65

COMMENTS: Sample @ 1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
DATE: 11/28/22
WEATHER: 50° Sunny
METER & PROBE SERIAL NUMBERS: M-21831 P-48806

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

MONITOR WELL #: FA-14
WELL PERMIT #: E202112499
WELL DEPTH: 15'
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 5-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.2

PUMP INTAKE DEPTH: 11.65 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.65 ft below TOC

TIME	PURGING	SAMPLING	pH ± .1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ± 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ± 10 (mv)		DISSOLVED OXYGEN ± 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ± 10% (EPA 180.1)		TEMPERATURE (degrees C) ± 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1330			6.61	NA	.325	NA	-128	NA	1.21	NA	342	NA	19.73	NA	150	9.72
1335			6.75	.14	.314	2.49	-118	10	0	NA	71.2	131.1	18.81	0.4	150	9.74
1340			6.76	.01	.312	.637	-110	8	0	NA	56.2	21.07	19.94	.66	150	9.65
1345			6.78	.02	.314	.64	-105	5	.11		27.0	51.96	19.14	4.01	150	9.63
1350			6.79	~~.147~~ .01	.313	.318	-104	1	.31	181.81	24.4	9.63	19.34	1.04	150	9.64
1355			6.79	0	.311	.639	-103	1	.38	22.58	22.7	6.96	19.53	.982	150	9.75
1400			6.79	0	.311	0	-102	1	.38	0	23.7	4.31	19.63	[illegible]	150	9.77
1405			6.78	.01	.311	0	-102	0	.38	0	22.8	3.43	19.68	0.31	150	9.78
1410			6.78	0	.311	0	-101	1	.38	0	23.0	0.44	19.64	0.25	150	9.80
1415		X														
1425			6.81	.03	.311	0	-110	9	0	NA	12.6	58.43	19.72	0.41	200	9.88

COMMENTS:
Sampled @ 1415

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE:
FIELD PERSONNEL:
WEATHER:
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS:

MONITOR WELL #: FA-15
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202112500
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND:
BENEATH OUTER CAP:
BENEATH INNER CAP:
PUMP INTAKE DEPTH: _____ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		

COMMENTS: Well Covered by Storage Box

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/28/22	FIELD PERSONNEL:	KK
WEATHER:	Sunny 55	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546(p) 3J470(M)		

MONITOR WELL #:	FA-16	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202112501	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 7 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.45 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH ± .1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ± 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL 10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY 10% (NTU) (EPA 180.1)		TEMPERATURE 3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1135			5.75	NA	0.273	NA	-17	NA	9.61	NA	63.8	NA	16.88	NA	250	3.55
1140			5.18	0.57	0.234	-14.29	10	27	0.0	—	23.1	-63.19	16.93	0.30	225	3.55
1145			5.19	0.01	0.193	-17.52	21	11	0.0	—	7.3	-68.40	16.98	0.30	225	3.55
1150			5.20	0.01	0.164	-15.03	33	12	0.0	—	3.1	-57.53	17.04	0.35	225	3.55
1155			5.19	-0.01	0.159	-3.05	37	4	0.0	—	2.9	-6.45	17.08	0.24	225	3.55
1200			5.21	0.02	0.160	0.63	37	—	0.0	—	2.8	-3.45	17.07	-0.06		3.55
1205			5.20	-0.01	0.157	-1.88	38	1	0.0	—	2.6	-7.14	17.16	0.53		3.55
1210			5.20	—	0.155	-1.27	39	1	0.0	—	2.6	—	17.18	0.12		3.55
1215		✓														
1220			5.23	0.03	0.158	1.94	38	-1	0.0	—	2.7	3.85	17.09	-0.52		3.55

COMMENTS:
Field Blank @ 1200 Sample @ 1215 Sulfur odor

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 11/29/22
WEATHER: Cloudy, 40
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KP
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546 (M) 32470 (P)

MONITOR WELL #: FA-17
WELL PERMIT #: E202112502
WELL DEPTH: 15'
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 5-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.31 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1050			6.98	NA	0.081	NA	80	NA	3.06	NA	9.9	NA	12.89	NA	350	2.61
1055			6.78	-0.10	0.080	-1.24	93	13	2.40	-21.57	6.2	-37.37	13.13	1.86	350	2.65
1100			6.71	-0.07	0.079	-1.25	104	11	2.44	1.67	2.0	-67.74	13.16	0.23	350	2.68
1105			6.69	-0.02	0.079	—	108	4	2.15	11.89	0.0	—	13.19	0.23	350	2.70
1110			6.65	-0.04	0.079	—	114	8	2.12	-1.40	0.0	—	13.26	0.53	350	2.72
1115			6.64	-0.01	0.079	—	122	6	2.09	-1.42	0.0	—	13.18	0.60	350	2.73
1120			6.63	-0.01	0.078	-1.27	123	1	2.03	-2.87	0.0	—	13.20	0.15	350	2.75
1125		✓														
1130			6.63	—	0.078	—	124	1	2.04	0.49	0.0	—	13.16	-0.30	350	2.77

COMMENTS: Sample @ 1125

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/29/22	FIELD PERSONNEL:	RL
WEATHER:	Cloudy, 40	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (M) 33470 (P)		

MONITOR WELL #:	FA-18	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202112503	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 7 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.81 ft below TOC	
	BENEATH INNER CAP:	0.0		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
955			6.96	NA	0.280	NA	27	NA	0.0	NA	89.9	NA	15.07	NA	300	5.01
1000			6.99	0.03	0.275	-1.79	12	-15	0.0	—	81.2	-9.68	15.35	1.86	300	5.03
1005			6.99	—	0.286	4.00	9	-3	0.0	—	80.6	-0.74	14.92	-2.80	300	5.04
1010			6.97	-0.02	0.286	—	2	-7	0.0	—	60.1	-25.43	14.05	-5.83	300	5.07
1015			6.96	-0.01	0.288	0.70	-3	-5	0.0	—	48.0	-20.13	14.27	1.57	300	5.06
1020			6.96	—	0.293	1.74	-10	-7	0.0	—	44.8	-6.67	14.38	0.77	300	5.06
1025			6.96	—	0.297	1.37	-13	-3	0.0	—	45.3	1.12	14.36	-0.14	300	5.07
1030			6.96	—	0.299	0.67	-15	-2	0.0	—	42.7	-5.74	14.50	0.98	300	5.07
1035		✓														
1040			6.96	—	0.301	0.67	-17	-2	0.0	—	38.7	-9.37	14.54	0.28	300	5.09

COMMENTS: Sample @ 1035

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 11/30/22
FIELD PERSONNEL: KU
WEATHER: Rain, wind, 53°
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: FA-19
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15' (STICK-UP)
WELL PERMIT #: E202112504
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 12.89 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 10.89 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1135			6.93	NA	0.785	NA	-80	NA	0.0	NA	5.8	NA	17.55	NA	300	10.91
1140			6.91	-0.02	0.786	0.13	-84	-4	0.0	—	5.6	-3.45	18.01	0.33	300	10.91
1145			6.88	-0.03	0.788	0.25	-86	-2	0.0	—	2.5	-55.36	18.15	0.78	300	10.91
1150			6.88	—	0.785	-0.38	-87	-1	0.0	—	3.4	36.00	18.19	0.22	300	10.91
1155			6.89	.01	0.784	-0.13	-89	-2	0.0	—	3.7	8.82	18.24	0.28	300	10.91
1200			6.89	—	0.783	-0.13	-90	-1	0.0	—	4.0	8.11	18.29	0.27	300	10.91
1205			6.89	—	0.782	-0.13	-90	—	0.0	—	4.3	7.5	18.36	0.38	300	10.91
1210		✓														
1215			6.89	—	0.781	-0.13	-91	-1	0.0	—	4.7	9.30	18.38	0.11	300	10.91

COMMENTS:
Sample @ 1210

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	11/22/22	FIELD PERSONNEL:	KY
WEATHER:	Cloudy, 40	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546(m) 33470(p)		

MONITOR WELL #:	FA-20	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15' (STICK-UP)
WELL PERMIT #:	E202112505	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12.83 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.88 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1155			6.97	NA	0.555	NA	-60	NA	0.0	NA	35.3	NA	17.26	NA	375	10.90
1200			7.06	0.09	0.570	2.70	-74	-14	0.0	—	8.4	-76.20	17.12	-0.81	375	10.90
1205			7.06	—	0.595	4.39	-85	-11	0.0	—	0.0	—	17.26	0.82	375	10.90
1210			7.07	0.01	0.617	3.70	-90	-5	0.0	—	0.0	—	17.25	-0.06	375	10.90
1215			7.07	—	0.633	2.59	-92	-2	0.0	—	0.0	—	17.31	0.35	375	10.91
1220			7.07	—	0.650	2.69	-93	-1	0.0	—	0.0	—	17.29	-0.12	375	10.91
1225			7.06	-0.01	0.666	2.46	-97	-4	0.0	—	0.0	—	17.30	0.06	375	10.91
1230		✓														
1235			7.06	—	0.674	1.20	-97	—	0.0	—	0.0	—	17.32	0.12	375	10.90

COMMENTS: Sample @ 1230

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/5/22	FIELD PERSONNEL:	OP
WEATHER:	42' Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-R19224 p-041072		

MONITOR WELL #:	FA-21	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15' (STICK-UP)
WELL PERMIT #:	E202112506	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.4 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1110	X		6.72	NA	.34	NA	53	NA	0	NA	102	NA	15.82	NA	250	10.82
1115	X		6.7	.02	.34	0	60	7	0	0	104	1.94	15.98	1	250	10.88
1120	X		6.64	.06	.332	2.38	59	1	0	0	105	1	16.1	.75	250	10.94
1125	X		6.6	.04	.332	0	52	7	0	0	100	4.88	16.27	1.17	250	11.03
1130		X														
1140			6.64	.04	.318	4.31	34	18	0	0	78.5	24.07	16.38	.55	250	11.06

COMMENTS:

Sampled @ 1130

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/21/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #:	LPG - 1	WELL DEPTH:	9'	SCREENED/OPEN INTERVAL:	2 - 9'
WELL PERMIT #:	2600063940	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 4.46 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.46 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
935			7.74	NA	0.044	NA	126	NA	6.23	NA	104	NA	9.48	NA	200	2.51
940			7.51	-0.23	0.041	-6.82	129	3	4.68	-24.88	96.0	-7.69	9.42	-0.63	150	2.57
945			7.29	-0.22	0.042	2.44	130	1	5.35	14.32	89.5	-6.77	9.46	0.43	150	2.59
950			7.19	-0.10	0.042	—	132	2	5.31	-0.75	87.0	-2.79	9.41	-0.53	150	2.61
955			7.11	-0.08	0.042	—	137	5	4.93	-7.16	87.2	0.23	9.48	0.74	150	2.62
1000			7.06	-0.05	0.042	—	138	1	4.59	-6.90	88.2	1.15	9.52	0.42	150	2.62
1005		✓														
1010			7.00	-0.06	0.042	—	141	3	4.17	-9.15	88.4	0.23	9.56	0.42	150	2.63

COMMENTS: Sample @ 1005

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/21/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U42 44546(p) 33430(m)

MONITOR WELL #:	LPG - 2	WELL DEPTH:	10'	SCREENED/OPEN INTERVAL:	2 - 10'
WELL PERMIT #:	2600063941	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 4.62 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.62 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1030			6.81	NA	0.332	NA	155	NA	3.55	NA	452	NA	10.47	NA	175	4.65
1035			6.80	-0.01	0.331	-0.30	154	-1	3.53	-0.56	418	-7.52	10.43	0.38	175	4.65
1040			6.80	—	0.333	0.60	153	-1	3.34	-5.38	413	-1.20	10.33	-0.96	175	4.65
1045			6.79	-0.01	0.335	0.60	153	—	3.30	-1.20	378	-8.48	10.18	-1.45	175	4.66
1050		✓														
1055			6.79	—	0.334	-0.30	153	—	3.22	~~0.64~~ -2.42	365	-3.44	10.12	-0.59	175	4.66

COMMENTS: Sample @ 1050

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12-13-22	FIELD PERSONNEL:	MFS
WEATHER:	30 Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	P/213160 M/29744		

MONITOR WELL #:	MRVU-1	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202112491	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 9 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : ____ ft below TOC	
	BENEATH INNER CAP:	0.0		6.87

TIME	PURGING	SAMPLING	pH ±0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550) 3%		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1036			6.65	NA	0.755	NA	11	NA	0.13	NA	804	NA	16.22	NA	275	7.10
1043			6.62	.03	0.737	2.4	15	4	0.0	—	589	30%	15.55	4.2	275	6.96
1050			6.62	—	0.733	0.5	15	—	0.0	—	493	17%	15.60	0.3	275	6.93
1057			6.62	—	0.734	0.1	15	—	0.0	—	391	23%	15.72	0.7	275	6.93
1104			6.62	—	0.736	0.2	14	1	0.0	—	331	16%	15.60	0.7	275	6.89
1111			6.62	—	0.734	0.2	14	—	0.0	—	295	11%	15.77	1.0	275	6.91
1 1118			6.62	—	0.733	0.1	15	1	0.0	—	273	7.7	15.72	0.3	275	6.90
2 1125			6.63	.01	0.736	0.4	15	—	0.0	—	258	5.6	15.75	0.1	275	6.89
3 1132			6.63	—	0.734	0.2	14	1	0.0	—	242	6.4	15.76	.06	275	6.87

COMMENTS:
ST = 1140

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SITE: Former Hess - Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/1/22
FIELD PERSONNEL: KU
WEATHER: Cloudy, 40
CERTIFICATION #: 13040
Horiba U52 44546(p) 33470(m)

MONITOR WELL #: MW-1
WELL DEPTH: 16'
SCREENED/OPEN INTERVAL: 6-16'
WELL PERMIT #: E201607933
WELL DIAMETER: 2" Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 14.68 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 12.68 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1220			12.05	NA	0.651	NA	-112	NA	6.24	NA	55.4	NA	15.24	NA	125	12.75
1223			12.06	0.01	0.651	—	-113	-1	6.84	9.62	32.0	-42.24	15.35	0.72	125	12.78
1226			12.06	—	0.651	—	-115	-2	6.01	-12.14	13.3	-58.44	15.28	-0.46	125	12.80
1235			12.05	-0.01	0.647	-0.61	-114	1	5.91	-1.66	6.4	-51.86	15.50	1.44	125	12.81
1240			12.06	0.01	0.648	0.16	-113	1	5.88	-0.51	0.0	—	15.48	-0.13	125	12.81
1245			12.08	0.02	0.650	0.31	-112	1	5.58	-5.10	0.0	—	15.20	-1.81	125	12.81
1250			12.00	-0.08	0.649	-0.15	-108	4	5.79	3.76	0.0	—	15.65	2.96	125	12.83
1255		✓														
1300			12.04	0.04	0.653	0.62	-101	7	5.70	-1.55	0.0	—	15.19	0.70	125	12.83

COMMENTS:
Sample @ 1255

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 40°	CERTIFICATION #:	13040

MONITOR WELL #:	MW-2	WELL DEPTH:	13.0'	SCREENED/OPEN INTERVAL:	3-13'
WELL PERMIT #:	E201607934	WELL DIAMETER:	2" Inches		

Horiba U52 44546(p) 33470(m)

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5.70 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.70 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1030			6.63	NA	0.323	NA	65	NA	0.32	NA	25.7	NA	16.16	NA	300	4.01
1035			6.69	0.06	0.335	3.72	30	-35	0.0	—	12.6	-50.97	16.31	0.93	300	4.03
1040			6.74	0.05	0.339	1.19	21	-9	0.0	—	7.8	-38.10	16.01	-1.84	300	4.03
1045			6.73	-0.01	0.338	-0.30	23	2	0.0	—	0.0	—	16.42	2.56	300	4.09
1050			6.73	—	0.338	—	26	3	0.0	—	0.0	—	16.49	0.43	300	4.06
1055			6.74	0.01	0.338	—	28	2	0.0	—	0.0	—	16.59	0.61	300	4.09
1100			6.73	-0.01	0.339	0.30	30	2	0.0	—	0.0	—	16.63	0.24	300	4.11
1105		✓														
1110			6.81	0.08	0.345	1.77	30	—	0.0	—	0.0	—	16.78	0.90	300	4.15

COMMENTS: Sample @ 1105

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	JP
WEATHER:	34° Sunny	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	MW-3	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	3-13'
WELL PERMIT #:	E201607935	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5.63 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 1.63 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
935	X		6.27	NA	0.069	NA	149	NA	5.23	NA	212	NA	14.46	NA	250	2.51
940	X		6.40	.13	0.065	5.94	142	7	5.0	4.5	119	56.2	14.95	3.33	200	2.51
945	X		6.49	.09	.065	0	142	0	4.86	2.84	110	7.86	15.18	1.53	200	2.54
950	X		6.56	.07	.065	0	146	4	4.53	7.03	101	8.53	15.36	1.18	200	2.54
955	X		6.54	.02	.065	0	149	3	4.21	7.32	86.7	4.35	15.61	1.61	200	2.56
1000		X														
1005			6.49	.05	.065	0	154	5	4.02	4.62	58.9	48.39	15.18	2.73	200	2.78

COMMENTS:
Sampled @ 1000

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___, OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	JP
WEATHER:	35° Cloudy	CERTIFICATION #:	13040

Tribe U52 P- 44541 PM ~33470

MONITOR WELL #:	MW-4	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	6-18'
WELL PERMIT #:	E201615028	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.95 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE ±3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1125			11.97	NA	0.684	NA	-186	NA	0	NA	140	NA	13.0	NA	250	6.24
1130			12.01	.04	0.689	0.73	-202	6	0	0	135	3.64	13.0	0	150	6.24
1135			12.07	.06	0.694	.72	-211	9	0	0	129	4.55	13.1	0.76	150	6.25
1140			12.12	.05	0.702	1.15	-219	8	0	0	123	4.76	13.25	1.14	150	6.25
1145		X														
1155			12.20	.08	0.724	3.09	-202	17	0	0	112	9.36	13.25	0	150	6.40

COMMENTS:

Sampled @ 1145

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	JP.
WEATHER:	38° cloudy	CERTIFICATION #:	13040

Hwl: 052 P - 44546 Pu - 33470

MONITOR WELL #:	PER - 1	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	6 - 18'
WELL PERMIT #:	2600063933	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1400	X		8.90	NA	.169	NA	58	NA	5.96	NA	28.1	NA	12.09	NA	150	10.76
1405	X		8.0	.1	.171	1.18	70	12	5.21	13.43	26.1	10.9	12.38	2.37	150	10.80
1410	X		7.8	.2	.167	2.37	89	15	6.20	17.35	30.4	15.22	12.38	0	250	10.91
1420	X		7.72	.08	.171	2.37	94	9	6.09	1.79	30.9	1.63	12.38	0	250	11.02
1425	X		7.64	.08	.171	0	102	8	5.94	4.19	29.8	3.62	12.40	0.16	250	11.0
1430	X		7.57	.05	.171	0	111	9	5.69	2.60	28.7	3.76	12.37	0.24	250	10.98
1435		X	~~7.36~~		~~.171~~											
1445			7.36	.23	.171	0	155	4	4.78	17.38	30.2	5.09	12.38	0.08	250	11.29

COMMENTS:

Sampled @ 1435

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/6/22	FIELD PERSONNEL:	JP
WEATHER:	41° rain	CERTIFICATION #:	13040

Horiba U52 M-29744 P-213110

MONITOR WELL #:	PER - 2	WELL DEPTH:	12'	SCREENED/OPEN INTERVAL:	5-12'
WELL PERMIT #:	2600063924	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.1 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1300	X		6.91	NA	.313	NA	60	NA	1.29	NA	376	NA	13.25	NA	150	5.18
1305	X		6.67	.21	.267	15.86	87	27	0	NA	357	5.18	13.2	.38	150	5.22
1310	X		6.66	.01	.264	1.13	94	7	0	0	331	7.56	13.24	.3	200	5.38
1315	X		6.51	.05	.26	1.53	102	8	0	0	322	2.76	13.26	.15	200	5.44
1320	X		6.64	.03	.258	.77	107	5	0	0	310	3.8	13.43	1.27	200	5.5
1325		X														
1340			6.58	.06	.247	4.36	106	1	0	0	294	5.3	13.55	1.35	250	5.69

COMMENTS:

Sampled @1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/6/22
WEATHER: 42° rain

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

Hwy 052 M - ~~[illegible]~~ 28744 P - 213160

MONITOR WELL #: PER - 2D
WELL PERMIT #: E201305266
WELL DEPTH: 33'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 28-33'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.45 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1205	X		6.93	NA	.803	NA	69	NA	2.97	NA	0	NA	14.44	NA	150	6.51
1210	X		6.85	.08	.809	.74	74	5	2.75	7.69	0	0	14.05	2.74	150	6.55
1215	X		6.85	.01	.819	1.23	81	7	2.54	7.94	0	0	13.89	1.15	150	6.57
1220	X		6.85	.01	.823	.49	90	9	2.38	6.5	0	0	13.79	.72	150	6.58
1225	X		6.84	.01	.834	1.33	98	8	2.17	9.23	0	0	13.81	.14	150	6.59
1230		X														
1245			6.82	.02	.847	1.55	115	17	1.81	18.09	0	0	14.21	2.86	200	6.68

COMMENTS:

Sampled @ 1230

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/6/22
WEATHER: 53°F Rain

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

METER & PROBE SERIAL NUMBERS: Horiba U52 M: 41072 P R19224

MONITOR WELL #: PER-20DD
WELL PERMIT #: E201812231
WELL DEPTH: 63'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 53-63'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 55 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.40 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) ±.1 (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
13:15	X		6.92	NA	.544	NA	56	NA	8.97	NA	115	NA	13.86	NA	100	6.78
13:20	X		6.97	.05	.689	26.65	44	12	7.89	12.04	231	100.87	14.08	1.59		6.79
13:25	X		7.00	.03	.692	.435	38	6	6.90	12.55	138	40.26	14.37	2.06		6.70
13:30	X		7.01	.01	.693	.145	35	3	5.91	14.35	66.9	51.52	14.45	.557	150	6.73
13:35	X		7.01	0	.693	0	33	2	5.07	14.213	39.7	40.66	14.50	.346		6.75
13:40	X		7.01	0	.692	.144	31	2	4.57	9.862	35.8	9.824	14.55	.346		6.76
13:45	X		7.01	0	.690	.289	30	1	4.15	9.19	32.5	9.22	14.57	.137	150	6.80
13:50		X	6.96	.05	.687	.435	30	0	3.74	9.88	29.3	9.85	14.61	.275		6.81
14:05			6.97	.01	.688	.146	32	2	.71	81.02	8.0	72.69	14.70	.67		6.86

COMMENTS: Sampled @ 13:50

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	JP
WEATHER:	43° Sunny	CERTIFICATION #:	13040

Hyiba U52 M-29744 Y-213160

MONITOR WELL #:	PER - 3	WELL DEPTH:	12'	SCREENED/OPEN INTERVAL:	5-12'
WELL PERMIT #:	2600063925	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.82 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1055	X		6.86	NA	6.67	NA	-78	NA	0	NA	182	NA	12.77	NA	100	4.44
1100	X		6.82	.04	6.58	1.21	-86	8	0	0	178	7.57	12.69	.63	100	4.51
1105	X		6.84	.02	6.48	1.88	-92	6	0	0	165	7.58	12.61	.63	100	4.53
1110	X		6.85	.01	6.52	.62	-99	7	0	0	190	2.99	12.58	.24	100	4.55
1115		X														
1125			6.87	.02	6.41	1.7	-115	16	0	0	209	20.58	12.47	.88	150	4.67

COMMENTS:

Sampled @1115

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/9/22
WEATHER: 41° Sunny

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JY
CERTIFICATION #: 13040

Hoiled US2 M-29744 P-213160

MONITOR WELL #: PER - 3D
WELL PERMIT #: E201309741
WELL DEPTH: 33'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 28-33'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.4 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1010	X		7.45	NA	6.21	NA	-42	NA	1.92	NA	<1000	NA	12.13	NA	100	5.58
1015	X		7.4	.05	6.02	3.11	-75	33	1.42	29.94	197	164.63	13.2	8.45	100	5.61
1020	X		7.32	.08	6.08	.99	-81	6	1.4	1.42	190	3.62	12.97	1.76	100	5.64
1025	X		7.3	.02	6.09	.16	-90	9	1.29	8.18	174	8.79	12.66	2.42	100	5.66
1030	X		7.29	.01	6.12	.49	-98	8	1.27	1.56	160	8.38	12.65	.08	100	5.7
1035		X														
1045			7.31	.02	6.19	1.14	-128	30	1.09	15.25	109	37.92	13.21	4.33	200	5.87

COMMENTS:

Sampled @ 1035

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/15/22	FIELD PERSONNEL:	KY
WEATHER:	Cloudy, 40	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	PER - 4	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	3 - 18'
WELL PERMIT #:	2600063934	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 8.59 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.59 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1230			7.00	NA	1.23	NA	-70	NA	0.0	NA	88.6	NA	12.53	NA	200	6.61
1235			7.01	0.01	1.23	—	-77	-7	0.0	—	74.0	-16.48	12.77	1.92	200	6.64
1240			7.02	0.02	1.23	—	-80	-3	0.0	—	65.6	-11.35	12.91	1.10	200	6.66
1245			7.02	—	1.24	0.81	-83	-3	0.0	—	59.5	-9.30	12.93	0.16	200	6.67
1250			7.03	0.01	1.24	—	-88	-4	0.0	—	62.6	5.21	13.18	1.93	200	6.68
1255			7.03	—	1.25	0.81	-89	-1	0.0	—	61.9	-1.12	13.45	2.05	200	6.68
1300		✓														
1305			7.03	—	1.25	—	-92	-3	0.0	—	62.2	-0.48	13.49	0.30	200	6.69

COMMENTS: Sample @ 1300

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

8

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/20/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KS
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: PER-5
WELL PERMIT #:
WELL DEPTH: 14'
WELL DIAMETER: 4 inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 10.89 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.89 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1040			7.09	NA	0.343	NA	25	NA	3.07	NA	59.9	NA	11.05	NA	100	8.94
1045			7.11	0.02	0.340	-0.88	30	5	2.75	-10.42	45.0	-24.88	11.22	1.54	100	8.95
1050			7.12	0.01	0.339	-0.29	37	7	2.56	-6.91	34.1	-24.22	11.37	1.34	100	8.95
1055			7.10	-0.02	0.339	—	41	4	2.45	-4.30	29.4	-15.27	11.39	0.18	100	8.95
1100			7.10	—	0.338	-0.30	43	2	2.42	-1.22	27.3	-7.14	11.46	0.61	100	8.96
1105			7.13	0.03	0.336	-0.59	50	7	2.22	-8.26	26.3	-3.66	11.65	1.66	100	8.96
1110			7.14	0.01	0.337	0.30	53	3	2.13	-4.05	27.0	2.66	11.81	1.37	100	8.97
1115		✓														
1120			7.14	—	0.337	—	52	-1	1.99	-6.57	27.6	2.22	11.93	1.02	100	8.97

COMMENTS: Sampled @ 1115 Well pad destroyed, No metal lid

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/1/22	FIELD PERSONNEL:	RC / SH
WEATHER:	P. Cloudy 44°	CERTIFICATION #:	13040

MONITOR WELL #:	PER - 6R	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	3 - 22'
WELL PERMIT #:	P200800554	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.46 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)	
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*			
1300	✓		6.85	NA	.244	NA	157	NA	9.71	NA	30.9	NA	13.11	NA	380	2.81	
1305	✓		6.86	.01	.246	.8%	166	9	8.86	8%	30.2	2%	13.24	.9%	380	2.81	
1310	✓		6.87	.01	.246	—	173	7	8.34	5%	30.1	<1%	13.11	<1%	380	2.81	
1315	✓		6.87	—	.248	<1%	177	4	7.97	4%	29.8	1%	13.14	<1%	380	2.82	✓
1320	✓		6.89	.02	.253	2%	183	6	7.46	6%	29.0	2%	12.94	1%	380	2.63	✓
1325		✓	6.89	—	.259	<1%	187	4	7.16	4%	29.2	<1%	12.95	<1%	380	2.64	✓
Post 1337			6.93		.269		186		6.87		28.1		12.90			2.66	

COMMENTS:

*misread initial DTW readings

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	JP
WEATHER:	51° Rain	CERTIFICATION #:	13040

Horiba USL M-29744 P-213160

MONITOR WELL #:	PER - 7	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	5-18'
WELL PERMIT #:	2600063931	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.92 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1140	X		7.27	NA	.352	NA	40	NA	2.36	NA	42.1	NA	16.84	NA	200	7.02
1145	X		6.74	.53	.235	38.86	116	76	1.67	34.24	46.5	9.93	16.41	3.18	100	7.04
1150	X		6.59	.15	.201	15.6	135	19	0	NA	44.4	4.62	16.45	.24	100	7.05
1155	X		6.53	.06	.179	11.58	154	19	0	0	43.2	2.74	16.42	.18	100	7.06
1200	X		6.49	.04	.177	1.12	162	8	0	0	42.3	2.11	16.38	.24	100	7.08
1205	X		6.49	0	.174	1.71	170	8	0	0	42.1	.47	16.45	.43	100	7.09
1210	X		6.48	.01	.174	0	174	4	0	0	42.2	.24	16.38	.43	100	7.09
1215		X														
1230			6.46	.02	.171	1.74	188	14	0	0	38.4	6.80	16.32	.37	100	7.12

COMMENTS:

Sampled @ 1215

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12-13-22	FIELD PERSONNEL:	MFS
WEATHER:	30° Sunny	CERTIFICATION #:	13040

MONITOR WELL #:	PER - 8	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5 - 17'
WELL PERMIT #:	2600063932	WELL DIAMETER:	4" Inches	meter 29744 Probe 213160	

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH:	8 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION :	____ ft below TOC	
	BENEATH INNER CAP:	0.0		5.74	

	TIME	PURGING	SAMPLING	pH ±0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) 3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
	12:08			6.62	NA	.075	NA	107	NA	2.11	NA	285	NA	15.25	NA	275	5.79
	12:13			6.62	—	0.734	+100	14	93	0.0	—	281	1.4	15.77	3.3	275	5.81
	12:20			6.58	.04	.074	+100	19	5	.21	NA	83.6	+100	15.00	5	275	5.87
	12:27			6.59	.01	.075	1.3	170	151	0.0	—	74	12%	15.09	0.6	275	5.99
1	12:34			6.59	—	.076	1.3	168	2	0.0	—	67.9	8.5	15.18	0.5	275	6.03
2	12:41			6.60	.01	.078	2.5	166	2	0.0	—	63.3	7.0	15.11	0.4	275	5.95
3	12:48			6.59	.01	.077	1.2	160	6	0.0	—	58.8	7.3	15.13	0.1	275	5.88

COMMENTS:
ST: 12:55

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:		FIELD PERSONNEL:	
WEATHER:		CERTIFICATION #:	13040

MONITOR WELL #:	PER - 9	WELL DEPTH:	18'.5	SCREENED/OPEN INTERVAL:	3.5 - 18'.5
WELL PERMIT #:	E201309742	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: _____
BENEATH OUTER CAP: _____
BENEATH INNER CAP: _____

PUMP INTAKE DEPTH: _____ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		

COMMENTS: Flooded - could not access

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE:
WEATHER:

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL:
CERTIFICATION #: 13040

MONITOR WELL #: PER - 9D
WELL PERMIT #: E201309743
WELL DEPTH: 37'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 32.5-37.5

PID/FID READINGS (ppm):
BACKGROUND:
BENEATH OUTER CAP:
BENEATH INNER CAP:

PUMP INTAKE DEPTH: _____ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		

COMMENTS: flooded - could not access

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE:
WEATHER:

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL:
CERTIFICATION #: 13040

MONITOR WELL #: PER - 9DD
WELL PERMIT #: E201313005
WELL DEPTH: 67.5'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 63-68'

PID/FID READINGS (ppm):
BACKGROUND:
BENEATH OUTER CAP:
BENEATH INNER CAP:

PUMP INTAKE DEPTH: _____ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		

COMMENTS: Flooded – could not access

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	SH
WEATHER:	45° Sunny	CERTIFICATION #:	13040
	Horiba U52 M - R19224		P - 41072

MONITOR WELL #:	PER - 10	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	6.61'- 18.61
WELL PERMIT #:	E201309744	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.3

PUMP INTAKE DEPTH: 8.61 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.61 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1240	X		7.66	NA	.283	NA	-71	NA	.55	NA	7.0	NA	13.12	NA	150	7.02
1245	X		7.12	.54	.269	4.95	-45	26	1.19	116.36	1.4	80	13.31	1.45	150	7.16
1250	X		7.03	.09	.266	1.12	-35	10	1.30	9.24	0	NA	14.15	6.31	150	7.19
1255	X		6.98	.05	.268	.75	-31	4	1.36	4.62	0	0	13.47	4.81	100	7.22
1300	X		6.96	.02	.269	.37	-33	2	1.35	.74	0	0	13.63	1.19	100	7.25
1305	X		6.94	.02	.270	.37	-37	4	1.23	8.89	0	0	13.67	.293	100	7.25
1310		X	6.92	.02	.270	0	-41	4	1.11	9.76	0	0	13.86	1.39	125	7.26
1325	X		6.91	.01	.274	1.47	-57	16	.98	12.44	0	0	14.04	1.29	125	7.26

COMMENTS:

Sampled @ 1310

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/9/22	FIELD PERSONNEL:	SH
WEATHER:	41°F Sunny	CERTIFICATION #:	13040

MONITOR WELL #:	PER - 10D	WELL DEPTH:	33'	SCREENED/OPEN INTERVAL:	28 - 33'
WELL PERMIT #:	E201309745	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 9.96 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE ±3% (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:25	X		7.21	NA	7.21	NA	33	NA	1.98	NA	0	NA	12.90	NA	100	10.21
10:30	X		7.23	.02	7.31	1.39	-32	65	.31	84.34	0	/	12.90	0		10.21
10:35	X		7.27	.04	7.26	.684	-103	71	.18	41.93	0	/	13.43	4.11		10.22
10:40	X		7.29	.02	7.26	0	-157	54	0	/	0	/	~~14~~13.47	.298	150	10.21
10:45	X		7.26	.03	7.26	0	-167	10	0	/	0	/	13.38	.668		10.20
10:50	X		7.28	.02	7.25	.138	-177	10	0	/	0	/	13.52	1.05		10.18
10:55		X	7.25	.03	7.22	.414	-185	8	0	/	0	/	13.83	2.29	150	10.18
11:10			7.31	.06	6.78	6.09	-191	6	1.22	/	0	/	13.78	.362		10.30

COMMENTS: Sampled @ 10:55

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #:	PL - 1RR	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	1 - 15'
WELL PERMIT #:	E201305259	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 3 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1230			7.11	NA	1.77	NA	0	NA	0.0	NA	22.2	NA	11.56	NA	175	0.6
1235			7.11	—	1.76	-0.57	-10	-10	0.0	—	25.1	13.06	11.46	-0.87	175	0.6
1240			7.12	0.01	1.76	—	-17	-7	0.0	—	30.7	22.31	11.24	-1.92	175	0.6
1245			7.15	0.03	1.74	-1.14	-18	-1	0.0	—	24.3	-20.85	10.39	1.34	175	0.6
1250			7.19	0.04	1.73	-0.58	-19	-1	0.0	—	23.9	-1.65	11.57	1.58	175	0.6
1255			7.15	-0.04	1.71	-1.16	-20	-1	0.0	—	23.6	-1.26	11.65	0.69	175	0.6
1300			7.15	—	1.70	-0.59	-20	—	0.0	—	24.6	4.24	11.69	0.34	175	0.6
1305		✓														
1310			7.14	-0.01	1.70	—	-20	—	0.0	—	24.1	-2.03	11.72	0.26	175	0.6

COMMENTS: Sample @ 1305

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/22	FIELD PERSONNEL:	12
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546 (pH) 33470 (mV)

MONITOR WELL #:	PL - 2	WELL DEPTH:	17'	SCREENED/OPEN INTERVAL:	3-17'
WELL PERMIT #:	2600037761	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 5.6

PUMP INTAKE DEPTH: 5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.04 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1335			7.10	NA	1.25	NA	-19	NA	0.0	NA	129	NA	11.85	NA	200	2.27
1340			7.06	-0.04	1.25	—	-32	-13	0.0	—	123	-4.65	11.65	-1.69	200	2.30
1345			7.05	-0.01	1.25	—	-36	-4	0.0	—	119	-3.25	11.53	-1.03	200	2.32
1350			7.05	—	1.24	-0.80	-38	-2	0.0	—	116	-2.52	11.47	-0.52	200	2.34
1355			7.04	-0.01	1.24	—	-41	-3	0.0	—	114	-1.72	11.39	-0.70	200	2.35
1400		✓														
1405			7.04	—	1.24	—	-42	-1	0.0	—	114	—	11.34	-0.44	200	2.36

COMMENTS: Sample @ 1400

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/22	FIELD PERSONNEL:	KD
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horizon USZ 44546(P) 33470 (m)

MONITOR WELL #:	PL - 3R	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	3.5-22.5'
WELL PERMIT #:	P200800555	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 7.7

PUMP INTAKE DEPTH: 5.87 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.87 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1045			6.72	NA	1.15	NA	3	NA	0.0	NA	32.1	NA	11.03	NA	150	4.07
1050			6.69	-0.03	1.14	-0.87	-6	-9	0.0	—	31.6	-1.56	11.13	0.91	150	4.10
1055			6.68	-0.01	1.14	—	-10	-4	0.0	—	32.4	2.53	11.02	-0.99	150	4.10
1100			6.68	—	1.14	—	-13	-3	0.0	—	32.1	-0.93	10.97	-0.45	150	4.10
1105		✓														
1110			6.68	—	1.14	—	-14	-1	0.0	—	31.7	-1.25	11.00	0.27	150	4.10

COMMENTS: Sample @ 1105

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	KV
WEATHER:	Cloudy, 35	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	PL-4RR	WELL DEPTH:	13.0	SCREENED/OPEN INTERVAL:	4-13'
WELL PERMIT #:	E201611638	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 6 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.53 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1345			7.74	NA	0.344	NA	73	NA	1.49	NA	94.4	NA	9.87	NA	175	3.79
1350			7.73	-0.01	0.344	—	75	2	1.48	-0.67	110	16.53	9.74	-1.32	175	3.82
1355			7.74	0.01	0.341	-0.87	75	—	2.15	45.27	82.4	-25.09	9.74	—	175	3.82
1400			7.75	0.01	0.340	-0.29	75	—	1.70	-20.93	66.5	-19.30	9.71	-0.31	175	3.83
1405			7.77	0.02	0.335	-1.47	77	2	2.48	45.88	47.8	-28.12	9.64	-0.72	175	3.83
1410			7.78	0.01	0.334	-0.30	78	1	2.29	-7.66	49.7	3.98	9.60	-0.42	175	3.84
1415			7.79	0.01	0.332	-0.60	79	1	2.09	-8.73	47.0	-5.43	9.53	-0.73	175	3.84
1420			7.80	0.01	0.331	-0.30	79	—	2.05	-1.91	47.2	0.42	9.47	-0.63	175	3.84
1425		✓														
1430			7.81	0.01	0.329	-0.60	78	-1	1.97	-3.90	46.1	-2.33	9.39	-0.85	175	3.85

COMMENTS: Sample @ 1425

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/6/22	FIELD PERSONNEL:	KY
WEATHER:	Rain, 45	CERTIFICATION #:	13040

Harbor USZ 44546(p) 33470(m)

MONITOR WELL #:	PL - 6RR	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	2 - 15'
WELL PERMIT #:	E202000815	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 4 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 1.13 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1335	✓		7.14	NA	1.30	NA	-94	NA	6.49	NA	33.2	NA	14.67	NA	250	1.21
1340	✓		7.14	—	1.36	4.62	-98	-4	5.90	-9.09	28.3	-14.76	14.76	0.61	250	1.23
1345	✓		7.14	—	1.41	3.68	-102	-4	5.17	-12.37	24.3	-14.13	14.80	0.27	250	1.23
1350	✓		7.14	—	1.46	3.55	-104	-2	4.59	-11.22	24.9	2.47	14.86	0.41	250	1.23
1355	✓		7.13	-0.01	1.50	2.74	-105	-1	4.29	-6.54	26.5	6.43	14.86	—	250	1.23
1400	✓		7.12	-0.01	1.52	1.33	-104	1	3.95	-7.93	25.5	-3.77	14.91	0.34	250	1.23
1405	✓		7.10	-0.02	1.56	2.63	-104	—	3.65	-7.60	24.7	-3.14	14.91	—	250	1.23
1410		✓														
1415			7.10	—	1.57	0.64	-104	—	3.46	-5.21	25.2	2.02	14.92	0.07	250	1.23

COMMENTS: Sample @ 1410

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	JP
WEATHER:	32° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48986 P-48987		

MONITOR WELL #: PL-7R WELL DEPTH: 20' SCREENED/OPEN INTERVAL: 10-20'

WELL PERMIT #: E202205216 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.29 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1200			6.72	NA	.424	NA	4	NA	2.11	NA	<1100	NA	13.15	NA	250	2.34
1205			6.74	.02	.42	.85	-2	6	0	NA	<1000	0	13.33	1.36	250	2.38
1210			6.75	.01	.424	.85	-6	4	0	0	482	NA	13.11	2.45	250	2.39
1215			6.76	.01	.43	1.41	-8	2	0	0	471	4.36	13.42	1.4	250	2.41
1220			6.77	.01	.434	.93	-12	4	0	0	449	4.78	13.36	.82	250	2.44
1225			6.77	0	.436	.46	-14	2	0	0	412	8.59	13.42	.45	250	2.47
1230		2														
1240			6.78	.01	.435	.23	-26	6	0	0	317	26.06	13.21	1.58	250	2.54

COMMENTS:

Sampled @ 1230

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/15/22
WEATHER: 39°F Cloudy
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
Horiba U52 M: 48986 P: 48987

MONITOR WELL #: PL - 8R
WELL PERMIT #: P200800558
WELL DEPTH: 20'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 3.5-22.5'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 6.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.27 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	CHANGE*	REDOX POTENTIAL ±10 (mv) READING	CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	CHANGE*	TEMPERATURE (degrees C) (SM 2550) ±3% READING	CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
11:10			8.32	NA	.302	NA	134	NA	3.78	NA	160	NA	11.23	NA	175	4.50
11:15			8.44	.12	.281	6.95	144	10	2.63	30.42	172	7.5	11.56	2.94		4.58
11:20			8.49	.05	.271	3.56	152	8	2.42	7.98	158	8.14	12.06	4.32		4.67
11:25			8.54	.05	.269	.738	158	6	2.23	7.85	118	25.32	11.17	7.38	100	4.60
11:30			8.55	.01	.269	0	161	3	2.19	1.79	75.1	36.36	11.45	2.51		4.56
11:35			8.55	0	.269	0	163	2	1.98	9.59	67.6	9.99	11.11	2.97		4.52
11:40			8.57	.02	.270	.372	168	5	1.99	.505	60.9	9.91	10.92	1.71	100	4.50
11:45		X	8.58	.01	.269	.37	169	1	1.98	.503	54.9	9.85	11.03	1.01		4.50
11:55			8.55	.03	.274	1.86	173	4	2.05	3.53	35.0	36.25	11.67	5.80		4.83

COMMENTS: Sampled @ 11:45

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/13/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KT
CERTIFICATION #: 13040
Horiba U52 44546 (p) 35470 (m)

MONITOR WELL #: PL - 9R
WELL PERMIT #: P200800559
WELL DEPTH: 20
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 3.5-22.5'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 5.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.39 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1130			7.03	NA	0.338	NA	-3	NA	0.0	NA	49.8	NA	10.28	NA	150	2.66
1135			6.99	-0.04	0.328	-2.96	-5	-2	0.0	—	40.5	-18.68	10.46	1.75	150	2.68
1140			6.99	—	0.326	-0.61	-6	-1	0.0	—	35.7	-11.85	10.58	1.15	150	2.69
1145			6.98	-0.01	0.324	-0.61	-3	-3	0.0	—	38.8	8.68	10.81	2.17	150	2.69
1150			6.99	0.01	0.323	-0.31	-8	-5	0.0	—	36.1	-6.96	10.97	1.48	150	2.70
1155			6.99	—	0.321	-0.62	-8	—	0.0	—	35.5	-1.66	11.10	1.19	150	2.70
1200		✓														
1205			6.99	—	0.318	-0.94	-10	-2	0.0	—	34.2	-3.66	11.18	0.72	150	2.71

COMMENTS: Sample @ 1200

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12.14.22
FIELD PERSONNEL: DES
WEATHER: 35 Sunny
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: R/213160 M/29744

MONITOR WELL #: RTF-1
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202202027
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 30.8

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.47 ft below TOC

TIME	PURGING	SAMPLING	pH ±0.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550) 3%		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1023			6.27	NA	0.418	NA	-20	NA	1.87	NA	296	NA	14.74	NA	300	6.88
1030			6.32	.05	0.412	1.4	-26	6	0.10	179	281	5.1	14.57	1.1	300	6.75
1036			6.35	.03	1.04	86	-29	3	1.03	164	300	6.5	15.24	4.4	300	6.74
1043			6.37	.02	0.958	8.2	-37	8	0.0	—	~~231~~ 212	34	15.15	0.5	300	6.70
1050			6.36	.01	0.795	18	-39	1	0.0	—	164	25	15.28	0.8	300	6.83
1056			6.37	.01	0.686	14	-41	2	0.0	—	134	20	15.61	2.1	300	6.81
1103			6.36	.01	0.683	0.4	-40	1	0.0	—	125	6.9	15.41	1.2	300	6.77
1110			6.37	.01	0.674	1.3	-42	2	0.0	—	119	4.9	15.47	0.3	300	6.80
1117			6.37	—	0.668	0.8	-40	2	0.0	—	117	1.6	15.45	0.1	300	6.78

COMMENTS: ST 11:24

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12.14.22	FIELD PERSONNEL:	MFS
WEATHER:	35° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	P/ 213160 M/ 29744		

MONITOR WELL #:	RTF-2	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202202028	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 9 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC	
	BENEATH INNER CAP:	281	6.89	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1150			6.56	NA	4.40	NA	-199	NA	0.98	NA	1000	NA	15.88	NA	300	6.93
1156			6.48	.08	4.93	11	-279	80	0.0	—	967	3.3	15.77	0.6	300	6.99
1203			6.50	.02	4.84	1.8	-355	76	0.0	—	721	29	16.26	3	300	6.99
1210			6.54	.04	4.43	8.8	-417	62	0.0	—	522	32	16.40	0.8	300	6.90
1216			6.56	.02	4.23	4.6	-430	13	0.0	—	442	16	16.44	0.2	300	6.93
1223			6.56	—	4.05	4.3	-433	3	0.0	—	369	18	16.32	0.7	300	6.98
1230			6.58	.02	3.95	2.5	-437	4	0.0	—	339	8.4	16.19	0.8	300	6.96
1236			6.60	.02	3.88	1.7	-438	1	0.0	—	333	1.7	16.18	.06	300	6.93
1243			6.60	—	3.81	1.8	-437	1	0.0	—	307	8.1	16.17	.06	300	6.93

COMMENTS:

ST 1250

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/15/22	FIELD PERSONNEL:	KG
WEATHER:	Cloudy, 40	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44544 (p) 33470 (m)		

MONITOR WELL #:	RTF-3	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202202029	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 7 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.18 ft below TOC
	BENEATH INNER CAP:	63.7	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1030			7.11	NA	0.500	NA	-152	NA	6.58	NA	241	NA	12.29	NA	175	4.19
1035			7.07	-0.04	0.495	-1.6	-147	5	5.53	-15.96	156	-35.27	12.43	1.14	175	4.19
1040			7.05	-0.02	0.497	0.40	-146	1	4.93	-10.95	112	-28.21	12.62	1.53	175	4.20
1045			7.04	-0.01	0.499	0.40	-147	-1	4.50	-8.72	110	-1.79	12.75	1.03	175	4.20
1050			7.04	—	0.501	0.40	-147	—	4.12	-8.44	102	-7.27	12.76	0.08	175	4.20
1055			7.05	0.01	0.502	0.20	-147	—	3.90	-5.34	95	-6.86	12.82	0.47	175	4.20
1100		✓														
1105			7.04	-0.01	0.503		-148	-1	3.75	-3.85	91	-4.21	12.88	0.47	175	4.20

COMMENTS: Sample @ 1100 petro-like sheen/odor

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12-13-22	FIELD PERSONNEL:	TFS
WEATHER:	30°, Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M/29744 P/213160		

MONITOR WELL #:	RTF-4	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202202030	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 9 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.74 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH (pH units) ±0.1 (SM 4500H+B)		SPECIFIC CONDUCTIVITY 3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN 10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) 10% (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550) 3%		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:26	X		6.85	NA	0.974	NA	-61	NA	0.0	NA	715	NA	14.78	NA	300	6.80
13:33	X		6.94	.09	0.906	7.2	-79	18	0.0	—	372	63	15.44	4.3	300	6.81
13:40	X		6.93	.01	0.909	0.3	-82	3	0.0	—	199	60	15.60	1.0	300	6.83
13:46	X		6.92	.01	0.925	1.7	-84	2	0.0	—	84.8	80	15.41	1.2	300	6.83
13:53	X		6.93	.01	0.917	.86	-86	2	0.0	—	58.6	50	15.05	2.3	300	6.83
3 14:00	X		6.92	.01	0.932	1.6	-84	2	0.0	—	47.4	6.5	14.95	0.6	300	6.83
2 14:08	X		6.92	—	0.939	0.7	-83	1	0.0	—	51.7	8.6	14.90	0.3	300	6.83
1 14:15	X		6.93	.01	0.942	0.3	-84	1	0.0	—	54.6	5.4	14.87	0.2	300	6.83
14:22		X	6.93	.01	0.942	-	-83	1	0.0	—	52.3	5.1	14.89	0.2	300	6.83

COMMENTS:

ST: 1422

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12.14.22
FIELD PERSONNEL: RFS
WEATHER: 35° Sunny
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: P/213160 M/29744

MONITOR WELL #: RTF-5
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202202031
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.83 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:20			7.46	NA	1.40	NA	-157	NA	2.43	NA	340	NA	14.83	NA	300	6.83
13:26			7.35	.11	1.45	3.5	-165	8	2.32	4.6	112	100+	15.58	4.9	300	6.97
13:33			7.32	.03	1.45	—	-167	2	2.64	12	122	8.5	15.60	0.1	300	6.93
13:40			7.30	.02	1.45	—	-168	1	1.9	32	109	11	15.70	0.6	300	6.93
13:47			7.29	.01	1.45	—	-170	2	0.58	100+	100	8.6	15.72	0.12	300	6.90
13:54			7.30	.01	1.46	0.6	-169	1	0.0	—	93.3	6.9	15.70	0.12	300	6.87
14:01			7.28	.02	1.46	—	-170	1	0.0	—	88.2	5.6	15.61	0.38	300	6.86
14:08			7.30	.02	1.45	0.6	-168	2	0.0	—	82.5	6.6	15.66	0.12	300	6.86

COMMENTS:
ST 14:15

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/13/22
FIELD PERSONNEL: KV
WEATHER: Cloudy, 40
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: RTF-6
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202202032
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 1.1

PUMP INTAKE DEPTH: 10.16 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.16 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1140			7.28	NA	1.94	NA	-122	NA	0.0	NA	218	NA	9.52	NA	125	8.22
1145			7.29	0.01	1.95	0.52	-125	-3	0.0	—	211	-3.21	9.56	0.42	125	8.25
1150			7.30	0.01	1.96	0.51	-128	-3	0.0	—	215	1.90	9.60	0.42	125	8.26
1155			7.32	0.02	1.98	1.02	-132	-4	0.0	—	202	-6.05	9.67	0.73	125	8.26
1200		✓														
1205			7.33	0.01	2.00	1.01	-134	-2	0.0	—	189	-6.44	9.71	0.41	125	8.27

COMMENTS: Sample @ 1200

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	SH
WEATHER:	54° cloudy	CERTIFICATION #:	13040

Horiba U52 M-29744 P-213160

MONITOR WELL #:	SC-1	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5.5-15.5'
WELL PERMIT #:	E201910392	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 1.51 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1200	X		6.70	NA	15.8	NA	-128	NA	3.05	NA	97.1	NA	13.23	NA	150	1.51
1205	X		6.65	.05	13.8	12.65	-130	2	2.12	30.49	122	25.64	12.84	2.95	150	1.70
1210	X		6.61	.04	12.7	7.97	-128	2	1.17	44.81	119	2.46	12.67	1.32	150	1.75
1215	X		6.61	0	12.5	1.57	-129	1	.86	26.49	83.5	29.83	12.59	.63	100	1.77
1220	X		6.61	0	12.3	1.6	-130	1	.64	25.58	66	20.96	12.62	.24	100	1.79
1225	X		6.61	0	12.1	1.63	-129	1	.33	48.44	47.1	28.64	12.61	.08	100	1.80
1230	X		6.61	0	12.4	2.48	-129	0	.14	57.58	20.1	57.32	12.92	2.46	100	1.81
1235	X		6.62	.01	12.4	0	-133	4	0	NA	18.1	9.95	12.92	0	100	1.81
1240	X		6.61	.01	12.4	0	-133	0	0	0	16.3	9.95	12.89	.23	100	1.81
1245		X	6.61	0	12.4	0	-131	2	0	0	15.4	5.52	12.87	.16	100	1.82
1300	X		6.68	.07	7.89	44.46	-64	67	1.91	NA	81.5	136.43	12.64	1.8	100	1.83

COMMENTS:

Sampled @ 1245

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess - Port Reading
DATE: 12/8/22
WEATHER: 50° Sunny

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

Horiba 052 M- R19224 P- 041072

MONITOR WELL #: SC-1DD
WELL PERMIT #: E201910394
WELL DEPTH: 60'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 50-60'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 52 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 0.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1145			7.58	NA	.412	NA	46	NA	.88	NA	58.7	NA	13.33	NA	100	0.71
1150			7.46	.12	.414	.48	28	14	0	NA	65.8	11.41	13.51	1.34	100	0.82
1155			7.38	.08	.417	.72	35	7	0	0	60.8	7.73	13.66	1.1	100	0.81
1200			7.29	.09	.421	.95	32	3	0	0	56.8	7	13.64	.15	100	0.99
1205			7.22	.07	.428	1.65	24	8	0	0	53.1	6.73	13.61	.22	100	1.04
1210																
1220			7.77	.05	.438	2.31	27	3	0	0	48.1	9.88	13.58	.22	200	1.25

COMMENTS:
Sampled @ 1210

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	RC
WEATHER:	Clear 45°	CERTIFICATION #:	13040

MONITOR WELL #:	SC-2DDD	WELL DEPTH:	78'	SCREENED/OPEN INTERVAL:	68-78'
WELL PERMIT #:	E201910398	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	6.0	PUMP INTAKE DEPTH: ~~78~~ 71' ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.25 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1020	✓		7.13	NA	.699	NA	157	NA	0.81	NA	2.8	NA	12.94	NA	360	3.20
1025	✓		6.39	0.74	.873	24%	33	124	2.24	176%	611	>7710%	13.12	1%	360	3.11
1030	✓		6.42	0.03	.866	.8%	22	11	2.47	10%	258	57%	13.38	1.9%	360	3.17
1035	✓		6.43	.01	.869	0.3%	21	1	0.89	63%	66.5	74%	13.49	1%	360	3.21
1040	✓		6.39	.04	.875	.4%	30	8	0.00	—	30.6	53%	13.52	1%	360	3.22
1045	✓		6.35	.04	.880	.5%	33	3	0.00	—	18.8	38%	13.66	1%	360	3.23
1050	✓		6.34	.01	.883	.3%	36	3	0.00	—	17.9	4%	13.70	1%	360	3.24
1055	✓		6.33	.01	.885	.2%	38	2	0.00	—	17.0	5%	13.76	1%	360	3.25
1100	✓		6.32	.01	.886	.1%	40	2	—	—	16.1	5%	13.86	.7%	360	3.26
1105		✓	6.32	—	.887	.1%	41	1	—	—	15.1	6%	13.90	.2%	360	3.27
1105 1120			6.27		.882		50		—	—	16.9		14.00			3.30

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	KC
WEATHER:	Clear 45°	CERTIFICATION #:	13040

MONITOR WELL #:	SC-2	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5.5 - 15.5'
WELL PERMIT #:	E201910395	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP:
BENEATH INNER CAP:

PUMP INTAKE DEPTH: 8 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 0.93 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1150	✓		6.24	NA	22.8	NA	-149	NA	2.00	NA	198	NA	13.10	NA	360	1.23
1155	✓		6.20	0.04	23.6	3%	-189	40	2.35	17%	216	9%	13.87	.5%	340	1.23
1200	✓		6.18	.02	21.8	7%	-263	74	2.89	22%	238	10%	13.54	2%	340	1.26
1205	✓		6.16	.02	20.1	7%	-322	69	3.25	12%	247	3%	13.38	1%	340	1.29
1210	✓		6.17	.01	19.2	4%	-330	8	2.31	28%	250	1%	13.40	<1%	340	1.40
1215	✓		6.17	—	18.1	5%	-336	6	1.81	21%	256	2%	13.38	<1%	340	1.53
1220	✓		6.18	.01	14.6	19%	-330	6	1.46	19%	200	25%	13.30	4%	320	1.5
1225	✓		6.19	.01	12.7	13%	-324	6	1.21	17%	175	12%	13.25	<1%	320	1.55
1230	✓		6.19	—	10.1	20%	-320	4	1.19	2%	156	10%	13.29	.1%	320	1.55
1235	✓		6.20	.01	9.27	8%	-317	3	1.17	1%	137	12%	13.20	.6%	320	1.54
1240	✓		6.20	—	9.00	3%	-317	—	1.01	13%	130	5%	13.26	.4%	320	1.53

COMMENTS:
Water clear black color

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 2 OF 2

SITE: Port Reading
DATE: 12/8/22
WEATHER: Clear 45°

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: RL
CERTIFICATION #: 13040

METER & PROBE SERIAL NUMBERS:

MONITOR WELL #: SC-2
WELL PERMIT #: E20910395
WELL DEPTH: 15'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 5.5-15.5'

PID/FID READINGS (ppm):
BACKGROUND:
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP:

PUMP INTAKE DEPTH: ___ ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.93 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1240			6.20	NA	9.00	NA	-317	NA	1.01	NA	130	NA	13.26	NA	320	1.53
1245			6.23	.03	8.80	2%	-316	1	0.97	3.9%	128	1.5%	13.19	.5%	↓	1.53
1250			6.25	.02	8.65	1.7%	-315	1	0.90	7%	125	2.3%	13.13	.4%	↓	1.53
1255			6.26	.01	8.58	.8%	-314	1	0.85	5%	121	3.2%	13.06	.5%	↓	1.53
POST			6.30	.04	8.61	.3%	-321	7	1.36		116	4%	13.00			1.56

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	RC
WEATHER:	45° Cloudy	CERTIFICATION #:	13040

Horiba US2 M-48986 P-48987

MONITOR WELL #:	SC-2D	WELL DEPTH:	35'	SCREENED/OPEN INTERVAL:	25 - 35'
WELL PERMIT #:	E201910396	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 28 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.44 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1325	X		7.11	NA	6.23	NA	-210	NA	0	NA	133	NA	13.67	NA	380	2.56
1330	X		7.07	.04	6.83	9.19	-241	31	0	0	86.4	42.48	13.81	1.02	380	2.57
1335	X		7.08	.01	6.78	.73	-249	8	0	0	114	27.54	13.82	.07	380	2.56
1340	X		7.08	0	6.49	4.37	-252	3	0	0	180	44.9	14.06	1.29	380	2.56
1345	X		7.08	0	6.30	2.97	-254	2	0	0	27.0	151.22	14.10	2.01	380	2.56
1350	X		7.08	0	6.17	2.09	-256	2	0	0	29.6	9.19	14.09	.07	380	2.56
1355	X		7.09	.01	6.08	1.47	-257	1	0	0	29.9	1	14.06	.21	380	2.56
1400		X	7.08	.01	5.99	1.49	-257	0	0	0	28.7	4.1	14.08	.14	380	2.56
Post	X		7.09	.01	5.85	2.19	-234	23	0	0	17.8	46.88	14.09	.07	380	2.58

COMMENTS:

Sampled @ 1400

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	RC
WEATHER:		CERTIFICATION #:	13040

MONITOR WELL #:	SC-2DD	WELL DEPTH:	60'	SCREENED/OPEN INTERVAL:	51-61'
WELL PERMIT #:	E201910397	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 54 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.29 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1420	✓		7.81	NA	.825	NA	-128	NA	2.77	NA	237	NA	13.53	NA	400	3.20
1425	✓		7.45	.36	.901	9%	-125	3	1.76	36%	100	[illegible]	13.60	1%	400	3.20
1430	✓		7.33	.12	.959	6%	-121	4	1.15	34%	11.8	89%	13.80	1%	400	3.20
1435	✓		7.19	.14	.974	1.5%	-121	—	0.19	83%	5.6	52%	13.82	1%	400	3.20
1440	✓		7.04	.15	.974	—	-122	1	0.00	—	11.6	>10%	13.80	1%	400	3.22
1445	✓		6.97	.07	.975	<1%	-122	—	0.00	—	13.0	12%	13.83	1%	400	3.24
1450	✓		6.94	.03	.972	<1%	-121	1	0.0	—	12.2	6%	13.82	1%	400	3.24
1455	✓		6.90	.04	.970	<1%	-121	+	0.0	—	11.0	9%	13.82	1%	400	3.24
1500		✓	6.86	.04	.966	<1%	-120	1	0.0	—	10.9	1%	13.81	1%	400	3.24

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	LO
WEATHER:	Cloudy 50	CERTIFICATION #:	13040

MONITOR WELL #:	SC-3	WELL DEPTH:	14'	SCREENED/OPEN INTERVAL:	7.75-17.75'
WELL PERMIT #:	E201910399	WELL DIAMETER:	4" Inches		

Horiba U52 445416 (p) 33470 (m)

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9.75 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.46 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1010			6.77	NA	7.02	NA	-84	NA	0.0	NA	35.9	NA	10.90	NA	175	5.74
1015			6.81	0.04	6.78	-3.42	-97	-13	0.0	—	37.9	5.57	10.86	-0.37	175	5.70
1020			6.83	0.02	6.42	-5.31	-107	-10	0.0	—	50.0	34.93	10.83	-0.28	175	5.71
1025			6.89	0.06	5.63	-12.31	-120	-13	0.0	—	33.1	-33.8	10.79	-0.37	175	5.71
1030			6.91	0.02	5.41	-3.91	-123	-3	0.0	—	29.9	-9.67	10.78	-0.09	175	5.71
1035			6.92	0.01	5.27	-2.59	-126	-3	0.0	—	27.6	-7.69	10.77	-0.09	175	5.71
1040			6.93	0.01	5.15	-2.28	-127	-1	0.0	—	26.8	-2.90	10.77	—	175	5.71
1045			6.93	—	5.10	-0.97	-127	—	0.0	—	26.5	-1.12	10.76	-0.09	175	5.71
1050		✓														
1055			6.94	0.01	5.01	-1.77	-128	-1	0.0	—	25.8	-2.64	10.75	-0.09	175	5.71

COMMENTS: Sample @ 1050

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess - Port Reading
DATE: 12/8/22
WEATHER: 51° Sunny
Horiba 052 [illegible] M-K19224 P-041072

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

MONITOR WELL #: SC-1D
WELL PERMIT #: E201910393
WELL DEPTH: 30'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 23 - 33'

PID/FID READINGS (ppm):
BACKGROUND: 0.6
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 25 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.0 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1240			7.12	NA	.524	NA	50	NA	.99	NA	148	NA	12.73	NA	150	0.21
1245			6.94	.18	.572	8.76	62	12	0	NA	67.1	75.22	12.97	1.87	150	0.35
1250			6.95	.01	.58	1.39	58	4	0	0	65.2	2.87	12.99	.15	150	0.37
1255			6.94	.01	.587	1.2	57	1	0	0	63.8	3.91	12.98	.07	150	0.38
1300			6.94	0	.583	1.02	55	2	0	0	61.2	4.16	12.92	.46	150	0.41
1305		X														
1315			6.95	.01	.605		55	0	0	0	48.9		13.02		200	0.69

COMMENTS:

Sampled @ 1305

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	KY
WEATHER:	Cloudy, 55	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	SC-3D	WELL DEPTH:	35'	SCREENED/OPEN INTERVAL:	28 - 38'
WELL PERMIT #:	E201910400	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.89 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1315			7.68	NA	5.02	NA	-155	NA	0.0	NA	6.1	NA	13.93	NA	250	5.33
1320			7.68	—	5.02	—	-158	-3	0.0	—	6.5	6.56	13.94	0.07	250	5.26
1325			7.68	—	5.03	0.20	-163	-5	0.0	—	6.1	-6.15	13.92	-0.14	250	5.23
1330			7.68		5.05	0.40	-165	-2	0.0	—	5.8	-4.92	13.91	-0.07	250	5.20
1335		✓														
1340			7.68	—	5.08	0.59	-170	-5	0.0	—	5.6	-3.45	13.94	0.22	250	5.16

COMMENTS: Sample @ 1335

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	KY
WEATHER:	Cloudy, 55	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	SC-3DD	WELL DEPTH:	65'	SCREENED/OPEN INTERVAL:	55 - 65'
WELL PERMIT #:	E201910401	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 57 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.26 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1205			7.19	NA	7.83	NA	-114	NA	0.0	NA	8.6	NA	13.92	NA	225	6.46
1210			7.14	-0.05	8.01	2.30	-119	-5	0.0	—	12.5	45.35	13.87	0.36	225	6.35
1215			6.84	-0.30	16.1	101.00	-96	25	0.0	—	30.1	140.8	13.88	0.07	225	6.31
1220			6.32	-0.52	18.6	15.53	-61	35	0.0	—	16.8	-44.19	13.87	-0.07	225	6.25
1225			6.19	-0.13	19.0	2.15	-47	14	0.0	—	13.7	-18.45	13.84	-0.22	225	6.23
1230			6.16	-0.03	19.1	0.53	-43	4	0.0	—	15.0	9.49	13.89	0.36	225	6.21
1235			6.13	-0.03	19.3	1.05	-40	3	0.0	—	13.8	-8.00	13.91	0.14	225	6.20
1240			6.10	-0.03	19.4	0.52	-36	4	0.0	—	13.1	-5.07	13.90	-0.07	225	6.20
1245		✓														
1250			6.09	-0.01	19.7	1.55	-30	6	0.0	—	12.7	-3.05	13.92	0.14	225	6.21

COMMENTS: Sample @ 1245

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/8/22	FIELD PERSONNEL:	KG
WEATHER:	Cloudy, 55	CERTIFICATION #:	13040

MONITOR WELL #:	SC-3DDD	WELL DEPTH:	80	SCREENED/OPEN INTERVAL:	74-84'
WELL PERMIT #:	E201910402	WELL DIAMETER:	2 Inches		

Horiz. 052 44546 (p) 33470 (m)

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 76 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.50 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1110			6.24	NA	16.5	NA	-40	NA	0.0	NA	9.1	NA	13.66	NA	175	6.61
1115			6.24	—	17.1	3.64	-44	-4	0.0	—	11.4	25.28	13.71	0.37	175	6.54
1120			6.21	-0.03	18.1	5.85	-44	—	0.0	—	9.5	-16.67	13.73	0.15	175	6.48
1125			6.17	-0.04	18.6	2.69	-42	2	0.0	—	7.1	-25.26	13.79	0.44	175	6.46
1130			6.14	-0.03	18.9	1.61	-41	1	0.0	—	6.5	-8.45	13.80	0.07	175	6.45
1135			6.10	-0.04	19.4	2.67	-37	4	0.0	—	6.4	-1.54	13.78	-0.15	175	6.44
1140			6.07	-0.03	19.8	2.06	-34	3	0.0	—	6.0	-6.25	13.81	0.22	175	6.44
1145		✓														
1150			6.02	-0.05	19.7	-0.51	-30	4	0.0	—	6.3	5.00	13.83	0.15	175	6.43

COMMENTS: Sample @ 1145

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess - Port Reading
DATE: 12/8/22
WEATHER: 49° cloudy

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SP
CERTIFICATION #: 13040

Horiba U52 M-219224 P-046072

MONITOR WELL #: SC-4
WELL PERMIT #: E201910403
WELL DEPTH: 15
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 5.5 - 15.5'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.62 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1045			6.82	NA	1.72	NA	29	NA	0	NA	112	NA	14.49	NA	100	2.64
1050			6.79	.03	1.17	1.17	21	8	0	0	116	3.51	14.67	1.23	100	2.65
1055			6.78	.01	1.69	.59	12	9	0	0	109	6.22	14.61	.41	100	2.65
1100			6.8	.02	1.68	.58	6	6	0	0	101	7.62	14.52	.62	100	2.67
1105		X														
1110			6.83	.03	1.54	8.7	1	5	0	0	78.6	24.94	14.91	2.65	200	2.71

COMMENTS:

Sampled @ 1105

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/8/22
WEATHER: 50°F Mostly Sunny
Horiba U52 M: 29744 P: 213160

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

MONITOR WELL #: SC-4D
WELL PERMIT #: E201910404
WELL DEPTH: 35
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 25 - 35'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.51 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) ±3% (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:15			7.13	NA	4.20	NA	-54	NA	2.58	NA	24.9	NA	13.49	NA	225	5.55
10:20			7.18	.05	5.49	30.714	-237	183	.72	72.09	20.1	19.28	13.34	1.112		5.56
10:25			7.22	.04	5.43	1.093	-266	29	.88	22.22	7.4	63.18	14.46	8.39		5.56
10:30			7.24	.02	5.15	5.157	-278	12	.75	14.77	0	/	14.73	1.87	225	5.57
10:35			7.26	.02	4.84	6.02	-285	7	.73	2.67	0	/	14.79	.41		5.58
10:40			7.29	.03	4.71	2.69	-288	3	.70	4.29	0	/	14.67	.811		5.59
10:45			7.30	.01	4.59	2.55	-290	3	.74	5.71	0	/	14.70	.204	250	5.60
10:50		X	7.32	.02	4.47	2.614	-291	1	.67	9.46	0	/	14.75	.34		5.62
11:00			7.38	.06	4.19	6.26	-279	12	.36	46.27	0	/	14.54	1.42		5.66

COMMENTS: Sampled @ 10:50

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/8/22
WEATHER: 50° cloudy
Horiba U52 M-K19224 P-041072

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

MONITOR WELL #: SC-4DD
WELL PERMIT #: E201910405
WELL DEPTH: 60'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 50- 60'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 52 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.36 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1005			7.51	NA	.959	NA	157	NA	0	NA	0	NA	13.65	NA	100	4.42
1010			7.42	.09	.951	.84	149	8	0	0	0	0	13.55	.94	100	4.49
1015			7.34	.08	.948	.32	147	2	0	0	0	0	13.69	1.03	100	4.55
1020			7.3	.04	.945	.32	150	3	0	0	0	0	13.7	.07	100	4.62
1025		X														
1035			7.31	.01	.941	.42	155	5	0	0	0	0	13.82	.87	100	4.89

COMMENTS:
Sampled @ 1025

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	JF
WEATHER:	37° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M- 48886 P- 48987		

MONITOR WELL #:	SG-1	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	10-20'
WELL PERMIT #:	E202201987	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 12 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.32 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1140			6.72	NA	32.4	NA	-19	NA	0	NA	378	NA	13.52	NA	150	3.36
1145			6.75	.03	32.1	.93	-40	21	0	0	156	83.15	12.64	6.73	150	3.38
1150			6.77	.02	32.7	1.85	-48	8	0	0	149	4.59	12.48	1.27	150	3.39
1155			6.78	.01	33.1	1.21	-55	7	0	0	152	1.99	12.41	.56	150	3.4
1200			6.78	0	33.4	.9	-63	8	0	0	164	7.59	12.32	.73	150	3.41
1205		X														
1210			6.79	.01	33.8	1.49	-87	24	0	0	131	22.37	12.47	1.21	150	3.46

COMMENTS:

Sample @ 1205

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	JY
WEATHER:	35° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48996 P-48987		

MONITOR WELL #: SG-2 WELL DEPTH: 15' SCREENED/OPEN INTERVAL: 5-15'

WELL PERMIT #: E202201988 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 9.8
BENEATH INNER CAP: 20.4

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.2 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1050			7.04	NA	3.21	NA	-28	NA	0	NA	221	NA	12.55	NA	150	3.24
1055			7.26	.22	1.72	60.45	-34	6	0	0	184	18.27	12.45	.8	150	3.25
1100			7.34	.08	1.7	1.17	-34	0	0	0	172	6.74	12.34	.89	150	3.27
1105			7.4	.06	1.69	.59	-33	1	0	0	168	2.35	12.43	.73	150	3.28
1110			7.42	.02	1.7	.59	-33	0	0	0	161	4.26	12.47	.32	150	3.28
1115		X														
1125			7.45	.03	1.72	1.17	-36	3	0	0	127	23.61	12.41	.48	150	3.3

COMMENTS:

Sampled @ 1115

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/14/22
FIELD PERSONNEL: JP
WEATHER: 34° Sunny
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: M-Y8986 P-Y8987

MONITOR WELL #: SG-3
WELL DEPTH: 15'
SCREENED/OPEN INTERVAL: 5-15'
WELL PERMIT #: E202201989
WELL DIAMETER: 2 inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 1.4

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.45 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
955			6.61	NA	8.61	NA	7	NA	7.52	NA	74.8	NA	12.24	NA	200	3.47
1000			6.69	.08	5.91	37.19	-4	11	6.98	7.45	82.2	7.43	11.41	7.02	200	3.48
1005			6.77	.08	5.79	2.05	-7	3	6.81	2.47	76.5	7.18	11.27	1.23	200	3.50
1010			6.79	.02	5.83	.69	1	8	6.65	2.38	72.8	4.96	11.45	1.58	200	3.51
1015			6.77	.02	5.81	.34	4	3	6.47	2.74	70.2	3.64	11.67	1.9	200	3.52
1020		X														
1030			6.75	.02	5.78	.52	7	3	5.89	9.39	69.8	8	11.68	.09	200	3.57

COMMENTS:
Sampled @1020

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	JP
WEATHER:	40° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48986 P-48987		

MONITOR WELL #: SG-4 WELL DEPTH: 15' SCREENED/OPEN INTERVAL: 5-15'

WELL PERMIT #: E202201990 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 6.8

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.79 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1240			6.86	NA	10.1	NA	-2	NA	0.39	NA	354	NA	10.03	NA	200	2.86
1245			7.02	.16	4.39	78.81	-14	12	0	NA	310	13.25	10.10	.7	200	2.88
1250			7.18	.16	2.91	40.55	-10	4	0	0	229	30.06	10.14	.4	200	2.91
1255			7.19	.01	2.89	.68	-10	0	0	0	220	4.0	10.19	.49	200	2.95
1300			7.18	.01	2.82	2.45	-9	1	0	0	213	3.23	10.21	.2	200	2.98
1305			7.18	0	2.79	1.07	-9	0	0	0	204	4.32	10.23	.2	200	3.01
1316		X														
1320			7.19	.01	2.63	5.8	-10	1	0	0	178	13.61	10.21	.2	200	3.09

COMMENTS:

Sampled @ 1316

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess - Port Reading
DATE: 12/15/22
WEATHER: 38° (cloudy)
Horiba U52 M-29744 P-213160

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

MONITOR WELL #: SM - 1
WELL PERMIT #: E201412972
WELL DEPTH: 15'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 5 - 15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.04 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1025			6.55	NA	.382	NA	132	NA	0	NA	521	NA	9.62	NA	150	4.09
1030			6.48	.07	.364	4.83	134	2	0	0	364	35.48	9.52	1.04	150	4.11
1035			6.47	.01	.362	.55	131	3	0	0	348	4.49	9.5	.21	150	4.13
1040			6.47	0	.36	.55	132	1	0	0	351	.86	9.51	.11	150	4.14
1045			6.48	.01	.358	.55	134	2	0	0	~~354~~ 354	.85	9.53	.21	150	4.16
1050																
1100			6.50	.02	.342	4.57	133	1	0	0	328	7.62	9.57	.42	150	4.21

COMMENTS:

Sampled @ 1050

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/22	FIELD PERSONNEL:	JP
WEATHER:	38° cloud	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-29744 P-213160		

MONITOR WELL #:	SM-1D	WELL DEPTH:	35'	SCREENED/OPEN INTERVAL:	25-35'
WELL PERMIT #:	E202202287	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.72 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1130			7.27	NA	1.19	NA	-86	NA	0	NA	410	NA	13.48	NA	150	6.75
1135			7.26	.01	1.21	1.67	-87	1	0	0	398	2.87	13.74	1.91	150	6.77
1140			7.28	.03	1.24	3.45	-93	6	0	0	377	5.42	13.91	1.23	150	6.78
1145			7.31	.02	1.26	1.6	-98	5	0	0	354	6.29	14.02	.79	150	6.8
1150																
1205			7.33	.02	1.31	3.89	-105	7	0	0	318	10.71	14.09	.5	150	6.87

COMMENTS:

Sampled @ 1150

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/21/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	SP - 1	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	3 - 13'
WELL PERMIT #:	2600025338	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 6.94 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.94 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1235			7.18	NA	0.233	NA	106	NA	4.77	NA	341	NA	11.07	NA	150	4.94
1240			7.21	0.03	0.232	-0.43	106	—	4.76	-0.21	332	-2.64	11.09	0.18	150	4.94
1245			7.24	0.03	0.228	-1.72	105	-1	4.82	1.25	332	—	11.13	0.36	150	4.94
1250			7.26	0.02	0.227	-0.44	105	—	4.88	1.25	315	-5.12	11.20	0.63	150	4.94
1255		✓														
1300			7.29	0.03	0.227	—	105	—	4.84	*0.82	311	-1.27	11.27	0.63	150	4.94

COMMENTS: Sample @ 1255

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/21/22	FIELD PERSONNEL:	
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

MONITOR WELL #: SP - 2 WELL DEPTH: 13' SCREENED/OPEN INTERVAL: 3 - 13'

WELL PERMIT #: 2600025339 WELL DIAMETER: 2" Inches

Horiba U52 44546(p) 33470(m)

PID/FID READINGS (ppm): BACKGROUND: 0.0

BENEATH OUTER CAP: 0.0

BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 6.52 ft below TOC

DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.52 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1150			6.78	NA	0.139	NA	131	NA	3.98	NA	263	NA	8.83	NA	100	4.79
1155			6.66	-0.12	0.134	-3.60	129	-2	4.13	3.77	254	-3.42	9.31	5.44	100	4.82
1200			6.63	-0.03	0.130	-2.99	128	-1	4.14	0.24	253	-0.39	9.48	1.83	100	4.83
1205			6.60	-0.03	0.128	-1.54	124	-4	4.10	-0.97	256	1.19	9.75	2.77	100	4.84
1210			6.57	-0.03	0.127	-0.78	124	—	4.01	-2.20	255	-0.39	9.88	1.33	100	4.84
1215		✓														
1220			6.55	-0.02	0.127	—	122	-2	3.94	-1.75	251	-1.57	9.97	0.90	100	4.85

COMMENTS: Sample @ 1215

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/5/2022
WEATHER: clear/40s

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: MP
CERTIFICATION #: 13040

MONITOR WELL #: SP - 3
WELL PERMIT #: 2600025340
WELL DEPTH: 13'
WELL DIAMETER: ~~1~~ 2" Inches
SCREENED/OPEN INTERVAL: 3 - 13'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 6.0 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.41 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1145	X		6.67	NA	0.786	NA	96	NA	0.0	NA	237	NA	12.78	NA	250	3.55
1150	X		6.60	1.05	0.796	1.27	91	5.2	0	0	186	21	12.81	0.23	250	3.61
1155	X		6.58	0.3	0.801	0.62	92	1.1	0		102	45	12.82	0.07	250	3.65
1200	X		6.59	0.15	0.799	0.29	91	1.08	0		95.1	6.7	12.82	0	250	3.65
1205	X		6.58	0.15	0.796	0.37	90	1.09	0		42.6	55	12.83	0.07	250	3.65
1210	X		6.58	0	0.845	6.15	88	2.2	0		37.2	12	12.83	0	250	3.65
1215	X		6.56	0.02	0.848	0.35	86	2.2	0		36.9	0.8	12.83	0	250	3.65
1220	X		6.56	0	0.847	0.11	85	1.1	0		36.8	0.2	12.83	0	250	3.65
1225		X	6.57	0.15	0.848	0.11	86	1.1	0		36.8	0	12.83	0	250	3.65

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	JP
WEATHER:	50° rain	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	pH - 29744	P - ~~[illegible]~~ 213160	

MONITOR WELL #:	SRB-1	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202200691	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0; BENEATH OUTER CAP: 0.0; BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9 ft below TOC

DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.6 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1305	X		5.81	NA	.159	NA	121	NA	0	NA	<1000	NA	16.96	NA	150	6.63
1310	X		5.96	.15	.163	2.48	110	9.5	0	0	<1000	0	17.38	2.45	250	6.75
1315	X		6.45	.49	.186	13.18	49	61	0	0	944	5.76	17.41	.14	250	6.78
1320	X		6.52	.07	.181	2.65	29	20	0	0	101	161.34	17.22	1.1	150	6.84
1325	X		6.60	.08	.192	.52	20	9	0	0	92.8	8.46	16.96	1.52	150	6.86
1330	X		6.64	.04	.183	.52	11	9	0	0	88.7	4.52	16.92	.24	150	6.89
1335	X		6.67	.03	.183	0	4	7	0	0	84.2	5.2	16.84	.44	150	6.93
[illegible]		X														
1350			6.72	.05	.185	1.03	-3	7	0	0	208.9	85.09	17.01	.83	150	6.99

COMMENTS:

Sampled @ 1340 ~~[illegible]~~

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/20/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KV
CERTIFICATION #: 13040

Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #: TF - 1
WELL PERMIT #: 2600018989
WELL DEPTH: 12'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 2-12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 4.09 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.09 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
935			7.10	NA	0.235	NA	-44	NA	0.0	NA	63.2	NA	7.41	NA	100	2.40
940			7.05	-0.05	0.235	—	-52	-8	0.0	—	59.3	-6.17	7.28	-1.75	100	2.42
945			7.04	-0.01	0.232	-1.28	-56	-4	0.0	—	58.8	-0.84	7.30	0.27	100	2.42
950			7.03	-0.01	0.231	-0.43	-59	-3	0.0	—	56.9	-3.23	7.36	0.82	100	2.43
955		✓														
1000			7.03	—	0.230	-0.43	-61	-2	0.0	—	58.5	2.81	7.39	0.41	100	2.43

COMMENTS: Sample @ 955

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	JP
WEATHER:	34° Sunny	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-48886 P-48987		

MONITOR WELL #: TF-1D WELL DEPTH: 35' SCREENED/OPEN INTERVAL: 25-35'

WELL PERMIT #: E202202002 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.85 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1305			8.55	NA	.496	NA	-142	NA	2.74	NA	51.7	NA	12.51	NA	200	4.88
1310			9.47	.92	.51	2.78	-138	4	0	NA	14.1	114.29	11.79	5.93	200	4.92
1315			9.99	.5	.508	.39	-119	19	0	0	12.1	15.27	11.79	0	200	4.94
1320			9.99	.02	.512	.78	-122	3	0	0	11.8	2.51	11.74	.43	200	4.95
1325			10.05	.06	.517	.97	-117	5	0	0	11.6	1.71	11.9	1.35	200	4.96
1330			10.1	.05	.52	.58	-108	8	0	0	11.7	.86	12.02	1	200	4.97
1335		*														
1350			10.13	.03	.524	.77	-101	8	0	0	9.1	25	12.22	1.65	200	5.02

COMMENTS:

Sample @ 1335

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/19/22
WEATHER: 35°F Sunny

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
Horiba U52 M: 29744 P: 213160

MONITOR WELL #: TF - 2
WELL PERMIT #: 2600018991
WELL DEPTH: 12'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 2 - 12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 1.8
BENEATH INNER CAP: 11.3

PUMP INTAKE DEPTH: 4 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 1.2 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) ±.1 (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
12:30			6.74	NA	.162	NA	27	NA	1.80	NA	40.0	NA	8.22	NA	150	1.39
12:35			6.90	.16	.104	35.80	-7	30	1.27	29.44	62.3	55.75	8.30	.973		1.30
12:40			6.91	.01	.100	3.85	-15	8	1.76	38.58	22.0	64.69	7.60	8.43		1.30
12:45			6.96	.05	.093	7	-30	15	1.03	41.48	0	/	7.40	2.63	100	1.28
12:50			6.98	.02	.093	0	-33	3	.78	24.27	0	/	7.43	.405		1.27
12:55			7.02	.04	.095	2.15	-37	4	.71	8.97	0	/	7.41	.27		1.20
13:00			7.05	.03	.095	0	-40	3	.64	9.86	0	/	7.20	2.83	100	1.20
13:05		X	7.07	.02	.097	2.10	-42	2	.58	9.37	0	/	7.23			1.20
13:15			7.05	.02	.110		-33	9	0	/	0	/	7.85			1.30

COMMENTS: Sampled @ 13:05

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/19/27
WEATHER: 37°F Cloudy
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
Storbx U57 M: 29744 P: 213160

MONITOR WELL #: TF - 3
WELL PERMIT #: 2600018990
WELL DEPTH: 12'
WELL DIAMETER: 2" inches
SCREENED/OPEN INTERVAL: 2 - 12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 4 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 1.5 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY ±10% (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550) ±3%		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:45			7.05	NA	.116	NA	9	NA	13.01	NA	118	NA	6.76	NA	125	2.45
13:50			7.05	0	.111	4.31	6	3	11.37	12.61	105	11.02	7.57	11.24		2.50
13:55			7.06	.01	.109	1.832	3	3	10.22	10.11	80.2	23.62	7.78	3.46		2.54
14:00			7.08	.02	.103	.917	-8	15	9.23	9.69	33.2	58.60	7.87	1.16	125	2.52
14:05			7.14	.06	.107	.926	-19	11	8.23	10.83	10.1	69.58	7.88	.127		2.50
14:10			7.17	.03	.107	0	-23	4	7.77	5.59	9.1	9.90	7.92	.508		2.50
14:15			7.20	.03	.108	.935	-28	5	7.15	7.98	8.3	8.79	7.96	.505	150	2.50
14:20		X	7.22	.02	.108	0	-31	3	6.70	6.29	0	/	7.86	1.25		2.50
14:30			7.28	.06	.110	1.852	-32	2	0	/	0	/	8.18	4.07		2.74

COMMENTS: Sampled @ 14:20

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	JY
WEATHER:	38° cloudy	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M- 815224 P- 041072		

MONITOR WELL #:	TF-4	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	3-13'
WELL PERMIT #:	E202202003	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.01 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1305			9.14	NA	.177	NA	74	NA	.72	NA	462	NA	8.04	NA	250	0.02
1310			9.01	.13	.177	0	87	13	0	NA	458	.87	8.42	4.62	150	0.03
1315			8.91	.1	.177	0	96	9	0	0	418	9.13	8.85	4.98	150	0.04
1320			8.82	.09	.177	0	92	4	0	0	397	5.15	8.92	.79	150	0.04
1325			8.75	.07	.176	.57	94	2	0	0	411	3.47	9.08	1.58	150	0.05
1330			8.71	.04	.177	.57	90	4	0	0	399	2.96	9.15	.77	150	0.05
1335		X														
1345			8.62	.09	.171	.57	87	3	0	0	361	10	9.07	.88	150	0.07

COMMENTS:

Sampled @ 1335

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	JP
WEATHER:	39° cloudy	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M- R19224	P- 041072	

MONITOR WELL #: TF-4D WELL DEPTH: 35' SCREENED/OPEN INTERVAL: 25-35'

WELL PERMIT #: E202202004 WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.85 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1215			7.29	NA	.531	NA	-11	NA	3.6	NA	31.5	NA	11.01	NA	150	3.91
1220			7.13	.16	.742	33.15	-12	1	0	NA	31.8	.95	11.21	1.8	150	3.93
1225			7.18	.05	.748	.81	-12	0	0	0	31.2	1.9	11.02	1.71	150	3.94
1230			7.12	.06	.752	.53	-14	2	0	0	30.7	1.62	10.78	2.11	150	3.85
1235			7.07	.05	.761	1.19	-15	1	0	0	29.2	5	10.48	2.82	150	3.78
1240																
1250			7.04	.03	.772	1.44	-20	5	0	0	21.3	31.29	10.57	.76	150	4.02

COMMENTS:

Sampled @ 1240

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/12/22
FIELD PERSONNEL: JP
WEATHER: 37° cloudy
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: M- R19224 P. 041072

MONITOR WELL #: TF-5
WELL DEPTH: 13'
SCREENED/OPEN INTERVAL: 3-13'
WELL PERMIT #: E202202005
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 1.99 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1015			7.21	NA	.585	NA	-49	NA	0	NA	447	NA	9.87	NA	100	2.07
1020			7.15	.06	.582	.51	-48	1	0	0	422	5.75	10.07	2	100	2.09
1025			7.08	.07	.571	1.91	-49	1	0	0	407	3.62	10.21	1.38	100	2.11
1030			7.01	.07	.566	.88	-49	0	0	0	391	4.01	10.26	.49	100	2.12
1035		X														
1045			6.98	.03	.554	2.19	-50	7	0	0	356	9.37	10.02	2.37	100	2.16

COMMENTS:

Sampled @ 1035

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/12/22	FIELD PERSONNEL:	JY
WEATHER:	34° Cloudy	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	M-R17224 P-041072		

MONITOR WELL #:	TF-6	WELL DEPTH:	13'	SCREENED/OPEN INTERVAL:	3-13'
WELL PERMIT #:	E202202288	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND: 0.0	PUMP INTAKE DEPTH: 5 ft below TOC	
	BENEATH OUTER CAP: 0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.15 ft below TOC	
	BENEATH INNER CAP: 0.0		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1110			7.85	NA	.141	NA	108	NA	5.28	NA	0	NA	9.26	NA	150	0.21
1115			7.84	.01	.14	.71	116	8	5.86	.34	0	0	9.18	.76	150	0.25
1120			7.83	.01	.141	.71	124	8	5.92	.67	0	0	9.32	1.4	150	0.3
1125			7.81	.02	.139	1.43	130	6	5.84	1.36	0	0	9.38	.64	150	.34
1130		X														
1145			7.76	.05	.138	.72	152	22	5.79	8.01	0	0	9.45	.74	150	.41

COMMENTS:

Sampled @ 1130

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	JP
WEATHER:	54° rain	CERTIFICATION #:	13040

Horiba U52 M-28744 P-213160

MONITOR WELL #:	~~TL-2~~ TL-1	WELL DEPTH:	~~15~~ 14	SCREENED/OPEN INTERVAL:	~~2-15~~ 2-14
WELL PERMIT #:	~~E201305270~~ E201305269	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 8.55 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.55 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1045	X		6.65	NA	14.0	NA	-56	NA	0.54	NA	47.2	NA	17.35	NA	100	6.92
1050	X		6.66	.01	14.2	.14	-59	3	0.55	1.83	45.7	3.23	17.35	0	100	6.93
1055	X		6.66	0	14.6	2.78	-58	1	0.57	3.57	43.1	5.86	17.34	.06	100	6.93
1100	X		6.67	.01	14.5	.69	-55	3	0.55	3.57	43.3	.46	17.29	.29	100	6.94
1105		X														
1115			6.68	.03	14.3	1.38	-49	6	0.52	5.61	41.1	5.21	17.21	.46	200	7.02

COMMENTS:

Sample @1105

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/7/22
WEATHER: 57°F Fog

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

Horiba U52 M: R19224 P: 41072

MONITOR WELL #: ~~TL-1~~ TL-2
WELL PERMIT #: ~~E201305269~~ E201305270
WELL DEPTH: ~~14'~~ 15'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: ~~2-14'~~ 2-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 52.1
BENEATH INNER CAP: 164.2

PUMP INTAKE DEPTH: 8.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.40 ft below TOC

TIME	PURGING	SAMPLING	pH ±0.1 (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
13:15	X		6.94	NA	.696	NA	-11	NA	~~X~~.21	NA	13.5	NA	16.74	NA	125	6.45
13:20	X		7.05	.11	.692	.575	-37	26	0	/	12.0	11.111	16.76	.119		6.44
13:25	X		7.05	0	.687	.723	-41	4	0	/	11.7	2.5	16.96	1.193		6.45
13:30	X		7.06	.01	.686	.146	-42	1	0	/	11.2	4.27	17.01	.295	125	6.45
13:35		X	7.06	0	.684	.292	-43	1	0	/	11.1	.893	17.13	.705		6.45
13:55			7.00	.06	.676	1.17	~~-520~~	~~3723~~	.0	/	13.4	20.72	17.17	.234		6.43

COMMENTS: Sampled @ 13:35

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 30	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(M)

MONITOR WELL #:	TL - 3	WELL DEPTH:	10'	SCREENED/OPEN INTERVAL:	2 - 10'
WELL PERMIT #:	E201305271	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 8.24 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.24 ft below TOC
	BENEATH INNER CAP:	0.0	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1105			7.16	NA	11.5	NA	-27	NA	0.0	NA	156	NA	9.69	NA	150	6.49
1110			7.39	0.23	9.59	-16.61	-68	-41	0.0	—	168	7.69	10.08	4.03	150	6.53
1115			7.39	—	8.56	-10.74	-73	-5	0.0	—	194	15.48	10.19	1.09	150	6.55
1120			7.38	-0.01	7.63	-10.86	-74	-1	0.0	—	186	-4.12	10.47	2.75	150	6.56
1125			7.37	-0.01	7.37	-3.41	-75	-1	0.0	—	182	-2.15	10.55	0.76	150	6.57
1130			7.37	—	7.21	-2.17	-75	—	0.0	—	178	-2.20	10.48	-0.66	150	6.57
1135			7.38	0.01	7.17	-0.56	-75	—	0.0	—	188	5.62	10.44	-0.38	150	6.57
1140			7.38	—	7.14	-0.42	-74	1	0.0	—	199	5.85	10.42	-0.19	150	6.57
1145		✓														
1150			7.38	—	7.10	-0.56	-74	—	0.0	—	200	0.50	10.46	0.38	150	6.57

COMMENTS: Sampler @ 1145

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
DATE: 12/7/22
WEATHER: 57°F Fog
METER & PROBE SERIAL NUMBERS: Horiba U52 M: R19224 P: 41072

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

MONITOR WELL #: TL-4
WELL PERMIT #: E202200689
WELL DEPTH: 15'
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 5-15'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 7.2
BENEATH INNER CAP: 745.6

PUMP INTAKE DEPTH: 8.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.36 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1)		REDOX POTENTIAL ±10 (mv)		DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG)		TURBIDITY (NTU) ±10% (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550) ±3%		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:15	X		6.84	NA	1.89	NA	-19	NA	~~5~~ 2.66	NA	153	NA	17.20	NA	150	6.39
11:20	X		6.87	.03	1.78	5.82	-36	17	0	/	112	26.8	17.62	2.44		6.38
11:25	X		6.87	0	1.77	.562	-37	1	0	/	145	29.46	18.04	2.38		6.38
11:30	X		6.87	0	1.78	.565	-38	1	0	/	150	3.45	18.22	.998	150	6.39
11:35	X		6.87	0	1.78	0	-40	2	0	/	143	4.67	18.38	.878		6.39
11:40		X	6.88	.01	1.78	0	-40	0	0	/	130	9.09	18.45	.381		6.39
11:55			6.82	.06	1.79	.562	-24	16	.83	/	62.6	51.04	18.62	.971	150	6.39

COMMENTS: Sampled @ 11:40

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/19/22	FIELD PERSONNEL:	KS
WEATHER:	Sunny, 30	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	TL-5	WELL DEPTH: 15'		SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202200690	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 8.59 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.59 ft below TOC	
	BENEATH INNER CAP:	147.4		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1010			7.07	NA	0.881	NA	-114	NA	2.80	NA	364	NA	12.35	NA	150	6.64
1015			7.07	—	0.873	-0.91	-114	—	2.68	-4.29	323	-11.26	12.17	-1.46	150	6.63
1020			7.06	-0.01	0.862	-1.26	-115	-1	2.60	-2.99	298	-7.74	12.40	1.89	150	6.64
1025			7.06	—	0.853	-1.04	-116	-1	2.43	-6.54	274	-8.05	12.62	1.77	150	6.64
1030			7.07	0.01	0.857	0.47	-116	—	2.34	-3.70	258	-5.84	12.60	-0.16	150	6.64
1035		✓														
1040			7.07	—	0.852	-0.58	-116	—	2.26	-3.42	252	-2.33	12.72	0.95	150	6.64

COMMENTS: Sample @ 1035 petrol-like odor

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/2022	FIELD PERSONNEL:	TR
WEATHER:	clear / 30s	CERTIFICATION #:	13040

MONITOR WELL #:	TM - 1	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	5.5 - 20.5'
WELL PERMIT #:	2600052623	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 13.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.39 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1125	X		4.99	NA	0.179	NA	376	NA	4.64	NA	46.0	NA	13.48	NA	250	10.62
1130	X		5.52	10.6	0.179	0	381	1.3	4.51	2.8	22.8	50	13.72	1.78	250	10.88
1135	X		5.79	4.8	0.178	0.55	382	0.2	4.02	10.8	18.5	18.8	13.78	0.4	250	10.90
1140	X		5.80	0.17	0.180	1.12	382	0	4.01	0.2	16.1	12.9	13.79	0	250	10.92
1145	X		5.81	0.17	0.180	0	384	0.5	3.88	3.2	15.4	4.3	13.80	0	250	10.93
1150	X		5.80	0.17	0.182	1.11	382	0.5	3.88	0	15.3	0.6	13.80	0	250	10.93
1155	X		5.80	0	0.182	0	382	0	3.85	0.7	15.2	0.6	13.80	0	250	10.93
1200		X	5.81	0.17	0.182	0	383	0.2	3.82	0.7	15.2	0	13.80	0	250	10.93

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/22	FIELD PERSONNEL:	RC
WEATHER:	30° cloudy	CERTIFICATION #:	13040

Horiba U52 M - 819244 P - 641072

MONITOR WELL #:	TM - 2	WELL DEPTH:	21'	SCREENED/OPEN INTERVAL:	6.5 - 21.5'
WELL PERMIT #:	2600052624	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 14.0 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.68 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1245	X		6.56	NA	.388	NA	61	NA	0	NA	432	NA	12.33	NA	250	11.95
1250	X		6.58	.02	.388	2.54	42	19	0	0	405	6.45	12.30	.24	250	12.11
1255	X		6.59	.01	.351	10.01	28	14	0	0	355	13.16	12.28	.16	250	12.42
1300	X		6.52	.07	.35	.29	26	2	0	0	286	21.53	12.26	.16	250	12.48
1305	X		6.53	.01	.349	.29	23	3	0	0	273	4.65	12.26	0	250	12.48
1310	X		6.51	.02	.349	0	23	0	0	0	272	.37	12.26	0	250	12.48
1315	X		6.50	.01	.349	0	22	1	0	0	271	.37	12.26	0	250	12.48
1320		X	6.49	.01	.349	0	22	0	0	0	268	1.11	12.26	0	250	12.48

COMMENTS:

Sampled @1320

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/13/2022	FIELD PERSONNEL:	[illegible]
WEATHER:	Clear / 30s	CERTIFICATION #:	13040

MONITOR WELL #:	TM - 3	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	5.5 - 20.5'
WELL PERMIT #:	2600052625	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 14.0 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 10.89 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1350	X		6.11	NA	0.333	NA	113	NA	0	NA	472	NA	12.14	NA	250	11.05
1355	X		6.16	0.8	0.342	2.7	120	6.6	0	0	382	19	12.22	0.24	250	11.22
1400	X		6.18	0.3	0.339	0.8	122	1.6	0	0	269	29	12.38	1.3	250	11.32
1405	X		6.16	0.3	0.338	0.29	109	10.6	0	0	252	15	12.68	2.4	250	11.36
1410	X		6.15	0.1	0.336	0.5	108	0.91	0	0	228	8.7	12.67	0	250	11.37
1415	X		6.15	0	0.338	0.5	107	0.92	0	0	205	1.4	12.67	0	250	11.37
1420	X		6.15	0	0.336	0.5	106	0.93	0	0	206	0.4	12.66	0	250	11.37
1425		X	6.14	0.1	0.335	0.2	107	0.94	0	0	202	1.9	12.67	0	250	11.38

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	KY
WEATHER:	Sunny, 38	CERTIFICATION #:	13040

Horizon USA 44546 (p) 33470 (m)

MONITOR WELL #:	TM - 4	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5.5 - 15.5'
WELL PERMIT #:	2600052626	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 11.70 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.70 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1010			7.71	NA	0.178	NA	87	NA	0.58	NA	0.0	NA	10.20	NA	100	9.91
1015			6.57	-1.14	0.145	-18.54	125	-38	0.0	—	0.0	—	10.10	-0.98	100	9.93
1020			6.50	-0.07	0.144	-0.69	134	+9	0.0	—	0.0	—	10.19	0.89	100	9.93
1025			6.47	-0.03	0.141	-2.08	141	7	0.0	—	0.0	—	10.18	-0.10	100	9.93
1030			6.47	—	0.139	-1.42	144	3	0.0	—	0.0	—	10.21	0.30	100	9.93
1035		✓														
1040			6.46	-0.01	0.140	0.72	146	2	0.0	—	0.0	—	10.19	-0.20	100	9.93

COMMENTS: Sample @ 1035

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/6/22
WEATHER: Rain, 45

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KY
CERTIFICATION #: 13040

Horiba U52 44546 (f) 33470 (m)

MONITOR WELL #: TM - 5
WELL PERMIT #: 2600052627
WELL DEPTH: 20'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 5.5 - 20.5'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 10.21 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.21 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1235	✓		7.06	NA	0.996	NA	13	NA	7.41	NA	20.0	NA	15.90	NA	200	8.44
1240	✓		7.05	-0.01	0.995	-0.1	20	7	6.68	-9.85	11.9	-40.5	16.00	0.63	200	8.46
1245	✓		7.04	-0.01	1.00	0.50	27	7	6.08	-8.98	11.7	-1.68	16.17	1.05	200	8.46
1250	✓		7.04	—	1.01	1.00	30	3	5.81	-4.44	10.6	-9.40	16.29	0.74	200	8.46
1255	✓		7.05	0.01	1.02	0.99	34	4	5.33	-8.26	10.3	-2.83	16.41	0.74	200	8.47
1300		✓														
1305			7.05	—	1.02	—	35	1	5.25	-1.50	10.2	-0.97	16.46	0.31	200	8.49

COMMENTS: Sample @ 1300

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	KW
WEATHER:	Light Rain, 55	CERTIFICATION #:	13040

Horiba U52 44546(p) 33470(m)

MONITOR WELL #:	TM - 6R	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	5 - 20'
WELL PERMIT #:	E201207155	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 7.9

PUMP INTAKE DEPTH: 7.36 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.36 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1345	✓		7.07	NA	0.384	NA	-72	NA	0.0	NA	14.7	NA	14.81	NA	200	5.51
1350	✓		6.62	-0.45	0.378	-1.56	-52	-20	0.0	—	12.6	-14.29	14.84	0.20	200	5.56
1355	✓		6.51	-0.11	0.377	-0.27	-50	-2	0.0	—	11.6	-7.94	14.87	0.20	200	5.58
1400	✓		6.44	-0.07	0.378	0.27	-48	-2	0.0	—	12.0	3.45	14.89	0.13	200	5.59
1405	✓		6.43	-0.01	0.379	0.27	-47	-1	0.0	—	11.9	-0.83	14.90	0.07	200	5.59
1410	✓		6.41	-0.02	0.380	0.26	-47	—	0.0	—	11.3	-5.04	14.94	0.27	200	5.60
1415		✓														
1420			6.41	—	0.381	0.26	-47	—	0.0	—	11.4	0.89	14.96	0.13	200	5.60

COMMENTS:
Sample @ 1415

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/9/22
WEATHER: 45° sunny
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KY
CERTIFICATION #: 13040

Horiba U52 M-33470 P-44546

MONITOR WELL #: TM-7
WELL PERMIT #: 2600052629
WELL DEPTH: 21.5'
WELL DIAMETER: 4" inches
SCREENED/OPEN INTERVAL: 6.5 - 21.5'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP:

PUMP INTAKE DEPTH: 8.93 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.93 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1310	X		7.08	NA	.505	NA	-75	NA	0	NA	33.2	NA	15.19	NA	200	7.25
1315	X		7.0	.08	.508	.59	-75	0	0	0	34.1	2.71	15.0	1.25	200	7.27
1320	X		6.93	.07	.519	2.17	-75	0	0	0	31.0	9.09	14.90	.67	200	7.28
1325	X		6.90	.03	.526	1.35	-74	1	0	0	21.4	30.97	14.79	.74	200	7.28
1330	X		6.87	.03	.535	1.71	-75	1	0	0	19.8	7.48	14.70	.61	200	7.28
1335	X		6.86	.01	.541	1.12	-75	0	0	0	21.7	9.60	14.72	.14	200	7.28
1340	X		6.85	.01	.549	1.48	-75	0	0	0	22.2	2.30	14.71	.07	200	7.28
1345		X														
1350	X		6.85	0	.554	.91	-75	0	0	0	20.3	8.56	14.68	.2	200	7.30

COMMENTS:
Sampled @1345

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

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LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/14/22	FIELD PERSONNEL:	K.V
WEATHER:	Sunny, 30	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 33470		

MONITOR WELL #:	TM-8	WELL DEPTH:	20'	SCREENED/OPEN INTERVAL:	10-20'
WELL PERMIT #:	E202201986	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 12 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.01 ft below TOC
	BENEATH INNER CAP:	3.3	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1120			6.89	NA	0.993	NA	137	NA	0.0	NA	150	NA	15.44	NA	150	6.04
1125			6.90	0.01	0.988	-0.50	135	-2	0.0	—	116	-22.67	15.65	1.36	150	6.05
1130			6.89	-0.01	0.982	-0.61	133	-2	0.0	—	87.5	-24.57	15.55	-0.64	150	6.05
1135			6.89	—	0.972	-1.02	129	-4	0.0	—	65.5	-25.14	15.72	1.09	150	6.05
1140			6.89	—	0.972	—	125	-4	0.0	—	50.5	-22.90	15.20	-3.31	150	6.05
1145			6.89	—	0.969	-0.31	124	-1	0.0	—	47.4	-6.14	15.35	0.99	150	6.06
1150			6.89		0.968	-0.10	123	-1	0.0	—	46.5	-1.90	15.50	0.98	150	6.06
1155			6.89	—	0.967	-0.10	122	-1	0.0	—	46.4	-0.22	15.54	0.26	150	6.06
1200		✓														
1205			6.88	-0.01	0.967	—	121	-1	0.0	—	45.2	-2.59	15.51	-0.19	150	6.06

COMMENTS: Sample @ 1200

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	~~42° Partly Cloudy~~ 12/1/22	FIELD PERSONNEL:	SH, RC
WEATHER:	42° Partly Cloudy	CERTIFICATION #:	13040

Horiba U52 M: 29744 P: 213160

MONITOR WELL #:	TR - 1R	WELL DEPTH:	18'	SCREENED/OPEN INTERVAL:	4 - 18'
WELL PERMIT #:	E201305263	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 10 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.90 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	CHANGE*	REDOX POTENTIAL ±10 (mv) READING	CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	CHANGE*	TEMPERATURE (degrees C) (SM 2550) ±3% READING	CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)	
2:05	✓		7.58	NA	0.415	NA	162	NA	8.56	NA	38.3	NA	18.33	NA	320	7.25	
1410	✓		7.65	0.07	.415	0	157	5	7.78	9%	25.0	34%	18.03	1.6%	220	7.28	
1415	✓		7.65	0.00	.415	—	155	2	7.09	8%	18.5	26%	18.23	1%		7.29	
1420	✓		7.66	.01	.415	—	155	—	6.44	9.17	16.9	8.65	18.3	.38		7.29	✓
1425	✓		7.66	—	.415	—	156	1	5.83	9%	15.5	8%	18.30	—	200	7.29	✓
1430		✓	7.66	—	.416	<1%	156	—	5.55	4%	15.7	1.2%	18.43	.7%		7.29	✓
Post 1416			7.66		.424		142		1.27		14.6		17.89			7.32	

COMMENTS: Sampled @ 14:30 pm

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/20/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KY
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546 (p) 33470 (m)

MONITOR WELL #: TR-2R
WELL PERMIT #:
WELL DEPTH:
WELL DIAMETER: 4 Inches
SCREENED/OPEN INTERVAL: 1-20

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.4
PUMP INTAKE DEPTH: 3 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 0.3 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1140			10.38	NA	0.496	NA	-35	NA	0.0	NA	40.4	NA	10.16	NA	150	0.75
1145			10.43	0.05	0.497	+.20	-55	-20	0.0	—	44.3	9.65	10.07	-0.09	150	0.75
1150			10.45	0.02	0.500	0.60	-70	-15	0.0	—	51.2	13.48	10.06	-0.10	150	0.75
1155			10.48	—	0.501	0.20	-72	-2	0.0	—	50.9	-0.59	10.04	-0.20	150	0.75
1200			10.45	—	0.501	—	-78	-6	0.0	—	51.0	0.20	10.02	-0.20	150	0.75
1205			10.47	0.02	0.502	0.20	-84	-6	0.0	—	51.2	0.39	9.97	-0.50	150	0.75
1210		✓														
1215			10.48	0.01	0.502	—	-88	-4	0.0	—	51.3	0.20	9.96	-0.10	150	0.75

COMMENTS: Sample @ 1210 Sheen

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	JI
WEATHER:	44° Sunny	CERTIFICATION #:	13040
	Horiba U52 M-48881		P-48887

MONITOR WELL #:	TR - 3RR	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	1 - 15'
WELL PERMIT #:	E201305493	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 5.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.22 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1325			6.89	NA	.306	NA	137	NA	7.88	NA	16.0	NA	14.31	NA	150	3.54
1330			6.68	.21	.301	1.65	169	32	6.81	14.57	17.1	6.65	14.71	2.76	150	3.60
1335			6.66	.02	.3	.33	177	8	6.61	2.98	16.9	1.18	14.71	0	150	3.65
1340			6.66	0	.3	0	185	8	6.4	3.23	16.0	5.47	14.71	0	150	3.85
1345			6.66	0	.297	1	193	8	6.25	1.73	15.8	1.26	14.68	.2	150	3.91
1350																
1400			6.67	.01	.297	0	205	12	0	NA	8.0	65.5	14.51	.82	250	4.22

COMMENTS:

Sampled @ 1350

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	SH
WEATHER:	41°F Sunny ~~Horiba U5~~ Horiba U52 P: 41072 M: R19224	CERTIFICATION #:	13040

MONITOR WELL #:	TR-3D	WELL DEPTH:	25'	SCREENED/OPEN INTERVAL:	15-25'
WELL PERMIT #:	E201812225	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 5.5

PUMP INTAKE DEPTH: 17 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.03 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	CHANGE*	REDOX POTENTIAL ±10 (mv) READING	CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	CHANGE*	TEMPERATURE (degrees C) (SM 2550) ±3% READING	CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
12:15	X		6.83	NA	2.03	NA	77	NA	2.17	NA	800	NA	15.42	NA	450	5.66
12:20	X		6.78	.05	2.02	.493	59	18	.02	99.08	715	10.62	15.34	.52		5.75
12:25	X		6.73	.05	1.95	3.465	61	32	0	/	471	41.12	14.68	4.49		5.95
12:30	X		6.70	.03	1.94	.513	69	8	0	/	279	33.73	14.51	1.16	250	5.97
12:35	X		6.68	.02	1.94	/	78	9	0	/	177	36.56	14.47	.276	~~250~~	5.79
12:40	X		6.65	.03	1.95	.515	97	19	0	/	105	40.68	14.55	.553		5.80
12:45	X		6.64	.01	1.94	.513	108	11	0	/	71.2	32.19	14.14	2.82	400	5.62
12:50	X		6.61	.03	1.92	1.031	96	12	0	/	64.5	9.41	15.75	11.38		6.70
12:55	X		6.64	.03	1.92	/	90	6	0	/	60.2	6.67	15.47	1.78		6.88
13:00	X		6.65	.01	1.93	.521	88	2	0	/	54.2	9.97	15.59	.78	300	7.10
13:05		X	6.65	/	1.93	/	88	0	0	/	48.8	9.96	15.74	.962		7.30
COMMENTS: 1320			6.60	.05	1.92	.521	82	6	0	0	51.3		15.24		700	7.55

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Sampled @ 13:05

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 12/2/22
WEATHER: 41° Sunny
METER & PROBE SERIAL NUMBERS: Horiba U52 M:

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040

MONITOR WELL #: TR-3D
WELL PERMIT #: E20181 2225
WELL DEPTH: 25'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 15-25'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 5.5

PUMP INTAKE DEPTH: 17 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 3.03 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:05		X	6.65	NA	1.93	NA	88	NA	0	NA	48.8	NA	15.74	NA		7.30
13:20			6.60		1.92		82	6	0	/	51.3		15.24		300	7.55

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/7/22
FIELD PERSONNEL: SH
WEATHER: 44°F Sunny
CERTIFICATION #: 13040
~~Hon~~ Horiba U52 M: R19224 P: 41072

MONITOR WELL #: TR-3DD
WELL DEPTH: 60'
SCREENED/OPEN INTERVAL: 50-60'
WELL PERMIT #: E201812226
WELL DIAMETER: 2" Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: ~~51~~ 52 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: ~~2.9~~ 3.9 ft below TOC

TIME	PURGING	SAMPLING	pH ±.1 (pH units) (SM 4500H+B) READING	CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	CHANGE*	REDOX POTENTIAL ±10 (mv) READING	CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	CHANGE*	TURBIDITY ±10% (NTU) (EPA 180.1) READING	CHANGE*	TEMPERATURE (degrees C) (SM 2550) ±3% READING	CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
13:55	X		8.53	NA	.744	NA	-93	NA	9.52	NA	30.9	NA	14.22	NA	350	5.61
14:00	X		7.14	1.39	.788	5.914	44	-137	8.00	15.97	19.9	35.6	14.37	1.05		5.93
14:05	X		6.80	.34	.820	4.061	77	-33	6.71	16.12	12.0	39.69	14.42	.35		6.13
14:10	X		6.68	.12	.846	3.171	92	-15	5.58	16.84	17.1	42.5	14.57	1.04	375	6.06
14:15	X		6.66	.02	.858	1.418	98	6	4.61	17.384	15.5	9.36	14.54	.206		6.07
14:20	X		6.67	.01	.860	.233	99	1	4.15	9.98	14.0	9.68	14.6	.413		6.08
14:25	X		6.68	.01	.861	.116	98	1	3.75	9.64	12.6	10*	14.61	.07	375	6.09
14:30		X	6.71	~~0~~ .45	.863	.232	98	/	3.40	9.33	11.4	9.52	14.6	.07		6.06
14:45			6.81	1.49	.815	5.562	86	12	0	/	26.8	135.09	14.48	.82		6.49

COMMENTS: Sampled @ 14:30

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/20/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KL
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: TR-4R
WELL PERMIT #:
WELL DEPTH:
WELL DIAMETER: 4 Inches
SCREENED/OPEN INTERVAL: 0-15

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 1.0
PUMP INTAKE DEPTH: 5.64 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 3.64 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1230			7.37	NA	1.45	NA	-111	NA	0.0	NA	37.1	NA	11.90	NA	200	3.89
1235			7.31	-0.06	1.43	-1.38	-107	4	0.0	—	36.0	-2.97	12.40	4.20	200	3.91
1240			7.27	-0.04	1.41	-1.40	-104	3	0.0	—	34.3	-4.72	12.45	0.40	200	3.91
1245			7.26	-0.01	1.40	-0.71	-103	1	0.0	—	31.8	-7.29	12.45	—	200	3.91
1250			7.24	-0.02	1.39	-0.71	-102	1	0.0	—	32.6	2.52	12.46	0.08	200	3.91
1255		✓														
1300			7.23	-0.01	1.39	—	-102	—	0.0	—	31.3	-3.99	12.50	0.32	200	3.91

COMMENTS: Sampled @ 1255

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Port Reading
DATE: 12/20/22
WEATHER: Sunny, 30
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: KV
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: TR-4D
WELL PERMIT #:
WELL DEPTH: 24'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 25-30

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.70 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1320			7.43	NA	0.397	NA	-18	NA	0.0	NA	45.8	NA	12.95	NA	200	5.75
1325			7.40	-0.03	0.394	-0.76	-15	3	0.0	—	58.8	28.38	12.94	-0.08	200	5.76
1330			7.38	-0.02	0.394	—	-23	-8	0.0	—	53.6	-8.84	12.90	-0.31	200	5.76
1335			7.36	-0.02	0.394	—	-22	1	0.0	—	48.8	-8.96	12.81	-0.70	200	5.76
1340			7.36	—	0.394	—	-22	—	0.0	—	47.2	-3.28	12.77	-0.31	200	5.76
1345		✓														
1350			7.36	—	0.394	—	-23	-1	0.0	—	45.8	-2.97	12.71	-0.47	200	5.76

COMMENTS:
Sample @ 1345

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	RC
WEATHER:	45° Sunny	CERTIFICATION #:	13040

Horiba U52 M-33470 P-44546

MONITOR WELL #:	TR - 4DD	WELL DEPTH:	56'	SCREENED/OPEN INTERVAL:	51 - 56'
WELL PERMIT #:	E201305267	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 53.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.1 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1200	X		6.97	NA	.537	NA	-67	NA	11.02	NA	584	NA	15.37	NA	400	6.85
1205	X		7.07	.1	.517	3.8	-70	3	9.88	10.9	387	40.58	15.47	.65	400	6.78
1210	X		6.95	.12	.547	5.64	-55	15	8.54	14.55	128	100.58	15.66	1.22	400	6.77
1215	X		6.75	.2	.621	12.67	-31	24	7.10	18.41	168	27.03	15.69	.17	400	6.76
1220	X		6.69	.06	.761	20.26	-22	9	6.07	15.64	216	25	15.79	.64	400	6.76
1225	X		6.66	.03	.789	3.61	-15	7	5.16	16.21	222	2.74	15.70	.57	400	6.73
1230	X		6.64	.02	.819	3.73	-10	5	4.39	16.13	229	3.1	15.74	.25	400	6.71
1235	X		6.62	.02	.841	2.65	-8	2	3.99	9.55	149	42.33	15.73	.06	380	6.73
1240	X		6.60	.02	.866	2.93	-5	3	3.41	15.68	100	39.36	15.62	.7	380	6.71
1245	X		6.60	0	.884	2.06	-3	2	2.97	13.79	49.5	67.56	15.53	.58	380	6.69
1250	X		6.59	.01	.899	1.68	0	3	2.36	22.89	31.6	44.14	15.40	.84	380	6.68

COMMENTS:

Sampled @ 1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET ___ OF ___

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	RC
WEATHER:	45° Sunny	CERTIFICATION #:	13040

Horiba U52 M-33470 P-44546

MONITOR WELL #:	TR - 4DD	WELL DEPTH:	56'	SCREENED/OPEN INTERVAL:	51 - 56'
WELL PERMIT #:	E201305267	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm): BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 53.5 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.1 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
				NA		NA		NA		NA		NA		NA		
1300	X		.658	.01	.911	1.33	1	1	2.11	11.19	23.0	31.5	15.42	.13	380	6.68
1305	X		.658	0	.916	.55	1	0	2.0	5.35	18.6	21.15	15.32	.65	380	6.68
1310	X		.658	0	.921	.54	2	1	1.89	5.66	15.1	20.77	15.31	.07	380	6.68
1315	X		.658	0	.922	.11	2	0	1.72	9.42	14.9	1.33	15.41	.65	380	6.68
1320	X		.658	0	.924	.22	3	1	1.68	2.35	15.3	2.65	15.36	.72	380	6.68
1325		X	.658	0	.926	.22	3	0	1.62	3.64	14.8	3.32	15.23	.46	380	6.68
Post	X		.659	.01	.891	3.85	-11	14	4.1	86.71	10.6	33.07	15.51	1.82	380	6.66

COMMENTS:

Sampled @ 1325

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess - Port Reading
DATE: 12/2/22
WEATHER: 39° Sunny
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: JP
CERTIFICATION #: 13040

Horiba U52 P-48987 M-48986

MONITOR WELL #: TR - 5
WELL PERMIT #: E201013006
WELL DEPTH: 12'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 2 - 12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.2
BENEATH INNER CAP: 135.5

PUMP INTAKE DEPTH: 7 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.90 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1050			6.75	NA	.741	NA	-13	NA	1.11	NA	2.8	NA	15.13	NA	150	4.94
1055			6.78	.03	.751	1.34	-20	7	.12	160.9	0	NA	15.53	2.61	150	5.14
1100			6.81	.03	.76	1.19	-23	3	.11	8.7	0	0	15.67	.9	150	5.36
1105			6.83	.02	.768	1.05	-26	3	.12	8.7	0	0	16.42	2.83	150	5.42
1110			6.84	.01	.775	.91	-28	2	.12	0	0	0	16.26	.86	150	5.49
1115		X														
1125			6.85	.01	.769	.78	-38	10	.21	54.55	1.7	NA	16.13	.8	150	5.58

COMMENTS:
Sampled @ 1115

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess-Port Reading
DATE: 12/2/22
WEATHER: 41° Sunny

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SP
CERTIFICATION #: 13040

Horiba U52 P-48987 M-48986

MONITOR WELL #: TR-5D
WELL PERMIT #: E201812227
WELL DEPTH: 25'
WELL DIAMETER: 2" Inches
SCREENED/OPEN INTERVAL: 15-25'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.4

PUMP INTAKE DEPTH: 17 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.76 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1145	X		6.88	NA	.958	NA	91	NA	3.44	NA	21.2	NA	16.38	NA	150	4.83
1150	X		6.8	.08	.981	2.37	70	21	0	NA	30.3	35.34	17.59	7.12	150	4.84
1155	X		6.83	.03	.985	.41	62	8	0	0	29.4	3.02	17.37	1.26	150	4.84
1200	X		6.81	.02	.981	.41	60	2	0	0	30.1	2.35	17.24	.75	150	4.85
1205	X		6.8	.01	.984	.31	60	0	0	0	28.8	4.07	17.15	.52	150	4.86
1210		X														
1220			6.77	.03	.978	.61	71	11	.15	NA	17.7	48.07	17.05	.58	200	4.95

COMMENTS:

Sampled @ 1210

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess-Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	JY
WEATHER:	43° Sunny	CERTIFICATION #:	13040

Florida 082 P-48987 M-48986

MONITOR WELL #:	TR-5DD	WELL DEPTH:	60'	SCREENED/OPEN INTERVAL:	50-60'
WELL PERMIT #:	E201812228	WELL DIAMETER:	2" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 52 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.48 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1235	X		7.57	NA	.512	NA	-48	NA	2.18	NA	1.8	NA	16.2	NA	100	5.49
1240	X		7.81	.24	.512	0	-45	3	.81	91.64	0	NA	16.36	.98	100	5.49
1245	X		7.89	.08	.512	0	-52	7	.79	2.5	0	0	16.47	.67	100	5.51
1250	X		7.97	.08	.511	.2	-60	8	.77	2.56	0	0	16.51	.24	100	5.51
1255	X		8.04	.07	.512	.2	-68	8	.42	6.71	0	0	16.51	0	100	5.51
1300		X														
1305			8.09	.05	.508		-80	22	0	NA	0	0	16.81	0	100	5.53

COMMENTS:

Sampled @ 1300

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 2

SITE: Former Hess - Port Reading
DATE: 12/2/22
WEATHER: 35°F Sunny
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
Horiba U52 M: R19224 P: 41072

MONITOR WELL #: TR - 6
WELL PERMIT #: E201013007
WELL DEPTH: 12'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 2 - 12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 6.58 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.58 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) ±.1 (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) ±3% (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) ±10 READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) ±10% (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
10:10			6.27	NA	.121	NA	317	NA	1.11	NA	52.0	NA	14.03	NA	300	4.88
10:15			6.46	.19	.120	.826	312	5	.97	12.61	40.0	23.07	13.98	.36		5.10
10:20			6.50	.04	.120	/	310	2	.84	13.40	26.1	34.75	14.17	1.36		5.25
10:25			6.50	/	.121	.833	302	8	.72	14.29	14.1	45.98	14.38	1.48	300	5.43
10:30			6.49	.01	.121	/	287	15	.61	15.28	1.2	91.49	14.50	.834		5.57
10:35			6.48	.01	.122	.826	270	17	.50	18.03	0	/	14.56	.414		5.7
10:40			6.46	.02	.123	.82	249	21	.39	22.0	0	/	14.58	.137	300	5.81
10:45			6.44	.02	.124	.813	229	20	.45	15.38	0	/	14.64	.42		5.91
10:50			6.44	0	.126	1.613	213	16	.24	46.67	0	/	14.66	.137		5.95
10:55			6.43	.01	.129	2.381	193	20	.14	71.43	0	/	14.71	.341	250	5.97
11:00			6.44	.01	.132	2.326	~~183~~ 145	~~12~~ 48	.05		0	/	14.93			6.18

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: Port Reading
DATE: 12/2/22
WEATHER: 35°F Sunny
CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SH
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 M: R19224 P: 41072

MONITOR WELL #: TR-6
WELL PERMIT #: E201013007
WELL DEPTH: 12'
WELL DIAMETER: 4" Inches
SCREENED/OPEN INTERVAL: 2-12'

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 6.58 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.58 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:00			6.44	NA	.132	NA	145	NA	.05	NA	0	NA	14.93	NA		6.18
11:05			6.45	.01	.135	2.273	121	24	0	/	0	/	14.98	.335		6.29
11:10			6.46	.01	.139	2.963	111	10	0	/	0	/	14.97	.067	250	6.36
11:15			6.49	.03	.143	2.878	101	10	0	/	0	/	14.96	.067		6.45
11:20		X	6.50	.01	.147	2.797	91	10	0	/	0	/	14.96	/		6.51
11:30			6.61		.196		68		0	/	1.8		15.03			6.76

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess - Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/2/22	FIELD PERSONNEL:	JP
WEATHER:	380 Sunny	CERTIFICATION #:	13040

Horiba 652 P-48983 M-48986

MONITOR WELL #:	TR - 6D	WELL DEPTH:	30'	SCREENED/OPEN INTERVAL:	25 - 30'
WELL PERMIT #:	E201305265	WELL DIAMETER:	4" Inches		

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 27 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 4.89 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) ±.1 (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY ±3% (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL ±10 (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN ±10% (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) ±10% (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) ±3% (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1005	X		6.51	NA	.32	NA	286	NA	1.98	NA	11.8	NA	13.78	NA	100	4.91
1010	X		6.44	.07	.32	0	279	7	1.88	5.18	12.0	1.68	13.99	1.44	100	4.93
1015	X		6.43	.01	.321	.3	269	10	1.84	2.15	12.1	.82	14.12	.92	100	4.93
1020	X		6.46	.03	.32	.3	260	9	1.8	2.2	11.7	3.36	14.22	.71	100	4.94
1025		X														
1035			6.5	.04	.322	.62	240	20	1.71	5.13	8.8	13.67	14.48	1.81	150	4.98

COMMENTS:

Sampled @ 1025

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/6/22	FIELD PERSONNEL:	KY
WEATHER:	Cloudy, light rain, 45	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	TR-7	WELL DEPTH:	15'	SCREENED/OPEN INTERVAL:	5-15'
WELL PERMIT #:	E202112784	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 7.89 ft below TOC
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 5.89 ft below TOC
	BENEATH INNER CAP:	11.4	

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1115	✓		6.19	NA	0.643	NA	-16	NA	0.0	NA	541	NA	15.32	NA	175	6.14
1120	✓		6.09	-0.10	0.626	-2.64	-15	1	0.0	—	436	-19.41	15.45	0.85	175	6.17
1125	✓		6.01	-0.08	0.591	-5.59	-23	-8	0.0	—	594	36.24	16.01	3.50	200	6.21
1130	✓		6.14	0.13	0.570	-3.55	-30	-7	0.0	—	614	3.37	16.41	2.50	200	6.25
1135	✓		6.14	—	0.551	-3.33	-33	-3	0.0	—	580	-5.54	16.43	0.12	200	6.26
1140	✓		6.14	—	0.540	-2.00	-34	-1	0.0	—	578	-0.35	16.44	0.06	200	6.26
1145	✓		6.14	—	0.528	-2.22	-36	-2	0.0	—	573	-0.87	16.48	0.24	200	6.27
1150	✓		6.14	—	0.522	-1.14	-36	—	0.0	—	569	-0.70	16.51	0.18	200	6.27
1155		✓														
1200			6.13	-0.01	0.515	-1.34	-36	—	0.0	—	552	-2.99	16.57	0.36	200	6.30

COMMENTS: Sampled @ 1155

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/2/22
FIELD PERSONNEL: KT
WEATHER: Sunny, 40
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546 (p) 32470 (m)

MONITOR WELL #: TR-7D
WELL DEPTH: 30'
SCREENED/OPEN INTERVAL: 20-30'
WELL PERMIT #: E202112785
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 1.7

PUMP INTAKE DEPTH: 22 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 7.21 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1245	X		12.73	NA	8.45	NA	-197	NA	0.0	NA	2.3	NA	16.97	NA	125	7.35
1250	X		12.71	-0.02	8.38	-0.83	-204	-7	0.0	—	2.3	—	17.10	0.77	125	7.35
1255	X		12.66	-0.05	8.33	-0.60	-206	-2	0.0	—	46.5	1921.74	17.21	0.64	125	7.35
1300	X		10.52	-2.14	8.53	2.40	-160	46	0.0	—	67.1	44.30	17.20	-0.06	125	7.35
1305	X		9.15	-1.37	9.25	8.44	-157	3	0.0	—	72.9	8.64	17.25	0.29	125	7.35
1310	X		8.93	-0.22	9.55	3.24	-172	-15	0.0	—	75.6	3.70	17.21	-0.23	125	7.35
1315	X		8.85	-0.08	9.68	1.36	-174	-2	0.0	—	70.3	-7.01	17.26	0.29	125	7.35
1320	X		8.81	-0.04	9.71	0.31	-172	2	0.0	—	70.1	-0.28	17.28	0.12	125	7.35
1325	X		8.78	-0.03	9.76	0.52	-172	—	0.0	—	70.2	0.14	17.21	-0.41	125	7.35
1330		✓	8.73	-0.05	9.70	-0.62	-173	-1								
1335			↓	↓	↓	↓	↓	1	0.0	—	70.5	0.43	17.21	—	125	7.35

COMMENTS: Sample @ 1330

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/7/22
FIELD PERSONNEL: KV
WEATHER: Rain, 55
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: TR-8
WELL DEPTH: 17'
SCREENED/OPEN INTERVAL: 7-17'
WELL PERMIT #: E202112787
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 9 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.85 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1135	✓		7.06	NA	2.94	NA	-47	NA	0.0	NA	22.6	NA	16.76	NA	275	3.09
1140	✓		7.10	0.04	2.99	1.70	-53	-6	0.0	—	19.9	-11.95	16.73	-0.18	275	3.14
1145	✓		7.09	-0.01	2.99	—	-56	-3	0.0	—	16.2	-18.59	16.79	0.36	275	3.16
1150	✓		7.08	-0.01	2.99	—	-59	-3	0.0	—	7.6	-53.09	16.86	0.42	275	3.17
1155	✓		7.08	—	3.00	0.33	-64	-5	0.0	—	7.0	-7.90	16.91	0.30	275	3.19
1200	✓		7.08	—	3.00	—	-66	-2	0.0	—	7.4	5.71	16.91	—	275	3.20
1205	✓		7.07	-0.01	3.00	—	-67	-1	0.0	—	7.1	-4.05	16.92	0.06	275	3.21
1210		✓														
1215			7.08	0.01	3.00	—	-69	-2	0.0	—	6.3	-11.27	16.95	0.18	275	3.21

COMMENTS: Sample @ 1210

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	Former Hess Port Reading	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	12/7/22	FIELD PERSONNEL:	KV
WEATHER:	Rain, 55	CERTIFICATION #:	13040
METER & PROBE SERIAL NUMBERS:	Horiba U52 44546 (p) 33470 (m)		

MONITOR WELL #:	TR-8D	WELL DEPTH:	30'	SCREENED/OPEN INTERVAL:	20-30'
WELL PERMIT #:	E202112788	WELL DIAMETER:	2 Inches		

PID/FID READINGS (ppm):	BACKGROUND:	0.0	PUMP INTAKE DEPTH: 22 ft below TOC	
	BENEATH OUTER CAP:	0.0	DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.11 ft below TOC	
	BENEATH INNER CAP:	9.1		

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1040	✓		7.04	NA	3.43	NA	94	NA	0.0	NA	217	NA	16.70	NA	250	2.29
1045	✓		7.03	-0.01	3.43	—	76	-18	0.0	—	90.4	-58.34	16.77	0.42	250	2.29
1050	✓		7.03	—	3.43	—	52	-24	0.0	—	47.5	-47.46	16.99	0.12	250	2.29
1055	✓		7.02	-0.01	3.42	-0.29	38	-14	0.0	—	21.1	-55.58	16.80	0.06	250	2.29
1100	✓		7.02	—	3.43	0.29	36	-2	0.0	—	19.8	-6.16	16.83	0.18	250	2.29
1105	✓		7.02	—	3.42	-0.29	28	-8	0.0	—	18.2	-8.08	16.85	0.12	250	2.29
1110	✓		7.02	—	3.42	—	26	-2	0.0	—	17.6	-3.30	16.85	—	250	2.29
1115		✓														
1120			7.02	—	3.42	—	22	-4	0.0	—	16.4	-6.82	16.87	0.12	250	2.29

COMMENTS: Sample @ 1115

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Former Hess Port Reading
CONSULTING FIRM: EARTH SYSTEMS
DATE: 12/7/22
FIELD PERSONNEL: V.Y
WEATHER: Rain, 55
CERTIFICATION #: 13040
METER & PROBE SERIAL NUMBERS: Horiba U52 44546(p) 33470(m)

MONITOR WELL #: TR-8DD
WELL DEPTH: 55'
SCREENED/OPEN INTERVAL: 43-55
WELL PERMIT #: E202112789
WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 0.0
PUMP INTAKE DEPTH: 47 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.19 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1250	✓		11.80	NA	0.622	NA	-130	NA	0.0	NA	15.7	NA	15.96	NA	200	7.13
1255	✓		11.86	0.06	0.619	-0.48	-150	-20	0.0	—	12.3	-21.66	16.01	0.31	200	7.31
1300	✓		11.87	0.01	0.618	-0.16	-157	-7	0.0	—	12.0	-2.44	15.97	-0.25	200	7.35
1305	✓		11.88	0.01	0.628	1.62	-161	-4	0.0	—	11.2	-6.67	16.10	0.81	200	7.38
1310	✓		11.89	0.01	0.624	-0.64	-167	-6	0.0	—	10.4	-7.14	16.08	-0.12	200	7.41
1315		✓														
1320			11.89	—	0.626		-170	-3	0.0		9.7	-6.73	16.07	-0.06	200	7.45

COMMENTS: Sample @ 1315

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity