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Mr. Kevin Bilash
USEPA Region III
Land, Chemicals & Redevelopment Division 3LD20
1650 Arch Street
Philadelphia, PA 19103

February 28, 2022
File No. 4862.04

Re: Marcus Hook Industrial Complex
Monthly Progress Report – February 2022
Area of Interest 7
Marcus Hook, PA

Dear Mr. Bilash:

This monthly progress report is being submitted on behalf of the Evergreen Resource Management Operations (Evergreen) for AOI 7 at the Marcus Hook Industrial Complex (MHIC) in Marcus Hook, Pennsylvania. On December 9, 2021, a Revised Interim Measures (IM) Workplan was submitted to the USEPA to address arsenic in the subsurface at AOI 7. The USEPA approved the Revised IM Workplan on February 15, 2022. This monthly progress report is being submitted in accordance with the USEPA's request in the October 26, 2021 correspondence concerning the IM Workplan.

Activities completed this reporting period

No activities were completed during this reporting period because the Revised IM Workplan was being reviewed by the USEPA. Activities will commence according to the updated schedule attached to this progress report based upon the February 15, 2022 approval of the Revised IM Workplan by the USEPA.

Activities planned for the next reporting period

The activities planned for the next reporting period (March 2022) include field mobilization and sediment/porewater sampling, as described in the Revised IM Workplan. The proposed locations for the sediment/porewater samples are shown on Figure 32 of the Revised IM Workplan, which is attached to this progress report. Sediment and porewater sampling activities are planned for March 22, 2022 through March 25, 2022.

Deviation from approved activities this reporting period

No activities performed this reporting period.

Deviation from approved schedule

The final schedule of IM Workplan activities was updated based on the February 15, 2022 USEPA approval and the availability of subcontractors to complete the planned activities. The updated schedule for the major milestones is provided below and the detailed schedule is included in Attachment A.

Task	Schedule
PDI Activities	3/2022 – 5/2022
Bench Scale Treatability Testing	4/2022 – 7/2022
Pilot Testing	7/2022 – 10/2022
IM Performance Monitoring	9/2022 – 9/2023

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Colleen Costello, PG
Senior Vice President

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FIGURES
Figure 32 – Proposed Pre-Design Investigation Locations for Sediment and Porewater

ATTACHMENTS
Attachment A – Updated Interim Measures Implementation Schedule

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Last Edited By: ewright

Path: P:\4800s\4862.00\Graphics Files\ArcGIS\Figures\202107 AOI Interim Workplan\ProposedSedLocs.mxd

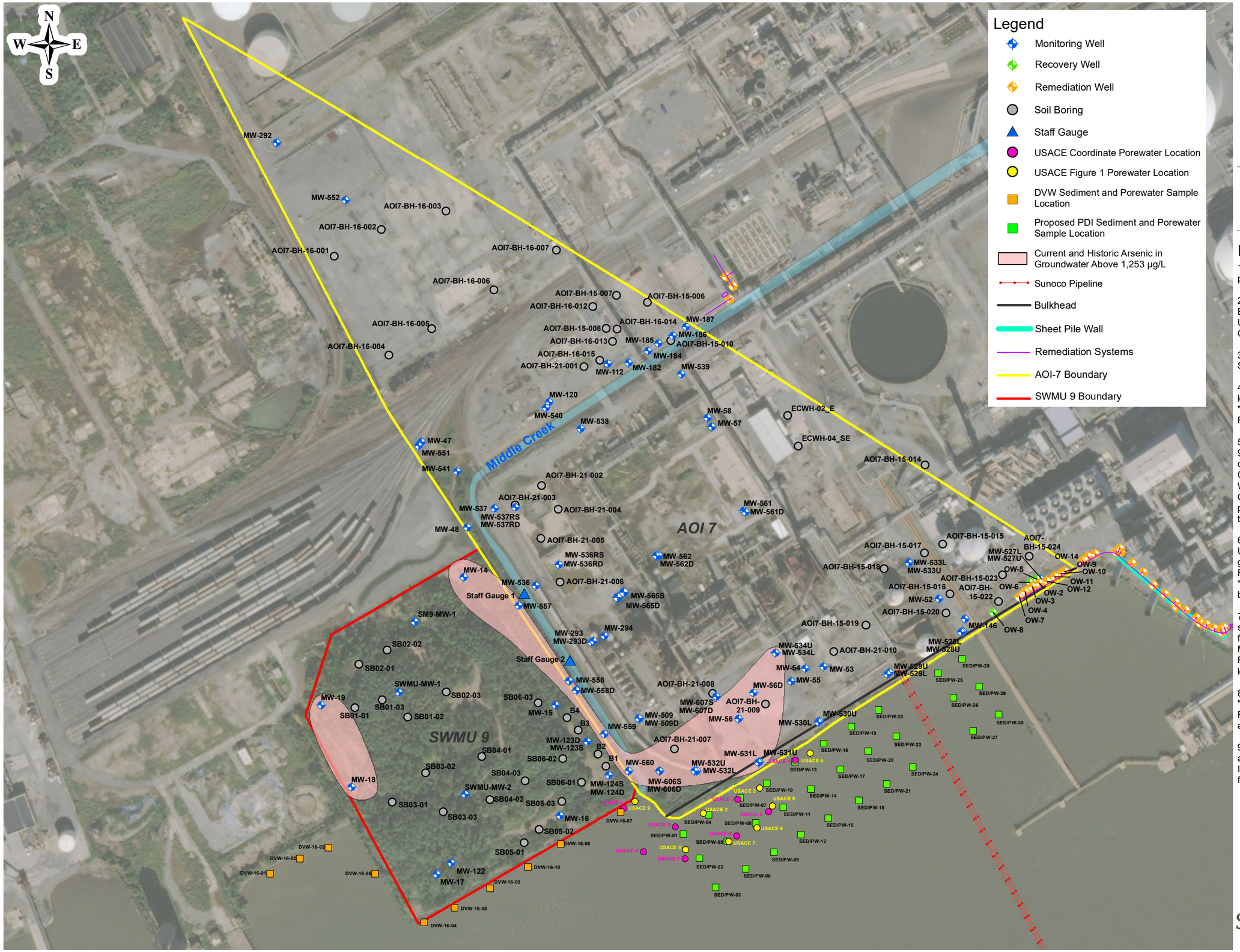

Figure 32

Proposed Pre-Design Investigation Locations for Sediment and Porewater

Evergreen

Marcus Hook, Pennsylvania

Drawn By:	M. Fuerte / H. LaPointe
Designed By:	C. Costello
Reviewed By:	C. Costello
Project No:	4862.00
Date:	December 2021

Notes

1. AOI 7 well locations provided by Stanport data portal, August 2021.

2. Aerial imagery Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

3. SWMU 9 located based on SWMU 9 Data Summary Report, Wood, 2020.

4. Proposed sediment coring locations based on locations from Figure 2-2 of Ramboll Environ "Supplemental Study Area Sediment Investigation Report, Delaware Works Property".

5. The pink circles labeled USACE 2 through USACE 9 porewater sample locations were taken from the coordinates provided in Table 1 under "USACE Coordinates" of the January 2019 "Delaware Valley Works Pore Water Sampling Event" by the U.S. Army Corps of Engineers. USACE 1 coordinates were not provided in this document because a sample was not taken at this location.

6. The yellow circles labeled USACE 2 through USACE 9 porewater sample locations were generated by Georeferencing these locations from Figure 1 in Appendix A of the January 2019 "Delaware Valley Works Pore Water Sampling Event" by the U.S. Army Corps of Engineers.

7. DVW-16-001 through DVW-16-010 are dual sediment and porewater locations that were taken from the coordinates provided in Figure 1 of the March 2017 "Supplemental Pathway Investigation Results Report" by Anchor QEA, LLC. These locations are represented by orange squares.

8. Sunoco offshore pipeline georeferenced from "Supplemental Study Area Sediment Investigation Report, Delaware Works Property". Location is approximate.

9. The bulkhead, remedial systems, sheet pile wall and well locations were provided by Stantec in Figure I-3 "Phillips Island Remediation System Site Plan" from July 2019.

137.5 68.75 0 137.5 275 Feet

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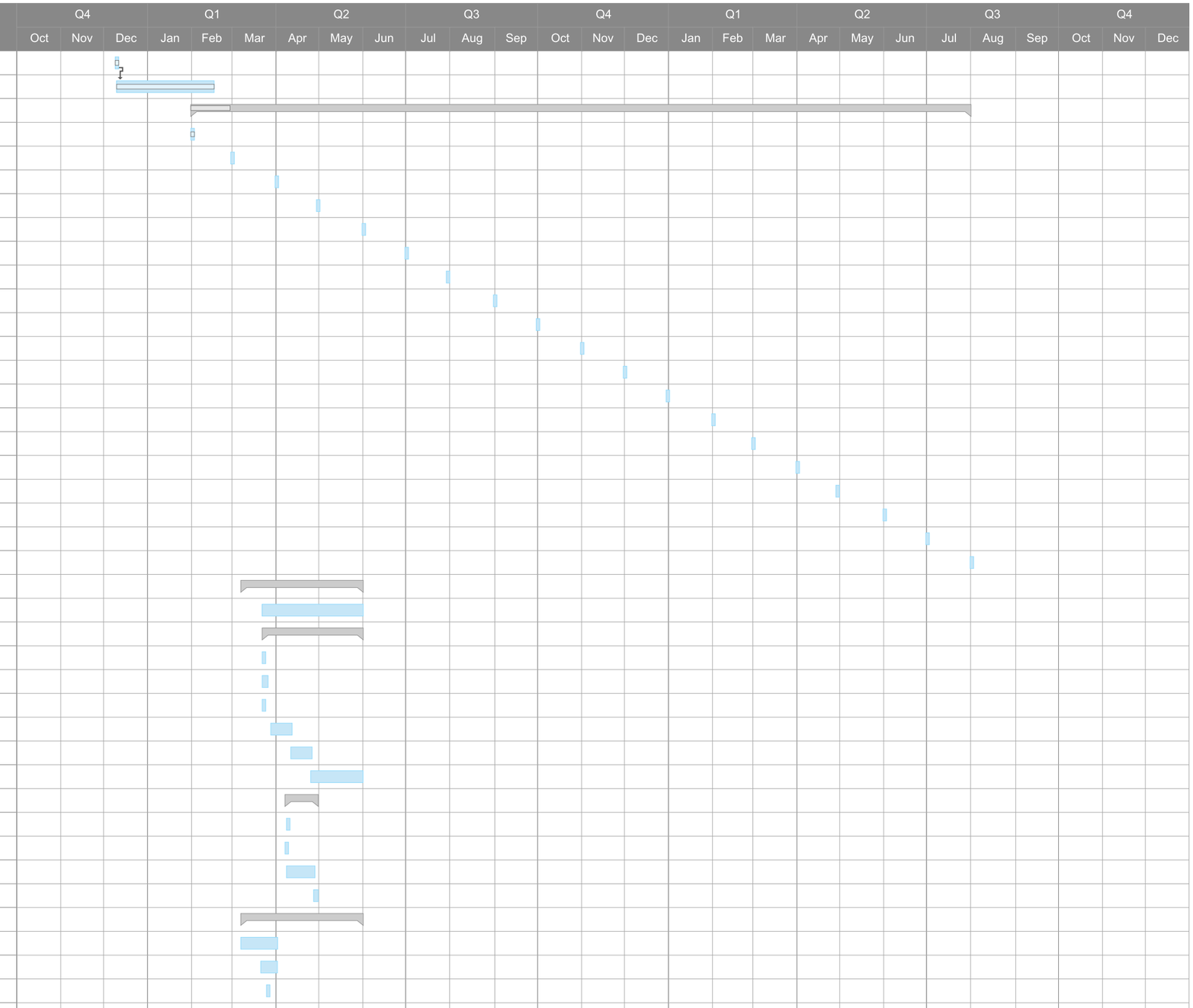
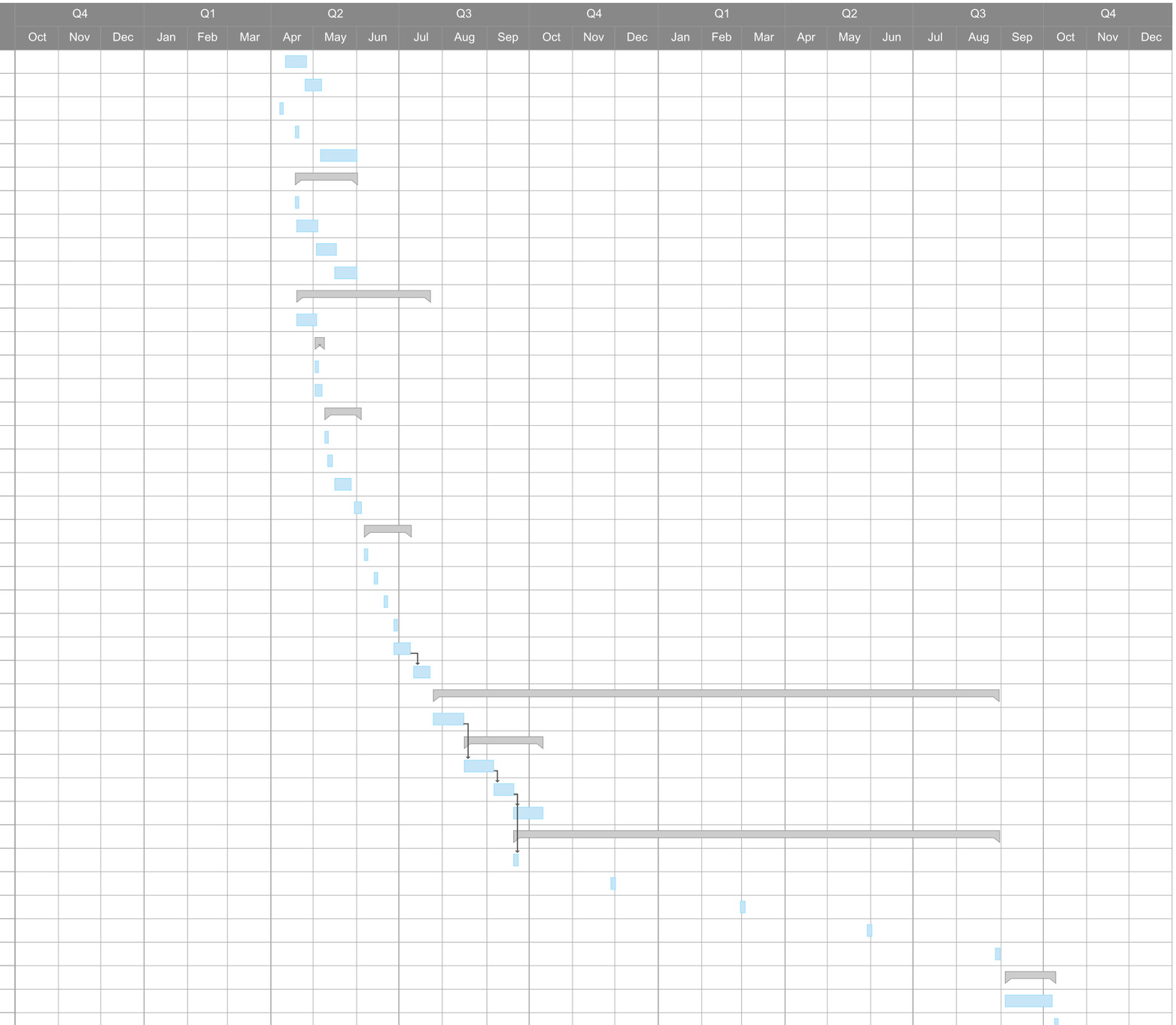
ATTACHMENT A

Updated Interim Measures Implementation Schedule

AOI 7 MHIC

Marcus Hook, Pennsylvania

Task Name	Start	Finish
Submit IM Workplan to EPA	12/09/21	12/09/21
EPA Approval of IM Workplan	12/10/21	02/15/22
Monthly Report to EPA	01/31/22	07/31/23
January 2022 Monthly Report	01/31/22	01/31/22
February 2022 Monthly Report	02/28/22	02/28/22
March 2022 Monthly Report	03/31/22	03/31/22
April 2022 Monthly Report	04/29/22	04/29/22
May 2022 Monthly Report	05/31/22	05/31/22
June 2022 Monthly Report	06/30/22	06/30/22
July 2022 Monthly Report	07/29/22	07/29/22
August 2022 Monthly Report	08/31/22	08/31/22
September 2022 Monthly Report	09/30/22	09/30/22
October 2022 Monthly Report	10/31/22	10/31/22
November 2022 Monthly Report	11/30/22	11/30/22
December 2022 Monthly Report	12/30/22	12/30/22
January 2023 Monthly Report	01/31/23	01/31/23
February 2023 Monthly Report	02/28/23	02/28/23
March 2023 Monthly Report	03/31/23	03/31/23
April 2023 Monthly Report	04/28/23	04/28/23
May 2023 Monthly Report	05/31/23	05/31/23
June 2023 Monthly Report	06/30/23	06/30/23
July 2023 Monthly Report	07/31/23	07/31/23
PDI	03/07/22	05/31/22
PDI Mobilization	03/22/22	05/31/22
Sediment and Porewater Sampling	03/22/22	05/31/22
Field Mobilization	03/22/22	03/22/22
Collection of sediment samples and grab porewater samples	03/22/22	03/25/22
Collection of DGT porewater samples	03/22/22	03/23/22
Laboratory Data Analysis	03/28/22	04/11/22
Data Validation	04/11/22	04/25/22
Data Evaluation	04/25/22	05/31/22
GW Elevation and GW Flow Evaluation	04/07/22	04/29/22
Installation of Transducers/Flow Meter	04/08/22	04/08/22
Install stilling well	04/07/22	04/08/22
Data Collection	04/08/22	04/27/22
Data Evaluation	04/27/22	04/29/22
Monitoring Well Installations, Soil Borings and Soil Sampling	03/07/22	05/31/22
Obtain Access to Honeywell Property	03/07/22	04/01/22
Delaware Well Permits	03/21/22	04/01/22
Utility Clearance	03/25/22	03/25/22
Soil Borings, Well Installations and Soil Sampling	04/04/22	04/08/22



Task Name	Start	Finish
Laboratory Data Analysis	04/11/22	04/25/22
Data Validation	04/25/22	05/06/22
Well Development	04/07/22	04/08/22
Well and Boring Survey	04/18/22	04/18/22
Data Evaluation	05/06/22	05/31/22
Groundwater Sampling	04/18/22	05/31/22
Groundwater Sampling	04/18/22	04/19/22
Laboratory Data Analysis	04/19/22	05/03/22
Data Validation	05/03/22	05/16/22
Data Evaluation	05/16/22	05/31/22
Bench Scale Treatability Test	04/19/22	07/22/22
Baseline Characterization	04/19/22	05/02/22
Titration and Soil Oxidant Demand Test	05/02/22	05/06/22
Titration	05/02/22	05/02/22
Soil Oxidant Demand Test	05/02/22	05/06/22
Reagent Screening	05/09/22	06/03/22
Test Setup	05/09/22	05/10/22
Initial Test	05/11/22	05/13/22
Modification Test (If Needed)	05/16/22	05/27/22
Evaluation	05/30/22	06/03/22
Rebound Test	06/06/22	07/08/22
Reactor Setup	06/06/22	06/06/22
First Sampling and Replenishing	06/13/22	06/13/22
Second Sampling and Replenishing	06/20/22	06/20/22
Final Sampling	06/27/22	06/27/22
Evaluation	06/27/22	07/08/22
Bench-scale Study Report	07/11/22	07/22/22
Pilot Test	07/25/22	08/30/23
Pilot Study Design	07/25/22	08/15/22
Pilot Study Implementation	08/16/22	10/10/22
Permit	08/16/22	09/05/22
Injection Preparation	09/06/22	09/19/22
Injection Activities	09/20/22	10/10/22
Pilot Study Monitoring	09/20/22	08/30/23
Baseline Sampling	09/20/22	09/22/22
First Performance Monitoring	11/28/22	11/30/22
Second Performance Monitoring	02/28/23	03/02/23
Third Performance Monitoring	05/29/23	05/31/23
Fourth Performance Monitoring	08/28/23	08/30/23
CMS	09/04/23	10/09/23
Design of Final Remedy	09/04/23	10/06/23
Submittal of CMS	10/09/23	10/09/23