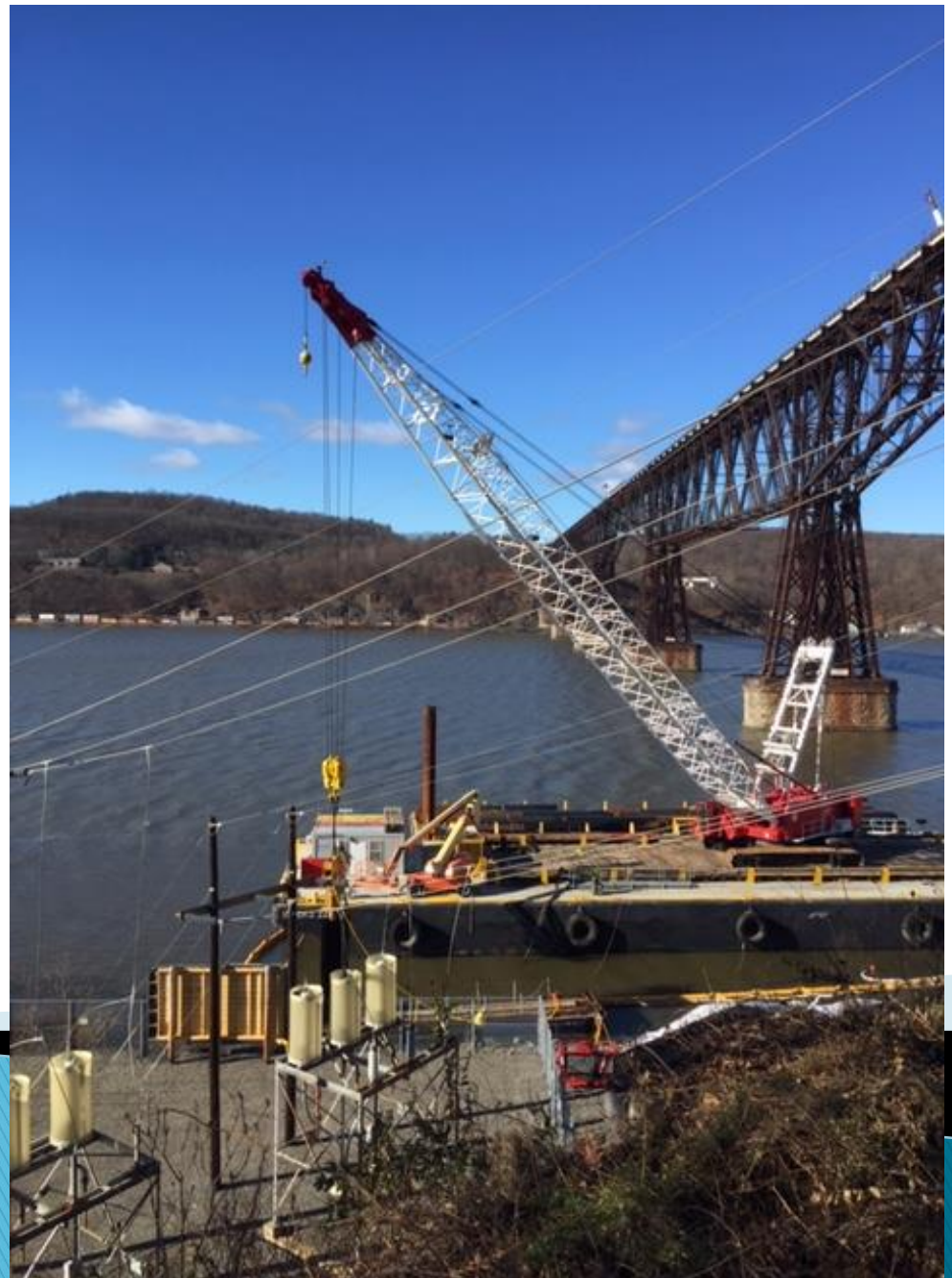



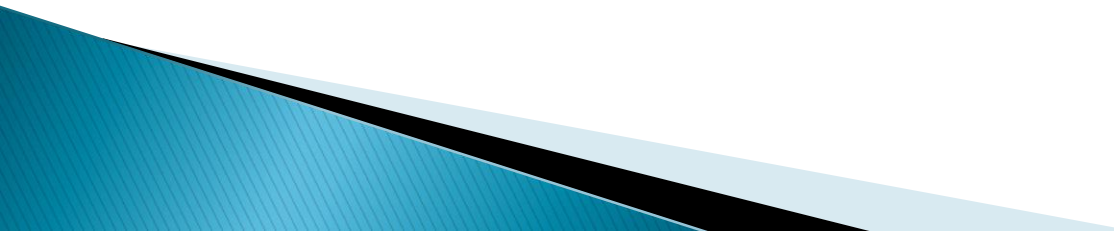
North Water Street Former MGP Site Remediation Project Season 2 Update



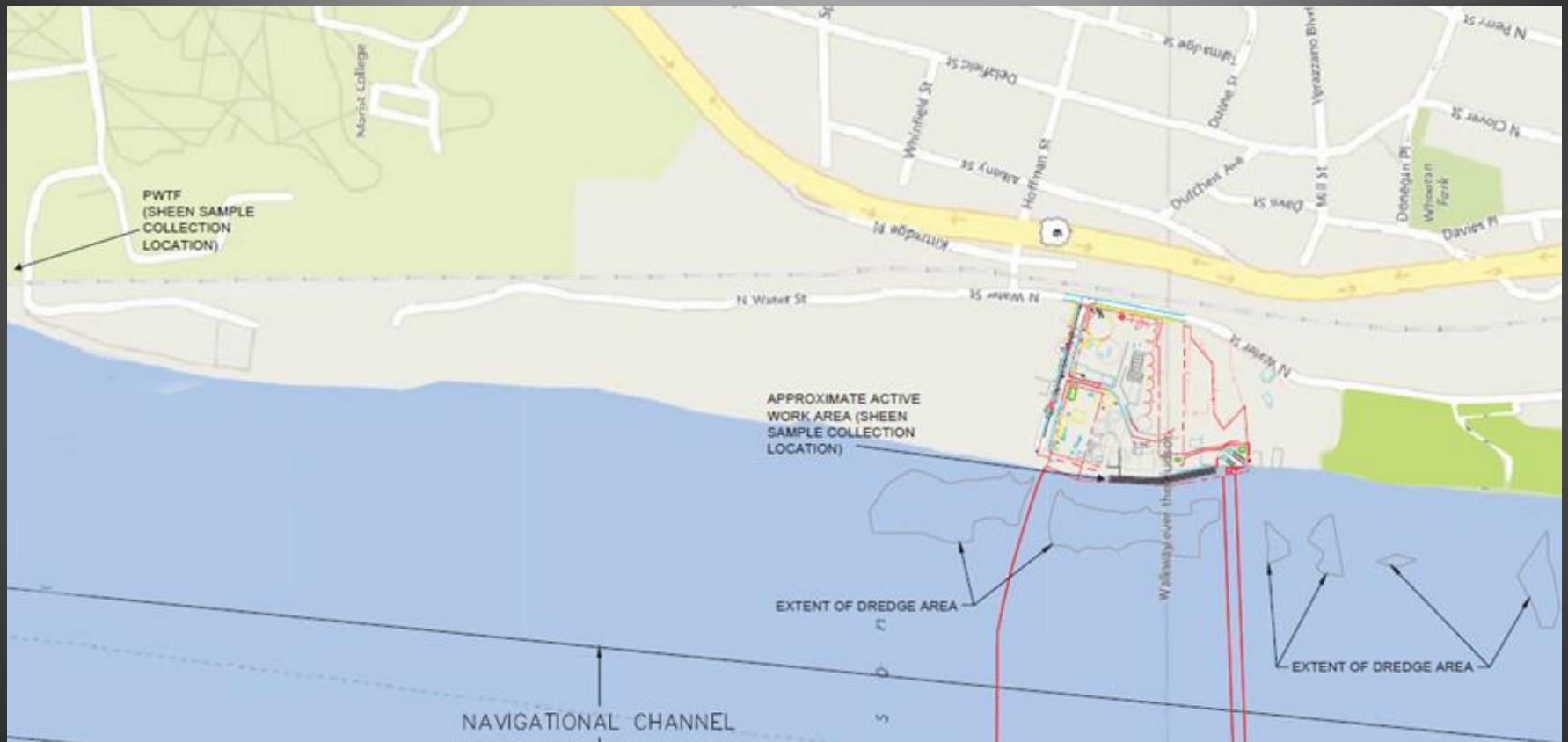
Project Background

- ▶ We are working collaboratively with the NYSDEC & NYSDOH to remediate a former Manufactured Gas Plant;
 - ▶ Summer 2018 –Cleanup started on the land portion;
 - ▶ Nov. 2018 through Jan. 2019, sheeting was installed along shoreline to improve conditions and contain migration.
 - ▶ Dec. 2018 – during sheet alignment pre-clearing operations an unexpected pocket of coal tar was encountered which resulted in a release beyond the near shore control perimeter.
- 

Lessons Learned From Season 1

- ▶ Impacted sediments are very sensitive to any type of disturbance related activity like excavation;
 - ▶ Establishing a control perimeter away from the active work area will offer a better opportunity to mitigate before getting beyond control & reporting as a release.
 - ▶ Clear lines of communication must be established both on-site and off-site.
- 

Remediation Project Site

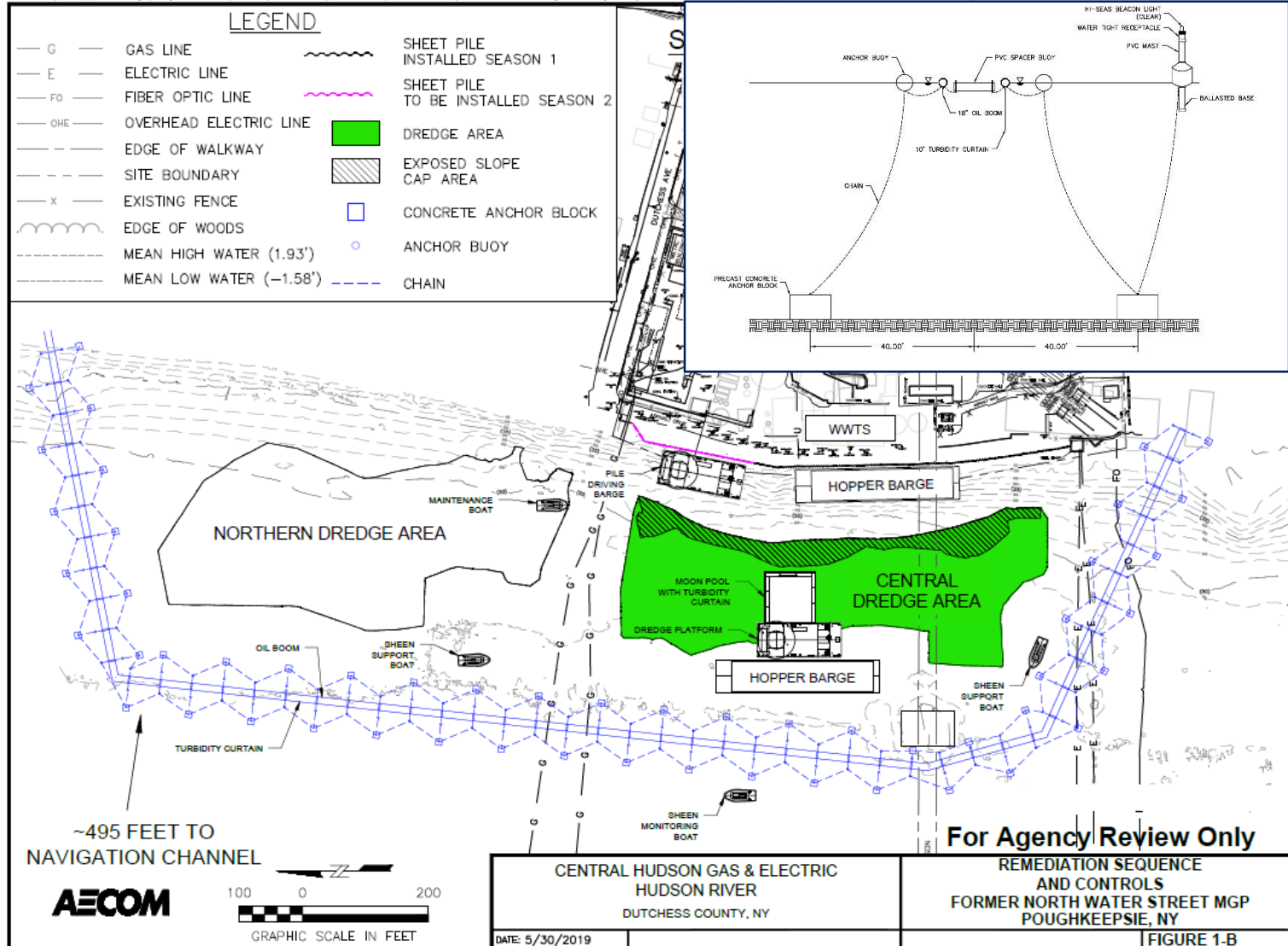


Water Supply Protection Measures

- ▶ Installation of a double perimeter turbidity & sheen control curtain;
- ▶ Deployment of additional sheen patrol/mitigation boats;
- ▶ Water quality monitoring in river and at the PWTF;
- ▶ Dedicated observer on the Walkway Over the Hudson;
- ▶ Fabrication of a fortified “moon pool” to control sediment & sheens from dredging operation;
- ▶ Application of NYSDEC approved bio-remediation agent to assist in controlling & mitigating sheens.
- ▶ Preparation of a Water Supply Protection /Contingency Plan

Perimeter Curtain Deployment

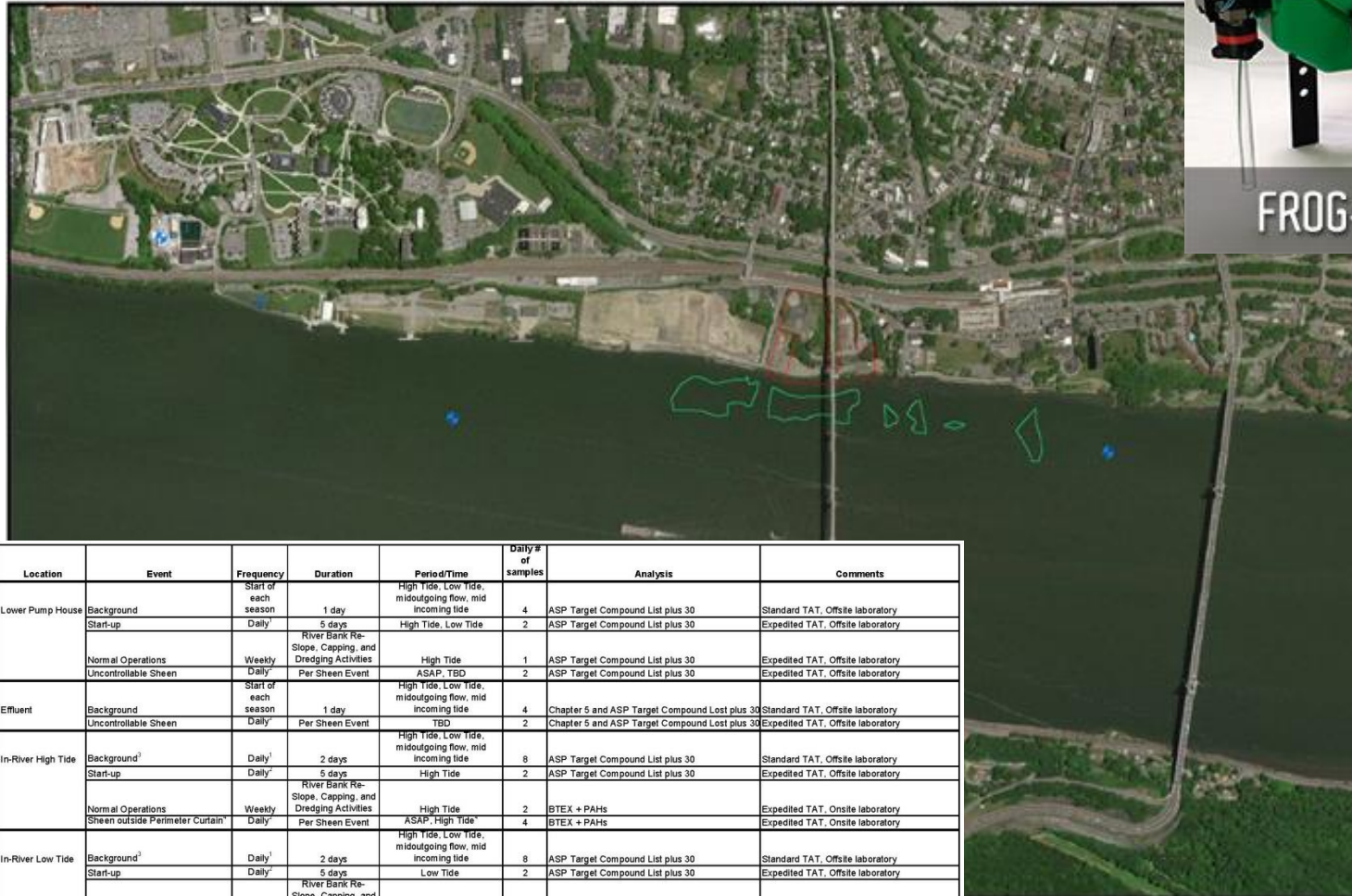
File: P:\Jobs\Rem_Eng\Project Files\CHGE\900 CAD\910 CAD\20 SHEETS\Seasons 1-4 Figures.dwg Layout: Season 2 (8.5X11) User: Erica.Hart Plotted: May 30, 2019 - 1:04pm Xref's:



Sheen Patrol & Mitigation



RIVER MONITORING



Location	Event	Frequency	Duration	Period/Time	Daily # of samples	Analysis	Comments
Lower Pump House	Background	Start of each season	1 day	High Tide, Low Tide, midgoing flow, mid incoming tide	4	ASP Target Compound List plus 30	Standard TAT, Offsite laboratory
	Start-up	Daily	5 days	High Tide, Low Tide	2	ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
	Normal Operations	Weekly	River Bank Re-Slope, Capping, and Dredging Activities	High Tide	1	ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
	Uncontrollable Sheen	Daily	Per Sheen Event	ASAP, TBD	2	ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
Effluent	Background	Start of each season	1 day	High Tide, Low Tide, midgoing flow, mid incoming tide	4	Chapter 5 and ASP Target Compound List plus 30	Standard TAT, Offsite laboratory
	Uncontrollable Sheen	Daily	Per Sheen Event	TBD	2	Chapter 5 and ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
In-River High Tide	Background ¹	Daily	2 days	High Tide, Low Tide, midgoing flow, mid incoming tide	8	ASP Target Compound List plus 30	Standard TAT, Offsite laboratory
	Start-up	Daily	5 days	High Tide	2	ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
	Normal Operations	Weekly	River Bank Re-Slope, Capping, and Dredging Activities	High Tide	2	BTEX + PAHs	Expedited TAT, Onsite laboratory
	Sheen outside Perimeter Curtain ¹	Daily	Per Sheen Event	ASAP, High Tide ¹	4	BTEX + PAHs	Expedited TAT, Onsite laboratory
In-River Low Tide	Background ²	Daily	2 days	High Tide, Low Tide, midgoing flow, mid incoming tide	8	ASP Target Compound List plus 30	Standard TAT, Offsite laboratory
	Start-up	Daily	5 days	Low Tide	2	ASP Target Compound List plus 30	Expedited TAT, Offsite laboratory
	Normal Operations	Weekly	River Bank Re-Slope, Capping, and Dredging Activities	Low Tide	2	BTEX + PAHs	Expedited TAT, Onsite laboratory
	Sheen outside Perimeter Curtain ¹	Daily	Per Sheen Event	ASAP, Low Tide ¹	4	BTEX + PAHs	Expedited TAT, Onsite laboratory

WATER QUALITY SAMPLE LOCATIONS

AECOM



WATER QUALITY SAMPLE LOCATIONS
NWS FORMER MGP SITE
DREDGE AREA

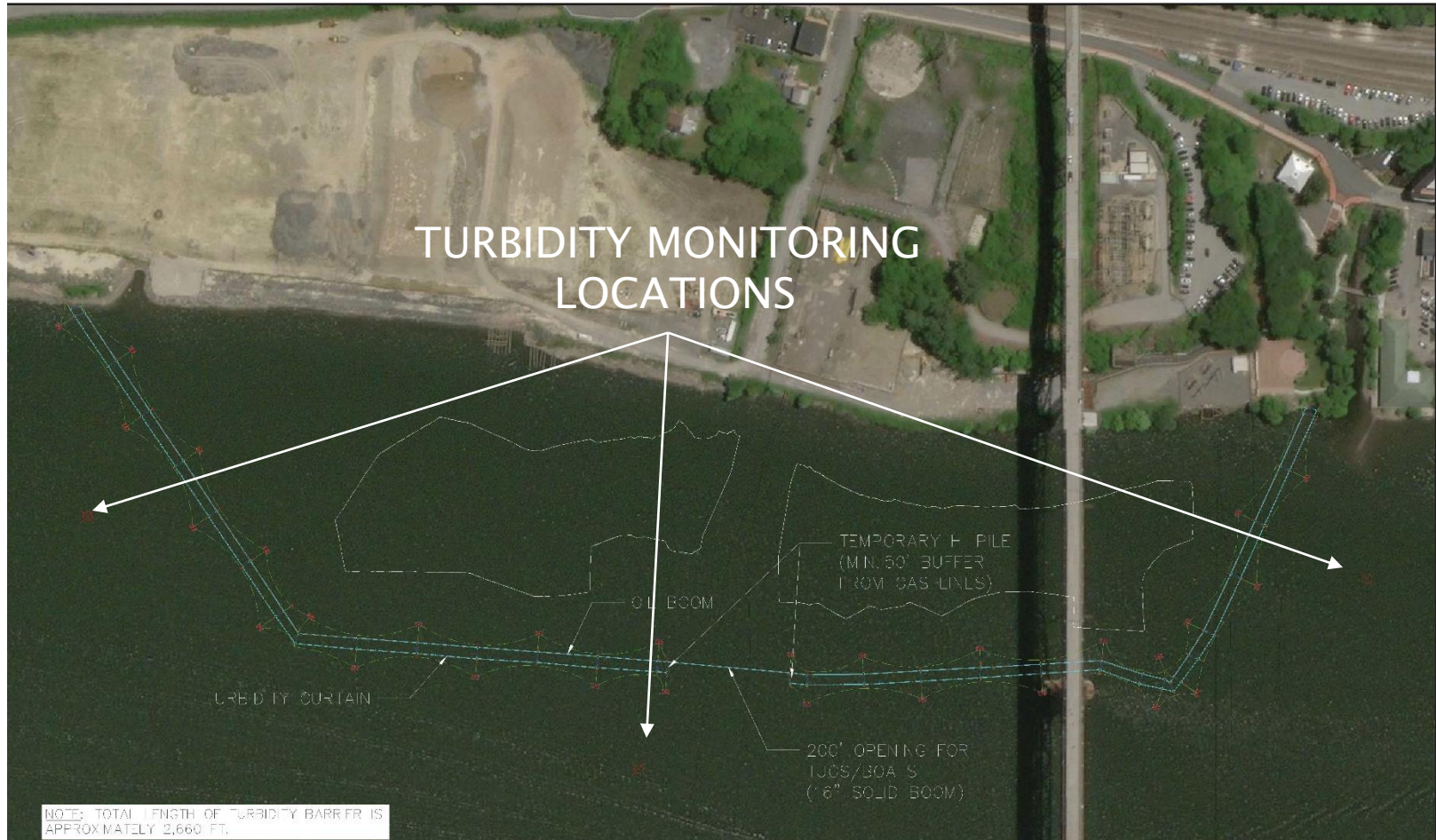
NORTH WATER STREET MGP
60540671

DATE: 6/18/2019

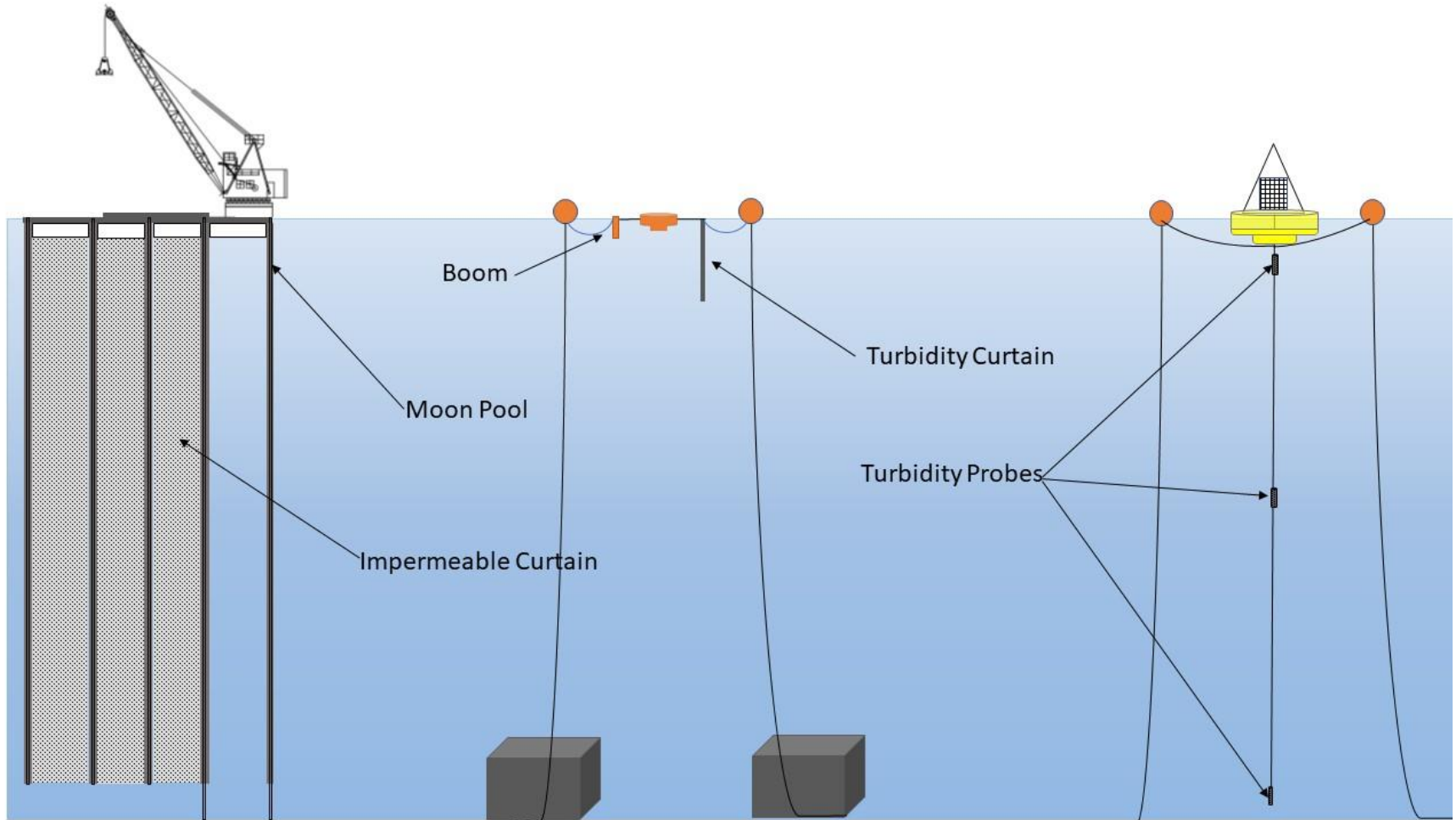
DRWN: ELJ

FIGURE 1

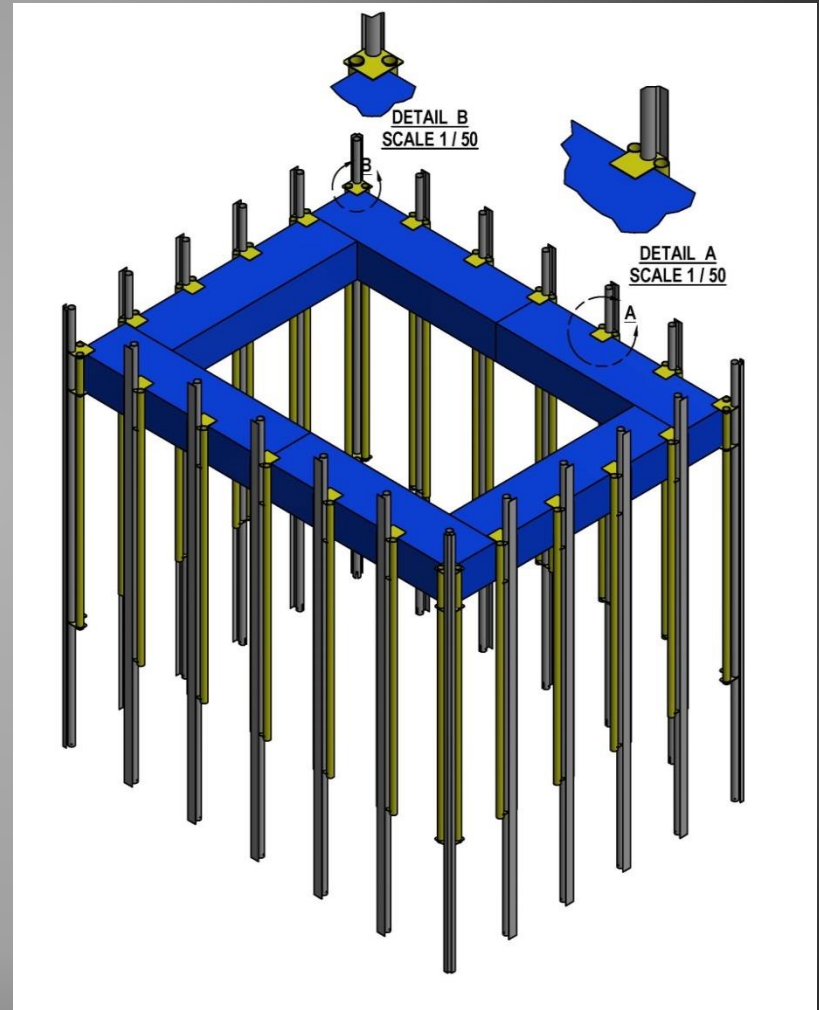
TURBIDITY MONITORING



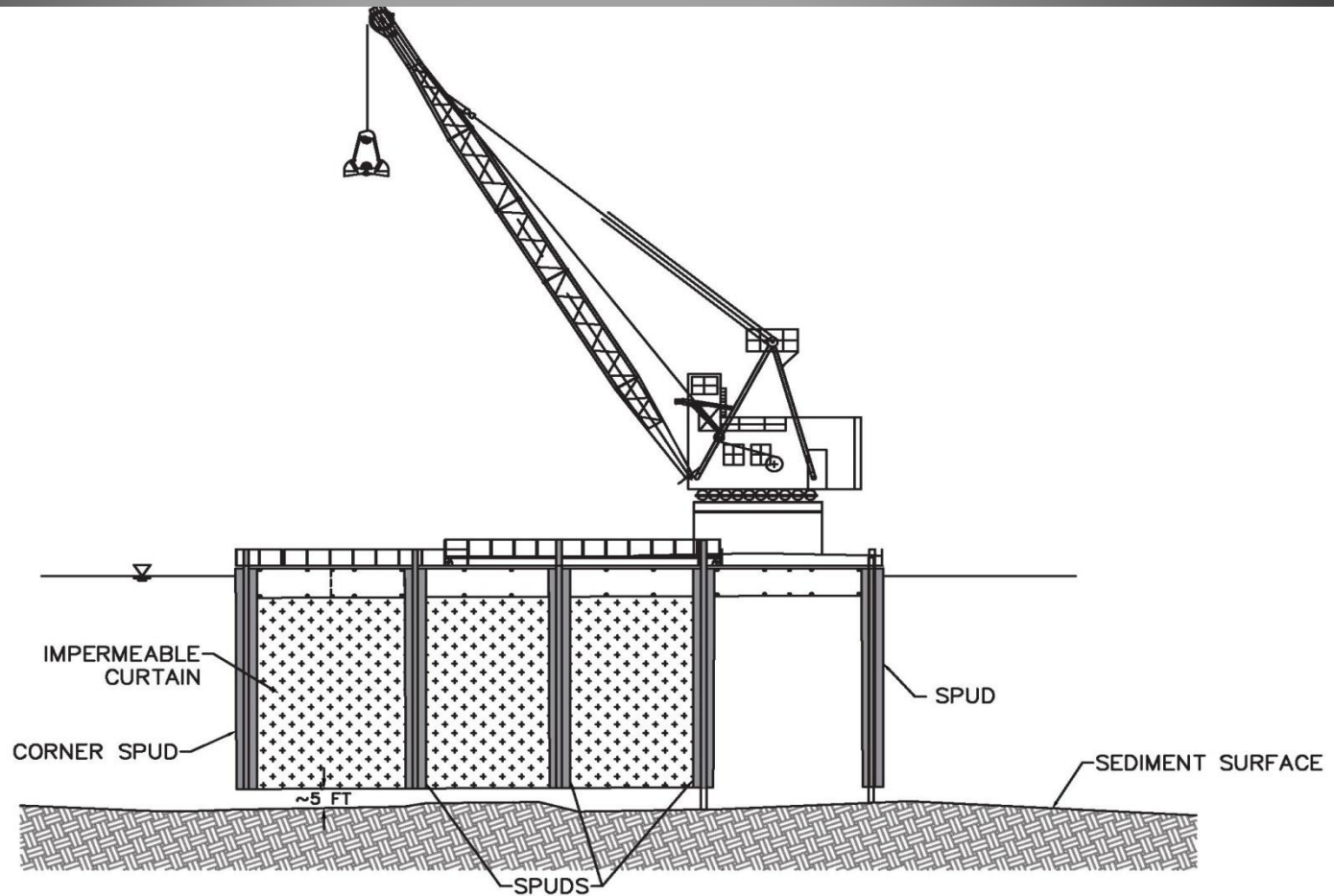
TURBIDITY CONTROL & MONITORING



Fortified "Moon Pool"



Fortified "Moon Pool" Operation



MOBILE SUSPENSION CONTROL SYSTEM SETUP

Upcoming Project Schedule

- ▶ Completion of sheet installation – 2019; dredging to begin October 2019 through Jan. 2020– “the season”
 - ▶ Dredging projected to continue through the 2021 /2022 season. Restoration & completion of the project in 2022.
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QUESTIONS