New Bedford Harbor Superfund Site

United States Environmental Protection Agency
& New Bedford Port Authority

Lower Harbor CAD Cell Sand Capping Final Remedial Action Report

New Bedford, MA
July 10, 2024

Foth Project I.D.: 20N001.10

Solving our clients' toughest science and engineering challenges.

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LIST OF ACRONYMS

BOC	Bottom of CAD
CAD	Confined Aquatic Disposal
CAD CELL	Confined Aquatic Disposal Cell
CAD 4	NBPA CAD Cell No. 4
Contractor	DW White Construction
CY	Cubic Yard
CZM	Coastal Zone Management
DAMOS	Disposal Area Monitoring System
DMF	Massachusetts Division of Marine Fisheries
EOEEA	Executive Office of Energy and Environmental Affairs
ESD	Explanation of Significant Differences
Foth	Foth Infrastructure & Environment
GPS	Global Position System
LHCC	Lower Harbor CAD Cell
MassDEP	Massachusetts Department of Environmental Protection
mg/kg	milligrams/kilogram
MLLW	Mean Lower Low Water
NBHSS	New Bedford Harbor Superfund Site
NBPA	New Bedford Port Authority
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PCBs	Polychlorinated biphenyls
ROD	Record of Decision
SER	State Enhanced Remedy
TOC	Total Organic Carbon
USEPA	United States Environmental Protection Agency
USACE	United States Army Corps of Engineers
WQMP	Water Quality Monitoring Plan

1.0 Introduction

This Remedial Action Report has been prepared by Foth Infrastructure & Environment (Foth) for the New Bedford Port Authority (NBPA) and the U.S. Environmental Protection Agency (USEPA) (Owner's Team) upon completion of the Lower Harbor CAD (Confined Aquatic Disposal) Cell Sand Capping Project. The Lower Harbor CAD Cell (LHCC) Capping Project (the Project) was conducted on behalf of the NBPA through Cooperative Agreement #V96150601 with USEPA Region 1 for construction of the LHCC and installation of the three-foot (3') sand cap over the entire LHCC footprint. Placement of 387,732 cubic yards (CY) of dredged PCB-contaminated sediment into the LHCC was completed in 2020 as part of the New Bedford Harbor Superfund Site (NBHSS) (USEPA, 2020) as well as 31,000 CY of sediments associated with the site's State Enhanced Remedy (SER) (USEPA, 1998) as discussed herein.

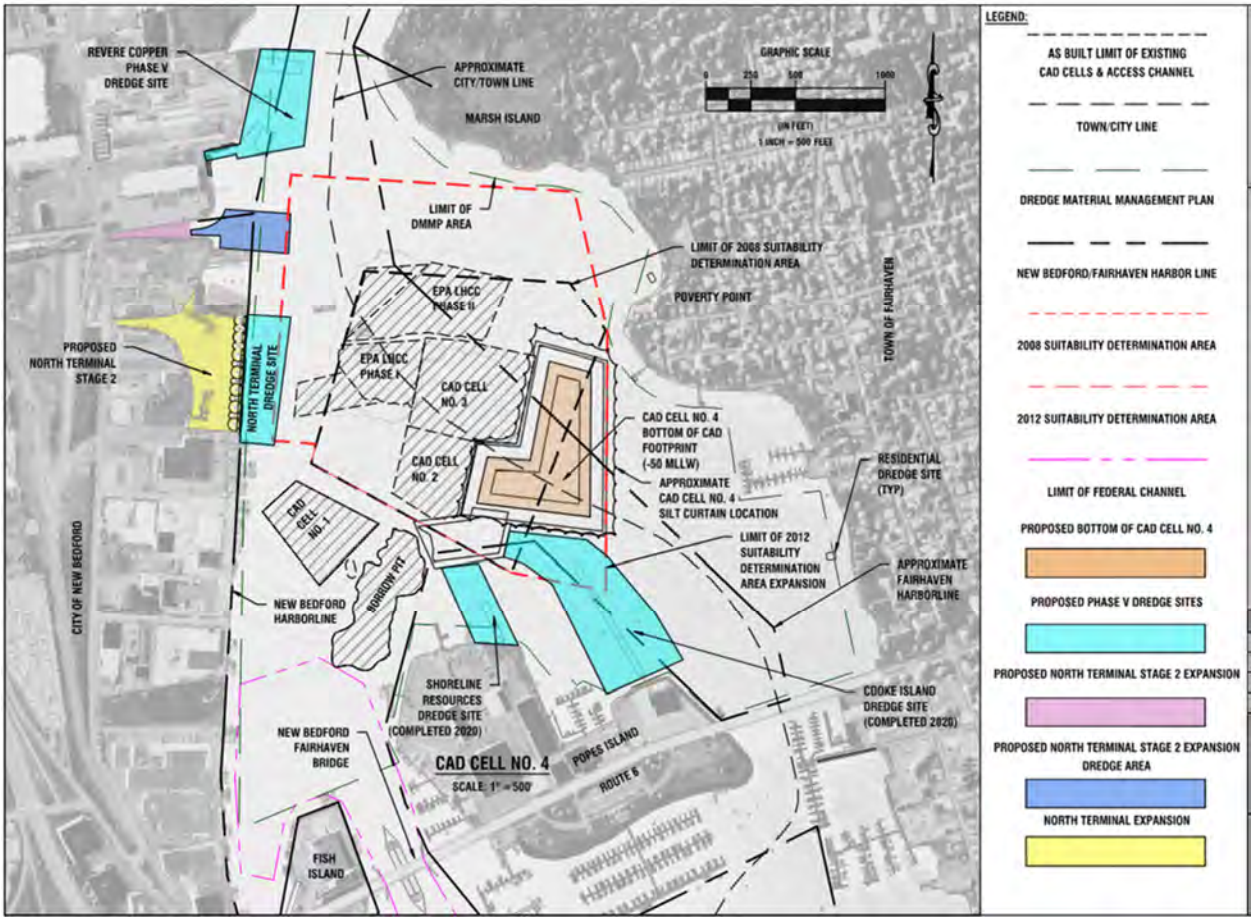
The 31,000 CY disposed in the LHCC as part of the SER was related to construction of the nearby North Terminal. North Terminal was constructed pursuant to the SER and was included in the same NBPA contract as the LHCC cap and completion of CAD Cell No. 4 (bottom of CAD excavation) due to the many overlaps among these marine construction projects. As space was available in the LHCC after the USEPA Superfund work was completed (including consolidation of the placed dredge material), USEPA approved using this available disposal capacity for SER disposal. This North Terminal construction-related dredging and associated LHCC disposal began in June of 2022 and was completed in March 2023.

After the disposal placements from the North Terminal site into the LHCC, the LHCC was left undisturbed for a period of 77 days, meeting the 45-day settlement period criteria agreed to by the USEPA for this limited North Terminal volume. At the completion of the settlement period, a three-foot-thick sediment cap was installed in two layers. The first layer (approximately 1.5 ft thick) of the sediment cap was designed as an isolation layer and was composed of a compost/sand mixture developed by the Contractor to contain the required minimum of 0.3% Total Organic Carbon (TOC). The second layer (also approximately 1.5 ft thick) of sediment cap consisted of sand placed to achieve a total minimum cap thickness of three feet. This sand material was a beneficial reuse of clean material dredged from the Bottom of CAD Cell No. 4.

2.0 Background

The City of New Bedford and the Town of Fairhaven are located on the south coast of Massachusetts between Cape Cod and Fall River, Massachusetts. New Bedford Harbor is an approximately four mile-long, narrow, protected embayment that stretches from the mouth of the Acushnet River (at the north) to a large hurricane dike and flood control structure at the entrance to Buzzards Bay (on the south). Historically, New Bedford Harbor was one of the dominant shipping ports on the east coast. During the 19th Century, textile mills and manufacturing facilities were built on the edge of the Harbor to take advantage of the access to the working waterfront. Electrical transformer manufacturing industries moved into the New Bedford Harbor waterfront area and operated from the 1940's to 1970's. With this electronic component manufacturing came new types of waste discharge into the Harbor. Investigations identified the Aerovox facility as the primary source of Polychlorinated Biphenyls (PCBs) to the Site. PCB wastes were discharged from Aerovox's operations directly to New Bedford Harbor through open trenches and discharge pipes, or indirectly via the City of New Bedford's sewage treatment plant outfall and combined sewer overflows. Secondary inputs of PCBs were also made from the Cornell Dubilier Electronics, Inc. facility just south of the New Bedford Hurricane Barrier (USEPA, 1998). By the 1970s, sediment sampling and testing conducted by environmental officials revealed that significant concentrations of metals and PCBs existed in the Harbor bottom sediments.

From the 1980s to the 1990s, the USEPA and the Massachusetts Department of Environmental Protection (MassDEP) studied the nature and extent of the contamination in New Bedford Harbor, collecting the information required to develop a remedy for the widespread contamination. In 1998, the USEPA signed the Operable Unit 1 Record of Decision (ROD) for the NBHSS, which prescribed that the remedy for the New Bedford Harbor would be focused on the removal of contaminated sediments with PCB concentrations in excess of cleanup standards set for various locations (USEPA, 1998). Through the SER process, which was included in the 1998 ROD, NBPA with oversight from MassDEP, have continued navigational dredging and disposal of sediments in the lower harbor below the ROD's 50 milligrams per kilogram (mg/kg) target cleanup level for PCBs in the lower harbor.



Locus Map – New Bedford Harbor Lower Harbor

The LHCC was constructed in two phases, both Phase I and Phase II are located within the inner (or lower harbor) portion of New Bedford Harbor. See above locus map. The LHCC is 12.87 acres in total (consisting of 3.85 acres at LHCC Phase I and 9.02 acres at LHCC Phase II) and the water depth was approximately 55' deep from Mean Lower Low Water (MLLW) after construction and before filling. Since the LHCC cap was implemented as part of a multi-part SER NBPA contract (including construction of North Terminal and completion of CAD Cell 4 excavation) it was completed under the SER protocols, performance standards, and oversight.

3.0 Pre-Construction of the LHCC Cap

As part of its NBHSS cleanup remedy, USEPA selected the LHCC as an effective approach for disposing of a portion of NBHSS PCB-contaminated sediment (USEPA, 2011). To effectively implement the LHCC, USEPA utilized experience of the NBPA and provided a

Cooperative Agreement to the NBPA to oversee the design and construction of the two phases of the LHCC, as well as design and construction of the final LHCC cap. Through the Superfund work, USEPA and the U.S. Army Corps of Engineers (USACE) conducted dredging throughout the harbor utilizing LHCC as the disposal site for approximately 387,732 CY of PCB-contaminated sediment. This disposal into the LHCC was completed in 2020.

At the completion of the Superfund sediment placement into the LHCC, NBPA began developing the design for a cap. In 2021, NBPA provided USEPA with preliminary and final design documents.

3.1 Oversight and Planning

The LHCC Cap project required oversight management by the USEPA, the NBPA and MassDEP, in coordination with several additional Federal and State authorities (the SER Committee), including the USACE, the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Massachusetts Division of Marine Fisheries (DMF), and the Massachusetts Executive Office of Energy and Environmental Affairs / Office of Coastal Zone Management (EOEA/CZM).

The NBPA, USEPA, and Foth prepared and submitted planning and information documents for applicable resource agencies. These documents included a Project Work Plan, a Sampling and Analysis Plan, project plans, proposed dredge footprints, and a specifications package. Prior to completion of planning documents, Foth discussed project plans with the NBPA, Town of Fairhaven, the USEPA, and resource agencies to determine any requirements and/or concerns that needed to be covered within the Contract Documents. The Owner's Team worked closely with the MassDEP Project Manager to expedite conversations between agencies. The Owner's Team addressed all comments made by agencies and revised documents as necessary.

The USEPA and Foth conducted the necessary regulatory interface with MassDEP during this work. Regulatory interface was required to ensure that the appropriate process was followed and that appropriate sampling and analysis activities were conducted.

Foth/NBPA submitted the proposed Work Plan for the Bottom of CAD Cell No. 4 and North Terminal Project (Addendum No. 3 to this Work Plan included the proposed capping of LHCC) to MassDEP on April 21, 2021, and received an authorization to proceed with construction from MassDEP/SER on June 12, 2021.

3.2 Preliminary/Final Cap Engineering

The LHCC Cap Design began in April 2021 when USEPA contracted with NBPA/Foth for a Preliminary Design for a cap at both LHCC Phase I and Phase II Sites. In July 2021, Foth provided USEPA with the following submittals for review:

- LHCC Phase I & II Capping – Conceptual Design – C-100 – Site Plan
- LHCC Phase I & II Capping – Conceptual Design – C-200 – Profile & Cross Section
- LHCC Phase I & II Capping – Conceptual Design – Rough Order of Magnitude Cost Estimate – 07-31-2023. Rough Order of Magnitude Cost was estimated at approximately $3,727,000.

After review and approval of the preliminary design, Foth submitted the following documents on August 12, 2021 to the SER Committee:

- LHCC Cap Draft Invitation for Bid Documents for Review

The documents listed above were reviewed and ultimately approved by the USEPA.

In February 2022, NBPA received bids for the North Terminal, Bottom of CAD 4, & LHCC Capping project. The project was awarded to the low bidder, DW White Construction, in March of 2022 (the contractor).

The LHCC Cap design was presented to USEPA as a sand cap with a total minimum thickness of three feet, including a one-foot isolation layer of imported sand cap material with the required minimum TOC of 0.3% (USEPA, 2011) and a two-foot beneficial reuse layer sand cap to be dredged from the Bottom of CAD (BOC) Cell No. 4.

Prior to construction, Foth presented USEPA with a design revision to the proposed capping layers to increase the volume and thickness of the isolation cap layer and improve the overall effectiveness of the isolation layer. The design was revised to install the cap material to a specified elevation within the LHCC in lieu of the previously specified minimum thickness criteria. The isolation cap layer was proposed to be installed to -9.0 MLLW, to create a layer thicker than the one-foot minimum thickness over the entire footprint of the LHCC. The beneficial reuse layer was revised to be installed to a minimum elevation of -7.5 feet MLLW or a minimum of three feet total thickness with a maximum elevation of -7 feet MLLW. This design revision was accepted by the USEPA Superfund project manager via email on September 28, 2022.

4.0 Construction

USEPA and NBPA managed and oversaw construction activities with the assistance of Foth, the Owner's Representative. Construction operations were performed in such a manner as to comply with the specific performance criteria established during the design phase of the project. Where possible, the intent was to allow the contractor to determine appropriate means and methods of construction, subject to the controls and performance criteria contained in the project specifications. Proposed means and methods and adherence to design and performance criteria were evaluated using the pre-construction submittal review process. The contractor was required to submit a Contractor Quality Control Plan and a Cap Placement Plan to demonstrate their methodologies for ensuring conformance to the regulatory performance criteria prior to commencing site activities. Construction Submittals were provided to MassDEP and USEPA for review and approved prior to issuance of a Notice to Proceed.

4.1 Lower Harbor CAD Cell: Cap Isolation Layer Placements

To meet the minimum requirement of 0.3% TOC for the LHCC Cap isolation layer, the contractor developed a compost blend consisting of one-part organic material and nine-parts sandy/granular material. Prior to placement, two samples of the isolation layer were analyzed for percent TOC (using USEPA method 9060A) and proved to meet or exceed the minimum specified TOC percentage; these two results were 0.41% and 0.5% percent TOC. See Section 5.0 below for more discussion of in-place TOC testing prior to full scale capping.

See **Appendix A** for lab results and other geotechnical material testing data.

Beginning on June 29, 2023, the contractor began importing isolation cap layer material for placement on the LHCC via dump scow. The contractor continued capping with the isolation layer material through August 30, 2023. The contractor imported and placed approximately 42,000 CY of isolation layer/compost blend and conducted bed leveling to ensure a level surface for placement of the beneficial reuse layer and a maximum elevation of -9 feet MLLW.

4.2 Lower Harbor CAD Cell: Beneficial Reuse Cap Layer

Beginning on September 1, 2022, the contractor began dredging within the Bottom of CAD Cell No. 4 (BOC) to obtain the beneficial reuse material for use as LHCC cap material.

The BOC material, which generally consisted of a well graded sand with traces of silt and gravel, was placed in the LHCC via dump scow placement methodology. The contractor continued capping with the BOC material through November 15, 2023. The contractor placed approximately 27,500 CY of beneficial reuse layer material and completed bed leveling to ensure a level finished grade surface and a minimum three feet of total cap thickness over the entire footprint of the LHCC.

See **Figures 1-7** for LHCC As-Built Plans & Sections.

See **Appendix B** for BOC beneficial reuse material Geotechnical data.

4.3 Monitoring and Oversight

Throughout the dredging and capping project, Foth personnel were on site to monitor and oversee the work and to ensure that work progressed smoothly and as safely as possible, in accordance with the Work Plan and Site-Specific Health and Safety Plan.

To monitor the success and progress of the work itself, Foth and the contractor conducted over 40 bathymetric surveys at LHCC Phase 1 and Phase II disposal/capping areas to monitor placement locations and fill/capping elevations. For quality control purposes, the contractor surveys were compared to the Owner's interim surveys and analyzed for discrepancies. The locations of equipment during cap placement and bed leveling activities were also closely monitored. Foth and the contractor personnel used a Global Positioning System (GPS) with accuracy to within approximately three feet (one meter), to check that scows were placed in the correct locations. Foth also conducted Water Quality Monitoring at both the dredge and disposal sites on a weekly basis and reported the results to MassDEP as required.

See Section 6 for Water Quality Monitoring results.

4.4 Cap Acceptance Criteria

Foth conducted a cap thickness analysis on the final contractor survey to determine that the required three feet of total cap thickness was achieved by the contractor. Foth used a 95% passing criteria and adjusted for an estimated vertical uncertainty of ±0.1 feet, or 2.9 feet, as acceptance criteria for the cap installation.

The multibeam bathymetric survey data for this project was collected and presented as a one-foot gridded data set. The data was sorted by selecting the average value of all the collected values within the one-foot grid. This one-foot average value data was used for

contouring and was the base data for analysis. The percentage of points passing the required three-foot thickness was determined by comparing survey data on a ten-foot grid created from the base files. The ten-foot average creates a smoother surface that was less sensitive to minor topography changes in the surfaces.

The cap was compliant with the project requirements if no areas within the cap were less than 2.5 feet thick when comparing the one-foot data sets directly, and that 95% of the entire cap had a thickness greater than 2.9 feet when considering the further sorted ten-foot gridded data set. Using this two-step verification assured there were no areas where the cap was problematically thin, while avoiding cap analysis failures generated from uncertainties in the surveying and placement process.

When comparing the ten-foot data sets, two analysis methodologies were used to determine if the cap met the acceptance criteria. The first method created a ten-foot average value gridded data set of the pre and post base surveys and then compared those two ten-foot surfaces; while the second analysis started with one-foot base surfaces and created differences of the one-foot sorting and then averaged those into a ten-foot grid. In short, method one measured the cap thickness after generating the ten-foot surface, while the second method measured the cap thickness from the one-foot grid and then averaged those values to get the ten-foot grid. See Table 1 below for a summary of results.

Methodology #1 resulted in 96.86% of the points passing on a total of ±4,500 points of analysis. Methodology #2 resulted in 97.11% of the points passing on a total of +/-4,460 points. This thorough, two part analysis ensures that the cap met the design thickness criteria.

See **Table 1** below for Cap Acceptance Analysis results.

TABLE 1: CAP THICKNESS ANALYSIS

10x10 vs 1x1						
Number of Points Analyzed	4523					
Passing Cap Thickness (FT)	2.5	2.7	2.8	2.9	3.0	3.1
Passing Value Points	4523	4458	4439	4381	4242	3954
% Passing	100%	99%	98%	97%	94%	87%
10x10 vs 10x10						
Number of Points Analyzed	4459					
Passing Cap Thickness (FT)	2.5	2.7	2.8	2.9	3.0	3.1
Passing Value Points	4459	4415	4384	4330	4189	3921
% Passing	100%	99%	98%	97%	94%	88%
Data References						
DW White Survey		CAD_LHCC_DOS_060923-10x10_NEG.xyz				
DW White Survey		LHCC 10x10 11-09-23.xyz				

5.0 TOC Sampling and Analysis

Prior to the start of cap installation placements, the contractor conducted a test on the placement methodology to ensure that the organics within the blended sand-compost material were not being substantially lost to the water column during placement (dump scow placement methodology). The contractor made placements within a small test area in the Northwest corner of LHCC Phase II and collected 2 samples from the in-place material for analysis (Figure 1). The same USEPA analytical method used during preconstruction to test the material was used to evaluate the in-place test area samples for TOC. Sample 1 reported a TOC of 0.41% and sample 2 reported a TOC of 0.50% (the passing criteria was 0.30% TOC). The results showed the TOC remained in place through the dump scow placements. The results of the in-place testing of the LHCC cap test area were provided to the USEPA and authorization was issued for the start of isolation layer placements.

Throughout the placement process the contractor collected a total of 20 isolation layer samples (not counting the two test area samples discussed above) and analyzed the percent TOC within each sample. The samples were collected using vibrocores through the full depth of the isolation layer. The results showed that 21 of the 22 samples met the minimum TOC requirements for the cap isolation layer. Additional placements of cap isolation layer materials were made in the area of the sample with 0.27% TOC that was

below the minimum TOC percent requirement to provide additional isolation layer thickness.

See **Appendix A** for lab results and other geotechnical material testing data.

6.0 Water Quality Monitoring Results

Water quality was monitored during dredging operations at the North Terminal site and disposal placement operations in LHCC Phase I and Phase II, along with during placements of cap materials. Water quality monitoring was performed in accordance with the approved Water Quality Monitoring Plan (WQMP). This WQMP was submitted to the SER committee for review and comment and ultimately accepted for use in the project.

Following the guidelines of the respective WQMP, water turbidity was recorded over various water depths, both up and down current from the dredge or material placement operations. The turbidity values recorded as the Reference Site Turbidity were taken from up-current monitoring locations (depending on tidal flow), or from monitoring events which occurred before dredge or material placement operations began. The Reference Site Turbidity value was then compared to down-current turbidity values measured at regular time intervals after operations began.

The monitoring results were separated into dredging and disposal water quality events that Foth oversaw in New Bedford Harbor during the Interim LHCC Phase I and Phase II Project. At each monitoring location, three measurements from the water column were taken (at 3 varying depths) to obtain an average reading of a turbidity within the full water column.

In monitoring the water quality, no exceedances of the WQMP turbidity guidelines were detected for either capping, dredging, or disposal operations.

See **Appendix C** for copies of the water quality monitoring sheets completed in the field.

In addition to the Water Quality Monitoring, Foth also provided the USEPA and the SER Committee with field reports summarizing activities and monitoring results for each week.

See **Appendix D** for North Terminal, Bottom of CAD, and LHCC Capping Field Reports.

7.0 Conclusion

Capping of the LHCC with a three-foot cap was completed in November 2023. In total, the contractor installed approximately 42,000 CY of imported sand-compost blended material as an isolation layer and an additional 27,500 CY of clean beneficial reuse material dredged from within the Bottom of CAD Cell No. 4. Confirmatory sampling was conducted to confirm that the isolation layer contained the minimum required 0.3% TOC. Analysis of pre- and post-capping bathymetric survey data was also conducted to confirm that the requirement for a minimum three-foot total cap thickness was met by the contractor. The final surface of the LHCC was leveled to allow for a more accurate bathymetric analysis. The MassDEP will perform long-term monitoring to ensure that the contaminated sediment remains sequestered within the LHCC and that this component of the NBHSS remedy remains protective of human health and the environment.

See **Appendix E** for Post-cap Baseline Sampling (January 2024).

8.0 References

USEPA, 1998. Record of Decision, Operable Unit 1, Upper and Lower Harbor, New Bedford Harbor Superfund Site. 9/25/1998. https://semspub.epa.gov/work/01/38206.pdf

USEPA, 2011. Lower Harbor CAD Cell, Explanation of Significant Differences, Operable Unit 1, Upper and Lower Harbor, New Bedford Harbor Superfund Site. 3/11/2011. https://semspub.epa.gov/work/01/479471.pdf

USEPA, 2020. Final Remedial Action Report for Operable Unit 1 Subtidal Dredging. NBHSS. September. https://semspub.epa.gov/work/01/100015351.pdf

Figures

LOWER HARBOR CAD CELL (LHCC) CAPPING NOTES:

1. COORDINATES SHOWN ARE IN STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE 2001, REFERENCED TO THE 1983 NORTH AMERICAN DATUM (NAD83), EXPRESSED IN US SURVEY FEET.
2. INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS MADE ON DATES INDICATED BELOW AND CAN ONLY BE CONSIDERED TO REPRESENT THE CONDITION AT THE TIME OF THE SURVEY.
3. ELEVATIONS & SOUNDINGS SHOWN ARE DEPTHS IN FEET BELOW MEAN LOWER LOW WATER (MLLW) FOR CLARK'S POINT NOAA STATION 8447712. THE MLLW ELEVATION FOR THE NEW BEDFORD HARBOR AREA IS -1.92 FEET, NAVD88. SEE GRAPHIC REPRESENTATION OF DATUM SEPARATION FOR MORE INFORMATION.
4. EXISTING CONDITIONS CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON FOTH PRE-DREDGE SURVEY DATED 12-20-2022 USING A 3X3 AVERAGE VALUE DATA SET FOR SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. AS-BUILT OF CAP ISOLATION LAYER (1ST LIFT) CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON D.W. WHITE SURVEY DATED 08-30-2023 USING A 10X10 AVERAGE VALUE DATA SET.
6. ISOLATION CAP LAYER (1ST LIFT) INSTALLED TO MAXIMUM ELEVATION OF -9 MLLW WITH MINIMUM 1' THICKNESS OVER ENTIRE FOOTPRINT OF LHCC.
7. SAMPLE NUMBERING REPRESENT SAMPLE NUMBER PROVIDED WITHIN LHCC CAP CONSTRUCTION REPORTING FROM FOTH (JULY AND AUGUST 2023 SER PROGRESS REPORTS). SAMPLE NUMBER IN QUOTATIONS REPRESENT CONTRACTORS SAMPLE NUMBER FOR CORRELATION TO LAB REPORTING.
8. TOTAL ORGANIC CARBON LEVEL IN THE CAP ISOLATION LATER MATERIAL IS A MINIMUM OF 0.3% PER MARCH 2011 FINAL 4TH EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD) FOR USE OF A LOWER HARBOR CAD CELL.
9. ISOLATION LAYER MATERIAL IMPORTED FROM OUTSIDE SOURCE PLACED VIA DUMP SCOW PLACEMENT METHODOLOGY. SEE LHCC CAP REMEDIAL ACTION REPORT FOR MORE INFORMATION.

LEGEND:

- DW WHITE CONFIRMATORY BORING (RESULTS OF TOTAL ORGANIC CARBON ANALYTICAL TESTING METHOD 9060A) SEE NOTE 7 & 8 FOR MORE INFORMATION

DWW-6 (TOC = 0.65%)
DWW-5 (TOC = 2.05%)
LHCC 1 & 2 PONAR SAMPLES SAMPLE 1 (TOC = 0.41%) SAMPLE 2 (TOC = 0.50%)
STA 10+00 N: 2697507.12 E: 815271.25
NORTH
DWW-8 (TOC = 0.27%)
DWW-9 (TOC = 0.46%)
DWW-10 (TOC = 1.02%)
PREDREGE CONTOURS FOTH 07-21-2022 MULTIBEAM SURVEY
DWW-18 (TOC = 1.31%) "6" 8/17/23
GRAPHIC SCALE 0 25 50 100 (IN FEET) 1 INCH = 50 FEET
N
APPROXIMATE LIMITS OF LOWER HARBOR CAD CELL (DESIGN LIMITS)
DWW-1 (NO RECOVERY)
DWW-2 (TOC = 0.30%)
STA 0+00 N: 2697234.10 E: 814913.93
WEST
LOWER HARBOR CAD CELL PHASE II EAST/WEST BASELINE
EPA LHCC PHASE II
DWW-19 (TOC = 1.03%) "5" 8/17/23
STA 10+00 N: 2697130.54 E: 815908.56
EAST
DWW-7 (TOC = 0.75%)
DWW-3 (TOC = 0.58%)
DWW-4 (TOC = 0.53%)
EXISTING CHANNEL
DWW-11 (TOC = 2.24%) "102" 8/17/23
DWW-20 (TOC = 1.46%) (4" 8/17/23
DWW-12 (TOC = 1.3%) "101" 8/17/23
APPROXIMATE LIMITS OF LHCC SAND CAP
DWW-16 (TOC = 0.98%) "104" 8/17/23
DWW-13 (TOC = 2.34%) "103" 8/17/23
DWW-15 (TOC = 1.02%) "2" 8/17/23
AS-BUILT CONTOURS DWW 08-30-2023 MULTIBEAM SURVEY
EPA LHCC PHASE I
APPROXIMATE LIMIT OF ISOLATION LAYER CAP
LOWER HARBOR CAD CELL CONTAINMENT BERM
DWW-14 (TOC = 1.47%) "1" 8/17/23
DWW-17 (TOC = 1.9%) "3" 8/17/23
CAD CELL NO. 3 (NO SPUD ZONE)
CAD CELL NO. 4
CAD CELL NO. 2 (NO SPUD ZONE)
LOWER HARBOR CAD CELL PHASE I & II NORTH/SOUTH BASELINE
PREVIOUS LIMIT OF LOWER HARBOR CAD CELL ACCESS CHANNEL
SOUTH
STA 0+00 N: 2696527.55 E: 815069.44
EBB
FLOOD

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CONSULTANT

LOWER HARBOR CAD CELL SAND CAPPING PLAN & SECTIONS
REMEDIAL ACTION REPORT
123 MACARTHUR DRIVE
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

SEAL AND SIGNATURE

REVISIONS | DATES

SHEET TITLE
LOWER HARBOR CAD CELL ISOLATION LAYER AS-BUILT

ISSUANCE

SCALE: 1" = 50'
DRAWN BY: PSR
CHECKED BY: SEN
PROJECT NO: 0020N001
DATE: 05/17/2024

SHEET NUMBER
FIGURE 1

LOWER HARBOR CAD CELL (LHCC) CAPPING NOTES:

1. LOWER HARBOR CAD CELL CONTOURS ARE SHOWN AT 1' CONTOUR INTERVAL.
2. AS-BUILT OF BENEFICIAL REUSE LAYER (2ND LIFT) CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON FOTH SURVEY DATED 01-08-2024 USING A 10X10 AVERAGE VALUE DATA SET.
3. BENEFICIAL REUSE CAP LAYER (2ND LIFT) INSTALLED TO MAXIMUM ELEVATION OF -7.5 MLLW WITH MINIMUM 3' TOTAL CAP THICKNESS OVER ENTIRE FOOTPRINT OF LHCC INCLUDING IMPORTED CAP LAYER.
4. BENEFICIAL REUSE LAYER(2ND LIFT) MATERIAL DREDGED FROM THE BOTTOM OF CAD CELL NO. 4 (BOC) AND PLACED VIA DUMP SCOW METHODOLOGY.

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LOWER HARBOR CAD CELL SAND CAP AND CAPPING PLAN & SECTIONS REMEDIAL ACTION REPORT 123 MACARTHUR DRIVE NEW BEDFORD, MA 02740 NEW BEDFORD PORT AUTHORITY

SEAL AND SIGNATURE

REVISIONS	DATES

SHEET TITLE

LOWER HARBOR CAD CELL BENEFICIAL REUSE LAYER AS-BUILT

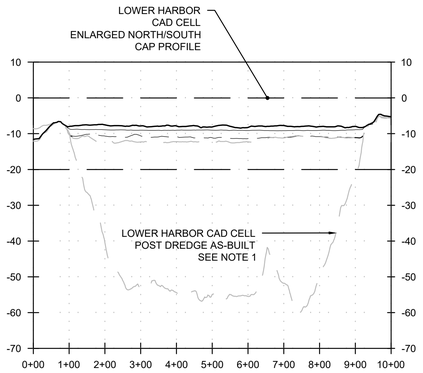
ISSUANCE

SCALE: 1" = 50'

DRAWN BY	CHECKED BY	PROJECT NO	DATE
PSR	SEN	0020N001	05/17/2024

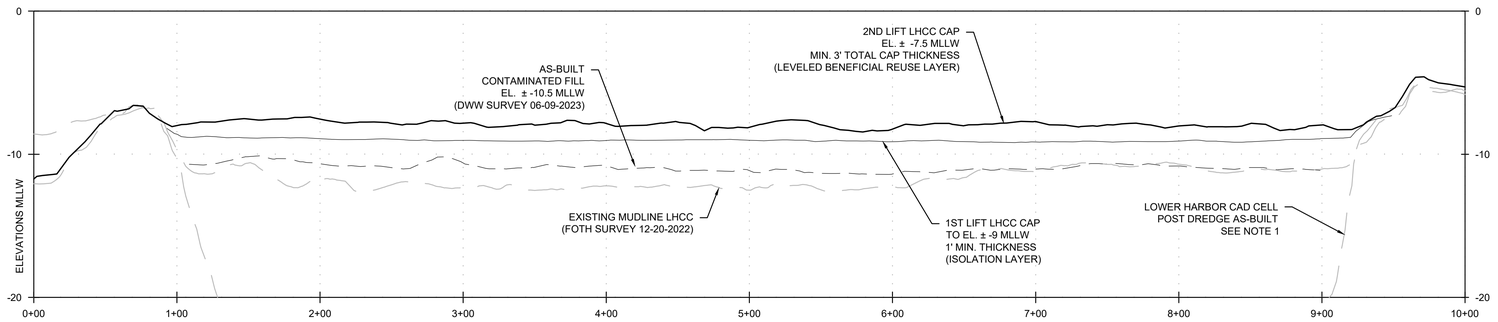
SHEET NUMBER

FIGURE 2



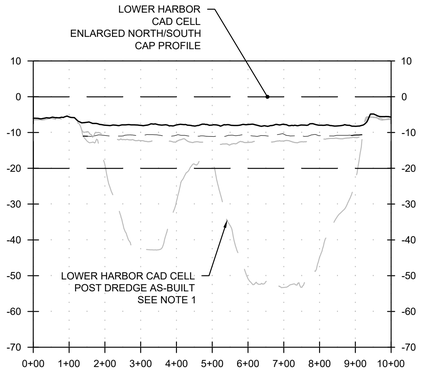
LOWER HARBOR CAD CELL
PHASE II BASELINE
EAST/WEST PROFILE VIEW

HORZ. SCALE 1" =200'
VERT. SCALE 1' = 20'



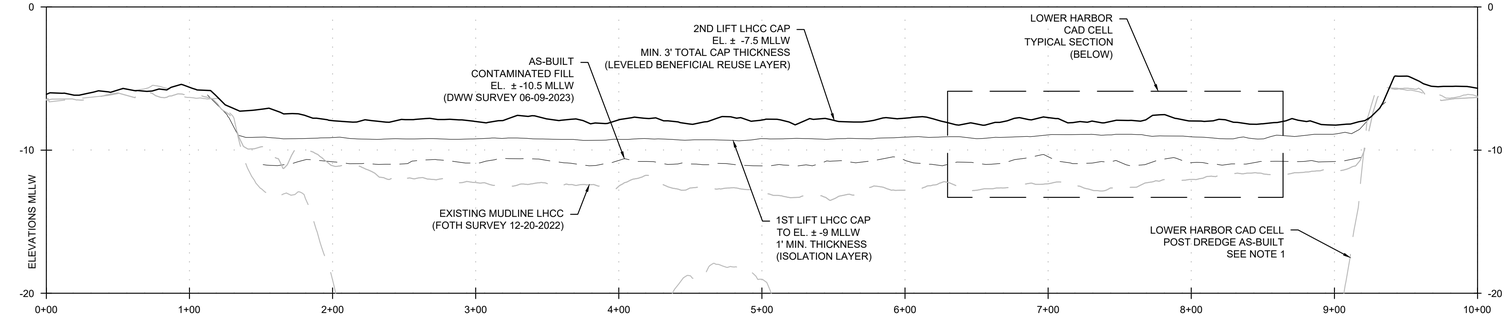
LOWER HARBOR CAD CELL
PHASE II BASELINE
ENLARGED EAST/WEST CAP PROFILE VIEW

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



LOWER HARBOR CAD CELL
PHASE I & II BASELINE
NORTH/SOUTH PROFILE VIEW

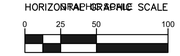
HORZ. SCALE 1" = 200'
VERT. SCALE 1' = 20'



LOWER HARBOR CAD CELL
PHASE I & II BASELINE
ENLARGED NORTH/SOUTH CAP PROFILE VIEW

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'

HORIZONTAL GRAPHIC SCALE



(IN FEET)
1 INCH = 50 FEET

VERTICAL GRAPHIC SCALE

(IN FEET)
1 INCH = 5 FEET

HORIZONTAL GRAPHIC SCALE

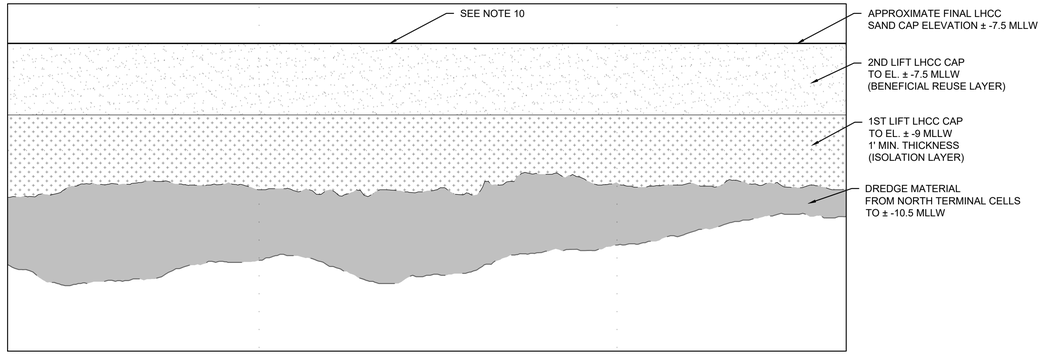
(IN FEET)
1 INCH = 200 FEET

VERTICAL GRAPHIC SCALE

(IN FEET)
1 INCH = 20 FEET

LOWER HARBOR CAD CELL (LHCC) CAPPING NOTES:

1. APPROXIMATE AS-BUILT LOCATION OF BOTTOM OF LHCC. COMPILED FROM APEX LHCC PHASE 2 PRE DREDGE SURVEY DATA DATED 11-20-2014 & APEX PHASE 2 POST DREDGE SURVEY DATA DATED 12-01-2015.
2. EXISTING CONDITIONS CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON FOTH PRE-DREDGE SURVEY DATED 12-20-2022 USING A 3X3 AVERAGE VALUE DATA SET FOR SITE CONDITIONS PRIOR TO CONSTRUCTION.
3. AS-BUILT CONTAMINATED FILL ELEVATIONS ON PROFILES & SECTIONS SHOWN BASED ON FOTH PRE-DREDGE SURVEY DATED 07-22-2023 USING A 3X3 AVERAGE VALUE DATA SET.
4. AS-BUILT OF CAP ISOLATION LAYER (1ST LIFT) CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON D.W. WHITE SURVEY DATED 08-30-2023 USING A 10X10 AVERAGE VALUE DATA SET.
5. AS-BUILT OF CAP BENEFICIAL REUSE LAYER (2ND LIFT) CONTOURS & ELEVATIONS SHOWN ON PROFILES & SECTIONS BASED ON FOTH SURVEY DATED 01-08-2024 USING A 10X10 AVERAGE VALUE DATA SET.
6. CAP ISOLATION LAYER INSTALLED TO MAXIMUM ELEVATION OF -9 MLLW WITH MINIMUM 1' THICKNESS OVER ENTIRE FOOTPRINT OF LHCC.
7. CAP BENEFICIAL REUSE LAYER INSTALLED TO MAXIMUM ELEVATION OF -7.5 MLLW WITH MINIMUM 3' TOTAL CAP THICKNESS OVER ENTIRE FOOTPRINT OF LHCC (ISOLATION LAYER + BENEFICIAL REUSE LAYER).
8. CONTAMINATED FILL MATERIAL WAS BED LEVELED TO ACHIEVE A UNIFORM SURFACE SUFFICIENT FOR PLACEMENT OF THE 1ST LIFT OF CAP MATERIAL (ISOLATION LAYER).
9. CAP ISOLATION LAYER WAS BED LEVELED TO ACHIEVE A UNIFORM SURFACE SUFFICIENT FOR PLACEMENT OF THE 2ND LIFT OF CAP MATERIAL (BENEFICIAL REUSE LAYER).
10. TYPICAL SECTION SHOWN AS THEORETICAL LAYERS FOR PROPOSED CAP. FINAL GRADES ARE PROVIDED ON ASBUILT PLAN & PROFILES.



LOWER HARBOR CAD CELL
TYPICAL SECTION

HORZ. SCALE 1" = 20'
VERT. SCALE 1' = 2'

HORIZONTAL GRAPHIC SCALE

(IN FEET)
1 INCH = 20 FEET

VERTICAL GRAPHIC SCALE

(IN FEET)
1 INCH = 2 FEET

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LOWER HARBOR CAD CELL
SAND CAPPING PLAN & SECTIONS
REMEDIAL ACTION REPORT
123 MACARTHUR DRIVE
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

SEAL AND SIGNATURE

REVISIONS	DATES

SHEET TITLE
LOWER HARBOR CAD CELL AS-BUILT PROFILE VIEWS

ISSUANCE

SCALE
AS NOTED

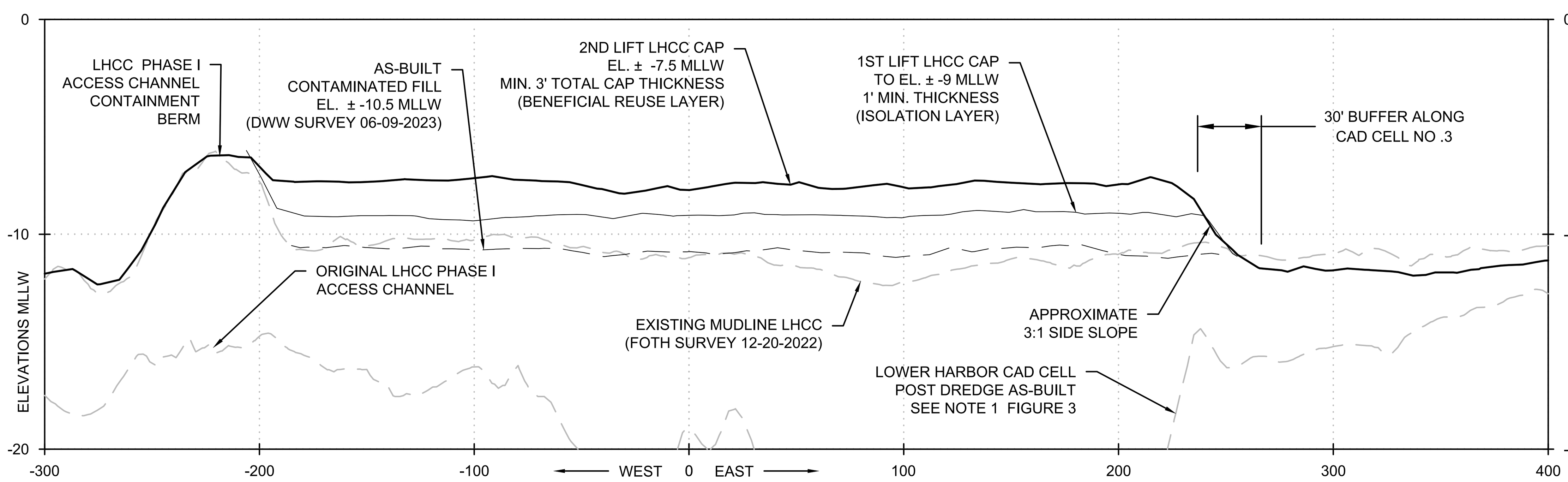
DRAWN BY
PSR

CHECKED BY
SEN

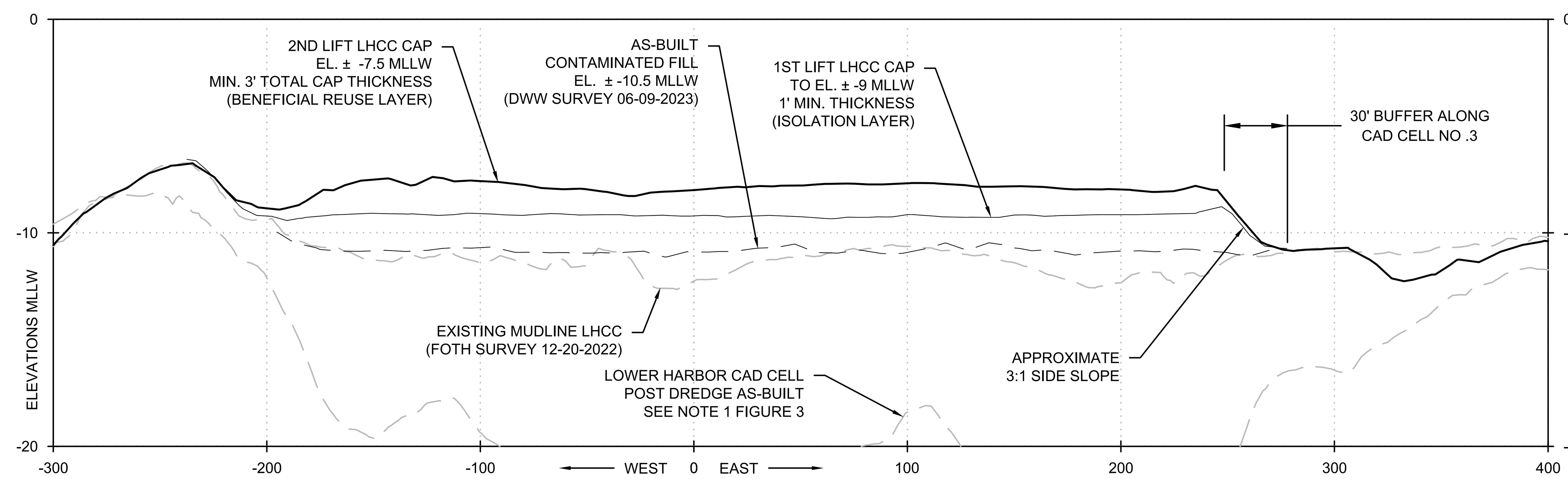
PROJECT NO
0020N001

DATE
05/17/2024

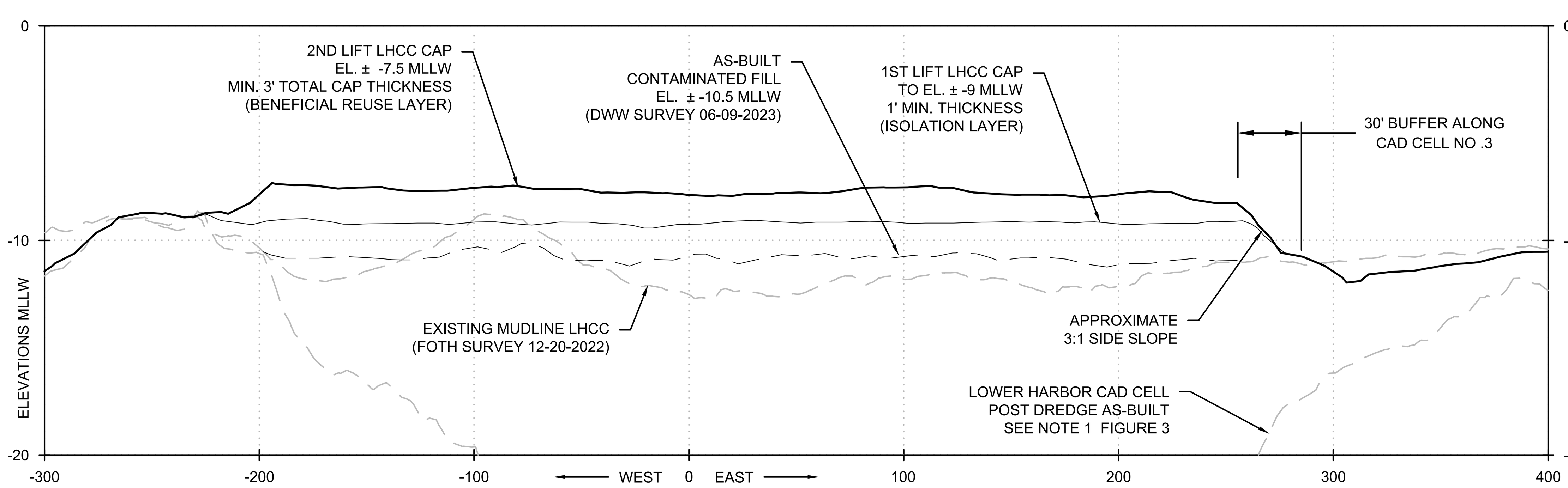
SHEET NUMBER
FIGURE 3



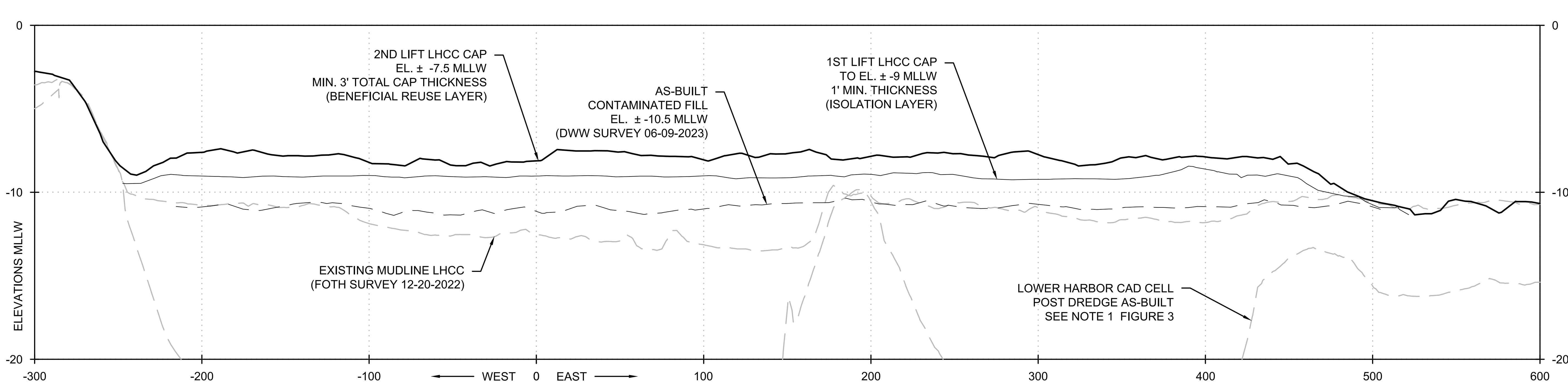
STA 2+00
LOWER HARBOR CAD CELL
PHASE I & II NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



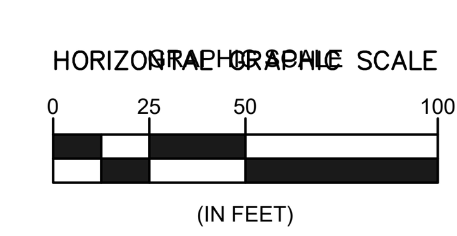
STA 3+00
LOWER HARBOR CAD CELL PHASE I & II
NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'

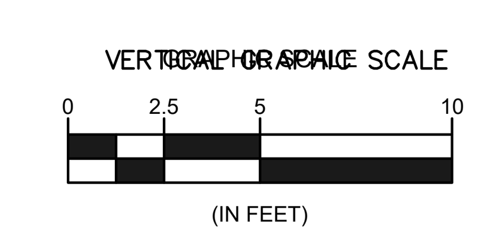


STA 4+00
LOWER HARBOR CAD CELL PHASE I & II
NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



STA 5+00
LOWER HARBOR CAD CELL
PHASE I & II NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'





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NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

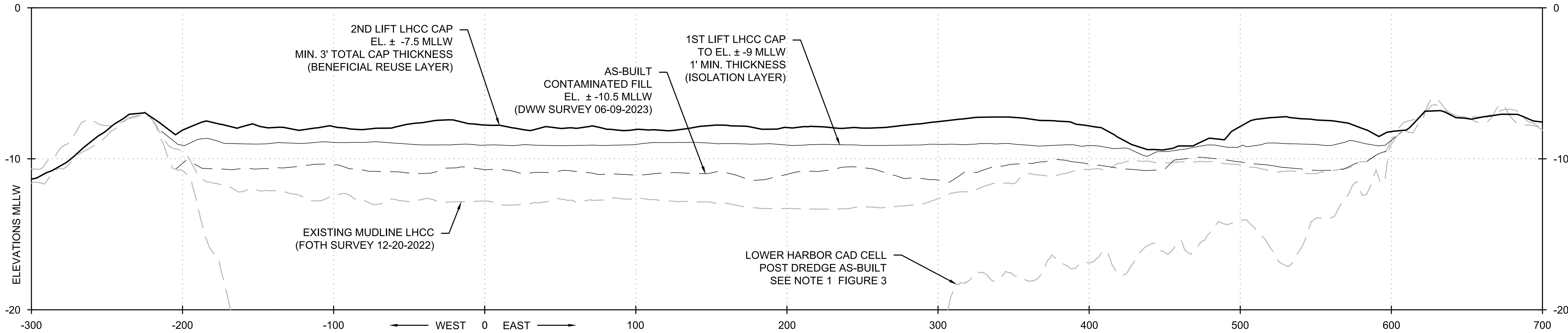
SEAL AND SIGNATURE

REVISIONS	DATES

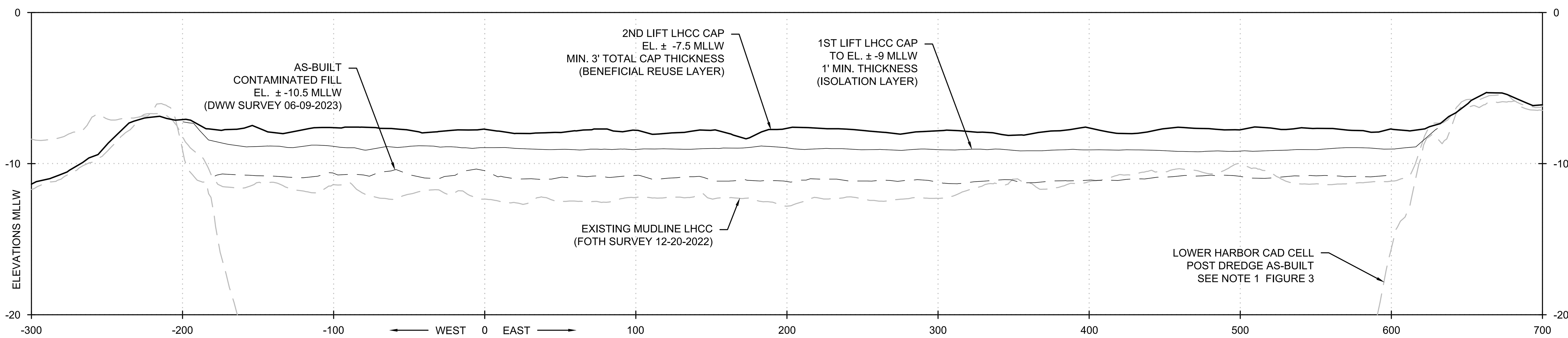
SHEET TITLE
LOWER HARBOR CAD CELL PH I & II AS-BUILT CROSS SECTIONS

ISSUANCE

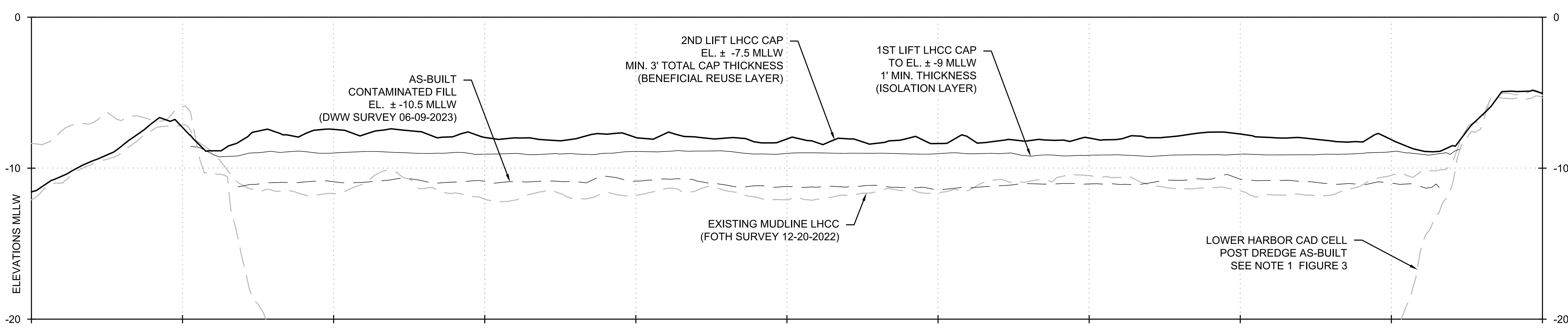
SCALE: AS NOTED	
DRAWN BY: PSR	SHEET NUMBER
CHECKED BY: SEN	
PROJECT NO: 0020N001	FIGURE 4
DATE: 05/17/2024	



STA 6+00
LOWER HARBOR CAD CELL
PHASE I & II NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



STA 7+00
LOWER HARBOR CAD CELL
PHASE I & II NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



STA 8+00
LOWER HARBOR CAD CELL
PHASE I & II NORTH/SOUTH BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'

HORIZONTAL GRAPHIC SCALE
0 25 50 100
(IN FEET)
1 INCH = 50 FEET

VERTICAL GRAPHIC SCALE
0 2.5 5 10
(IN FEET)
1 INCH = 5 FEET

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SEAL AND SIGNATURE

REVISIONS	DATES

SHEET TITLE
LOWER HARBOR
CAD CELL PH I & II
AS-BUILT
CROSS SECTIONS

ISSUANCE

SCALE
AS NOTED

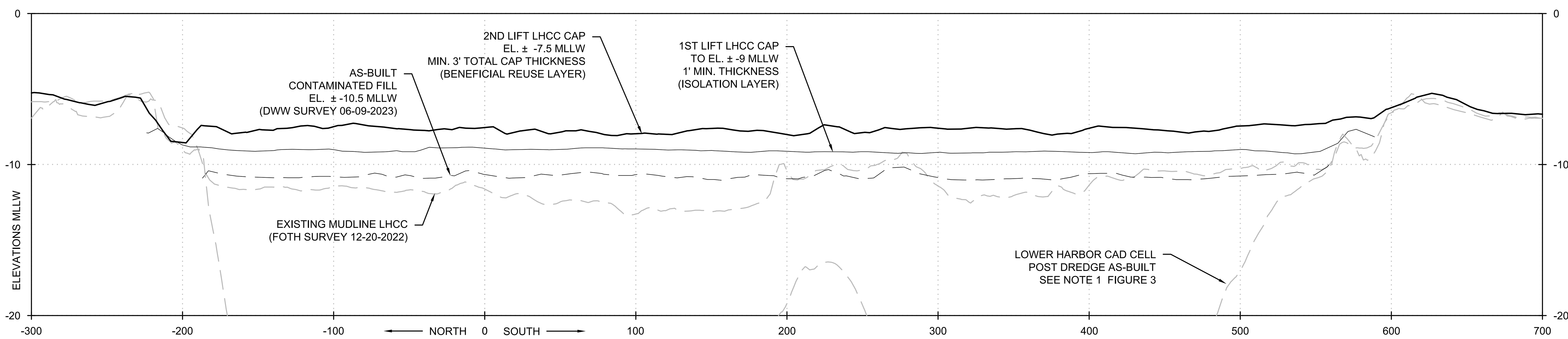
DRAWN BY
PSR

CHECKED BY
SEN

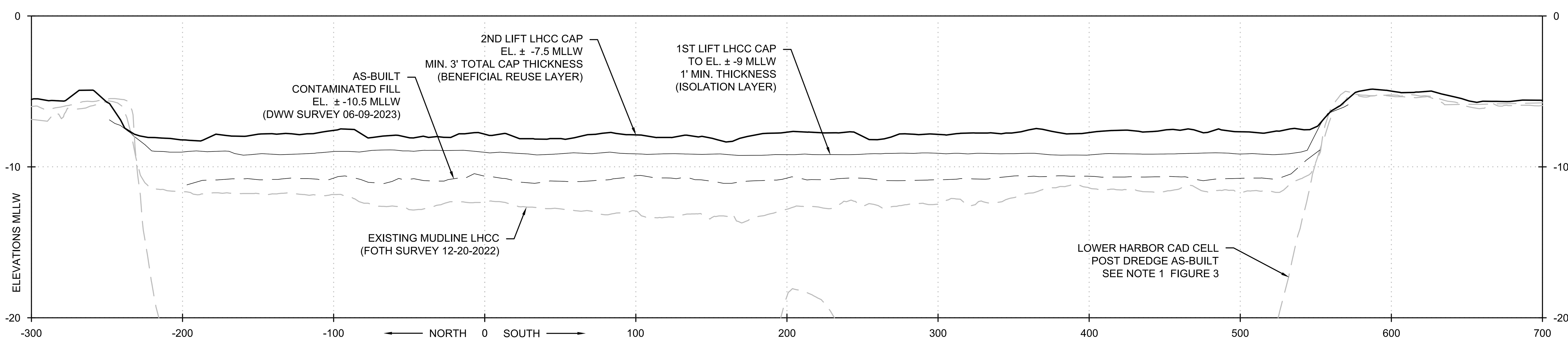
PROJECT NO
0020N001

DATE
05/17/2024

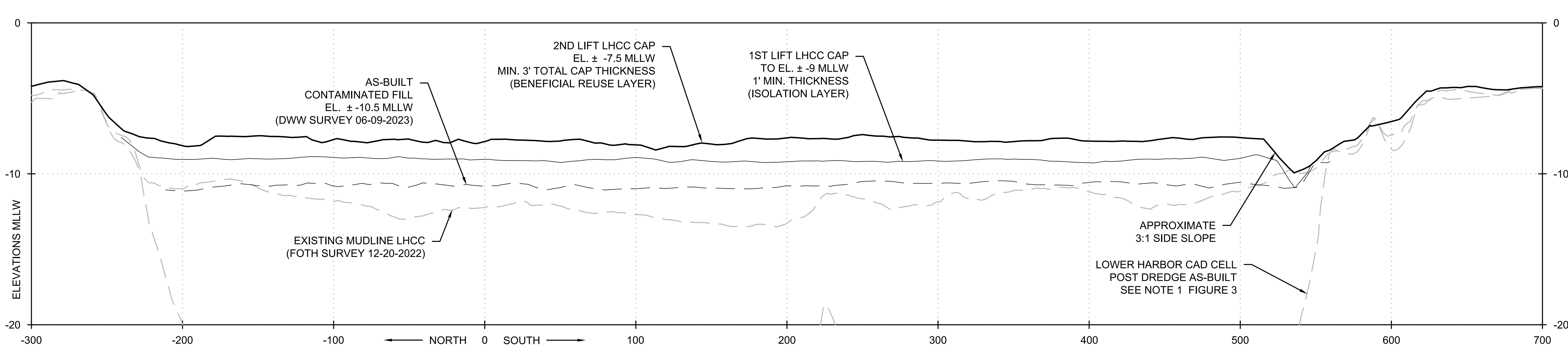
SHEET NUMBER
FIGURE 5



STA 2+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1" = 5'



STA 3+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1" = 5'



STA 4+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE
HORZ. SCALE 1" = 50'
VERT. SCALE 1" = 5'

HORIZONTAL GRAPHIC SCALE
(IN FEET)
1 INCH = 50 FEET

VERTICAL GRAPHIC SCALE
(IN FEET)
1 INCH = 5 FEET

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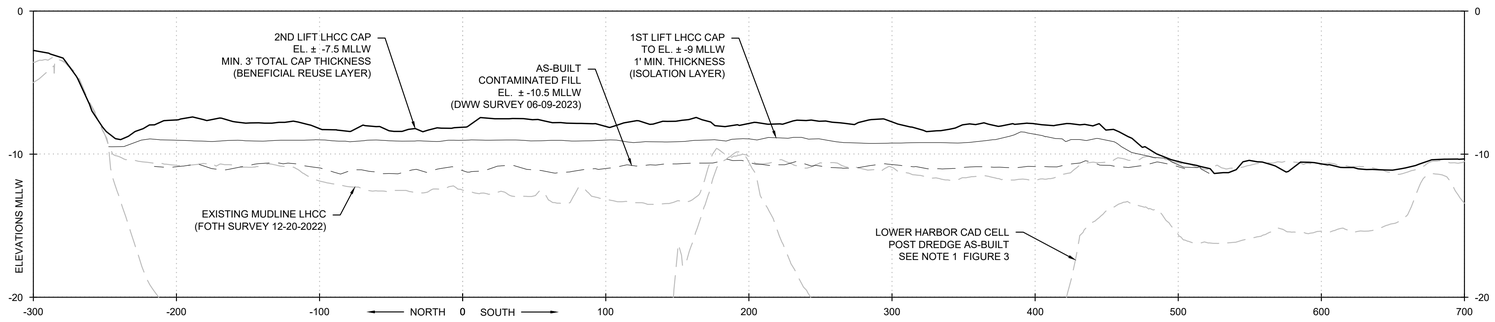
REVISIONS	DATES

SHEET TITLE
LOWER HARBOR
CAD CELL PH I & II
AS-BUILT
CROSS SECTIONS

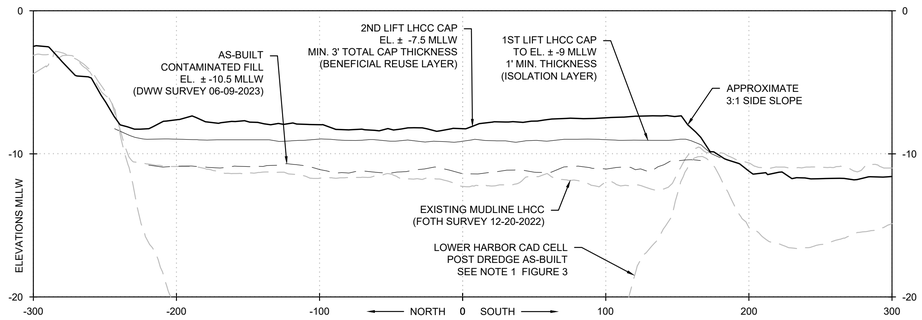
ISSUANCE

SCALE: AS NOTED	
DRAWN BY: PSR	SHEET NUMBER
CHECKED BY: SEN	
PROJECT NO: 0020N001	FIGURE 6
DATE: 05/17/2024	



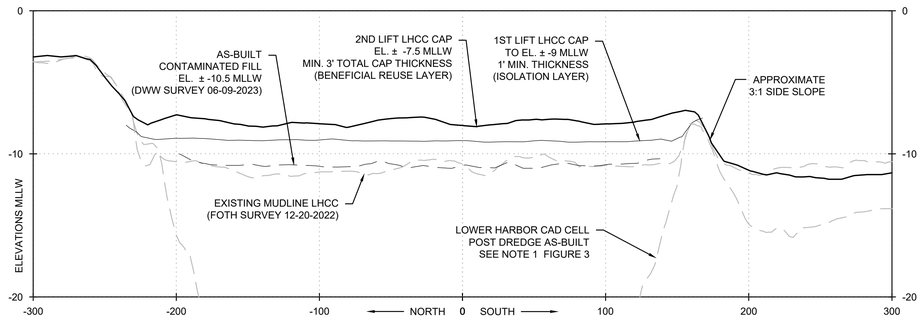
STA 5+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



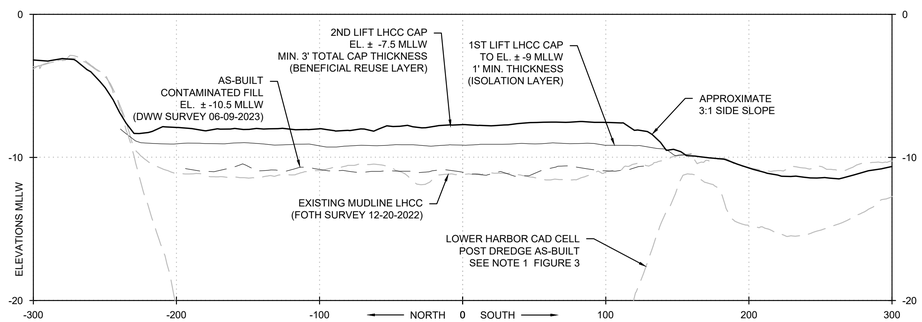
STA 6+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



STA 8+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'



STA 7+00
LOWER HARBOR CAD CELL
PHASE II EAST/WEST BASELINE

HORZ. SCALE 1" = 50'
VERT. SCALE 1' = 5'

HORIZONTAL GRAPHIC SCALE
0 25 50 100
(IN FEET)
1 INCH = 50 FEET

VERTICAL GRAPHIC SCALE
0 2.5 5 10
(IN FEET)
1 INCH = 5 FEET

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NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

SEAL AND SIGNATURE

REVISIONS		DATES

SHEET TITLE
LOWER HARBOR CAD CELL PH I & II AS-BUILT CROSS SECTIONS

ISSUANCE

SCALE
AS NOTED

DRAWN BY: PSR	SHEET NUMBER
CHECKED BY: SEN	**FIGURE 7**
PROJECT NO: 0020N001	
DATE: 05/17/2024	

Appendix A

Isolation Layer Confirmatory Sample Results & Analytical Data

D. W. White Construction, Inc.
NBPA Project NBPA-FY2-001

New Bedford Port Authority
Bottom of CAD Cell No. 4 & N. Term. Exp. Proj.
New Bedford Lower Harbor
NBPA Project No. NBPA-FY22-001

6/13/2023

Submittal Number: 02550-002-00

Specification Section:

02550

Description:

02550-002-00 Sand Cap Material

FOR RECORD

New Bedford Port Authority &
Town of Fairhaven
123 MacArthur Drive
New Bedford, MA 02740

Foth Infrastructure & Environment, LLC
Patrick Rezendes
15 Creek Road
Marion, Massachusetts 02738

D.W. White Construction
Joel Kosberg
867 Middle Road
Acushnet, Massachusetts 02743

PennState Extension

Agricultural Analytical Services Laboratory
The Pennsylvania State University
111 Ag Analytical Svcs Lab
University Park, PA 16802

(814) 863-0841 aaslab@psu.edu www.aasl.psu.edu

Report for:	*Additional copy to:*
Todd Miller D.W. White Construction 867 Middle Rd Acushnet MA 02743	

Sample information

Lab ID:	Sample ID:	Sample type:	Feedstocks:	Sampled:	Received:	Reported:
C15577	OM 1-9		Capping material	5/10/23 2:00 PM TM	5/12/23 11:50 AM PA	5/19/23

COMPOST ANALYSIS REPORT

Compost Test 1A

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.6	——
Soluble Salts (1:5 w:w)	0.22 mmhos/cm	——
Solids	93.3 %	——
Moisture	6.7 %	——
Organic Matter	2.0 %	2.2 %
Total Nitrogen	0.07 %	0.07 %
Carbon	1.1 %	1.2 %
Carbon:Nitrogen Ratio	16.6	16.6

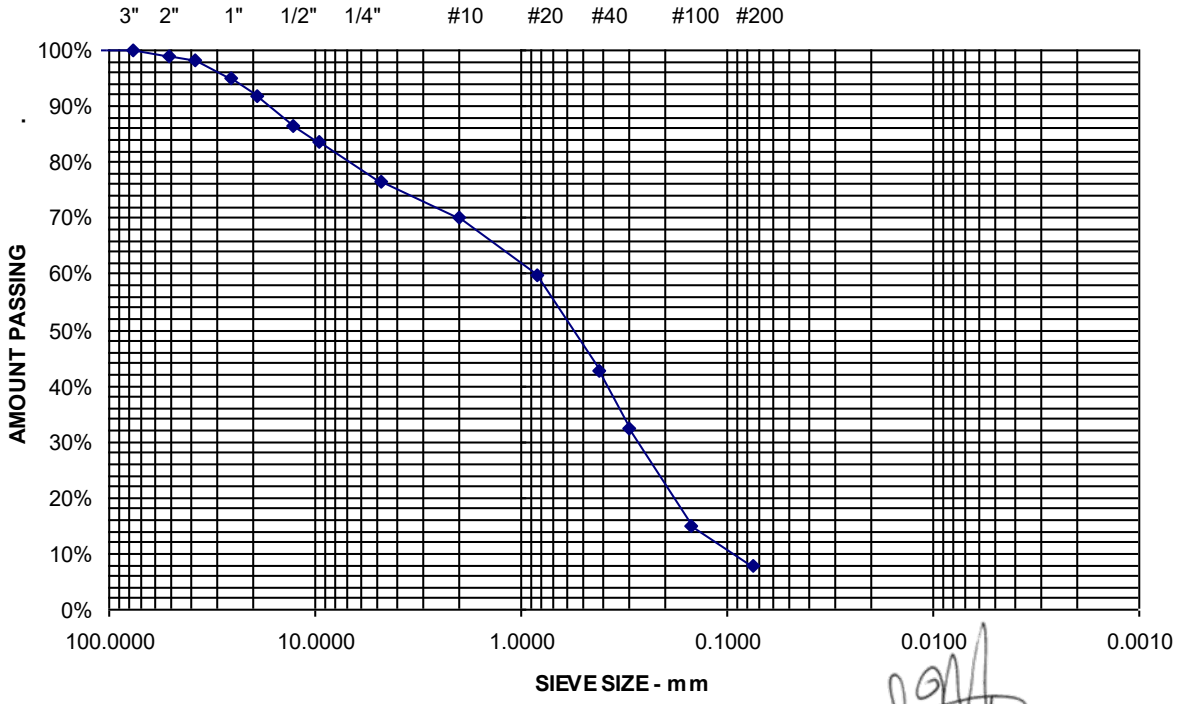
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	NEW BEDFORD MA - STATE PIER - BOTTOM OF CAD CELL #4 AND TERMINAL EXPANSION - CONSTRUCTION MATERIALS TESTING	Project Number	23-0571
Client	D.W. WHITE CONSTRUCTION, INC.	Lab ID	6291T
Material Type	EXISTING MATERIAL 1	Date Received	5/26/2023
Material Source	STA 407 SOUTH BOUND: OPPOSITE CITY PIER; MID POINT OF EXCAVATION	Date Completed	5/30/2023
		Tested By	NATHANIEL GEWANDTER

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	**6"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**99**	
38.1 mm	**1-1/2"**	**98**	
25.0 mm	**1"**	**95**	
19.0 mm	**3/4"**	**92**	
12.5 mm	**1/2"**	**86**	
9.5 mm	**3/8"**	**83**	
4.75 mm	**No. 4**	**76**	
2.00 mm	**No. 10**	**70**	
850 um	**No. 20**	**60**	
425 um	**No. 40**	**43**	
300 um	**No. 50**	**32**	
150 um	**No. 100**	**15**	
75 um	**No. 200**	**7.7**	



Comments

Derek Mello

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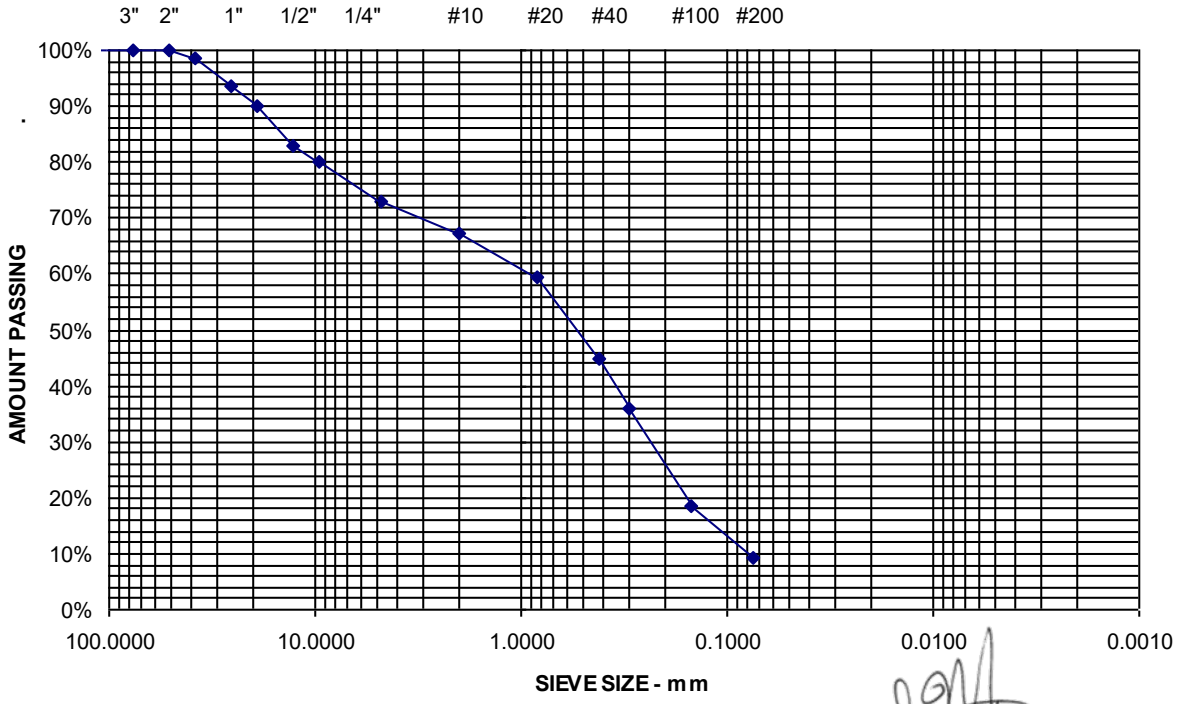
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	NEW BEDFORD MA - STATE PIER - BOTTOM OF CAD CELL #4 AND TERMINAL EXPANSION - CONSTRUCTION MATERIALS TESTING	Project Number	23-0571
Client	D.W. WHITE CONSTRUCTION, INC.	Lab ID	6292T
Material Type	EXISTING MATERIAL 2	Date Received	5/26/2023
Material Source	STA 402 STOCKPILE- SOUTH BOUND DAVOL	Date Completed	5/30/2023
		Tested By	NATHANIEL GEWANDTER

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	**6"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	
38.1 mm	**1-1/2"**	**99**	
25.0 mm	**1"**	**94**	
19.0 mm	**3/4"**	**90**	
12.5 mm	**1/2"**	**83**	
9.5 mm	**3/8"**	**80**	
4.75 mm	**No. 4**	**73**	
2.00 mm	**No. 10**	**67**	
850 um	**No. 20**	**59**	
425 um	**No. 40**	**45**	
300 um	**No. 50**	**36**	
150 um	**No. 100**	**18**	
75 um	**No. 200**	**9.2**	



Comments

Derek Mello

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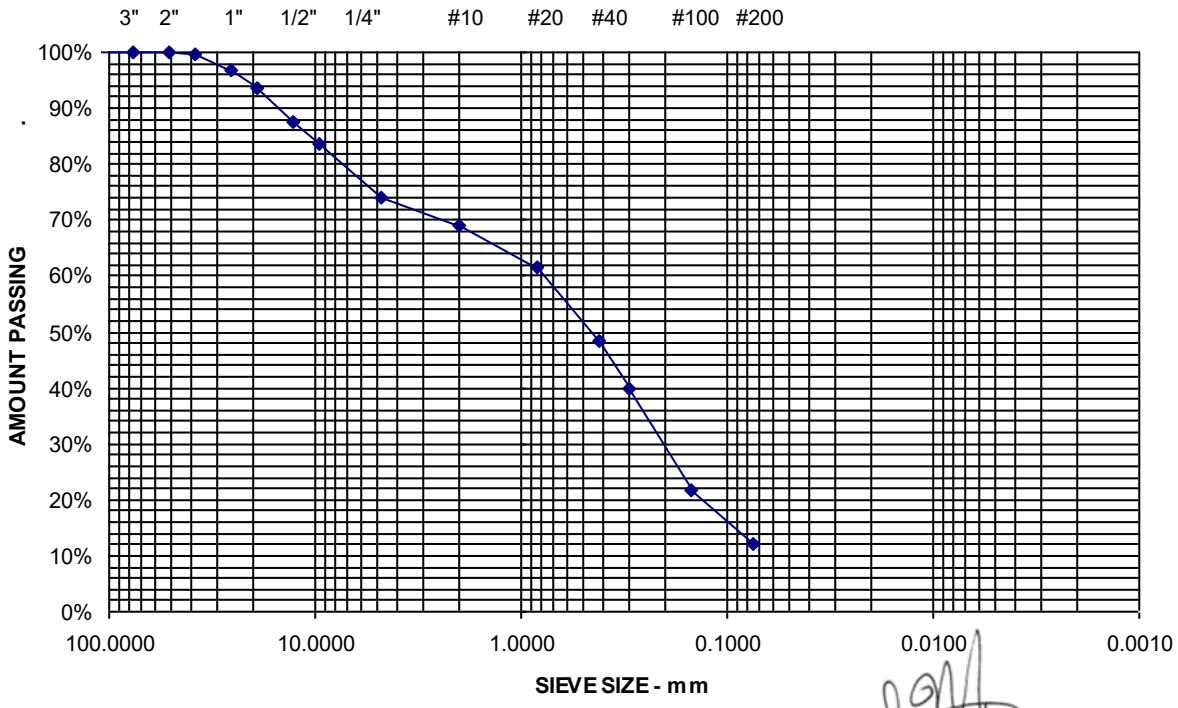
S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

Project Name	NEW BEDFORD MA - STATE PIER - BOTTOM OF CAD CELL #4 AND TERMINAL EXPANSION - CONSTRUCTION MATERIALS TESTING	Project Number	23-0571
Client	D.W. WHITE CONSTRUCTION, INC.	Lab ID	6351T
Material Type	9-1 FILL/COMPOST	Date Received	6/12/2023
Material Source	BLENDED BY CLIENT	Date Completed	6/14/2023
		Tested By	EMMA DENNIS

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	**6"**	**100**	
100 mm	**4"**	**100**	
75 mm	**3"**	**100**	
50 mm	**2"**	**100**	**100**
38.1 mm	**1-1/2"**	**100**	
25.0 mm	**1"**	**97**	**80 - 100**
19.0 mm	**3/4"**	**94**	
12.5 mm	**1/2"**	**88**	**65 - 100**
9.5 mm	**3/8"**	**84**	
4.75 mm	**No. 4**	**74**	**40 - 100**
2.00 mm	**No. 10**	**69**	
850 um	**No. 20**	**62**	**20 - 100**
425 um	**No. 40**	**48**	**10 - 70**
300 um	**No. 50**	**40**	
150 um	**No. 100**	**22**	**0 - 30**
75 um	**No. 200**	**12.2**	**0.0 - 15.0**



Comments

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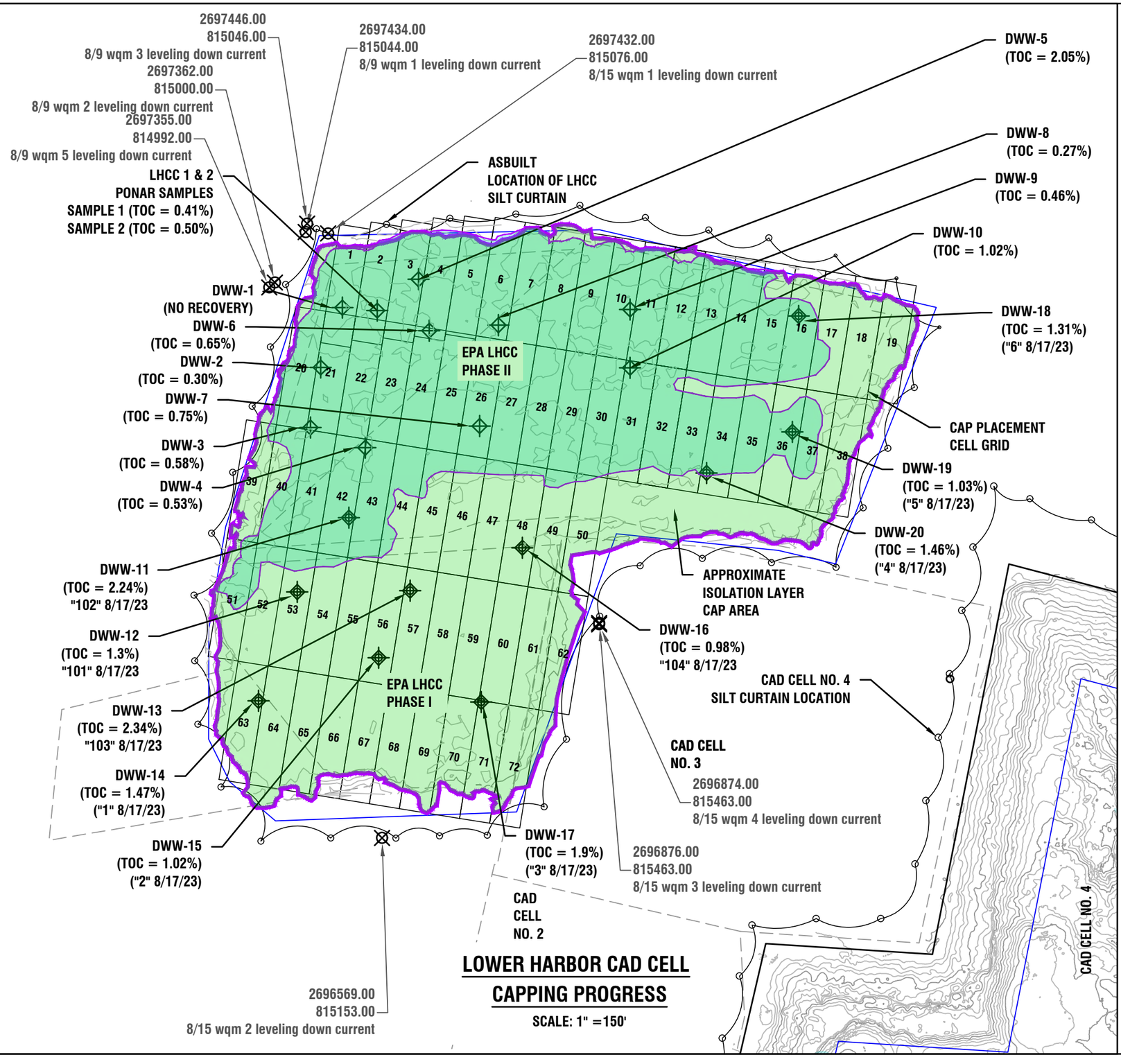

LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

- AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL
- APPROXIMATE LIMIT OF LHCC AREAS
- WATER QUALITY MONITORING TARGET
- ISOLATION LAYER SAMPLE LOCATION (TOC RESULTS)
- PREVIOUSLY CAPPED AREA
- AREA CAPPED THIS PERIOD
- APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	09/1/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3

CERTIFICATE OF ANALYSIS

Joel Kosberg
DW White Construction
867 Middle Road
Acushnet, MA 02743

RE: New Bedford Cad Cell No. 4 and N Terminal (22317)
ESS Laboratory Work Order Number: 23G0218

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 7:53 pm, Jul 17, 2023

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23G0218

SAMPLE RECEIPT

The following samples were received on July 10, 2023 for the analyses specified on the enclosed Chain of Custody Record.

The cooler temperature was not within the acceptance criteria of ≤6°C.

Lab Number	Sample Name	Matrix	Analysis
23G0218-01	LHCC Capping Sand - 1	Solid	9060
23G0218-02	LHCC Capping Sand - 2	Solid	9060

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23G0218

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23G0218

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC Capping Sand - 1
Date Sampled: 07/10/23 13:15
Percent Solids: N/A

ESS Laboratory Work Order: 23G0218
ESS Laboratory Sample ID: 23G0218-01
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**4160** (473)		9060		1	CCP	07/12/23 18:35	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC Capping Sand - 2
Date Sampled: 07/10/23 13:15
Percent Solids: N/A

ESS Laboratory Work Order: 23G0218
ESS Laboratory Sample ID: 23G0218-02
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**5000** (476)		9060		1	CCP	07/12/23 19:05	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23G0218

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DG30766 - General Preparation										
Blank										
Total Organic Carbon (1)	ND	500	mg/kg							
Total Organic Carbon (2)	ND	500	mg/kg							
LCS										
Total Organic Carbon (1)	9960	500	mg/kg	10010		100	80-120			
Total Organic Carbon (2)	10200	500	mg/kg	10010		101	80-120			
LCS Dup										
Total Organic Carbon (1)	10300	500	mg/kg	10010		103	80-120	3	25	
Total Organic Carbon (2)	9970	500	mg/kg	10010		100	80-120	2	25	

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23G0218

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23G0218

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: DW White Construction - TB/KPB

Shipped/Delivered Via: Client

ESS Project ID: 23G0218
Date Received: 7/10/2023
Project Due Date: 7/17/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 23.8 Iced with: None
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

Per Client → randomly picked one jar & called it Sample 02
m 7/10/23

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	451035	Yes	N/A	Yes	Other Glass	NP	
2	~~451036~~ 451085	Yes	N/A	Yes	Other Glass	NP	

m 7/10/23

2nd Review

Were all containers scanned into storage/lab? Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Davis Date & Time: 7/10/23 1754
Reviewed By: Date & Time: 7/10/23 1733

CHAIN OF CUSTODY

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 230218. Page 1 of 1

Turn Time (Days) ☐ > 5 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA **Criteria:** Per Contract Specs

Is this project for any of the following?:
☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☐ Limit Checker ☐ State Forms ☐ EQuIS
☐ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: D.W.White Construction Inc
Address: 867 Middle Rd, Acushnet, 02743
Phone: office 5087638868 Todd's cell 5089892739
Email Distribution List: Jkosberg@dwwhite.com ToddMiller@dwwhite.com

PROJECT INFORMATION

Project Name: New Bedford Cad Cell #4 & N Terminal
Project Location: 40 Hervey Tichon Ave New Bedford
Project Number: 22317
Project Manager: Joel Kosberg
Bill to: D.W.White Construction
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Total Organic Carbon	Total Number of Bottles
1	7/10/23	13:15		S	LHCC Capping Sand-1	X	
2	7/10/23	13:15		S	LHCC Capping Sand-2	X	
				TO			
				7/10/23	7/10/23		

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by : Chuck Morse

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 23.8 no ice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Ryan a Yeaw	7/10/23	3:16pm					

CERTIFICATE OF ANALYSIS

Joel Kosberg
DW White Construction
867 Middle Road
Acushnet, MA 02743

RE: New Bedford Cad Cell No. 4 and N Terminal (22317)
ESS Laboratory Work Order Number: 23H0692

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:34 pm, Aug 28, 2023

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0692

SAMPLE RECEIPT

The following samples were received on August 18, 2023 for the analyses specified on the enclosed Chain of Custody Record.

The cooler temperature was not within the acceptance criteria of ≤6°C.

Lab Number	Sample Name	Matrix	Analysis
23H0692-01	LHCC-1	Solid	9060
23H0692-02	LHCC-2	Solid	9060
23H0692-03	LHCC-3	Solid	9060
23H0692-04	LHCC-4	Solid	9060
23H0692-05	LHCC-5	Solid	9060
23H0692-06	LHCC-6	Solid	9060

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0692

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0692

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-1
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-01
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**14700** (482)		9060		1	CCP	08/25/23 9:12	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-2
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-02
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**10200** (477)		9060		1	CCP	08/25/23 10:02	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-3
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-03
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**19000** (491)		9060		1	CCP	08/25/23 10:19	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-4
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-04
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**14600** (484)		9060		1	CCP	08/25/23 11:35	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-5
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-05
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**10300** (494)		9060		1	CCP	08/25/23 17:32	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-6
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0692
ESS Laboratory Sample ID: 23H0692-06
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**13100** (480)		9060		1	CCP	08/25/23 12:09	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0692

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DH32249 - General Preparation										
Blank										
Total Organic Carbon (1)	ND	500	mg/kg							
Total Organic Carbon (2)	ND	500	mg/kg							
LCS										
Total Organic Carbon (1)	9630	500	mg/kg	10010		96	80-120			
Total Organic Carbon (2)	9510	500	mg/kg	10010		95	80-120			
LCS Dup										
Total Organic Carbon (1)	9700	500	mg/kg	10010		97	80-120	0.7	25	
Total Organic Carbon (2)	9660	500	mg/kg	10010		97	80-120	2	25	

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0692

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23H0692

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: DW White Construction - TB/KPB

Shipped/Delivered Via: ~~ESS Courier~~ Client 8/14/23

ESS Project ID: 23H0692
Date Received: 8/18/2023
Project Due Date: 8/22/2023
Days for Project: 2 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 21 Iced with: ~~Ice~~ Notice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / ~~No~~
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

Ice cooling media above bc

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	464755	Yes	N/A	Yes	Other Glass	NP	
2	464756	Yes	N/A	Yes	Other Glass	NP	
3	464757	Yes	N/A	Yes	Other Glass	NP	
4	464758	Yes	N/A	Yes	Other Glass	NP	
5	464759	Yes	N/A	Yes	Other Glass	NP	
6	464760	Yes	N/A	Yes	Other Glass	NP	

2nd Review
Were all containers scanned into storage/lab? Initials: [illegible] Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [illegible] Date & Time: 8/18/23 9:53
Reviewed

ESS Laboratory Sample and Cooler Receipt Checklist

Client: DW White Construction - TB/KPB

By: [signature]

ESS Project ID: 23H0692

Date Received: 8/18/2023

Date & Time: 8/18/23 1017

ESS LABORATORY

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 23H0692 | Page 1 of 1

Turn Time (Days) ☐ > 5 ☐ 5 ☐ 4 ☐ 3 ☒ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: Per Contract Specs

Is this project for any of the following?:
☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☐ Limit Checker ☐ State Forms ☐ EQuIS
☐ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: D.W.White Construction Inc
Address: 867 Middle Rd, Acushnet, 02743
Phone: office 5087638868 Todd's cell 5089892739
Email Distribution List: Jkosberg@dwwhite.com ToddMiller@dwwhite.com

PROJECT INFORMATION

Project Name: New Bedford Cad Cell #4 & N Terminal
Project Location: 40 Hervey Tichon Ave New Bedford
Project Number: 22317
Project Manager: Joel Kosberg
Bill to: D.W.White Construction
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	TOC	Total Organic Carbon	Total Number of Bottles
1	8/17/23	7:35am			LHCC 1		X	
2					LHCC 2		X	
3					LHCC 3		X	
4					LHCC 4		X	
5					LHCC 5		X	
6					LHCC 6		X	

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by : Chuck Morse

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 21 notice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Susan Tosi	8/18/23	9:13am					
Relinquished by (Signature)	**Date**	**Time**	**Received by (Signature)**	**Relinquished by (Signature)**	**Date**	**Time**	**Received by (Signature)**

CERTIFICATE OF ANALYSIS

Joel Kosberg
DW White Construction
867 Middle Road
Acushnet, MA 02743

RE: New Bedford Cad Cell No. 4 and N Terminal (22317)
ESS Laboratory Work Order Number: 23H0693

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:22 pm, Aug 24, 2023

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23H0693

SAMPLE RECEIPT

The following samples were received on August 18, 2023 for the analyses specified on the enclosed Chain of Custody Record.

The cooler temperature was not within the acceptance criteria of ≤6°C.

Lab Number	Sample Name	Matrix	Analysis
23H0693-01	LHCC-101	Solid	9060
23H0693-02	LHCC-102	Solid	9060
23H0693-03	LHCC-103	Solid	9060
23H0693-04	LHCC-104	Solid	9060

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0693

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0693

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-101
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0693
ESS Laboratory Sample ID: 23H0693-01
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**13000** (483)		9060		1	CCP	08/23/23 15:12	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-102
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0693
ESS Laboratory Sample ID: 23H0693-02
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**22400** (486)		9060		1	CCP	08/23/23 15:28	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-103
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0693
ESS Laboratory Sample ID: 23H0693-03
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**23400** (482)		9060		1	CCP	08/23/23 15:45	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal
Client Sample ID: LHCC-104
Date Sampled: 08/17/23 07:30
Percent Solids: N/A

ESS Laboratory Work Order: 23H0693
ESS Laboratory Sample ID: 23H0693-04
Sample Matrix: Solid

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Organic Carbon (Average)	**9810** (475)		9060		1	CCP	08/23/23 16:02	mg/kg dry	[CALC]

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0693

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DH31630 - General Preparation										
Blank										
Total Organic Carbon (1)	ND	500	mg/kg							
Total Organic Carbon (2)	ND	500	mg/kg							
LCS										
Total Organic Carbon (1)	9410	500	mg/kg	10010		94	80-120			
Total Organic Carbon (2)	9630	500	mg/kg	10010		96	80-120			
LCS Dup										
Total Organic Carbon (1)	9980	500	mg/kg	10010		100	80-120	6	25	
Total Organic Carbon (2)	9640	500	mg/kg	10010		96	80-120	0.2	25	

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal ESS Laboratory Work Order: 23H0693

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: DW White Construction
Client Project ID: New Bedford Cad Cell No. 4 and N Terminal

ESS Laboratory Work Order: 23H0693

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: DW White Construction - TB/KPB

Shipped/Delivered Via: ~~ESS Courier~~ Client - GA 8/18

ESS Project ID: 23H0693
Date Received: 8/18/2023
Project Due Date: 8/22/2023
Days for Project: 2 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 21 Iced with: Ice Notice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** ~~Yes~~ / No / NA
10. Were any analyses received outside of hold time? Yes / ~~No~~

11. Any Subcontracting needed? Yes / ~~No~~
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / ~~No~~
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / ~~No~~
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:
No cooling media above 6°C

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	464761	Yes	N/A	Yes	Other Glass	NP	
2	464762	Yes	N/A	Yes	Other Glass	NP	
3	464763	Yes	N/A	Yes	Other Glass	NP	
4	464764	Yes	N/A	Yes	Other Glass	NP	

2nd Review

Were all containers scanned into storage/lab? Initials: C
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 8/18/23 9:54
Reviewed By: Date & Time: 8/18/23 1014

CHAIN OF CUSTODY

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 2306693 | Page 1 of 1

Turn Time (Days) ☐ > 5 ☐ 5 ☐ 4 ☐ 3 ☒ 2 ☐ 1 ☐ Same Day

Regulatory State: MA **Criteria:** Per Contract Specs

Is this project for any of the following?:
☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☐ Limit Checker ☐ State Forms ☐ EQuIS
☐ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: D.W.White Construction Inc
Address: 867 Middle Rd, Acushnet, 02743
Phone: office 5087638868 Todd's cell 5089892739
Email Distribution List: Jkosberg@dwwhite.com ToddMiller@dwwhite.com

PROJECT INFORMATION

Project Name: New Bedford Cad Cell #4 & N Terminal
Project Location: 40 Hervey Tichon Ave New Bedford
Project Number: 22317
Project Manager: Joel Kosberg
Bill to: D.W.White Construction
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	TOC	Total Organic Carbon														Total Number of Bottles
1	8/17/23	7:30am			LHCC 101		X														
2	↓	↓			LHCC 102		X														
3					LHCC 103		X														
4					LHCC 104		X														

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by : Chuck Morse

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 21 nSec

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

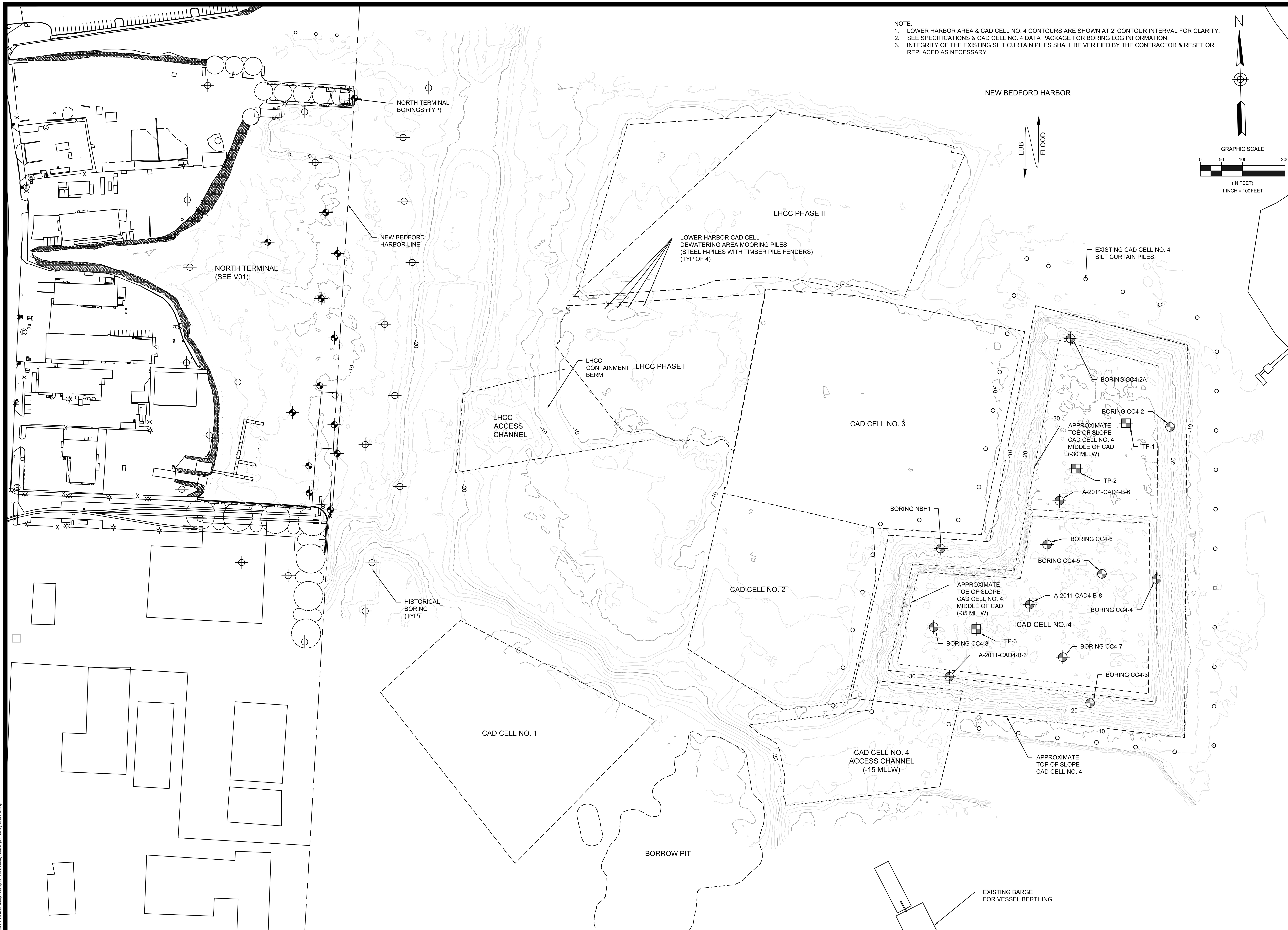
Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Ryan A Jain	8/18/23	9:13am					
Relinquished by (Signature)	**Date**	**Time**	**Received by (Signature)**	**Relinquished by (Signature)**	**Date**	**Time**	**Received by (Signature)**

Appendix B

Beneficial Reuse Layer Geotechnical Data

DRAFT - NOT FOR CONSTRUCTION



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS HE/HER IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. (USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING)

CONSULTANT

BOTTOM OF CAD CELL NO.4 & NORTH TERMINAL EXPANSION PROJECT
ISSUED FOR BID DRAWINGS
123 MACARTHUR DRIVE
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

SEAL AND SIGNATURE

REVISIONS

SHEET TITLE
CAD CELL NO .4
EXISTING
CONDITIONS PLAN

ISSUANCE

SCALE
1" = 60'
DRAWN BY
PSR
CHECKED BY
SEN
PROJECT NO
0020N001
DATE
11/25/2020
SHEET NUMBER
V08

Date:	12/13/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815210
Location: New Bedford Harbor		North of Popes Island	Y: 2697039
Elevation at grade: -4.2	Datum:	MLLW	Boring No: A2011-CAD4-B-1
Casing Type: Steel	Boring Depth:	-88	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0		24.0"	2,1,3,3	3" Black, organic SILT, some shell hash, some fine sand.	
2		6.0"		3" Dark grey, fine to medium SAND and organic SILT, trace shell hash.	-6.2
4		24.0" 12.0"	6,23,16, 12	Light grey, fine SAND, little inorganic SILT.	-8.2
6		24.0" 15.0"	14,8,9,12	Grey, inorganic SILT.	-10.2
8		24.0" 8.0"	6,6,4,6	Grey, inorganic SILT and fine SAND.	-12.2
10		24.0" 16.0"	5,4,10,24	Grey, inorganic SILT, little fine sand.	-14.2
12		24.0" 9.0"	6,4,7,10	Grey, inorganic SILT, little fine sand.	-16.2
14		24.0" 8.0"	7,4,5,5	Grey, inorganic SILT, little fine sand.	-18.2
16		24.0" 11.0"	6,5,5,7	Grey, inorganic SILT, little fine sand.	-20.2
18		24.0" 18.0"	6,4,4,6	Tan grey, SILT, little fine sand, grades to tan grey, fine SAND, little silt.	-22.2
20		24.0" 12.0"	9,9,12,9	Tan, fine SAND, grades to tan, SILT, little to some fine sand.	-24.2
22		24.0" 12.0"	4,6,6,9	Tan, fine SAND, little silt.	-26.2
24		24.0" 12.0"	9,9,12,9	Tan, fine SAND, little silt.	-28.2
26		24.0" 13.0"	8,5,7,7	Tan grey, SILT.	-30.2

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/13/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815210
Location: New Bedford Harbor		North of Popes Island	Y: 2697039
Elevation at grade: -4.2	Datum:	MLLW	Boring No: A2011-CAD4-B-1
Casing Type: Steel	Boring Depth:	-88	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 9.0"	3,3,5,9	Tan grey, SILT.	-32.2
30		24.0" 7.0"	7,4,6,8	Tan grey, SILT, little fine sand.	-34.2
32		24.0" 9.0"	8,9,14,14	Interbedded grey and tan, fine SAND and SILT.	-36.2
34		24.0" 15.0"	6,8,8,11	Interbedded grey and tan, fine SAND grades to SILT.	-38.2
36		24.0" 13.0"	2,2,5,8	Interbedded grey and tan, fine SAND grades to SILT.	-40.2
38		24.0" 12.0"	1,1,8,12	Interbedded grey and tan, fine SAND grades to SILT.	-42.2
40		24.0" 16.0"	6,6,8,6	2" Tan, fine SAND. 14" Grey, fine SAND, grades to SILT.	-44.2
42		24.0" 12.0"	3,5,5,7	Grey, fine SAND, little SILT.	-46.2
44		24.0" 9.0"	9,12,11, 11	Tan grey, SILT, some fine sand.	-48.2
46		24.0" 14.0"	18,16,18, 18	Grey, SILT.	-50.2
48		24.0" 12.0"	9,11,11,8	Grey, SILT, little fine sand.	-52.2
49		12.0" 6.0"	19,*	Grey, SILT, little fine sand. *Casing advancing with split spoon - casing dropped 4' on removal of split spoon.	-53.2
52		24.0" 11.0"	wor,wor, wor, 21	Grey, SILT - Casing penetrated through interval, split spoon driven inside of casing to collect sample.	-56.2

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/13/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815210
Location: New Bedford Harbor		North of Popes Island	Y: 2697039
Elevation at grade: -4.2	Datum:	MLLW	Boring No: A2011-CAD4-B-1
Casing Type: Steel	Boring Depth:	-88	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
52		24.0"	8,17,17, 10	7" Grey, fine SAND, little silt.	
54		9.0"		2" Grey fine to coarse SAND, some fine to coarse gravel, little silt.	-58.2
56		24.0" 2.0"	18,22,16, 23	Grey, fine to coarse GRAVEL, little silt, little fine to coarse sand - TILL.	-60.2
58		24.0" 0.0"	20,23,16, 33	Coarse GRAVEL plugging nose of spoon - probable TILL.	-62.2
60		24.0" 13.0"	28,33,72, 33	Grey, SILT, some fine to coarse sand, some fine to coarse gravel - TILL.	-64.2
62		24.0" 4.0"	20,25,17, 44	Grey, SILT, some fine to coarse sand, some fine to coarse gravel - TILL.	-66.2
64		24.0" 1.0"	8,13,18,2 3	Grey, fine to coarse GRAVEL, some fine to coarse sand, some silt - TILL.	-68.2
66		3.0" 1.5"	150/3"	Coarse GRAVEL. Obstruction encountered - drilled with roller bit through 6" cobble.	-70.2
68		24.0" 0.0"	30,21,33, 46	No Recovery	-72.2
70		24.0" 3.0"	46,26,33, 38	Grey, fine to coarse SAND, some silt, some fine to coarse gravel - TILL.	-74.2
72		24.0" 0.0"	33,26,27, 42	No Recovery	-76.2
72.4		5.0" 0.0"	150/5"	Grey, fine to coarse SAND, some silt, some fine to coarse gravel - TILL.	-76.6
73.8				Obstruction Encountered - 76.6' MLLW. Advanced roller bit to 78.0' MLLW and began coring.	-78.0
78.8	85%	5' 3.7'	5-4-5-4-8	Rock Core #1 -78.0 to -83.0 MLLW Grey, moderately fractured, GRANITE, slight gneissic banding. Pink granitic PEGMATITE 1.9'-2.3'.	-83.0

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/13/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815210
Location: New Bedford Harbor		North of Popes Island	Y: 2697039
Elevation at grade: -4.2	Datum:	MLLW	Boring No: A2011-CAD4-B-1
Casing Type: Steel	Boring Depth:	-88	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 4 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
83.1	0%	4.3' 0.6'		Rock Core #2 -83.0 to -87.3 MLLW Grey, intensely fractured, GRANITE. Drill Rig stalling during core run - no drill times recorded.	-87.3
83.8	77%	0.7' 5.1'		Rock Core #3 -87.3 to -88.0 MLLW Grey, intensely to moderately fractured, GRANITE. Drill Rig stalling during core run - no drill times recorded.	-88.0

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/19/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815567
Location: New Bedford Harbor		North of Popes Island	Y: 2697300
Elevation at grade: -3.7	Datum:	MLLW	Boring No: A-2011-CAD4-B-2
Casing Type: Steel	Boring Depth:	-82.7	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 12.0"	1, 1, 2, 2	Black, organic SILT, some fine sand, little silt, trace shell hash.	-3.7
4		24.0" 9.0"	1, 1, 1, 2	Gray brown, fine SAND, trace silt.	-7.7
6		24.0" 10.5"	1, 2, 4, 5	Brown, fine SAND, trace shell hash.	-9.7
8		24.0" 9.5"	3, 7, 11, 17	Brown, fine to medium SAND.	-11.7
10		24.0" 10.0"	4, 4, 8, 8	Brown, fine to medium SAND.	-13.7
12		24.0" 9.0"	2, 5, 11, 12	Brown, fine to coarse SAND, trace silt.	-15.7
14		21.0" 2.0"	12, 23, 30, 130-3	Brown, fine to coarse SAND, trace silt.	-17.7
16		24.0" 17.0"	39, 45, 39, 29	Light brown, fine to coarse SAND.	-19.7
18		24.0" 10.0"	23, 12, 19, 16	Light brown, fine to coarse SAND.	-21.7
20		24.0" 5.5"	11, 9, 11, 17	Light brown, fine to coarse SAND.	-23.7
22		24.0" 11.0"	12, 20, 37, 17	Light brown, fine to coarse SAND.	-25.7
24		24.0" 8.0"	15, 12, 10, 12,	Light brown, fine to coarse SAND.	-27.7
26		24.0" 5.0"	1, 3, 6, 7	Light brown, fine to coarse SAND.	-29.7

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/19/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815567
Location: New Bedford Harbor		North of Popes Island	Y: 2697300
Elevation at grade: -3.7	Datum:	MLLW	Boring No: A-2011-CAD4-B-2
Casing Type: Steel	Boring Depth:	-82.7	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 12.0"	5, 6, 5, 5	Light brown, very fine to coarse SAND.	-29.7
30		24.0" 13.0"	1, 2, 4, 3	Light brown, very fine to coarse SAND.	-33.7
32		24.0" 13.0"	5, 14, 15, 13	Light brown reddish, fine to coarse SAND.	-35.7
34		24.0" 4.0"	16, 18, 11, 13	Light brown reddish fine to coarse SAND, some fine gravel.	-37.7
36		24.0" 8.0"	18, 15, 27, 40	Brown red, fine to coarse SAND and fine to coarse GRAVEL.	-39.7
38		24.0" 8.0"	50, 15, 26, 21	Dark brown, fine to coarse SAND, some medium gravel.	-41.7
40		24.0" 7.5"	90, 16, 10, 17	Dark brown, fine to coarse SAND, trace coarse gravel.	-43.7
42		24.0" 7.0"	20, 24, 15, 29	Light brown, fine to coarse SAND, trace gravel.	-45.7
44		20.0" 8.5"	32, 31, 47, 100-4	Gray, fine to coarse SAND, some gravel.	-47.7
44.25		3.0" 0.0"	120-3	Obstruction encountered, no recovery.	-48.0
48		0.0" 0.0"	100-0"	Advanced with roller bit through coarse gravel to -51.7' MLLW.	-51.7
50		0.0" 0.0"	100-0"	Advanced with roller bit through coarse gravel to 53.7' MLLW.	-53.7
51.1		11.0" 0.0"	50,120-5	Obstruction encountered at 54.8' MLLW, no recovery, roller bit to -55.7' MLLW.	-54.8

Notes/ Comments:

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2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/19/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815567
Location: New Bedford Harbor		North of Popes Island	Y: 2697300
Elevation at grade: -3.7	Datum:	MLLW	Boring No: A-2011-CAD4-B-2
Casing Type: Steel	Boring Depth:	-82.7	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
52 53		12" 4.5"	73, 100-6"	Gray/black, fine to coarse SAND, some gravel. Obstruction encountered at -56.7' MLLW, advanced with roller bit to -57.7' MLLW.	-56.7
54.75		9.0" 8.0"	15, 120-3"	Light gray, fine to coarse SAND and GRAVEL.	-58.5
56.2		2.0" 0.0"	120-2"	Obstruction Encountered: 59.9' MLLW.	-59.9
59				Advanced roller bit through cobbles and boulders to -62.7' MLLW and began core run.	-62.7
64		5' 4.8'	8-8-8-8-8	Rock Core #1: -62.7' to -67.7' MLLW Grey, moderately fractured, Granitic GNEISS.	-67.7
69		5' 5'	9-9-9-9-9	Rock Core #2: -67.7 to -72.7' MLLW Grey, moderately fractured, Granitic GNEISS.	-72.7

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/23/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815854
Location: New Bedford Harbor		North of Popes Island	Y: 2696087
Elevation at grade: -6.7	Datum:	MLLW	Boring No: A2011-CAD4-B-3
Casing Type: Steel	Boring Depth:	-94.3	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 7.0"	WOR/24"	Black, organic SILT.	-8.7
4		24.0" 2.0"	WOH/24"	Black, organic SILT.	-10.7
6		24.0" 20.0"	WOH/24"	Black, organic SILT.	-12.7
8		24.0" 16.0"	1, WOH, 1, WOH	Black, organic SILT, grades to dark grey, organic SILT, trace shell hash.	-14.7
10		24.0" 21.0"	WOR/24"	Dark grey, organic SILT, trace shell hash.	-16.7
12		24.0" 7.0"	WOR/24"	Dark grey, organic SILT, trace shell hash.	-18.7
14		24.0" 19.0"	WOR/12" WOH/12"	Dark grey, organic SILT.	-20.7
16		24.0" 24.0"	WOR/12" WOH/12"	Dark grey, organic SILT.	-22.7
18		24.0" 12.0"	WOR/24"	Dark grey, organic SILT.	-24.7
20		24.0" 12.0"	WOR/24"	Dark grey, organic SILT.	-26.7
22		24.0" 9.0"	WOR/12" 3,2	Dark brown, PEAT and organic SILT	-28.7
24		24.0" 24.0"	WOR,2,2, 1	Dark brown to black, organic SILT, trace peat.	-30.7
26		24.0" 20.0"	WOR/12" 3,2	Dark grey, organic SILT, some plant fibers - PEAT.	-32.7

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/23/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815854
Location: New Bedford Harbor		North of Popes Island	Y: 2696087
Elevation at grade: -6.7	Datum:	MLLW	Boring No: A2011-CAD4-B-3
Casing Type: Steel	Boring Depth:	-94.3	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 3.0"	8,9,8,7	Grey, fine SAND, little inorganic silt.	-34.7
30		24.0" 10.0"	8,9,25,45	Grey, fine SAND, trace medium sand.	-36.7
32		24.0" 10.0"	3,4,8,12	Grey, fine SAND.	-38.7
34		24.0" 6.0"	5,8,7,8	Grey, fine SAND.	-40.7
36		24.0" 8.0"	3,4,8,9	Grey, fine SAND.	-42.7
38		24.0" 12.0"	4,6,6,10	Grey, fine to medium SAND.	-44.7
40		24.0" 6.0"	5,6,10,18	Grey, fine to coarse SAND.	-46.7
42		24.0" 2.0"	7,8,8,10	Grey, fine to coarse SAND and fine GRAVEL, trace silt.	-48.7
44		24.0" 9.0"	9,8,8,11	Grey, fine SAND. Grades to fine SAND, some silt.	-50.7
46		24.0" 6.0"	46,41,41, 30	Grey, fine to coarse SAND, trace silt	-52.7
48		24.0" 3.0"	30,28,26, 21	Greenish grey, fine to coarse SAND, trace silt - TILL.	-54.7
50				Obstruction Encountered - advanced with roller-bit to -57.7' MLLW.	-56.7
53		24.0" 0.0"	32,11,15, 23	rock fragment in nose of spoon	-59.7

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/23/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815854
Location: New Bedford Harbor		North of Popes Island	Y: 2696087
Elevation at grade: -6.7	Datum:	MLLW	Boring No: A2011-CAD4-B-3
Casing Type: Steel	Boring Depth:	-94.3	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
53 55		24.0" 4.0"	30,24,29, 46	Greenish grey, fine to coarse SAND, trace fine gravel, trace silt, TILL.	-61.7
57		24.0" 3.0"	28,14,12, 11	Greenish grey, fine to coarse SAND, trace fine gravel, trace silt, TILL.	-63.7
59		24.0" 6.0"	12,16,11, 15	Tan, fine to coarse SAND.	-65.7
61		24.0" 12.0"	52,38,21, 28	Tan, fine to coarse SAND.	-67.7
63		na na	na	Obstruction encountered at -67.7' MLLW. Advanced with roller bit to -69.7' MLLW.	-69.7
65		24.0" 18.0"	11,14,27, 39	Tan, fine to medium SAND, trace silt.	-71.7
67		24.0" 8.0"	12,14,28, 62	Olive green, fine to coarse SAND, trace silt, trace fine gravel, TILL	-73.7
68		na na	NA	Obstruction encountered at -73.7' MLLW. Advanced with roller bit to -74.7' MLLW.	-74.7
70		24.0" 4.0"	19,25,31, 77	Olive green, fine to coarse SAND, trace silt, trace fine gravel - TILL.	-76.7
72		24.0" 12.0"	20,25,30, 30	Olive green, fine to coarse SAND, trace silt, trace fine gravel - TILL.	-78.7
74		24.0" 8.0"	25,37,41, 66	Olive green, fine to coarse SAND, trace silt, trace fine gravel - TILL.	-80.7
75.3		16.0" 5.0"	25,39, 100/4"	Olive green, fine to coarse SAND, trace silt, trace fine gravel - TILL.	-82.0
				Obstruction Encountered - elevation -82.0' MLLW. Advanced roller bit to -84.3' MLLW and began core run.	

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	12/23/2011

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815854
Location: New Bedford Harbor		North of Popes Island	Y: 2696087
Elevation at grade: -6.7	Datum:	MLLW	Boring No: A2011-CAD4-B-3
Casing Type: Steel	Boring Depth:	-94.3	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 4 of 4
Driller: N. Studdard	Log By:	GCD & GAD	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
77.55 82.55	26%	5' 2.9'	8-7-8-7-7	Rock Core #1 -84.3 to -89.3 MLLW Grey, intensely fractured, granitic GNEISS	-89.3
87.55	63%	5' 4.8'	7-7-8-7-7	Rock Core #2 -89.3 to -94.3 MLLW Grey, intensely to moderately fractured, granitic GNEISS	-94.3

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/6/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816005
Location: New Bedford Harbor		North of Popes Island	Y: 2695847
Elevation at grade: -7.2	Datum:	MLLW	Boring No: A-2011-CAD4-B-4
Casing Type: Steel	Boring Depth:	-69.2	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 2.0"	WOR	Black, organic SILT.	-9.2
4		24.0" 8.0"	WOR	Black, organic SILT.	-11.2
6		24.0" 10.0"	WOR	Black, organic SILT.	-13.2
8		24.0" 12.0"	WOR	Black, organic SILT.	-15.2
10		24.0" 12.0"	WOR	Black, organic SILT.	-17.2
12		24.0" 8.0"	WOR	Black/grey, organic SILT.	-19.2
14		24.0" 24.0"	WOR, WOR, 1, 1	Black, organic SILT.	-21.2
16		24.0" 20.0"	WOR, 6, 12, 15	Black, organic SILT, some fine to medium sand.	-23.2
18		24.0" 4.0"	19, 21, 24, 30	Grey, fine to medium SAND.	-25.2
20		24.0" 12.0"	15, 15, 12, 11	Grey, inorganic SILT.	-27.2
22		24.0" 16.0"	6, 7, 14, 16	Grey, inorganic SILT.	-29.2
24		24.0" 19.0"	25, 22, 19, 11	Grey, inorganic SILT.	-31.2
26		24.0" 9.0"	10, 15, 19, 25	Grey, inorganic SILT.	-33.2

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/6/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816005
Location: New Bedford Harbor		North of Popes Island	Y: 2695847
Elevation at grade: -7.2	Datum:	MLLW	Boring No: A-2011-CAD4-B-4
Casing Type: Steel	Boring Depth:	-69.2	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 11.0"	7, 14, 17, 21	Grey, inorganic SILT.	-35.2
30		24.0" 11.0"	19, 24, 25, 30	Grey, inorganic SILT.	-37.2
32		24.0" 11.0"	17, 23, 25, 31	Grey, inorganic SILT.	-39.2
34		24.0" 7.0"	4, 6, 7, 6	Grey, fine to medium SAND.	-41.2
36		NA NA	NA	Obstruction encountered at - 41.2' MLLW. Advanced Roller bit to -43.2 MLLW.	-43.2
38		24.0" 10.0"	21, 13, 16, 25	Grey, fine to coarse SAND - TILL.	-45.2
39		NA NA	NA	Obstruction encountered at --45.2 MLLW, Advanced with roller bit to -46.2 MLLW.	-46.2
41		24.0" 8.0"	30, 24, 21, 11	Grey, fine to coarse SAND, trace gravel - TILL.	-48.2
43		24.0" 6.0"	13, 13, 10, 19	Grey, fine to coarse SAND - TILL.	-50.2
45		24.0" 6.0"	24, 14, 18, 24	Brown, fine to medium SAND - TILL.	-52.2
47		24.0" 4.0"	23, 20, 38, 25	Brown, fine to medium SAND - TILL.	-54.2
49.8		22.0" 4.0"	37, 25, 15, 25/4"	Brown, fine to medium SAND - TILL.	-57.0
52				Obstruction encountered at -57.0 through -59.0 MLLW, advanced with roller bit to -59.2 MLLW and began coring.	-59.2

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/6/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816005
Location: New Bedford Harbor		North of Popes Island	Y: 2695847
Elevation at grade: -7.2	Datum:	MLLW	Boring No: A-2011-CAD4-B-4
Casing Type: Steel	Boring Depth:	-69.2	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
52	76%	5'	8-8-8-8-8	Rock Core #1 -59.2 to -64.2 MLLW	
57		4.5'		Grey, moderate to intensily fractured granitic GNEISS.	-64.2
	80%	5'	8-8-8-8-8	Rock Core #2 -64.2 to -69.2 MLLW	
62		4.6'		Grey, moderate to intensily fractured granitic GNEISS.	-69.2

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/10/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815579
Location: New Bedford Harbor		North of Popes Island	Y: 2697429
Elevation at grade: -6.0	Datum:	MLLW	Boring No: A-2011-CAD4-B-5
Casing Type: Steel	Boring Depth:	-56.0	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 2
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
2		24.0" 12.0"	WOR,12, 1, 1	Black, organic SILT, trace shell hash.	-8.0
4		24.0" 12.0"	WOR, 6, 1, 1	Black/brown, fine to medium SAND, some organic silt.	-10.0
6		24.0" 16.0"	18, 15, 14, 10	Black/brown, fine to medium SAND, some organic silt, trace shell hash.	-12.0
8		24.0" 7.0"	4, 4, 8, 10	Black/brown, fine to medium SAND, trace shell hash.	-14.0
10		24.0" 9.0"	14, 22, 23, 29	Brown, fine to medium SAND.	-16.0
12		24.0" 14.0"	5, 9, 7, 11	Brown, fine to medium SAND, little silt.	-18.0
14		24.0" 10.0"	15, 16, 22,	Brown red to grey, fine to medium SAND, trace silt.	-20.0
16		24.0" 8.0"	42, 25, 31, 47	Grey, fine to medium SAND, trace silt.	-22.0
18		24.0" 4."0	45, 9, 9, 15	Grey, medium to coarse gravel. Obstruction encountered at -24.0 MLLW. Advanced with roller bit to -25.0 MLLW.	-24.0
21		24.0" 8.0"	10, 14, 20, 19	Brown, fine to coarse SAND and GRAVEL.	-27.0
23		24.0" 6.0"	23, 21, 25, 25	Brown, medium to coarse SAND and GRAVEL.	-29.0
25		24.0" 5.0"	31, 30, 22, 25	Brown, fine to coarse SAND.	-31.0
27		24.0" 7.0"	35, 21, 12, 40	Brown, fine to coarse SAND, some gravel.	-33.0

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/16/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816110
Location: New Bedford Harbor		North of Popes Island	Y: 2696504
Elevation at grade: -8.6	Datum:	MLLW	Boring No: A-2011-CAD4-B-6
Casing Type: Steel	Boring Depth:	-76.6	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 10.0"	WOR/24"	Black, organic SILT.	-10.6
4		24.0" 7.0"	WOR/24"	Black, organic SILT.	-12.6
6		24.0" 22.0"	WOR/24"	Black, organic SILT.	-14.6
8		24.0" 22.0"	WOR/24"	Black, organic SILT.	-16.6
10		24.0" 18.0"	WOH/24"	Black, organic SILT.	-18.6
12		24.0" 20.0"	WOH/24"	Black, organic SILT.	-20.6
14		24.0" 24.0"	WOR, WOR, 7,14	Black, organic SILT, grades to grey, inorganic SILT.	-22.6
16		24.0" 7.0"	7, 6, 4, 4	Grey, inorganic SILT.	-24.6
18		24.0" 8.0"	6, 7, 6, 6	Grey, inorganic SILT.	-26.6
20		24.0" 8.0"	6, 7, 7, 10	Grey, inorganic SILT.	-28.6
22		24.0" 2.0"	17, 17, 32, 14	Grey, fine to medium SAND, trace silt.	-30.6
24		24.0" 13.0"	17, 20, 21, 7	Grey, fine to medium SAND.	-32.6
26		24.0" 6.0"	28, 14, 12, 12	Grey, fine to medium SAND.	-34.6

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/16/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816110
Location: New Bedford Harbor		North of Popes Island	Y: 2696504
Elevation at grade: -8.6	Datum:	MLLW	Boring No: A-2011-CAD4-B-6
Casing Type: Steel	Boring Depth:	-76.6	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 8.0"	22, 25, 38, 31	Brown/grey, fine to medium SAND, trace silt.	-36.6
30		24.0" 10.0"	WOH, 4, 3, 1	Brown, fine to medium SAND.	-38.6
32		24.0" 11.0"	5, 4, 6, 4	Brown, fine to medium SAND.	-40.6
34		24.0" 4.0"	24, 29, 24, 14	Brown, fine to coarse SAND, trace silt.	-42.6
36		24.0" 3.0"	WOR, 13, 21, 33	Brown, fine to coarse SAND, trace silt.	-44.6
38		24.0" 1.0"	11, 9, 7, 6	Brown, fine to coarse SAND, trace silt.	-46.6
40		24.0" 2.0"	17, 39, 46, 25	Brown, fine to coarse SAND, trace silt.	-48.6
42		24.0" 1.0"	9, 15, 18, 7	Brown, medium to coarse SAND, trace silt.	-50.6
44		24.0" 3.0"	12, 56, 6, 10	Brown, fine to coarse SAND, trace silt.	-52.6
46		NA NA	NA	Cobbles encountered at -52.6' MLLW. Advanced with roller bit to -54.6' MLLW.	-54.6
46.4		5.0" 1.0"	120/5"	Brown, fine to medium SAND. Obstruction encountered at -55.0' MLLW advanced with roller bit to -55.6' MLLW.	-55.0
49		24.0" 7.0"	35, 27, 70, 90	Brown, fine to medium SAND, some gravel- obstruction encountered at -57.6' MLLW, advanced with roller bit to -59.6' MLLW	-57.6
53		24.0 5.0	65, 28, 33, 43	Brown, fine to medium SAND, trace gravel	-61.6

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/16/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816110
Location: New Bedford Harbor		North of Popes Island	Y: 2696504
Elevation at grade: -8.6	Datum:	MLLW	Boring No: A-2011-CAD4-B-6
Casing Type: Steel	Boring Depth:	-76.6	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
53 53.2		2.0 0.0	120/2"	Obstruction encountered at 61.8 MLLW, advanced with roller bit to -64.6' MLLW.	-61.8
56.3		4.0 2.0	144/4"	Brown, very fine to medium SAND. Obstruction encountered -64.9' MLLW.	-64.9
58				Advanced with roller bit to -66.6' MLLW, and began coring	-66.6
63	40%	5' 4'	7-7-7-7-7	C1- Rock core -66.6 to -71.6 MLLW Grey, intensely fractured granitic GNEISS.	-71.6
68	34%	5' 5'	8-8-8-8-8	C2- Rock core -71.6 to -76.6 MLLW Grey, moderately fractured granitic GNEISS.	-76.6

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/19/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815079
Location: New Bedford Harbor		North of Popes Island	Y: 2697445
Elevation at grade: -8.1	Datum:	MLLW	Boring No: A-2011-CAD4-B-7
Casing Type: Steel	Boring Depth:	-70.1	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 1 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 20.0"	WOR/24"	Black, organic SILT.	-10.1
4		24.0" 10.0"	WOR/24"	Black, organic SILT.	-12.1
6		24.0" 23.0"	WOR/24"	Grey/Black, organic SILT.	-14.1
8		24.0" 22.0"	15, 12, 12, 10	6" Black, organic SILT. 16" Grey, fine SAND.	-16.1
10		24.0" 20.0"	6, 13, 10, 8	Brown, very fine to fine SAND, some inorganic silt.	-18.1
12		24.0" 13.0"	9, WOH/18"	Brown, very fine to fine SAND, some silt, trace red fine sand.	-20.1
14		24.0" 23.0"	WOH,8, 12, 8	Brown, very fine to fine SAND.	-22.1
16		24.0" 7.0"	13, 9, 14, 15	Red-brown, very fine to fine SAND.	-24.1
18		24.0" 7.0"	9, 10, 14, 14	Brown, fine to medium SAND.	-26.1
19.9		21.0" 19.0"	11, 17, 36, 160/5"	Brown, fine to medium SAND.	-28.0
20		NA NA	NA	Obstruction encountered - cobble. Advanced with roller bit to -29.1' MLLW.	-28.1
23		24.0" 19.0"	8, 8, 20, 30	Brown red, very fine to medium SAND, trace shell hash.	-31.1
25		24.0" 15.0"	12, 12, 13, 18	Brown, very fine to fine SAND, trace medium sand.	-33.1

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/19/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815079
Location: New Bedford Harbor		North of Popes Island	Y: 2697445
Elevation at grade: -8.1	Datum:	MLLW	Boring No: A-2011-CAD4-B-7
Casing Type: Steel	Boring Depth:	-70.1	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 2 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
25 27		24.0" 18.0"	7, 5, 5, 5	Brown, very fine to fine SAND.	-35.1
29		24.0" 22.0"	5, 18, 33, 28	Brown, very fine to medium SAND.	-37.1
31		24.0" 21.0"	14, 19, 26, 26	Brown grey, very fine to fine SAND.	-39.1
32		24.0" 20.0"	WOH/12" 3,2	Brown, fine to medium SAND.	-40.1
34		24.0" 20.0"	WOH/18", 2	Brown, very fine to fine SAND.	-42.1
36		24.0" 17.0"	4, 6, 8, 10	Brown, very fine to fine SAND.	-44.1
38		24.0" 24.0"	9, 11, 12, 14	Brown, very fine to fine SAND.	-46.1
40		24.0" 7.0"	6, 12, 15, 23	2" Red brown, very fine to fine SAND, trace gravel. 5" Red brown, fine to coarse SAND.	-48.1
42		24.0" 8.0"	3, 5, 11, 13	Red brown, fine to coarse SAND.	-50.1
44		24.0" 6.0"	42, 22, 14, 15	Brown grey, fine to coarse SAND.	-52.1
46		24.0" 0.0"	WOH, 5, 12, 13	No recovery.	-54.1
46.5		6.0" 1.0"	120/6"	Brown, fine to coarse SAND, trace gravel.	-54.6
48		NA NA	NA	Obstruction encountered at -54.6' MLLW, Advanced with roller bit to -56.1' MLLW.	-56.1

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/19/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 815079
Location: New Bedford Harbor		North of Popes Island	Y: 2697445
Elevation at grade: -8.1	Datum:	MLLW	Boring No: A-2011-CAD4-B-7
Casing Type: Steel	Boring Depth:	-70.1	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drive and Wash	Sheet: 3 of 3
Driller: N. Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
48 48.4		5.0" 5.0"	120/5"	Brown, fine to medium SAND. Obstruction encountered at -56.5' MLLW.	-56.5
52				Advanced with roller bit to -60.1' MLLW, and began coring.	-60.1
57	92%	5' 5'	7-8-8-7-8	C1- Rock core -60.1 to -65.1 MLLW Grey, slightly fractured granitic GNEISS.	-65.1
62	80%	5' 5'	7-7-7-7-7	C2- Rock core -65.1 to -70.1 MLLW Grey, slightly fractured granitic GNEISS.	-70.1

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/23/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816040
Location: New Bedford Harbor		North of Popes Island	Y: 2696259
Elevation at grade: -7.9	Datum:	MLLW	Boring No: A-2011-CAD4-B-8
Casing Type: Steel	Boring Depth:	-79.9	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drill and Wash	Sheet: 1 of 3
Driller: N Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
0 2		24.0" 12.0"	WOR/24"	Black, organic, SILT.	-9.9
4		24.0" 10.0"	WOH/24"	Black, organic, SILT.	-11.9
6		24.0" 24.0"	WOH/24"	Black, organic, SILT.	-13.9
8		24.0" 12.0"	WOH/12" 1, WOH	Black, organic, SILT.	-15.9
10		24.0" 7.0"	WOH/24"	Black, organic, SILT.	-17.9
12		24.0" 24.0"	WOH/24"	Dark grey to black, organic SILT.	-19.9
14		24.0" 24.0"	1,2,1,2	Dark grey to black, organic SILT.	-21.9
17		36.0" 24.0"	WOR/12" 2,2, WOH/12"	Dark grey to black, organic SILT.	-24.9
18		12.0" 12.0"	3,4	Dark grey to black, organic SILT, trace peat.	-25.9
20		24.0" 24.0"	WOR,12, 5,6	Dark grey to black, organic SILT and PEAT.	-27.9
22		24.0" 24.0"	WOR, 3,3,6	Black, organic SILT and PEAT.	-29.9
24		24.0" 23.0"	WOR, 2,8,9	Black to dark brown, organic SILT and PEAT.	-31.9
26		24.0" 24.0"	8,8,7,9	Dark brown, PEAT, trace to some organic silt.	-33.9

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/23/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816040
Location: New Bedford Harbor		North of Popes Island	Y: 2696259
Elevation at grade: -7.9	Datum:	MLLW	Boring No: A-2011-CAD4-B-8
Casing Type: Steel	Boring Depth:	-79.9	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drill and Wash	Sheet: 2 of 3
Driller: N Studdard	Log By:	CAS	

Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
26 28		24.0" 24.0"	7,8,9,7	Brown, PEAT, trace organic silt.	-35.9
30		24.0" 9.0"	7,7,8,7	Brown grey, very fine to coarse SAND and inorganic SILT, trace gravel.	-37.9
32		24.0" 7.0"	8,9,10,22	5" Grey, fine to coarse SAND. 2" Grey, inorganic SILT.	-39.9
34		24.0" 10.0"	25,18,19,29	Grey, inorganic SILT.	-41.9
36		24.0" 8.0"	15,15,28,24	Grey, inorganic SILT.	-43.9
38		24.0" 1.0"	13,17,16,13	Grey, inorganic SILT.	-45.9
40		24.0" 10.0"	10,11,6,10	Grey, very fine to fine SAND.	-47.9
42		24.0" 15.0"	11,13,14,9	Grey, very fine to fine SAND.	-49.9
44		24.0" 11.0"	16,10,16,29	9" Grey, very fine to fine SAND. 2" Grey, inorganic SILT.	-51.9
46		24.0" 18.0"	4,11,12,14	Grey, very fine to fine SAND.	-53.9
48		NA NA	NA	Obstruction Encountered. Advanced with roller bit to -55.9' MLLW.	-55.9
50		24.0" 18.0"	15,18,20,17	Grey, very fine to medium SAND.	-57.9
51		NA NA	NA	Obstruction encountered. Advanced with roller bit to -58.9' MLLW.	-58.9

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.

Date:	1/23/2012

BORING LOG

Project: EPA LHCC		Project No: 6724.001	X: 816040
Location: New Bedford Harbor		North of Popes Island	Y: 2696259
Elevation at grade: -7.9	Datum:	MLLW	Boring No: A-2011-CAD4-B-8
Casing Type: Steel	Boring Depth:	-79.9	
Casing Diameter: 4"	Drill Rig:	CME 55	
Drill Co: NH Boring	Method:	Drill and Wash	Sheet: 3 of 3
Driller: N Studdard	Log By:	CAS	

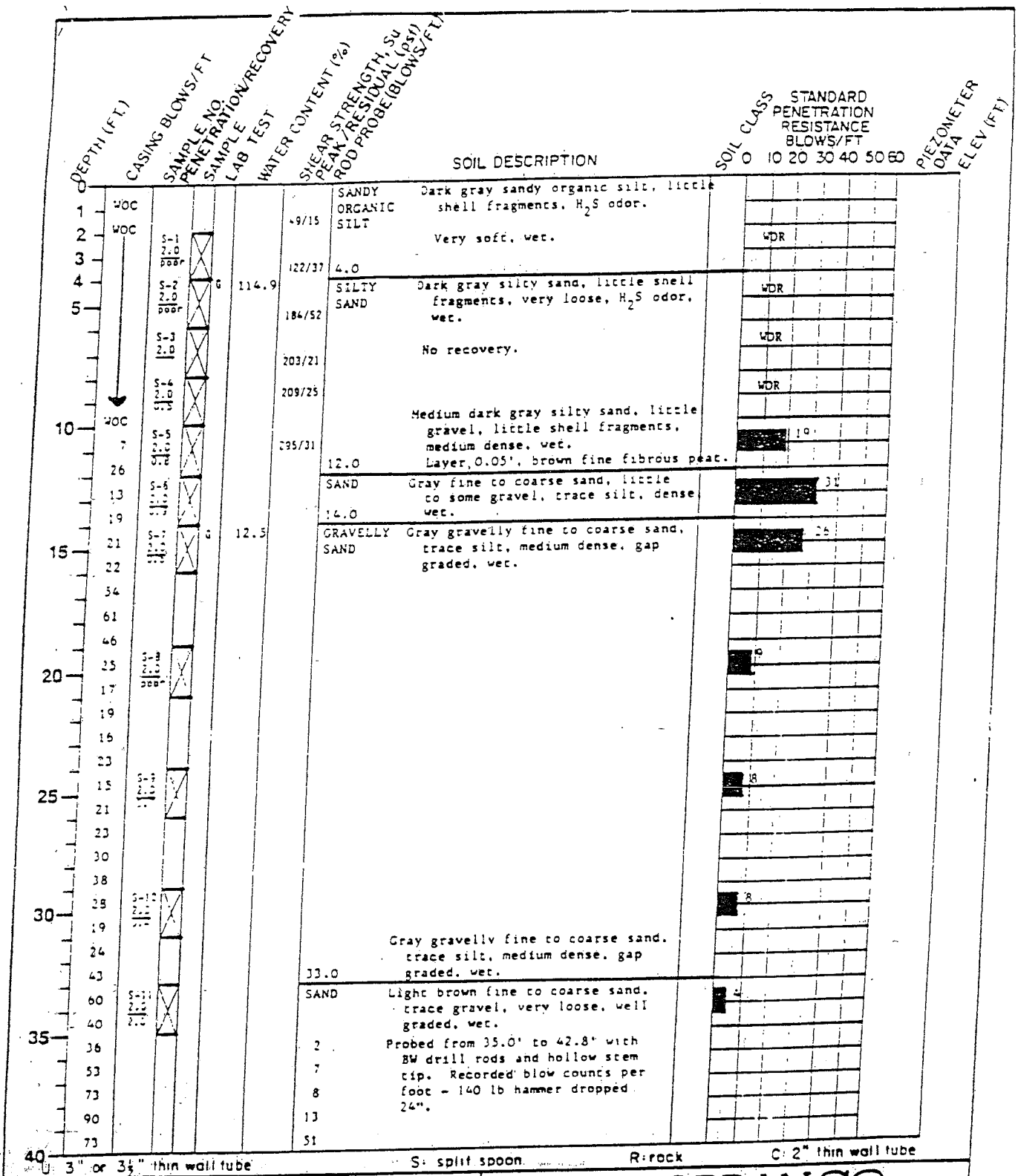
Depth below mudline (ft)	RQD	Penetration/ Recovery	SPT Blows per 6" / Drill Min. per Foot	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%	Elevation (MLLW)
51 53		NA NA	NA	Obstruction encountered. Advanced with roller bit to -60.9' MLLW.	-60.9
55		24.0" 4.0"	23,18,20, 40	Grey, fine to coarse SAND. Coarse gravel in nose of spoon.	-62.9
57		24.0" 10.0"	46,70, 84,62	Grey, fine to medium SAND.	-64.9
59		NA NA	NA	Obstruction encountered. Advanced with roller bit to -66.9' MLLW.	-66.9
61		24.0" 7.0"	40,30, 30, 21	Grey, fine to medium SAND.	-68.9
61.8		10.0" 10.0"	47, 100/4"	Brown red, fine to coarse SAND. Obstruction Encountered -69.7' MLLW.	-69.7
62				Advanced with roller bit to -69.9' MLLW, and began coring.	-69.9
67	32%	5' 5'	7-7-7-7-7	C1 - Rock core -69.9 to -74.9' MLLW Grey, intensely to moderately fractured granitic GNEISS.	-74.9
72	80%	5' 5'	8-8-8-8-8	C2 - Rock core -74.9 to - 79.9' MLLW Grey, moderately fractured granitc GNEISS. Pink, PEGMATITE 2.4 to 2.8' and 3.8 to 5.0'.	-79.9

Notes/ Comments:

1). Numbers in "Depth below mudline (ft)" column represent the depth below mudline of the bottom of the respective split-spoon, core run, or drill tool advancement.

2). Numbers in "Elevation (MLLW)" column represent the elevation of the bottom of the respective split-spoon, core run, or drill tool.

3). SPT tests conducted using a 2" Split Spoon, driven with a 140 lb donut hammer dropped from a height of 30". In instances of poor sample recovery, a 2" or 3" split spoon was readvanced through the same interval for increased sample recovery only.



PRELIMINARY GEOTECHNICAL INVESTIGATION
OF ENGINEERING PROPERTIES
NEW BEDFORD HARBOR SUPERFUND SITE
BRISTOL COUNTY, MASSACHUSETTS

E.C. JORDAN CO.
CONSULTING ENGINEERS

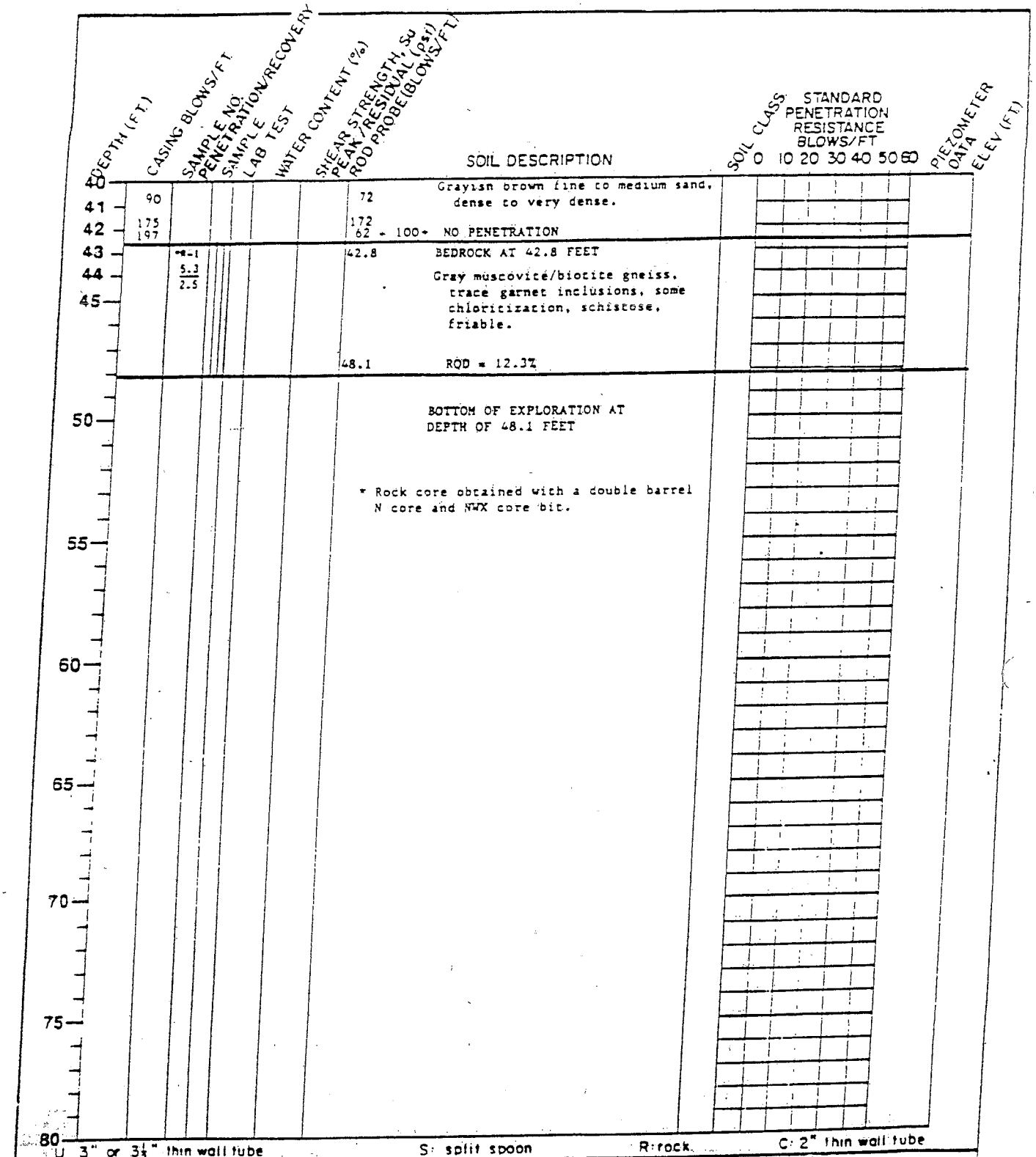
Engineering Log of: BW-109A

Page 1/2

Project No. 4959-19

Date Drilled 2/4 - 2/9/88

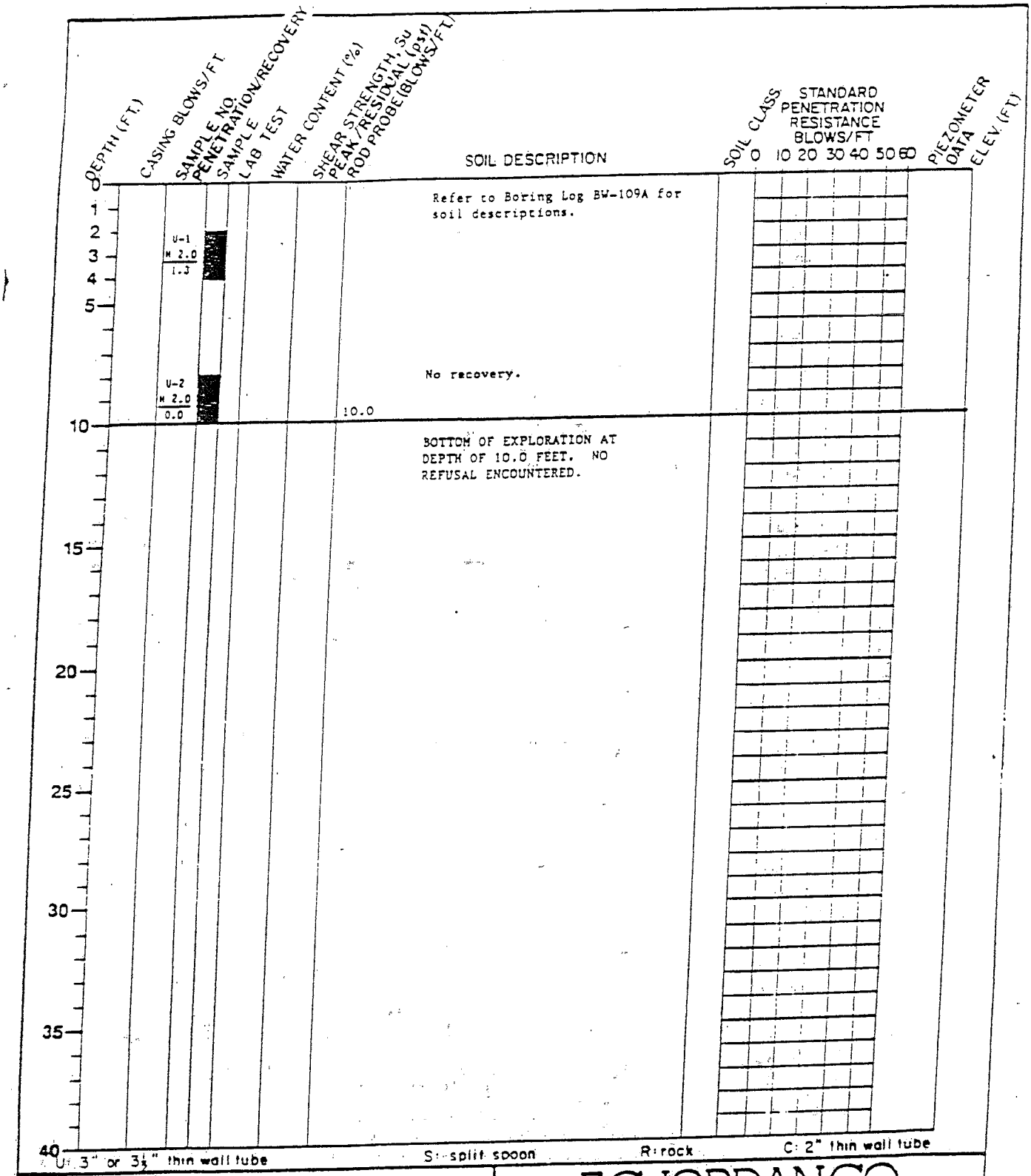
Sheet A-12



PRELIMINARY GEOTECHNICAL INVESTIGATION
OF ENGINEERING PROPERTIES
NEW BEDFORD HARBOR SUPERFUND SITE
BRISTOL COUNTY, MASSACHUSETTS

E.C. JORDAN CO.
CONSULTING ENGINEERS

Engineering Log of: BW-109A		Page 2 of 2
Project No. 4950-19	Date Drilled 2/4 - 2/9/88	Sheet A-13

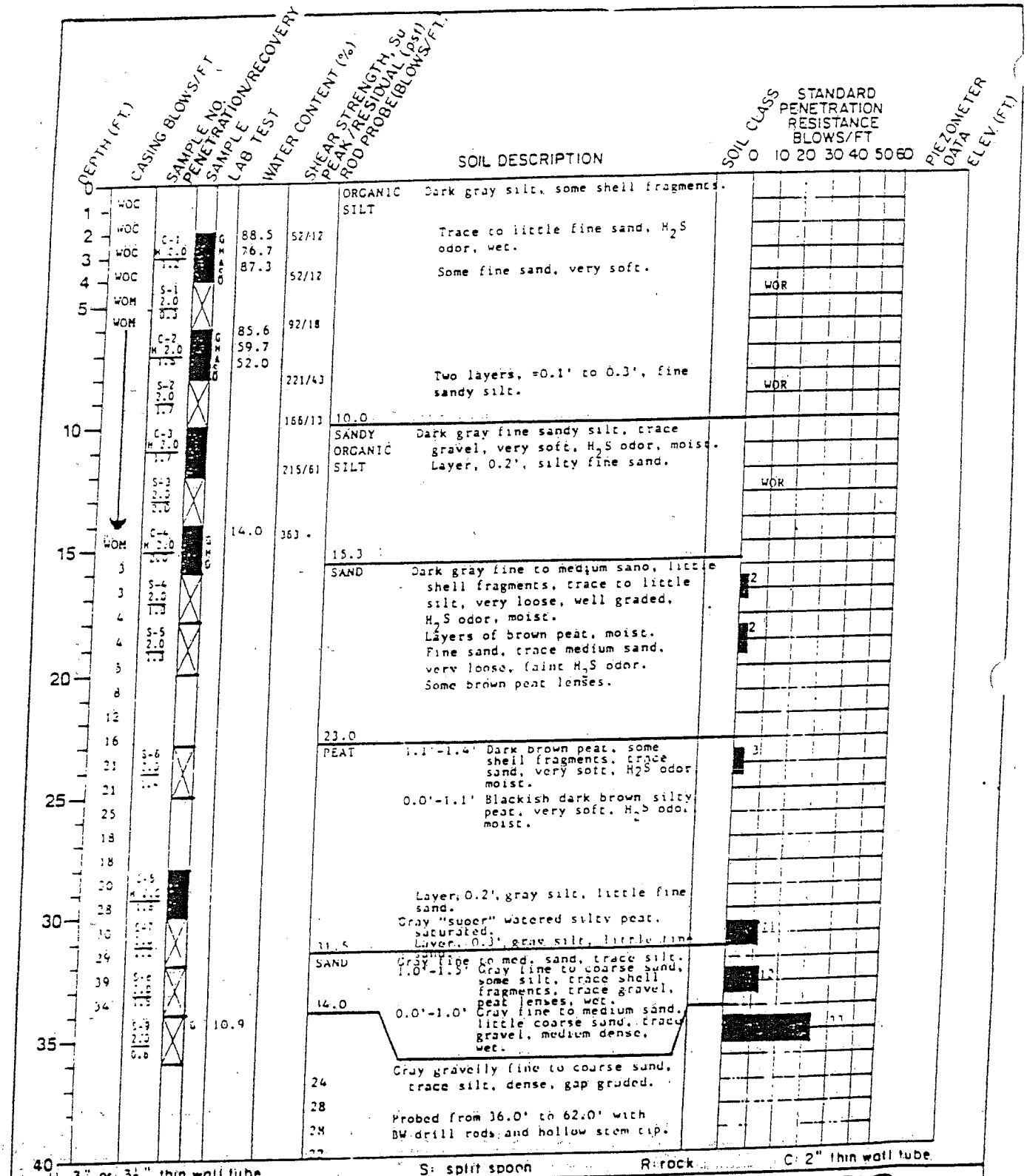


PRELIMINARY GEOTECHNICAL INVESTIGATION
OF ENGINEERING PROPERTIES
NEW BEDFORD HARBOR SUPERFUND SITE
BRISTOL COUNTY, MASSACHUSETTS

E.C. JORDAN CO.
CONSULTING ENGINEERS

Engineering Log of: BW-109B

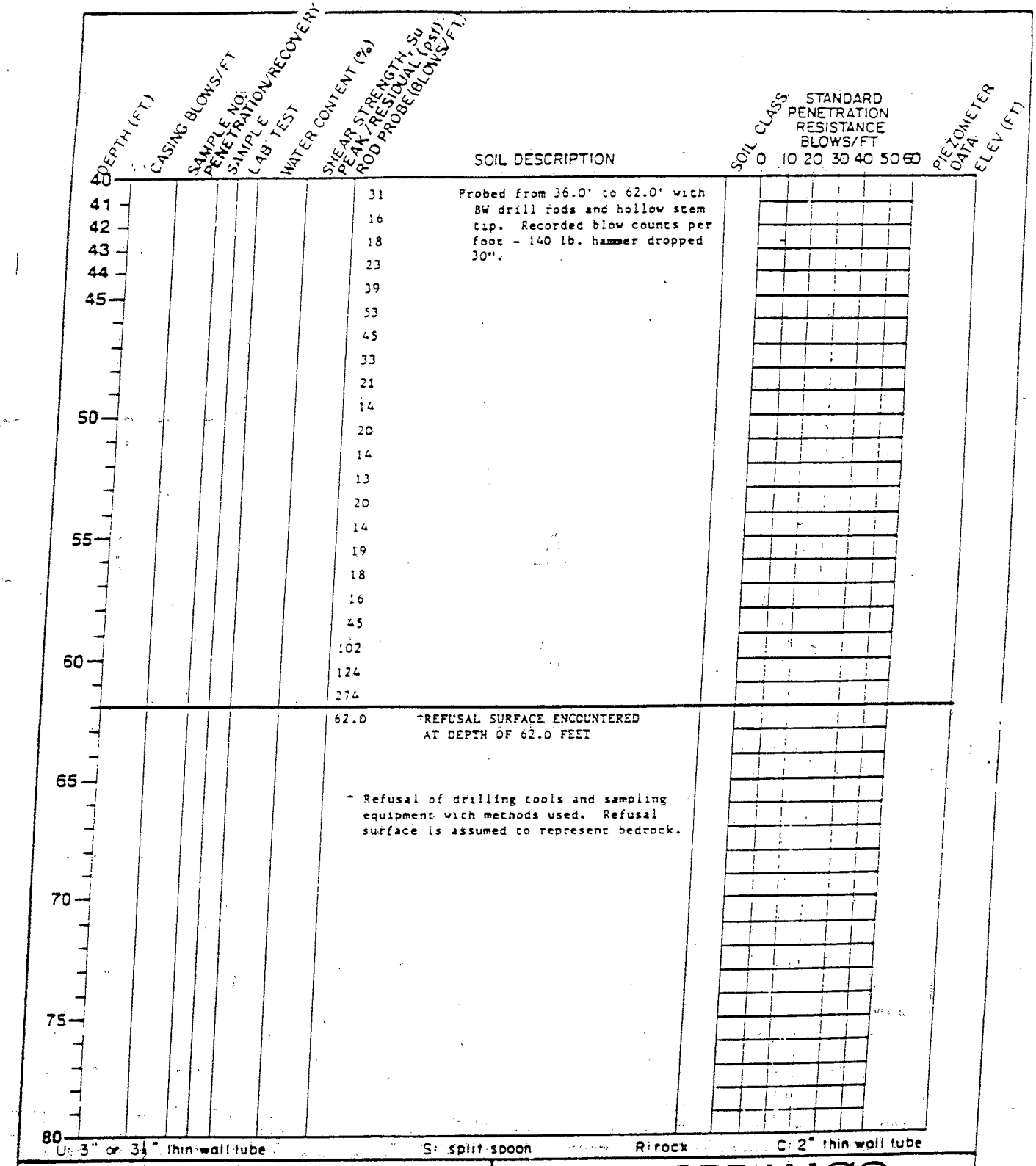
Project No.	Date Drilled	Sheet
4939-19	2/9/88	A-14



PRELIMINARY GEOTECHNICAL INVESTIGATION
OF ENGINEERING PROPERTIES
NEW BEDFORD HARBOR SUPERFUND SITE
BRISTOL COUNTY, MASSACHUSETTS

E.C. JORDAN CO.
CONSULTING ENGINEERS

Engineering Log of: BW-110		Page 1/2
Project No. 4939-19	Date Drilled 2/9 - 2/10/88	Sheet A-15



PRELIMINARY GEOTECHNICAL INVESTIGATION
OF ENGINEERING PROPERTIES
NEW BEDFORD HARBOR SUPERFUND SITE
BRISTOL COUNTY, MASSACHUSETTS

E.C. JORDAN CO.
CONSULTING ENGINEERS

Engineering Log of: BW-110 Page 2/2

Project No.	Date Drilled	Sheet A-16
4959-19	2/9 - 2/10/88	

GUILD DRILLING CO., INC.

100 WATER STREET • EAST PROVIDENCE, R.I.

SHEET 1 OF 2

TO Maguire Group, Inc. | ADDRESS Foxborough, MA | HOLE NO. NBH-3A

PROJECT NAME Harbor Aquatic Disposal Cell | LOCATION New Bedford, MA | PROJ. NO. 16421

REPORT SENT TO above / Feasibility Study | OUR JOB NO. 02-011 | SURF. ELEV. -7.2' MSL

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR.	DATE	
At _____ after _____ Hours	Type	HW-NW	S/S	NV-II	Start	7/12/01
	Size I.D.	4" 3"	1-3/8"		Complete	7/13/01
At _____ after _____ Hours	Hammer Wt.	300#	140#	BIT	Boring Foreman	J. Medeiros
	Hammer Fall	24"	30"	Dia.	Inspector/Engr.	R. SHARPNACK

LOCATION OF BORING

Depth	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev./ Depth	SOIL OR ROCK IDENTIFICATION Remarks include color, gradation, type of soil etc. Rock-color, type, condition, hardness, drilling time, seams, etc.	SAMPLE No.	Pen"	Rec."
		0.0-2.0	D	Wt.	of	Rods			Black Organic SILT	1	24	6
		4.0-6.0	D	Wt.	of	Rods			" color change to Gray	2	24	24
		9.0-11.0	D	Wt.	of	Rods				3	24	24
								11.0	PEAT, some organic silt			
		16.5-18.5	D	8	8	20 22		16.0	Brown fine to coarse SAND, some fine to medium gravel, trace silt & shells	4	24	2
		21.5-23.5	D	2	3	3 8		21.5	Gray fine to coarse SAND, some silt & fine to coarse gravel	5	24	5
		26.0-28.0	D	3	2	3 5		26.0	Brown coarse to fine SAND, some fine gravel, little silt	6	24	4
		31.0-33.0	D	3	3	4 5		31.0	Light Brown fine SAND, some silt, little fine gravel	7	24	1
		37.0-39.0	D	5	5	6 8				8	24	0

GROUND SURFACE TO _____ USED _____ CASING: THEN _____

Sample Type
D=Drive C=Cored W=Washed
UP=Fixed Piston UT=Shelby Tube
TP=Test Pit A=Auger
OE = Open End Rod
*300# hammer

Proportions Used

trace	0 to 10%
little	10 to 20%
some	20 to 35%
and	35 to 50%

140 lb. Wt x 30" fall on 2" O.D. Sampler

Cohesionless	Density	Cohesive	Consistency
0-10	Loose	0-4	Soft
10-30	Med. Dense	4-8	M./Stiff
30-50	Dense	8-15	Stiff
50+	Very Dense	15-30	V-Stiff

30 + Hard

SUMMARY:

Earth Boring 57.5'
Rock Coring 10'
Samples 12

HOLE NO. NBH-3A

GUILD DRILLING CO., INC.

100 WATER STREET • EAST PROVIDENCE, R.I.

SHEET 2 OF 2

TO Maguire Group, Inc. | ADDRESS Foxborough, MA | HOLE NO. NBH-3A

PROJECT NAME Harbor Aquatic Disposal Cell | LOCATION New Bedford, MA | PROJ. NO. 16421

REPORT SENT TO above / Feasibility Study | OUR JOB NO. 02-011 | SURF. ELEV. -7.2' MSL

Depth	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev./ Depth	SOIL OR ROCK IDENTIFICATION Remarks include color, gradation, type of soil etc. Rock-color, type, condition, hardness, drilling time, seams, etc.	SAMPLE No.	Pen"	Rec."
		41.0-43.0	D	2	3	3			Brown fine SAND, little silt	9	24	8
						2						
45		46.0-48.0	D	1	1	2				10	24	12
						3						
50		50.0-52.0	D	26	30	33		50.0	Brown weathered GRANITE and silty Sand	11	24	12
						33						
		54.0-54.5	D	100					" color change to Gray with little sand	12	6	4
55							Min/Ft					
		57.5-62.5 C					5	57.5	GRANITE	C1	60	52
		RQD = 90%					5					86.7%
60							6					
							6					
		62.5-67.5 C					5			C2	60	58
		RQD = 85%					5					96.7%
65							5					
							5					
							5					
								67.5	Bottom of Boring 67.5'			

GROUND SURFACE TO _____ USED _____ CASING: THEN _____

Sample Type
D=Drive C=Cored W=Washed
UP=Fixed Piston UT=Shelby Tube
TP=Test Pit A=Auger
OE = Open End Rod
* 300# hammer

Proportions Used

trace	0 to 10%
little	10 to 20%
some	20 to 35%
and	35 to 50%

140 lb. Wt x 30" fall on 2" O.D. Sampler

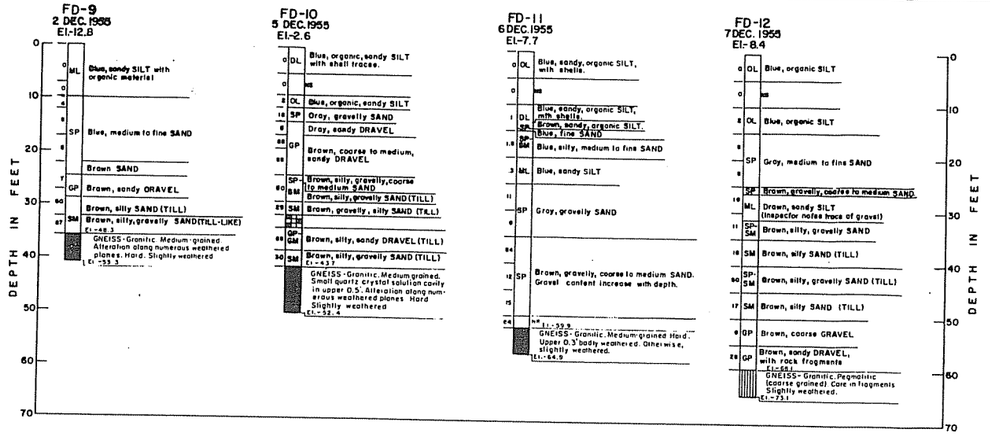
Cohesionless	Density	Cohesive	Consistency
0-10	Loose	0-4	Soft
10-30	Med. Dense	4-8	M./Stiff
30-50	Dense	8-15	Stiff
50+	Very Dense	15-30	V-Stiff
		30 +	Hard

SUMMARY:
Earth Boring 57.5'
Rock Coring 10'
Samples 12

HOLE NO. NBH-3A

CORPS OF ENGINEERS

U. S. ARMY



LEGEND FOR GRAPHIC LOGS

FD-10 — Foundation Test Boring

5 DEC 1955 — Date exploration completed.

El-2.65 — M.S.L. elevation of ground or river bottom at time of exploration.

Subsurface water level in boring at time of exploration.

Group letter symbol according to Unified Soil Classification System.

NR — No Recovery or unsatisfactory soil samples recovered.

NS — Not Sampled (Core-drilled, blasted and/or wash-bored).

Blows per foot of penetration considered most representative, usually within a 5-foot sample drive using a 350 pound hammer with a free fall of about 18 inches on a 2" O.D. or 1⅜" I.D. size sample spoon equipped with beveled and sharpened drive shoe. 2½" O.D. sample spoon used for FD-18.

Blow count not recorded or not considered representative.

Cobbles or boulders (Core-drilled).

Cobbles or boulders continuous or nested. (Core-drilled and/or blasted and chopped.)

El-43.75 — Elevation of bedrock surface.

Rock core recovery 0 – 25 %

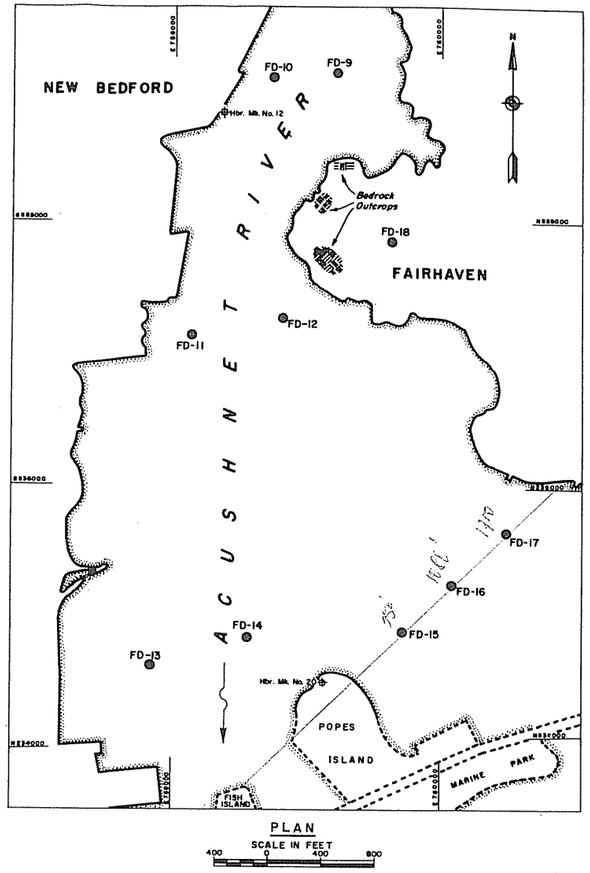
Rock core recovery 25 – 50 %

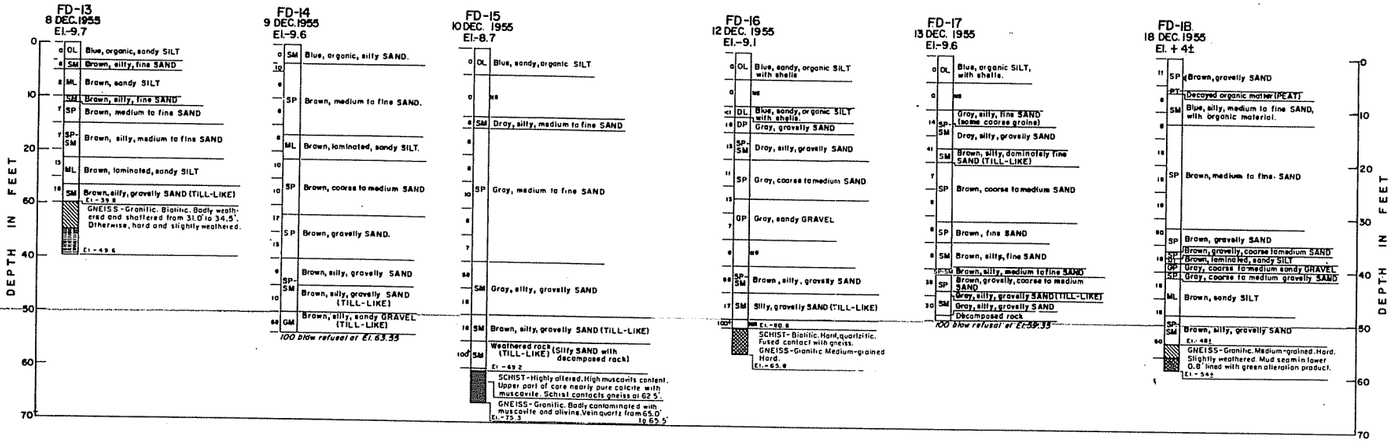
Rock core recovery 50 – 75 %

Rock core recovery 75 – 90 %

Rock core recovery 90 – 100 %

El-52.45 — Elevation of bottom of exploration.





REVISION	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
WALTHAM, MASS.

DES. BY	DR. BY	CK. BY
C. G. H.	H. C. S.	R. C. G.

SUBMITTED: for Hurley, HEAD, GEOLOGY SECTION
PROJECT ENGINEER: —
APPROVAL RECOMMENDED: Robt Sorrell, CHIEF, FDN & MATLS BRANCH
APPROVAL RECOMMENDED: CHIEF, PLANN & RP'TS BRANCH

HURRICANE PROTECTION

NEW BEDFORD - FAIRHAVEN
PLAN AND RECORD OF UPSTREAM EXPLORATIONS
NEW BEDFORD HARBOR MASSACHUSETTS

APPROVED
DATE FEB 1960
CHIEF, ENGINEERING DIVISION

SCALE
SPEC. NO.
DRAWING NUMBER
SHEET 11 OF 11

PLATE 11

UNIFIED SOIL CLASSIFICATION
(Including Identification and Description)

Major Divisions		Group Symbols	Typical Names	Field Identification Procedures (Excluding particles larger than 3 in. and basing fractions on estimated weight).	Laboratory Classification Criteria
Coarse-grained Soils: More than half of material is larger than No. 200 sieve size.	Gravels: More than half of coarse fraction is larger than No. 4 sieve size. (For visual classification, the 1/4-in. size may be used as equivalent to the No. 4 sieve size.)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.	Wide range in grain sizes and substantial amounts of all intermediate particle sizes.	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
		GP	Poorly graded gravels, or gravel-sand mixtures, little or no fines.	Predominantly one size or a range of sizes with some intermediate sizes missing.	Not meeting all gradation requirements for GW
	Gravels with Fines (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixture.	Nonplastic fines or fines with low plasticity (for identification procedures see ML below).	Atterberg limits below "A" line with PI less than 4 / Above "A" line with PI between 4 and 7 are borderline cases requiring use of dual symbols.
		GC	Clayey gravels, gravel-sand-clay mixture.	Plastic fines (for identification procedures see CL below).	Atterberg limits above "A" line with PI greater than 7
	Sands: More than half of coarse fraction is smaller than No. 4 sieve size.	SW	Well-graded sands, gravelly sands, little or no fines.	Wide range in grain size and substantial amounts of all intermediate particle sizes.	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
		SP	Poorly graded sands or gravelly sands, little or no fines.	Predominantly one size or a range of sizes with some intermediate sizes missing.	Not meeting all gradation requirements for SW
	Sands with Fines (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures.	Nonplastic fines or fines with low plasticity (for identification procedures see ML below).	Atterberg limits above "A" line or PI less than 4 / Limits plotting in hatched zone with PI between 4 and 7 are borderline cases requiring use of dual symbols.
		SC	Clayey sands, sand-clay mixtures.	Plastic fines (for identification procedures see CL below).	Atterberg limits above "A" line with PI greater than 7

Determine percentages of gravel and sand from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse-grained soils are classified as follows:

Less than 5% — GW, GP, SW, SP.
More than 12% — GM, GC, SM, SC.
5% to 12% — Borderline cases requiring use of dual symbols.

Fine-grained Soils: More than half of material is smaller than No. 200 sieve size. The No. 200 sieve size is about the smallest particle visible to the naked eye.						
				Identification Procedures on Fraction Smaller than No. 40 Sieve Size		
				Dry Strength (Crushing characteristics)	Dilatancy (Reaction to shaking)	Toughness (Consistency near PL)
Silts and Clays: Liquid limit is less than 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sand or clayey silts with slight plasticity.	None to slight	Quick to slow	None
		CL	Inorganic clays of low to medium plasticity gravelly clays, sandy clays, silty clays, lean clays.	Medium to high	None to very slow	Medium
		OL	Organic silts and organic silty clays of low plasticity.	Slight to medium	Slow	Slight
Silts and Clays: Liquid limit is greater than 50		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	Slight to medium	Slow to none	Slight to medium
		CH	Inorganic clays of high plasticity, fat clays.	High to very high	None	High
		OH	Organic clays of medium to high plasticity, organic silts.	Medium to high	None to very slow	Slight to Medium
Highly Organic Soils		PT	Peat and other highly organic soils.	Readily identified by color, odor, spongy feel and frequently by fibrous texture.		

PLASTICITY CHART
For laboratory classification of fine-grained soils

(1) Boundry classifications: Soils possessing characteristics of two groups are designated by combinations of group symbols. For example GW-GC, well-graded gravel-sand mixture with clay binder.
(2) All sieve sizes on this chart are U. S. standard.

NOTE

For further information on Unified Soil Classification, refer to "The Unified Soil Classification System," Volumes 1 and 2, Technical Memorandum No. 3-357, published by U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. File copies may be examined at Headquarters, U.S. Army Engineer Division, New England, 424 Trapelo Road, Waltham, Massachusetts, Building 141, Foundation and Materials Branch.

Adopted by Corps of Engineers and Bureau of Reclamation, January 1952

PLATE 12

Attachment 1

Boring Logs and Laboratory Analysis

Groundwater Depth	N/A	feet	
Total Depth of Hole	50'	feet	
Depth to Cored Rock	45'	feet	

Boring	NBPA CC4-2
Page	1 of 1
Date	5/2/19, 5/3/19
Weather	5/2 Overcast, 45 degrees, NE 10, Calm, 5/3 Overcast, 55 degrees, N 5, Calm
Project Name	New Bedford Port Authority, CAD Cell #4
Job No	
Driller	Hardiman, Tom JR, Tony
Logged By	Courtney Rocha, M.Campagnone, P.E. FOTH

Elev. -7 MLLW feet	Depth feet	Sample Type & No.	Blows per 6"	Uncorr (Corr) Blows	Pen. inch	Rec. inch	Graphic Log	Soil & Rock Descriptions
-7' to -9'	0' To 2'	S-1	WR WR WR WR	WR	24"	18"		S1 - Very soft, black/grey, organic marine sediment, wet, trace sand, trace shell took bag sample *Drive and wash 3" casing tip to 5'*
-12' to	5' to	S-2	14	43	24"	12"		S2 - Dense, brown, fine to coarse sand, wet, trace silt, few gravel
-14'	7'		24 19 24					*Drive and wash 3" casing tip to 10'*
-17' to	10' to	S-3	11	26	24"	12"		S3 - Medium dense, brown, fine to medium sand, wet, trace silt, trace gravel
-19'	12'		15 11 17					*Drive and wash 3" casing tip to 15'*
-22' to	15' to	S-4	6	11	24"	8"		S4 - Medium dense, brown, fine to medium sand, wet, trace silt, trace gravel
-24'	17'		6 5 5					*Drive and wash 3" casing tip to 20'*
-27' to	20' to	S-5	11	12	24"	4"		S5 - Medium dense, brown, fine to medium sand, wet, trace silt, few gravel
-29'	22'		5 7 11					*Drive and wash 3" casing tip to 25'*
-32' to	25' to	S-6	14	70	24"	24"		S6 - Dense, brown, medium to coarse sand, wet, trace silt, few gravel
-34'	27'		33 37 42					*Drive and wash 3" casing tip to 30'*
-37' to	30' to	S-7	5	38	24"	24"		S7 - Dense, brown, medium to coarse sand, wet, trace silt, few gravel
-39'	32'		14 24 33					*Drive and wash 3" casing tip to 35'*
-42' to	35' to	S-8	7	31	21"	14"		S8 - Dense, brown, fine sand, wet, few silt, trace gravel
-44'	37'		11 20 Ref 3"					*Drive and wash 3" casing tip to 40'*
-47' to	40' to	S-9	10	29	24"	12"		S9 - Medium dense, grey sand, wet, few silt, trace gravel
-49'	42'		14 15 13					*Drive and wash 3" casing tip to 45'* *Refused on roller bit @ 45' set up for NX rock core.*
-52' to	45' to	Run 1			60"	57"		
-53' -54 -55 -56 -57' to	46' 47 48 49 50		5 min 4 min 6 min 7 min 4 min					Granite Gneiss, competent, moderately fractured, quartz inclusion

Notes:
Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key:
Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Foth	Boring		NBPA CC4-2a
	Page		1 of 1
	Date		6-May-19
	Weather		Overcast, 50 degrees, NE 5-10
Groundwater Depth	N/A	feet	Project Name	New Bedford Port Authority, CAD Cell #4
Total Depth of Hole	45.5'	feet	Job No	
Depth to Cored Rock	41'	feet	Driller	Hardiman, Tom JR, Tony
			Logged By	M.Campagnone, P.E. FOTH

Elev.	Depth	Sample					Graphic Log	Soil & Rock Descriptions
-6.5		Type &	Blows per	Uncorr (Corr)	Pen.	Rec.		
MLLW feet	feet	No.	6"	Blows	inch	inch		
-7' to -9'	0' To 2'	S-1	WR WR WR WR	WR	24"	24"		S1 - Very soft, black, organic silt, wet, trace sand, trace shell *Drive and wash 3" casing tip to 5'*
-12' to	5' to	S-2	WR	WR	24"	24"		S2 - Very soft, black/grey, organic silt, wet, trace sand, trace shell
-14'	7'		WR WR WR					*Drive and wash 3" casing tip to 10'*
-17' to	10' to	S-3	WR	WR	24"	24"		S3 - Very soft, black/grey, organic silt, wet, trace sand, trace shell
-19'	12'		WR WR WR					*Drive and wash 3" casing tip to 15'*
-22' to	15' to	S-4	WR	3	24"	12"		S4 -0"-6" Very soft, black/grey, organic silt, wet, trace sand, trace shell
-24'	17'		WR 3 3					S4a - 6"-12" Loose, grey, medium to fine sand, wet, trace silt, trace gravel *Drive and wash 3" casing tip to 20'*
-27' to	20' to	S-5	WR	1	24"	22"		S5 - Loose, grey, silt, wet, pockets of fine sand
-29'	22'		WR 1 2					*Drive and wash 3" casing tip to 25'*
-32' to	25' to	S-6	14	10	24"	0"		S6 - No recovery, sand and gravel in wash
-34'	27'		6 4 2					*Drive and wash 3" casing tip to 30'*
-37' to	30' to	S-7	24	41	24"	4"		S7 - Dense, brown, fine to coarse sand, wet, trace silt, trace gravel
-39'	32'		21 20 12					*Drive and wash 3" casing tip to 35'*
-42' to	35' to	S-8	17	15	21"	22"		S8 - Medium dense, brown, fine to medium sand, wet, trace silt, trace gravel
-44'	37'		7 8 14					*Drive and wash 3" casing tip to 40' refused at 40'* *Refused on roller bit @ 41' set up for NX rock core.*
-49' to	42' to	R1	4 Min		56"			
-50' -51 -52 -52.5	43' 44 45 45.5		5 Min 3 Min 4 Min 6 Min					

Notes: Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Groundwater Depth	N/A	feet	
Total Depth of Hole	78'	feet	
Depth to Cored Rock	73'	feet	

Boring	NBPA CC4-3
Page	1 of 2
Date	4/29/19 & 4/30/19
Weather	4/29 Sunny, 50 degrees, nw 10, slight chop, 4/30 Overcast, 50 degrees, light calm
Project Name	New Bedford Port Authority, CAD Cell #4
Job No	
Driller	Hardiman, Tom JR, Tony
Logged By	M.Campagnone, P.E. FOTH

Elev.	Depth	Sample					Graphic Log	Soil & Rock Descriptions
-8.5		Type &	Blows per	Uncorr (Corr)	Pen.	Rec.		
MLLW feet	feet	No.	6"	Blows	inch	inch		
-9' to -11'	0' To 2'	S-1	WR WR WR WR	WR	24"	3"		S1 - Very soft, black, organic silt, wet, trace sand, trace shell *Drive and wash 3" casing tip to 5'*
-14' to	5' to	S-2	WR	WR	24"	24"		S2 - Very soft, black/grey, organic silt, wet, trace sand, trace shell
-16'	7'		WR WR WR					*Drive and wash 3" casing tip to 10'*
-19' to	10' to	S-3	WR	WR	24"	13"		S3 - Very soft, black/grey, organic silt, wet, few sand, trace shell
-21'	12'		WR WR WR					*Drive and wash 3" casing tip to 15'*
-24' to	15' to	S-4	WR	WR	24"	15"		S4 - Very soft, black/grey, organic silt, wet, few sand, trace shell
-26'	17'		WR WR WR					P.Pen = 2.0 (w/1"shoe) *Drive and wash 3" casing tip to 20'*
-29' to	20' to	S-5	WR	1	24"	20"		S5 - Very soft, black, fine grained peat, wet, trace shell, strong odor
-31'	22'		1 WR 1					*Drive and wash 3" casing tip to 25'*
-34' to	25' to	S-6	WH	WH	24"	24"		S6 - Very soft, black, fine grained peat, wet, trace shell, strong odor
-36'	27'		WH WH WH					*Drive and wash 3" casing tip to 30'* *Material change at 33'*
-39' to	30' to	S-7	WR	2	24"	16"		S7 - Very loose, grey, very fine sand, wet, little silt
-41'	32'		WR 2 2					*Drive and wash 3" casing tip to 35'*
-44' to	35' to	S-8	3	13	21"	20"		S8 - Medium dense, grey, fine to coarse sand, wet, trace silt, trace gravel
-46'	37'		5 8 8					*Drive and wash 3" casing tip to 40'*
-49' to	40' to	S-9	8	16	24"	6"		S9 - Medium dense, grey, fine to coarse sand, wet, trace silt, few gravel
-51'	42'		7 9 9					*Drive and wash 3" casing tip to 45'*
-54' to	45' to	S-10	3	8	24"	0"		S10 - No recovery
-56'	47'		4 4 5					*Drive and wash 3" casing tip to 50'*
-59' to	50' to	S-11	10	21	24"	10"		S11 - Medium dense, brown, coarse sand,wet, trace silt, trace gravel
-61'	52'		10 11 11					*Drive and wash 3" casing tip to 55'*

Notes: Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Groundwater Depth	N/A	feet	
Total Depth of Hole	78'	feet	
Depth to Cored Rock	73'	feet	

Boring	NBPA CC4-3
Page	1 of 2
Date	4/29/19 & 4/30/19
Weather	4/29 Sunny, 50 degrees, nw 10, slight chop, 4/30 Overcast, 50 degrees, light calm
Project Name	New Bedford Port Authority, CAD Cell #4
Job No	
Driller	Hardiman, Tom JR, Tony
Logged By	M.Campagnone, P.E. FOTH

Elev.	Depth	Sample					Graphic Log	Soil & Rock Descriptions
-8.5		Type &	Blows per	Uncorr (Corr)	Pen.	Rec.		
MLLW feet	feet	No.	6"	Blows	inch	inch		
-9' to	55	S-12	10	23	24"	12"		S12- Medium dense, brown, fine to coarse sand, wet trace silt, trace gravel
-66'	57'		12					
			11					*Drive and wash 3" casing tip to 60'*
			5					
-69' to	60' to	S-13	3	7	24"	2"		S13 - Loose, brown, fine to coarse sand, wet, trace silt, trace gravel
-71'	62'		4					
			3					
			3					*Drive and wash 3" casing tip to 65'*
-74' to	65' to	S-14	2	3	24"	0"		S14 - No Recovery, trace coarse sand in tip
-76'	67'		1					
			2					
			7					*Drive and wash 3" casing tip to 70'*
-79' to	70' to	S-15	12	18	24"	8"		S15 - Dense, brown, fine to coarse sand, wet, trace silt, trace gravel
-81'	72'		8					
			10					
			69					*Drilled out hole to 73' Setup for NX core run*
-83' to	74' to	R1	8 Min		60"	60"		
-84'	75'		6 Min					
-85	76		5 Min					
-86	77		7 Min					
-87	78		6 Min					

Notes:
Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key:
Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Foth	Boring	NBPA CC4-4	
	Page	1 of 1	
	Date	2-Apr-19	
	Weather	Mostly Cloudy, 45 degrees	
Groundwater Depth	N/A feet	Project Name	New Bedford Port Authority, CAD Cell #4
Total Depth of Hole	50' feet	Job No	
Depth to Cored Rock	45' feet	Driller	Hardiman, Tom JR, Tony
		Logged By	K.Fratus

Elev.	Depth	Sample					Graphic Log	Soil & Rock Descriptions
-8		Type &	Blows per	Uncorr (Corr)	Pen.	Rec.		
MLLW feet	feet	No.	6"	Blows	inch	inch		
-8' to	0' To	S-1	WR	WR	24"	10"		S1 - Very soft, black, organic silt, wet, trace sand, trace shell
-10'	2'		WR					
			WR					*Drive and wash 3" casing tip to 5'*
			WR					
-13' to	5' to	S-2	WR	WR	24"	24"		S2 - Very soft, black/grey, organic silt, wet, trace sand, trace shell
-15'	7'		WR					
			WR					
			WR					*Drive and wash 3" casing tip to 10'*
-18' to	10' to	S-3	4	9	24"	24"		S3 - Loose, grey, fine sand, wet trace silt, organics in bottom 6"
-20'	12'		4					
			5					
			4					*Drive and wash 3" casing tip to 15'*
-23' to	15' to	S-4	4	13	24"	18"		S4 - Medium dense, grey, medium to fine sand, wet trace silt
-25'	17'		5					
			8					
			11					*Drive and wash 3" casing tip to 20'*
-28' to	20' to	S-5	4	7	24"	19"		S5 - Loose, grey, medium to fine sand, wet, trace silt
-30'	22'		4					
			3					
			3					*Drive and wash 3" casing tip to 25'*
-33' to	25' to	S-6	7	148	24"	10"		S6 - Very dense, grey, medium to coarse sand, wet, trace silt, trace gravel
-35'	27'		87					
			61					
			8					*Drive and wash 3" casing tip to 30'*
-38' to	30' to	S-7	4	10	24"	22"		S7 - Loose, grey, medium to fine sand, wet, trace silt, trace gravel
-40'	32'		3					
			7					
			5					*Drive and wash 3" casing tip to 35'*
-43' to	35' to	S-8	9	22	21"	0"		S8 - No recovery
-45'	37'		8					
			14					
			13					*Drive and wash 3" casing tip to 40'*
-48' to	40' to	S-9	15	32	24"	10"		S9 - Dense, brown, fine to medium sand, wet, trace silt, few gravel
-50'	42'		19					
			13					
			17					*Drive and wash 3" casing tip to 45'*
-53' to	45' to	S-10	Ref 5"	Ref	24"	0"		S10 - No recovery
-55'	47'							
								Run roller bit to top of rock at 45.5'
								Set up NX core run
-54' to	46' to	R1	3 Min	63%	60"			
-55'	47'		3 Min					
-56	48		4 Min					
-57	49		4 Min					
-58	50		4 Min					

Notes: Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Foth	Boring		NBPA CC4-5
	Page		1 of 1
	Date		1-May-19
	Weather		Cloudy, 50 degrees, light wind
Groundwater Depth	N/A	feet	Project Name	New Bedford Port Authority, CAD Cell #4
Total Depth of Hole	54'	feet	Job No	
Depth to Cored Rock	49'	feet	Driller	Hardiman, Tom JR, Tony
			Logged By	M.Campagnone, P.E.

Elev. -7 MLLW feet	Depth feet	Sample Type & No.	Blows per 6"	Uncorr (Corr) Blows	Pen. inch	Rec. inch	Graphic Log	Soil & Rock Descriptions
-7' to -9'	0' To 2'	S-1	WR WR WR WR	WR	24"	4"		S1 - Very soft, black, organic silt, wet, trace sand, trace shell *Drive and wash 3" casing tip to 5'*
-12' to	5' to	S-2	WR	WR	24"	24"		S2 - Very soft, black/gray, organic silt, wet, trace sand, trace shell
-14'	7'		WR WR WR					*Drive and wash 3" casing tip to 10'*
-17' to	10' to	S-3	WR	WR	24"	24"		S3 - Very soft, black/gray, organic silt, wet, trace sand, trace shell
-19'	12'		WR WR WR					*Drive and wash 3" casing tip to 15'*
-22' to	15' to	S-4	WR	WR	24"	12"		S4 - Very soft, black/gray, organic silt, wet, trace sand, trace shell
-24'	17'		WR WR WR					S4a - Very soft, dark brown, fine grained peat, trace shell, sand in tip *Drive and wash 3" casing tip to 20'*
-27' to	20' to	S-5	WR	WR	24"	11"		S5 - Very soft, dark brown, fine grained peat, trace shell
-29'	22'		WR WR 1					*Drive and wash 3" casing tip to 25'* *Material changes at 23'*
-32' to	25' to	S-6	2	4	24"	20"		S6 - Loose, grey, fine sand, wet, trace silt
-34'	27'		2 2 2					*Drive and wash 3" casing tip to 30'*
-37' to	30' to	S-7	2	8	24"	20"		S7 - Loose, grey, fine sand, wet, trace silt
-39'	32'		3 5 4					*Drive and wash 3" casing tip to 35'*
-42' to	35' to	S-8	5	6	21"	4"		S8 - Loose, grey, fine to coarse sand, wet, trace silt, trace gravel
-44'	37'		3 3 3					*Drive and wash 3" casing tip to 40'*
-47' to	40' to	S-9	4	6	24"	0"		S9 - No recovery, trace of coarse sand in tip
-49'	42'		4 2 2					*Drive and wash 3" casing tip to 45'*
-52' to	45' to	S-10	1	4	24"	3"		S10 - Loose, brown, fine to coarse sand, wet, trace silt, trace gravel
-54'	47'		1 3 4					*Run roller bit to top of rock at 49'* *Set up NX core run*
-57' to	50' to	R1	2 Min		60"	±14"		
-58' -59 -60 -61	51' 52 53 54		2 Min 1 Min 3 Min 4 Min					Corer stuck in casing, lost majority of sample during extraction, damaged casing

Notes: Drill barge sited with GPS using Hypack. As-built locations as indicated on plan
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Foth	Boring		NBPA-CC4-6
	Page		1 of 1
	Date		12-Nov-20
	Weather		Rain, 54 degrees, wind NW 5-10, calm
Groundwater Depth	N/A	feet	Project Name	Bottom of CAD Cell No. 4
Total Depth of Hole	35'	feet	Job No	
Depth to Cored Rock	N/A	feet	Driller	Hardiman, Tom JR, Tony
			Logged By	J.HILL (FOTH)

Elev. MLLW feet	Depth feet	Sample Type & No.	Blows per 6"	Uncorr (Corr) Blows	Pen. inch	Rec. inch	Graphic Log	Soil & Rock Descriptions
-35.5								
-36' to -38'	0' To 2'							*Drive and wash 3" casing tip to 5'*
-41' to	5' to	S-1	3	12	24"	24"		S-1 Medium dense, grey, medium sand, moist (SP)
-43'	7'		6 6 6					*Drive and wash 3" casing tip to 10'*
-46' to	10' to	S-2	5	12	24"	8"		S-2 Medium dense, grey, fine to medium sand, wet, trace silt (SW)
-48'	12'		4 8 8					*Drive and wash 3" casing tip to 15'*
-51' to	15' to	S-3	2	5	24"	15"		S-3 Loose, brown, coarse sand, wet, trace gravel (SP)
-53'	17'		2 3 6					*Drive and wash 3" casing tip to 20'*
-56' to	20' to	S-4	9	13	24"	6"		S-4 Medium dense, grey, fine to medium sand, wet, trace gravel (SW)
-58'	22'		5 8 9					*Drive and wash 3" casing tip to 25'*
-60' to	24' to	S-5	6	7	24"	20"		S-5 Loose, grey, medium sand, wet, trace silt, trace gravel (SW)
-62'	26'		4 3 2					*Drive and wash 3" casing tip to 30'*
-64' to	28' to	S-6	2	3	24"	19"		S-6 Loose, brown, fine to coarse sand, wet, trace silt, trace gravel (SW)
-66'	30'		1 2 2					*Drive and wash 3" casing tip to 35'*
-68' to	32' to	S-7	12	43	24"	10"		S-7 Dense, brown, fine to medium sand, wet, trace silt, trace gravel, trace fractured rock (SW)
-70'	34'		18 25 25					

Notes: Drill barge sited with GPS using Hypack. As-built locations (X=816075, Y=2696396)
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Foth

Groundwater Depth	N/A	feet	
Total Depth of Hole	35'	feet	
Depth to Cored Rock	N/A	feet	

Boring	NBPA-CC4-7
Page	1 of 1
Date	11/11/2020, 11/13/20
Weather	Mostly sunny, 60 degrees, SW 20-25, Choppy - called for weather Cont 11/13/2(
Project Name	Bottom of CAD Cell No. 4
Job No	
Driller	Hardiman, Tom JR, Tony
Logged By	J.HILL (FOTH)

Elev. -35 MLLW feet	Depth feet	Sample Type & No.	Blows per 6"	Uncorr (Corr) Blows	Pen. inch	Rec. inch	Graphic Log	Soil & Rock Descriptions
-35' to -37'	0' To 2'							*Drive and wash 3" casing tip to 5'*
-40' to	5' to	S-1	13	16	24"	14"		S-1 Medium dense, grey, fine to medium sand, moist (SP)
-42'	7'		8 8 9					*Drive and wash 3" casing tip to 10'*
-45' to	10' to	S-2	4	6	24"	21"		S-2 Loose, brown, medium to coarse sand, wet, trace silt, trace gravel (SW)
-47'	12'		3 3 3					*Drive and wash 3" casing tip to 15'*
-50' to	15' to	S-3	5	16	24"	17"		S-3 Medium dense, grey, fine sand, wet, trace silt (SP)
-52'	17'		6 10 11					*Drive and wash 3" casing tip to 20'*
-55' to	20' to	S-4a	5	20	24"	4"		S-4a Medium dense, brown, coarse sand, wet, trace gravel (SP)
-57'	22'		7 13 8					*Drive and wash 3" casing tip to 25'*
-59' to	24' to	S-5a	11	13	24"	0"		S-5a (0"-5") Medium dense, grey, coarse to medium sand, wet, some gravel (SW)
-61'	26'		8 5 3					S-5a (5"-12") Loose, grey, medium to fine sand, trace silt, trace gravel (SW) *Drive and wash 3" casing tip to 30'*
-63' to	28' to	S-6a	2	4	24"	10"		S-6a No Recovery
-65'	30'		2 2 2					*Drive and wash 3" casing tip to 35'*
-67' to	32' to	S-7a	6	29	24"	18"		S-7a Dense, brown, coarse sand, wet, trace silt, some gravel (SW)
-69'	34'		14 15 11					

Notes: Drill barge sited with GPS using Hypack. As-built locations (X=816112, Y=2696130)
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

Groundwater Depth	N/A	feet	Boring: NBPA-CC4-8
Total Depth of Hole	35'	feet	Page: 1 of 1
Depth to Cored Rock	N/A	feet	Date: 10-Nov-20
			Weather: Mostly sunny, 60 degrees, SW 5-10, CALM
			Project Name: Bottom of CAD Cell No. 4
			Job No:
			Driller: Hardiman, Tom JR, Tony
			Logged By: M.Campagnone, P.E. FOTH

Elev.	Depth	Sample					Graphic Log	Soil & Rock Descriptions
-36.5 MLLW feet	feet	Type & No.	Blows per 6"	Uncorr (Corr) Blows	Pen. inch	Rec. inch		
-37' to -39'	0' To 2'							*Drive and wash 3" casing tip to 5'*
-42' to	5' to	S-1	3	10	24"	18"		S-1 (0"-15") Loose, grey, fine to medium sand, moist (SP) (Bagged sample)
-44'	7'		4 6 14					S-1 (15"-18") Medium dense, grey/brown, fine to coarse sand, moist, trace silt, trace gravel (SW) (Jar) *Drive and wash 3" casing tip to 10'*
-47' to	10' to	S-2	10	13	24"	8"		S-2 Medium dense, brown, medium to coarse sand, wet, trace silt, trace gravel (SW)
-49'	12'		7 6 10					*Drive and wash 3" casing tip to 15'*
-52' to	15' to	S-3	5	6	24"	6"		S-3 Loose, brown, fine to coarse sand, wet, trace silt, trace gravel (SW)
-54'	17'		2 4 8					*Drive and wash 3" casing tip to 20'*
-57' to	20' to	S-4	5	8	24"	4"		S-4 Loose, brown, fine to coarse sand, wet, trace silt, trace gravel (SW)
-59'	22'		4 4 4					*Drive and wash 3" casing tip to 25'*
-62' to	25' to	S-5	3	7	24"	0"		S-5 No Recovery
-64'	27'		3 4 4					*Drive and wash 3" casing tip to 30'*
-67' to	30' to	S-6	8	16	24"	10"		S-6 Medium dense, grey, fine sand, wet, trace silt, trace gravel (SP)
-68'	31'		8 8 8					*Drive and wash 3" casing tip to 35'*
-72' to	35' to	S-7	4	9	24"	18"		S-7 Loose, grey, fine to coarse sand, wet, trace silt, trace gravel (SW)
-74'	37'		5 4 5					

Notes: Drill barge sited with GPS using Hypack. As-built locations (X=815807, Y=2696201)
Drill and wash w/SPT and sampling 5' intervals.
SPT done with 2" split spoon sampler and safety hammer with cathead

Name (Density, Color, Classification), Moisture, Secondary grain Size, (USC Group Symbol)

Key: Fines Content: trace (tr) = <5%, little (lt) = 6-15%, few = 16-30%, some (sm) = 31-49%
Cohesionaless Soil Density (blows/ft): very loose (vl) = 0-4, loose (l) = 5-10, medium dense (md) = 11-29, dense (d) = 30-49 , very dense (vd) = 50+
Cohesive Soil Consistency (bows/ft): very soft (vs) <2, soft (s) = 3 - 4 , medium (f) = 5-8 , stiff (st) = 9-15, very stiff (vs) = 16-30, hard (h) >30
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black

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Transmittal

TO:

Mike Campagnone

Foth Infrastructure & Environment

15 Creek Rd

Marion, MA 02738

DATE: 5/28/2019	GTX NO: 310004
RE: New Bedford Harbor CAD Cell	

COPIES	DATE	DESCRIPTION
	5/28/2019	**May 2019 Laboratory Test Report**

REMARKS:

SIGNED: _____

Jonathan Campbell, Laboratory Manager

APPROVED BY: _____

Nancy Hubbard, Project Manager

GeoTesting EXPRESS

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May 28, 2019

Mike Campagnone
Foth Infrastructure & Environment
15 Creek Rd
Marion, MA 02738

RE: New Bedford Harbor CAD Cell, New Bedford, MA (GTX-310004)

Dear Mike:

Enclosed are the test results you requested for the above referenced project. GeoTesting Express, Inc. (GTX) received 13 samples from you on 5/15/2019. These samples were labeled as follows:

Boring Number	Sample Number	Depth
CC4-2a	sand/ composite jars	15-22
CC4-2a	silt/ composite jars	0-12
CC4-2a & 2	sand/ composite jars	5-32
CC4-2a & 2	sand/ composite jars	27-45
CC4-3	peat/ composite jars	20-27
CC4-3	sand/ composite jars	30-42
CC4-3	silt/ composite jars	0-17
CC4-4	sand/ composite jars	10-22
CC4-4	sand/ composite jars	25-42
CC4-4	silt/ composite jars	0-7
CC4-5	peat/ composite jars	15-22
CC4-5	sand/ composite jars	30-37
CC4-5	silt/ composite jars	0-17

GTX performed the following tests on these samples:

13 ASTM D2216 - Moisture Content
2 ASTM D3080 - Three-Point Direct Shear Test Series
13 ASTM D6913/D7928 - Grain Size Analysis - Sieve and Hydrometer
13 ASTM D7263 - Density (Unit Weight) of Soil Specimens
13 ASTM D854 - Specific Gravity

A copy of your test request is attached.

The results presented in this report apply only to the items tested. This report shall not be reproduced except in full, without written approval from GeoTesting Express. The remainder of these samples will be retained for a period of sixty (60) days and will then be discarded unless otherwise notified by you. Please call me if you have

any questions or require additional information. Thank you for allowing GeoTesting Express the opportunity of providing you with testing services. We look forward to working with you again in the future.

Respectfully yours,

Jonathan Campbell
Laboratory Manager

GeoTesting EXPRESS

Technologies to manage risk for infrastructure

Boston
Atlanta
Chicago
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New York

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Geotechnical Test Report **5/28/2019**

GTX-310004

New Bedford Harbor CAD Cell

New Bedford, MA

Client Project No.: 18N020

Prepared for:

Foth Infrastructure & Environment

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/21/19	Checked By:	bfs
Depth :	---	Test Id:	504937		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
CC4-2a	silt/ composite jars	0-12	Moist, very dark gray silt with sand	111.7
CC4-2a	sand/ composite jars	15-22	Moist, dark gray sandy silt	21.6
CC4-2a _2	sand/ composite jars	27-45	Moist, grayish brown silty sand with gravel	9.7
CC4-2a _2	sand/ composite jars	5-32	Moist, light olive brown silty sand with gravel	12.1
CC4-3	silt/ composite jars	0-17	Moist, dark gray silt	86.9
CC4-3	peat/ composite jars	20-27	Moist, very dark gray silt	243.8
CC4-3	sand/ composite jars	30-42	Moist, dark gray silty sand	20.6

Notes: Temperature of Drying : 110° Celsius

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/22/19	Checked By:	bfs
Depth :	---	Test Id:	504934		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
CC4-4	silt/ composite jars	0-7	Moist, dark gray sandy silt	47.5
CC4-4	sand/ composite jars	10-22	Moist, dark gray silty sand	19.0
CC4-4	sand/ composite jars	25-42	Moist, gray silty sand with gravel	9.9
CC4-5	silt/ composite jars	0-17	Moist, dark gray silt	95.4
CC4-5	peat/ composite jars	15-22	Moist, very dark gray silt	260.7
CC4-5	sand/ composite jars	30-37	Moist, gray silty sand with gravel	18.4

Notes: Temperature of Drying : 110° Celsius

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/17/19	Checked By:	bfs
Depth :	---	Test Id:	504924		

Laboratory Determination of Density (Unit Weight) of Soil Specimens by ASTM D7263

Boring ID	Sample ID	Depth	Visual Description	Bulk Density pcf	Moisture Content %	Dry Density pcf	*
CC4-2a	silt/ composite jars	0-12	Moist, very dark gray silt with sand	88.24	111.7	41.68	(1)
CC4-2a	sand/ composite jars	15-22	Moist, dark gray sandy silt	130.1	21.57	107.0	(2)
CC4-2a 2	sand/ composite jars	27-45	Moist, grayish brown silty sand with gravel	130.3	9.662	118.8	(3)
CC4-2a 2	sand/ composite jars	5-32	Moist, light olive brown silty sand with gravel	135.9	12.08	121.2	(4)
CC4-3	silt/ composite jars	0-17	Moist, dark gray silt	94.61	86.90	50.62	(5)
CC4-3	peat/ composite jars	20-27	Moist, very dark gray silt	70.54	243.8	20.52	(6)
CC4-3	sand/ composite jars	30-42	Moist, dark gray silty sand	130.8	20.62	108.5	(7)

* Sample Comments

(1): Method B-Volumetric, Reconstituted (compacted)

(2): Method B-Volumetric, Reconstituted (compacted)

(3): Method B-Volumetric, Reconstituted (compacted)

(4): Method B-Cylinder, Reconstituted (compacted)

(5): Method B-Volumetric, Reconstituted (compacted)

(6): Method B-Volumetric, Reconstituted (compacted)

(7): Method B-Volumetric, Reconstituted (compacted)

Notes: Moisture Content determined by ASTM D2216.

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/22/19	Checked By:	bfs
Depth :	---	Test Id:	504921		

Laboratory Determination of Density (Unit Weight) of Soil Specimens by ASTM D7263

Boring ID	Sample ID	Depth	Visual Description	Bulk Density pcf	Moisture Content %	Dry Density pcf	*
CC4-4	silt/ composite jars	0-7	Moist, dark gray sandy silt	104.4	47.55	70.79	(1)
CC4-4	sand/ composite jars	10-22	Moist, dark gray silty sand	130.7	18.95	109.9	(2)
CC4-4	sand/ composite jars	25-42	Moist, gray silty sand with gravel	137.4	9.862	125.1	(3)
CC4-5	silt/ composite jars	0-17	Moist, dark gray silt	91.55	95.44	46.84	(4)
CC4-5	peat/ composite jars	15-22	Moist, very dark gray silt	68.78	260.7	19.07	(5)
CC4-5	sand/ composite jars	30-37	Moist, gray silty sand with gravel	121.7	18.40	102.8	(6)

* Sample Comments

(1): Method B-Volumetric, Reconstituted (compacted)

(2): Method B-Volumetric, Reconstituted (compacted)

(3): Method B-Volumetric, Reconstituted (compacted)

(4): Method B-Volumetric, Reconstituted (compacted)

(5): Method B-Volumetric, Reconstituted (compacted)

(6): Method B-Volumetric, Reconstituted (compacted)

Notes: Moisture Content determined by ASTM D2216.

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/23/19	Checked By:	bfs
Depth :	---	Test Id:	504950		

Specific Gravity of Soils by ASTM D854

Boring ID	Sample ID	Depth	Visual Description	Specific Gravity	Comment
CC4-2a	silt/ composite jars	0-12	Moist, very dark gray silt with sand	2.62	
CC4-2a	sand/ composite jars	15-22	Moist, dark gray sandy silt	2.76	
CC4-2a _2	sand/ composite jars	27-45	Moist, grayish brown silty sand with gravel	2.73	
CC4-2a _2	sand/ composite jars	5-32	Moist, light olive brown silty sand with gravel	2.70	
CC4-3	silt/ composite jars	0-17	Moist, dark gray silt	2.66	
CC4-3	peat/ composite jars	20-27	Moist, very dark gray silt	2.14	
CC4-3	sand/ composite jars	30-42	Moist, dark gray silty sand	2.76	

Notes: Specific Gravity performed by using method B (oven dried specimens) of ASTM D854
Moisture Content determined by ASTM D2216.

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	05/23/19	Checked By:	bfs
Depth :	---	Test Id:	504947		

Specific Gravity of Soils by ASTM D854

Boring ID	Sample ID	Depth	Visual Description	Specific Gravity	Comment
CC4-4	silt/ composite jars	0-7	Moist, dark gray sandy silt	2.70	
CC4-4	sand/ composite jars	10-22	Moist, dark gray silty sand	2.76	
CC4-4	sand/ composite jars	25-42	Moist, gray silty sand with gravel	2.71	
CC4-5	silt/ composite jars	0-17	Moist, dark gray silt	2.64	
CC4-5	peat/ composite jars	15-22	Moist, very dark gray silt	2.08	
CC4-5	sand/ composite jars	30-37	Moist, gray silty sand with gravel	2.72	

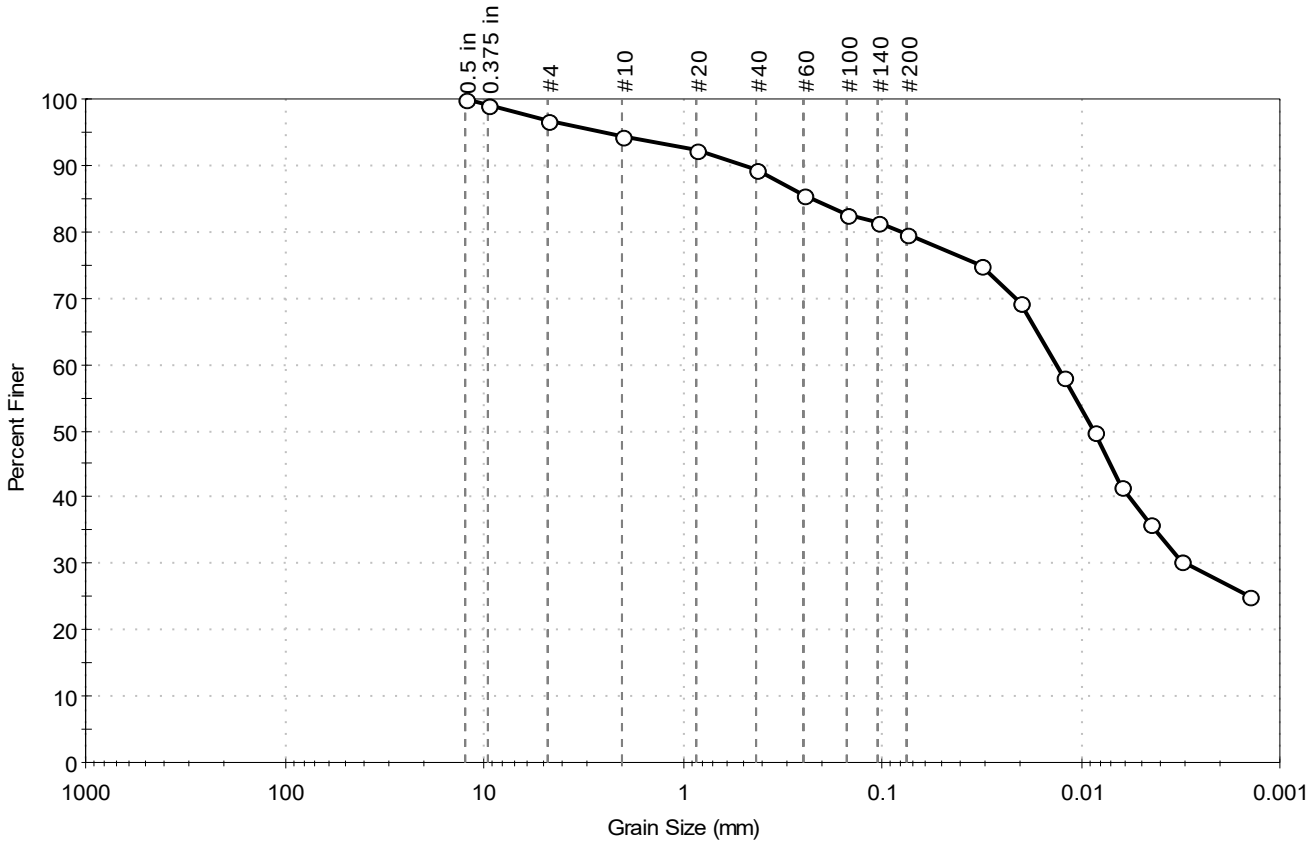
Notes: Specific Gravity performed by using method B (oven dried specimens) of ASTM D854
Moisture Content determined by ASTM D2216.

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-2a	Sample Type:	jar	Tested By:	ckg
Sample ID:	silt/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	0-12	Test Id:	504915		

Test Comment: ---
Visual Description: Moist, very dark gray silt with sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.3	17.1	79.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	97		
#10	2.00	94		
#20	0.85	92		
#40	0.42	89		
#60	0.25	86		
#100	0.15	83		
#140	0.11	81		
#200	0.075	80		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0315	75		
---	0.0203	69		
---	0.0121	58		
---	0.0086	50		
---	0.0062	42		
---	0.0045	36		
---	0.0032	31		
---	0.0014	25		

Coefficients

D_{85} = 0.2283 mm D_{30} = 0.0030 mm
D_{60} = 0.0132 mm D_{15} = N/A
D_{50} = 0.0086 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

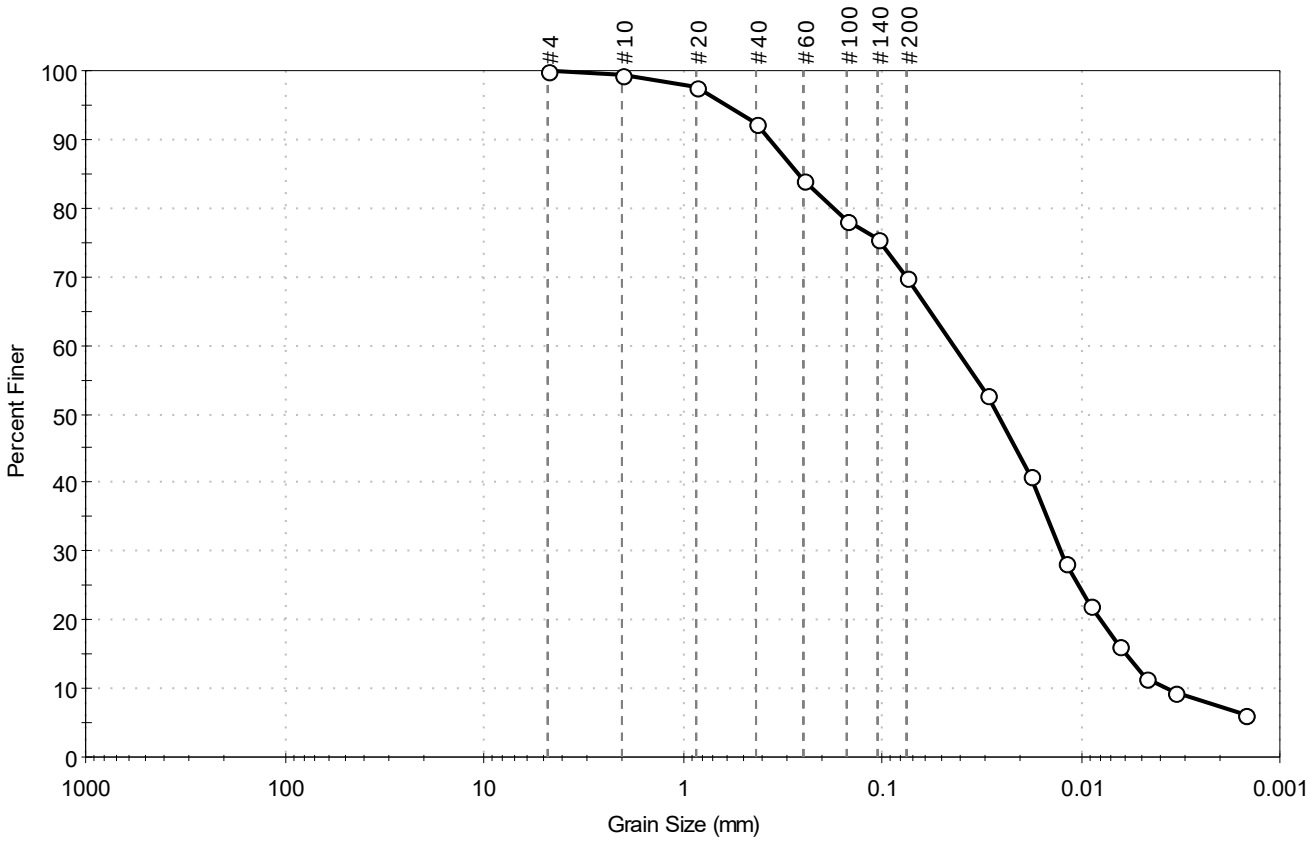
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-2a	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	15-22	Test Id:	505560		
Test Comment:	---				
Visual Description:	Moist, dark gray sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.0	30.2	69.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	98		
#40	0.42	92		
#60	0.25	84		
#100	0.15	78		
#140	0.11	75		
#200	0.075	70		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0294	53		
---	0.0179	41		
---	0.0119	28		
---	0.0089	22		
---	0.0065	16		
---	0.0047	12		
---	0.0033	9		
---	0.0015	6		

Coefficients

D_{85} = 0.2674 mm	D_{30} = 0.0126 mm
D_{60} = 0.0438 mm	D_{15} = 0.0059 mm
D_{50} = 0.0261 mm	D_{10} = 0.0037 mm
C_u = 11.838	C_c = 0.980

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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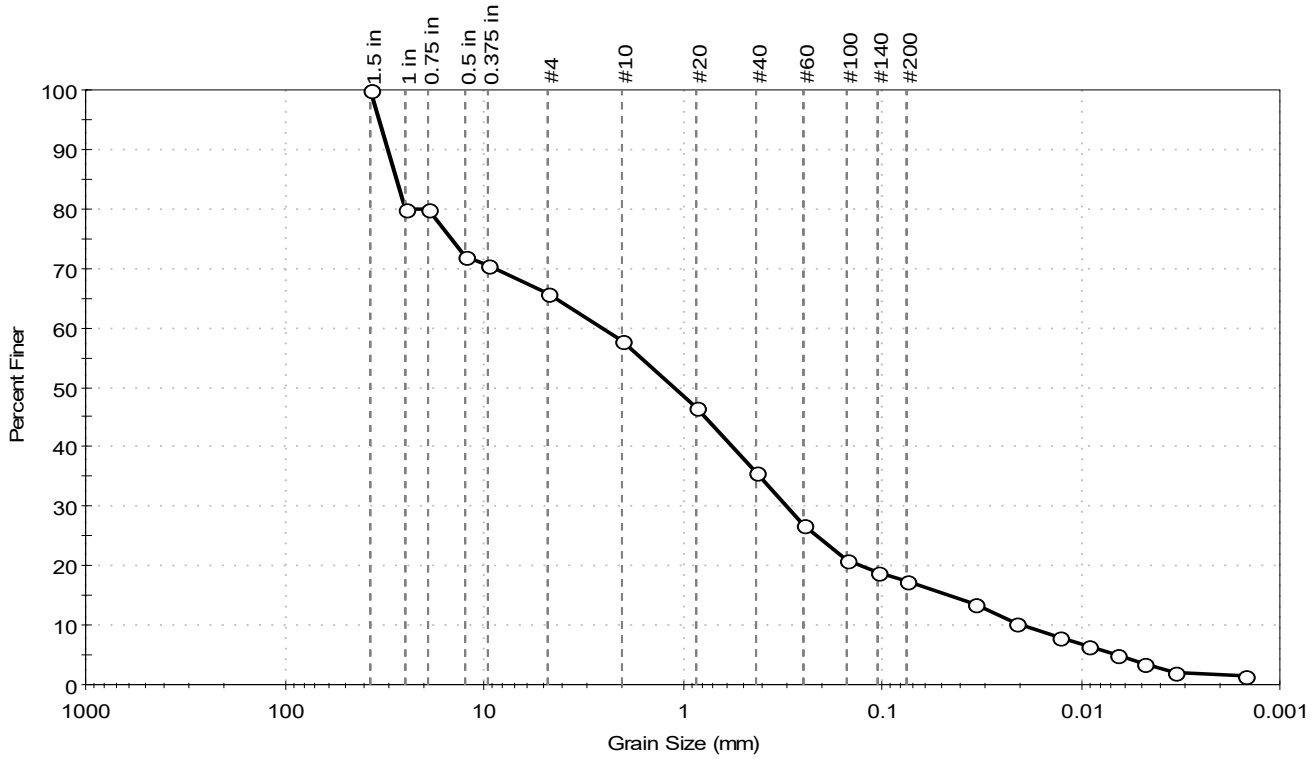
GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-2a & 2	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	27-45	Test Id:	504917		
Test Comment:	---				
Visual Description:	Moist, grayish brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	34.3	48.3	17.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	80		
0.75 in	19.00	80		
0.5 in	12.50	72		
0.375 in	9.50	70		
#4	4.75	66		
#10	2.00	58		
#20	0.85	47		
#40	0.42	36		
#60	0.25	27		
#100	0.15	21		
#140	0.11	19		
#200	0.075	17		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0344	13		
---	0.0210	10		
---	0.0129	8		
---	0.0093	6		
---	0.0066	5		
---	0.0048	4		
---	0.0034	2		
---	0.0015	1		

Coefficients

D_{85} = 27.7043 mm
D_{30} = 0.3016 mm
D_{60} = 2.5616 mm
D_{15} = 0.0465 mm
D_{50} = 1.0979 mm
D_{10} = 0.0201 mm
C_u = 127.443
C_c = 1.767

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

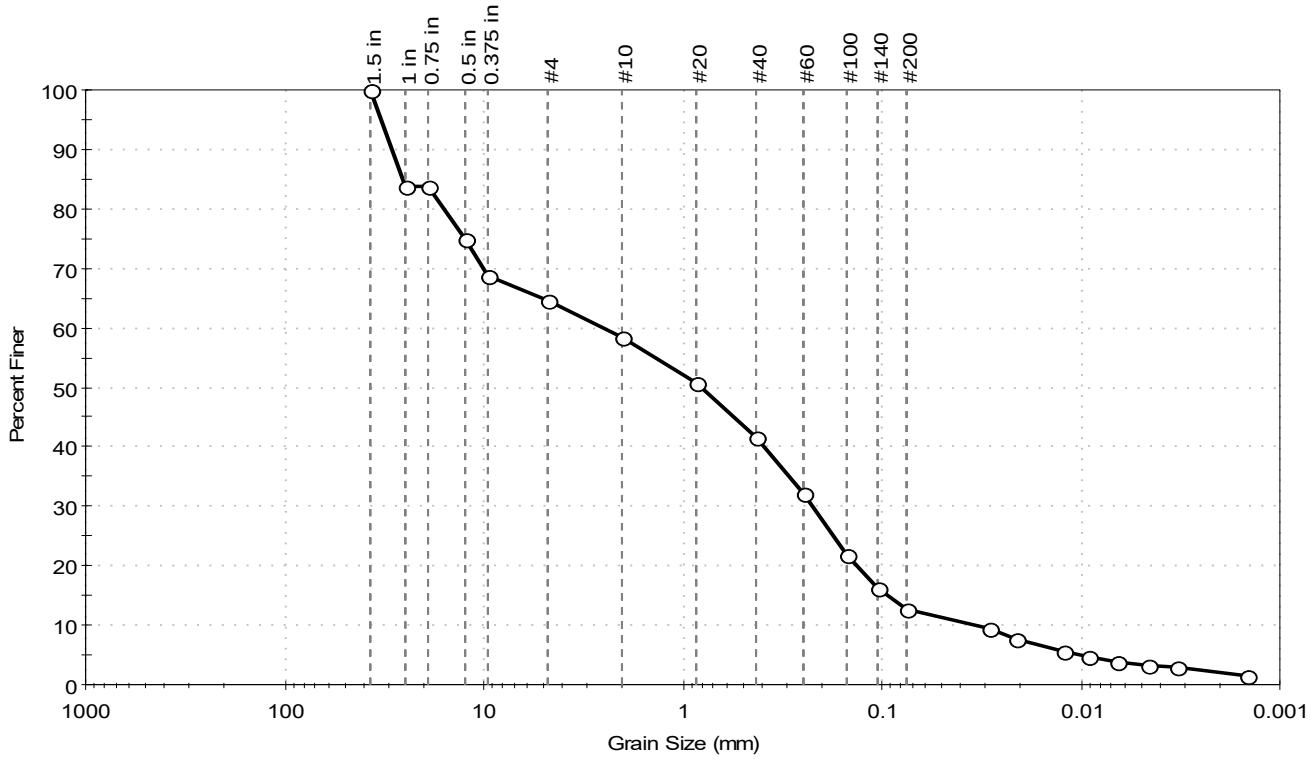
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-2a & 2	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	5-32	Test Id:	504918		
Test Comment:	---				
Visual Description:	Moist, light olive brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	35.5	51.8	12.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	84		
0.75 in	19.00	84		
0.5 in	12.50	75		
0.375 in	9.50	69		
#4	4.75	64		
#10	2.00	58		
#20	0.85	51		
#40	0.42	42		
#60	0.25	32		
#100	0.15	22		
#140	0.11	16		
#200	0.075	13		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0286	9		
---	0.0212	8		
---	0.0122	6		
---	0.0092	5		
---	0.0065	4		
---	0.0046	3		
---	0.0033	3		
---	0.0015	2		

Coefficients

D_{85} = 25.8200 mm	D_{30} = 0.2237 mm
D_{60} = 2.5178 mm	D_{15} = 0.0939 mm
D_{50} = 0.8022 mm	D_{10} = 0.0350 mm
C_u = 71.937	C_c = 0.568

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

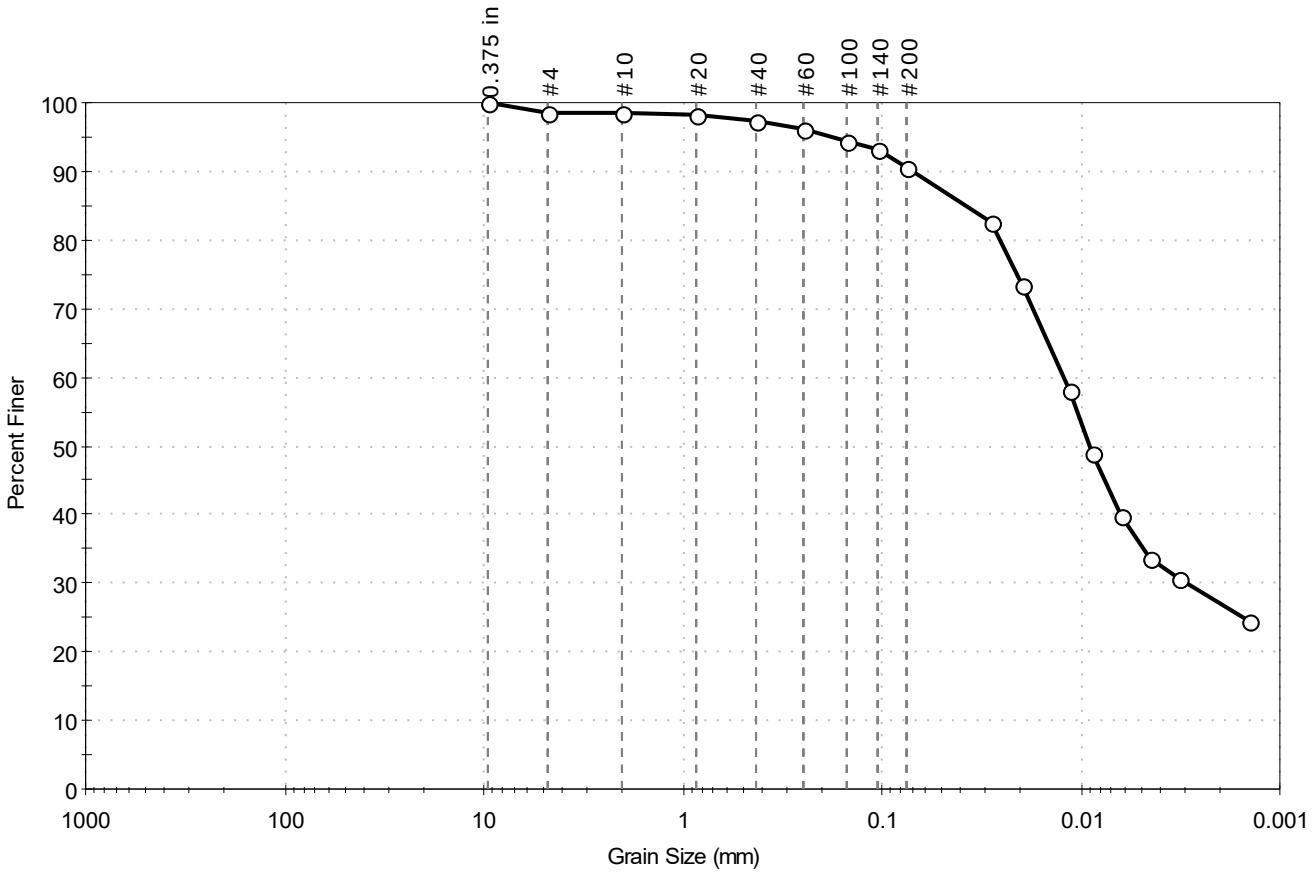
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-3	Sample Type:	jar	Tested By:	ckg
Sample ID:	silt/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	0-17	Test Id:	504909		
Test Comment:	---				
Visual Description:	Moist, dark gray silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.4	8.1	90.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	98		
#40	0.42	97		
#60	0.25	96		
#100	0.15	94		
#140	0.11	93		
#200	0.075	91		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0280	83		
---	0.0199	73		
---	0.0115	58		
---	0.0088	49		
---	0.0062	40		
---	0.0045	34		
---	0.0032	31		
---	0.0014	24		

Coefficients

D_{85} = 0.0379 mm	D_{30} = 0.0030 mm
D_{60} = 0.0123 mm	D_{15} = N/A
D_{50} = 0.0091 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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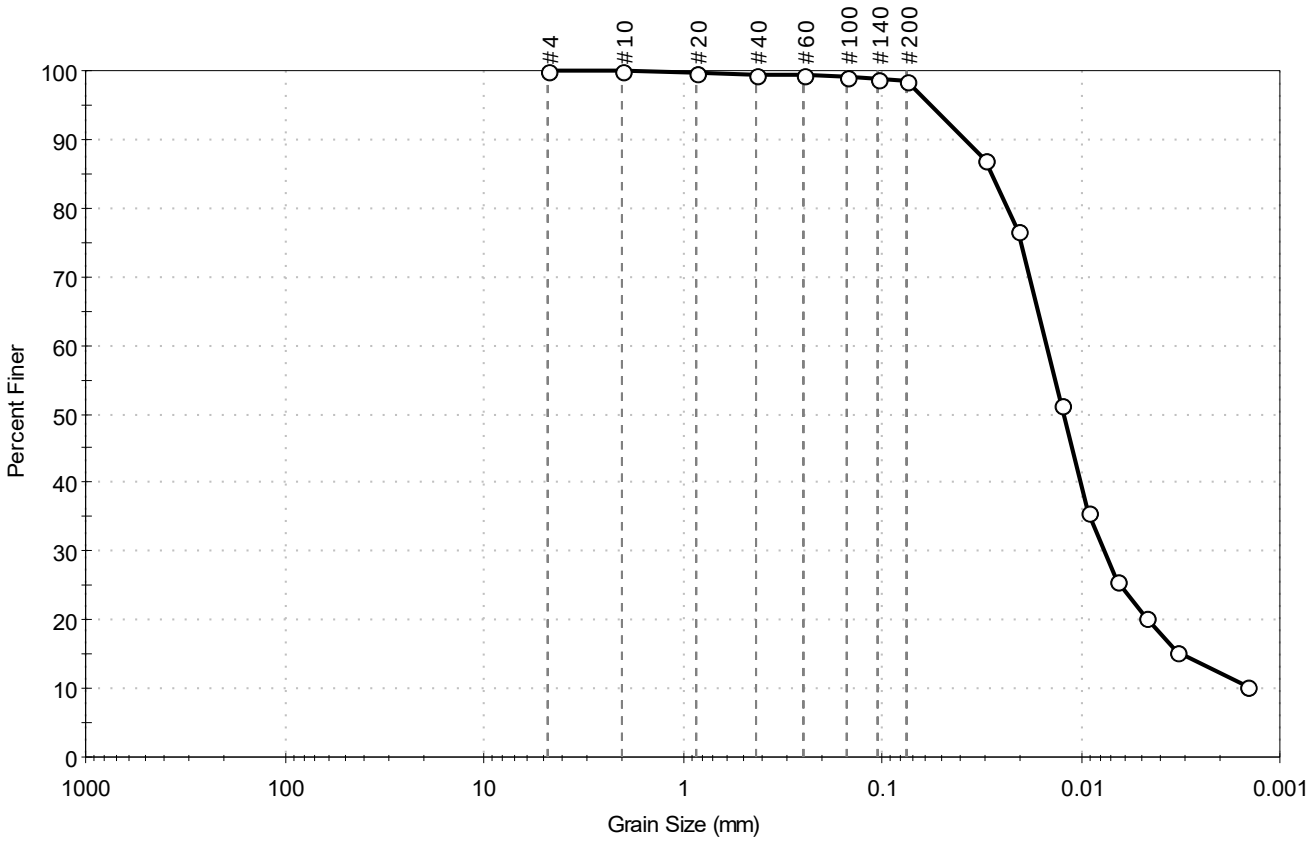
GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-3	Sample Type:	jar	Tested By:	ckg
Sample ID:	peat/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	20-27	Test Id:	504910		
Test Comment:	---				
Visual Description:	Moist, very dark gray silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.0	1.6	98.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	99		
#140	0.11	99		
#200	0.075	98		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0304	87		
---	0.0207	77		
---	0.0125	51		
---	0.0092	36		
---	0.0065	26		
---	0.0047	20		
---	0.0033	15		
---	0.0015	10		

Coefficients

D_{85} = 0.0282 mm	D_{30} = 0.0076 mm
D_{60} = 0.0149 mm	D_{15} = 0.0032 mm
D_{50} = 0.0122 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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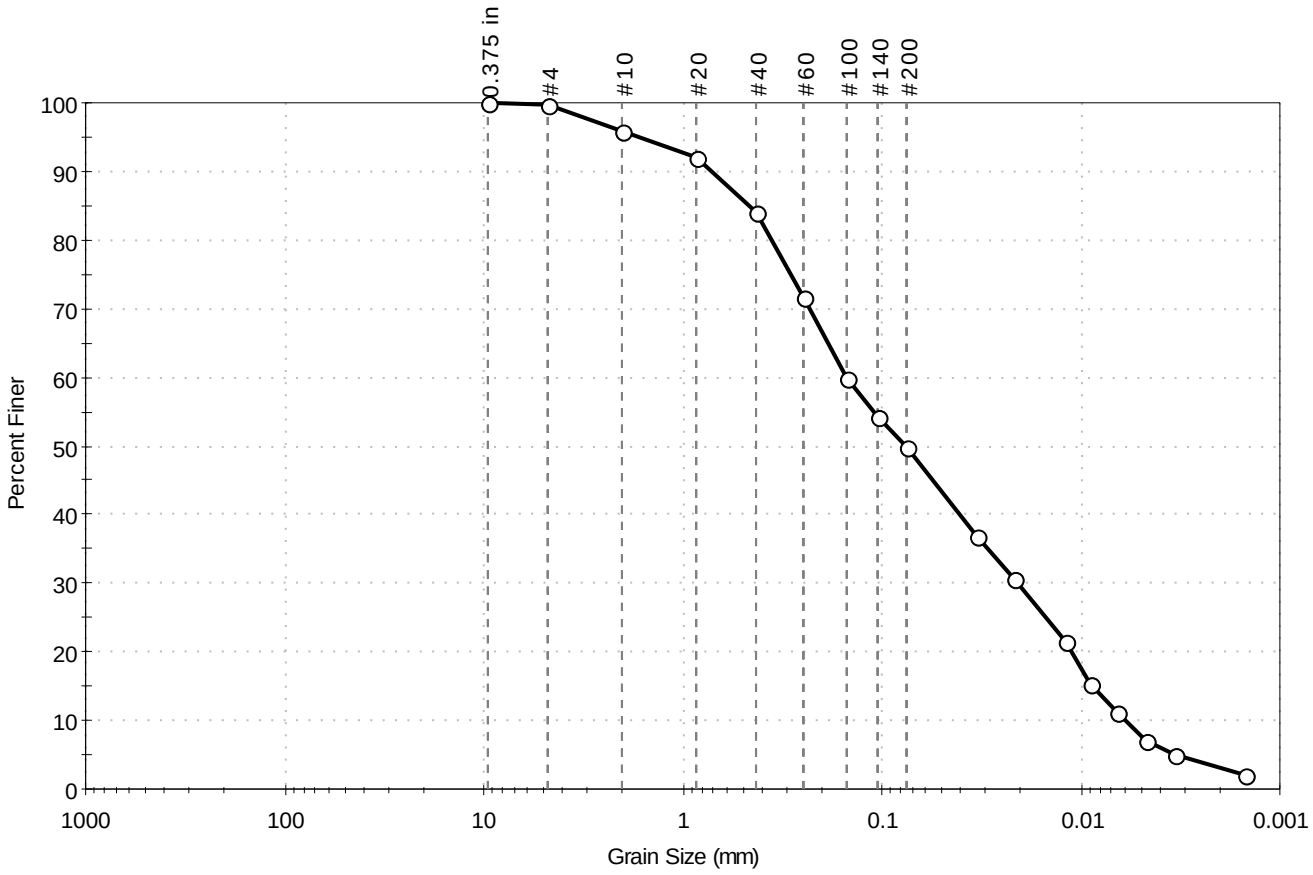
Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-3	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	30-42	Test Id:	504911		
Test Comment:	---				
Visual Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.4	49.7	49.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	96		
#20	0.85	92		
#40	0.42	84		
#60	0.25	72		
#100	0.15	60		
#140	0.11	54		
#200	0.075	50		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0331	37		
---	0.0215	31		
---	0.0121	21		
---	0.0089	15		
---	0.0065	11		
---	0.0047	7		
---	0.0034	5		
---	0.0015	2		

Coefficients

D_{85} = 0.4574 mm
D_{30} = 0.0206 mm
D_{60} = 0.1505 mm
D_{15} = 0.0087 mm
D_{50} = 0.0759 mm
D_{10} = 0.0059 mm
C_u = 25.508
C_c = 0.478

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

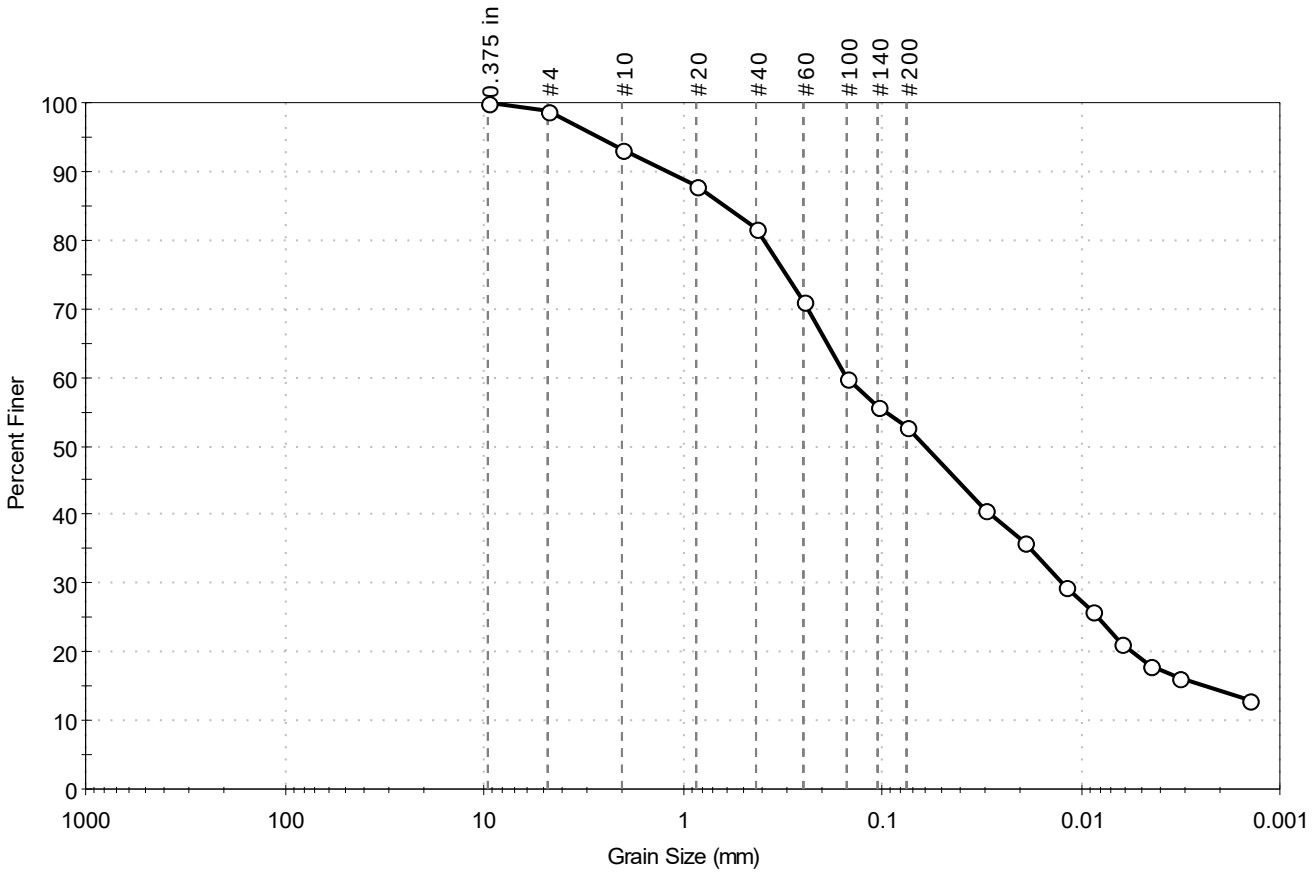
Sample / Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-4	Sample Type:	jar	Tested By:	ckg
Sample ID:	silt/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	0-7	Test Id:	504912		
Test Comment:	---				
Visual Description:	Moist, dark gray sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.2	46.0	52.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	93		
#20	0.85	88		
#40	0.42	82		
#60	0.25	71		
#100	0.15	60		
#140	0.11	56		
#200	0.075	53		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0302	41		
---	0.0192	36		
---	0.0121	29		
---	0.0087	26		
---	0.0063	21		
---	0.0045	18		
---	0.0032	16		
---	0.0014	13		

Coefficients

D_{85} = 0.6114 mm	D_{30} = 0.0126 mm
D_{60} = 0.1515 mm	D_{15} = 0.0023 mm
D_{50} = 0.0604 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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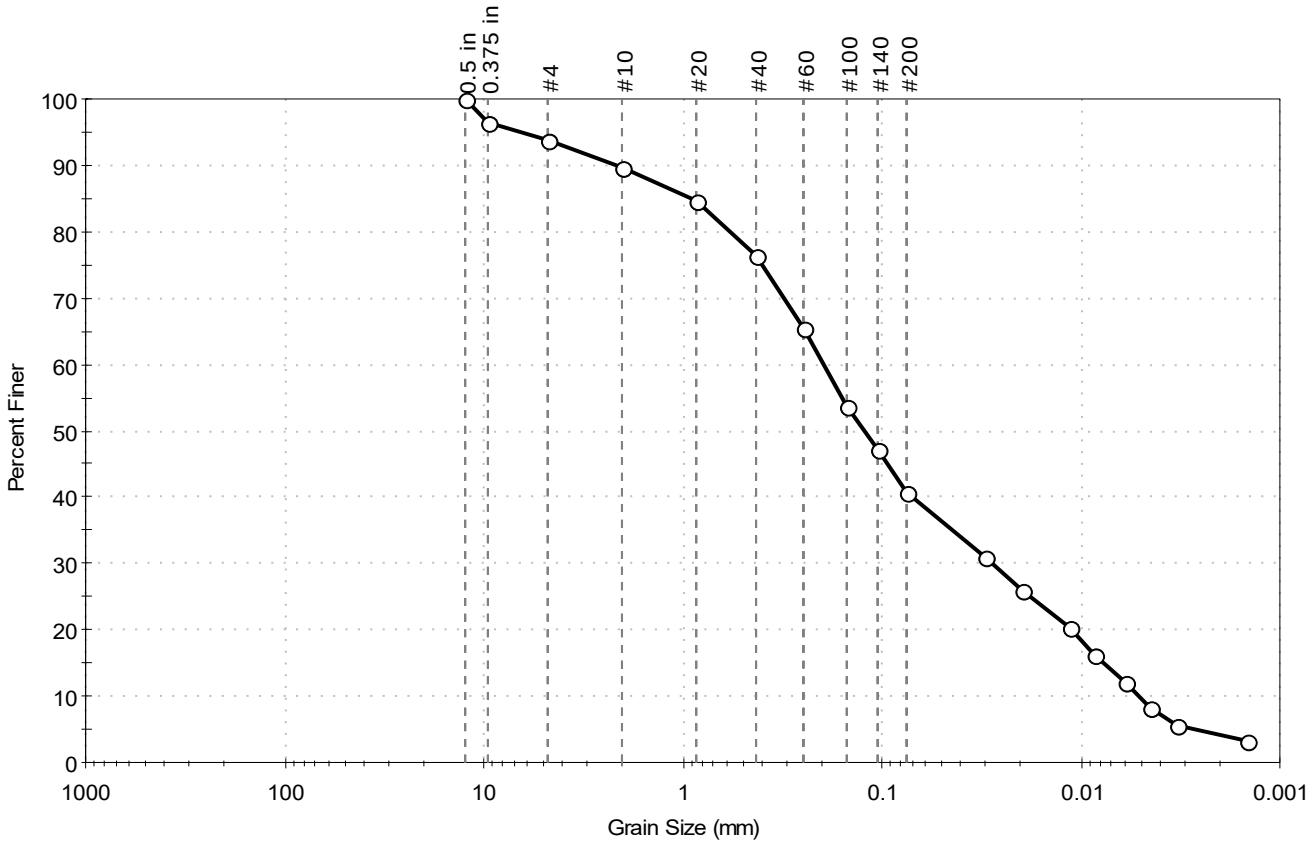
GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-4	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	10-22	Test Id:	504913		
Test Comment:	---				
Visual Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.1	53.1	40.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	94		
#10	2.00	90		
#20	0.85	85		
#40	0.42	76		
#60	0.25	66		
#100	0.15	54		
#140	0.11	47		
#200	0.075	41		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0304	31		
---	0.0196	26		
---	0.0113	20		
---	0.0085	16		
---	0.0061	12		
---	0.0045	8		
---	0.0033	6		
---	0.0015	3		

Coefficients

D_{85} = 0.9130 mm	D_{30} = 0.0279 mm
D_{60} = 0.1968 mm	D_{15} = 0.0077 mm
D_{50} = 0.1232 mm	D_{10} = 0.0052 mm
C_u = 37.846	C_c = 0.761

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

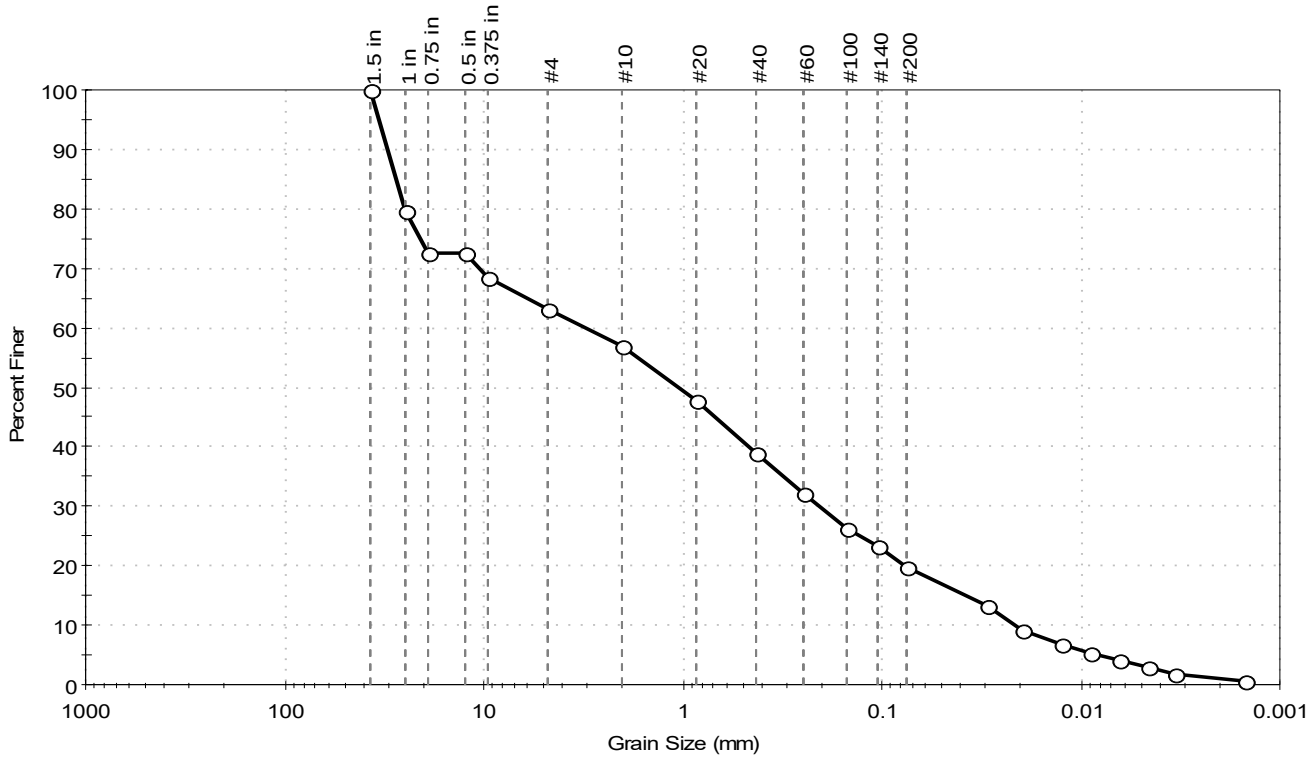
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-4	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	25-42	Test Id:	504914		
Test Comment:	---				
Visual Description:	Moist, gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	37.0	43.2	19.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	80		
0.75 in	19.00	72		
0.5 in	12.50	72		
0.375 in	9.50	68		
#4	4.75	63		
#10	2.00	57		
#20	0.85	48		
#40	0.42	39		
#60	0.25	32		
#100	0.15	26		
#140	0.11	23		
#200	0.075	20		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0297	13		
---	0.0199	9		
---	0.0125	7		
---	0.0089	5		
---	0.0065	4		
---	0.0046	3		
---	0.0034	2		
---	0.0015	1		

Coefficients

D_{85} = 27.8448 mm	D_{30} = 0.2075 mm
D_{60} = 3.0752 mm	D_{15} = 0.0379 mm
D_{50} = 1.0487 mm	D_{10} = 0.0217 mm
C_u = 141.714	C_c = 0.645

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

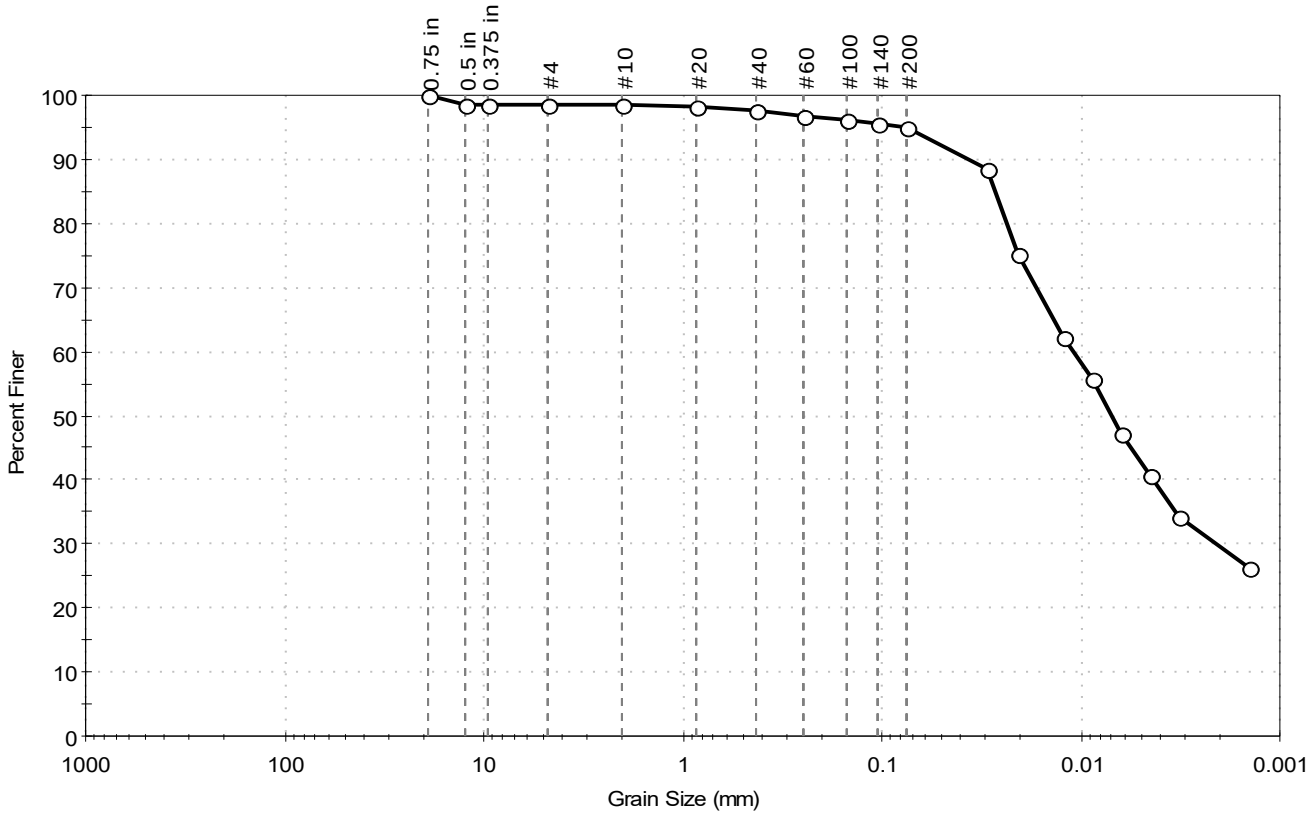
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-5	Sample Type:	jar	Tested By:	ckg
Sample ID:	silt/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	0-17	Test Id:	504906		
Test Comment:	---				
Visual Description:	Moist, dark gray silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
–	1.5	3.5	95.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	99		
0.375 in	9.50	99		
#4	4.75	99		
#10	2.00	98		
#20	0.85	98		
#40	0.42	98		
#60	0.25	97		
#100	0.15	96		
#140	0.11	96		
#200	0.075	95		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0294	88		
---	0.0207	75		
---	0.0122	62		
---	0.0088	56		
---	0.0063	47		
---	0.0045	41		
---	0.0032	34		
---	0.0014	26		

Coefficients

D_{85} = 0.0268 mm
D_{30} = 0.0021 mm
D_{60} = 0.0109 mm
D_{15} = N/A
D_{50} = 0.0070 mm
D_{10} = N/A
C_u = N/A
C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

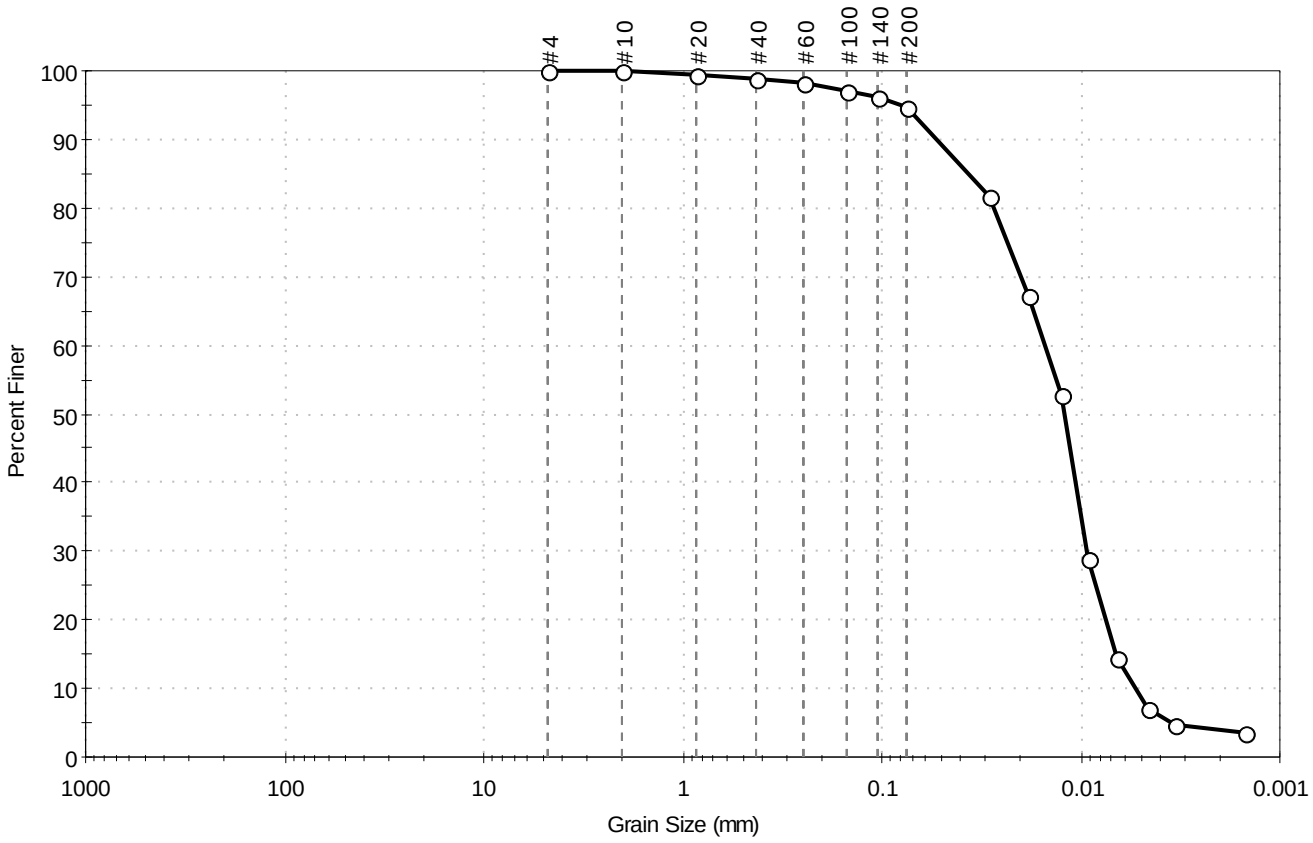
Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-5	Sample Type:	jar	Tested By:	ckg
Sample ID:	peat/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	15-22	Test Id:	504907		
Test Comment:	---				
Visual Description:	Moist, very dark gray silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	5.2	94.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	99		
#40	0.42	99		
#60	0.25	98		
#100	0.15	97		
#140	0.11	96		
#200	0.075	95		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0292	82		
---	0.0183	67		
---	0.0124	53		
---	0.0093	29		
---	0.0066	14		
---	0.0046	7		
---	0.0034	5		
---	0.0015	4		

Coefficients

D_{85} = 0.0371 mm	D_{30} = 0.0094 mm
D_{60} = 0.0151 mm	D_{15} = 0.0067 mm
D_{50} = 0.0120 mm	D_{10} = 0.0053 mm
C_u = 2.849	C_c = 1.104

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

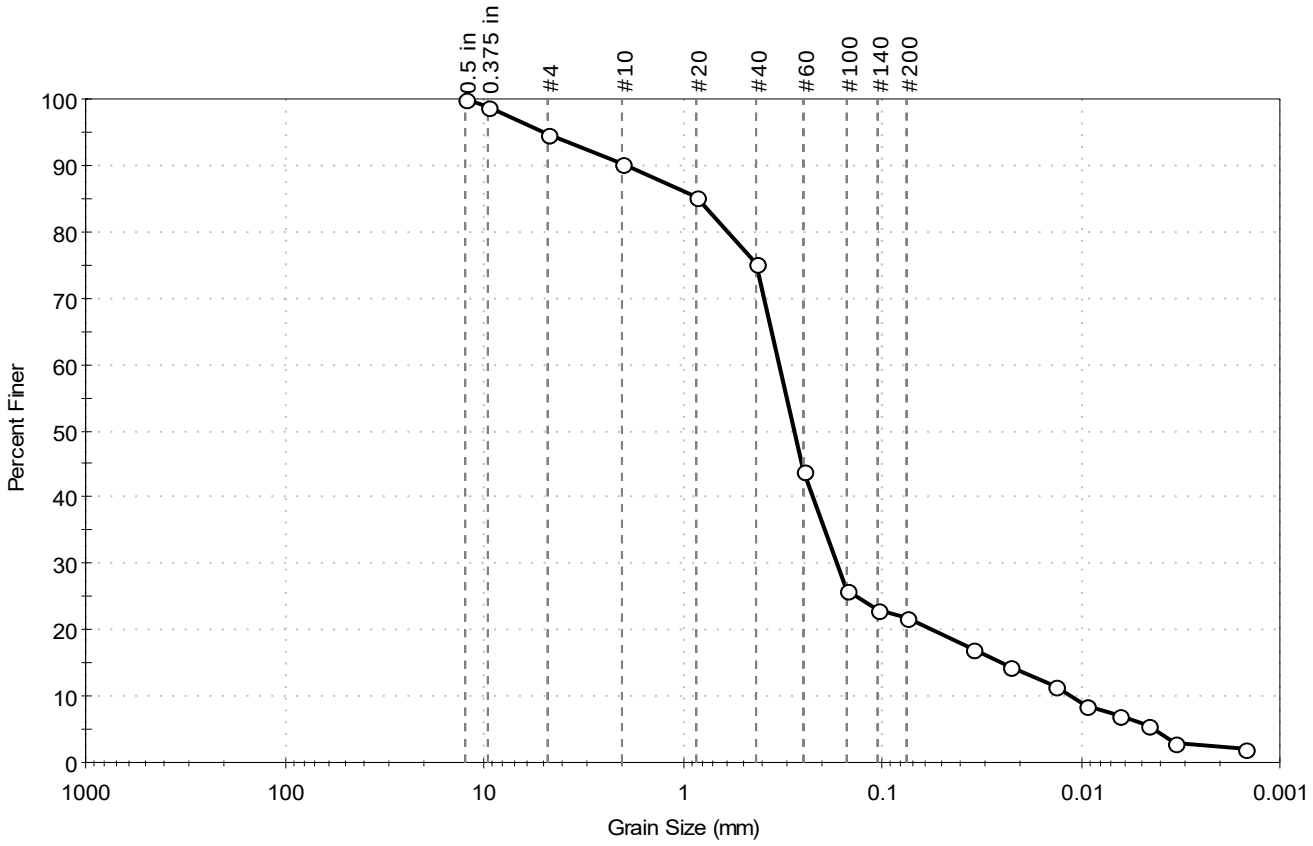
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	New Bedford Harbor CAD Cell				
Location:	New Bedford, MA			Project No:	GTX-310004
Boring ID:	CC4-5	Sample Type:	jar	Tested By:	ckg
Sample ID:	sand/ composite jars	Test Date:	05/22/19	Checked By:	bfs
Depth :	30-37	Test Id:	504908		
Test Comment:	---				
Visual Description:	Moist, gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	5.4	72.9	21.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	95		
#10	2.00	90		
#20	0.85	85		
#40	0.42	75		
#60	0.25	44		
#100	0.15	26		
#140	0.11	23		
#200	0.075	22		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	17		
---	0.0230	14		
---	0.0135	11		
---	0.0093	9		
---	0.0065	7		
---	0.0046	6		
---	0.0034	3		
---	0.0015	2		

Coefficients

D_{85} = 0.8418 mm	D_{30} = 0.1686 mm
D_{60} = 0.3283 mm	D_{15} = 0.0252 mm
D_{50} = 0.2771 mm	D_{10} = 0.0111 mm
C_u = 29.577	C_c = 7.800

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

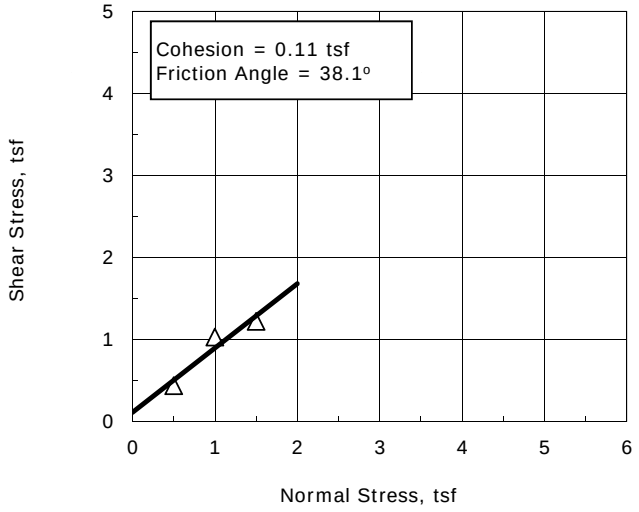
Dispersion Period : 1 minute

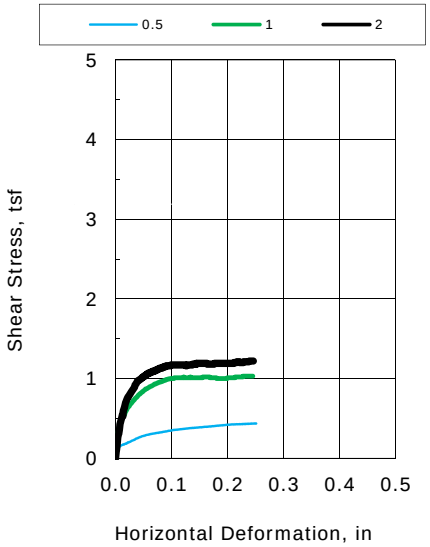
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

Client:	Foth Infrastructure & Environment
Project Name:	New Bedford Harbor CAD Cell
Project Location:	New Bedford, MA
GTX #:	310004
Test Date:	05/20/19
Tested By:	trm
Checked By:	njh
Boring ID:	CC4-2a
Sample ID:	Sand/ Composite Jars
Depth, ft:	15-22
Visual Description:	Moist, dark gray sandy silt

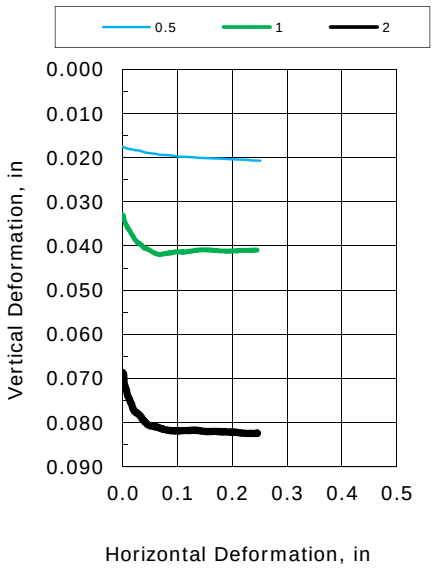
Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D3080





Test No.:	DS-1A	DS-2	DS-3
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	166.3	168.7	167.1
Initial Dry Density, pcf:	109.4	111.9	109.5
Initial Moisture Content, %:	18.0	17.1	18.5
Initial Bulk Density, pcf:	129.1	131.0	129.7
Initial Degree of Saturation:	86.5	87.1	88.8
Initial Void Ratio:	0.58	0.54	0.57
Final Dry Density, pcf:	111.7	116.6	119.3
Final Moisture Content, %:	17.5	16.0	16.2
Final Bulk Density, pcf:	131.3	135.3	138.6
Normal Stress, tsf:	0.5	1.0	1.5
Maximum Shear Stress, tsf:	0.4	1.0	1.2
Shear Rate, in/min:	0.0003	0.0003	0.0003

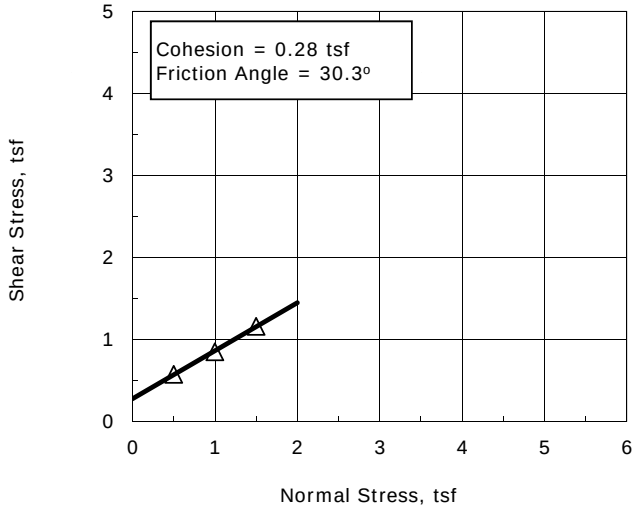
Sample Type:	reconstituted
Measured Specific Gravity:	2.76
Liquid Limit:	---
Plastic Limit:	---
Plasticity Index:	---
% Passing #200 sieve:	69.8
Soil Classification:	---
Group Symbol:	---

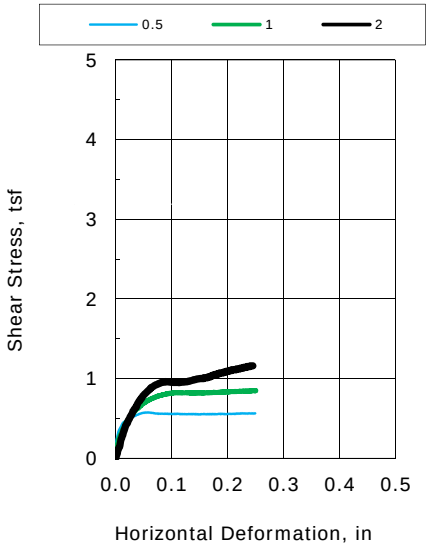


Notes:
- Material greater than #5 sieve screened out of sample prior to testing
- Moisture content obtained before shear from sample trimmings
- Moisture Content determined by ASTM D2216
- % Passing #200 sieve determined by ASTM D6913
- Target Compaction: At the as-received density and moisture content. Values specified by client.
- Values for cohesion and friction angle determined from best-fit straight line to the data for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site-specific conditions.
- "---" indicates testing required to determine these values was not requested.

Client:	Foth Infrastructure & Environment
Project Name:	New Bedford Harbor CAD Cell
Project Location:	New Bedford, MA
GTX #:	310004
Test Date:	05/20/19
Tested By:	trm
Checked By:	njh
Boring ID:	CC4-3
Sample ID:	Sand/ Composite Jars
Depth, ft:	30-42
Visual Description:	Moist, dark gray silty sand

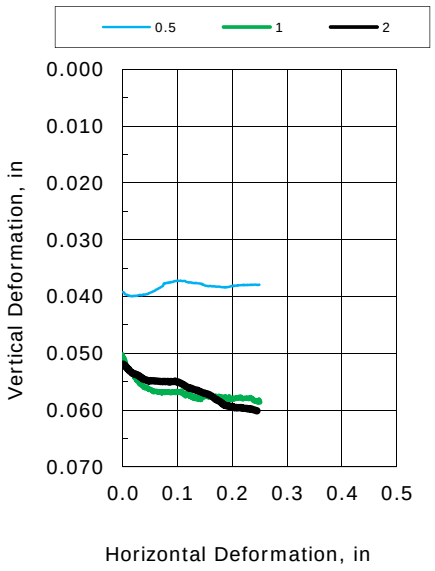
Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D3080





Test No.:	DS-4	DS-5	DS-6
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	169.7	169.4	167.4
Initial Dry Density, pcf:	115.8	115.6	115.6
Initial Moisture Content, %:	13.7	13.7	13.7
Initial Bulk Density, pcf:	131.7	131.5	131.5
Initial Degree of Saturation:	77.6	77.2	77.3
Initial Void Ratio:	0.49	0.49	0.49
Final Dry Density, pcf:	120.3	122.8	123.0
Final Moisture Content, %:	12.2	12.5	11.9
Final Bulk Density, pcf:	135.0	138.2	137.7
Normal Stress, tsf:	0.5	1.0	1.5
Maximum Shear Stress, tsf:	0.6	0.9	1.2
Shear Rate, in/min:	0.0003	0.0003	0.0003

Sample Type:	reconstituted
Measured Specific Gravity:	2.76
Liquid Limit:	---
Plastic Limit:	---
Plasticity Index:	---
% Passing #200 sieve:	49.9
Soil Classification:	---
Group Symbol:	---



Notes:
- Material greater than #5 sieve screened out of sample prior to testing
- Moisture content obtained before shear from sample trimmings
- Moisture Content determined by ASTM D2216
- % Passing #200 sieve determined by ASTM D6913
- Target Compaction: At the as-received density and moisture content. Values specified by client.
- Values for cohesion and friction angle determined from best-fit straight line to the data for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site-specific conditions.
- "---" indicates testing required to determine these values was not requested.

GeoTesting EXPRESS

SOIL CHAIN OF CUSTODY & TEST REQUEST

GeoTesting Express, Inc.
123 Nagog Park
Acton, MA 01720
800 434 1062 Toll Free

2358 Perimeter Park Drive, Suite 320
Atlanta, GA 30341
770 645 6575 Tel

www.geotesting.com

CLIENT		INVOICE (complete if different from Client)	
Company: Foth		Company: Foth	
Address: 15 Creek Road		Address: 2121 Innovation Court, Suite 300, PO Box 5126	
City, State, Zip: Marion, MA 02738		City, State, Zip: De Pere, WI 54115-5126	
Contact: Mike Campagnone	Phone: 508-762-0772	Contact: Lori Kurowski	Phone: 920-496-6858
E-mail: mike.campagnone@foth.com	Cell: 401-663-5782	E-mail: accounting@foth.com	Cell: lori.kurowski@foth.com

PROJECT		
Project Name: New Bedford Harbor CAD cell	Client Project #: 18N020	Purchase Order#:
Project Location: New Bedford	GTX Quote #:	Requested Turnaround: RUSH
On-site Contact: Mike Campagnone	E-mail: Brian Sperrazza	Phone: 651-288-8584

SOIL			Atterberg Limits (ASTM D 4318)	USCS – Classification (ASTM D 2487)	Grain Size (ASTM D 6913) (Sieve Only)	Grain Size (ASTM 7928) (Hydrometer)	Density (ASTM D 7263)	Moisture Content (ASTM D 2216)	Organic Content (ASTM D 2974)	pH Please select	Specific Gravity (ASTM D 854)	Electrical Resistivity Please select	Proctor Compaction Please select	California Bearing Ratio * (ASTM D 1883)	Direct Shear* (ASTM D 3080)	Triaxial Shear* UU - ASTM D2850	Incremental Consolidation* (ASTM D 2435)	Permeability/ Hydraulic Conductivity* Please Select	Unconfined Compression (ASTM D 2166)	Other:
Boring ID	Sample ID	Depth																		
CC4-5	silt/ composite jars	0-17		✓	✓	✓	✓	✓			✓									
CC4-5	peat/ composite jars	15-22		✓	✓	✓	✓	✓			✓									
CC4-5	sand/ composite jars	30-37		✓	✓	✓	✓	✓			✓									
CC4-3	silt/ composite jars	0-17		✓	✓	✓	✓	✓			✓									
CC4-3	peat/ composite jars	20-27		✓	✓	✓	✓	✓			✓									
CC4-3	sand/ composite jars	30-42		✓	✓	✓	✓	✓			✓				✓					
CC4-4	silt/ composite jars	0-7		✓	✓	✓	✓	✓			✓									
CC4-4	sand/ composite jars	10-22		✓	✓	✓	✓	✓			✓									
CC4-4	sand/ composite jars	25-42		✓	✓	✓	✓	✓			✓									
CC4-2a	silt/ composite jars	0-12		✓	✓	✓	✓	✓			✓									
CC4-2a	sand/ composite jars	15-22		✓	✓	✓	✓	✓			✓				✓					

*Specify Test Conditions (Undisturbed or Remolded, Density and moisture, Test Normal Loads, Test Confining Stresses, etc.): For strength tests remolded granular samples will be used, as received density, and saturated moisture. Test normal loads of 0.5, 1.0, and 1.5 TSF. Please call Brian Sperrazza 651-288-8584 to discuss particulars of strength tests.

AUTHORIZE BY SIGNING AND DATING:

SIGNATURE:_____ **PRINT NAME:** _____ **DATE:** _____

For GTX Use Only
Incoming Sample Inspection Performed □
Adverse conditions:

Relinquished By:	DATE: / TIME:	Received By:	DATE: / TIME:
Relinquished By:	DATE: / TIME:	Received By:	DATE: / TIME:

GeoTesting EXPRESS

SOIL CHAIN OF CUSTODY & TEST REQUEST

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CLIENT		INVOICE (complete if different from Client)	
Company: Foth		Company: Foth	
Address: 15 Creek Road		Address: 2121 Innovation Court, Suite 300, PO Box 5126	
City, State, Zip: Marion, MA 02738		City, State, Zip: De Pere, WI 54115-5126	
Contact: Mike Campagnone	Phone: 508-762-0772	Contact: Lori Kurowski	Phone: 920-496-6858
E-mail: mike.campagnone@foth.com	Cell: 401-663-5782	E-mail: accounting@foth.com	Cell: lori.kurowski@foth.com

PROJECT		
Project Name: New Bedford Harbor CAD cell	Client Project #: 18N020	Purchase Order#:
Project Location: New Bedford	GTX Quote #:	Requested Turnaround: RUSH
On-site Contact: Mike Campagnone	E-mail: Brian Sperrazza	Phone: 651-288-8584

SOIL			Atterberg Limits (ASTM D 4318)	USCS – Classification (ASTM D 2487)	Grain Size (ASTM D 6913) (Sieve Only)	Grain Size (ASTM 7928) (Hydrometer)	Density (ASTM D 7263)	Moisture Content (ASTM D 2216)	Organic Content (ASTM D 2974)	pH Please select	Specific Gravity (ASTM D 854)	Electrical Resistivity Please select	Proctor Compaction Please select	California Bearing Ratio * (ASTM D 1883)	Direct Shear* (ASTM D 3080)	Triaxial Shear* UU - ASTM D2850	Incremental Consolidation* (ASTM D 2435)	Permeability/ Hydraulic Conductivity* Please Select	Unconfined Compression (ASTM D 2166)	Other:
Boring ID	Sample ID	Depth																		
CC4-2a & 2	sand/ composite jars	27-45		✓	✓	✓	✓	✓			✓									
CC4-2a & 2	sand/ composite jars	5-32		✓	✓	✓	✓	✓			✓									

*Specify Test Conditions (Undisturbed or Remolded, Density and moisture, Test Normal Loads, Test Confining Stresses, etc.): For strength tests remolded granular samples will be used, as received density, and saturated moisture. Test normal loads of 0.5, 1.0, and 1.5 TSF. Please call Brian Sperrazza 651-288-8584 to discuss particulars of strength tests.

AUTHORIZE BY SIGNING AND DATING:

SIGNATURE:_____ **PRINT NAME:** _____ **DATE:** _____

For GTX Use Only
Incoming Sample Inspection Performed □
Adverse conditions:

Relinquished By:	DATE:	Received By:	DATE:
	TIME:		TIME:
Relinquished By:	DATE:	Received By:	DATE:
	TIME:		TIME:

GeoTesting EXPRESS

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CAI	CERCHAR Abrasiveness Index
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
CSR	cyclic stress ratio
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \times D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c'	cohesion intercept for effective stresses
D	diameter of specimen
D	damping ratio
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young's modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
H_R	Rebound Hardness number
i	gradient
I_S	Uncorrected point load strength
$I_{S(50)}$	Size corrected point load strength index
H_A	Modified Taber Abrasion
H_T	Total hardness
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p'	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p' at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S_r	Post cyclic undrained shear strength
T	temperature
t	time
U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_s	shear wave velocity
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson's ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ'_{vc}	Effective vertical consolidation stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

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Technologies to manage risk for infrastructure

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Chicago
Los Angeles
New York

www.geotesting.com

Transmittal

TO:

Mike Campagnone

Foth Infrastructure & Environment

15 Creek Rd

Marion, MA 02738

DATE: 1/22/2020	GTX NO: 311129
RE: NBPA CAD Cell Berm Design	

COPIES	DATE	DESCRIPTION
	1/22/2020	**January 2020 Laboratory Test Report**

REMARKS:

SIGNED: _____

Jonathan Campbell, Laboratory Manager

CC:

APPROVED BY : _____

Joe Tomei, Director of Testing Services

GeoTesting EXPRESS

Technologies to manage risk for infrastructure

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Atlanta
Chicago
Los Angeles
New York
www.geotesting.com

January 22, 2020

Mike Campagnone
Foth Infrastructure & Environment
15 Creek Rd
Marion, MA 02738

RE: NBPA CAD Cell Berm Design, New Bedford, MA (GTX-311129)

Dear Mike:

Enclosed are the test results you requested for the above referenced project. GeoTesting Express, Inc. (GTX) received nine samples from you on 12/31/2019. These samples were labeled as follows:

Boring Number	Sample Number	Depth
B-1	B1 Shelby-1	3-5 ft
B-1	Bag & Jar-3	9-11 ft
B-1	Jar-4	5-7 ft
B-1	Jar-5	7-9 ft
B-1	Jar-6	9-11 ft
B-1	Jar-7	11-13 ft
B-3	B3 Shelby-1	3-5 ft
B-3	Jar-1	7-9 ft
B-3	Jar-2	11-13 ft

GTX performed the following tests on these samples:

9 ASTM D2216 - Moisture Content
2 ASTM D2435 - Incremental Consolidation
2 ASTM D2487 - Soil Classification
9 ASTM D2974 - Moisture, Ash and Organic Matter
2 ASTM D4318 - Atterberg Limits
2 ASTM D6913/D7928 - Grain Size Analysis - Sieve and Hydrometer

A copy of your test request is attached.

The results presented in this report apply only to the items tested. This report shall not be reproduced except in full, without written approval from GeoTesting Express. The remainder of these samples will be retained for a period of sixty (60) days and will then be discarded unless otherwise notified by you. Please call me if you have any questions or require additional information. Thank you for allowing GeoTesting Express the opportunity of providing you with testing services. We look forward to working with you again in the future.

Respectfully yours,

Jonathan Campbell
Laboratory Manager

GeoTesting EXPRESS

Technologies to manage risk for infrastructure

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Atlanta
Chicago
Los Angeles
New York

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Geotechnical Test Report **1/22/2020**

GTX-311129

NBPA CAD Cell Berm Design

New Bedford, MA

Client Project No.: 0018N020-Phase 7

Prepared for:

Foth Infrastructure & Environment

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	01/09/20	Checked By:	jsc
Depth :	---	Test Id:	537047		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
B-1	B1 Shelby- 1	3-5 ft	Moist, grayish brown sandy clay	50.6
B-1	Bag & Jar- 3	9-11 ft	Moist, very dark gray silty sand with gravel	30.1
B-1	Jar- 4	5-7 ft	Moist, very dark gray silt	50.9
B-1	Jar- 5	7-9 ft	Moist, very dark gray silty sand	50.6
B-1	Jar- 6	9-11 ft	Moist, very dark gray silt with organics	86.5
B-1	Jar- 7	11-13 ft	Moist, very dark silt with organics	99.6
B-3	B3 Shelby- 1	3-5 ft	Moist, grayish brown silty sand	29.9
B-3	Jar- 1	7-9 ft	Moist, very dark gray silty sand	24.6
B-3	Jar- 2	11-13 ft	Moist, very dark gray silty sand	22.0

Notes: Temperature of Drying : 110° Celsius

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	---	Sample Type:	---	Tested By:	cam
Sample ID:	---	Test Date:	01/09/20	Checked By:	jsc
Depth :	---	Test Id:	537056		

Moisture, Ash, and Organic Matter - ASTM D2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
B-1	B1 Shelby-1	3-5 ft	Moist, grayish brown sandy clay	51	97.0	3.0
B-1	Bag & Jar-3	9-11 ft	Moist, very dark gray silty sand with gravel	30	97.7	2.3
B-1	Jar-4	5-7 ft	Moist, very dark gray silt	51	96.9	3.1
B-1	Jar-5	7-9 ft	Moist, very dark gray silty sand	51	96.7	3.3
B-1	Jar-6	9-11 ft	Moist, very dark gray silt with organics	87	91.6	8.4
B-1	Jar-7	11-13 ft	Moist, very dark silt with organics	100	82.4	17.6
B-3	B3 Shelby-1	3-5 ft	Moist, grayish brown silty sand	30	98.6	1.4
B-3	Jar-1	7-9 ft	Moist, very dark gray silty sand	25	99.2	.8
B-3	Jar-2	11-13 ft	Moist, very dark gray silty sand	22	98.6	1.4

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass; dried to a constant mass at temperature of 105º C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440º C

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	---	Sample Type:	---	Tested By:	cam
Sample ID:	---	Test Date:	01/22/20	Checked By:	jsc
Depth :	---	Test Id:	537065		

USCS Classification - ASTM D2487

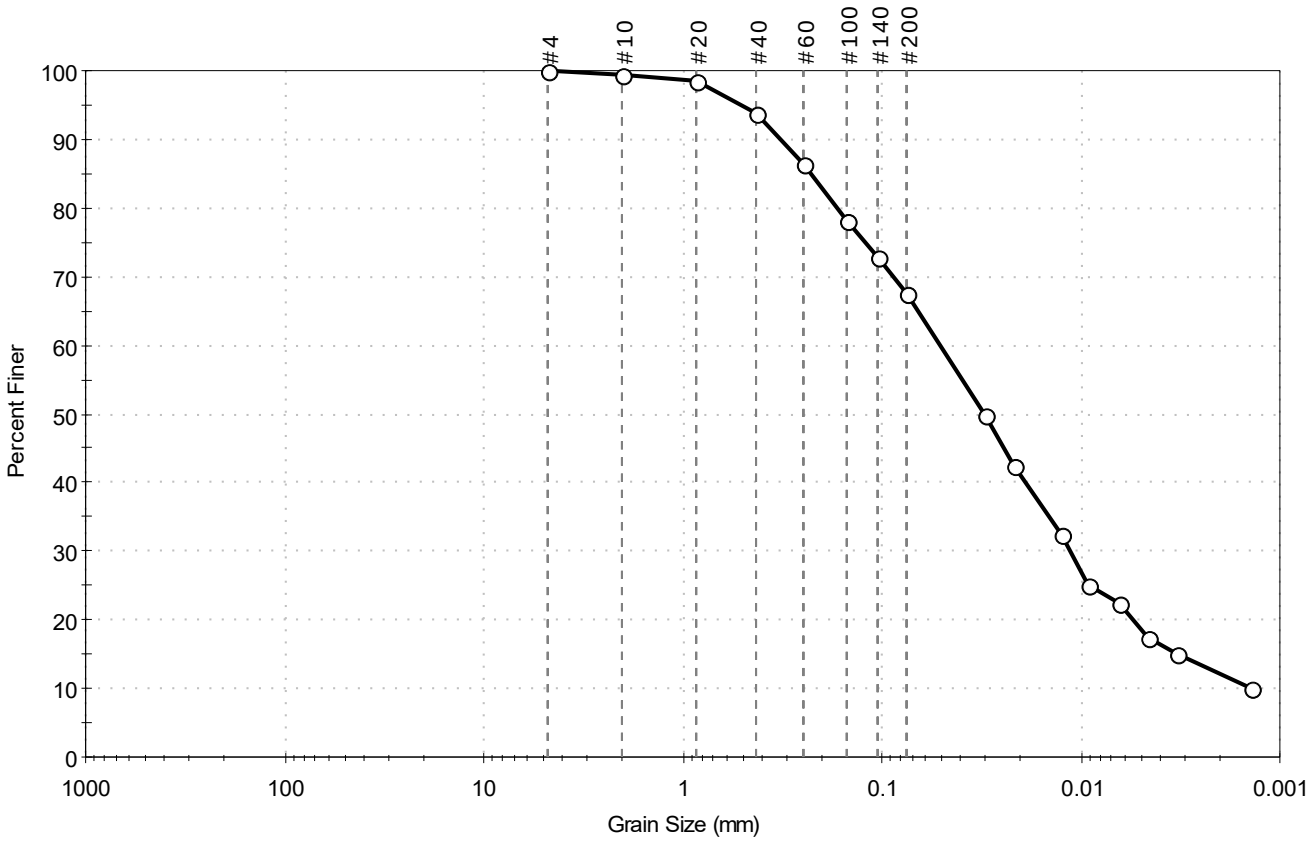
Boring ID	Sample ID	Depth	Group Name	Group Symbol	Gravel, %	Sand, %	Fines, %
B-1	B1 Shelby-1	3-5 ft	Sandy Fat CLAY	CH	0.0	32.3	67.7
B-3	B3 Shelby-1	3-5 ft	Silty SAND	SM	0.0	69.4	30.6

Remarks: Grain Size analysis performed by ASTM D6913/D7928 results enclosed
Atterberg Limits performed by ASTM D4318, results enclosed

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	B-1	Sample Type:	tube	Tested By:	ckg
Sample ID:	B1 Shelby-1	Test Date:	01/18/20	Checked By:	jsc
Depth :	3-5 ft	Test Id:	537066		
Test Comment:	---				
Visual Description:	Moist, grayish brown sandy clay				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	32.3	67.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	98		
#40	0.42	94		
#60	0.25	87		
#100	0.15	78		
#140	0.11	73		
#200	0.075	68		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0304	50		
---	0.0215	42		
---	0.0125	32		
---	0.0091	25		
---	0.0064	22		
---	0.0046	17		
---	0.0033	15		
---	0.0014	10		

Coefficients

D_{85} = 0.2280 mm	D_{30} = 0.0113 mm
D_{60} = 0.0508 mm	D_{15} = 0.0033 mm
D_{50} = 0.0306 mm	D_{10} = 0.0014 mm
C_u = 36.286	C_c = 1.795

Classification

ASTM Sandy Fat CLAY (CH)

AASHTO Clayey Soils (A-7-6 (19))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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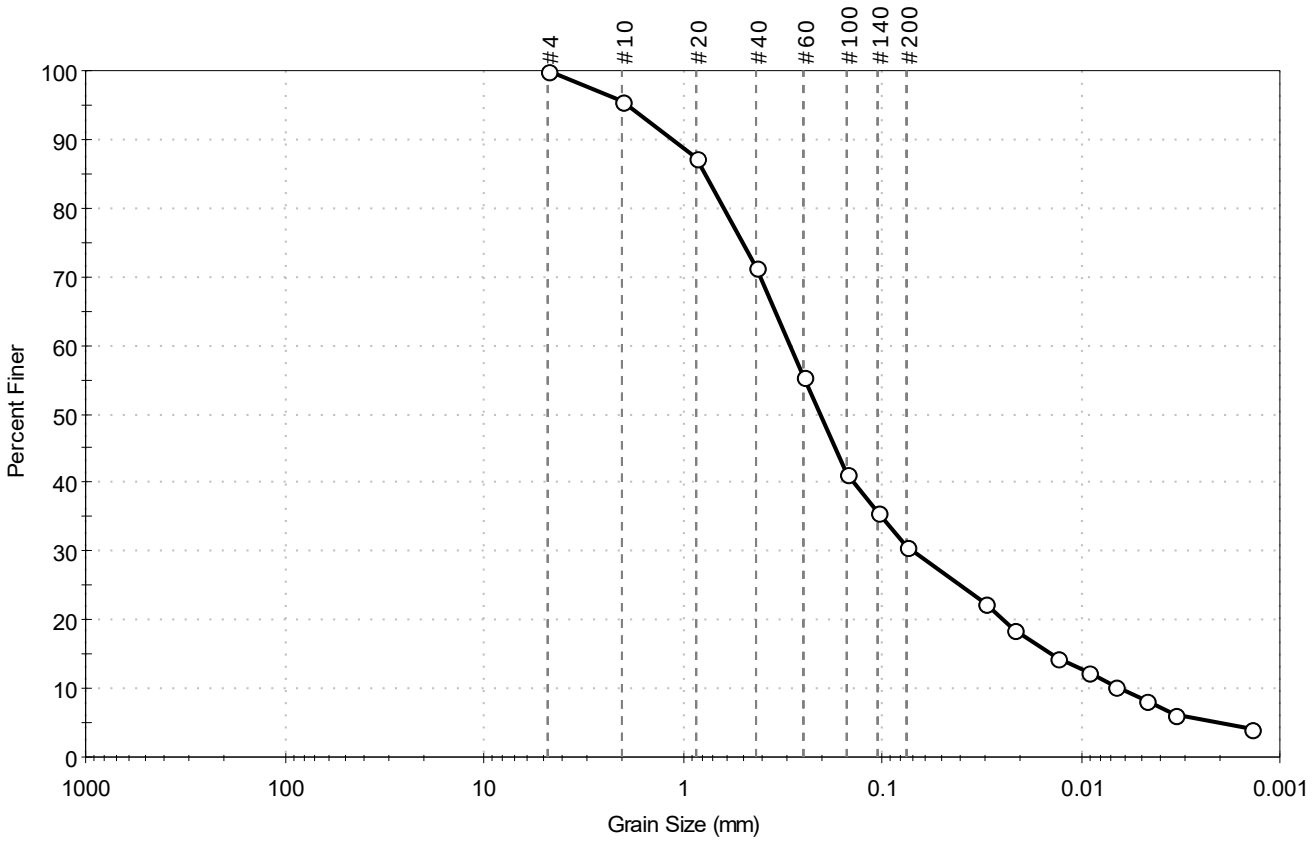
GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	B-3	Sample Type:	tube	Tested By:	ckg
Sample ID:	B3 Shelby-1	Test Date:	01/20/20	Checked By:	jsc
Depth :	3-5 ft	Test Id:	537067		
Test Comment:	---				
Visual Description:	Moist, grayish brown silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913/D7928



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	69.4	30.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	96		
#20	0.85	87		
#40	0.42	72		
#60	0.25	55		
#100	0.15	41		
#140	0.11	36		
#200	0.075	31		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0306	23		
---	0.0218	18		
---	0.0133	14		
---	0.0093	12		
---	0.0067	10		
---	0.0047	8		
---	0.0034	6		
---	0.0014	4		

Coefficients

D_{85} = 0.7701 mm	D_{30} = 0.0698 mm
D_{60} = 0.2909 mm	D_{15} = 0.0144 mm
D_{50} = 0.2054 mm	D_{10} = 0.0064 mm
C_u = 45.453	C_c = 2.617

Classification

ASTM Silty SAND (SM)

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

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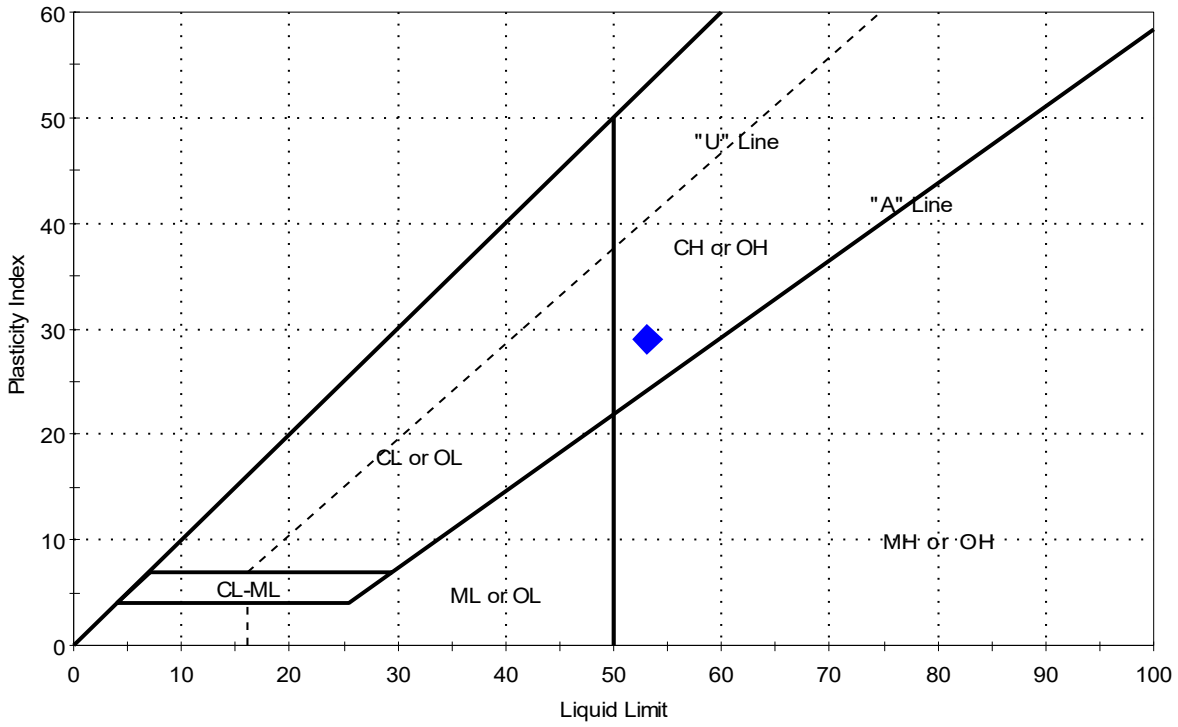
Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	B-1	Sample Type:	tube	Tested By:	cam
Sample ID:	B1 Shelby-1	Test Date:	01/22/20	Checked By:	jsc
Depth :	3-5 ft	Test Id:	537062		
Test Comment:	---				
Visual Description:	Moist, grayish brown sandy clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	B1 Shelby-1	B-1	3-5 ft	51	53	24	29	0.9	Sandy Fat CLAY (CH)

Sample Prepared using the WET method
6% Retained on #40 Sieve
Dry Strength: VERY HIGH
Dilatancy: SLOW
Toughness: LOW

GeoTesting EXPRESS

Client:	Foth Infrastructure & Environment				
Project:	NBPA CAD Cell Berm Design				
Location:	New Bedford, MA			Project No:	GTX-311129
Boring ID:	B-3	Sample Type:	tube	Tested By:	cam
Sample ID:	B3 Shelby-1	Test Date:	01/22/20	Checked By:	jsc
Depth :	3-5 ft	Test Id:	537063		
Test Comment:	---				
Visual Description:	Moist, grayish brown silty sand				
Sample Comment:	---				

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	B3 Shelby-1	B-3	3-5 ft	30	n/a	n/a	n/a	n/a	Silty SAND (SM)

28% Retained on #40 Sieve

Dry Strength: VERY HIGH

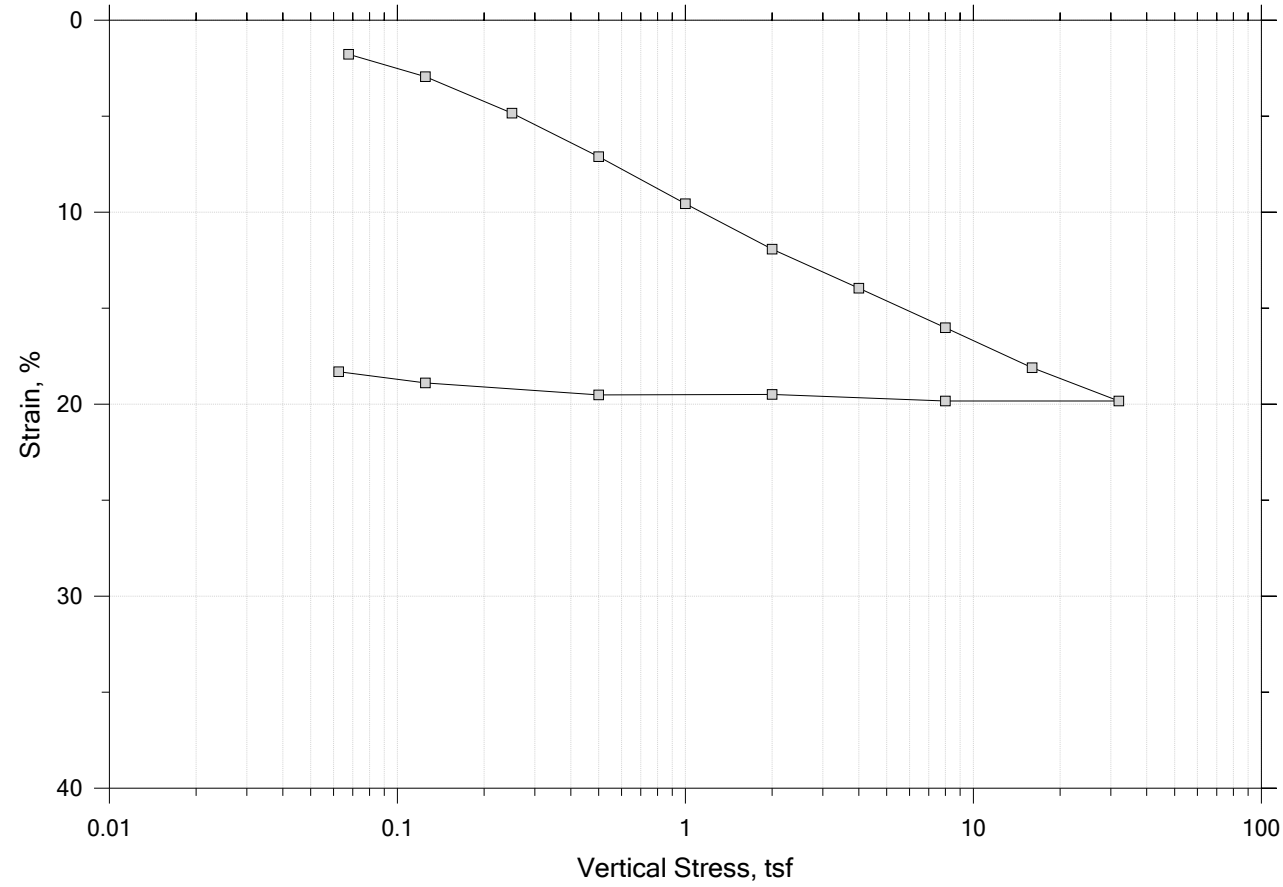
Dilatancy: RAPID

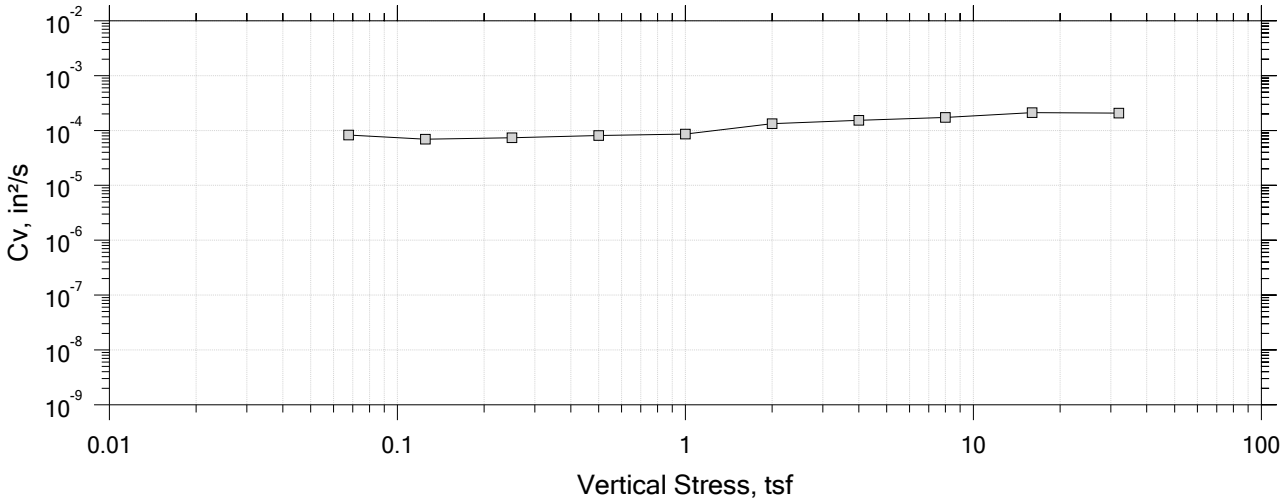
Toughness: n/a

The sample was determined to be Non-Plastic

One-Dimensional Consolidation by ASTM D2435 - Method B

Summary Report

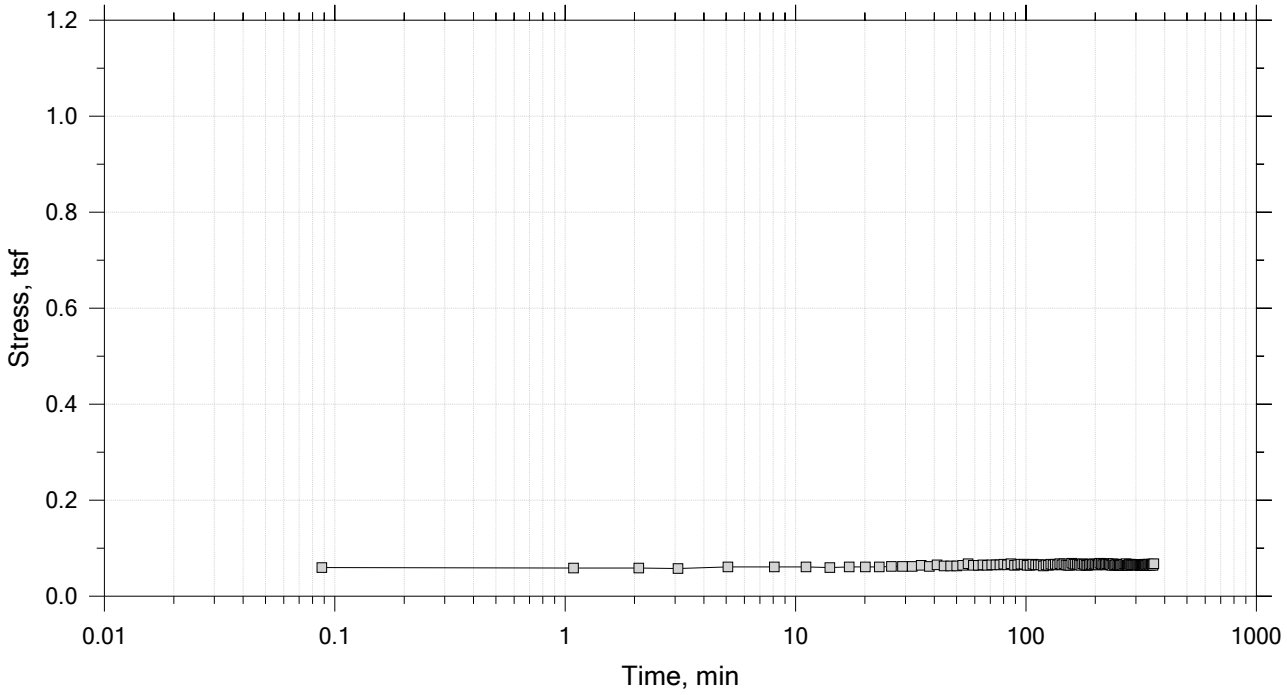


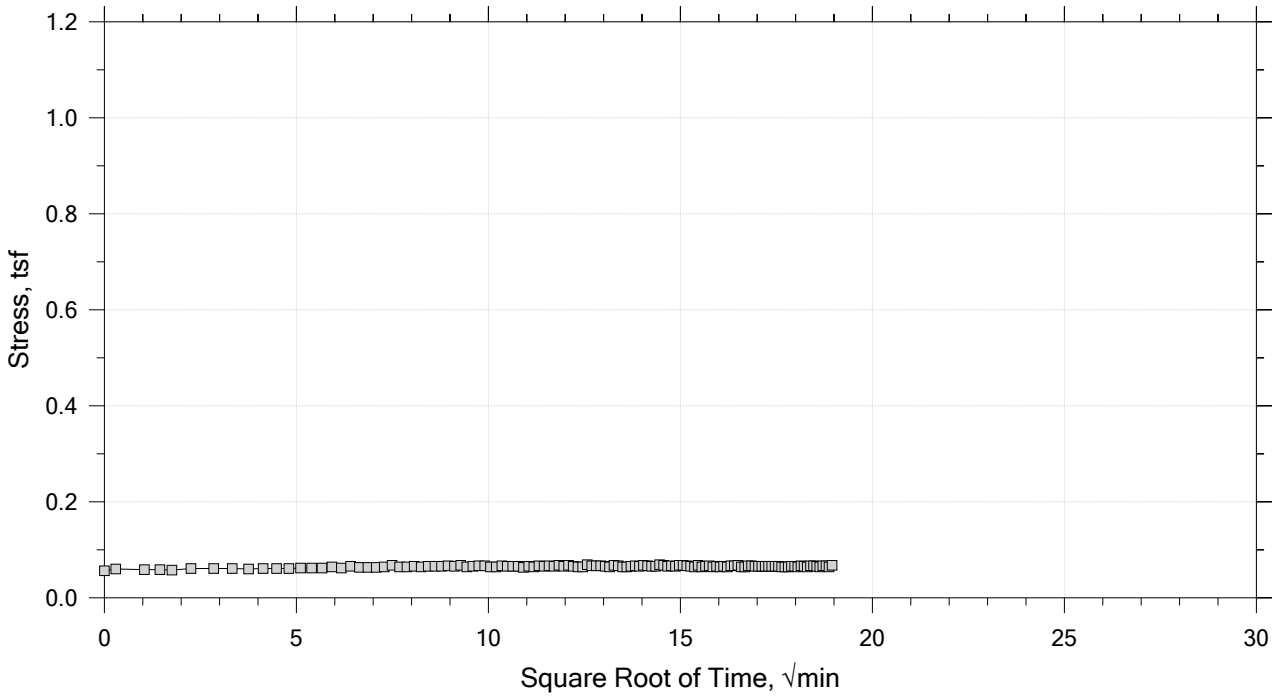


GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-1	Tested By: md	Checked By: anm
	Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-2	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sandy clay		
	Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 1 of 15
Constant Volume Step
Stress: 0.0677 tsf

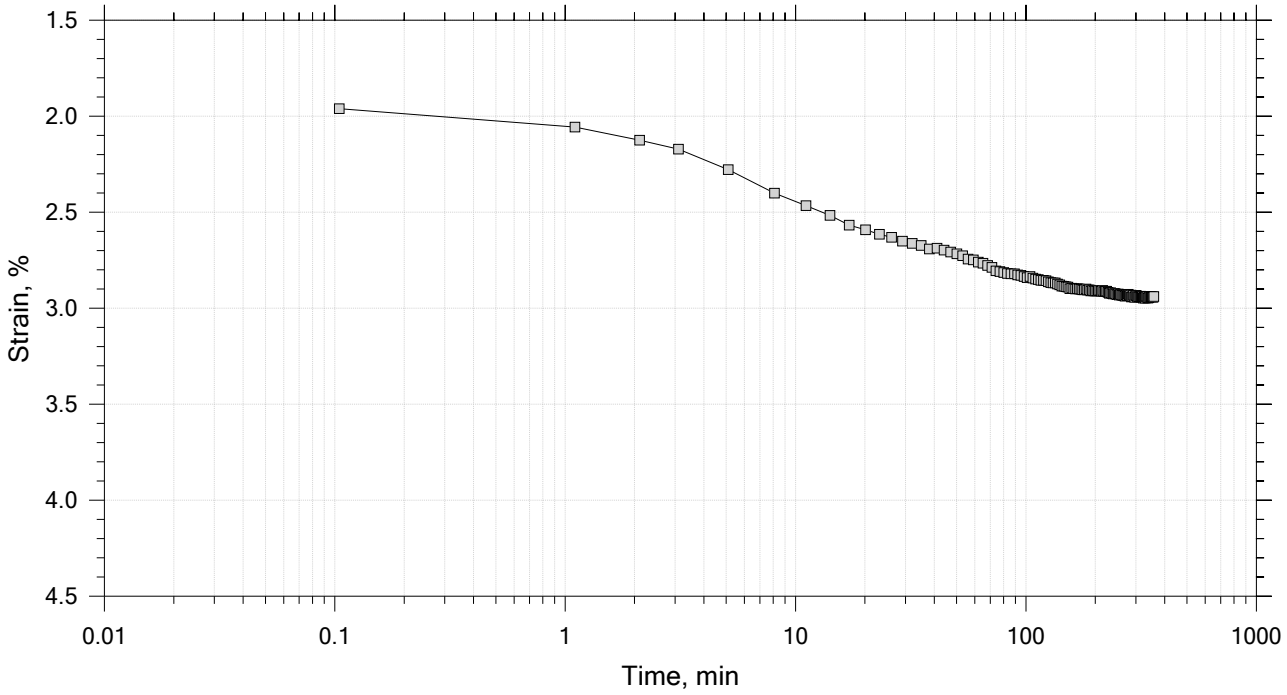


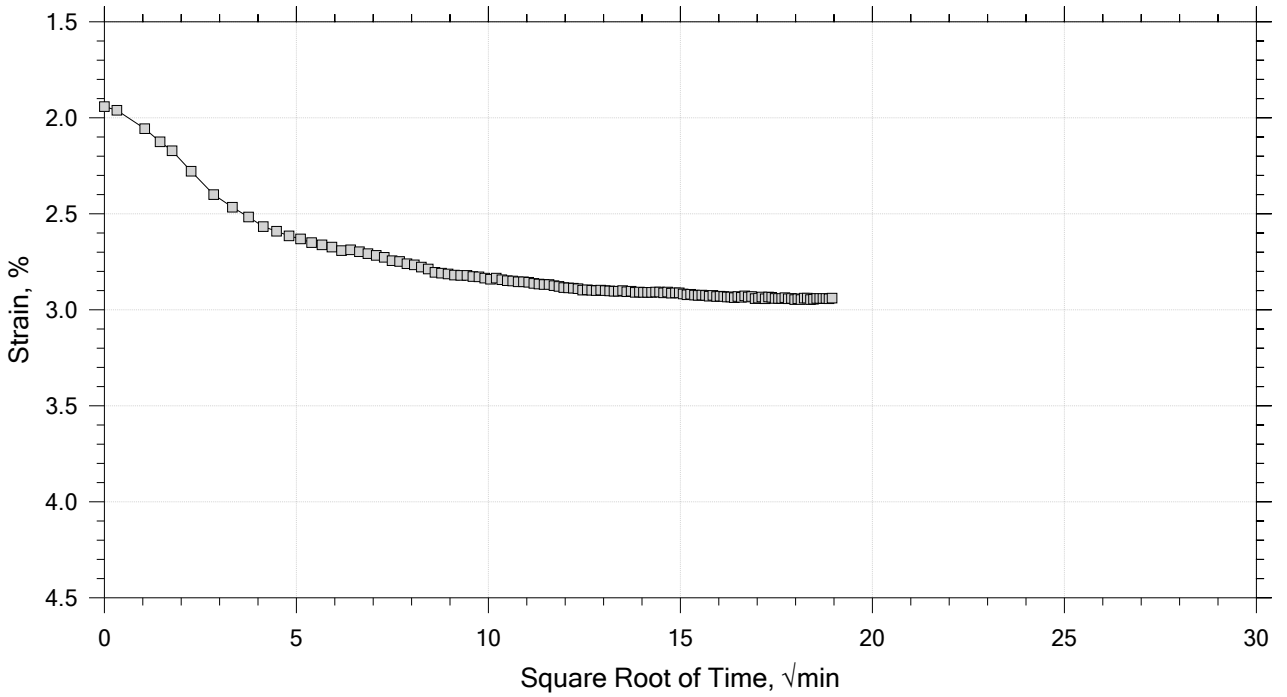


GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-1	Tested By: md	Checked By: anm
	Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-2	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sandy clay		
	Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 2 of 15
Constant Load Step
Stress: 0.125 tsf





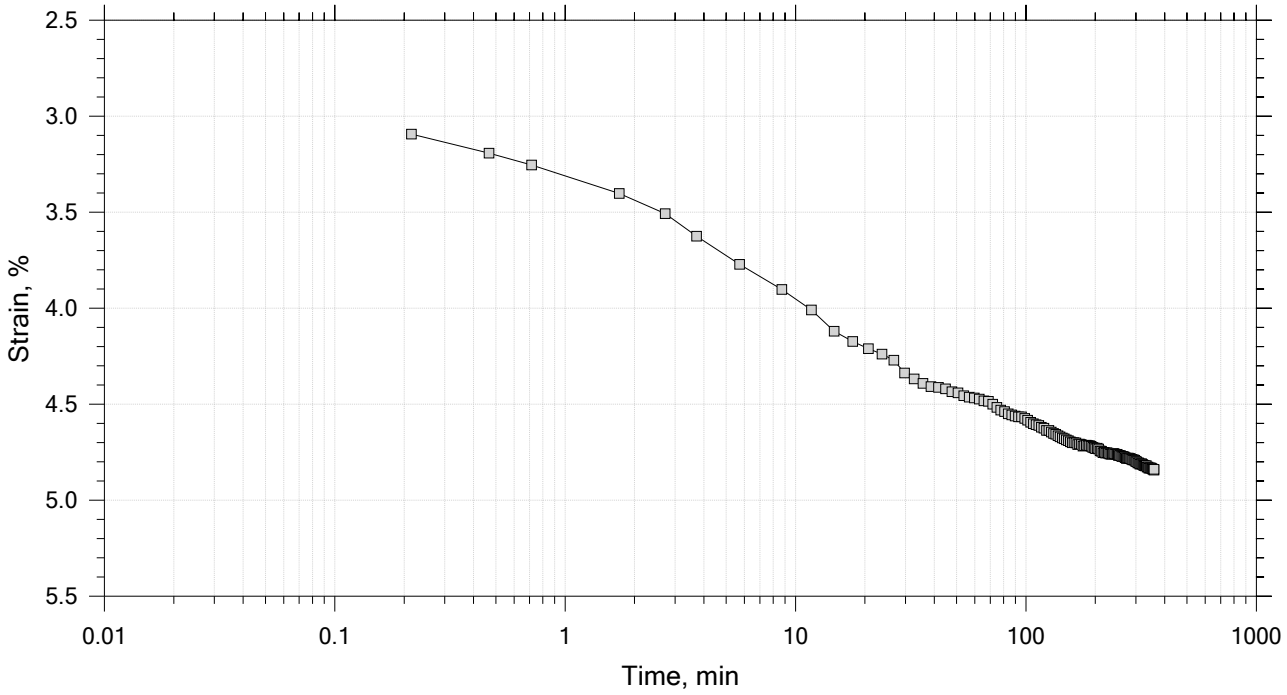
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

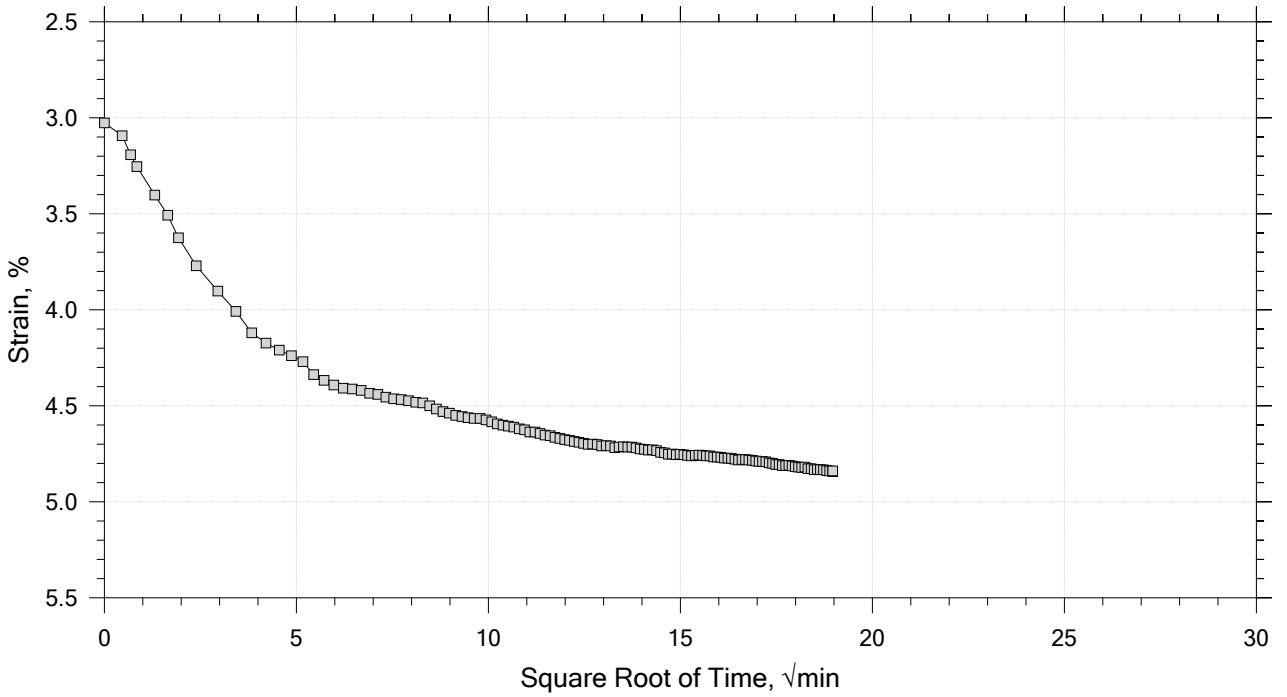
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 3 of 15

Constant Load Step

Stress: 0.25 tsf





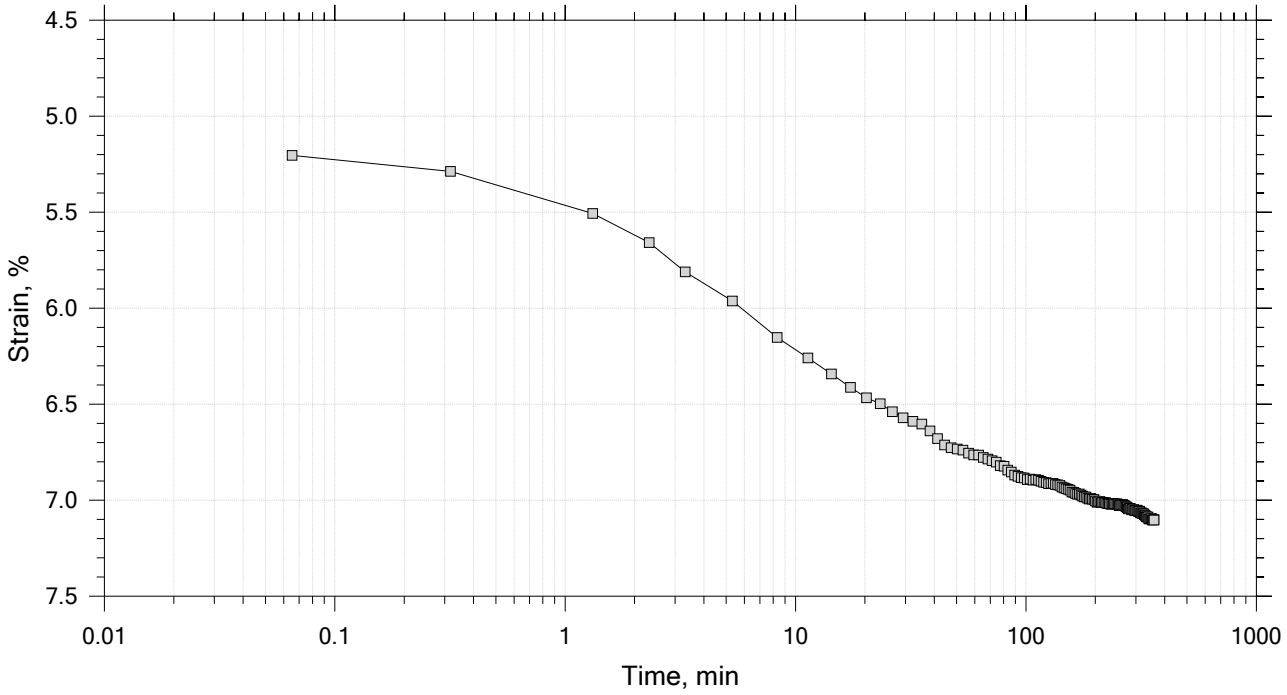
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

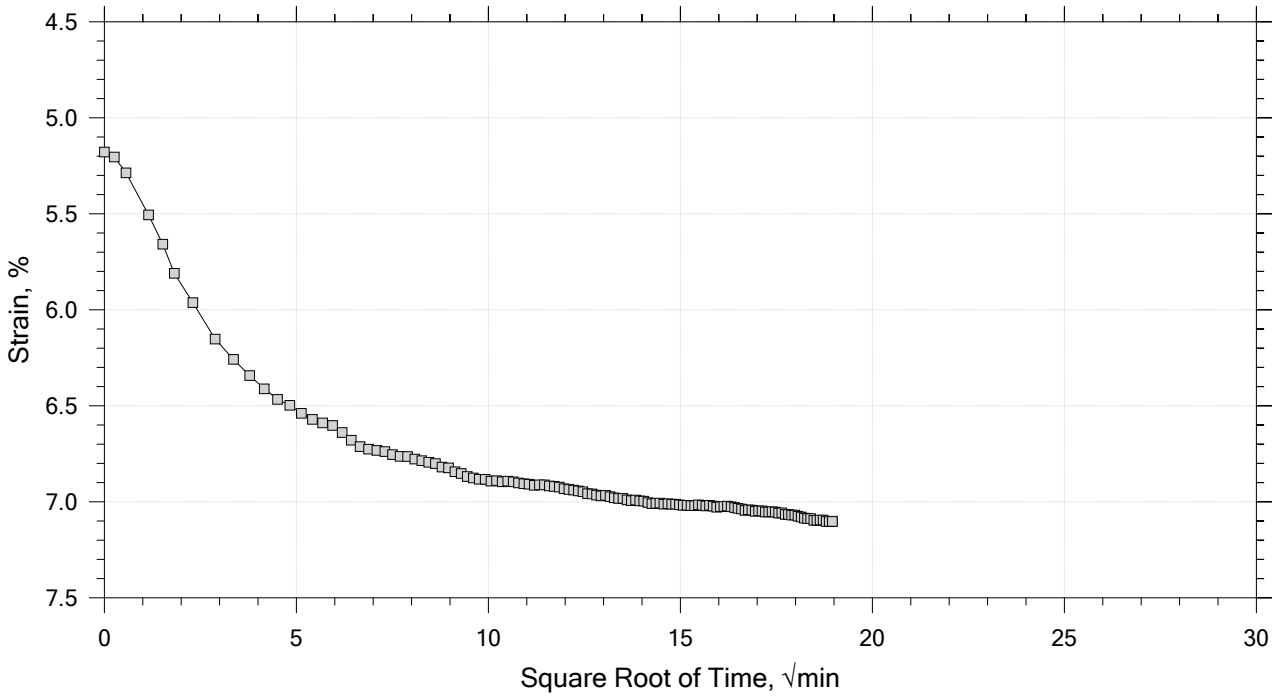
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 4 of 15

Constant Load Step

Stress: 0.5 tsf





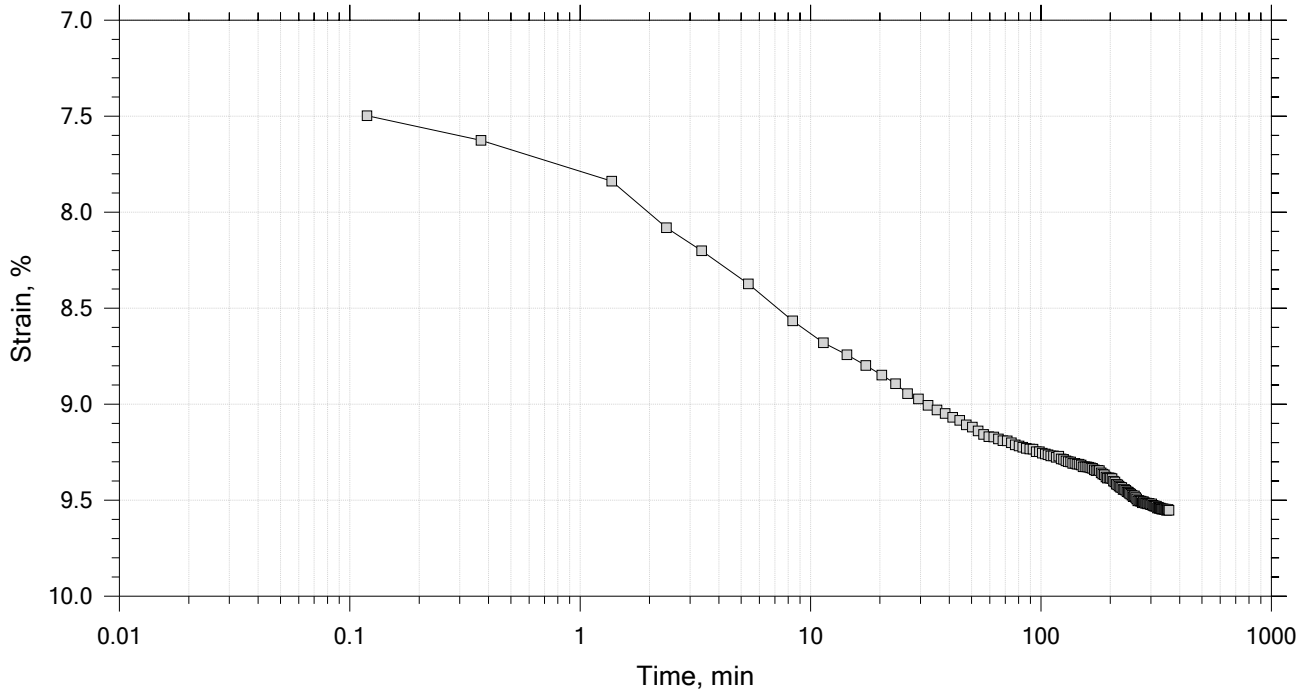
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

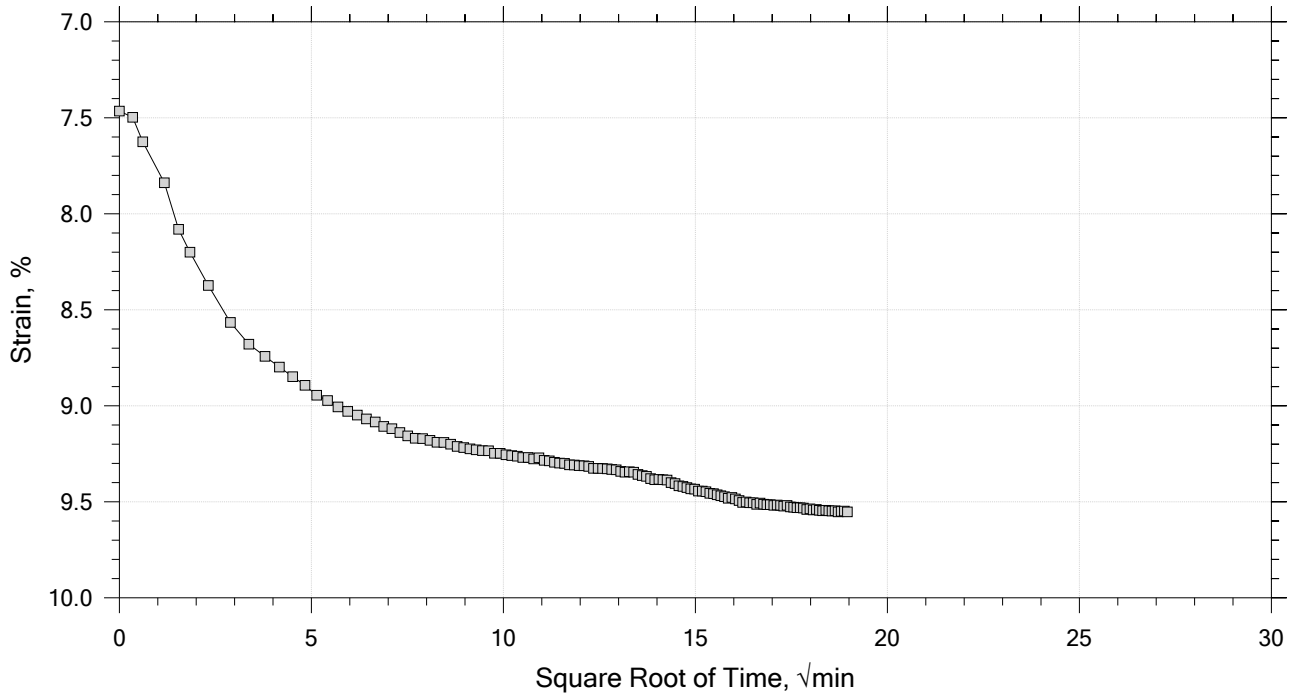
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 5 of 15

Constant Load Step

Stress: 1 tsf





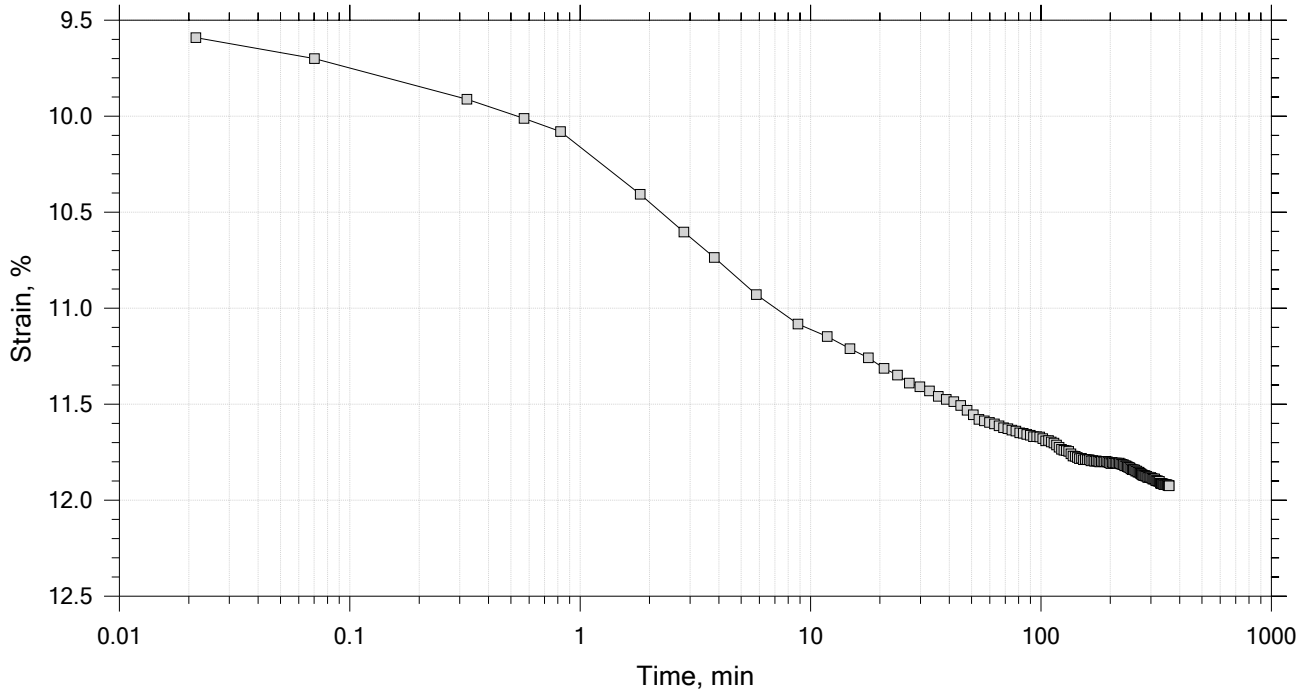
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

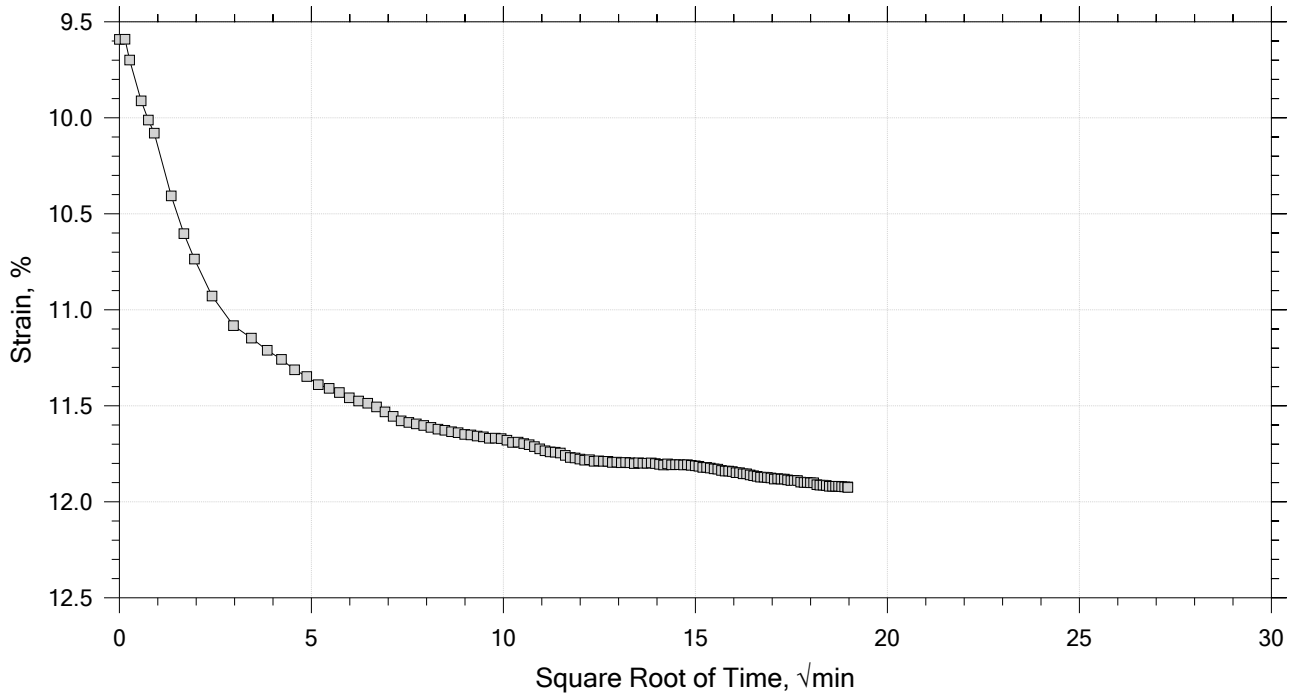
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 6 of 15

Constant Load Step

Stress: 2 tsf





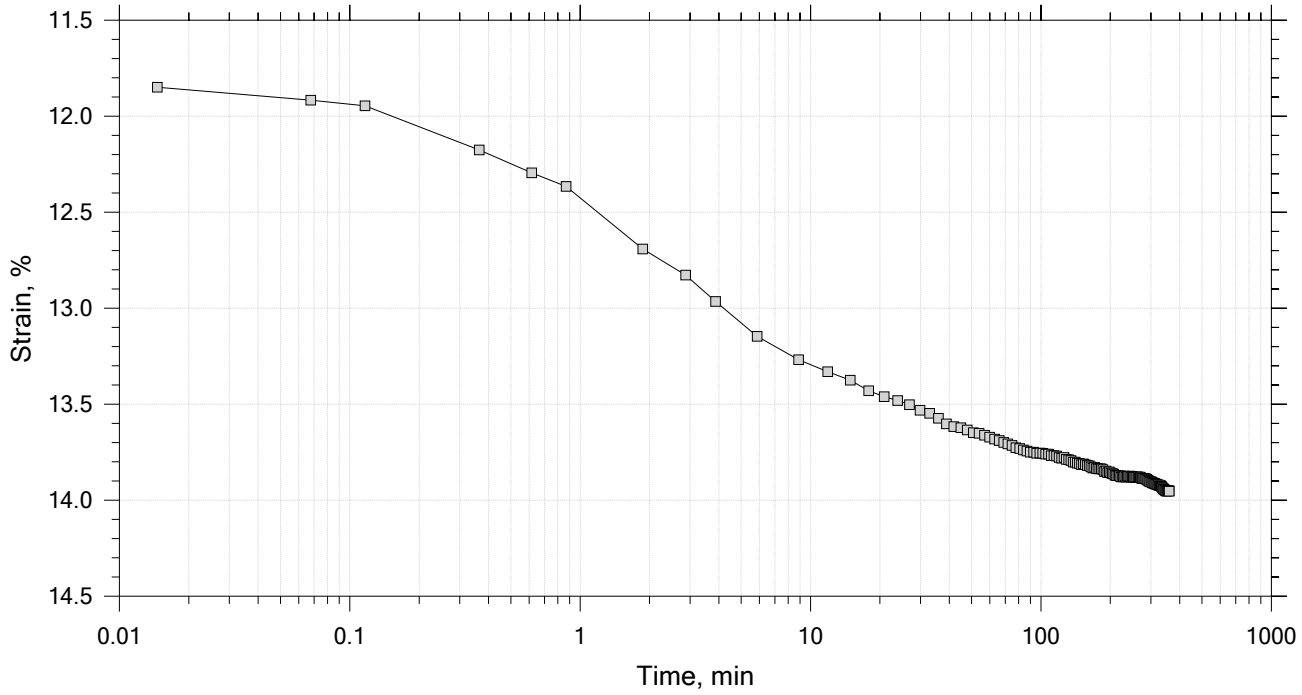
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

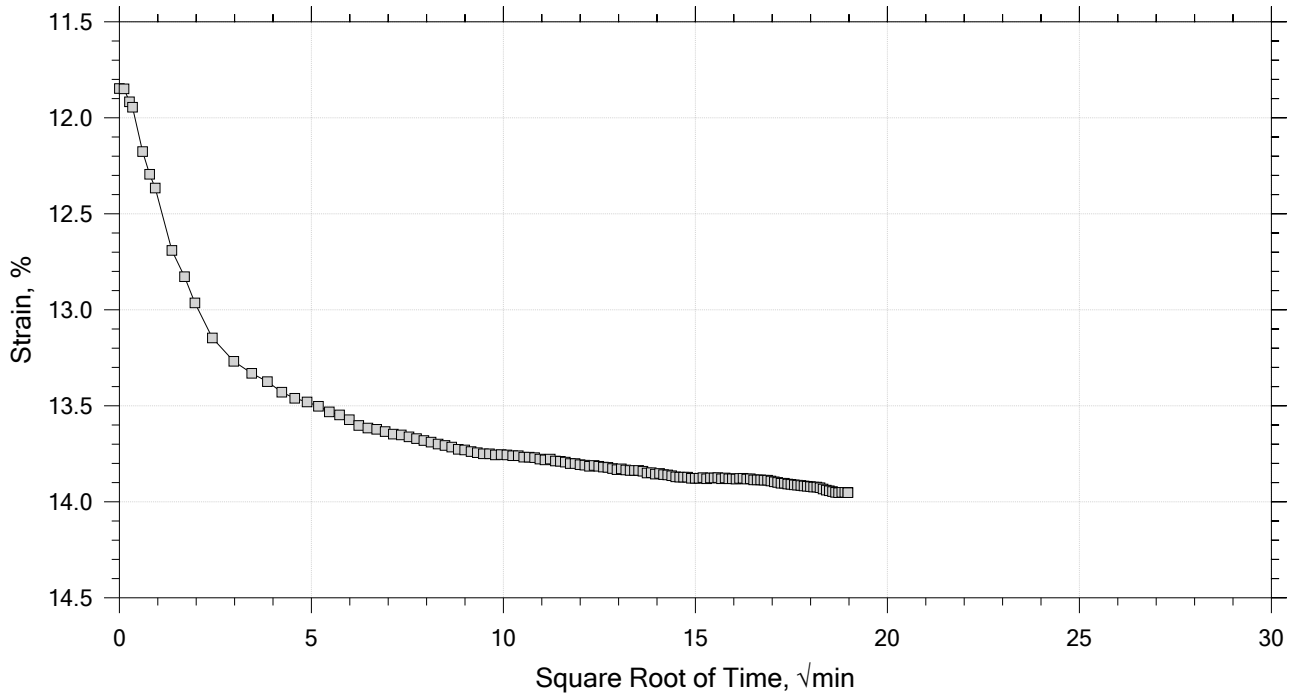
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 7 of 15

Constant Load Step

Stress: 4 tsf





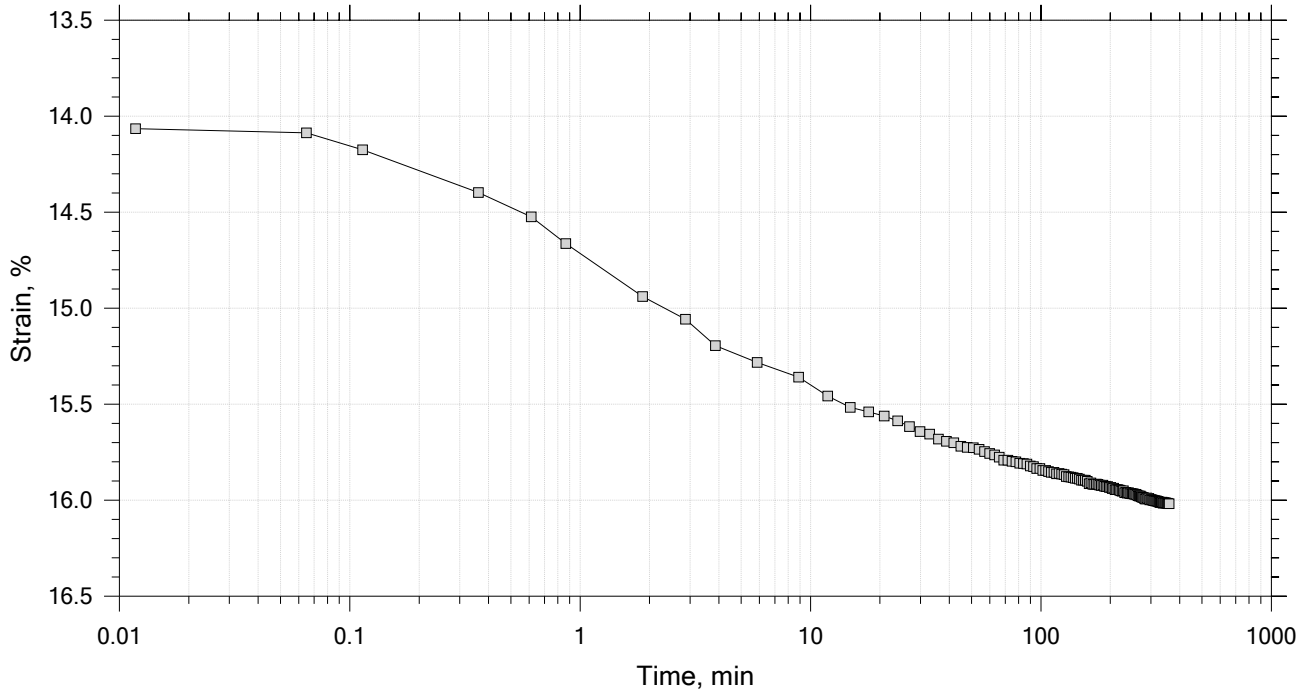
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

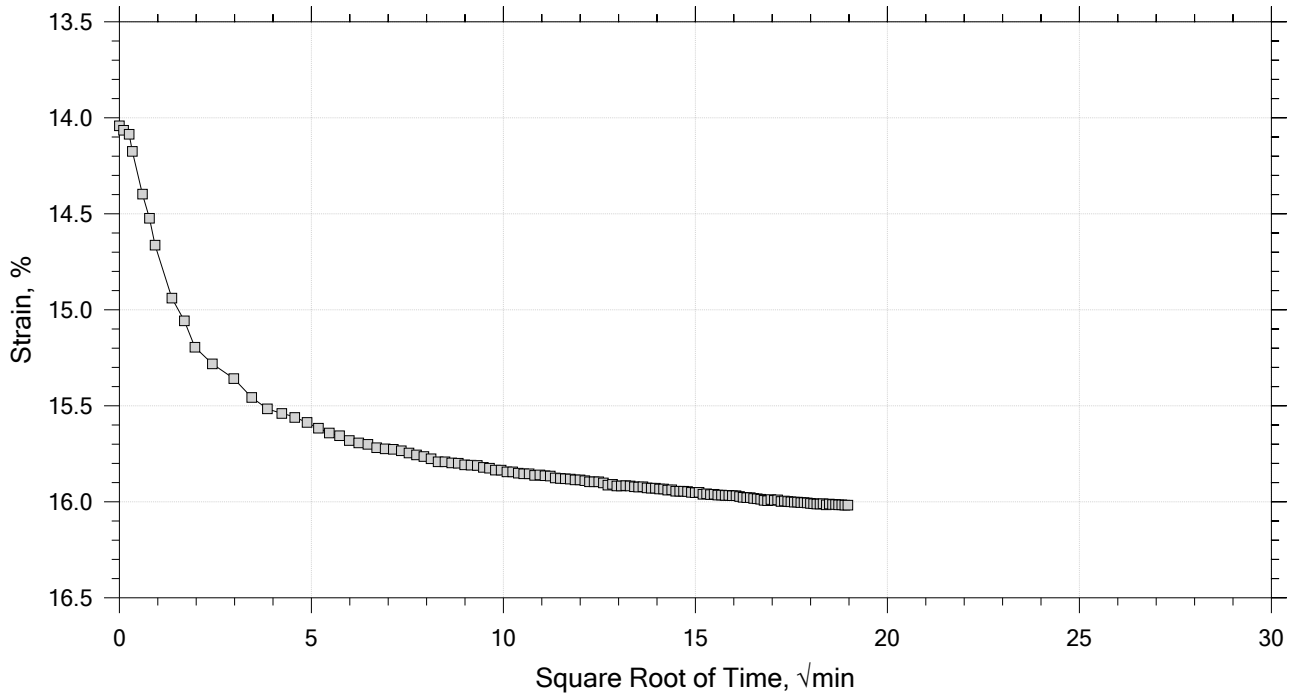
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 8 of 15

Constant Load Step

Stress: 8 tsf





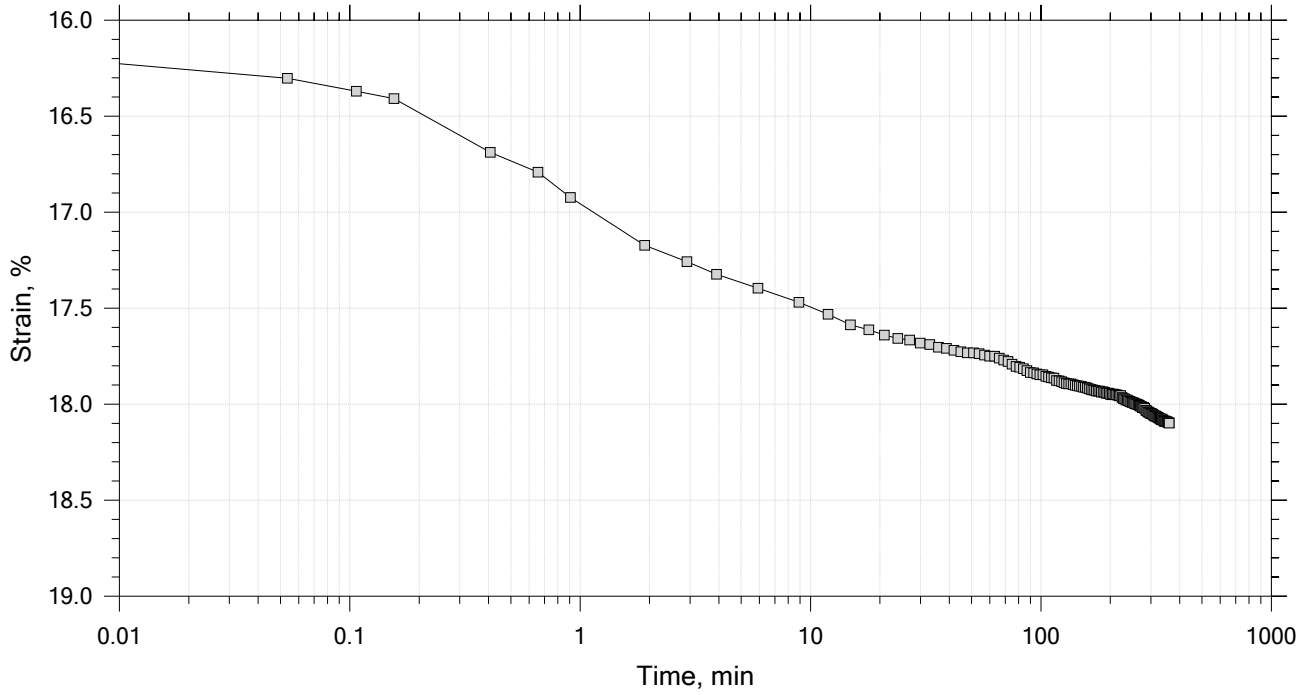
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

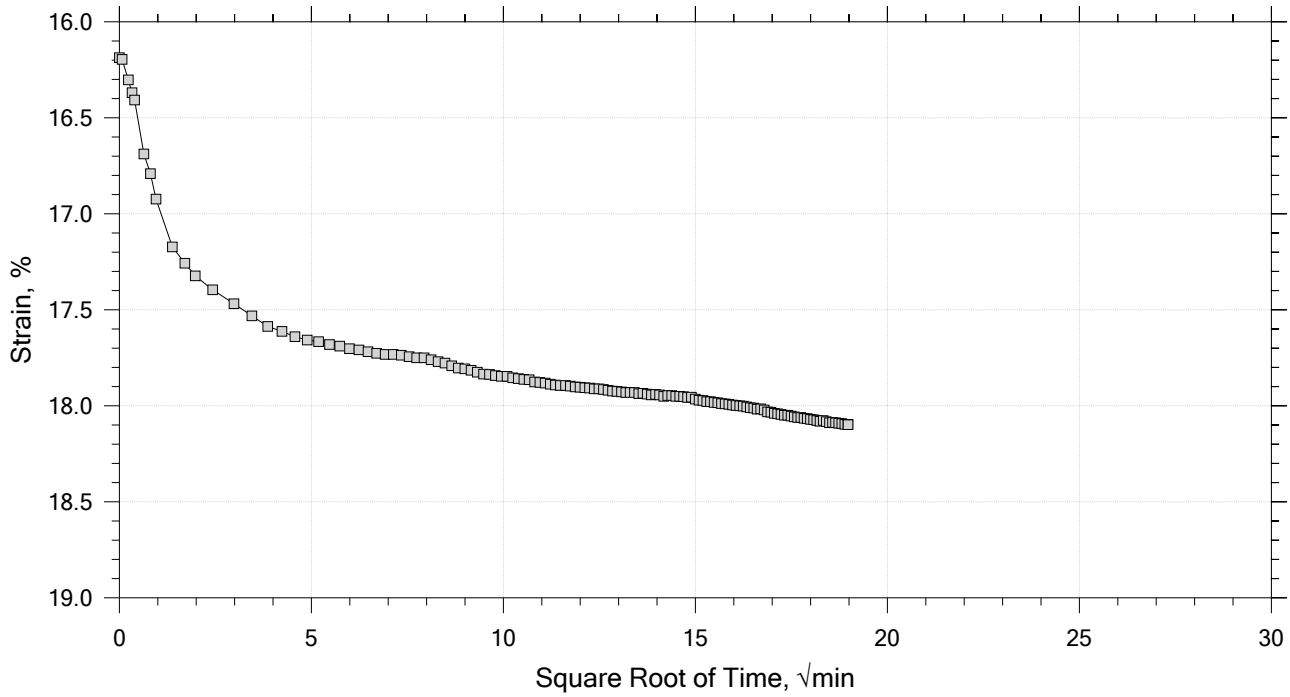
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 9 of 15

Constant Load Step

Stress: 16 tsf

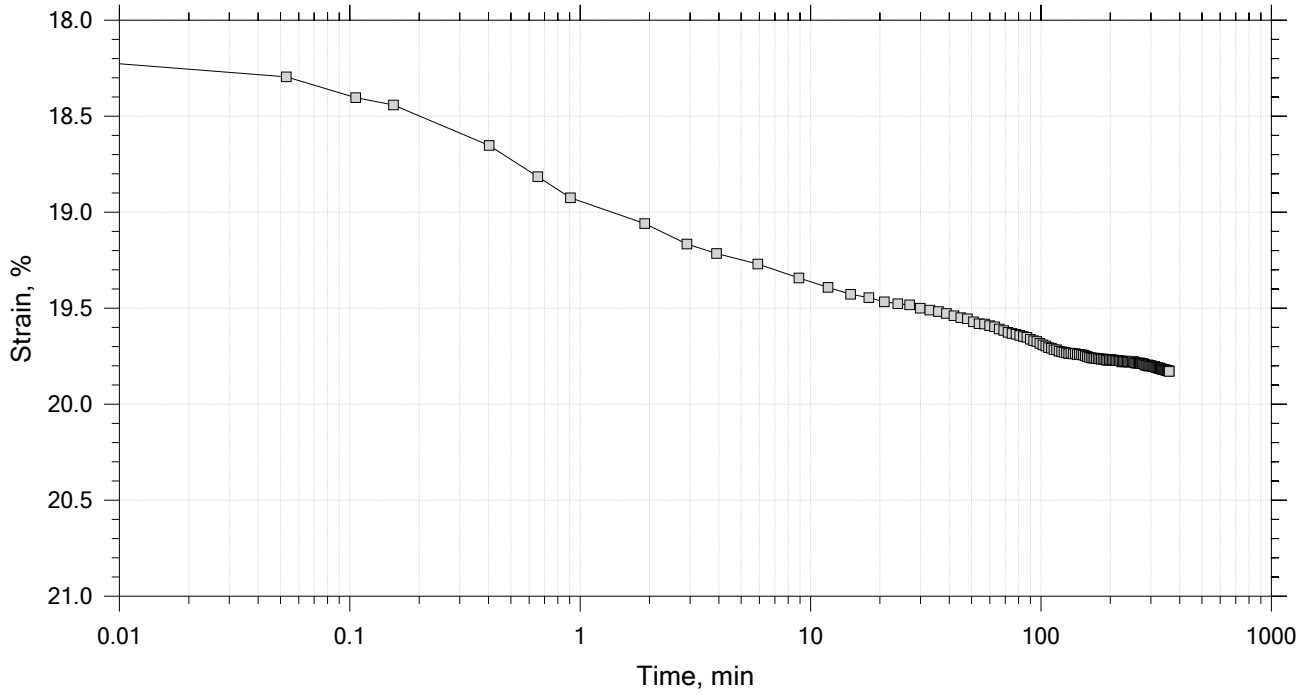


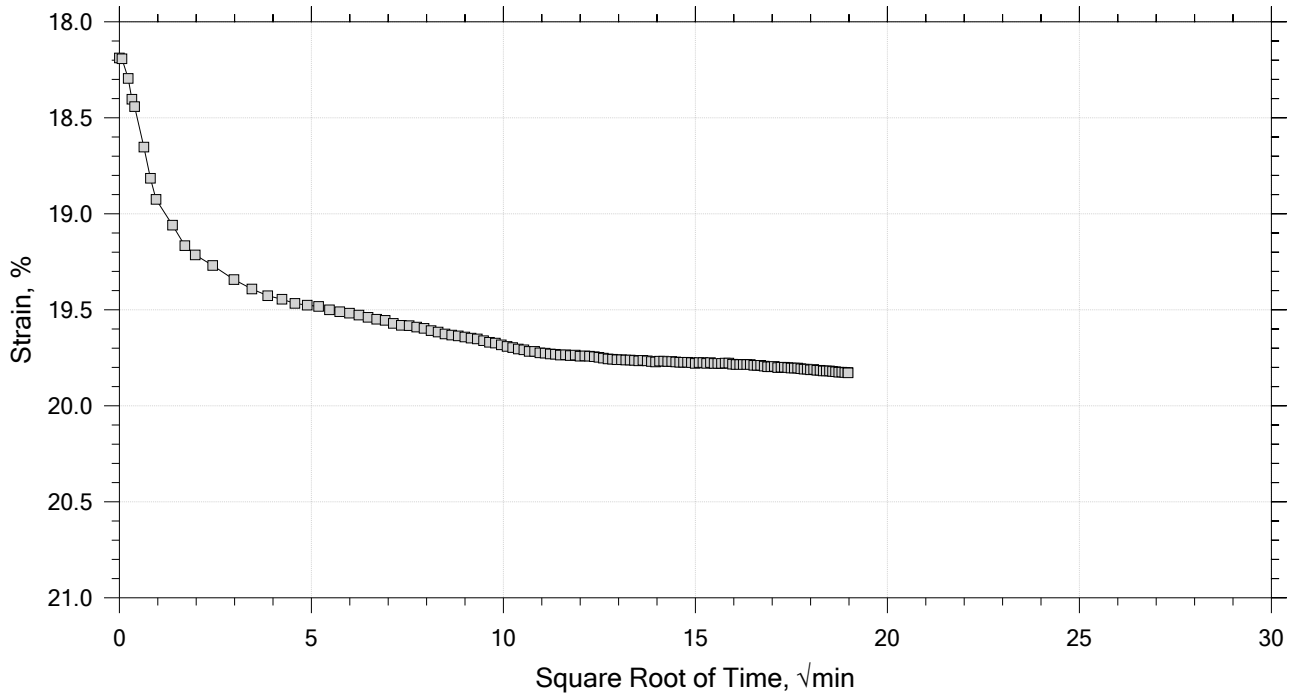


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 10 of 15
Constant Load Step
Stress: 32 tsf

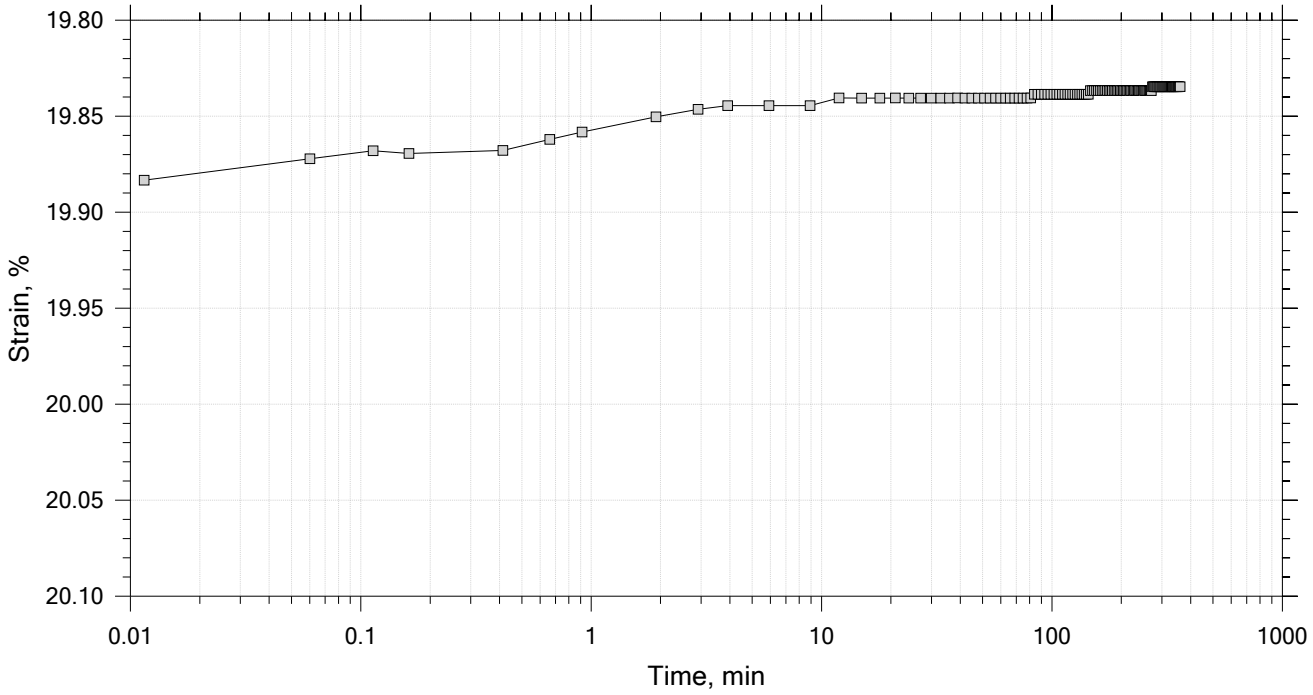


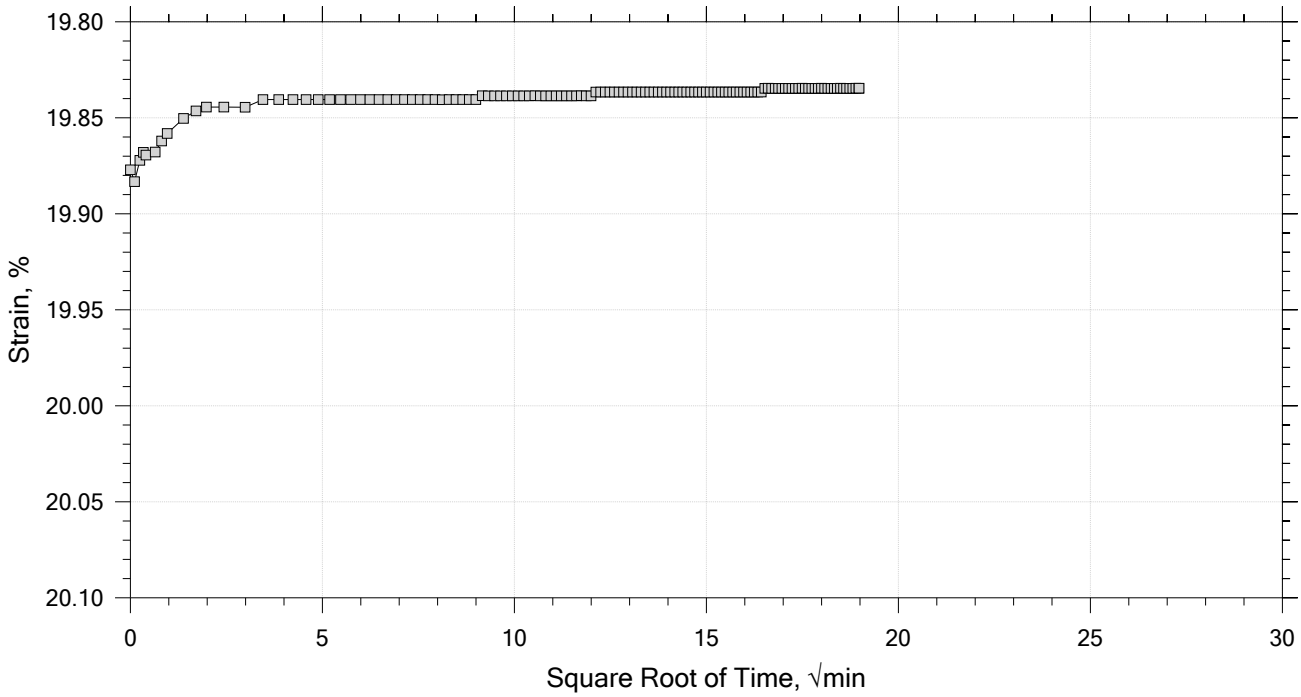


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 11 of 15
Constant Load Step
Stress: 8 tsf

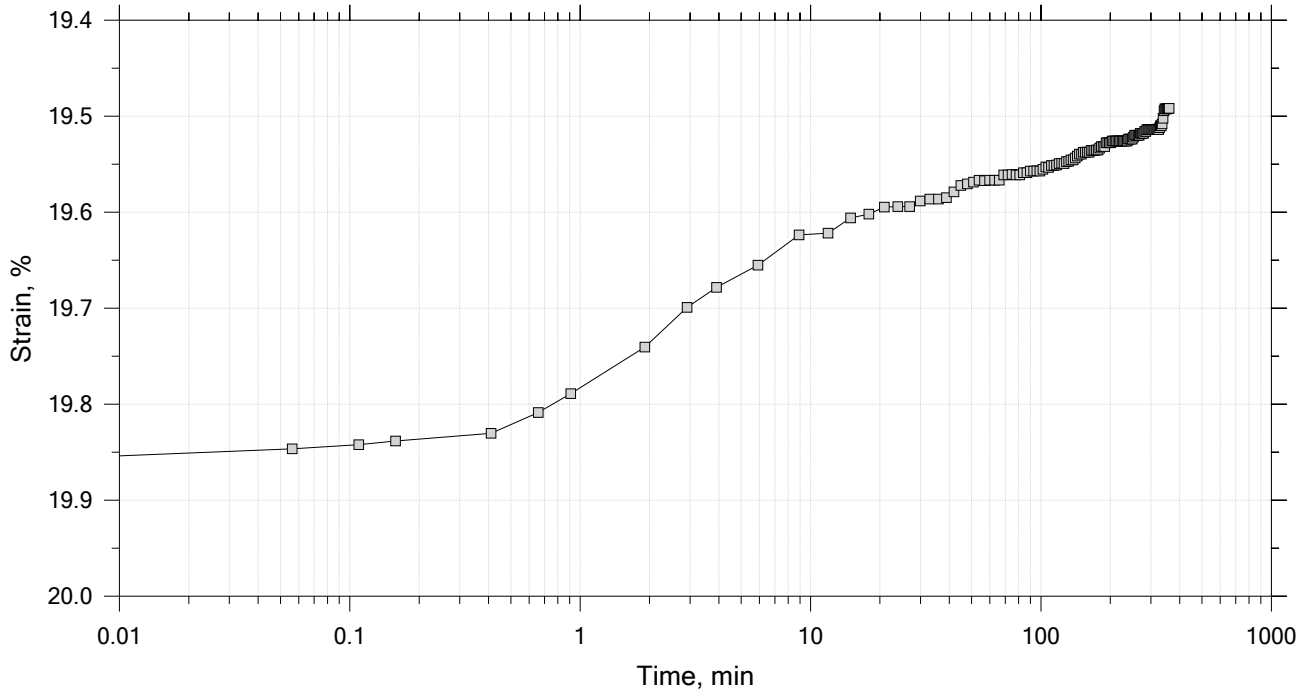


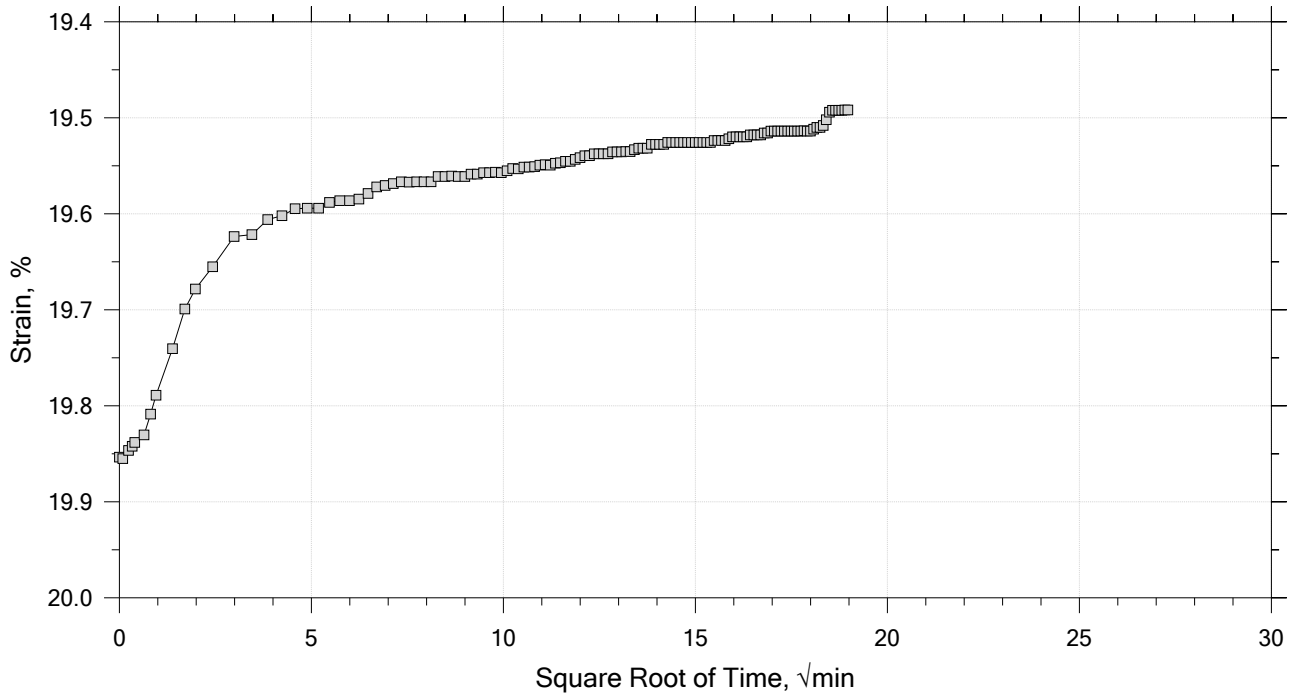


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 12 of 15
Constant Load Step
Stress: 2 tsf

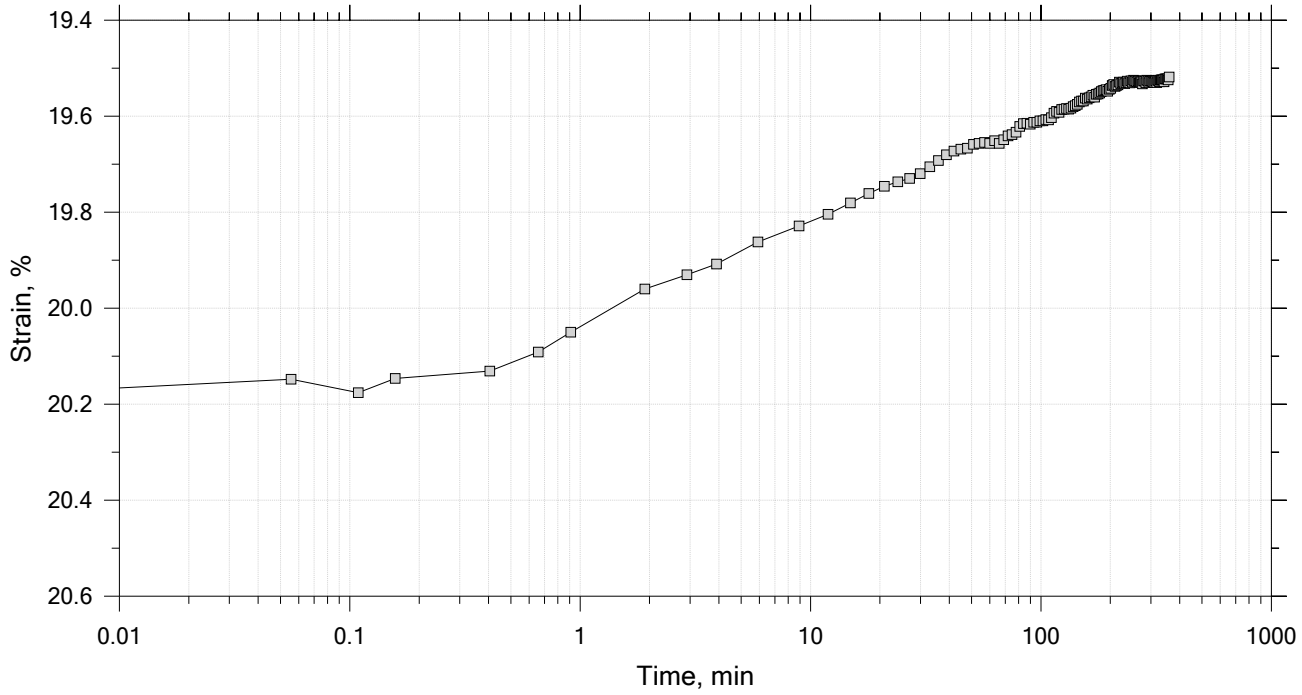


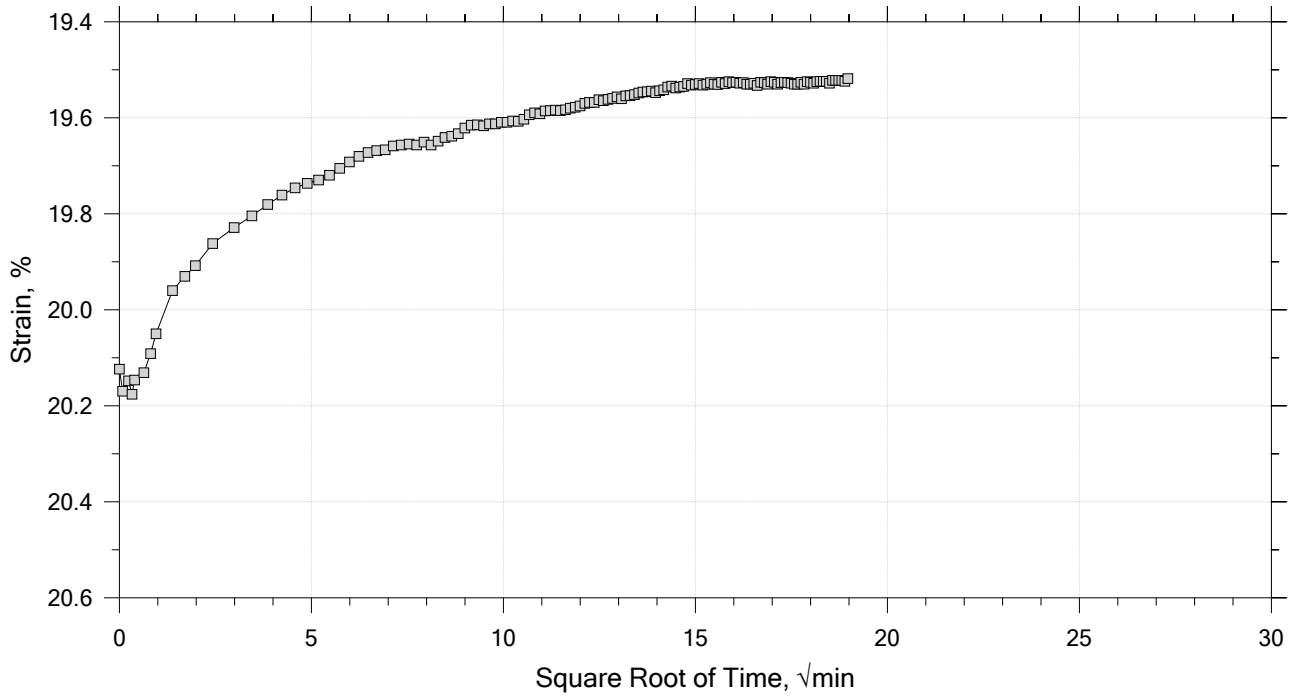


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 13 of 15
Constant Load Step
Stress: 0.5 tsf

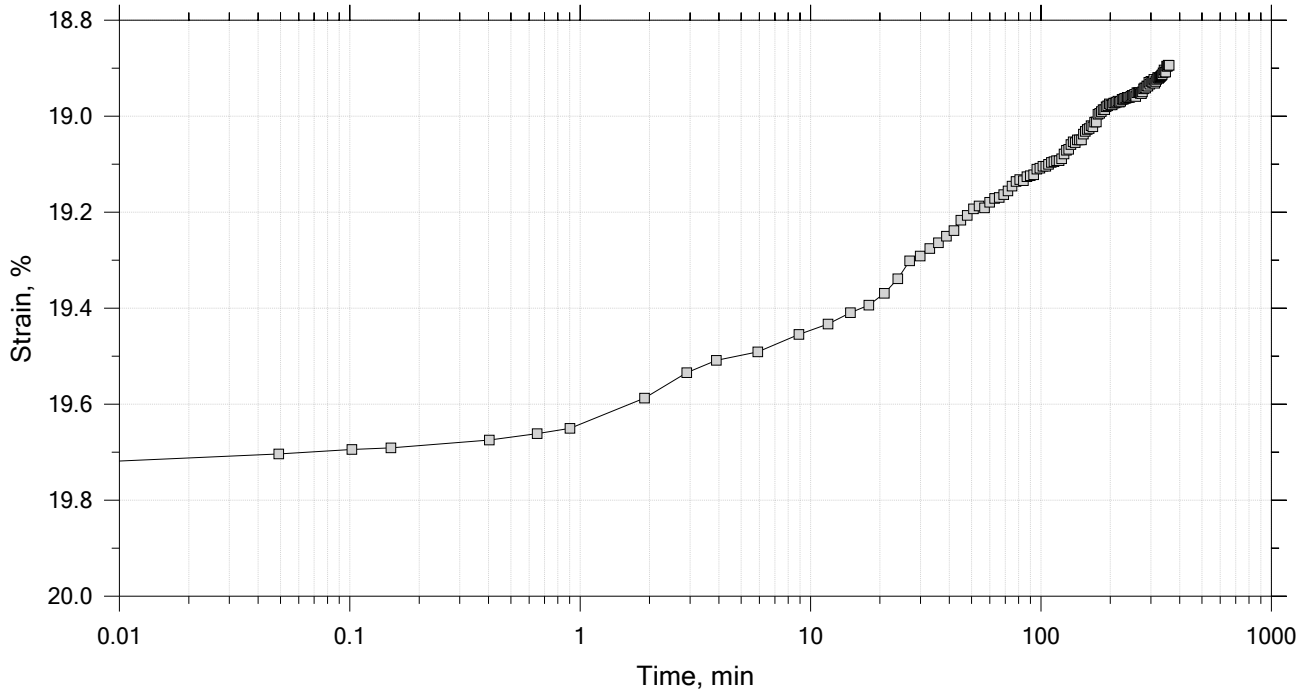


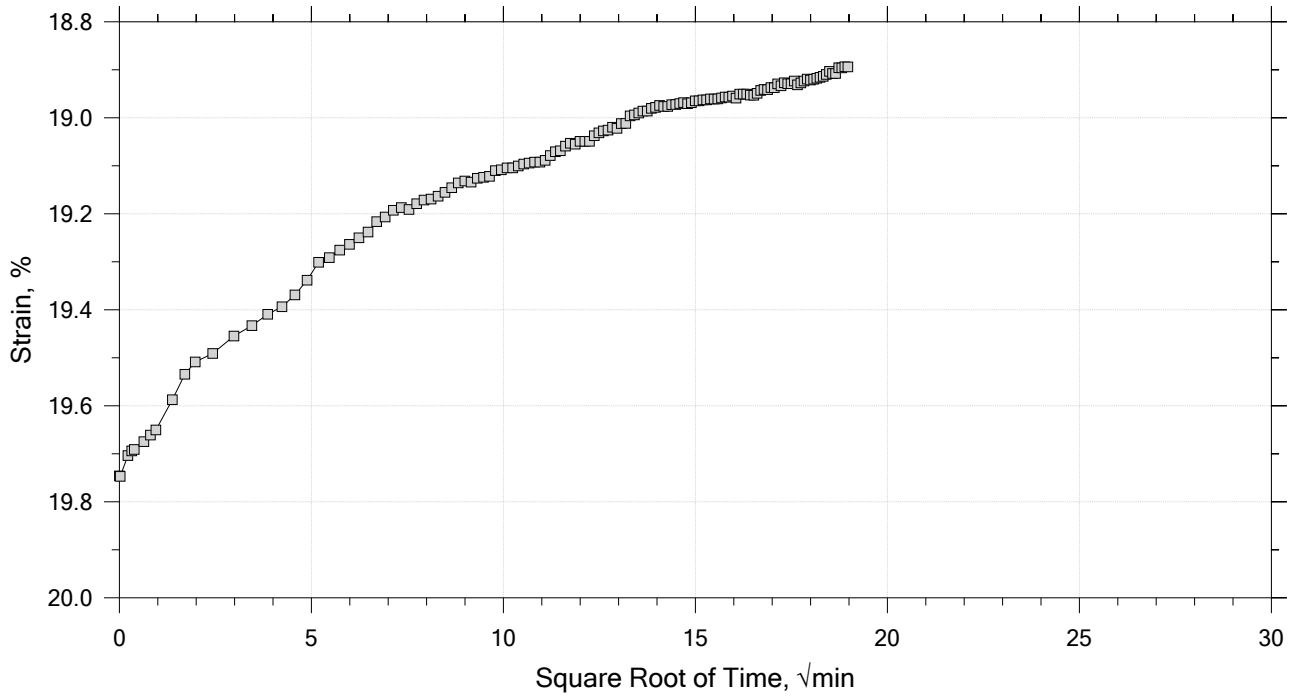


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 14 of 15
Constant Load Step
Stress: 0.125 tsf

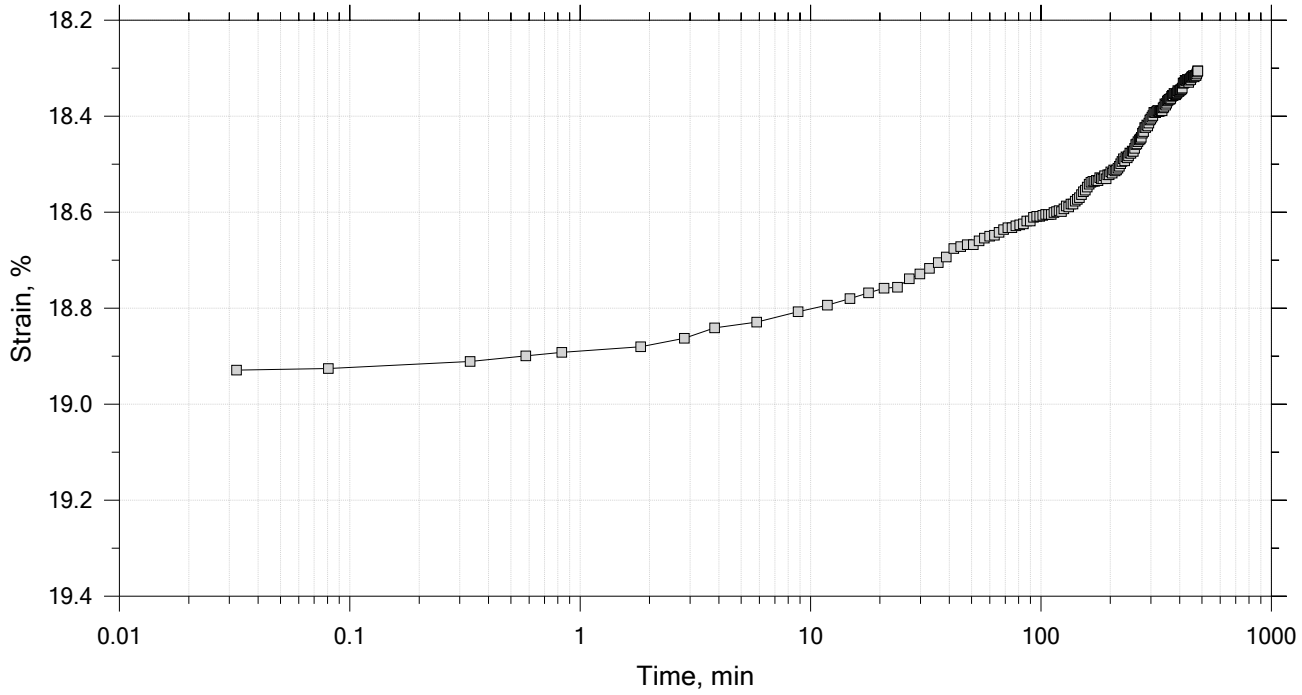


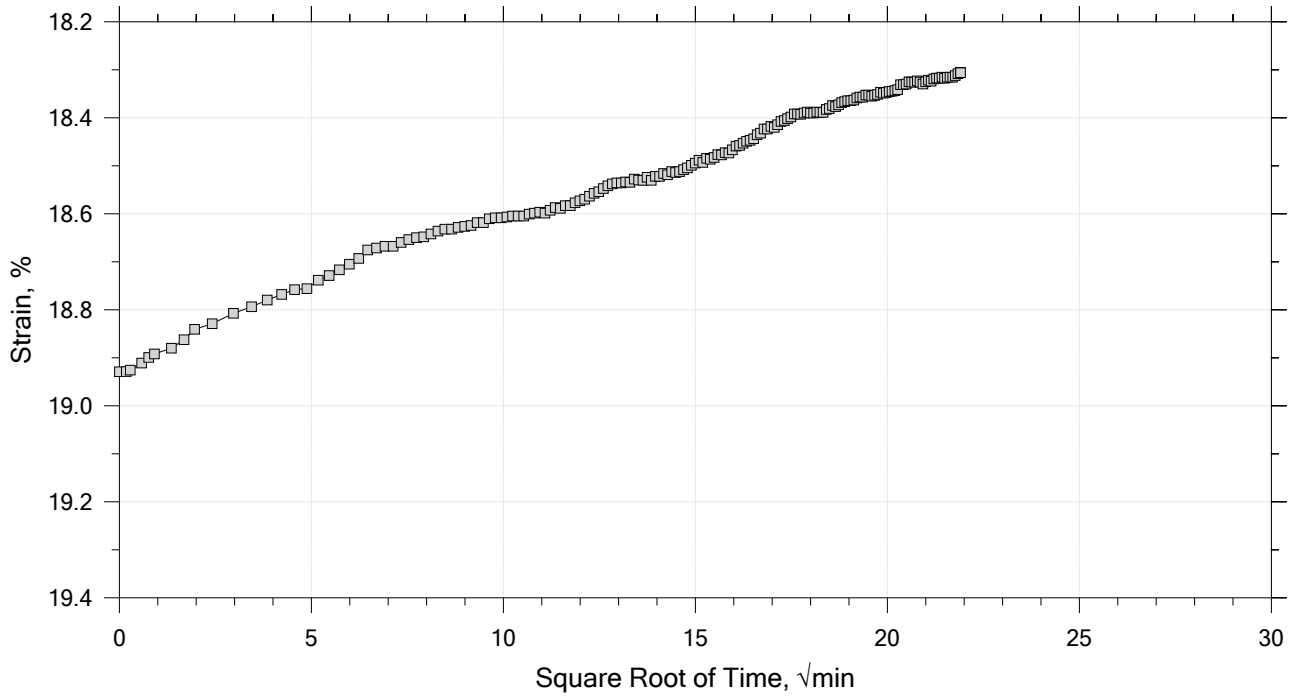


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 15 of 15
Constant Load Step
Stress: 0.0625 tsf





Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-1	Tested By: md	Checked By: anm
Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sandy clay		
Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Specimen Diameter: 2.50 in	Measured Specific Gravity: 2.71	Liquid Limit: 53
Initial Height: 1.00 in	Initial Void Ratio: 1.21	Plastic Limit: 24
Final Height: 0.70 in	Final Void Ratio: 0.546	Plasticity Index: 29

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID	A-2364	RING		A-3037
Mass Container, gm	8.4	110.13	110.13	8.4
Mass Container + Wet Soil, gm	244.54	251.52	228.56	126.64
Mass Container + Dry Soil, gm	169.64	208.67	208.67	106.78
Mass Dry Soil, gm	161.24	98.538	98.538	98.38
Water Content, %	46.45	43.49	20.19	20.19
Void Ratio	---	1.21	0.55	---
Degree of Saturation, %	---	97.34	100.00	---
Dry Unit Weight, pcf	---	76.474	109.25	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-1	Tested By: md	Checked By: anm
	Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-2	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sandy clay		
	Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Log of Time Coefficients

Step	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv in²/s	Mv 1/tsf	k ft/day	Ca %
1	0.0677	0.01770	1.17	1.77	0.000	0.00e+00	2.62e-01	0.00e+00	0.00e+00
2	0.125	0.02939	1.14	2.94	11.309	6.92e-05	2.04e-01	2.64e-04	0.00e+00
3	0.250	0.04839	1.10	4.84	11.558	6.56e-05	1.52e-01	1.87e-04	0.00e+00
4	0.500	0.07103	1.05	7.10	9.366	7.75e-05	9.05e-02	1.31e-04	0.00e+00
5	1.00	0.09552	0.998	9.55	0.000	0.00e+00	4.90e-02	0.00e+00	0.00e+00
6	2.00	0.1193	0.946	11.9	0.000	0.00e+00	2.37e-02	0.00e+00	0.00e+00
7	4.00	0.1395	0.901	14.0	0.000	0.00e+00	1.01e-02	0.00e+00	0.00e+00
8	8.00	0.1602	0.855	16.0	0.000	0.00e+00	5.16e-03	0.00e+00	0.00e+00
9	16.0	0.1810	0.809	18.1	0.000	0.00e+00	2.60e-03	0.00e+00	0.00e+00
10	32.0	0.1983	0.771	19.8	0.000	0.00e+00	1.08e-03	0.00e+00	0.00e+00
11	8.00	0.1983	0.771	19.8	0.000	0.00e+00	-2.46e-06	-0.00e+00	0.00e+00
12	2.00	0.1949	0.778	19.5	0.000	0.00e+00	5.71e-04	0.00e+00	0.00e+00
13	0.500	0.1952	0.778	19.5	0.000	0.00e+00	-1.76e-04	-0.00e+00	0.00e+00
14	0.125	0.1889	0.792	18.9	0.000	0.00e+00	1.66e-02	0.00e+00	0.00e+00
15	0.0625	0.1831	0.805	18.3	0.000	0.00e+00	9.41e-02	0.00e+00	0.00e+00

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-1	Tested By: md	Checked By: anm
	Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-2	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sandy clay		
	Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

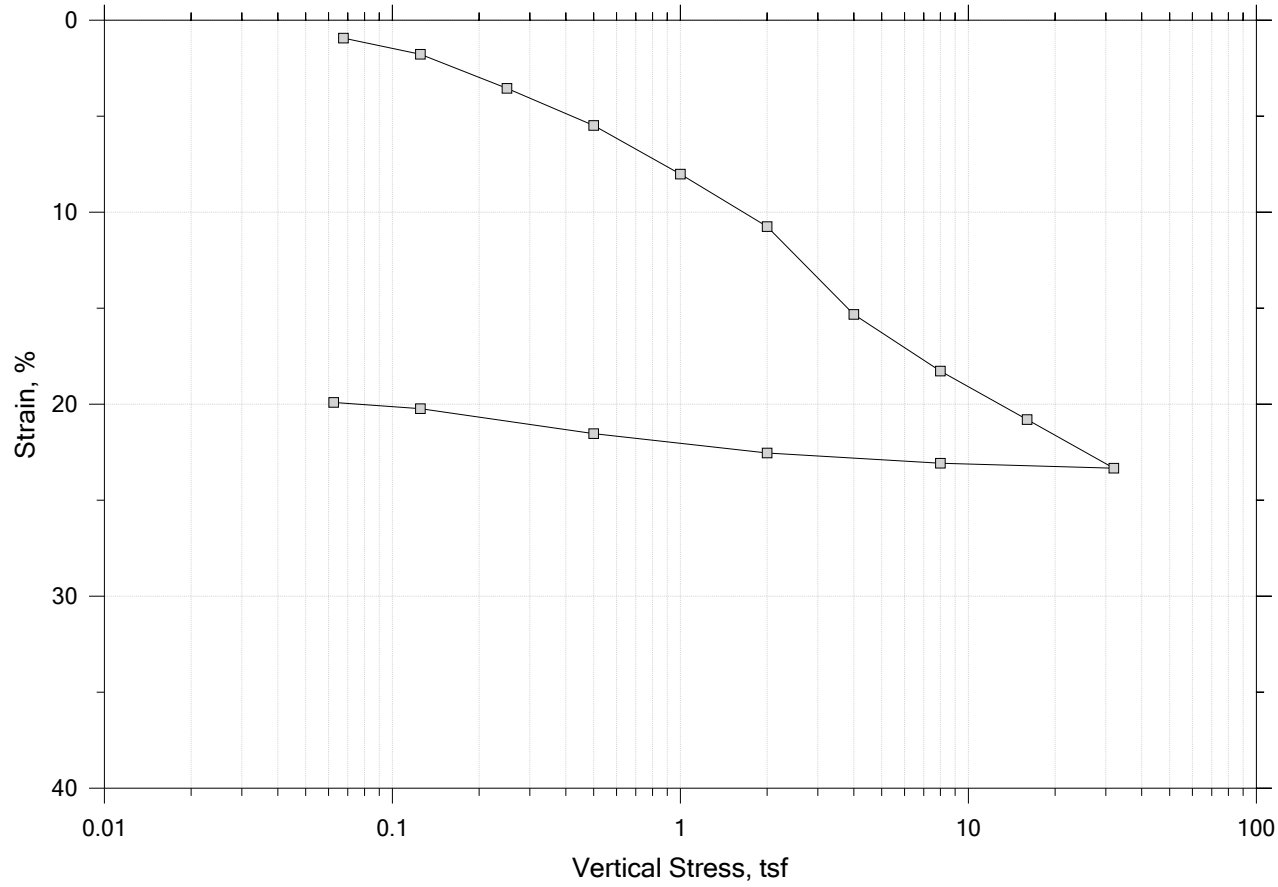
Square Root of Time Coefficients

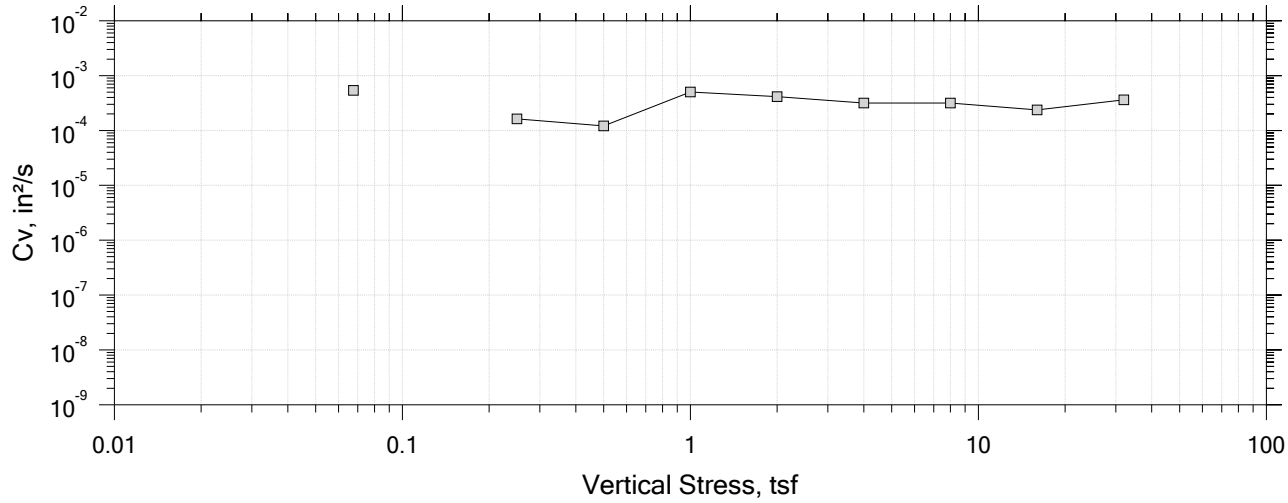
Step	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt. T90 min	Cv in²/s	Mv 1/tsf	k ft/day
1	0.0677	0.01770	1.17	1.77	63.477	5.47e-05	2.62e-01	2.68e-04
2	0.125	0.02939	1.14	2.94	74.483	4.52e-05	2.04e-01	1.73e-04
3	0.250	0.04839	1.10	4.84	57.175	5.71e-05	1.52e-01	1.63e-04
4	0.500	0.07103	1.05	7.10	60.817	5.14e-05	9.05e-02	8.71e-05
5	1.00	0.09552	0.998	9.55	60.983	4.87e-05	4.90e-02	4.47e-05
6	2.00	0.1193	0.946	11.9	48.697	5.78e-05	2.37e-02	2.57e-05
7	4.00	0.1395	0.901	14.0	44.045	6.08e-05	1.01e-02	1.15e-05
8	8.00	0.1602	0.855	16.0	43.393	5.89e-05	5.16e-03	5.69e-06
9	16.0	0.1810	0.809	18.1	43.715	5.56e-05	2.60e-03	2.71e-06
10	32.0	0.1983	0.771	19.8	43.853	5.29e-05	1.08e-03	1.07e-06
11	8.00	0.1983	0.771	19.8	11.905	1.91e-04	-2.46e-06	-8.78e-09
12	2.00	0.1949	0.778	19.5	46.859	4.87e-05	5.71e-04	5.21e-07
13	0.500	0.1952	0.778	19.5	52.275	4.38e-05	-1.76e-04	-1.45e-07
14	0.125	0.1889	0.792	18.9	73.336	3.15e-05	1.66e-02	9.81e-06
15	0.0625	0.1831	0.805	18.3	367.793	6.37e-06	9.41e-02	1.12e-05

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-1	Tested By: md	Checked By: anm
	Sample No.: B1 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-2	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sandy clay		
	Remarks: System LTIII-B, Swell Pressure = 0.0677 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Summary Report

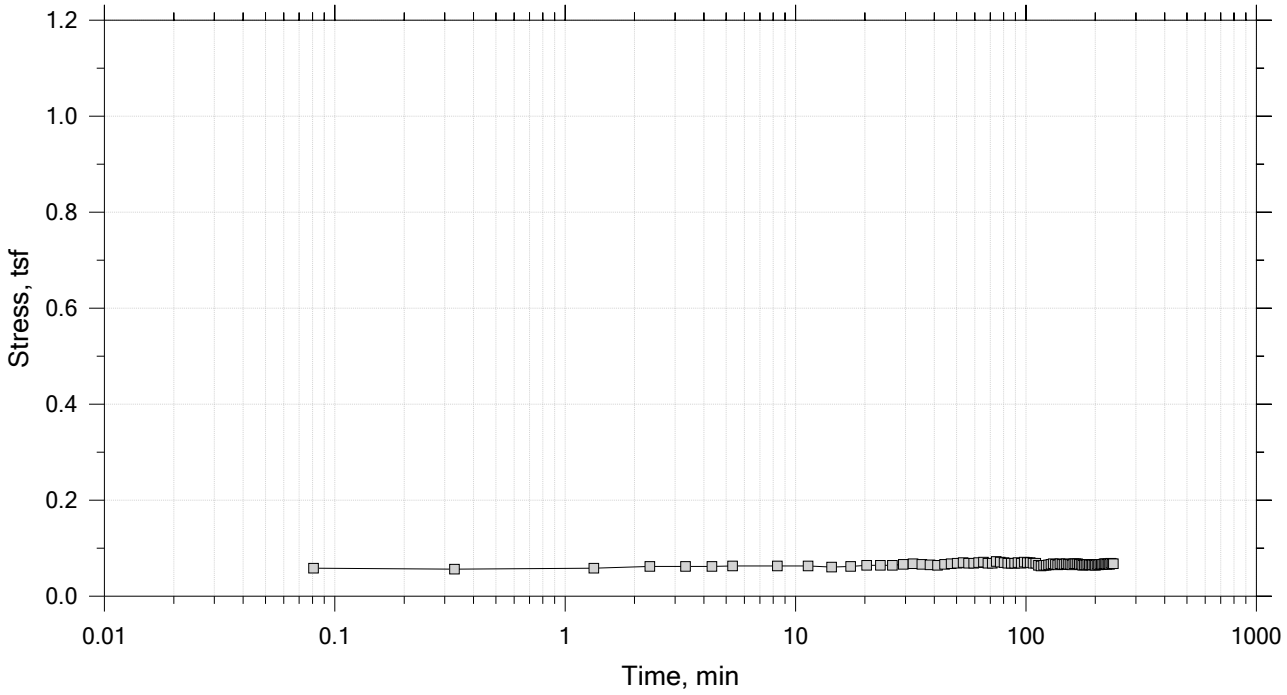


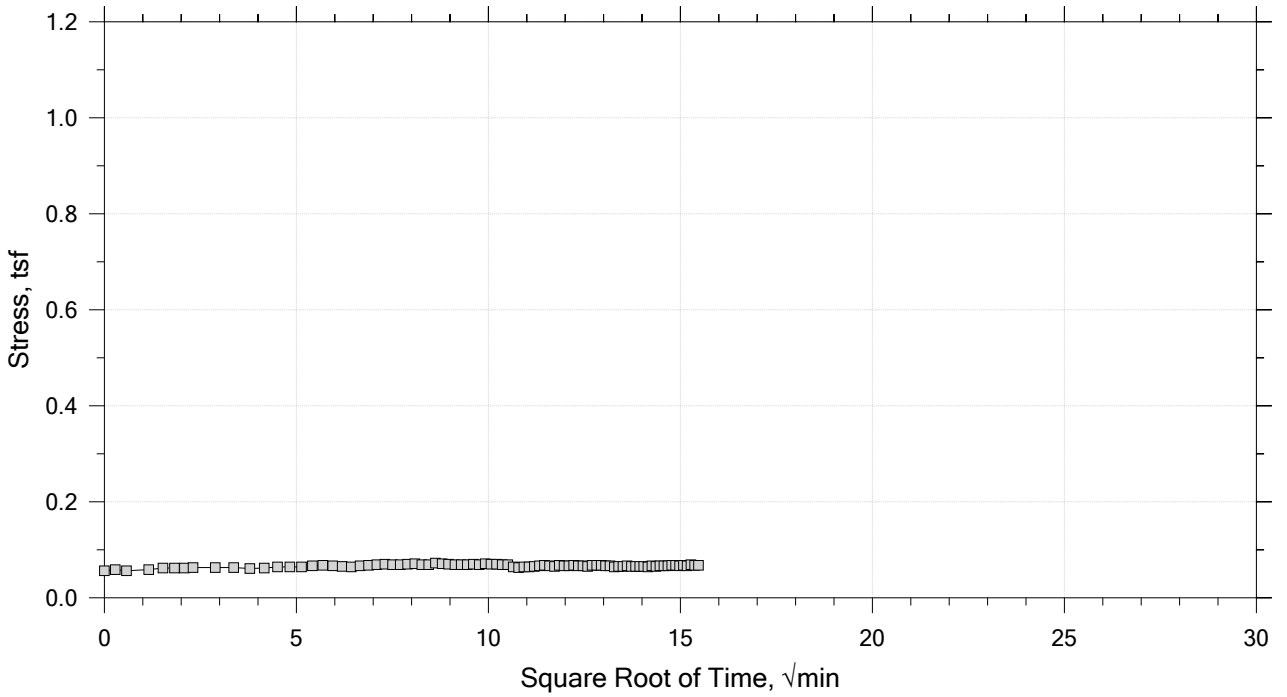


GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 1 of 15
Constant Volume Step
Stress: 0.0676 tsf

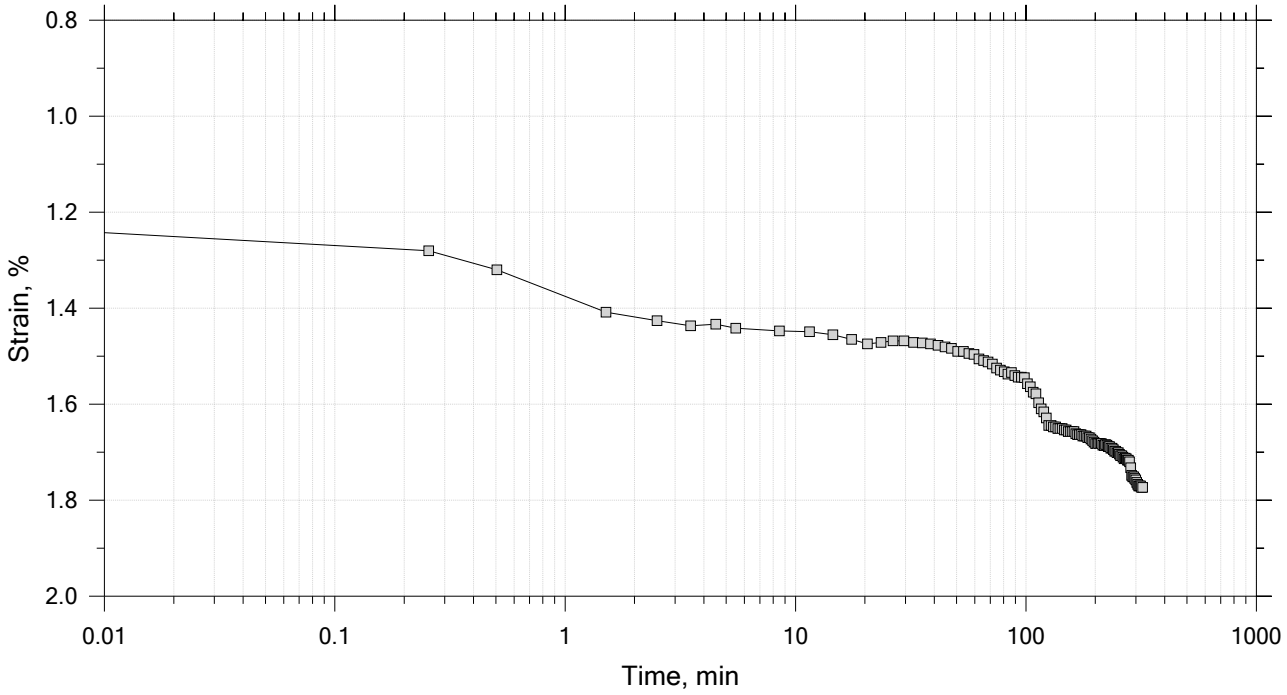


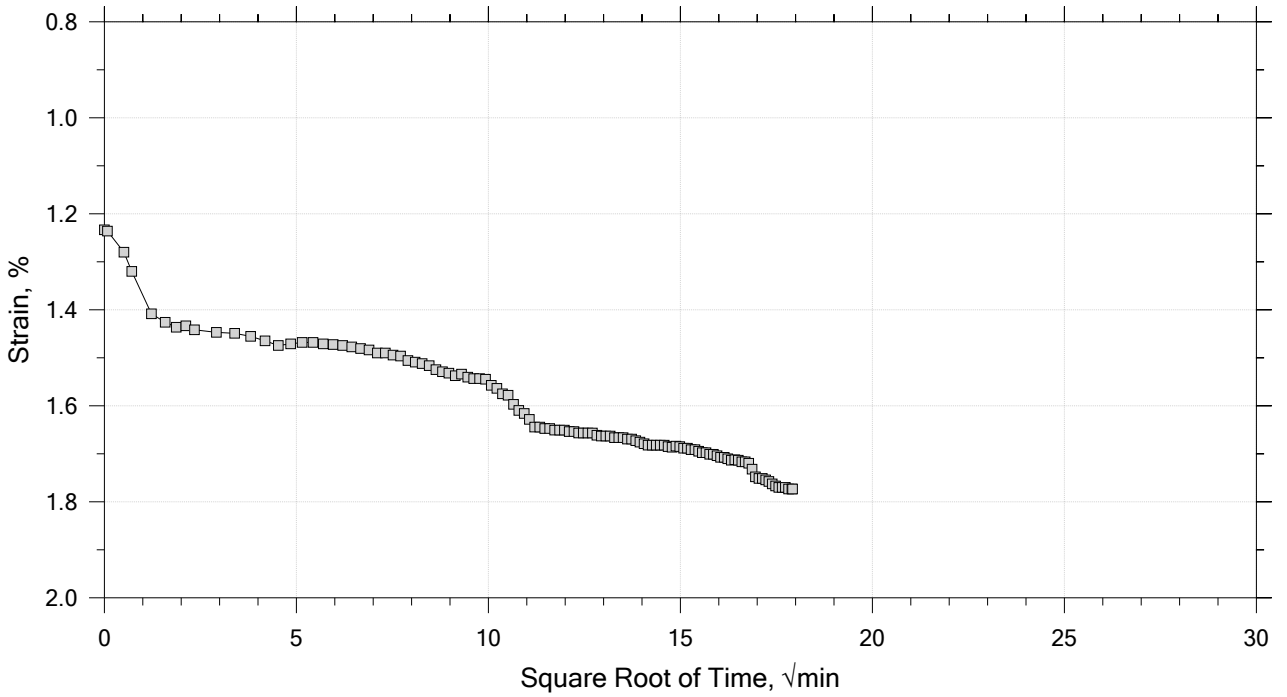


GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 2 of 15
Constant Load Step
Stress: 0.125 tsf

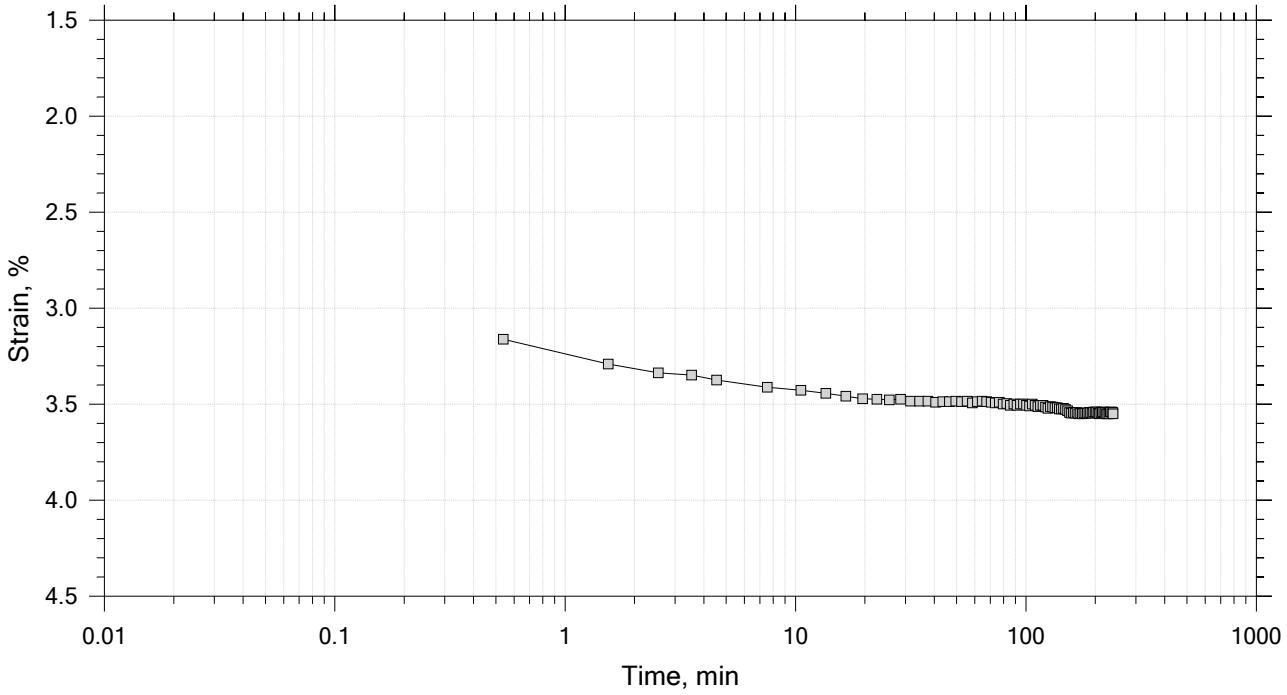


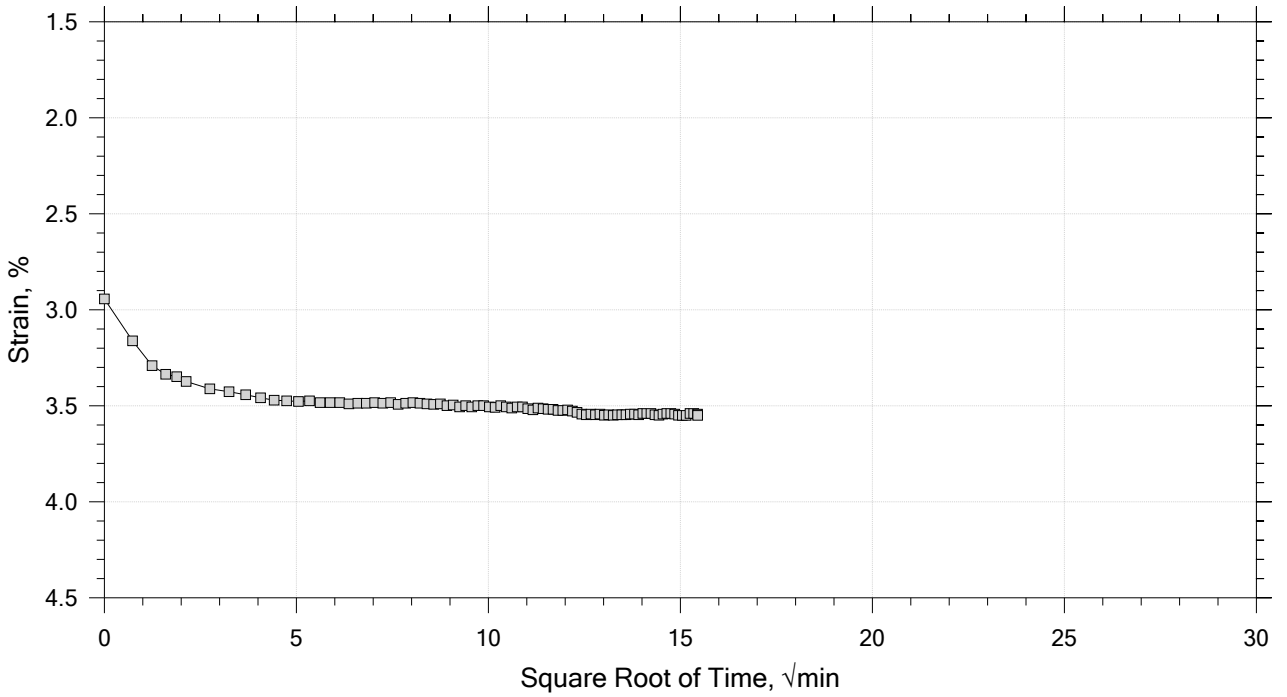


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 3 of 15
Constant Load Step
Stress: 0.25 tsf





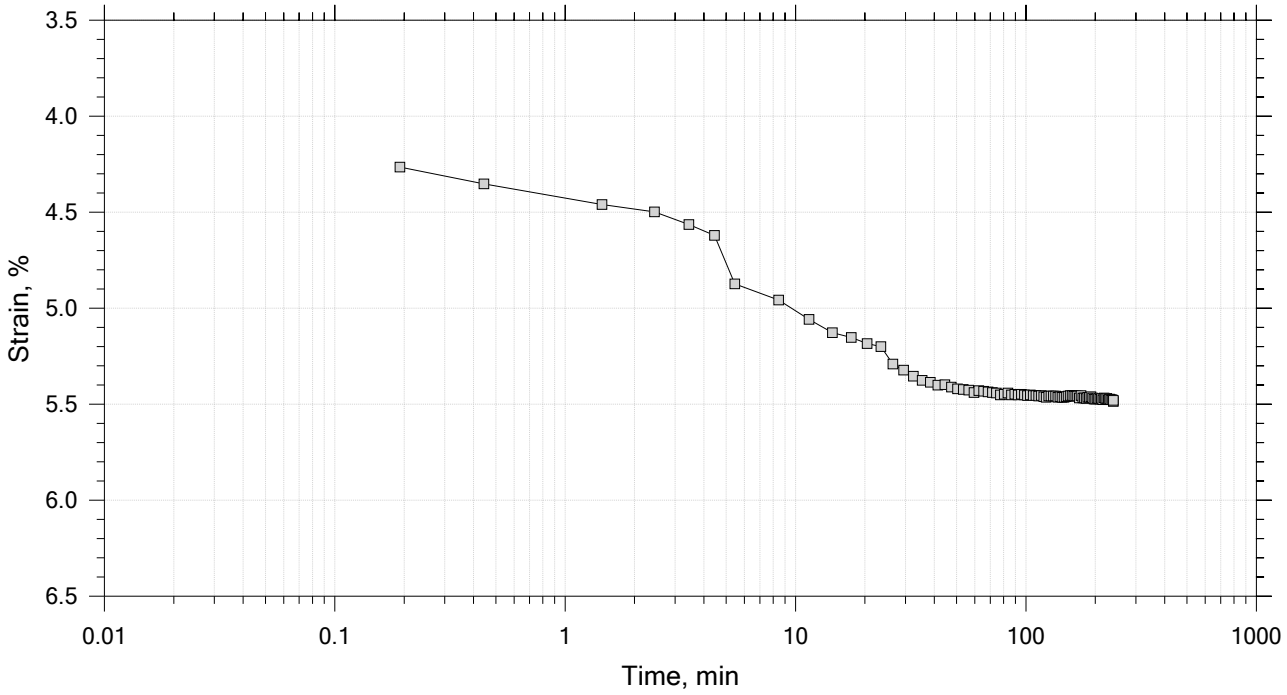
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

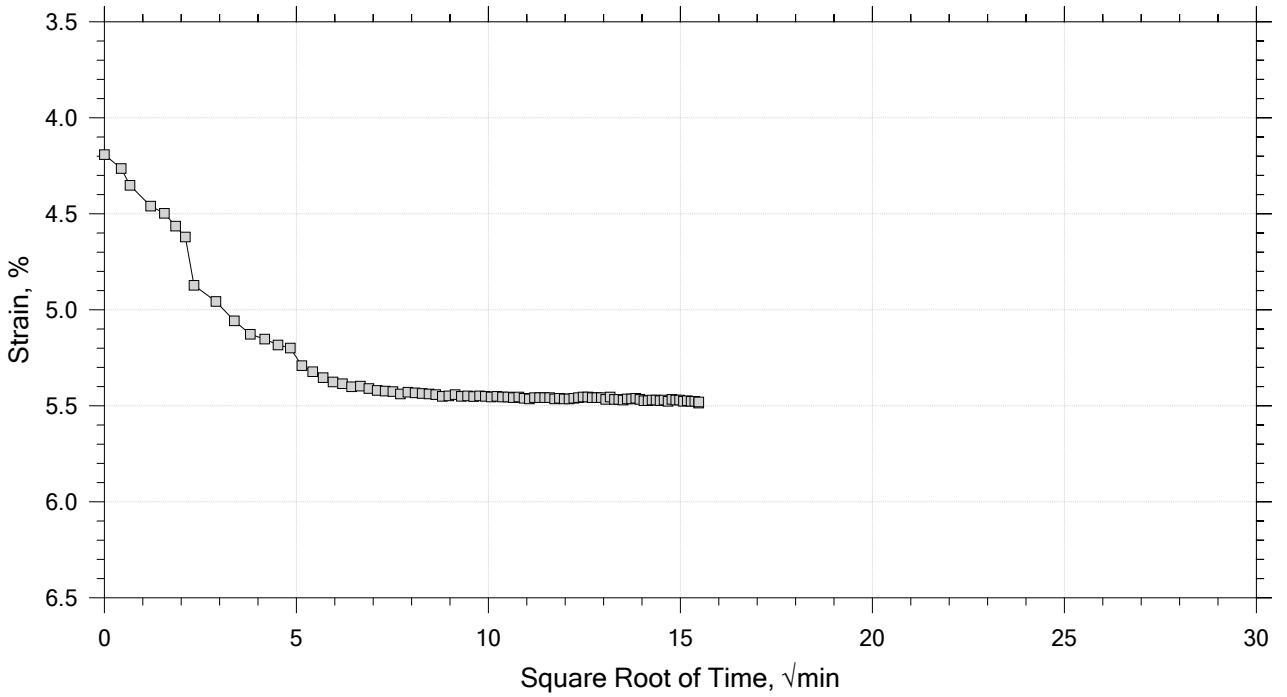
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 4 of 15

Constant Load Step

Stress: 0.5 tsf





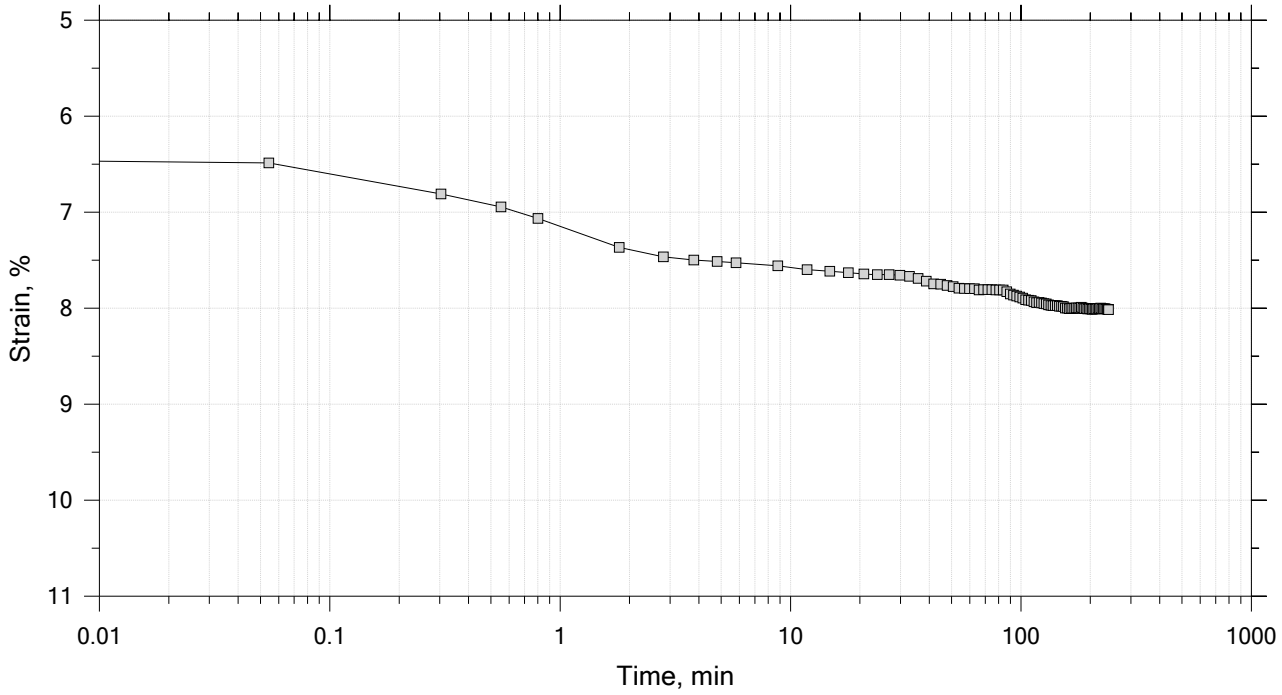
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

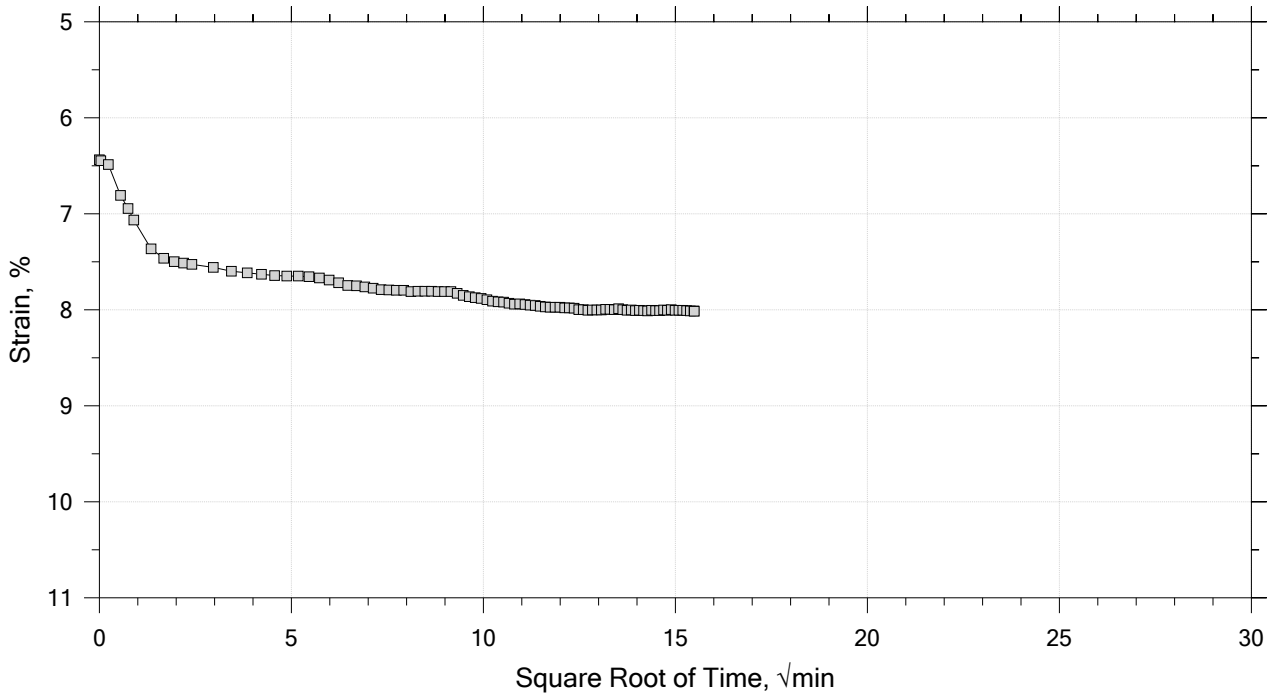
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 5 of 15

Constant Load Step

Stress: 1 tsf





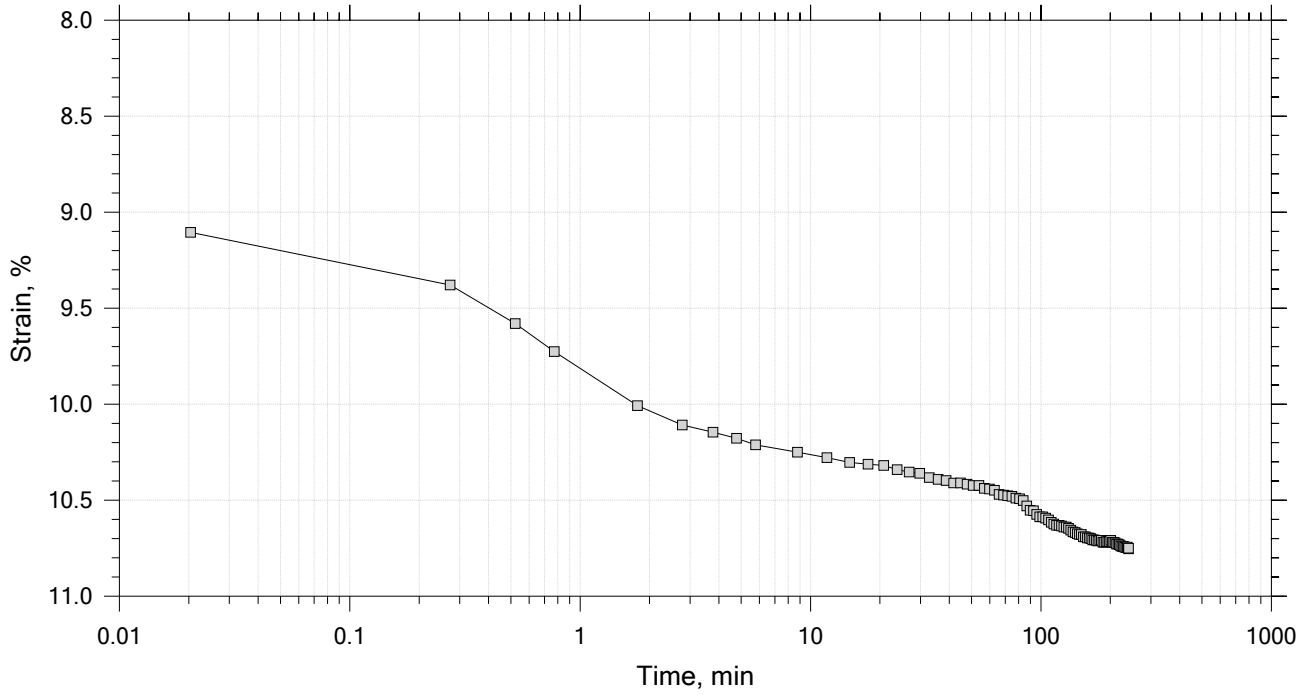
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

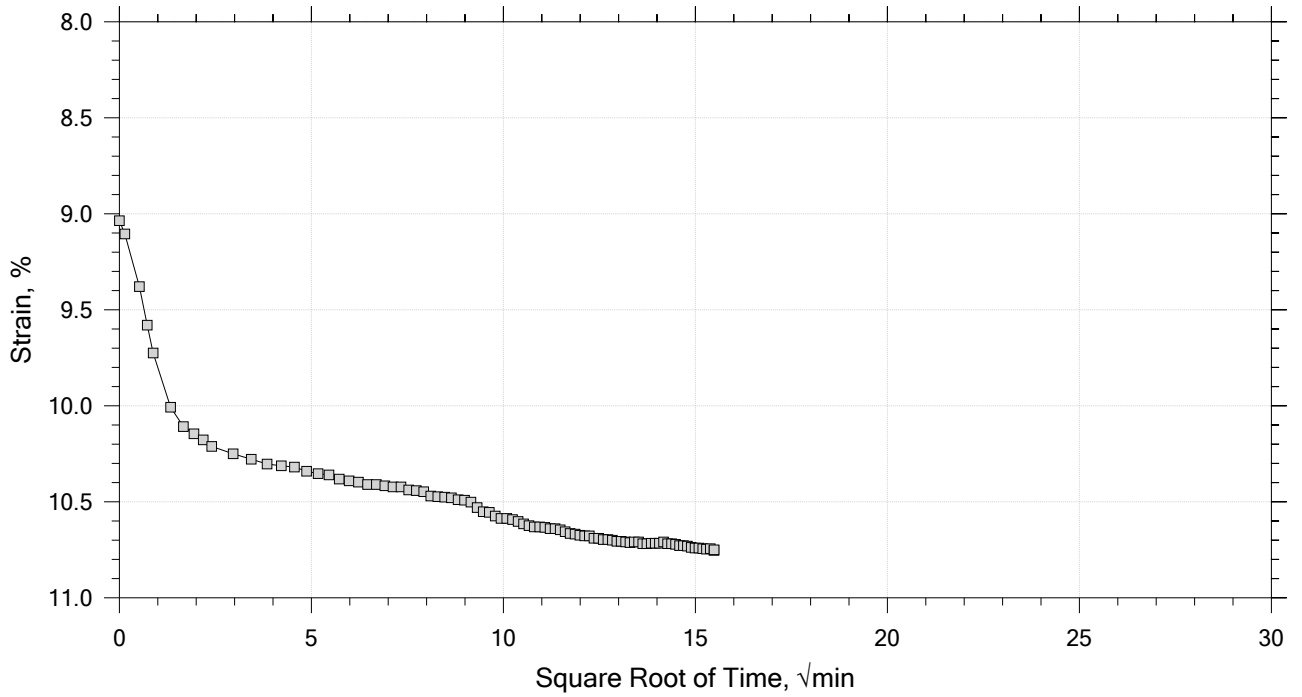
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 6 of 15

Constant Load Step

Stress: 2 tsf





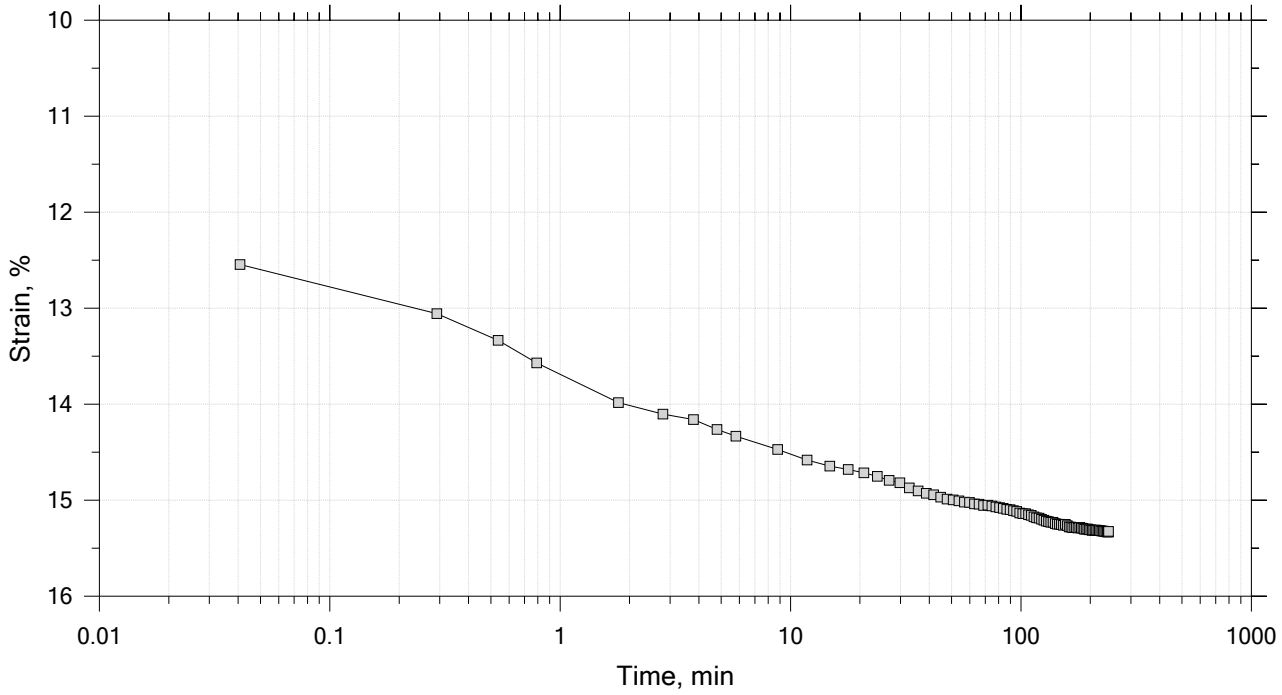
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

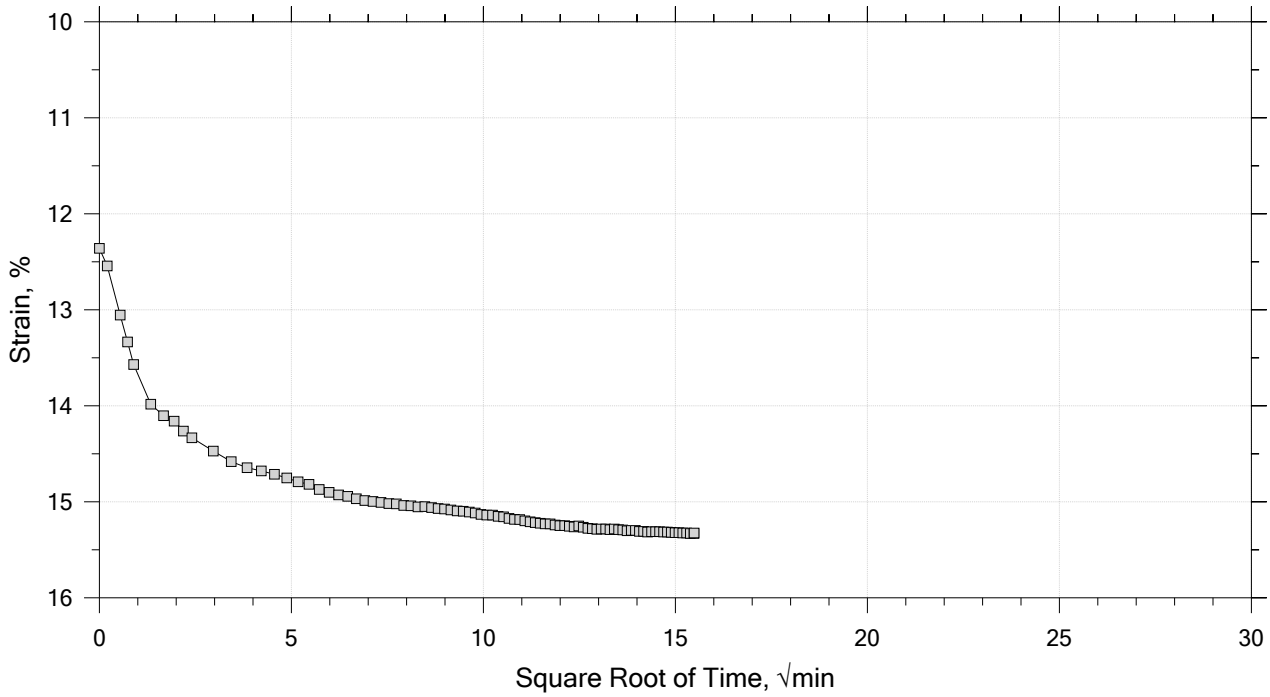
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 7 of 15

Constant Load Step

Stress: 4 tsf





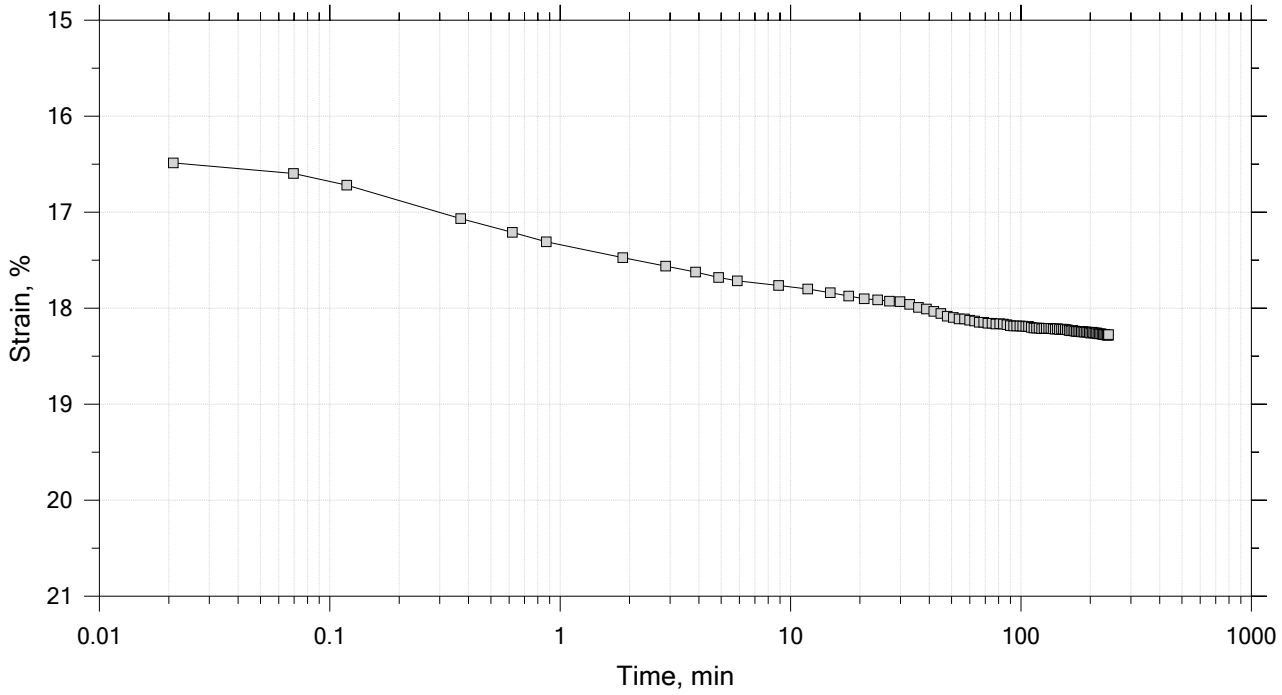
Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

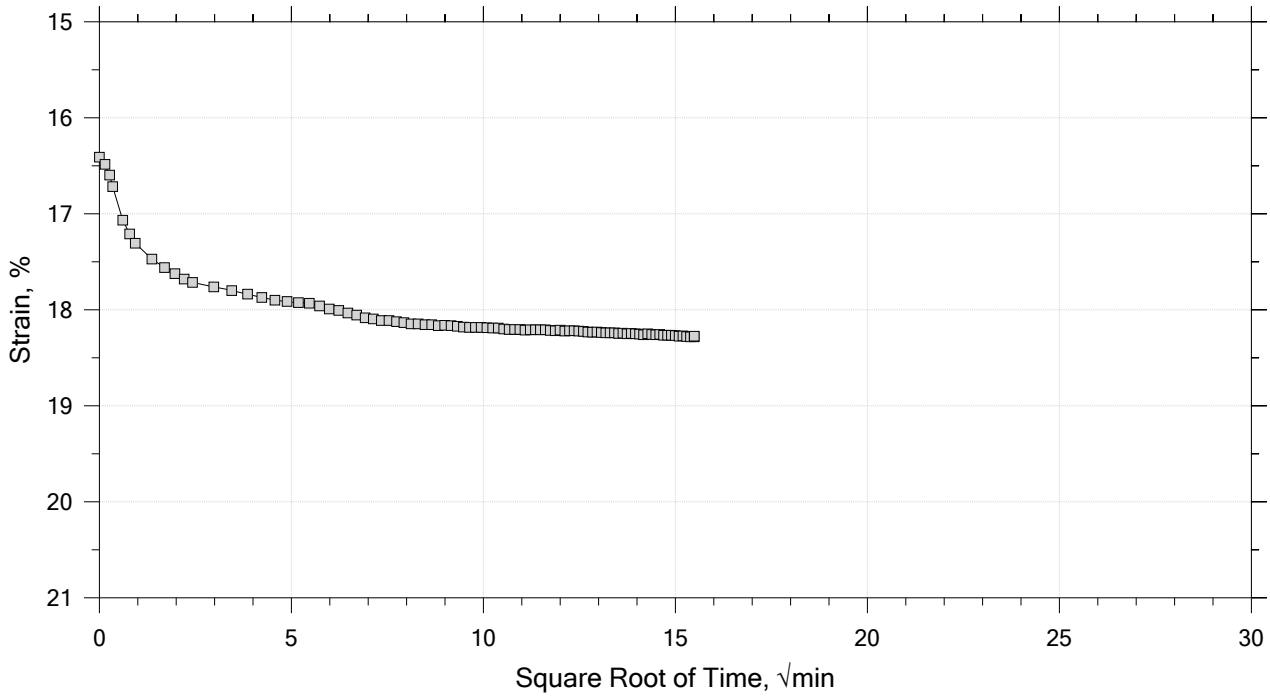
One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 8 of 15

Constant Load Step

Stress: 8 tsf

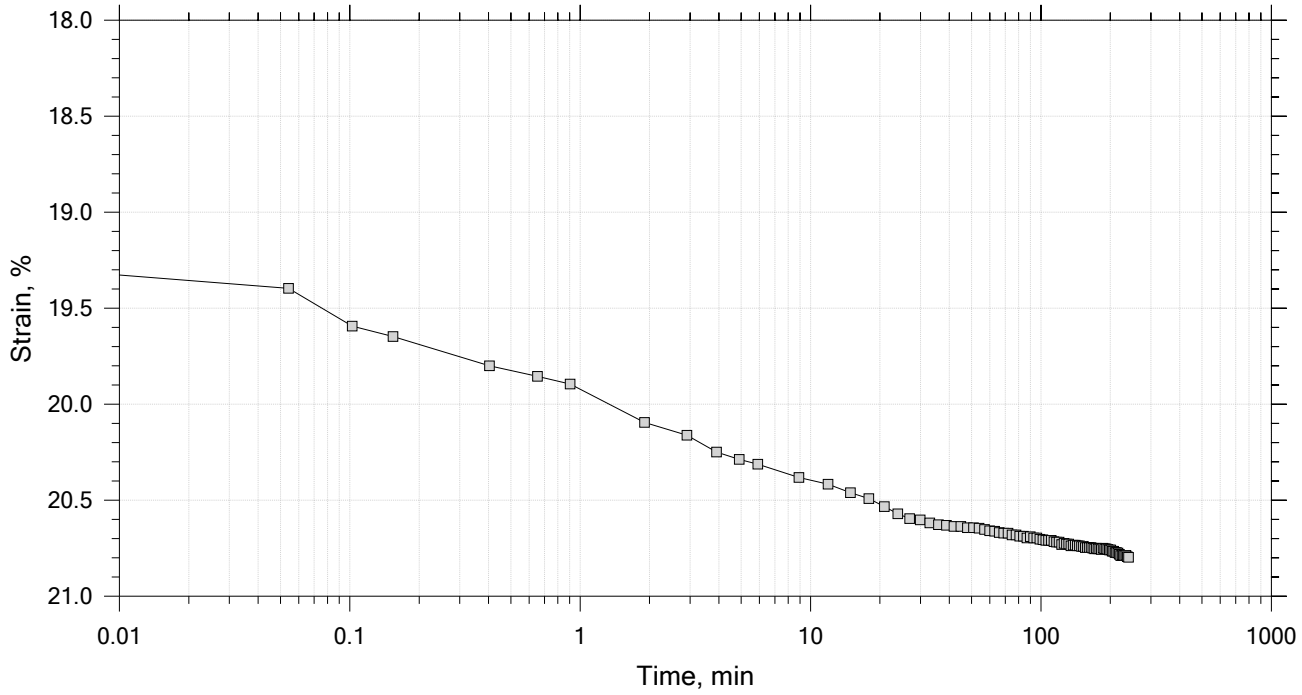


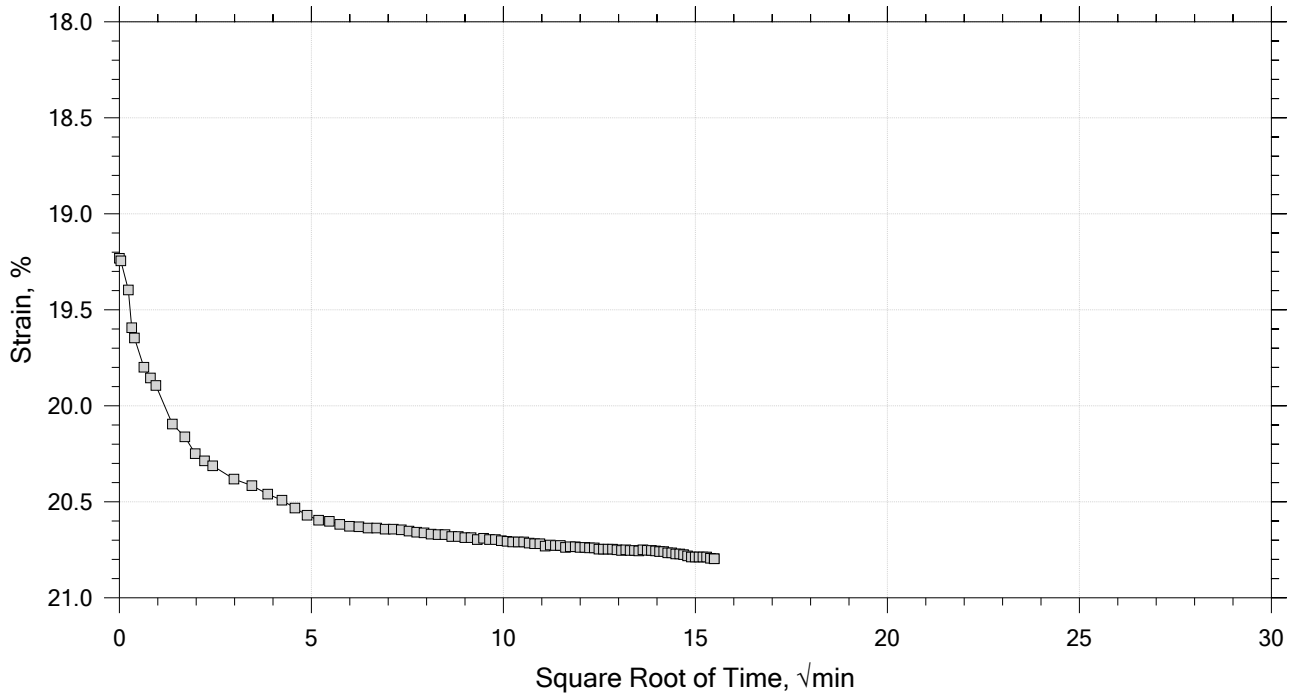


GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 9 of 15
Constant Load Step
Stress: 16 tsf

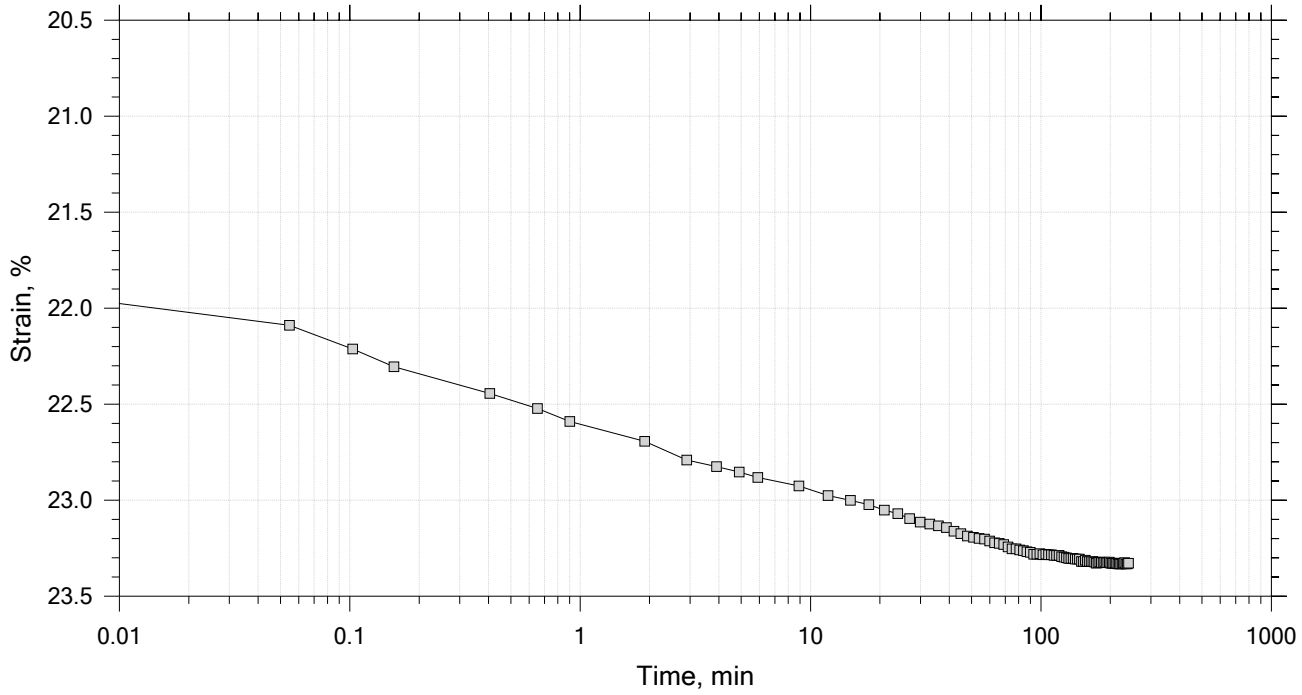


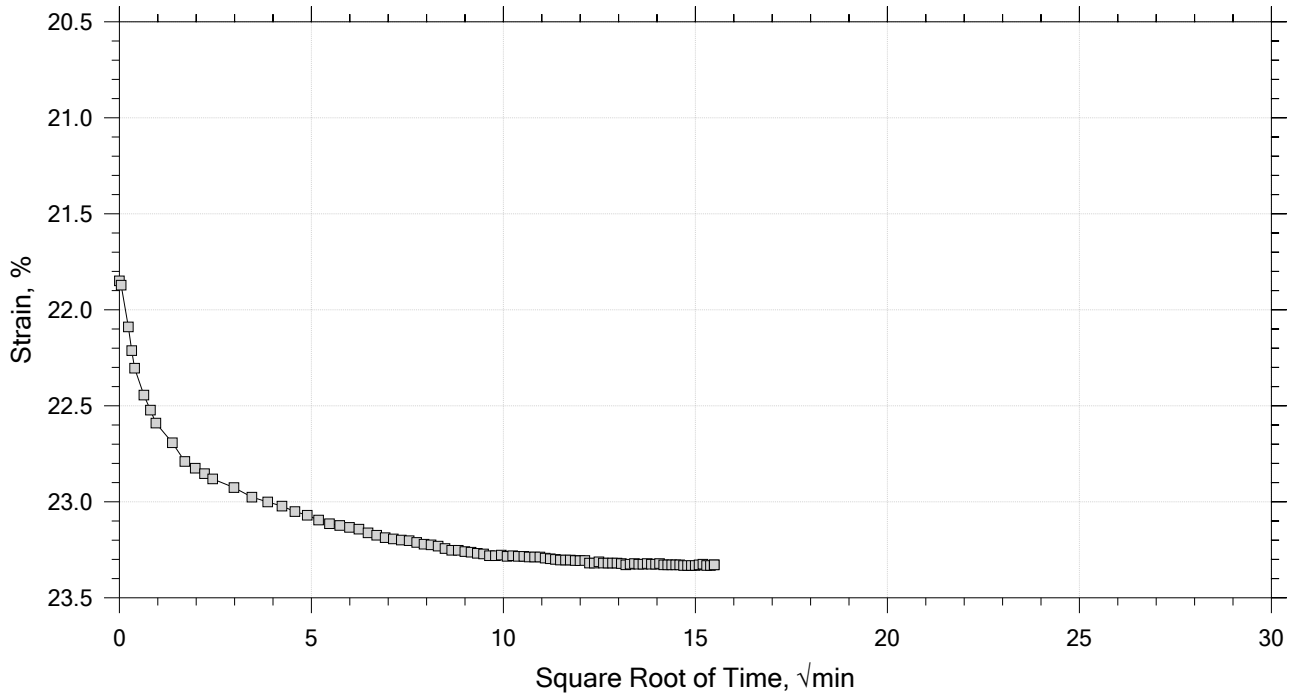


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 10 of 15
Constant Load Step
Stress: 32 tsf

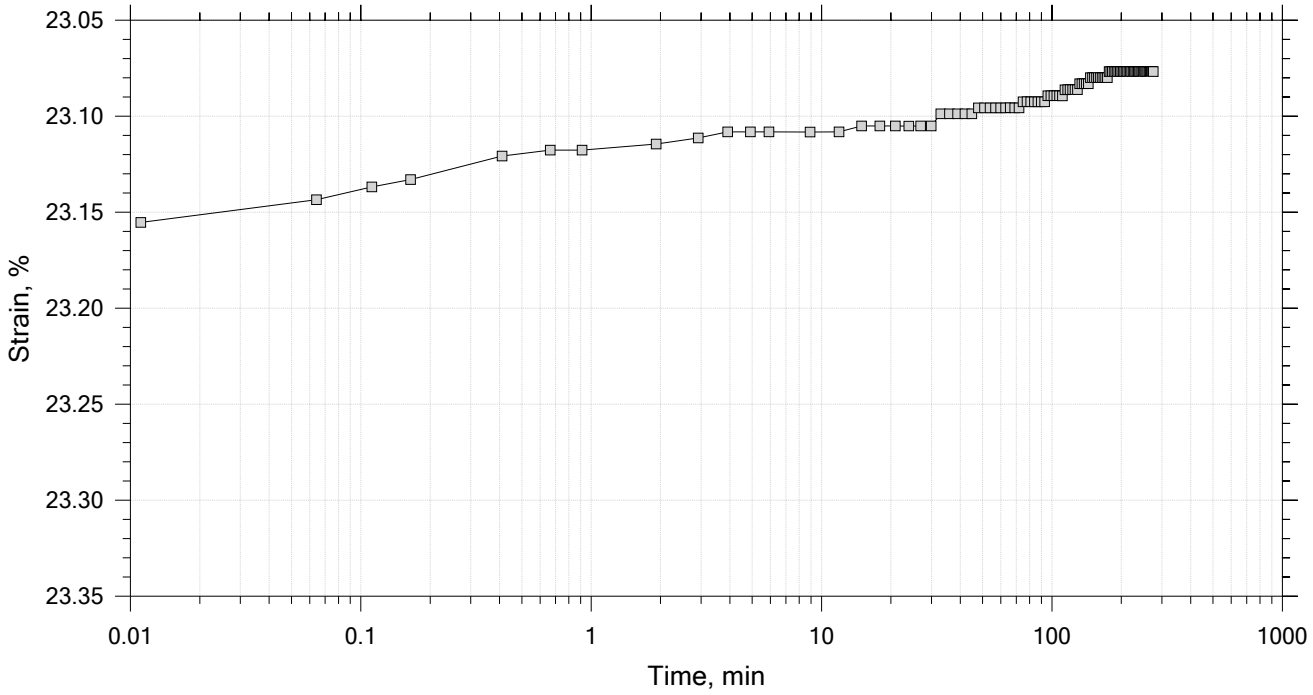


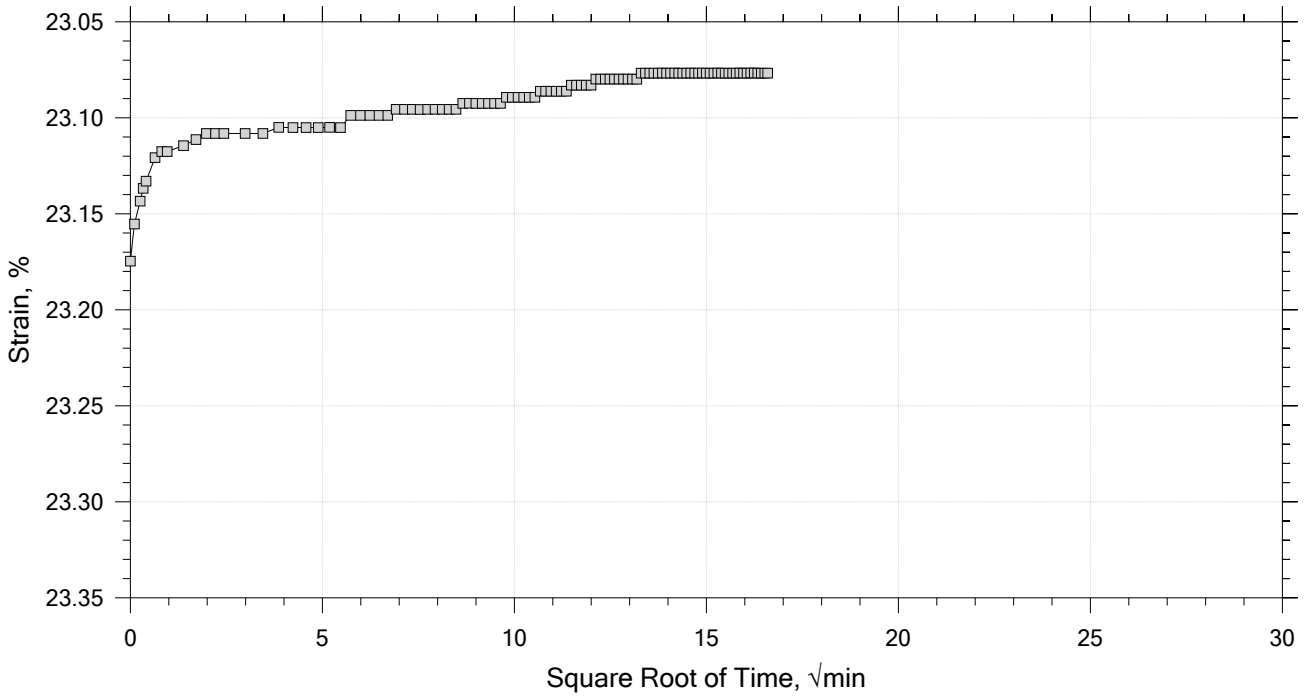


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 11 of 15
Constant Load Step
Stress: 8 tsf

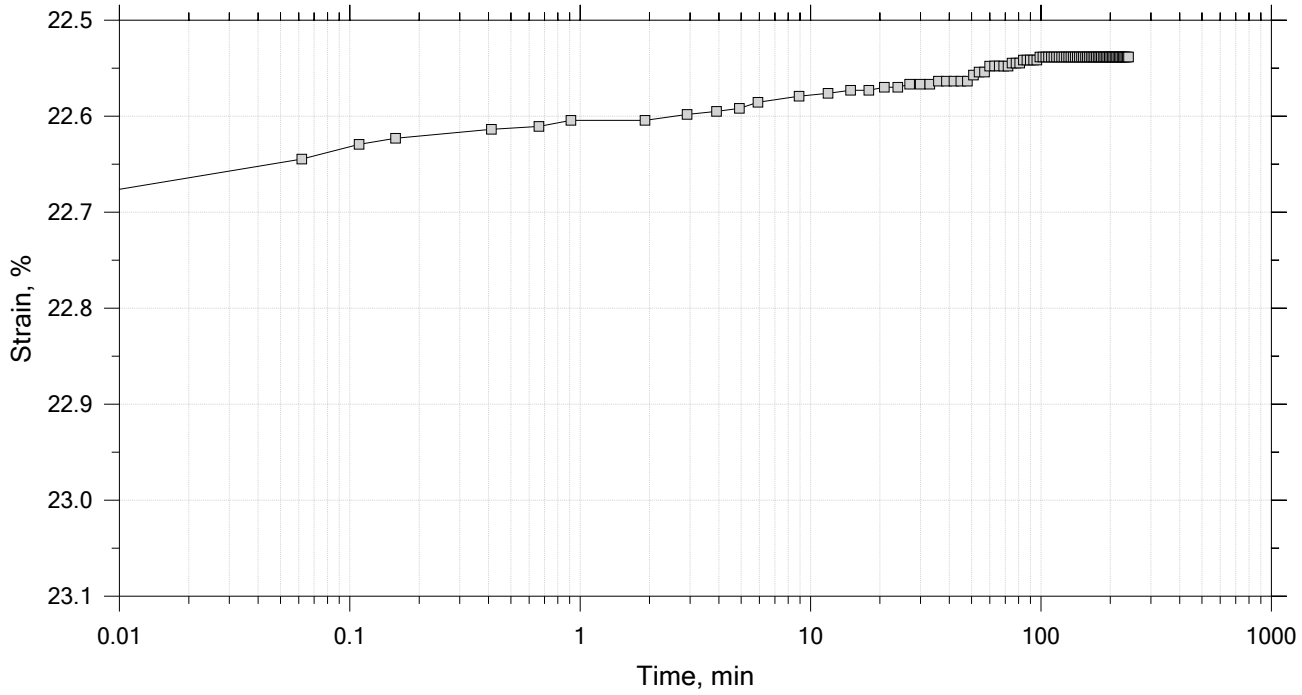


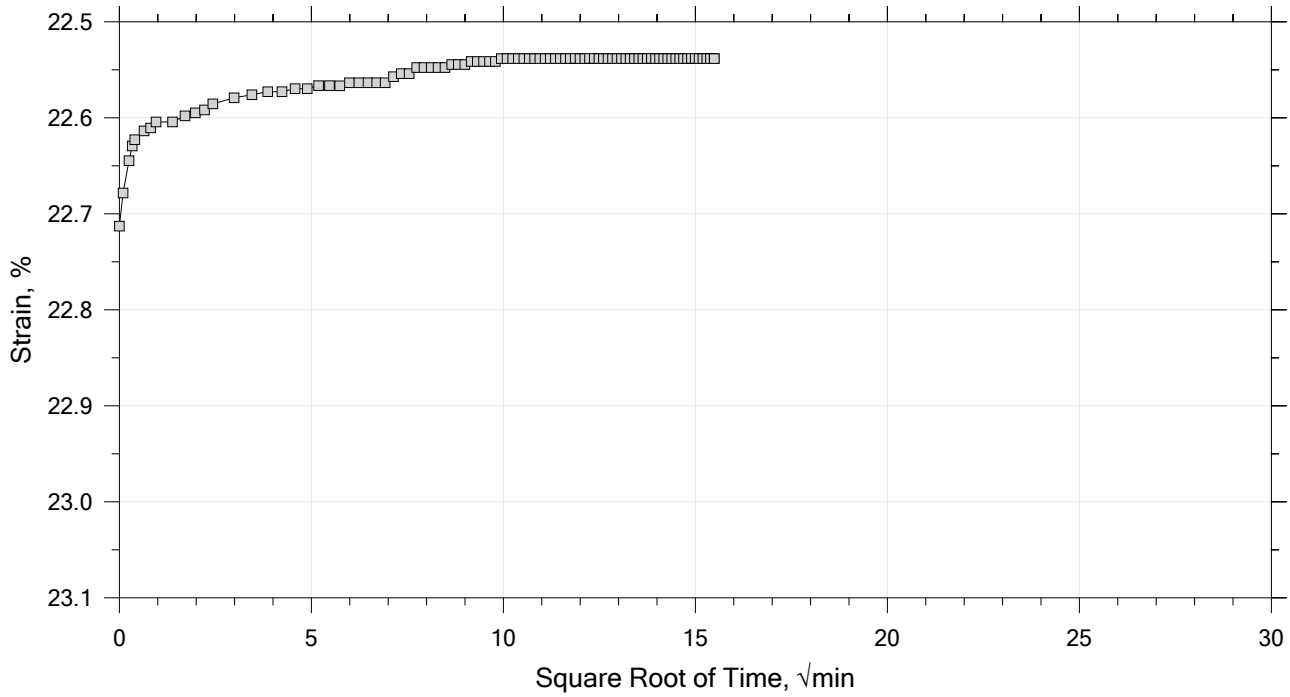


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 12 of 15
Constant Load Step
Stress: 2 tsf

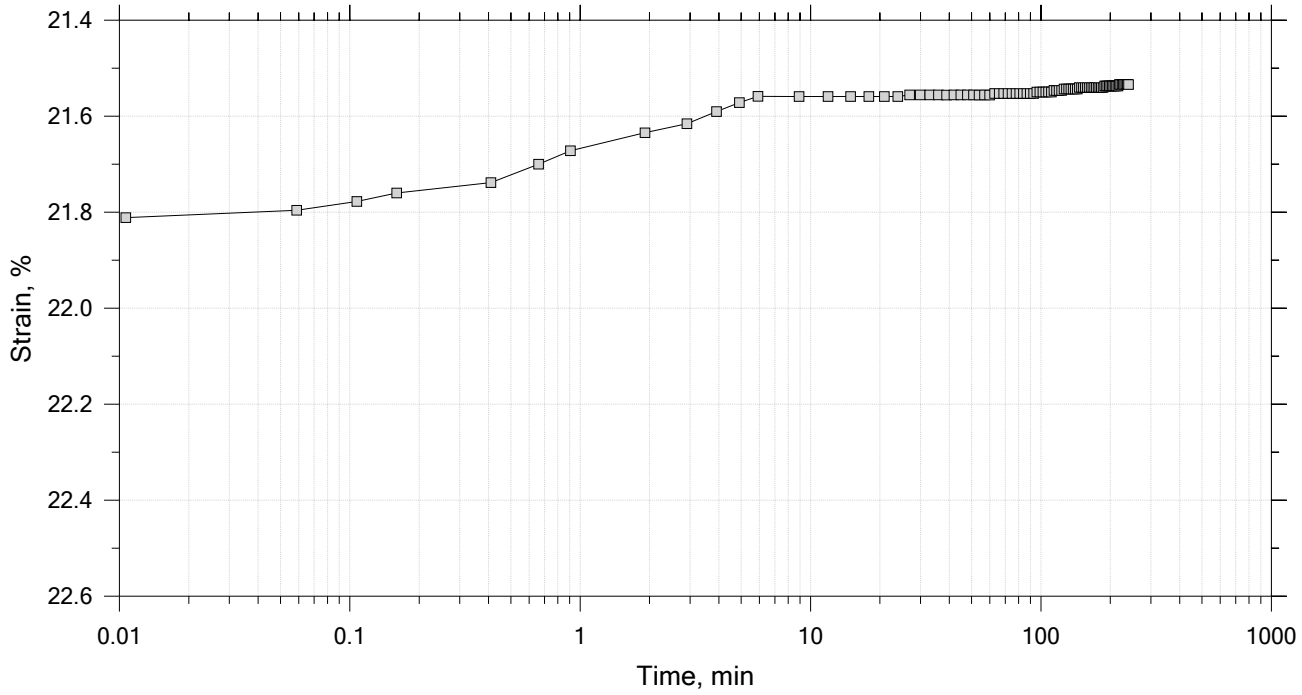


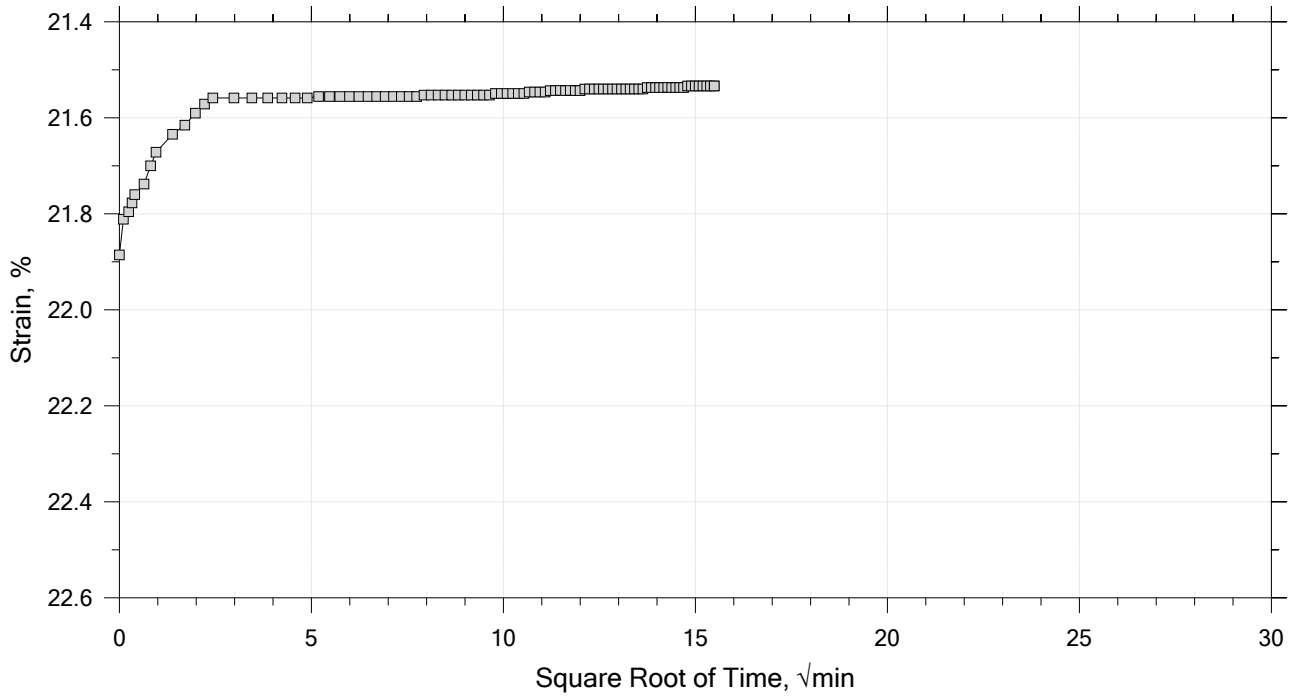


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 13 of 15
Constant Load Step
Stress: 0.5 tsf

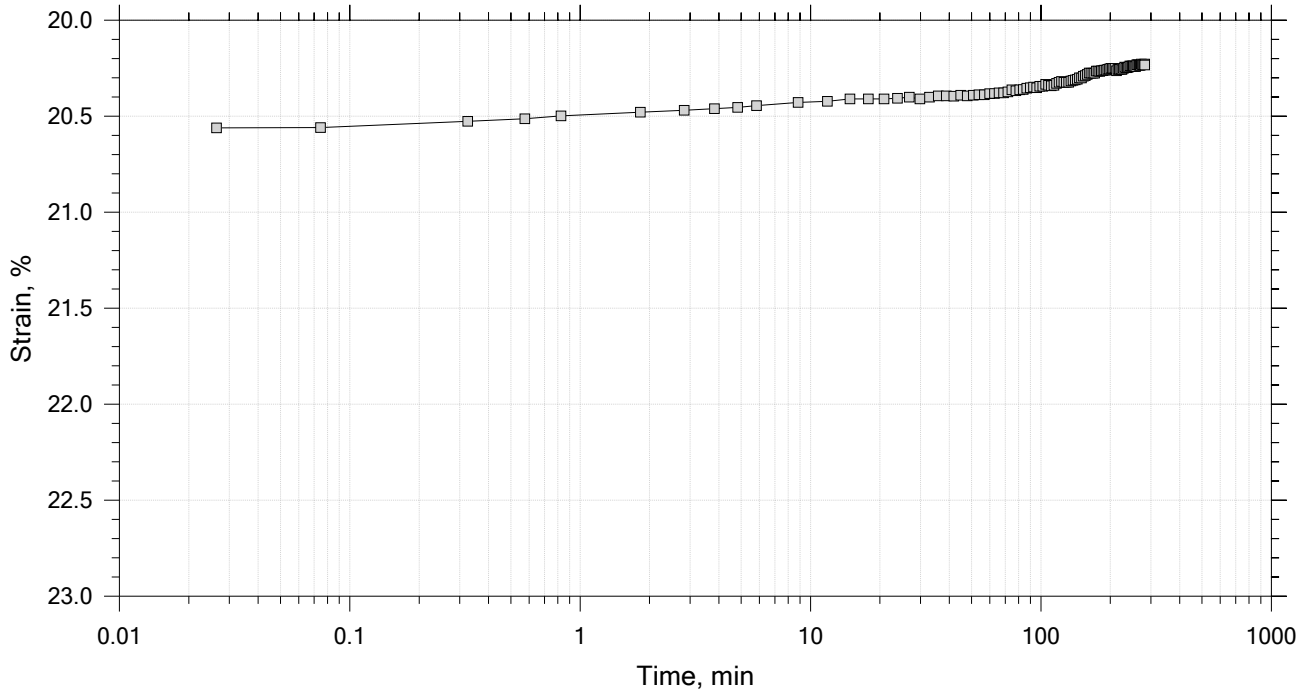


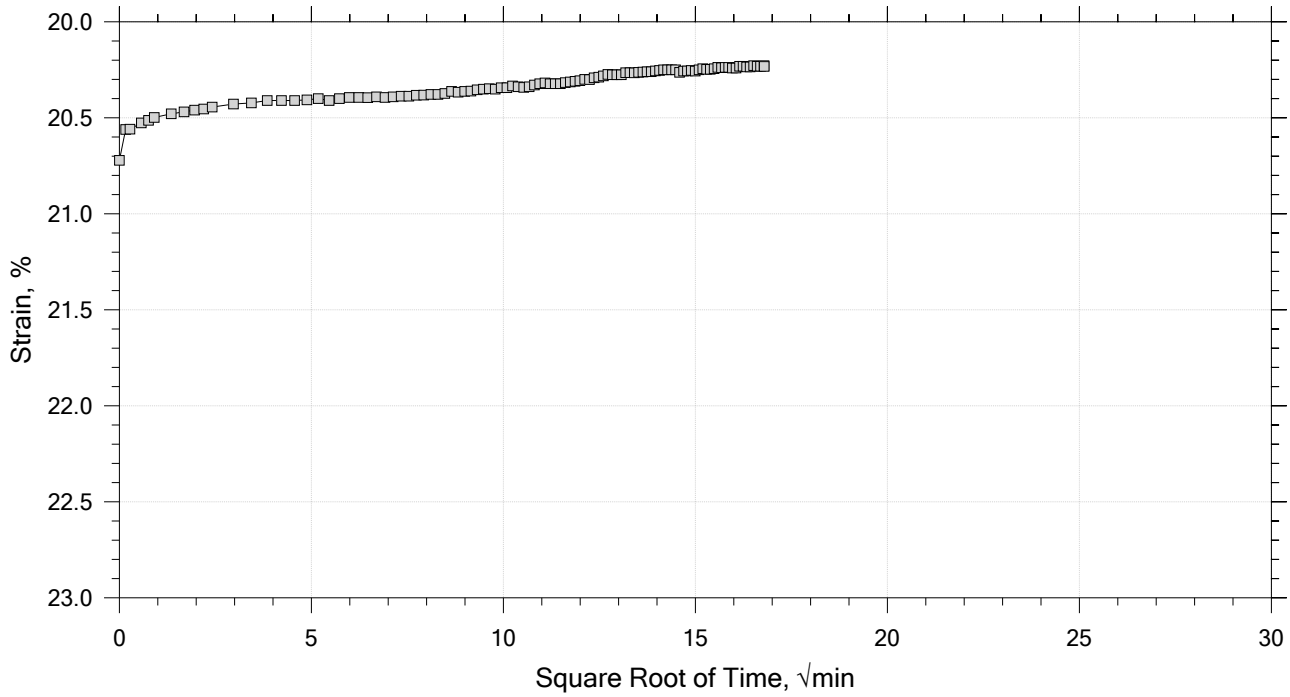


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 14 of 15
Constant Load Step
Stress: 0.125 tsf

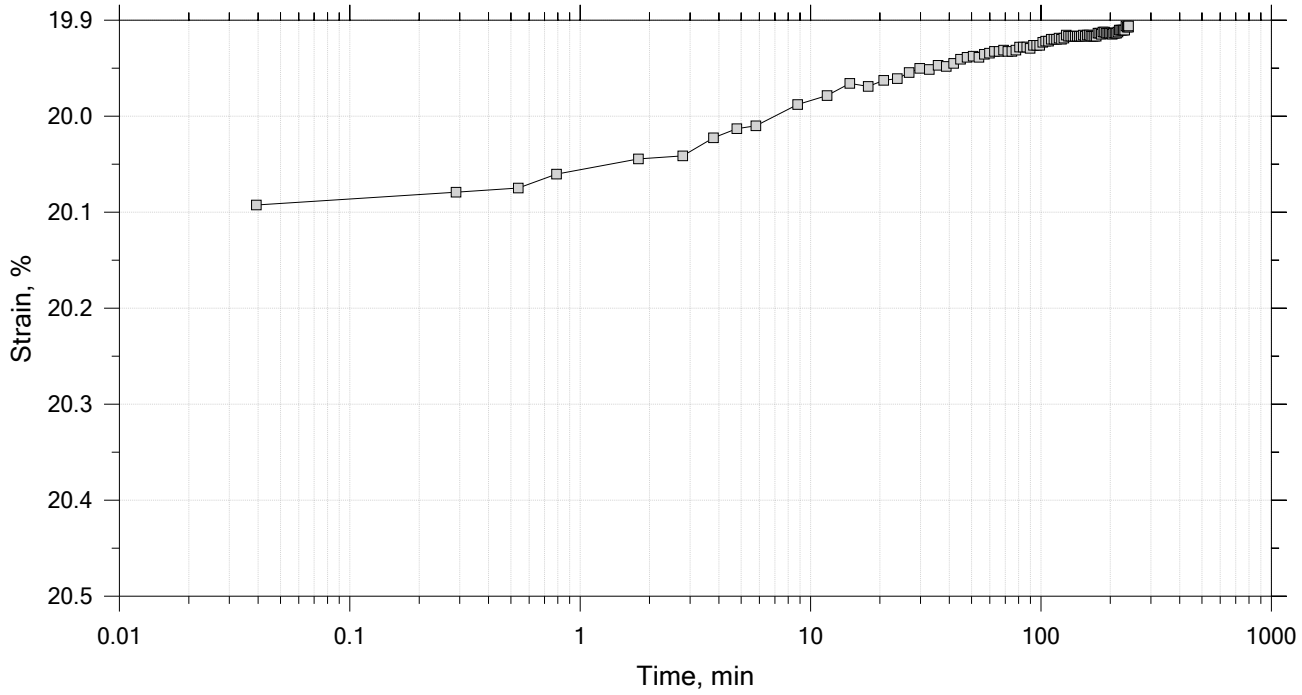


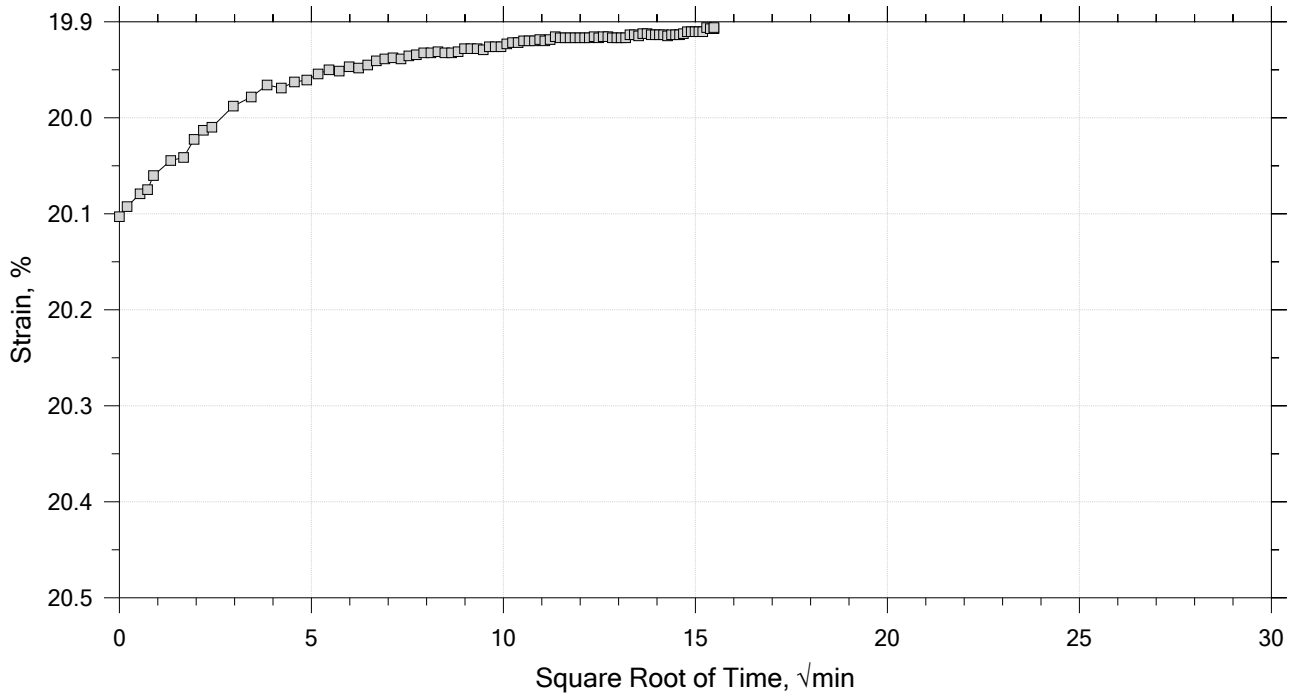


Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 15 of 15
Constant Load Step
Stress: 0.0625 tsf





Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
Boring No.: B-3	Tested By: md	Checked By: anm
Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---
Description: Moist, grayish brown sand with silt		
Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Specimen Diameter: 2.50 in	Measured Specific Gravity: 2.69	Liquid Limit: NP
Initial Height: 1.00 in	Initial Void Ratio: 0.761	Plastic Limit: NP
Final Height: 0.80 in	Final Void Ratio: 0.409	Plasticity Index: NP

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID	A-2864	RING		C-2515
Mass Container, gm	8.36	106.43	106.43	8.24
Mass Container + Wet Soil, gm	447.75	263.21	248	149.41
Mass Container + Dry Soil, gm	360.67	229.32	229.32	130.78
Mass Dry Soil, gm	352.31	122.89	122.89	122.54
Water Content, %	24.72	27.58	15.20	15.20
Void Ratio	---	0.76	0.41	---
Degree of Saturation, %	---	97.47	100.00	---
Dry Unit Weight, pcf	---	95.371	119.21	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Log of Time Coefficients

Step	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv in²/s	Mv 1/tsf	k ft/day	Ca %
1	0.0676	0.009291	0.745	0.929	0.000	0.00e+00	1.37e-01	0.00e+00	0.00e+00
2	0.125	0.01773	0.730	1.77	0.000	0.00e+00	1.47e-01	0.00e+00	0.00e+00
3	0.250	0.03550	0.699	3.55	0.000	0.00e+00	1.42e-01	0.00e+00	0.00e+00
4	0.500	0.05480	0.665	5.48	0.000	0.00e+00	7.72e-02	0.00e+00	0.00e+00
5	1.00	0.08014	0.620	8.01	0.000	0.00e+00	5.07e-02	0.00e+00	0.00e+00
6	2.00	0.1075	0.572	10.8	0.000	0.00e+00	2.74e-02	0.00e+00	0.00e+00
7	4.00	0.1532	0.491	15.3	1.581	3.93e-04	2.29e-02	1.68e-04	0.00e+00
8	8.00	0.1828	0.439	18.3	0.000	0.00e+00	7.38e-03	0.00e+00	0.00e+00
9	16.0	0.2080	0.395	20.8	0.000	0.00e+00	3.15e-03	0.00e+00	0.00e+00
10	32.0	0.2333	0.350	23.3	0.830	6.01e-04	1.58e-03	1.78e-05	0.00e+00
11	8.00	0.2308	0.355	23.1	0.000	0.00e+00	1.05e-04	0.00e+00	0.00e+00
12	2.00	0.2254	0.364	22.5	0.000	0.00e+00	8.97e-04	0.00e+00	0.00e+00
13	0.500	0.2153	0.382	21.5	0.000	0.00e+00	6.70e-03	0.00e+00	0.00e+00
14	0.125	0.2023	0.405	20.2	0.000	0.00e+00	3.47e-02	0.00e+00	0.00e+00
15	0.0625	0.1991	0.411	19.9	0.000	0.00e+00	5.23e-02	0.00e+00	0.00e+00

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Square Root of Time Coefficients

Step	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt. T90 min	Cv in²/s	Mv 1/tsf	k ft/day
1	0.0676	0.009291	0.745	0.929	25.733	1.36e-04	1.37e-01	3.50e-04
2	0.125	0.01773	0.730	1.77	0.000	0.00e+00	1.47e-01	0.00e+00
3	0.250	0.03550	0.699	3.55	31.509	1.06e-04	1.42e-01	2.83e-04
4	0.500	0.05480	0.665	5.48	41.260	7.81e-05	7.72e-02	1.13e-04
5	1.00	0.08014	0.620	8.01	18.473	1.66e-04	5.07e-02	1.58e-04
6	2.00	0.1075	0.572	10.8	21.174	1.37e-04	2.74e-02	7.02e-05
7	4.00	0.1532	0.491	15.3	24.124	1.11e-04	2.29e-02	4.74e-05
8	8.00	0.1828	0.439	18.3	22.547	1.08e-04	7.38e-03	1.50e-05
9	16.0	0.2080	0.395	20.8	21.478	1.07e-04	3.15e-03	6.29e-06
10	32.0	0.2333	0.350	23.3	20.156	1.06e-04	1.58e-03	3.15e-06
11	8.00	0.2308	0.355	23.1	176.913	1.18e-05	1.05e-04	2.31e-08
12	2.00	0.2254	0.364	22.5	20.904	1.01e-04	8.97e-04	1.69e-06
13	0.500	0.2153	0.382	21.5	5.901	3.64e-04	6.70e-03	4.56e-05
14	0.125	0.2023	0.405	20.2	240.938	9.18e-06	3.47e-02	5.96e-06
15	0.0625	0.1991	0.411	19.9	29.579	7.63e-05	5.23e-02	7.47e-05

GeoTesting EXPRESS	Project: NBPA CAD Cell Berm Design	Location: New Bedford, MA	Project No.: GTX-311129
	Boring No.: B-3	Tested By: md	Checked By: anm
	Sample No.: B3 Shelby 1	Test Date: 01/10/20	Depth: 3-5 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, grayish brown sand with silt		
	Remarks: System LTIII-A, Swell Pressure = 0.0676 tsf		
	Displacement at End of Increment		

GeoTesting EXPRESS

SOIL CHAIN OF CUSTODY & TEST REQUEST

GeoTesting Express, Inc.
125 Nagog Park
Acton, MA 01720
800 434 1062 Toll Free

2358 Perimeter Park Drive, Suite 320
Atlanta, GA 30341
770 645 6575 Tel

www.geotesting.com

CLIENT		INVOICE (complete if different from Client)	
Company: Foth Infratructure & Environment LL		Company:	
Address: 15 Creek Road		Address:	
City, State, Zip: Marion, MA 02771		City, State, Zip:	
Contact: Mike Campagnone	Phone: 401-663-5782	Contact:	Phone:
E-mail: Mike.Campagnone@foth.com	Cell: 401-663-5782	E-mail: invoices@foth.com	Cell:

PROJECT		
Project Name: NBPA CAD Cell Berm Design	Client Project #: 0018N020-Phase 7	Purchase Order#:
Project Location: New Bedford, MA	GTX Quote #:	Requested Turnaround:
On-site Contact: Mike Campagnone	E-mail: Mike.campagnone@foth.com	Phone: 401-663-5782

SOIL			Atterberg Limits (ASTM D 4318)	USCS – Classification (ASTM D 2487)	Grain Size (ASTM D 6913) (Sieve Only)	Grain Size (ASTM 7928) (Hydrometer)	Density (ASTM D 7263)	Moisture Content (ASTM D 2216)	Organic Content (ASTM D 2974)	pH Please select	Specific Gravity (ASTM D 854)	Electrical Resistivity Please select	Proctor Compaction Please select	California Bearing Ratio * (ASTM D 1883)	Direct Shear* (ASTM D 3080)	Triaxial Shear* Please select	Incremental Consolidation* (ASTM D 2435)	Permeability/ Hydraulic Conductivity* Please Select	Unconfined Compression (ASTM D 2166)	Other:
Boring ID	Sample ID	Depth																			
B-1	B1 Shelby-1	3'-5'	✓	✓		✓		✓	✓								✓				
B-3	B3 Shelby-1	3'-5'	✓	✓		✓		✓	✓								✓				
B-3	Jar - 1	7'-9'						✓	✓												
B-3	Jar -2	11'-13'						✓	✓												
B-3	Bag & Jar - 3	9'-11'						✓	✓												
B-1	Jar - 4	5'-7'						✓	✓												
B-1	Jar - 5	7'-9'						✓	✓												
B-1	Jar - 6	9'-11'						✓	✓												
B-1	Jar - 7	11'-13'						✓	✓												

*Specify Test Conditions (Undisturbed or Remolded, Density and moisture, Test Normal Loads, Test Confining Stresses, etc.):

Oven dried LL for organic soils. ASTM 2435- b Standard loading sequence

AUTHORIZE BY SIGNING AND DATING:

SIGNATURE: _____ **PRINT NAME:** Michael Campagnone **DATE:** 12/20/19

For GTX Use Only
Incoming Sample Inspection Performed □
Adverse conditions:

Relinquished By:	**DATE:** 12/31/19	**Received By:**	**DATE:** 12/31/19
	TIME: 10:43 am		**TIME:** 10:45 am
Relinquished By:	**DATE:** 12/31/19	**Received By:**	**DATE:** 12/31/19
	TIME: 12:40 pm		**TIME:** 12:40 pm

GeoTesting EXPRESS

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CAI	CERCHAR Abrasiveness Index
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
CSR	cyclic stress ratio
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \times D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c'	cohesion intercept for effective stresses
D	diameter of specimen
D	damping ratio
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young's modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
H_R	Rebound Hardness number
i	gradient
I_S	Uncorrected point load strength
$I_{S(50)}$	Size corrected point load strength index
H_A	Modified Taber Abrasion
H_T	Total hardness
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p'	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p' at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S_r	Post cyclic undrained shear strength
T	temperature
t	time
U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_s	shear wave velocity
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson's ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ'_{vc}	Effective vertical consolidation stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

Appendix C

Water Quality Monitoring Results

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/10/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 2:11a/2:47p **Low:** 7:52a/9:45p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071023-00-RL-2	2696545 , 815893	7:00	12'	2	1.89		EBB	0'	0
071023-00-RL-6		7:00		6	1.84				
071023-00-RL-10		7:00		10	1.68				
			AVERAGE TURBIDITY:		1.80				
071023-02-RL-2	2695885 , 816028	9:00	10'	2	1.97		FLOOD	0'	2
071023-02-RL-5		9:00		5	1.98				
071023-02-RL-8		9:00		8	1.87				
			AVERAGE TURBIDITY:		1.94				
071023-03-RL-2	2696562 , 815159	9:10	7'	2	2.17	CAPPING	FLOOD	0'	CAPPING
071023-03-RL-4		9:10		4	2.02				
071023-03-RL-5		9:10		5	1.81				
			AVERAGE TURBIDITY:		2.00				
071023-04-RL-2	2695960 , 815929	11:00	11'	2	2.84		FLOOD	0'	4
071023-04-RL-5		11:00		5	2.96				
071023-04-RL-9		11:00		9	3.5				
			AVERAGE TURBIDITY:		3.10				
071023-05-RL-2	2695938 , 816109	12:00	15'	2	2.34		FLOOD	0'	5
071023-05-RL-7		12:00		7	2				
071023-06-RL-13		12:00		13	3.08				
			AVERAGE TURBIDITY:		2.47				
071023-06-RL-2	2695937 , 816100	13:00	14'	2	6.08		FLOOD	0'	6
071023-06-RL-7		13:00		7	1.73				
071023-06-RL-12		13:00		12	2.02				
			AVERAGE TURBIDITY:		3.28				
071023-07-RL-2	2695937 , 816102	14:00	13'	2	2.87		FLOOD	0'	7
071023-07-RL-6		14:00		6	2.83				
071023-07-RL-11		14:00		11	3.53				
			AVERAGE TURBIDITY:		3.08				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071023-00-ML-2	2695961 , 816063	7:05	10'	2	1.53		EBB	0	0
071023-00-ML-5		7:05		5	1.74				
071023-00-ML-8		7:05		8	1.75				
			AVERAGE TURBIDITY:		1.67				
			TURBIDITY INCREASE:		-0.13				
071023-02-ML-2	2696462 , 815772	9:05	12'	2	1.72		FLOOD	0	2
071023-02-ML-6		9:05		6	1.67				
071023-02-ML-10		9:05		10	4.78				
			AVERAGE TURBIDITY:		2.72				
			TURBIDITY INCREASE:		0.78				
071023-03-ML-2	2697442 , 815061	9:15	9	2	2.84	CAPPING	FLOOD	0	CAPPING
071023-03-ML-4		9:15		4	2.81				
071023-03-ML-7		9:15		7	3.49				
			AVERAGE TURBIDITY:		3.05				
			TURBIDITY INCREASE:		1.05				
071023-04-ML-2	2696463 , 815777	11:05	13'	2	1.84		FLOOD	0	4
071023-04-ML-6		11:05		6	1.99				
071023-04-ML-11		11:05		11	2.16				
			AVERAGE TURBIDITY:		2.00				
			TURBIDITY INCREASE:		-1.10				
071023-05-ML-2	2696448 , 815672	12:05	13'	2	2.33		FLOOD	0	5
071023-05-ML-6		12:05		6	6.36				
071023-05-ML-11		12:05		11	20.22				
			AVERAGE TURBIDITY:		9.64				
			TURBIDITY INCREASE:		7.16				
071023-06-ML-2	2696468 , 815772	13:05	15'	2	1.95		FLOOD	0'	6
071023-06-ML-7		13:05		7	2.12				
071023-06-ML-13		13:05		13	1.64				
			AVERAGE TURBIDITY:		1.90				
			TURBIDITY INCREASE:		-1.37				
071023-07-ML-2	2696480 , 815830	14:05	17'	2	2.84		FLOOD	0'	7
071023-07-ML-8		14:05		8	2.17				
071023-07-ML-15		14:05		15	2.04				
			AVERAGE TURBIDITY:		2.35				
			TURBIDITY INCREASE:		-0.73				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/24/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:34a/1:09p **Low:** 6:04a/6:40p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072423-00-RL-2	2695938 , 816097	7:00	10'	2	1.99		FLOOD	0'	0
072423-00-RL-5		7:00		5	2.35				
072423-00-RL-8		7:00		8	2.94				
			AVERAGE TURBIDITY:		2.43				
072423-02-RL-2	2695934 , 816108	9:00	11'	2	2.65		FLOOD	0'	2
072423-02-RL-5		9:00		5	2.58				
072423-02-RL-9		9:00		9	3.24				
			AVERAGE TURBIDITY:		2.82				
072423-03-RL-2	2696564 , 815164	10:00	7'	2	5.86	LEVELING	FLOOD, LEVELING	0'	3
072423-03-RL-3		10:00		3	7.05				
072423-03-RL-5		10:00		5	7.03				
			AVERAGE TURBIDITY:		6.65				
072423-04-RL-2	2695933 , 816107	11:00	12'	2	2.43		FLOOD	0'	4
072423-04-RL-6		11:00		6	2.41				
072423-04-RL-10		11:00		10	2.93				
			AVERAGE TURBIDITY:		2.59				
072423-05-RL-2	2696959 , 815618	11:15	14'	2	2.95	LEVELING	FLOOD, LEVELING	0'	5
072423-05-RL-7		11:15		7	2.71				
072423-05-RL-12		11:15		12	3.47				
			AVERAGE TURBIDITY:		3.04				
072423-06-RL-2	2695933 , 816098	13:00	20'	2	2.07		FLOOD	0'	6
072423-06-RL-10		13:00		10	3.36				
072423-06-RL-18		13:00		18	0.34				
			AVERAGE TURBIDITY:		1.92				
072423-07-RL-2	2697459 , 815045	14:00	10	2	8.42		EBB	0'	7
072423-07-RL-5		14:00		5	8.69				
072423-07-RL-8		14:00		8	7.33				
			AVERAGE TURBIDITY:		8.15				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072423-00-ML-2	2696442 , 815668	7:05	12'	2	2.37		FLOOD	0'	0
072423-00-ML-6		7:05		6	2.39				
072423-00-ML-10		7:05		10	2.61				
			AVERAGE TURBIDITY:		2.46				
			TURBIDITY INCREASE:		0.03				
072423-02-ML-2	2696461 , 815760	9:05	13'	2	2.83		FLOOD	0'	2
072423-02-ML-6		9:05		6	2.62				
072423-02-ML-11		9:05		11	3.29				
			AVERAGE TURBIDITY:		2.91				
			TURBIDITY INCREASE:		0.09				
072423-03-ML-2	2697436 , 815045	10:05	10'	2	4.68	LEVELING	FLOOD, LEVELING	0'	3
072423-03-ML-5		10:05		5	5.3				
072423-03-ML-8		10:05		8	7.12				
			AVERAGE TURBIDITY:		5.70				
			TURBIDITY INCREASE:		-0.95				
072423-04-ML-2	2696469 , 815771	11:05	15'	2	2.96		FLOOD	0'	4
072423-04-ML-7		11:05		7	2.49				
072423-04-ML-13		11:05		13	2.6				
			AVERAGE TURBIDITY:		2.68				
			TURBIDITY INCREASE:		0.09				
072423-05-ML-2	2697451 , 815068	11:25	11'	2	6.22	LEVELING	FLOOD, LEVELING	0'	5
072423-05-ML-5		11:25		5	8.17				
072423-05-ML-9		11:25		9	8.97				
			AVERAGE TURBIDITY:		7.79				
			TURBIDITY INCREASE:		4.74				
072423-06-ML-2	2696465 , 815785	13:05	15'	2	8.95		FLOOD	0'	6
072423-06-ML-7		13:05		7	7.66				
072423-06-ML-13		13:05		13	3.76				
			AVERAGE TURBIDITY:		6.79				
			TURBIDITY INCREASE:		4.87				
072423-07-ML-2	2696555 , 815095	14:05	10'	2	7.01		EBB	0'	7
072423-07-ML-5		14:05		5	7.41				
072423-07-ML-8		14:05		8	8.49				
			AVERAGE TURBIDITY:		7.64				
			TURBIDITY INCREASE:		-0.51				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/31/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:11a/7:39p **Low:** 12:56a/12:35p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-RL-2	2697030 , 815840	7:10	10'	2	8.5		FLOOD	0'	0
073123-00-RL-5		7:10		5	6.6				
073123-00-RL-8		7:10		8	12				
			AVERAGE TURBIDITY:		9.03				
073123-02-RL-2	2697371 , 815015	9:10	9'	2	2.9		EBB	0'	2
073123-02-RL-4		9:10		4	1.94				
073123-02-RL-7		9:10		7	3.3				
			AVERAGE TURBIDITY:		2.71				
073123-03-RL-2	2697371 , 815015	11:10	7'	2	2.2		EBB	0'	4
073123-03-RL-3		11:10		3	3.9				
073123-03-RL-5		11:10		5	8.6				
			AVERAGE TURBIDITY:		4.90				
073123-04-RL-2	2697371 , 815015	12:10	4'	2	2.9		EBB	0'	5
073123-04-RL-3		12:10		3	3				
073123-04-RL-3		12:10		3	3				
			AVERAGE TURBIDITY:		2.97				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-ML-2	2697371 , 815015	7:15	10'	2	1.7		FLOOD	0	0
073123-00-ML-5		7:15		5	3				
073123-00-ML-8		7:15		8	1.3				
			AVERAGE TURBIDITY:		2.00				
			TURBIDITY INCREASE:		-7.03				
073123-02-ML-2	2697030 , 815840	9:15	8'	2	8.2		EBB	0	2
073123-02-ML-4		9:15		4	9.6				
073123-02-ML-6		9:15		6	11.4				
			AVERAGE TURBIDITY:		9.73				
			TURBIDITY INCREASE:		7.02				
073123-03-ML-2	2697030 , 815840	11:15	7'	2	5		EBB	0	4
073123-03-ML-3		11:15		3	5.3				
073123-03-ML-5		11:15		5	6.6				
			AVERAGE TURBIDITY:		5.63				
			TURBIDITY INCREASE:		0.73				
073123-04-ML-2	2697030 , 815840	12:15	6'	2	26.3		EBB	0	5
073123-04-ML-3		12:15		3	25.9				
073123-04-ML-4		12:15		4	24.9				
			AVERAGE TURBIDITY:		25.70				
			TURBIDITY INCREASE:		22.73				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/9/2023
MONITORS: HC/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 2:42a/3:19p **Low:** 7:56a/10:33p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-RL-2	2696547 , 815082	9:10	6'	2	30.68		FLOOD	0'	2
080923-00-RL-3		9:10		3	19.25				
080923-00-RL-4		9:10		4	25.76				
			AVERAGE TURBIDITY:		25.23				
080923-02-RL-2	2696552 , 815237	11:10	6'	2	15.17		FLOOD	0'	4
080923-02-RL-4		11:10		3	15.01				
080923-02-RL-7		11:10		4	16.27				
			AVERAGE TURBIDITY:		15.48				
080923-04-RL-2	2696870 , 815475	13:10	14'	2	9.09		FLOOD	0'	6
080923-04-RL-7		13:10		7	8.31				
080923-04-RL-12		13:10		12	6.08				
			AVERAGE TURBIDITY:		7.83				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-ML-2	2697434 , 815044	9:15	6'	2	11		FLOOD	0	2
080923-00-ML-3		9:15		3	13.42				
080923-00-ML-4		9:15		4	10.45				
			AVERAGE TURBIDITY:		11.62				
			TURBIDITY INCREASE:		-13.61				
080923-02-ML-2	2696890 , 815971	11:15	9'	2	8.25		FLOOD	0	4
080923-02-ML-4		11:15		4	6.49				
080923-02-ML-7		11:15		7	5.7				
			AVERAGE TURBIDITY:		6.81				
			TURBIDITY INCREASE:		-8.67				
080923-04-ML-2	2697446 , 815046	13:15	9'	2	8.71		FLOOD	0	6
080923-04-ML-4		13:15		4	10.19				
080923-04-ML-7		13:15		7	10.04				
			AVERAGE TURBIDITY:		9.65				
			TURBIDITY INCREASE:		1.82				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/15/2023
MONITORS: JR/MC
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 8:08a/8:29p **Low:** 1:53a/1:18p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
081523-00-RL-2	2696553 , 815067	7:00	10'	2	2.92		FLOOD	0'	0
081523-00-RL-5		7:00		5	2.55				
081523-00-RL-8		7:00		8	4.81				
			AVERAGE TURBIDITY:		3.43				
081523-02-RL-2	2697266 , 814974	9:00	10'	2	3.27		EBB	0'	2
081523-02-RL-5		9:00		5	3.55				
081523-02-RL-8		9:00		8	4.84				
			AVERAGE TURBIDITY:		3.89				
081523-04-RL-2	2697427 , 815043	11:00	8'	2	3.69		EBB	0'	4
081523-04-RL-4		11:00		4	3.68				
081523-04-RL-6		11:00		6	4.25				
			AVERAGE TURBIDITY:		3.87				
081523-06-RL-2	2697439 , 815046	13:00	6'	2	3.65		EBB	0'	6
081523-06-RL-3		13:00		3	4.23				
081523-06-RL-4		13:00		4	3.64				
			AVERAGE TURBIDITY:		3.84				
081523-08-RL-2	2696555 , 815363	14:30	12'	2	4.45		FLOOD	0'	8
081523-08-RL-6		14:30		6	4.14				
081523-08-RL-10		14:30		10	4.25				
			AVERAGE TURBIDITY:		4.28				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
081523-00-ML-2	2697432 , 815076	7:05	10'	2	3.32		FLOOD	0	0
081523-00-ML-5		7:05		5	3.15				
081523-00-ML-8		7:05		8	8.76				
			AVERAGE TURBIDITY:		5.08				
			TURBIDITY INCREASE:		1.65				
081523-02-ML-2	2696569 , 815153	9:05	9'	2	3.01		EBB	0	2
081523-02-ML-4		9:05		4	3.26				
081523-02-ML-7		9:05		7	6.91				
			AVERAGE TURBIDITY:		4.39				
			TURBIDITY INCREASE:		0.51				
081523-04-ML-2	2696876 , 815463	11:05	14'	2	3.65		EBB	0	4
081523-04-ML-7		11:05		7	3.64				
081523-04-ML-12		11:05		12	4.82				
			AVERAGE TURBIDITY:		4.04				
			TURBIDITY INCREASE:		0.16				
081523-06-ML-2	2696874 , 815463	13:05	12'	2	4.23		EBB	0	6
081523-06-ML-6		13:05		6	3.98				
081523-06-ML-10		13:05		10	5.57				
			AVERAGE TURBIDITY:		4.59				
			TURBIDITY INCREASE:		0.75				
081523-08-ML-2	2697355 , 814992	14:35	7'	2	4.06		FLOOD	0	8
081523-08-ML-4		14:35		4	3.87				
081523-08-ML-5		14:35		5	5.29				
			AVERAGE TURBIDITY:		4.41				
			TURBIDITY INCREASE:		0.13				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/13/2023
MONITORS: JR/MW/KA
WEATHER CONDITIONS: RAIN
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC CAPPING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:40a/7:59p **Low:** 1:15a/1:04p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-RL-2	2697437 , 815046	11:10	7'	2	3.8		EBB	0'	0
091323-00-RL-3		11:10		3	2.5				
091323-00-RL-5		11:10		5	6.9				
			AVERAGE TURBIDITY:		4.40				
091323-02-RL-2	2696566 , 815160	13:35	12'	2	6		FLOOD	0'	2
091323-02-RL-4		13:35		4	4.2				
091323-02-RL-6		13:35		6	3.7				
			AVERAGE TURBIDITY:		4.63				
091323-04-RL-2	2696562 , 815164	14:20	7	2	3.4		FLOOD	0'	4
091323-04-RL-4		14:20		4	3				
091323-04-RL-5		14:20		5	2.9				
			AVERAGE TURBIDITY:		3.10				
			AVERAGE TURBIDITY:						
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-ML-2	2696566 , 814987	11:15	8'	2	6.6		EBB	0	0
091323-00-ML-4		11:15		4	7.8				
091323-00-ML-6		11:15		6	18.8				
			AVERAGE TURBIDITY:		11.07				
			TURBIDITY INCREASE:		6.67				
091323-02-ML-2	2697364 , 815009	13:40	8'	2	4		FLOOD	0	2
091323-02-ML-4		13:40		4	3.6				
091323-02-ML-6		13:40		6	3.7				
			AVERAGE TURBIDITY:		3.77				
			TURBIDITY INCREASE:		-0.87				
091323-04-ML-2	2697440 , 815046	14:25	8'	2	2.9		FLOOD	0	4
091323-04-ML-4		14:25		4	3.1				
091323-04-ML-6		14:25		6	8.9				
			AVERAGE TURBIDITY:		4.97				
			TURBIDITY INCREASE:		1.87				
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/21/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:25a/12:50p **Low:** 5:27a/6:24p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-RL-2	2696571 , 815167	7:15	7'	2	2.56		FLOOD	0'	0
092123-00-RL-4		7:15		4	2.28				
092123-00-RL-5		7:15		5	7				
			AVERAGE TURBIDITY:		3.95				
092123-02-RL-2	2697355 , 815007	9:15	9'	2	5.02		FLOOD	0'	2
092123-02-RL-4		9:15		4	5.71				
092123-02-RL-7		9:15		7	2.94				
			AVERAGE TURBIDITY:		4.56				
092123-04-RL-2	2696557 , 815235	11:15	7	2	5.31		FLOOD	0'	4
092123-04-RL-4		11:15		4	5.96				
092123-04-RL-5		11:15		5	5.02				
			AVERAGE TURBIDITY:		5.43				
092123-06-RL-2	2697275 , 815001	13:15	11'	2	2.99		EBB	0'	6
092123-06-RL-5		13:15		5	4.59				
092123-06-RL-9		13:15		9	4.84				
			AVERAGE TURBIDITY:		4.14				
092123-08-RL-2	2697096 , 814938	14:55	10'	2	2.36		EBB	0'	8
092123-08-RL-5		14:55		5	3.36				
092123-08-RL-8		14:55		8	9.15				
			AVERAGE TURBIDITY:		4.96				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-ML-2	2697460 , 815031	7:20	8'	2	2.4		FLOOD	0	0
092123-00-ML-4		7:20		4	2.93				
092123-00-ML-6		7:20		6	3.21				
			AVERAGE TURBIDITY:		2.85				
			TURBIDITY INCREASE:		-1.10				
092123-02-ML-2	2697355 , 815007	9:20	9'	2	2.92		FLOOD	0	2
092123-02-ML-4		9:20		4	3.61				
092123-02-ML-7		9:20		7	8.44				
			AVERAGE TURBIDITY:		4.99				
			TURBIDITY INCREASE:		0.43				
092123-04-ML-2	2697276 , 814994	11:20	10'	2	4.58		FLOOD	0	4
092123-04-ML-5		11:20		5	7.3				
092123-04-ML-8		11:20		8	13.62				
			AVERAGE TURBIDITY:		8.50				
			TURBIDITY INCREASE:		3.07				
092123-06-ML-2	2696567 , 815084	13:20	10'	2	3.8		EBB	0	6
092123-06-ML-5		13:20		5	3.24				
092123-06-ML-8		13:20		8	1.45				
			AVERAGE TURBIDITY:		2.83				
			TURBIDITY INCREASE:		-1.31				
092123-08-ML-2	2696556 , 815119	15:00	9'	2	7.79		EBB	0	8
092123-08-ML-4		15:00		4	7.85				
092123-08-ML-7		15:00		7	3.95				
			AVERAGE TURBIDITY:		6.53				
			TURBIDITY INCREASE:		1.57				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/26/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 5:38a/6:09p **Low:** 11:26a

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-RL-2	2697362 , 815025	9:10	8'	2	2.14		EBB	0'	0
092623-00-RL-4		9:10		4	2.66				
092623-00-RL-6		9:10		6	2.62				
			AVERAGE TURBIDITY:		2.47				
092623-02-RL-2	2697363 , 815022	11:10	7'	2	2.65		EBB	0'	2
092623-02-RL-4		11:10		4	2.93				
092623-02-RL-5		11:10		5	2.6				
			AVERAGE TURBIDITY:		2.73				
092623-04-RL-2	2696571 , 815312	13:10	11'	2	9.42		FLOOD	0'	4
092623-04-RL-5		13:10		5	8.88				
092623-04-RL-9		13:10		9	5.2				
			AVERAGE TURBIDITY:		7.83				
092623-06-RL-2	2696623 , 815384	14:50	13'	2	6.2		FLOOD	0'	6
092623-06-RL-6		14:50		6	5.54				
092623-06-RL-11		14:50		11	4.37				
			AVERAGE TURBIDITY:		5.37				
								0'	8
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-ML-2	2696631 , 815395	9:15	13'	2	3.92		EBB	0	0
092623-00-ML-6		9:15		6	3.4				
092623-00-ML-11		9:15		11	4.72				
			AVERAGE TURBIDITY:		4.01				
			TURBIDITY INCREASE:		1.54				
092623-02-ML-2	2696555 , 815248	11:15	5'	2	16.47		EBB	0	2
092623-02-ML-3		11:15		3	18.97				
092623-02-ML-4		11:15		4	17.73				
			AVERAGE TURBIDITY:		17.72				
			TURBIDITY INCREASE:		15.00				
092623-04-ML-2	2697285 , 814996	13:05	8'	2	3.3		FLOOD	0	4
092623-04-ML-4		13:05		4	3.33				
092623-04-ML-6		13:05		6	3.1				
			AVERAGE TURBIDITY:		3.24				
			TURBIDITY INCREASE:		-4.59				
092623-06-ML-2	2697444 , 815062	14:55	8'	2	4.77		FLOOD	0	6
092623-06-ML-4		14:55		4	4.3				
092623-06-ML-6		14:55		6	5.72				
			AVERAGE TURBIDITY:		4.93				
			TURBIDITY INCREASE:		-0.44				
								0	8
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/4/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 12:00a/12:28p **Low:** 4:57a/6:12p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-RL-2	2696576 , 815305	9:10	10'	2	0.4		FLOOD	0'	0
100423-00-RL-5		9:10		5	0.3				
100423-00-RL-8		9:10		8	6.5				
			AVERAGE TURBIDITY:		2.40				
100423-02-RL-2	2696573 , 815242	11:10	9'	2	0.9		FLOOD	0'	2
100423-02-RL-4		11:10		4	0.8				
100423-02-RL-7		11:10		7	4.7				
			AVERAGE TURBIDITY:		2.13				
100423-04-RL-2	2697736 , 815020	13:10	12'	2	2.6		EBB	0'	4
100423-04-RL-6		13:10		6	3.2				
100423-04-RL-10		13:10		10	0.6				
			AVERAGE TURBIDITY:		2.13				
100423-06-RL-2	2697199 , 814985	14:50	11'	2	4.2		EBB	0'	6
100423-06-RL-5		14:50		5	11.3				
100423-06-RL-9		14:50		9	4.8				
			AVERAGE TURBIDITY:		6.77				
								0'	8
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-ML-2	2697194 , 814972	9:15	8'	2	0.5		FLOOD	0	0
100423-00-ML-4		9:15		4	1.4				
100423-00-ML-6		9:15		6	1.7				
			AVERAGE TURBIDITY:		1.20				
			TURBIDITY INCREASE:		-1.20				
100423-02-ML-2	2697183 , 814973	11:15	10'	2	4.7		FLOOD	0	2
100423-02-ML-5		11:15		5	1.3				
100423-02-ML-8		11:15		8	3.1				
			AVERAGE TURBIDITY:		3.03				
			TURBIDITY INCREASE:		0.90				
100423-04-ML-2	2696571 , 815083	13:15	10'	2	0.9		EBB	0	4
100423-04-ML-5		13:15		5	17.7				
100423-04-ML-8		13:15		8	36.4				
			AVERAGE TURBIDITY:		18.33				
			TURBIDITY INCREASE:		16.20				
100423-06-ML-2	2696571 , 815086	14:55	8'	2	3.8		EBB	0	6
100423-06-ML-4		14:55		4	5.6				
100423-06-ML-6		14:55		6	4.3				
			AVERAGE TURBIDITY:		4.57				
			TURBIDITY INCREASE:		-2.20				
								0	8
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/13/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:42a/7:55p **Low:** 1:00a/1:42p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-RL-2	2697352 , 815020	9:10	10'	2	0.4		EBB	0'	0
101323-00-RL-5		9:10		5	0.4				
101323-00-RL-8		9:10		8	1.2				
			AVERAGE TURBIDITY:		0.67				
101323-02-RL-2	2697267 , 815004	11:10	9'	2	0.6		EBB	0'	2
101323-02-RL-4		11:10		4	0.6				
101323-02-RL-7		11:10		7	1.2				
			AVERAGE TURBIDITY:		0.80				
101323-04-RL-2	2697364 , 815022	13:10	7'	2	0.4		EBB	0'	4
101323-04-RL-4		13:10		4	0.5				
101323-04-RL-5		13:10		5	0.6				
			AVERAGE TURBIDITY:		0.50				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-ML-2	2696563 , 815092	9:15	9'	2	8.6		EBB	0	0
101323-00-ML-4		9:15		4	8.4				
101323-00-ML-7		9:15		7	2.7				
			AVERAGE TURBIDITY:		6.57				
			TURBIDITY INCREASE:		5.90				
101323-02-ML-2	2696558 , 814985	11:15	9'	2	18.8		EBB	0	2
101323-02-ML-4		11:15		4	18.2				
101323-02-ML-7		11:15		7	16.7				
			AVERAGE TURBIDITY:		17.90				
			TURBIDITY INCREASE:		17.10				
101323-04-ML-2	2696567 , 815085	13:15	7'	2	18.4		EBB	0	4
101323-04-ML-4		13:15		4	23.3				
101323-04-ML-5		13:15		5	11.8				
			AVERAGE TURBIDITY:		17.83				
			TURBIDITY INCREASE:		17.33				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/20/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:10a/12:34p **Low:** 5:08a/6:09p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-RL-2	2696561 , 815164	9:10	7'	2	5.46		FLOOD	0'	0
102023-00-RL-4		9:10		4	6.66				
102023-00-RL-5		9:10		5	6.67				
			AVERAGE TURBIDITY:		6.26				
102023-02-RL-2	2696974 , 815589	11:10	14'	2	6.72		FLOOD	0'	2
102023-02-RL-7		11:10		7	4.63				
102023-02-RL-12		11:10		12	2.23				
			AVERAGE TURBIDITY:		4.53				
102023-04-RL-2	2697424 , 815054	13:10	10'	2	8.88		EBB	0'	4
102023-04-RL-5		13:10		5	6.62				
102023-04-RL-8		13:10		8	6.04				
			AVERAGE TURBIDITY:		7.18				
102023-06-RL-2	2697432 , 815061	14:55	12'	2	3.36		EBB		
102023-06-RL-6		14:55		6	3.08				
102023-06-RL-10		14:55		10	3.5				
			AVERAGE TURBIDITY:		3.31				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-ML-2	2697450 , 815069	9:15	8'	2	5.15		FLOOD	0	0
102023-00-ML-4		9:15		4	6.09				
102023-00-ML-6		9:15		6	6.82				
			AVERAGE TURBIDITY:		6.02				
			TURBIDITY INCREASE:		-0.24				
102023-02-ML-2	2697449 , 815081	11:15	10'	2	5.65		FLOOD	0	2
102023-02-ML-5		11:15		5	7.19				
102023-02-ML-8		11:15		8	8.15				
			AVERAGE TURBIDITY:		7.00				
			TURBIDITY INCREASE:		2.47				
102023-04-ML-2	2696957 , 815527	13:15	15'	2	2.74		EBB	0	4
102023-04-ML-7		13:15		7	2.33				
102023-04-ML-13		13:15		13	1.54				
			AVERAGE TURBIDITY:		2.20				
			TURBIDITY INCREASE:		-4.98				
102023-04-ML-2	2696957 , 815710	15:00	13'	2	13.77		EBB		
102023-04-ML-6		15:00		6	16.06				
102023-04-ML-11		15:00		11	13.17				
			AVERAGE TURBIDITY:		14.33				
			TURBIDITY INCREASE:		11.02				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/1/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 11:07a/11:35p **Low:** 3:46a/4:52p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-RL-2	2696963 , 815711	9:10	13'	2	2.49		FLOOD	0'	0
110123-00-RL-4		9:10		6	3.21				
110123-00-RL-5		9:10		11	2.55				
			AVERAGE TURBIDITY:		2.75				
110123-02-RL-2	2696940 , 815795	10:50	15'	2	3.52		FLOOD	0'	2
110123-02-RL-7		10:50		7	3.79				
110123-02-RL-13		10:50		13	2.11				
			AVERAGE TURBIDITY:		3.14				
110123-04-RL-2	2697476 , 815432	13:10	6'	2	1.62		EBB	0'	4
110123-04-RL-3		13:10		3	1.61				
110123-04-RL-4		13:10		4	1.76				
			AVERAGE TURBIDITY:		1.66				
110123-06-RL-2	2697476 , 815248	14:55	7'	2	2.16		EBB		
110123-06-RL-3		14:55		3	2.17				
110123-06-RL-5		14:55		5	2.37				
			AVERAGE TURBIDITY:		2.23				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-ML-2	2697406 , 815761	9:15	8'	2	1.86		FLOOD	0	0
110123-00-ML-4		9:15		4	3.64				
110123-00-ML-6		9:15		6	6.87				
			AVERAGE TURBIDITY:		4.12				
			TURBIDITY INCREASE:		1.37				
110123-02-ML-2	2697416 , 815671	10:55	8'	2	2.52		FLOOD	0	2
110123-02-ML-4		10:55		4	3.18				
110123-02-ML-6		10:55		6	2.64				
			AVERAGE TURBIDITY:		2.78				
			TURBIDITY INCREASE:		-0.36				
110123-04-ML-2	2696881 , 815472	13:15	15'	2	2.15		EBB	0	4
110123-04-ML-7		13:15		7	2.33				
110123-04-ML-13		13:15		13	2.38				
			AVERAGE TURBIDITY:		2.29				
			TURBIDITY INCREASE:		0.62				
110123-04-ML-2	2696957 , 815606	15:00	13'	2	10.2		EBB		
110123-04-ML-6		15:00		6	11.91				
110123-04-ML-11		15:00		11	9.04				
			AVERAGE TURBIDITY:		10.38				
			TURBIDITY INCREASE:		8.15				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Appendix D

North Terminal, Bottom of CAD,

& LHCC Capping Field Reports

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 20th– June 24th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 1st Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of June 20th through June 24th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 1)

- Water Quality Monitoring Forms completed for the week of June 20th through June 24th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted initial baseline water quality monitoring as required by the Performance Standards during dredging on the first 3 days of dredging.

    - Performed observation of dredging at the North Terminal Pre-Cell Dredge area and disposal of material into Lower Harbor CAD Cell (LHCC).

- Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. The PC-1250 worked to dredge the North Terminal Pre-Cell dredge area from June 20th through June 24th, 2022. The PC-1250 worked with one scow, the Kaunas, for disposal into LHCC.

DWW was observed conducting daily surveys. All dredging activities were conducted within a silt curtain perimeter surrounding the North Terminal area. All disposal activities were performed at LHCC and also contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted using an environmental bucket by the PC-1250. DWW was observed conducting activities during the authorized operational window of 7 AM until 9:00 pm and following planned navigational routes to and from the North Terminal area to LHCC.

Disposal:

Disposal of material into LHCC began June 20th and continued through June 24th, 2022. The Kaunas Scow conducted 1 to 2 trips per day to LHCC with loads varying between +/- 600 and 1,000 CY. Disposal material was placed as in the appropriate disposal cell location as designated by the contractor and scows were tracked on the ADIS/DQM real-time tracking systems for conformation.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	4,728
Approximate North Terminal Pre-Cell Volume Dredged to Date	4,728
Approximate North Terminal Pre-Cell Volume Remaining	18,772
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	19,572

* Dredge volume quantities included on Quantity Tracking Log are estimated based on contractors reported survey, all volumes are confirmed and adjusted as necessary using Foth bathymetric survey data at the completion of each dredge area. For this table, dredge volumes were set based on survey data collected by DWW.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging or disposal operations. Turbidity monitoring was performed for the week of dredging and disposal that met the SER performance standards (1 day per week – 10/23). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 20th– June 24th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Reports

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	50	77	Mostly Sunny	None	0	0	Wind 10-15 WSW	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Survey Vessel, Tug Grizzly.

Coastal Marine

Other personnel on site:	*Purpose:*
Jimmy Hill	Dredging Observation, Disposal Observations,
Harrison Chouinard	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. Surveys – DWW Survey of Dredge and Disposal Area
2. WQMP – Every 2 hours for 8 hours worked and one disposal event.
3. Site Inspections Performed –
    a. PC-1250 working in North Terminal Pre-Cell dredge area.
    b. Coastal Marine relocating on site for marine support and silt curtain maintenance/deploying silt curtain.
    c. Survey vessel surveying dredge area.
    d. Crew working on deck barge to support PC-1250.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Scow Kaunas at LHCC Disposal Site

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: A. Hart

Project #: 0220N00.1

Date: 06/21/2022

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	48	72	Mostly Sunny	None	0	0	Wind 10-15 WSW	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Survey Vessel, Tug Grizzly.

Coastal Marine

Other personnel on site:	*Purpose:*
Harrison Chouinard	Dredging Observation, Disposal Observations,
Cameron Dutra	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. Surveys – DWW Survey of Dredge and Disposal Area
2. WQMP – Every 2 hours for 8 hours worked and one disposal event.
3. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Survey vessel surveying dredge area.
    c. Crew working on deck barge to support PC-1250.
4. Additional Site Notes – Large light brown turbidity plume on south side of site. Large tug maneuvering fully loaded barge just prior to noticing plume.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Scow Kaunas at LHCC Disposal Site at 11:15am

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	61	71	Mostly Cloudy	None	0	0	Wind 10-15 WSW	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Survey Vessel, Tug Grizzly.

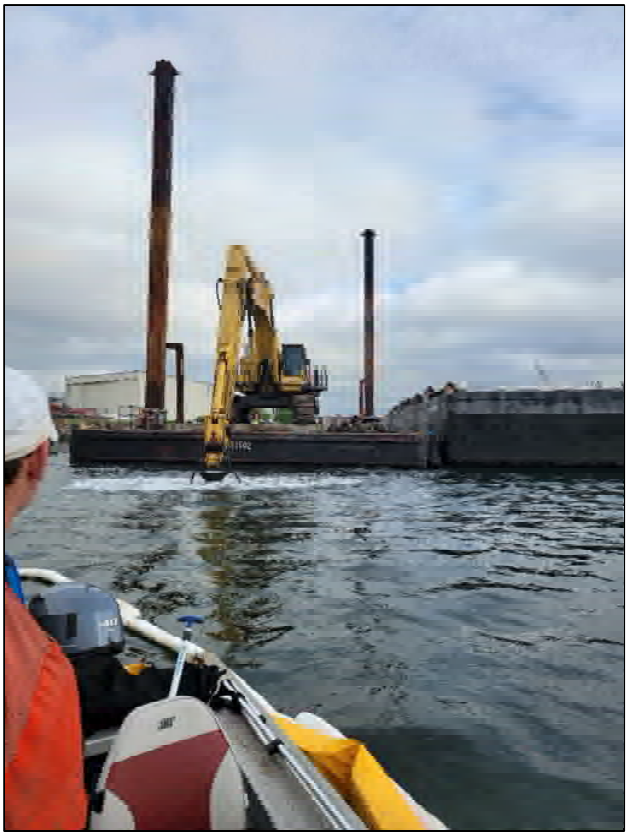
Coastal Marine

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observation, Disposal Observations,
Adam Hart	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. Surveys – DWW Survey of Dredge and Disposal Area
2. WQMP – Every 2 hours for 8 hours worked and one disposal event.
3. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Survey vessel surveying dredge and disposal areas.
    c. Crew working on dredged PC-1250 from approximately 8:50am-11:00am. No dredging during this time.

Construction Observation Report



Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 20th– June 24th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2
Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/20/2022
MONITORS: AMH/HC/JH
WEATHER CONDITIONS: Sunny
WIND: 5-10 N/NW
PRIOR STORM EVENTS: None
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 0125/1358 **Low:** 0738/2025

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062022-00-RL-2	N:2696479, E:814426	815	14.7	2	4.17		Flooding	0'	0
062022-00-RL-6		815		6	6.08				
062022-00-RL-13		815		13	1.94				
			AVERAGE TURBIDITY:		4.06				
062022-02-RL-2	N:2696466, E:814422	1005	15.4	2	1		Flooding	0'	2
062022-02-RL-8		1005		8	1.28				
062022-02-RL-14		1005		14	4.19				
			AVERAGE TURBIDITY:		2.16				
062022-04-RL-2	N:2696480, E:814429	1200	17.4	2	1.12		Flooding	0'	4
062022-04-RL-8		1200		8	1.28				
062022-04-RL-16		1200		16	1.83				
			AVERAGE TURBIDITY:		1.41				
062022-06-RL-2	N:2696471, E:814427	1415	27.1	2	12.52		Slack	0'	6
062022-06-RL-13		1415		13	1.42				
062022-06-RL-25		1415		25	3.57				
			AVERAGE TURBIDITY:		5.84				
062022-08-RL-2	N:2697006, E:814462	1600	14.8	2	4.14		Ebbing	0'	8
062022-08-RL-6		1600		6	6.76				
062022-08-RL-13		1600		13	2.56				
			AVERAGE TURBIDITY:		4.49				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062022-00-ML-2	N:2697003, E:814460	835	12.4	2	4.26		Flooding	0'	0
062022-00-ML-6		835		6	5.08				
062022-00-ML-11		835		11	5.53				
			AVERAGE TURBIDITY:		4.96				
			TURBIDITY INCREASE:		0.89				
062022-02-ML-2	N:2697019, E:814443	1015	12.4	2	1.28		Flooding	0'	2
062022-02-ML-6		1015		6	9.31				
062022-02-ML-11		1015		11	15.11				
			AVERAGE TURBIDITY:		8.57				
			TURBIDITY INCREASE:		6.41				
062022-04-ML-2	N:2697020, E814448	1207	14.6	2	1.81		Flooding	0'	4
062022-04-ML-7		1207		7	11.41				
062022-04-ML-12		1207		12	1.32				
			AVERAGE TURBIDITY:		4.85				
			TURBIDITY INCREASE:		3.44				
062022-06-ML-2	N:2697017, E:814444	1426	15.5	2	5.44		Slack	0'	6
062022-06-ML-7		1426		7	10.3				
062022-06-ML-11		1426		11	8.95				
			AVERAGE TURBIDITY:		8.23				
			TURBIDITY INCREASE:		2.39				
062022-08-ML-2	N:2696478, E:814430	1605	18	2	4.12		Ebbing	0'	8
062022-08-ML-8		1605		8	15.53				
062022-08-ML-16		1605		16	4.11				
	e		AVERAGE TURBIDITY:		7.92				
			TURBIDITY INCREASE:		5.36				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/21/2022
MONITORS: AMH/HC/CD
WEATHER CONDITIONS: Sunny
WIND: 5-15 N/NW
PRIOR STORM EVENTS: None
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 0220/1454 **Low:** 0838/2048

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062122-00-RL-2	N:2696481, E:814434	730	14.8	2	1.51		Ebbing	0'	0
062122-00-RL-7		730		7	3.22				
062122-00-RL-14		730		14	1.72				
			AVERAGE TURBIDITY:		2.15				
062122-02-RL-2	N:2696473, E:814430	920	11.9	2	1.58		Flooding	0'	2
062122-02-RL-6		920		6	1.73				
062122-02-RL-10		920		10	5.69				
			AVERAGE TURBIDITY:		3.00				
062122-04-RL-2	N:2696439, E:814418	1110	20.6	2	2.86		Flooding	0'	4
062122-04-RL-10		1110		10	1.82				
062122-04-RL-19		1110		19	4.47				
			AVERAGE TURBIDITY:		3.05				
062122-06-RL-2	N:2696476, E:814434	1310	22	2	1.02		Flooding	0'	6
062122-06-RL-10		1310		10	1.08				
062122-06-RL-21		1310		21	2.95				
			AVERAGE TURBIDITY:		1.68				
062122-08-RL-2	N:2697098, E:814417	1500	15	2	1.93		Slack	0'	8
062122-08-RL-8		1500		8	1.97				
062122-08-RL-13		1500		13	2.64				
			AVERAGE TURBIDITY:		2.18				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062122-00-ML-2	N:2697024, E:814452	735	11.8	2	4.64		Ebbing	0'	0
062122-00-ML-5		735		5	5.59				
062122-00-ML-11		735		11	3.98				
			AVERAGE TURBIDITY:		4.74				
			TURBIDITY INCREASE:		2.59				
062122-02-ML-2	N:2697077, E:814448	927	15.3	2	3.77		Flooding	0'	2
062122-02-ML-7		927		7	15.05				
062122-02-ML-14		927		14	4.81				
			AVERAGE TURBIDITY:		7.88				
			TURBIDITY INCREASE:		4.88				
062122-04-ML-2	N:2697106, E:814369	1115	12.8	2	2.1		Flooding	0'	4
062122-04-ML-6		1115		6	4.91				
062122-04-ML-10		1115		10	6.73				
			AVERAGE TURBIDITY:		4.58				
			TURBIDITY INCREASE:		1.53				
062122-06-ML-2	N:2697031, E:814443	1315	16.6	2	1.73		Flooding	0'	6
062122-06-ML-7		1315		7	1.07				
062122-06-ML-15		1315		15	4.06				
			AVERAGE TURBIDITY:		2.29				
			TURBIDITY INCREASE:		0.60				
062122-08-ML-2	N:2696458, E:814419	1510	26	2	10.2		Slack	0'	8
062122-08-ML-9		1510		9	5.87				
062122-08-ML-24		1510		24	5.73				
			AVERAGE TURBIDITY:		7.27				
			TURBIDITY INCREASE:		5.09				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/22/2022
MONITORS: AMH/JR
WEATHER CONDITIONS: Overcast
WIND: 5-15 S/SW
PRIOR STORM EVENTS: None
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 0315/1552 **Low:** 0925/2248

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062222-00-RL-2	N:2696998, E:814439	720	11.88	2	1		Ebbing	0'	0
062222-00-RL-6		720		6	1.03				
062222-00-RL-11		720		11	1.31				
			AVERAGE TURBIDITY:		1.11				
062222-02-RL-2	N:2696991, E:814413	910	10.2	2	2.19		Ebbing	0'	2
062222-02-RL-4		910		4	2.09				
062222-02-RL-8		910		8	9.56				
			AVERAGE TURBIDITY:		4.61				
062222-04-RL-2	N:2696468, E:814420	1110	15	2	2.79		Flooding	0'	4
062222-04-RL-6		1110		6	3.16				
062222-04-RL-14		1110		14	6.98				
			AVERAGE TURBIDITY:		4.31				
062222-06-RL-2	N:2696450, E:814420	1300	20	2	2.14		Flooding	0'	6
062222-06-RL-9		1300		9	3.52				
062222-06-RL-18		1300		18	1.82				
			AVERAGE TURBIDITY:		2.49				
062222-08-RL-2	N:2696471, E:814404	1500	18	2	2.62		Flooding	0'	8
062222-08-RL-7		1500		7	16.19				
062222-08-RL-16		1500		16	7.12				
			AVERAGE TURBIDITY:		8.64				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

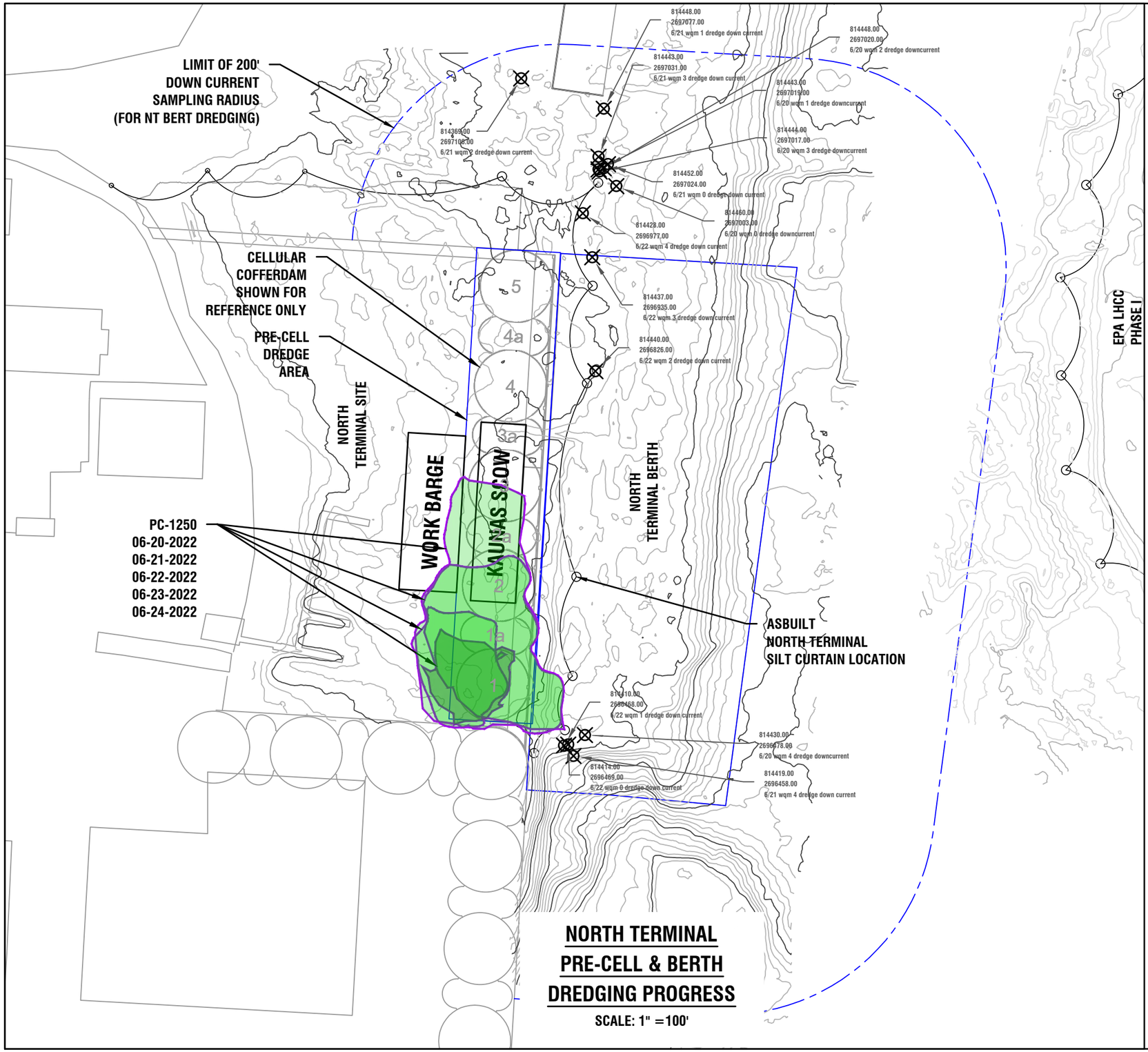
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062222-00-ML-2	N:2696469, E:814414	724	14.57	2	1.2		Ebbing	0'	0
062222-00-ML-7		724		7	1.17				
062222-00-ML-14		724		14	8.83				
			AVERAGE TURBIDITY:		3.73				
			TURBIDITY INCREASE:		2.62				
062222-02-ML-2	N:2696468, E:814410	913	14.5	2	1.71		Ebbing	0'	2
062222-02-ML-7		913		7	1.78				
062222-02-ML-12		913		12	14.71				
			AVERAGE TURBIDITY:		6.07				
			TURBIDITY INCREASE:		1.45				
062222-04-ML-2	N:2696826, E:814440	1115	11	2	3.25		Flooding	0'	4
062222-04-ML-6		1115		6	5.77				
062222-04-ML-10		1115		10	9.92				
			AVERAGE TURBIDITY:		6.31				
			TURBIDITY INCREASE:		2.00				
062222-06-ML-2	N:2696935, E:814437	1310	11	2	9.15		Flooding	0'	6
062222-06-ML-5		1310		5	5.35				
062222-06-ML-10		1310		10	8.46				
			AVERAGE TURBIDITY:		7.65				
			TURBIDITY INCREASE:		5.16				
062222-08-ML-2	N:2696977, E:814428	1510	14	2	6.5		Flooding	0'	8
062222-08-ML-8		1510		8	8.71				
062222-08-ML-12		1510		12	12.64				
			AVERAGE TURBIDITY:		9.28				
			TURBIDITY INCREASE:		0.64				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

LIMIT OF 200' DOWN CURRENT SAMPLING RADIUS (FOR NT BERTH DREDGING)

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGE AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

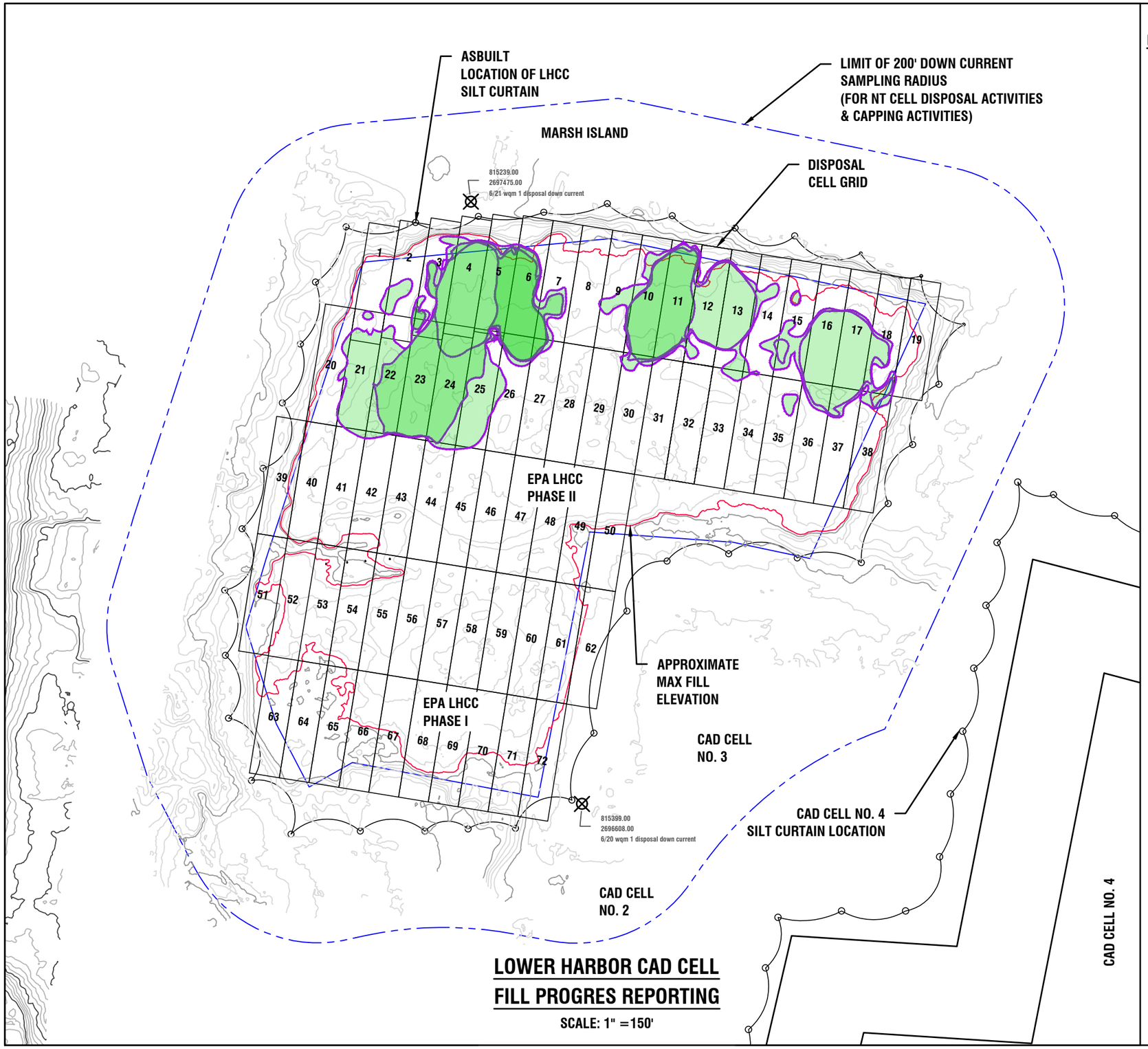
DATE:	06-24-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL
FILL PROGRES REPORTING
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

LIMIT OF 200' DOWN CURRENT
SAMPLING RADIUS
(FOR LHCC DISPOSAL)

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	06-24-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 20th– June 24th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/20/2022 TO 06/24/202

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
6/20/2022	1	PC-1250	KAUNAS	673	NT	LHCC (4)	PRECELL	6/20/2022
6/21/2022	2	PC-1250	KAUNAS	397	NT	LHCC (5/6)	PRECELL	6/21/2022
6/21/2022	3	PC-1250	KAUNAS	516	NT	LHCC (10/11)	PRECELL	6/21/2022
6/22/2022	4	PC-1250	KAUNAS	946	NT	LHCC (23)	PRECELL	6/22/2022
6/23/2022	5	PC-1250	KAUNAS	784	NT	LHCC (12/13)	PRECELL	6/23/2022
6/23/2022	6	PC-1250	KAUNAS	505	NT	LHCC (16/17)	PRECELL	6/23/2022
6/24/2022	7	PC-1250	KAUNAS	863	NT	LHCC (21)	PRECELL	6/24/2022
6/24/2022	8	PC-1250	KAUNAS	44	NT	LHCC (25)	PRECELL	6/24/2022
			Weekly Total	4728	CY			
			CUMLATIVE TOTAL	4728	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 27th– July 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 2nd Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of June 27th through July 1st, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 1)

- Water Quality Monitoring Forms completed for the week of June 27th through July 1st, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at the North Terminal Pre-Cell Dredge area and disposal of material into Lower Harbor CAD Cell (LHCC).

- Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 27th– July 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. The PC-1250 worked to dredge the North Terminal Pre-Cell dredge area from June 27th through July 1st, 2022. The PC-1250 worked with one scow, the Kaunas, for disposal into LHCC.

DWW was observed conducting daily surveys. All dredging activities were conducted within a silt curtain perimeter surrounding the North Terminal area. All disposal activities were performed at LHCC and were also contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted using an environmental bucket by the PC-1250. DWW was observed conducting activities during the authorized operational window of 7 AM until 9:00 pm and following planned navigational routes to and from the North Terminal area to LHCC.

Disposal:

Disposal of material into LHCC continued from June 27th through July 1st, 2022. The Kaunas Scow conducted 1 to 2 trips per day to LHCC with loads varying between +/- 600 and 1,000 CY. Disposal material was placed as in the appropriate disposal cell location as designated by the contractor and scows were tracked on the ADIS/DQM real-time tracking systems for conformation.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	6,306
Approximate North Terminal Pre-Cell Volume Dredged to Date	11,034
Approximate North Terminal Pre-Cell Volume Remaining	12,466
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	13,266

* Dredge volume quantities included on Quantity Tracking Log are estimated based on contractors reported survey, all volumes are confirmed and adjusted as necessary using Foth bathymetric survey data at the completion of each dredge area. For this table, dredge volumes were set based on survey data collected by DWW.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging or disposal operations. Turbidity monitoring was performed for the week of dredging and disposal

that met the SER performance standards (1 day per week – 6/28). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	June 27th– July 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Reports

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	58	75	Sunny	None	0	0	Wind 5-10 SW	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 3:15 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Survey Vessel, Tug Grizzly.

Coastal Marine

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observation, Disposal Observations,
Adam Hart	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. Surveys – DWW Survey of Dredge and Disposal Area
2. WQMP – Every 2 hours for 8 hours worked and two disposal events.
3. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Survey vessel surveying dredge areas.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Tug Grizzly and Scow Kaunas at Disposal Area at 1425.

Attachment 2
Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/28/2022
MONITORS: AMH/JR
WEATHER CONDITIONS: Sunny/Clear
WIND: 5-10 SW/WSW
PRIOR STORM EVENTS: Rain 6/27 to 6/28. 0.8in
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE **High:** 0821/2038 **Low:** 0157/1318

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062822-00-RL-2	N:2696470, E:814393	700	22	2	3.62		Flooding	0'	0
062822-00-RL-10		700		10	2.11				
062822-00-RL-20		700		20	2.14				
			AVERAGE TURBIDITY:		2.62				
062822-02-RL-2	N:2697011, E:814442	900	14	2	2.71		Ebbing	0'	2
062822-02-RL-6		900		6	6.24				
062822-02-RL-12		900		12	12.58				
			AVERAGE TURBIDITY:		7.18				
062822-04-RL-2	N:2696996, E:814447	1100	14	2	6.74		Ebbing	0'	4
062822-04-RL-7		1100		7	12.84				
062822-04-RL-12		1100		12	9.72				
			AVERAGE TURBIDITY:		9.77				
062822-06-RL-2	N:2696969, E:814460	1305	12	2	1.28		Slack	0'	6
062822-06-RL-6		1305		6	12.04				
062822-06-RL-10		1305		10	11.66				
			AVERAGE TURBIDITY:		8.33				
062822-08-RL-2	N:2696462, E:814404	1500	16	2	16.62		Flooding	0'	8
062822-08-RL-7		1500		7	5.1				
062822-08-RL-14		1500		14	2.85				
			AVERAGE TURBIDITY:		8.19				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062822-00-ML-2	N:2696890, E:814440	710	13	2	1.6		Flooding	0'	0
062822-00-ML-5		710		5	5.9				
062822-00-ML-11		710		11	5.02				
			AVERAGE TURBIDITY:		4.17				
			TURBIDITY INCREASE:		1.55				
062822-02-ML-2	N:2696523, E:814410	910	17	2	8.35		Ebbing	0'	2
062822-02-ML-7		910		7	10.9				
062822-02-ML-16		910		16	11.81				
			AVERAGE TURBIDITY:		10.35				
			TURBIDITY INCREASE:		3.18				
062822-04-ML-2	N:2696536, E:814407	1110	15	2	3.8		Ebbing	0'	4
062822-04-ML-8		1110		8	8.26				
062822-04-ML-13		1100		13	9.93				
			AVERAGE TURBIDITY:		7.33				
			TURBIDITY INCREASE:		-2.44				
062822-06-ML-2	N:2696507, E:814433	1310	13	2	2.27		Slack	0'	6
062822-06-ML-5		1310		5	12.43				
062822-06-ML-10		1310		10	29.76				
			AVERAGE TURBIDITY:		14.82				
			TURBIDITY INCREASE:		6.49				
062822-08-ML-2	N:2697022, E:814369	1510	10	2	9.36		Flooding	0'	8
062822-08-ML-4		1510		4	12.54				
062822-08-ML-8		1510		8	15.71				
			AVERAGE TURBIDITY:		12.54				
			TURBIDITY INCREASE:		4.35				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/28/2022
MONITORS: AMH/JR
WEATHER CONDITIONS: Sunny/Clear
WIND: 5-10 SW/WSW
PRIOR STORM EVENTS: Rain 6/27 to 6/28. 0.8in
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE **High:** 0821/2038 **Low:** 0157/1318

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062822-D1-02-RL-2	N:2697422, E:815099	915	9	2	2.45		Ebbing	0'	2
062822-D1-02-RL-4		915		4	1.4				
062822-D1-02-RL-7		915		7	1.84				
			AVERAGE TURBIDITY:		1.90				
062822-D2-08-RL-2	N:2696558, E:815195	1400	6	2	1.17		Flooding	0'	8
062822-D2-08-RL-3		1400		3	1.58				
062822-D2-08-RL-4		1400		4	1.66				
			AVERAGE TURBIDITY:		1.47				

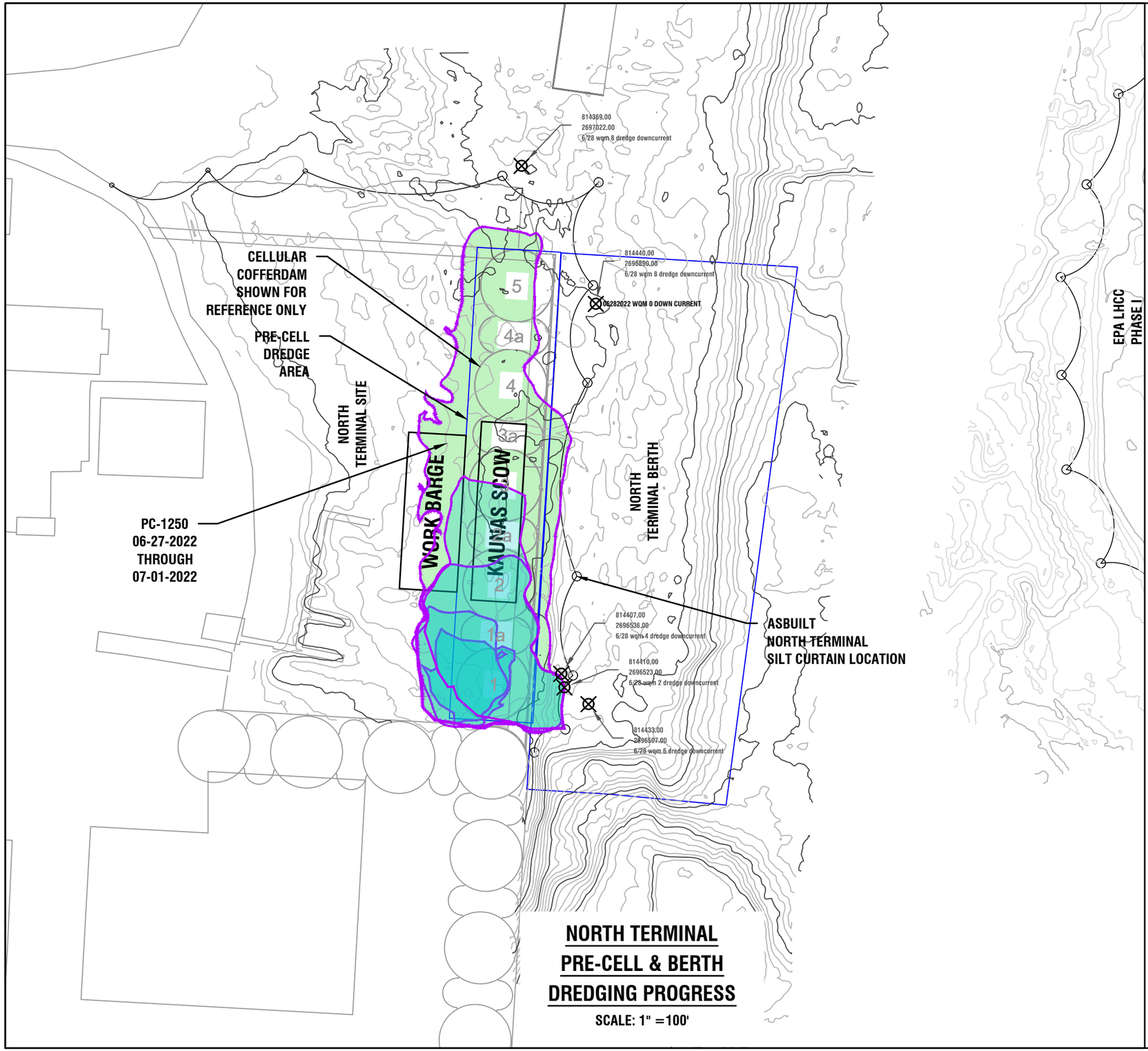
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062822-D1-02-ML-2	N:2696560, E:815212	950	9	2	1.92		Ebbing	0'	2
062822-D1-02-ML-4		950		4	2.17				
062822-D1-02-ML-7		950		7	5.52				
			AVERAGE TURBIDITY:		3.20				
			TURBIDITY INCREASE:		1.31				
062822-D2-08-ML-2	N:2697478, E:815280	1430	5	2	3.03		Flooding	0'	8
062822-D2-08-ML-3		1430		3	2.95				
062822-D2-08-ML-4		1430		4	2.56				
			AVERAGE TURBIDITY:		2.85				
			TURBIDITY INCREASE:		1.38				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL
PRE-CELL & BERTH
DREDGING PROGRESS
SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGE AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 INCH = 100 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

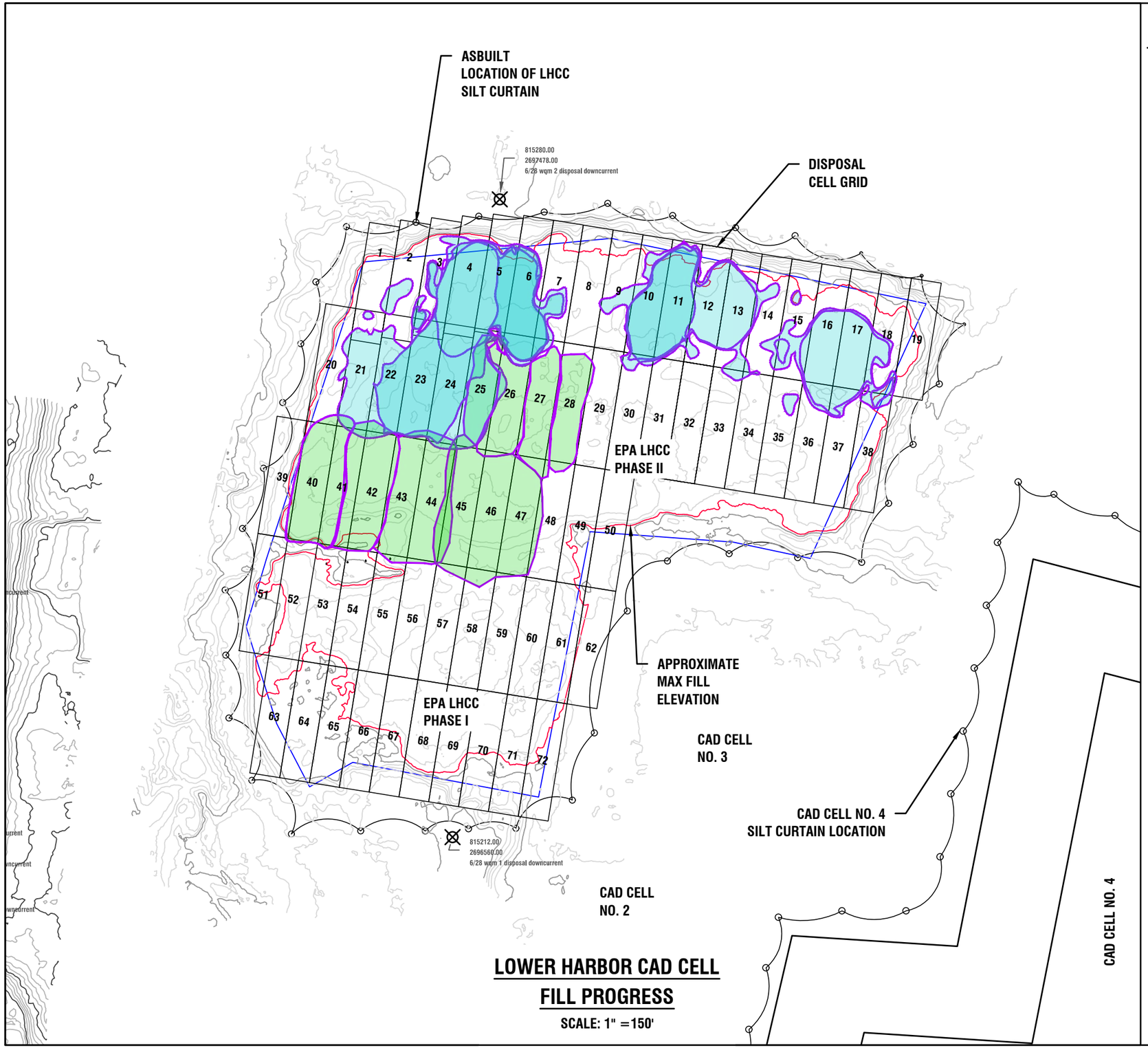
DATE:	07-01-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL
FILL PROGRESS
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	07-01-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/27/2022 TO 7/1/2022

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
6/27/2022	10	PC-1250	KAUNAS	576	NT	LHCC (25)	PRECELL	6/27/2022
6/28/2022	11	PC-1250	KAUNAS	625	NT	LHCC (26)	PRECELL	6/28/2022
6/28/2022	12	PC-1250	KAUNAS	970	NT	LHCC (40)	PRECELL	6/28/2022
6/29/2022	13	PC-1250	KAUNAS	1002	NT	LHCC (41/42)	PRECELL	6/29/2022
6/29/2022	14	PC-1250	KAUNAS	682	NT	LHCC (27)	PRECELL	6/29/2022
6/30/2022	15	PC-1250	KAUNAS	1001	NT	LHCC (43/44)	PRECELL	6/30/2022
6/30/2022	16	PC-1250	KAUNAS	700	NT	LHCC (28)	PRECELL	6/30/2022
7/1/2022	17	PC-1250	KAUNAS	750	NT	LHCC (45)	PRECELL	7/1/2022
			Weekly Total	6306	CY			
			CUMLATIVE TOTAL	11034	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 4th– July 8th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 3rd Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of July 4th through July 8th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 1)

- Water Quality Monitoring Forms completed for the week of July 4th through July 8th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at the North Terminal Pre-Cell Dredge area and disposal of material into Lower Harbor CAD Cell (LHCC).

- Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 4th– July 8th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. The PC-1250 worked to dredge the North Terminal Pre-Cell dredge area from July 4th through July 8th, 2022. The PC-1250 worked with one scow, the Kaunas, for disposal into LHCC.

DWW was observed conducting daily surveys. All dredging activities were conducted within a silt curtain perimeter surrounding the North Terminal area. All disposal activities were performed at LHCC and were also contained with a silt curtain perimeter.

2. Notes/Clarifications:

Holiday: On July 4th, 2022 no work was completed due to national holiday.

Dredging:

During this reporting period, dredging operations were conducted using an environmental bucket by the PC-1250. DWW was observed conducting activities during the authorized operational window of 7 AM until 9:00 pm and following planned navigational routes to and from the North Terminal area to LHCC.

Disposal:

Disposal of material into LHCC continued from July 4th through July 8th, 2022. The Kaunas Scow conducted 1 to 2 trips per day to LHCC with loads varying between +/- 600 and 1,000 CY. Disposal material was placed as in the appropriate disposal cell location as designated by the contractor and scows were tracked on the ADIS/DQM real-time tracking systems for conformation.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	4,075
Approximate North Terminal Pre-Cell Volume Dredged to Date	15,109
Approximate North Terminal Pre-Cell Volume Remaining	8,391
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	9,191

* Dredge volume quantities included on Quantity Tracking Log are estimated based on contractors reported survey, all volumes are confirmed and adjusted as necessary using Foth bathymetric survey data at the completion of each dredge area. For this table, dredge volumes were set based on survey data collected by DWW.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging or disposal operations. Turbidity monitoring was performed for the week of dredging and disposal that met the SER performance standards (1 day per week – 7/7). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 4th– July 8th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: A. Hart

Project #: 0220N00.1

Date: 07/07/2022

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	56	80	Sunny	None	0	0	Wind 0-15 SE	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Tug Grizzly.

Coastal Marine

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observation, Disposal Observations,
Adam Hart	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Crew working on dredge PC-1250 from approximately 7:00am-4:00pm. No dredging occurred during the time from 9:00am-11:00am due to dredge maintenance.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Tug Grizzly and Scow Kaunas at Disposal Area at 1020.

Attachment 2
Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/7/2022
MONITORS: AMH, JER
WEATHER CONDITIONS: 75 SUNNY
WIND: 5-10 SE
PRIOR STORM EVENTS:
DREDGE UPDATE:
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 2:43P Low: 7:38A

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
070722-00-RL-02	814482, 2696908	7:24	10	2	3.31		EBB	0	0
070722-00-RL-05		7:24		5	4.85				
070722-00-RL-08		7:24		8	6.48				
			AVERAGE TURBIDITY:		4.88				
070722-02-RL-02	814415, 2696462	900	14	2	1.41		FLOOD	0	2
070722-02-RL-07		900		7	16.51				
070722-02-RL-12		900		12	8.9				
			AVERAGE TURBIDITY:		8.94				
070722-04-RL-02	814426, 2696525	1100	14	2	9.7		FLOOD	0	4
070722-07-RL-07		1100		7	15.3				
070722-12-RL-12		1100		12	2.94				
			AVERAGE TURBIDITY:		9.31				
070722-06-RL-02	814424, 2696535	1300	17	2	12.91		FLOOD	0	6
070722-06-RL-08		1300		8	16.97				
070722-06-RL-15		1300		15	1.37				
			AVERAGE TURBIDITY:		10.42				
070722-08-RL-02	814347, 2697020	1500	14	2	5.77		SLACK	0	8
070722-08-RL-07		1500		7	6.15				
070722-08-RL-12		1500		12	12.27				
			AVERAGE TURBIDITY:		8.06				
			AVERAGE TURBIDITY:		#DIV/0!				
07072022_D1_00_RL-2	815265, 2696582	950	7	2	2.43		DISPOSAL	0	3
07072022_D1_00_RL-3		950		3	1.82				
07072022_D1_00_RL-5		950		5	2.24				
			AVERAGE TURBIDITY:		2.16				

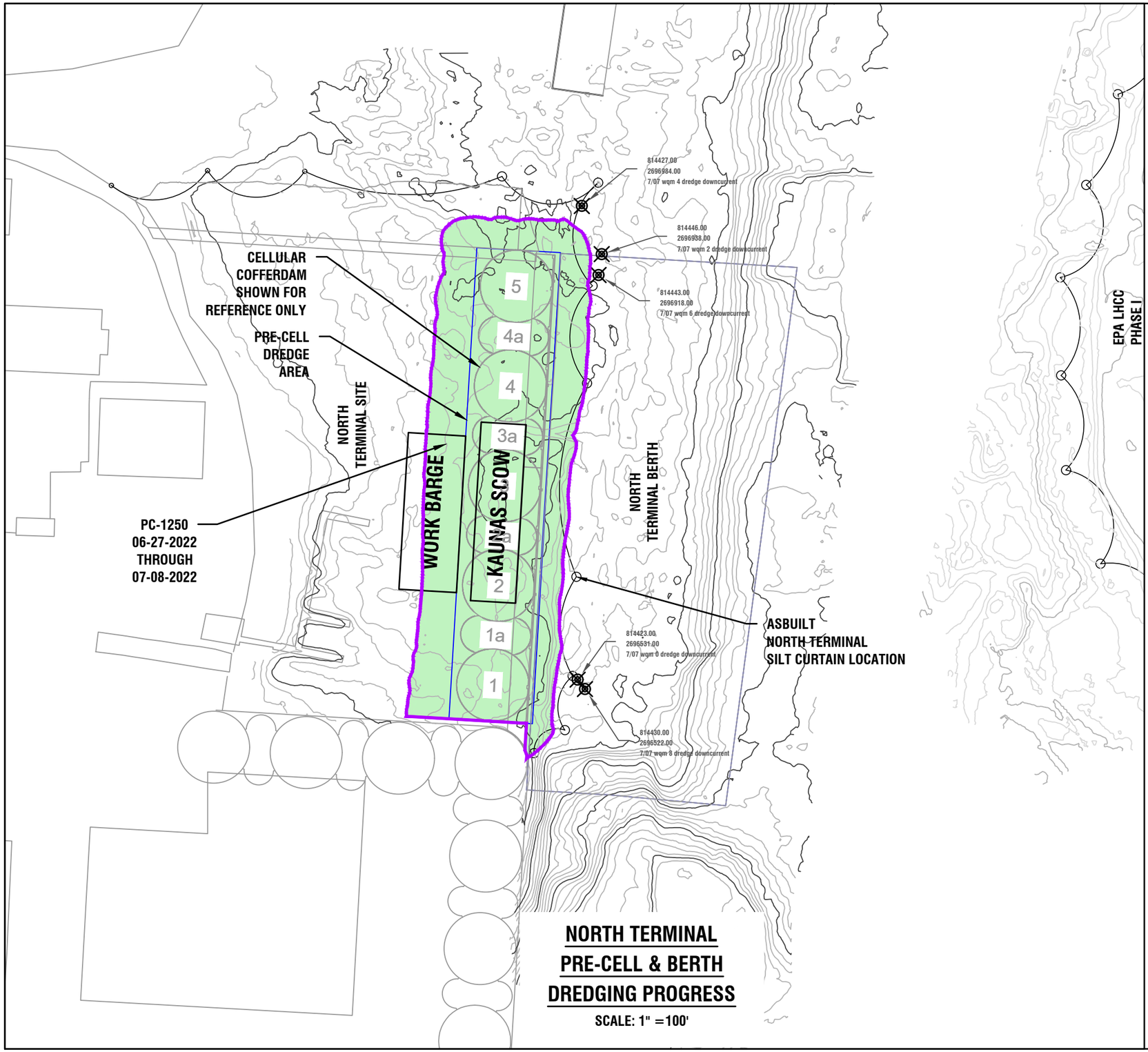
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
070722-00-ML-2	814423, 2696531	7:26	14	2	2		EBB	0	0
070722-00-ML-7		7:26		7	1.83				
070722-00-ML-12		7:26		12	21.62				
			AVERAGE TURBIDITY:		8.48				
			TURBIDITY INCREASE:		3.60				
070722-02-ML-2	814446, 2696928	905	12	2	1.58		FLOOD	0	2
070722-02-ML-6		905		6	1.5				
070722-02-ML-10		905		10	30.46				
			AVERAGE TURBIDITY:		11.18				
			TURBIDITY INCREASE:		2.24				
070722-04-ML-2	814427, 2696984	1106	12	2	3.53		FLOOD	0	4
070722-04-ML-6		1106		6	5.5				
070722-04-ML-10		1106		10	10.91				
			AVERAGE TURBIDITY:		6.65				
			TURBIDITY INCREASE:		-2.67				
070722-06-ML-2	814443, 2696918	1308	13	2	6.63		FLOOD	0	6
070722-06-ML-6		1308		6	6.33				
070722-06-ML-11		1308		11	21.48				
			AVERAGE TURBIDITY:		11.48				
			TURBIDITY INCREASE:		1.06				
070722-08-ML-2	814430, 2696522	1510	17	2	9.17		SLACK	0	8
070722-08-ML-8		1510		8	32.42				
070722-08-ML-15		1510		15	31.59				
			AVERAGE TURBIDITY:		24.39				
			TURBIDITY INCREASE:		16.33				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
07072022_D1_05_ML-2	815250, 2697466	1023	6	2	1.8		DISPOSAL	0	3
07072022_D1_05_ML-3		1023		3	1.77				
07072022_D1_05_ML-4		1023		4	1.68				
			AVERAGE TURBIDITY:		1.75				
			TURBIDITY INCREASE:		-0.41				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL
PRE-CELL & BERTH
DREDGING PROGRESS
SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

AREA DREDGED TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 INCH = 100 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

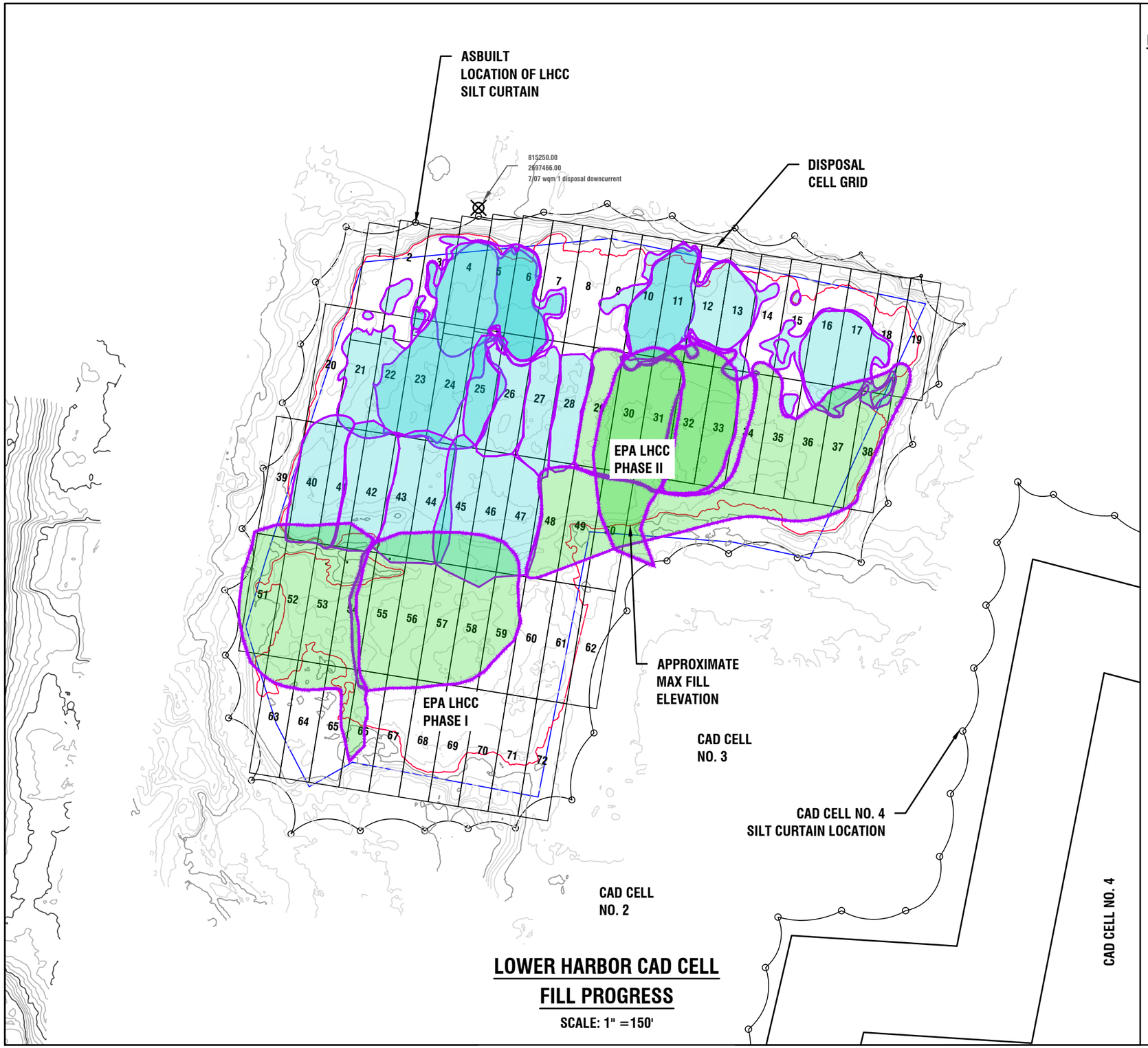
DATE:	07-08-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL
FILL PROGRESS
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	07-08-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/4/2022 TO 7/8/2022

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
7/5/2022	18	PC-1250	KAUNAS	725	NT	LHCC (33)	PRECELL	7/5/2022
7/5/2022	19	PC-1250	KAUNAS	650	NT	LHCC (36)	PRECELL	7/5/2022
7/6/2022	20	PC-1250	KAUNAS	500	NT	LHCC (52)	PRECELL	7/6/2022
7/6/2022	21	PC-1250	KAUNAS	500	NT	LHCC (55)	PRECELL	7/6/2022
7/7/2022	22	PC-1250	KAUNAS	600	NT	LHCC (31)	PRECELL	7/7/2022
7/7/2022	23	PC-1250	KAUNAS	200	NT	LHCC (32)	PRECELL	7/7/2022
7/8/2022	24	PC-1250	KAUNAS	900	NT	LHCC (29/30)	PRECELL	7/8/2022
			Weekly Total	4075	CY			
			CUMULATIVE TOTAL	15109	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 11th– July 15th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 4th Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of July 11th through July 15th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 1)

- Water Quality Monitoring Forms completed for the week of July 11th through July 15th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at the North Terminal Pre-Cell Dredge area and disposal of material into Lower Harbor CAD Cell (LHCC).

- Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 11th– July 15th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. The PC-1250 worked to dredge the North Terminal Pre-Cell dredge area from July 11th through July 15th, 2022. The PC-1250 worked with one scow, the Kaunas, for disposal into LHCC.

DWW was observed conducting daily surveys. All dredging activities were conducted within a silt curtain perimeter surrounding the North Terminal area. All disposal activities were performed at LHCC and were also contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted using an environmental bucket by the PC-1250. DWW was observed conducting activities during the authorized operational window of 7:00 am until 9:00 pm and following planned navigational routes to and from the North Terminal area to LHCC.

Disposal:

Disposal of material into LHCC continued from July 11th through July 15th, 2022. The Kaunas Scow conducted 1 to 2 trips per day to LHCC with loads varying between +/- 600 and 1,000 CY. Disposal material was placed as in the appropriate disposal cell location as designated by the contractor and scows were tracked on the ADIS/DQM real-time tracking systems for conformation.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	4,631
Approximate North Terminal Pre-Cell Volume Dredged to Date	19,740
Approximate North Terminal Pre-Cell Volume Remaining	3,760
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	4,560

* Dredge volume quantities included on Quantity Tracking Log are estimated based on contractors reported survey, all volumes are confirmed and adjusted as necessary using Foth bathymetric survey data at the completion of each dredge area. For this table, dredge volumes were set based on survey data collected by DWW.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging or disposal operations. Turbidity monitoring was performed for the week of dredging and disposal that met the SER performance standards (1 day per week – 7/15). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 11th– July 15th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: A. Hart

Project #: 0220N00.1

Date: 07/15/2022

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	70	85	Sunny	None	0	0	Wind 5-10 SE	

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Tug Grizzly.

Coastal Marine

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observation, Disposal Observations,
Adam Hart	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Crew working on dredge PC-1250 from approximately 7:00am-4:00pm. No dredging occurred during the time from 8:00am to 9:00am to refuel.
    c. Silt curtain at north side of North Terminal cells separated at 14:00, repaired at 15:00.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Tug Grizzly and Scow Kaunas at Disposal Area at 1320.

Attachment 2
Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/15/2022
MONITORS: AMH/JER
WEATHER CONDITIONS: SUNNY 75
WIND: 10-15 N/NW
PRIOR STORM EVENTS:
DREDGE UPDATE: Pre-cell dredgecontinues
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 9:53, 20:19 Low: 3:40, 15:25

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071522_00_RL_2	814420, 2696624	700	15	2	3.71		FLOOD	0	0
071522_00_RL_8		700		8	3.8				
071522_00_RL_13		700		13	1.97				
			AVERAGE TURBIDITY:		3.16				
071522_02_RL_2	814420, 2696623	900	17	2	5.56		FLODD	0	2
071522_02_RL_8		900		8	1.44				
071522_02_RL_15		900		15	2.09				
			AVERAGE TURBIDITY:		3.03				
071522_04_RL_2	814349, 2697022	1100	14	2	2.82		EBB	0	4
071522_04_RL_7		1100		7	3.37				
071522_04_RL_12		1100		12	7.95				
			AVERAGE TURBIDITY:		4.71				
071522_06_RL_2	814393, 2697001	1300	12	2	1.82		EBB	0	6
071522_06_RL_6		1300		6	1.62				
071522_06_RL_10		1300		10	2.61				
			AVERAGE TURBIDITY:		2.02				
071522_08_RL_2	814372, 2697005	1500	10	2	1.73		EBB	0	8
071522_08_RL_5		1500		5	2.68				
071522_08_RL_8		1500		8	2.99				
			AVERAGE TURBIDITY:		#DIV/0!				
071522_D1_00_RL_2	815190, 2697424	1330	10	2	2.56		DISPOSAL	0	6.5
071522_D1_00_RL_5		1330		5	2.27				
071522_D1_00_RL_8		1330		8	2.54				
			AVERAGE TURBIDITY:		2.46				

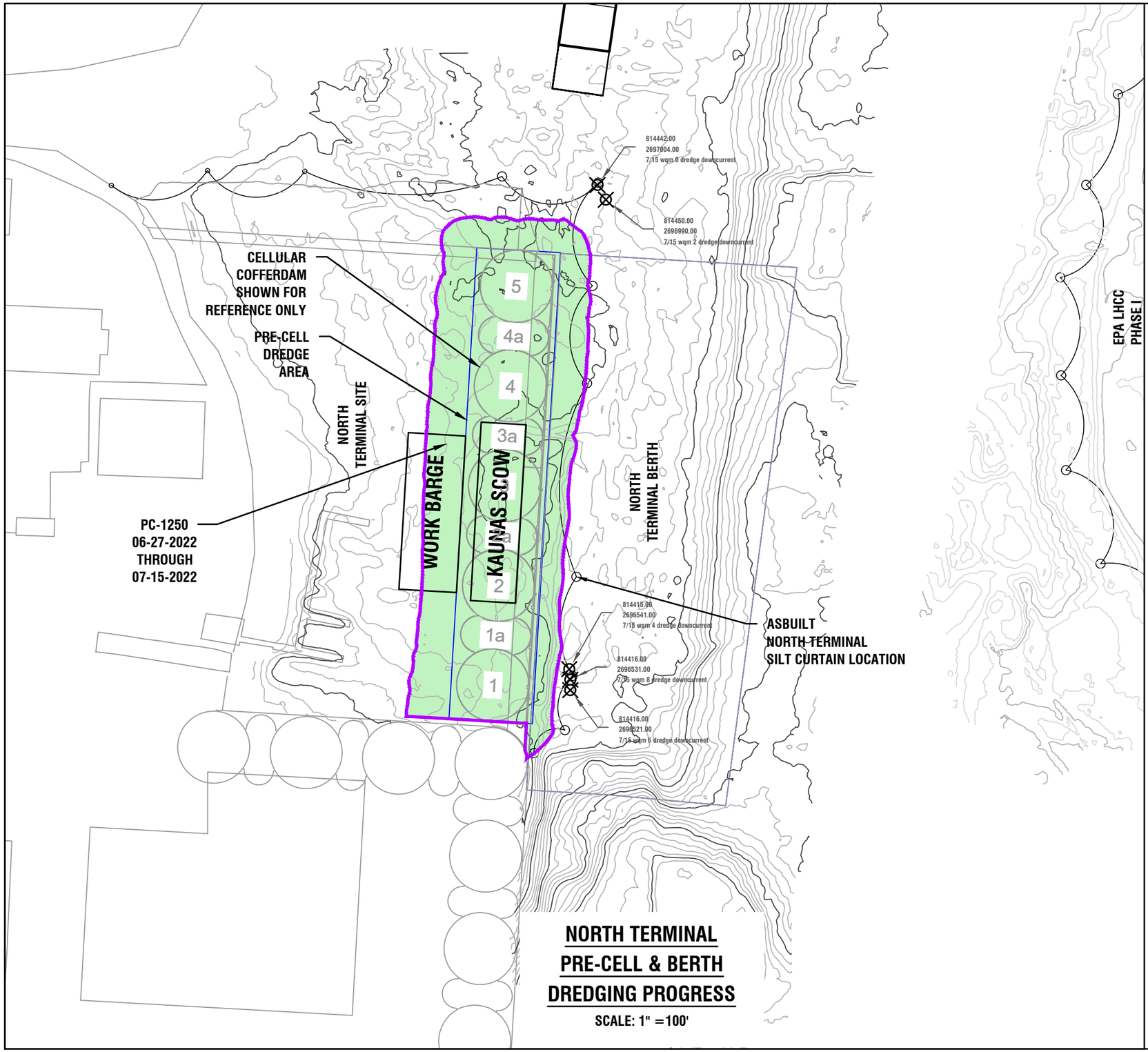
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071522_00_ML_2	814442, 2697004	705	13	2	4.76		FLOOD	0	0
071522_00_ML_6		705		6	3.92				
071522_00_ML_11		705		11	4.91				
			AVERAGE TURBIDITY:		4.53				
			TURBIDITY INCREASE:		1.37				
071522_02_ML_2	814450, 2696990	905	16	2	2.62		FLOOD	0	2
071522_02_ML_8		905		8	1.7				
071522_02_ML_14		905		14	1.82				
			AVERAGE TURBIDITY:		2.05				
			TURBIDITY INCREASE:		-0.98				
071522_04_ML_2	814415, 2696541	1105	16	2	4.37		EBB	0	4
071522_04_ML_8		1105		8	3.12				
071522_04_ML_14		1105		14	14.54				
			AVERAGE TURBIDITY:		7.34				
			TURBIDITY INCREASE:		2.63				
071522_06_ML_2	814416, 2696521	1305	15	2	9.08		EBB	0	6
071522_06_ML_7		1305		7	13.62				
071522_06_ML_13		1305		13	21.04				
			AVERAGE TURBIDITY:		14.58				
			TURBIDITY INCREASE:		12.56333333				
071522_08_ML_2	814416, 2696531	1505	13	2	3.36		EBB	0	8
071522_08_ML_6		1505		6	3.56				
071522_08_ML_11		1505		11	4.18				
			AVERAGE TURBIDITY:		3.70				
			TURBIDITY INCREASE:		3.7				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
071522_D1_10_RL_2	815295, 2696566	1340	8	2	1.98		DISPOSAL	0	6.5
071522_D1_10_RL_4		1340		4	2.25				
071522_D1_10_RL_6		1340		6	4.52				
			AVERAGE TURBIDITY:		2.92				
			TURBIDITY INCREASE:		0.46				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL
PRE-CELL & BERTH
DREDGING PROGRESS
SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

AREA DREDGED TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 INCH = 100 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

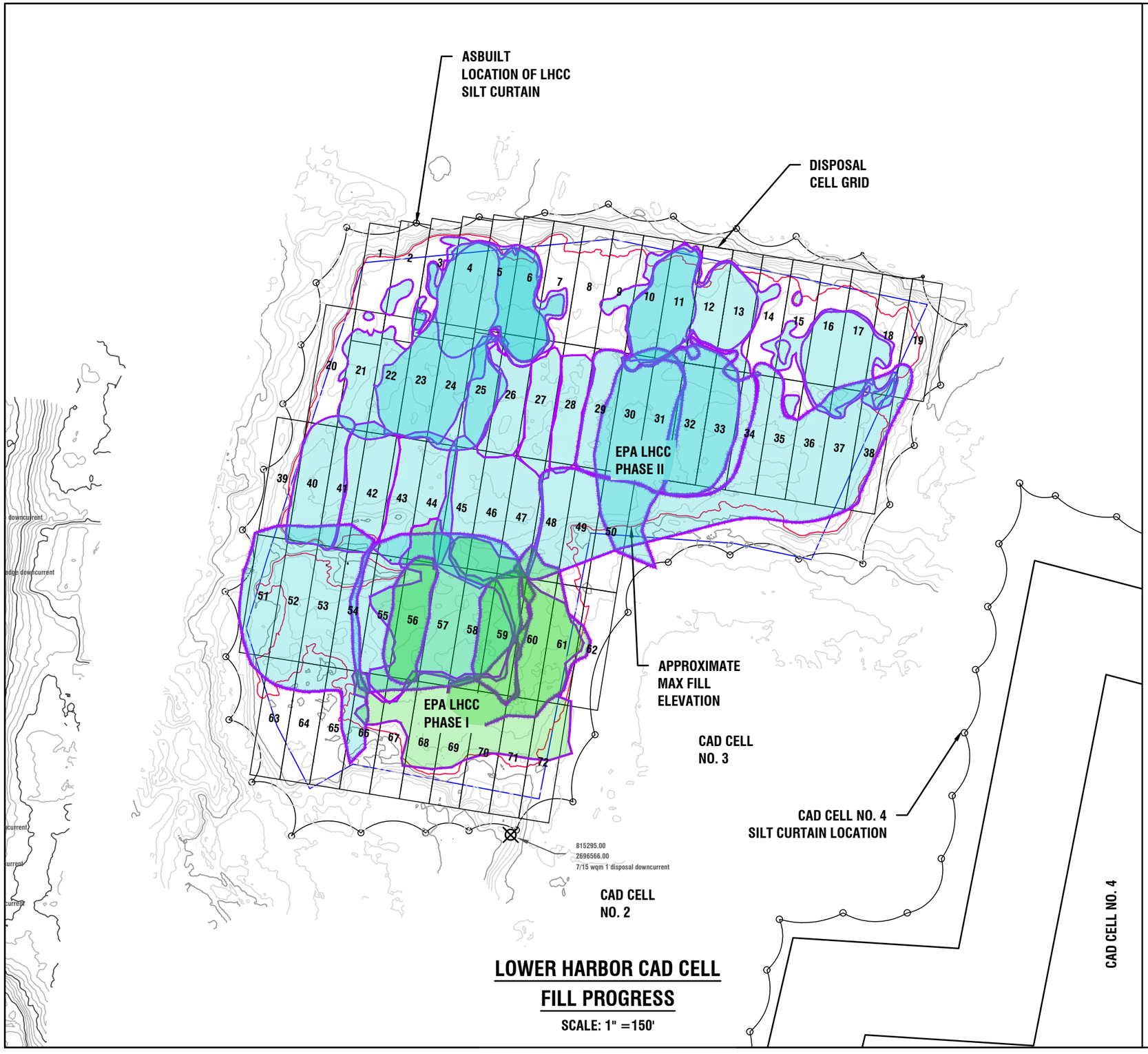
DATE:	07-15-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL
FILL PROGRESS
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	07-15-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 711/2022 TO 7/15/2022

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
7/11/2022	25	PC-1250	KAUNAS	700	NT	LHCC (48)	PRECELL	7/11/2022
7/12/2022	26	PC-1250	KAUNAS	900	NT	HCC (56/57/58/5	PRECELL	7/12/2022
7/13/2022	27	PC-1250	KAUNAS	800	NT	HCC (67/68/69/7	PRECELL	7/13/2022
7/14/2022	28	PC-1250	KAUNAS	900	NT	LHCC (56/59)	PRECELL	7/14/2022
7/15/2022	29	PC-1250	KAUNAS	700	NT	LHCC (60)	PRECELL	7/15/2022
7/15/2022	30	PC-1250	KAUNAS	631	NT	LHCC (25/26)	PRECELL	7/15/2022
			Weekly Total	4631	CY			
			CUMULATIVE TOTAL	19740	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 18th– July 22nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 5th Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of July 18th through July 22nd, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 1)

- Water Quality Monitoring Forms completed for the week of July 18th through July 22nd, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at the North Terminal Pre-Cell Dredge area and disposal of material into Lower Harbor CAD Cell (LHCC).

- Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 18th– July 22nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. The PC-1250 worked to dredge the North Terminal Pre-Cell dredge area from July 18th through July 20th, 2022. The PC-1250 worked with one scow, the Kaunas, for disposal into LHCC.

DWW was observed conducting daily surveys. All dredging activities were conducted within a silt curtain perimeter surrounding the North Terminal area. All disposal activities were performed at LHCC and were also contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted using an environmental bucket by the PC-1250. DWW was observed conducting activities during the authorized operational window of 7:00 am until 9:00 pm and following planned navigational routes to and from the North Terminal area to LHCC. Dredging of the pre-cell area concluded on Wednesday July 20th.

Disposal:

Disposal of material into LHCC continued from July 18th through July 20th, 2022. The Kaunas Scow conducted 1 to 2 trips per day to LHCC with loads varying between +/- 600 and 1,000 CY. Disposal material was placed as in the appropriate disposal cell location as designated by the contractor and scows were tracked on the ADIS/DQM real-time tracking systems for conformation.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	1,465
Approximate North Terminal Pre-Cell Volume Dredged to Date	21,205
Approximate North Terminal Pre-Cell Volume Remaining	2,295
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	3,095

* Dredge volume quantities included on Quantity Tracking Log are estimated based on contractors reported survey, all volumes are confirmed and adjusted as necessary using Foth bathymetric survey data at the completion of each dredge area. For this table, dredge volumes were set based on survey data collected by DWW.

** Approximately 7-10% of each disposal event is mixing during the dumping process. This has been consistent throughout the disposal process. Survey Volumes of the Pre-Cell Template total approximate 24,500 CY. Survey Volumes of LHCC disposal area total approximately 21,500 CY as of the final disposal event.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging or disposal operations. Turbidity monitoring was performed for the week of dredging and disposal that met the SER performance standards (1 day per week – 7/20). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 18th – July 22nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Reports

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	69	94	Sunny	None	0	0	Wind 5-15 SE	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in North Terminal Pre-Cell dredge area, Scow Kaunas, Tug Grizzly.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observation, Disposal Observations,
Adam Hart	Water Quality Monitoring, Hydro Surveys
Cameron Dutra	

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. PC-1250 dredging in North Terminal Pre-Cell dredge area.
    b. Tug Grizzly moved Dredge PC-1250 and Scow Kaunas outside of silt curtain at 11:15 to reposition. Silt curtain closed and dredging resumes at 12:04 inside silt curtain.
    c. Tug Grizzly moves Scow Kaunas offsite (south of the bridge) at 15:00 bridge opening.

Construction Observation Report

Dredge PC-1250 at North Terminal Pre-Cell Dredge Area

Tug Grizzly, Dredge PC-1250 and Scow Kaunas repositioning at 1115.

Tug Grizzly and Scow Kaunas at Disposal Area at 1452.

Attachment 2
Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/20/2022
MONITORS: AMH/JER/CD
WEATHER CONDITIONS: SUNNY 90
WIND: 0-5
PRIOR STORM EVENTS:
DREDGE UPDATE: Pre-cell dredge continues
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING
TIDE High: 0715 / 2110 Low: 0150 / 1424

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072022_00_RL_2	814347, 2697010	700	10	2	1.43		EBB	0	0
072022_00_RL_5		700		5	1.37				
072022_00_RL_8		700		8	3.82				
			AVERAGE TURBIDITY:		2.21				
072022_02_RL_2	814385, 2696454	900	13	2	1.83		FLOOD	0	2
072022_02_RL_6		900		6	8.95				
072022_02RL_11		900		11	10.65				
			AVERAGE TURBIDITY:		7.14				
072022_04_RL_2	814426, 2696471	1100	15	2	1.61		FLOOD	0	4
072022_04_RL_7		1100		7	2.24				
072022_04_RL_13		1100		13	2.31				
			AVERAGE TURBIDITY:		2.05				
072022_06_RL_2	814402, 2696480	1300	18	2	1.7		FLOOD	0	6
072022_06_RL_9		1300		9	1.85				
072022_06_RL_16		1300		16	2.35				
			AVERAGE TURBIDITY:		1.97				
072022_08_RL_2	814353, 2697007	1505	14	2	5.63		EBB	0	8
072022_08_RL_7		1505		7	5.31				
072022_08_RL_12		1505		12	8.65				
			AVERAGE TURBIDITY:		6.53				
			AVERAGE TURBIDITY:		#DIV/0!				
072022_D1_00_RL_2	815174, 2696569	1450	9	2	1.33		DISPOSAL	0	8
072022_D1_00_RL_4		1450		4	1.46				
072022_D1_00_RL_7		1450		7	1.57				
			AVERAGE TURBIDITY:		1.45				

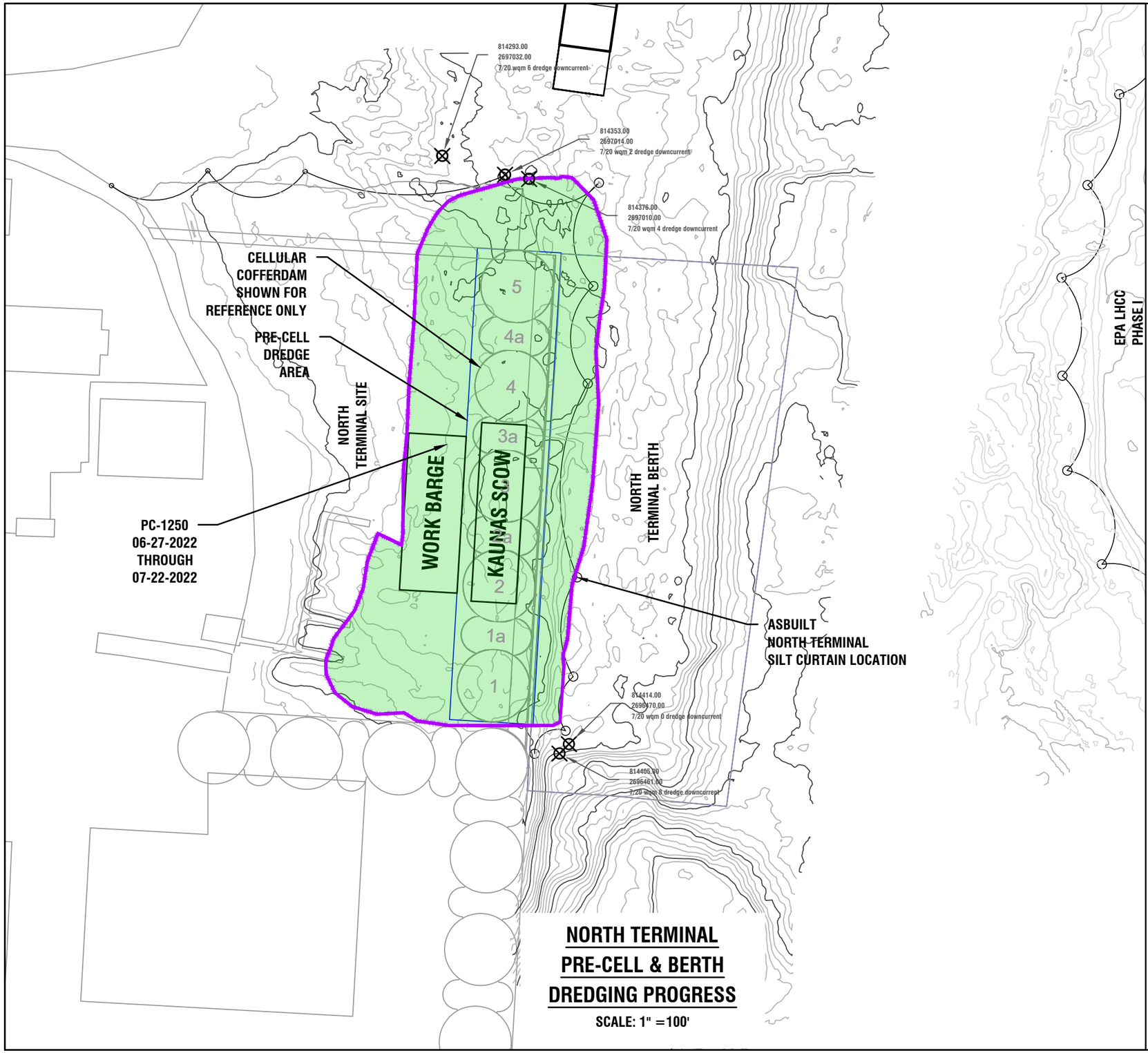
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072022_00_ML_2	814414, 2696470	710	14	2	20.41		EBB	0	0
072022_00_ML_7		710		7	27.33				
072022_00_ML_12		710		12	12.41				
			AVERAGE TURBIDITY:		20.05				
			TURBIDITY INCREASE:		17.84				
072022_02_ML_2	814353, 2697014	905	12	2	1.61		FLOOD	0	2
072022_02_ML_5		905		5	4.11				
072022_02_ML_10		905		10	7.11				
			AVERAGE TURBIDITY:		4.28				
			TURBIDITY INCREASE:		-2.87				
072022_04_ML_2	814376, 2697010	1105	12	2	15.88		FLOOD	0	4
072022_04_ML_6		1105		6	13.32				
072022_04_ML_10		1105		10	6.89				
			AVERAGE TURBIDITY:		12.03				
			TURBIDITY INCREASE:		9.98				
072022_06_ML_2	814293, 2697032	1307	13	2	8.47		FLOOD	0	6
072022_06_ML_6		1307		6	16.47				
072022_06_ML_11		1307		11	33.36				
			AVERAGE TURBIDITY:		19.43				
			TURBIDITY INCREASE:		17.47				
072022_08_ML_2	814405, 2696461	1510	17	2	14.89		EBB	0	8
072022_08_ML_8		1510		8	16.72				
072022_08_ML_15		1510		15	29.88				
			AVERAGE TURBIDITY:		20.50				
			TURBIDITY INCREASE:		13.97				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
072022_D1_10_RL_2	815165, 2697453	1500	9	2	1.8		DISPOSAL	0	8
072022_D1_10_RL_4		1500		4	1.68				
072022_D1_10_RL_7		1500		7	1.84				
			AVERAGE TURBIDITY:		1.77				
			TURBIDITY INCREASE:		0.32				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL
PRE-CELL & BERTH
DREDGING PROGRESS
SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

AREA DREDGED TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 INCH = 100 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

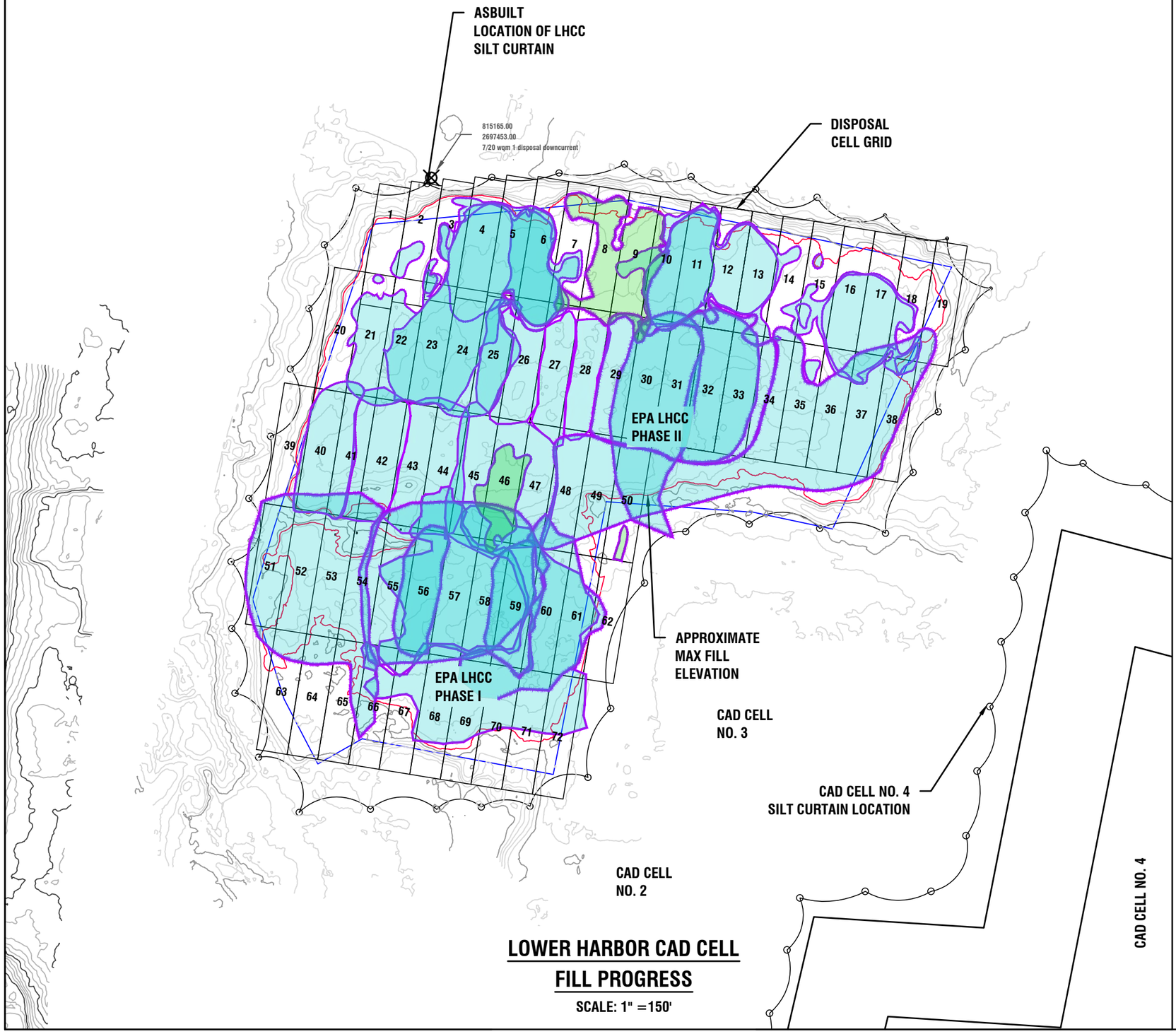
DATE:	07-22-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL FILL PROGRESS

SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	07-22-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	July 18th– July 22nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/18/2022 TO 7/22/2022

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
7/18/2022	1	PC-1250	KAUNAS	162	NT	LHCC (50)	PRECELL	7/18/2022
7/18/2022	2	PC-1250	KAUNAS	138	NT	LHCC (52)	PRECELL	7/18/2022
7/19/2022	1	PC-1250	KAUNAS	300	NT	LHCC (8)	PRECELL	7/19/2022
7/20/2022	1	PC-1250	KAUNAS	450	NT	LHCC (46)	PRECELL	7/20/2022
7/20/2022	2	PC-1250	KAUNAS	415	NT	LHCC (56)	PRECELL	7/20/2022
			Weekly Total	1465	CY			
			CUMULATIVE TOTAL	21205	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	August 8th– 12th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Weekly Dredging/Construction Summary Report

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period for the weekly reports will be Friday to Friday on a weekly basis. The weekly reporting will cover the 5-day working week with supplemental reporting on weekend work provided as needed through the Contractor reports. No work is planned for the weekend at this stage of the project.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 6th Weekly Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the week of August 8th through August 12th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the week of August 8th through August 12th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of bed leveling at Lower Harbor CAD Cell (LHCC).

- Figures: Figure 1 - Weekly Dredge Tracking & Water Quality Monitoring, which shows daily approximate dredge areas, and the locations of the water quality monitoring events conducted during this reporting period for North Terminal Pre-Cell Dredge area and Figure 2 showing approximate locations of scow disposals into LHCC (Attachment 3).

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	August 8th– 12th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging activities on June 20th, 2022 in the North Terminal Pre-Cell Dredge Area. DWW completed dredging activities on July 20th, 2022 in the North Terminal Pre-Cell Dredge Area. Elevations of dredged material disposed during this period in the LHCC disposal site are shallower than allowed by the project specifications. The PC-1250 began bed leveling activities at LHCC on August 10, 2022 and continued this work on August 11, 2022.

All bed leveling activities performed at LHCC were contained with a silt curtain perimeter.

On August 10, 2022 a minor (2.5 gallons) spill of Bio Hydraulic oil was released into the New Bedford Harbor due to a damaged steering line. Per the project requirements it was reported as noted in the Spill Control plan. Additionally it was reported to the Coast Guard, and the National Response Center (ID #1344058).

2. Notes/Clarifications:

Dredging:
During this reporting period, no dredging operations were conducted.

Disposal:
Disposal of material into LHCC from the North Terminal Pre-Cell dredge area was complete on July 20th, 2022. On August 10th, 2022 through August 11th, 2022, DWW completed bed leveling operations at LHCC.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area	
Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	0*
Approximate North Terminal Pre-Cell Volume Dredged to Date	21,205
Approximate North Terminal Pre-Cell Volume Remaining	2,295
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	3,095

* No dredging was completed during this reporting period.

** Approximately 7-10% of each disposal event is mixing during the dumping process. This has been consistent throughout the disposal process. Survey Volumes of the Pre-Cell Template total approximate 24,500 CY. Survey Volumes of LHCC disposal area total approximately 21,500 CY as of the final disposal event.

3. Monitoring Summary:

There were no water quality exceedances observed during this reporting period related to dredging , disposal or bed leveling operations. Turbidity monitoring was performed for the week of dredging and disposal that met the SER performance standards (1 day per week – 8/11). Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	August 8th– 12th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Report

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 08/11/2022

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	63	75	Rain	None	0	0	Wind 5-10 SW	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in LHCC with Tug Grizzly. Bed leveling began yesterday at LHCC. Tug Grizzly down for maintenance 7:15-8:15am. Crew completed bed leveling activities for the day at 12:15pm

Other personnel on site:	*Purpose:*
Josh Ray	Bed Leveling Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Tug Grizzly moving Dredge PC-1250 fitted with drag bar in LHCC area.
    b. Foth completed update survey of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 Bed Leveling at LHCC.

Dredge PC-1250 Bed Leveling at LHCC.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Week of:	August 8th– 12th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2
Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/11/2022
MONITORS: JER, MW
WEATHER CONDITIONS: 70 DEGREES, RAIN
WIND: 10-15 N/NW
PRIOR STORM EVENTS:
DREDGE UPDATE: PRE CELL DREDGE AREA COMPLETE, LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 7:50A, 8:19P Low: 1:39A, 1:20P

Foth

UP-CURRENT

Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS LEVELING
081122_00_RL_2	815163, 2696575	700	9	2	1.68		FLOOD	0	0
081122_00_RL_5		700		5	1.85				
081122_00_RL_7		700		7	1.86				
			AVERAGE TURBIDITY:		1.796666667				
081122_00_RL_2	815174, 2697430	900	8.5	2	2.41		EBB	0	2
081122_00_RL_4		900		4	2.12				
081122_00_RL_6		900		6	2.94				
			AVERAGE TURBIDITY:		2.49				
081122_00_RL_2	815277, 2697460	1100	7	2	4.66		EBB	0	4
081122_00_RL_4		1100		4	4.89				
081122_00_RL_5		1100		5	5.48				
			AVERAGE TURBIDITY:		5.01				
081122_00_RL_2	815068, 2697454	1300	7	2	4.52		EBB	0	6
081122_00_RL_4		1300		4	4.48				
081122_00_RL_5		1300		5	4.84				
			AVERAGE TURBIDITY:		4.61				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

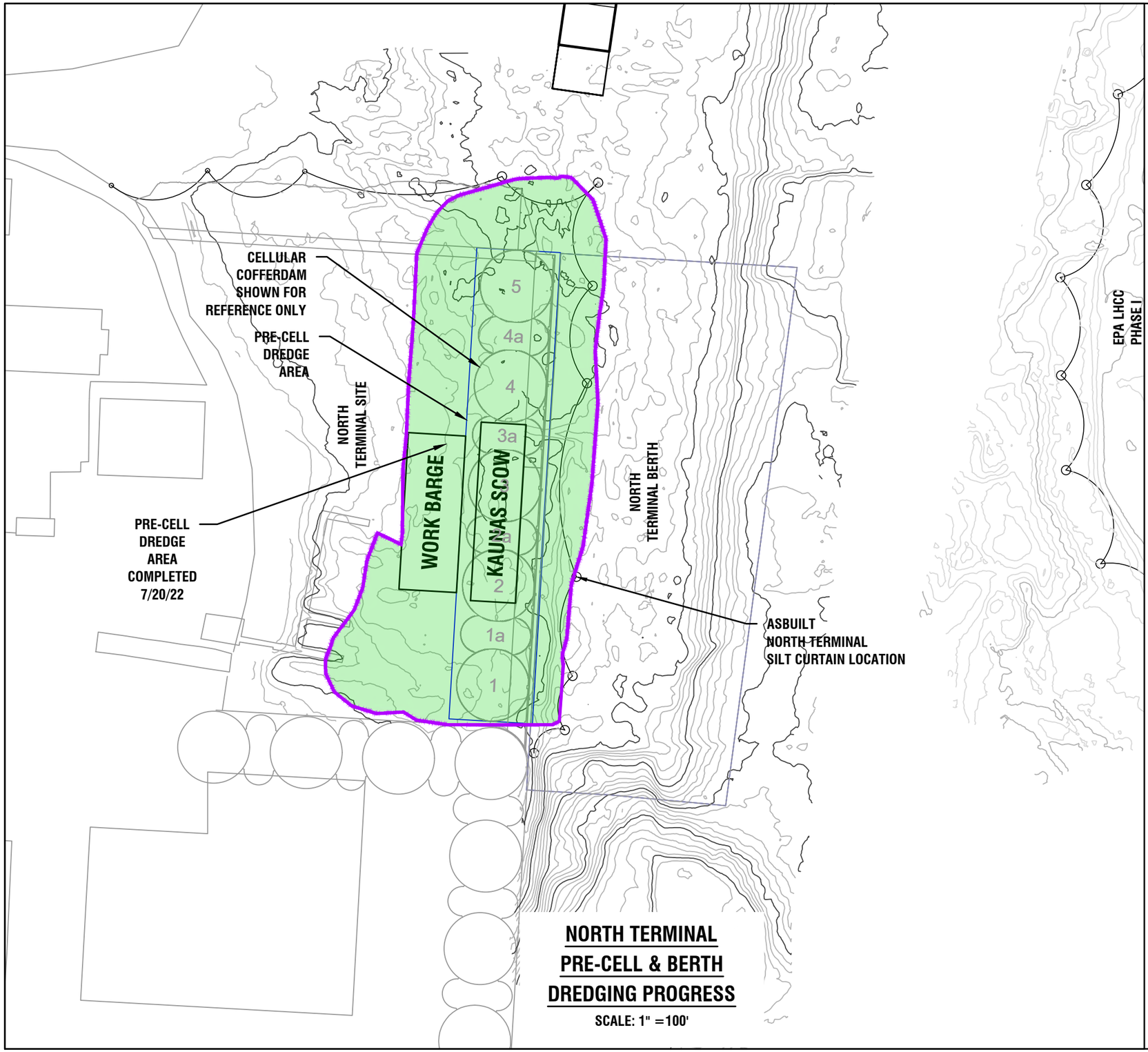
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS LEVELING
081122_00_ML_2	815174, 2697430	700	10	2	2.44		FLOOD	0	0
081122_00_ML_5		700		5	2.12				
081122_00_ML_8		700		8	2.94				
			AVERAGE TURBIDITY:		2.50				
			TURBIDITY INCREASE:		0.70				
081122_00_ML_2	815067, 2696572	900	9	2	5.95		EBB	0	2
081122_00_ML_5		900		5	6.93				
081122_00_ML_7		900		7	5.78				
			AVERAGE TURBIDITY:		6.22				
			TURBIDITY INCREASE:		3.73				
081122_00_ML_2	815484, 2696942	1100	13	2	3.69		EBB	0	4
081122_00_ML_6		1100		6	3.24				
081122_00_ML_11		1100		11	2.91				
			AVERAGE TURBIDITY:		3.28				
			TURBIDITY INCREASE:		-1.73				
081122_00_ML_2	814992, 2696568	1300	7	2	6.76		EBB	0	6
081122_00_ML_4		1300		4	6.87				
081122_00_ML_5		1300		5	8.19				
			AVERAGE TURBIDITY:		7.27				
			TURBIDITY INCREASE:		2.66				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3
Figure 1 Weekly North Terminal Pre-Cell & Berth Dredge Tracking and Water Quality Monitoring

Figure 2 Weekly Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring



NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

SCALE: 1" =100'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

AREA DREDGED TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

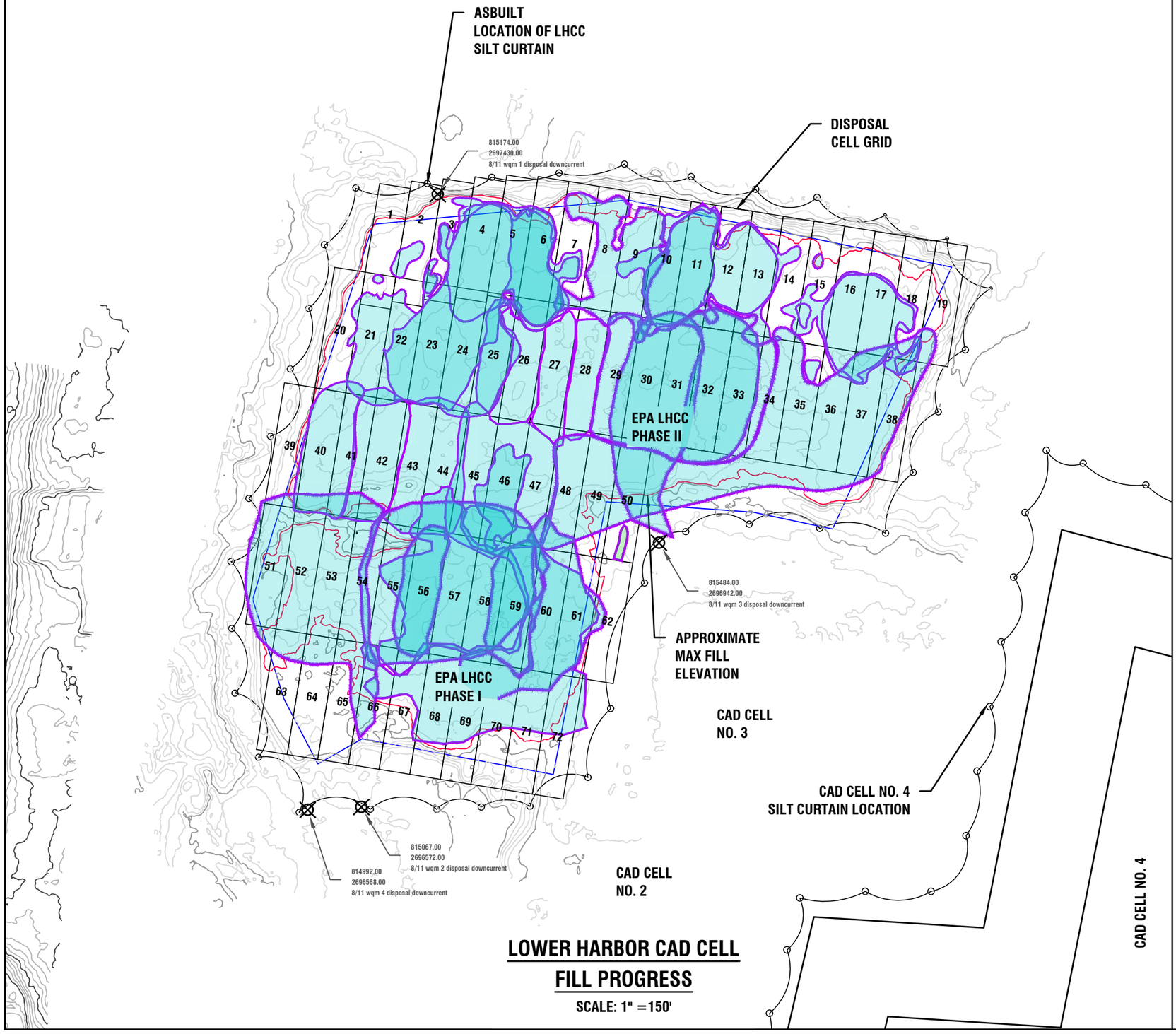
DATE:	08-11-2022
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

DRAWING NO.

FIGURE 1



LOWER HARBOR CAD CELL
FILL PROGRESS
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	08-11-2022
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

DRAWING NO.

FIGURE 2

Attachment 4
Figure 1 Weekly North Terminal Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 8/8/2022 TO 8/12/2022

Date	Load No.	Dredge	Scow No.	Estimated Quantity (CY)	Dredge Location	Disposal Location (Grid No.)	Dredge Area	Date Dumped
8/8-12/22	0	PC-1250		0	NT			8/8-12/22
		Weekly Total		0	CY			
		CUMULATIVE TOTAL		21500	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 8th– Sept. 16th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

LHCC Bed Leveling Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the during of the bed leveling operations within Lower Harbor CAD Cell.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 6th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of August 8th through September 16th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of August 8th through September 2nd, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of bed leveling at Lower Harbor CAD Cell (LHCC).

- Figures: Figure 3 – Pre Bed Leveling Plan, which shows elevation of the LHCC prior to bed leveling and daily approximate locations of the water quality monitoring events conducted during LHCC Bed Leveling and Figure 4 - Post Bed Leveling Plan showing elevations of the LHCC after the completion of Bed Leveling operations and removal of high points above the specificized top elevation.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 8th– Sept. 16th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began bed leveling activities on August 10th, 2022 in the LHCC Area. The PC-1250 and associated push boat began continued this work intermittently thru September 13th, 2022.

All bed leveling activities performed at LHCC were contained with a silt curtain perimeter.

On August 10, 2022 a minor (2.5 gallons) spill of Bio Hydraulic oil was released into the New Bedford Harbor due to a damaged steering line. Per the project requirements it was reported as noted in the Spill Control plan. Additionally it was reported to the Coast Guard, and the National Response Center (ID #1344058).

2. Notes/Clarifications:

Dredging:
During this reporting period, no dredging operations were conducted.

Disposal:
Disposal of material into LHCC from the North Terminal Pre-Cell dredge area was complete on July 20th, 2022.

Table 1 – Cumulative Dredging Progress- North Terminal Pre-Cell Dredge Area	
Dredge Area (cy)	Volume (cy)
Estimate Total North Terminal Pre-Cell Volume	23,500
Approximate North Terminal Pre-Cell Volume Dredged (This reporting period)	0*
Approximate North Terminal Pre-Cell Volume Dredged to Date	21,205
Approximate North Terminal Pre-Cell Volume Remaining	2,295
Total LHCC Capacity Available	24,300
Remaining LHCC Capacity at end of week	3,095

* No dredging was completed during this reporting period.

** Approximately 7-10% of each disposal event is mixing during the dumping process. This has been consistent throughout the disposal process. Survey Volumes of the Pre-Cell Template total approximate 24,500 CY. Survey Volumes of LHCC disposal area total approximately 21,500 CY as of the final disposal event.

3. Monitoring Summary:
Turbidity monitoring was performed for the weeks of the bed leveling operations and met the SER performance standards (1 day per week – 8/11 & 8/29). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 8th– Sept. 16th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1
Daily Report

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 08/11/2022

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	63	75	Rain	None	0	0	Wind 5-10 SW	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in LHCC with Tug Grizzly. Bed leveling began yesterday at LHCC. Tug Grizzly down for maintenance 7:15-8:15am. Crew completed bed leveling activities for the day at 12:15pm

Other personnel on site:	*Purpose:*
Josh Ray	Bed Leveling Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Tug Grizzly moving Dredge PC-1250 fitted with drag bar in LHCC area.
    b. Foth completed update survey of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 Bed Leveling at LHCC.

Dredge PC-1250 Bed Leveling at LHCC.

Construction Observation Report

Location New Bedford – North Terminal Pre-Cell Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	63	80	Clear	None	0	0	Wind 15-20 SW	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in LHCC with Tug Grizzly. Bed leveling continued at LHCC. Crew completed bed leveling activities from 09:00am to 15:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Bed Leveling Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Tug Grizzly moving Dredge PC-1250 fitted with drag bar in LHCC area.

Construction Observation Report

Dredge PC-1250 Bed Leveling at LHCC.

Dredge PC-1250 Bed Leveling at LHCC.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 8th– Sept. 16th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2
Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/11/2022
MONITORS: JER, MW
WEATHER CONDITIONS: 70 DEGREES, RAIN
WIND: 10-15 N/NW
PRIOR STORM EVENTS:
DREDGE UPDATE: PRE CELL DREDGE AREA COMPLETE, LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 7:50A, 8:19P Low: 1:39A, 1:20P

UP-CURRENT

Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS LEVELING
081122_00_RL_2	815163, 2696575	700	9	2	1.68		FLOOD	0	0
081122_00_RL_5		700		5	1.85				
081122_00_RL_7		700		7	1.86				
			AVERAGE TURBIDITY:		1.796666667				
081122_00_RL_2	815174, 2697430	900	8.5	2	2.41		EBB	0	2
081122_00_RL_4		900		4	2.12				
081122_00_RL_6		900		6	2.94				
			AVERAGE TURBIDITY:		2.49				
081122_00_RL_2	815277, 2697460	1100	7	2	4.66		EBB	0	4
081122_00_RL_4		1100		4	4.89				
081122_00_RL_5		1100		5	5.48				
			AVERAGE TURBIDITY:		5.01				
081122_00_RL_2	815068, 2697454	1300	7	2	4.52		EBB	0	6
081122_00_RL_4		1300		4	4.48				
081122_00_RL_5		1300		5	4.84				
			AVERAGE TURBIDITY:		4.61				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS LEVELING
081122_00_ML_2	815174, 2697430	700	10	2	2.44		FLOOD	0	0
081122_00_ML_5		700		5	2.12				
081122_00_ML_8		700		8	2.94				
			AVERAGE TURBIDITY:		2.50				
			TURBIDITY INCREASE:		0.70				
081122_00_ML_2	815067, 2696572	900	9	2	5.95		EBB	0	2
081122_00_ML_5		900		5	6.93				
081122_00_ML_7		900		7	5.78				
			AVERAGE TURBIDITY:		6.22				
			TURBIDITY INCREASE:		3.73				
081122_00_ML_2	815484, 2696942	1100	13	2	3.69		EBB	0	4
081122_00_ML_6		1100		6	3.24				
081122_00_ML_11		1100		11	2.91				
			AVERAGE TURBIDITY:		3.28				
			TURBIDITY INCREASE:		-1.73				
081122_00_ML_2	814992, 2696568	1300	7	2	6.76		EBB	0	6
081122_00_ML_4		1300		4	6.87				
081122_00_ML_5		1300		5	8.19				
			AVERAGE TURBIDITY:		7.27				
			TURBIDITY INCREASE:		2.66				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/29/2022
MONITORS: JR/MW
WEATHER CONDITIONS: Overcast
WIND: 5-15 S/SW
PRIOR STORM EVENTS: None
DREDGE UPDATE: LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 0315/1552 **Low:** 0925/2248

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
082922-00-RL-2	2696579, 815225	700	7	2	5.6		FLOODING	0'	0
082922-00-RL-4		700		4	5.8				
082922-00-RL-5		700		5	6				
			AVERAGE TURBIDITY:		5.80				
082922-02-RL-2	2696581, 815167	900	10	2	5.3		FLOODING	0'	2
082922-02-RL-4		900		4	4.9				
082922-02-RL-7		900		7	4.5				
			AVERAGE TURBIDITY:		4.90				
082922-04-RL-2	2697472, 815346	1100	9	2	6		EBBING	0'	4
082922-04-RL-4		1100		4	5.7				
082922-04-RL-7		1100		7	8.2				
			AVERAGE TURBIDITY:		6.63				
082922-06-RL-2	2697464, 815286	1300	7	2	6.3		EBBING	0'	6
082922-06-RL-4		1300		4	5.7				
082922-06-RL-5		1300		5	11.4				
			AVERAGE TURBIDITY:		7.80				
082922-08-RL-2	2697460, 815250	1500	6	2	11.2		EBBING	0'	8
082922-08-RL-4		1500		4	10.7				
082922-08-RL-5		1500		5	13				
			AVERAGE TURBIDITY:		11.63				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
082922-00-ML-2	2697439, 815178	705	8	2	5.7		FLOODING	0'	0
082922-00-ML-4		705		4	6.3				
082922-00-ML-6		705		6	7.3				
			AVERAGE TURBIDITY:		6.43				
			TURBIDITY INCREASE:		0.63				
082922-02-ML-2	2697455, 815559	910	7	2	5.4		FLOODING	0'	2
082922-02-ML-4		910		4	5.1				
082922-02-ML-5		910		5	6.6				
			AVERAGE TURBIDITY:		5.70				
			TURBIDITY INCREASE:		0.80				
082922-04-ML-2	2696974, 815612	1110	14	2	9.7		EBBING	0'	4
082922-04-ML-2		1110		7	8.3				
082922-04-ML-2		1110		12	18.2				
			AVERAGE TURBIDITY:		12.07				
			TURBIDITY INCREASE:		5.43				
082922-06-ML-2	2696963, 815516	1310	13	2	11.2		EBBING	0'	6
082922-06-ML-6		1310		6	10.6				
082922-06-ML-11		1310		11	32.2				
			AVERAGE TURBIDITY:		18.00				
			TURBIDITY INCREASE:		10.20				
082922-08-ML-2	2696567, 815292	1510	7	2	6.8		EBBING	0'	8
082922-08-ML-4		1510		4	6.6				
082922-08-ML-5		1510		5	8.7				
			AVERAGE TURBIDITY:		7.37				
			TURBIDITY INCREASE:		-4.27				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 3a Weekly Lower Harbor CAD Cell Pre-Bed Leveling Tracking and Water Quality Monitoring

Figure 3b Weekly Lower Harbor CAD Cell Post-Bed Leveling Tracking and Water Quality Monitoring

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Nov. 7th– 25th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the during of the bed leveling operations within Lower Harbor CAD Cell.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 8th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of November 7th through November 25th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of November 7th through November 25th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at CAD Cell #4.

- Figures: Figure 1 – Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities and Figure 2 – Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheet showing estimated volumes of dredged material for each deck barge transferred for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Nov. 7th– 25th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the bottom of CAD Cell #4 on November 9th, 2022. The PC-1250, associated deck barges fitted with coamings, and tugs continued this work intermittently thru November 25th, 2022.

All dredging activities performed at CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022 and continued each day as dredging activities continued.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area (cy)	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	4,200
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	4,200
Approximate Bottom of CAD Cell #4 Dredging Remaining	149,850
Total Approximate Cofferdam Filling Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	4,200
Approximate Cofferdam Capacity Filled to Date	4,200
Approximate Cofferdam Fill Capacity Remaining	25,350

3. Monitoring Summary:

Turbidity monitoring was performed for the weeks of the bed leveling operations and met the SER performance standards (1 day per week – 11/9, 11/17, & 11/21). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Nov. 7th– 25th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 11/9/2022

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	33	54	Clear	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 began dredging bottom of CAD Cell #4 today. Dredging began in northern area of CAD 4. Dredging into flat top barges for transfer into cofferdam cells. Crews completed dredging activities from 09:30am to 15:30pm.

Other personnel on site:	*Purpose:*
Mike Campagnone	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredging of Bottom of CAD for CAD Cell #4 began today in the northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Tug bringing loaded deck barge to North Terminal area for cofferdam cell #1 filling.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 11/17/2022

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	37	48	Cloudy	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Mike Campagnone	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Landside excavator loading deck barge dredged material into cofferdam cell #1.

Landside excavator waiting on next deck barge. Dredge PC-1250 dredging at CAD Cell #4 in background.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 11/21/2022

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	24	39	Clear	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Nov. 7th– 25th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/9/2022
MONITORS: MEC4/MW
WEATHER CONDITIONS: SUNNY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 08:08 / 20:30 **Low:** 12:53 / 13:59

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110922-00-RL-2	2697029 , 816231	8:00	7'	2	1.1		FLOODING	0'	0
110922-00-RL-3		8:00		3	2				
110922-00-RL-6		8:00		6	2.3				
			AVERAGE TURBIDITY:		1.80				
110922-02-RL-2	2695930 , 816178	10:10	17'	2	1.6		EBBING	0'	2
110922-02-RL-8		10:10		8	1.4				
110922-02-RL-16		10:10		16	1.8				
			AVERAGE TURBIDITY:		1.60				
110922-04-RL-2	2695933 , 816173	12:20	12'	2	1		EBBING	0'	4
110922-04-RL-7		12:20		7	1.1				
110922-04-RL-11		12:20		11	1.3				
			AVERAGE TURBIDITY:		1.13				
110922-06-RL-2	2697055 , 816147	14:30	7'	2	1.6		FLOODING	0'	6
110922-06-RL-3		14:30		3	1.5				
110922-06-RL-6		14:30		6	1.7				
			AVERAGE TURBIDITY:		1.60				
110922-08-RL-2	2697050 , 816161	15:45	7'	2	1.2		FLOODING	0'	8
110922-08-RL-3		15:45		3	1.5				
110922-08-RL-6		15:45		6	1.3				
			AVERAGE TURBIDITY:		1.33				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110922-00-ML-2	2697270 , 816149	8:10	11'	2	1.6		FLOODING	209'	0
110922-00-ML-5		8:10		5	1.2				
110922-00-ML-10		8:10		10	1.4				
			AVERAGE TURBIDITY:		1.40				
			TURBIDITY INCREASE:		-0.40				
110922-02-ML-2	2695683 , 816152	10:25	11'	2	1.8		EBBING	229'	2
110922-02-ML-5		10:25		5	1.8				
110922-02-ML-10		10:25		10	1.8				
			AVERAGE TURBIDITY:		1.80				
			TURBIDITY INCREASE:		0.20				
110922-04-2	2695706 , 816163	12:30	18'	2	3.3		EBBING	229'	4
110922-04-9		12:30		9	3.2				
110922-04-17		12:30		17	1.6				
			AVERAGE TURBIDITY:		2.70				
			TURBIDITY INCREASE:		1.57				
110922-06-2	2697273 , 816143	14:45	7'	2	1.8		FLOODING	229'	6
110922-06-3		14:45		3	2.1				
110922-06-6		14:45		6	1.4				
			AVERAGE TURBIDITY:		1.77				
			TURBIDITY INCREASE:		0.17				
110922-08-2	2697234 , 816119	15:55	7'	2	2.1		FLOODING	209'	8
110922-08-3		15:55		3	1.5				
110922-08-6		15:55		6	1.6				
			AVERAGE TURBIDITY:		1.73				
			TURBIDITY INCREASE:		0.40				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/17/2022
MONITORS: MEC4/MW
WEATHER CONDITIONS: SUNNY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 01:55 / 14:05 **Low:** 07:37 / 20:43

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111722-00-RL-2	2695926 , 816350	7:15	10'	2	0.89		EBBING	0'	0
111722-00-RL-5		7:15		5	1.42				
111722-00-RL-9		7:15		9	2.66				
			AVERAGE TURBIDITY:		1.66				
111722-02-RL-2	2697027 , 816186	9:15	7'	2	0.78		FLOODING	0'	2
111722-02-RL-3		9:15		3	0.85				
111722-02-RL-6		9:15		6	1.3				
			AVERAGE TURBIDITY:		0.98				
111722-04-RL-2	2697008 , 816327	11:20	8'	2	0.94		FLOODING	0'	4
111722-04-RL-4		11:20		4	0.98				
111722-04-RL-7		11:20		7	2.83				
			AVERAGE TURBIDITY:		1.58				
111722-06-RL-2	2697035 , 816229	13:30	8'	2	0.86		FLOODING	0'	6
111722-06-RL-4		13:30		4	0.92				
111722-06-RL-7		13:30		7	1.12				
			AVERAGE TURBIDITY:		0.97				
111722-08-RL-2	2695908 , 816313	15:15	11'	2	1.14		EBBING	0'	8
111722-08-RL-5		15:15		5	0.99				
111722-08-RL-10		15:15		10	0.98				
			AVERAGE TURBIDITY:		1.04				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111722-00-ML-2	2695660 , 816169	7:15	18'	2	1.12		EBBING	209'	0
111722-00-ML-9		7:15		9	1.27				
111722-00-ML-17		7:15		17	1.1				
			AVERAGE TURBIDITY:		1.16				
			TURBIDITY INCREASE:		-0.49				
111722-02-ML-2	2697273 , 816166	9:15	7'	2	1.48		FLOODING	229'	2
111722-02-ML-3		9:15		3	0.99				
111722-02-ML-6		9:15		6	1				
			AVERAGE TURBIDITY:		1.16				
			TURBIDITY INCREASE:		0.18				
111722-04-2	2697264 , 816178	11:30	7'	2	0.75		FLOODING	229'	4
111722-04-3		11:30		3	1.07				
111722-04-6		11:30		6	1.16				
			AVERAGE TURBIDITY:		0.99				
			TURBIDITY INCREASE:		-0.59				
111722-06-2	2697278 , 816148	13:30	7'	2	0.99		EBBING	229'	6
111722-06-3		13:30		3	1.48				
111722-06-6		13:30		6	2.97				
			AVERAGE TURBIDITY:		1.81				
			TURBIDITY INCREASE:		0.85				
111722-08-2	2695682 , 816110	15:55	19'	2	1.12		FLOODING	209'	8
111722-08-9		15:55		9	1.51				
111722-08-18		15:55		18	1.21				
			AVERAGE TURBIDITY:		1.28				
			TURBIDITY INCREASE:		0.24				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/21/2022
MONITORS: JR/MW
WEATHER CONDITIONS: SUNNY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 05:18 / 17:37 **Low:** 11:19 / 23:11

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
112122-00-RL-2	2696991 , 815991	7:00	7'	2	1.03		EBBING	0'	0
112122-00-RL-4		7:00		4	2.41				
112122-00-RL-5		7:00		5	0.82				
			AVERAGE TURBIDITY:		1.42				
112122-02-RL-2	2696908 , 815995	9:05	8'	2	0.96		EBBING	0'	2
112122-02-RL-4		9:05		4	1.88				
112122-02-RL-6		9:05		6	1.12				
			AVERAGE TURBIDITY:		1.32				
112122-04-RL-2	2697090 , 816004	11:05	6'	2	1.74		EBBING	0'	4
112122-04-RL-3		11:05		3	1.85				
112122-04-RL-4		11:05		4	0.95				
			AVERAGE TURBIDITY:		1.51				
112122-06-RL-2	2695938 , 816482	12:55	8'	2	0.83		FLOODING	0'	6
112122-06-RL-4		12:55		4	0.89				
112122-06-RL-7		12:55		7	0.84				
			AVERAGE TURBIDITY:		0.85				
112122-08-RL-2	2695946 , 816089	14:45	10'	2	1.21		FLOODING	0'	8
112122-08-RL-5		14:45		5	1.69				
112122-08-RL-8		14:45		8	1.27				
			AVERAGE TURBIDITY:		1.39				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

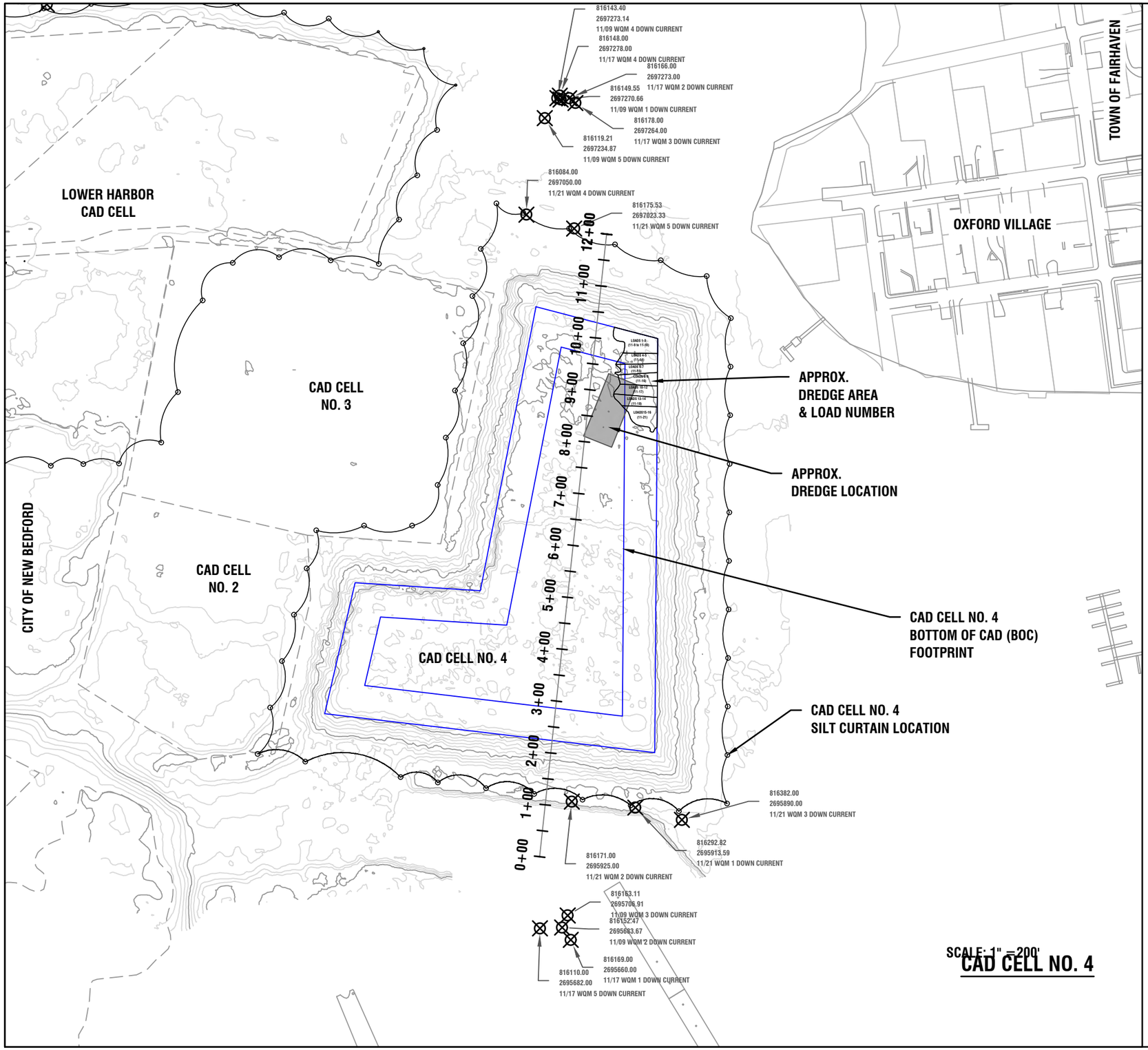
Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
112122-00-ML-2	2695913 , 816292	7:10	15'	2	1.9		EBBING	0'	0
112122-00-ML-8		7:10		8	1.62				
112122-00-ML-13		7:10		13	2.09				
			AVERAGE TURBIDITY:		1.87				
			TURBIDITY INCREASE:		0.45				
112122-02-ML-2	2695925 , 816171	9:10	10'	2	0.95		EBBING	0'	2
112122-02-ML-5		9:10		5	1.33				
112122-02-ML-8		9:10		8	3.68				
			AVERAGE TURBIDITY:		1.99				
			TURBIDITY INCREASE:		0.67				
112122-04-2	2695890 , 816382	11:15	8'	2	1.56		EBBING	0'	4
112122-04-4		11:15		4	1.48				
112122-04-6		11:15		6	1.37				
			AVERAGE TURBIDITY:		1.47				
			TURBIDITY INCREASE:		-0.04				
112122-06-2	2697050 , 816084	13:05	7'	2	1.77		FLOODING	0'	6
112122-06-4		13:05		4	2.31				
112122-06-5		13:05		5	2.31				
			AVERAGE TURBIDITY:		2.13				
			TURBIDITY INCREASE:		1.28				
112122-08-2	2697023 , 816175	14:50	7'	2	5		FLOODING	0'	8
112122-08-4		14:50		4	4.9				
112122-08-5		14:50		5	3.62				
			AVERAGE TURBIDITY:		4.51				
			TURBIDITY INCREASE:		3.12				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Nov. 7th– 25th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



SCALE: 1" = 200'

CAD CELL NO. 4

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF CAD CELL NO. 4 BOTTOM OF CAD DREDGING

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	11-21-22
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

WQM - NOV. 9, 2022
WQM - NOV. 17, 2022
WQM - NOV. 21, 2022

Attachment 4

Figure 2 Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 11/7/2022 TO 11/21/202

*BASED ON ESTIMATED VOLUME BY EXCAVATOR MODELING

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
11/9/2022	1	Komatsu 1250	B-61	200	CAD4	NT-Cell 1	NS STA10+00	NA
11/10/2022	2	Komatsu 1250	Little Jeff	100	CAD4	NT-Cell 1	NS STA10+00	NA
11/10/2022	3	Komatsu 1250	B-61	200	CAD4	NT-Cell 1	NS STA10+00	NA
11/14/2022	4	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 9+75	NA
11/14/2022	5	Komatsu 1250	B-61	400	CAD4	NT-Cell 1	NS STA 9+75	NA
11/15/2022	6	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 9+50	NA
11/15/2022	7	Komatsu 1250	B-61	400	CAD4	NT-Cell 1	NS STA 9+50	NA
11/16/2022	8	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 9+25	NA
11/16/2022	9	Komatsu 1250	B-61	400	CAD4	NT-Cell 1	NS STA 9+25	NA
11/17/2022	10	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 9+00	NA
11/17/2022	11	Komatsu 1250	B-61	400	CAD4	NT-Cell 1	NS STA 9+00	NA
11/17/2022	12	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 9+00	NA
11/18/2022	13	Komatsu 1250	B-61	300	CAD4	NT-Cell 1	NS STA 8+75	NA
11/18/2022	14	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 1	NS STA 8+75	NA
11/21/2022	15	Komatsu 1251	Little Jeff	200	CAD5	NT-Cell 2	NS STA 8+50	NA
11/21/2022	16	Komatsu 1252	Little Jeff	400	CAD6	NT-Cell 3	NS STA 8+50	NA
			Weekly Total	4200	CY			
			CUMULATIVE TOTAL	4200	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Dec. 5th– 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of December 2022 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal expansion project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 9th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of December 5th through December 30th, 2022. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of December 5th through December 30th, 2022, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;
    - Figure 2 – Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheet showing estimated volumes of dredged material for each deck barge transferred for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Dec. 5th– 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the bottom of CAD Cell #4 on November 9th, 2022. The PC-1250, associated deck barges fitted with coamings, and tugs continued this work intermittently thru December 28th, 2022. No dredge reporting has been completed for the week of November 28th thru December 2nd as no dredging was completed this week due to logistics associated with filling cofferdam cells #1 and #2.

All dredging activities performed at CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Dredging has continued each day of this reporting period as Bottom of CAD Cell #4 dredging continues.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	8,507
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	12,707
Approximate Bottom of CAD Cell #4 Dredging Remaining	141,343
Total Approximate Cofferdam Filling Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	8,507
Approximate Cofferdam Capacity Filled to Date	12,707
Approximate Cofferdam Fill Capacity Remaining	16,843

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 12/7, 12/15, 12/21 & 12/28). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Dec. 5th– 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	40	54	Rain	None	0	0	Wind 10-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 12/15/2022

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	31	42	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 12/21/2022

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	25	41	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

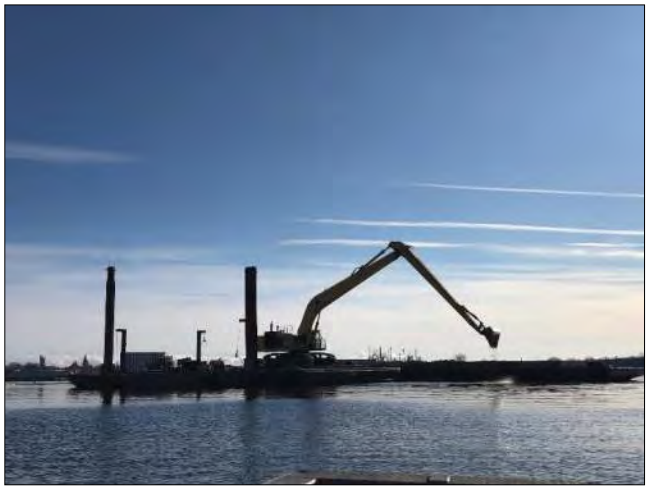
Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.



Dredge PC-1250 dredging at CAD Cell #4.

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	19	45	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

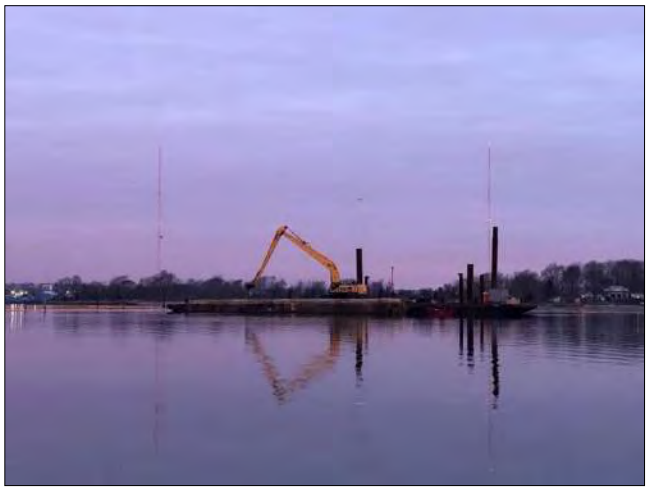
DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

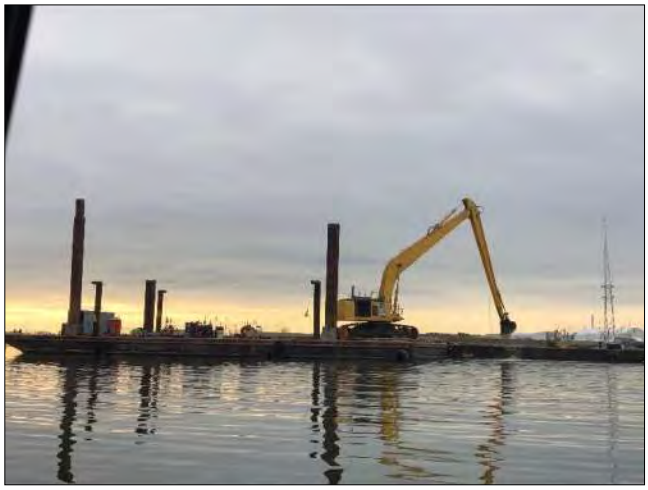
Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report



Dredge PC-1250 dredging at CAD Cell #4.



Dredge PC-1250 dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Dec. 5th– 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 12/7/2022
MONITORS: JR/MW
WEATHER CONDITIONS: SUNNY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 07:07 / 19:26 **Low:** 13:07

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
120722-00-RL-2	2695931, 816190	7:00	14'	2	0.83		FLOOD	0'	0
120722-00-RL-7		7:00		7	1.02				
120722-00-RL-12		7:00		12	1.61				
			AVERAGE TURBIDITY:		1.15				
120722-02-RL-2	2697004, 816271	9:00	10'	2	1.12		EBB	0'	2
120722-02-RL-5		9:00		5	2.14				
120722-02-RL-8		9:00		8	0.95				
			AVERAGE TURBIDITY:		1.40				
120722-04-RL-2	2697056, 816082	11:15	7'	2	1.19		EBB	0'	4
120722-04-RL-4		11:15		4	1.71				
120722-04-RL-5		11:15		5	1.17				
			AVERAGE TURBIDITY:		1.36				
120722-06-RL-2	2696993, 816240	13:00	7'	2	1.08		EBB	0'	6
120722-06-RL-4		13:00		4	1.14				
120722-06-RL-5		13:00		5	0.98				
			AVERAGE TURBIDITY:		1.07				
120722-08-RL-2	2695940, 816110	15:00	10'	2	0.71		FLOOD	0'	8
120722-08-RL-5		15:00		5	0.96				
120722-08-RL-8		15:00		8	1.11				
			AVERAGE TURBIDITY:		0.93				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
120722-00-ML-2	2697028, 816169	7:05	11'	2	1.14		FLOOD	0	0
120722-00-ML-5		7:05		5	1.11				
120722-00-ML-9		7:05		9	1.82				
			AVERAGE TURBIDITY:		1.36				
			TURBIDITY INCREASE:		0.20				
120722-02-ML-2	2695915, 816294	9:05	13'	2	1.04		EBB	0	2
120722-02-ML-7		9:05		7	1.11				
120722-02-ML-11		9:05		11	1.59				
			AVERAGE TURBIDITY:		1.25				
			TURBIDITY INCREASE:		-0.16				
120722-04-2	2695901, 816373	11:30	9'	2	1.03		EBB	0	4
120722-04-5		11:30		5	1.15				
120722-04-7		11:30		7	1.04				
			AVERAGE TURBIDITY:		1.07				
			TURBIDITY INCREASE:		-0.28				
120722-06-2	2695918, 816457	13:05	9'	2	1.21		EBB	0	6
120722-06-5		13:05		5	1.4				
120722-06-7		13:05		7	2.33				
			AVERAGE TURBIDITY:		1.65				
			TURBIDITY INCREASE:		0.58				
120722-08-2	2697025, 816149	15:05	7'	2	1.2		FLOOD	0	8
120722-08-4		15:05		4	1.22				
120722-08-5		15:05		5	1.17				
			AVERAGE TURBIDITY:		1.20				
			TURBIDITY INCREASE:		0.27				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 12/15/2022
MONITORS: JR/MW
WEATHER CONDITIONS: CLOUDY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 00:24 / 12:29 **Low:** 05:36 / 18:20

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
121522-00-RL-2	2695920 , 816465	7:00	11'	2	1.19		FLOOD	0'	0
121522-00-RL-5		7:00		5	1.4				
121522-00-RL-9		7:00		9	1.5				
			AVERAGE TURBIDITY:		1.36				
121522-02-RL-2	2695904 , 816379	9:10	10'	2	1.56		FLOOD	0'	2
121522-02-RL-5		9:10		5	3.27				
121522-02-RL-8		9:10		8	1.23				
			AVERAGE TURBIDITY:		2.02				
121522-04-RL-2	2695916 , 816288	11:05	15'	2	1.07		FLOOD	0'	4
121522-04-RL-8		11:05		8	3.34				
121522-04-RL-13		11:05		13	10.52				
			AVERAGE TURBIDITY:		4.98				
121522-06-RL-2	2697025 , 816175	13:05	10'	2	0.45		EBB	0'	6
121522-06-RL-5		13:05		5	0.54				
121522-06-RL-8		13:05		8	1.39				
			AVERAGE TURBIDITY:		0.79				
121522-08-RL-2	2697046 , 816095	15:00	9'	2	0.75		EBB	0'	8
121522-08-RL-4		15:00		4	0.91				
121522-08-RL-7		15:00		7	1.12				
			AVERAGE TURBIDITY:		0.93				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
121522-00-ML-2	2697056 , 816007	7:05	9	2	0.7		FLOOD	0	0
121522-00-ML-4		7:05		4	0.76				
121522-00-ML-7		7:05		7	1.92				
			AVERAGE TURBIDITY:		1.13				
			TURBIDITY INCREASE:		-0.24				
121522-02-ML-2	2697031 , 816161	9:15	9'	2	0.79		FLOOD	0	2
121522-02-ML-7		9:15		4	1.06				
121522-02-ML-11		9:15		7	1.45				
			AVERAGE TURBIDITY:		1.10				
			TURBIDITY INCREASE:		-0.92				
121522-04-2	2697049 , 816067	11:15	10'	2	0.82		FLOOD	0	4
121522-04-5		11:15		5	2.63				
121522-04-8		11:15		8	1.1				
			AVERAGE TURBIDITY:		1.52				
			TURBIDITY INCREASE:		-3.46				
121522-06-2	2695930 , 816189	13:15	17'	2	1.74		EBB	0	6
121522-06-8		13:15		8	2.43				
121522-06-15		13:15		15	0.89				
			AVERAGE TURBIDITY:		1.69				
			TURBIDITY INCREASE:		0.89				
121522-08-2	2695930 , 816273	15:05	16'	2	1.29		EBB	0	8
121522-08-8		15:05		8	9.91				
121522-08-14		15:05		14	2.05				
			AVERAGE TURBIDITY:		4.42				
			TURBIDITY INCREASE:		3.49				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 12/21/2022
MONITORS: JR/MW
WEATHER CONDITIONS: CLOUDY
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 05:38 / 18:02 **Low:** 11:44 / 23:25

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
122122-00-RL-2	2697033 , 816180	7:00	11'	2	1.19		EBB	0'	0
122122-00-RL-5		7:00		5	1.04				
122122-00-RL-9		7:00		9	1.07				
			AVERAGE TURBIDITY:		1.10				
122122-02-RL-2	2697072 , 816073	9:00	9'	2	2.36		EBB	0'	2
122122-02-RL-4		9:00		4	3.52				
122122-02-RL-7		9:00		7	1.41				
			AVERAGE TURBIDITY:		2.43				
122122-04-RL-2	2697068 , 815994	11:00	7'	2	1.69		EBB	0'	4
122122-04-RL-4		11:00		4	1.68				
122122-04-RL-5		11:00		5	1.67				
			AVERAGE TURBIDITY:		1.68				
122122-06-RL-2	2695943 , 816174	13:00	10'	2	0.98		FLOOD	0'	6
122122-06-RL-5		13:00		5	1.75				
122122-06-RL-8		13:00		8	1.7				
			AVERAGE TURBIDITY:		1.48				
122122-08-RL-2	2695940 , 816275	15:00	10'	2	0.93		FLOOD	0'	8
122122-08-RL-5		15:00		5	1.54				
122122-08-RL-8		15:00		8	2.57				
			AVERAGE TURBIDITY:		1.68				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
122122-00-ML-2	2695922 , 816278	7:05	13'	2	1.47		EBB	0	0
122122-00-ML-7		7:05		7	2.02				
122122-00-ML-11		7:05		11	5.15				
			AVERAGE TURBIDITY:		2.88				
			TURBIDITY INCREASE:		1.78				
122122-02-ML-2	2695919 , 816376	9:05	10'	2	3.1		EBB	0	2
122122-02-ML-5		9:05		5	3.8				
122122-02-ML-8		9:05		8	1.74				
			AVERAGE TURBIDITY:		2.88				
			TURBIDITY INCREASE:		0.45				
122122-04-2	2695916 , 816458	11:05	9'	2	1.68		EBB	0	4
122122-04-4		11:05		4	1.48				
122122-04-7		11:05		7	2.17				
			AVERAGE TURBIDITY:		1.78				
			TURBIDITY INCREASE:		0.10				
122122-06-2	2697061 , 816076	13:05	7'	2	1.44		FLOOD	0	6
122122-06-4		13:05		4	4.99				
122122-06-5		13:05		5	1.45				
			AVERAGE TURBIDITY:		2.63				
			TURBIDITY INCREASE:		1.15				
122122-08-2	2697025 , 816150	15:05	8'	2	1.53		FLOOD	0	8
122122-08-4		15:05		4	1.45				
122122-08-6		15:05		6	1.96				
			AVERAGE TURBIDITY:		1.65				
			TURBIDITY INCREASE:		-0.03				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 12/28/2022
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: ~~11:52~~ Low: 4:52 / 5:43

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
122822-00-RL-2	2695918 , 816386	7:00	8'	2	2.71		FLOOD	0'	0
122822-00-RL-4		7:00		4	3.75				
122822-00-RL-6		7:00		6	3.76				
			AVERAGE TURBIDITY:		3.41				
122822-02-RL-2	2695921 , 816276	9:05	10'	2	3.24		FLOOD	0'	2
122822-02-RL-5		9:05		5	3.08				
122822-02-RL-8		9:05		8	3.33				
			AVERAGE TURBIDITY:		3.22				
122822-04-RL-2	2695926 , 816212	11:00	12'	2	2.14		FLOOD	0'	4
122822-04-RL-6		11:00		6	3.65				
122822-04-RL-10		11:00		10	4.5				
			AVERAGE TURBIDITY:		3.43				
122822-06-RL-2	2697043 , 816084	13:05	10'	2	2.78		EBB	0'	6
122822-06-RL-5		13:05		5	6.64				
122822-06-RL-8		13:05		8	2.54				
			AVERAGE TURBIDITY:		3.99				
122822-08-RL-2	2697046 , 816095	14:55	9'	2	2.68		EBB	0'	8
122822-08-RL-5		14:55		5	4.4				
122822-08-RL-7		14:55		7	2.44				
			AVERAGE TURBIDITY:		3.17				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

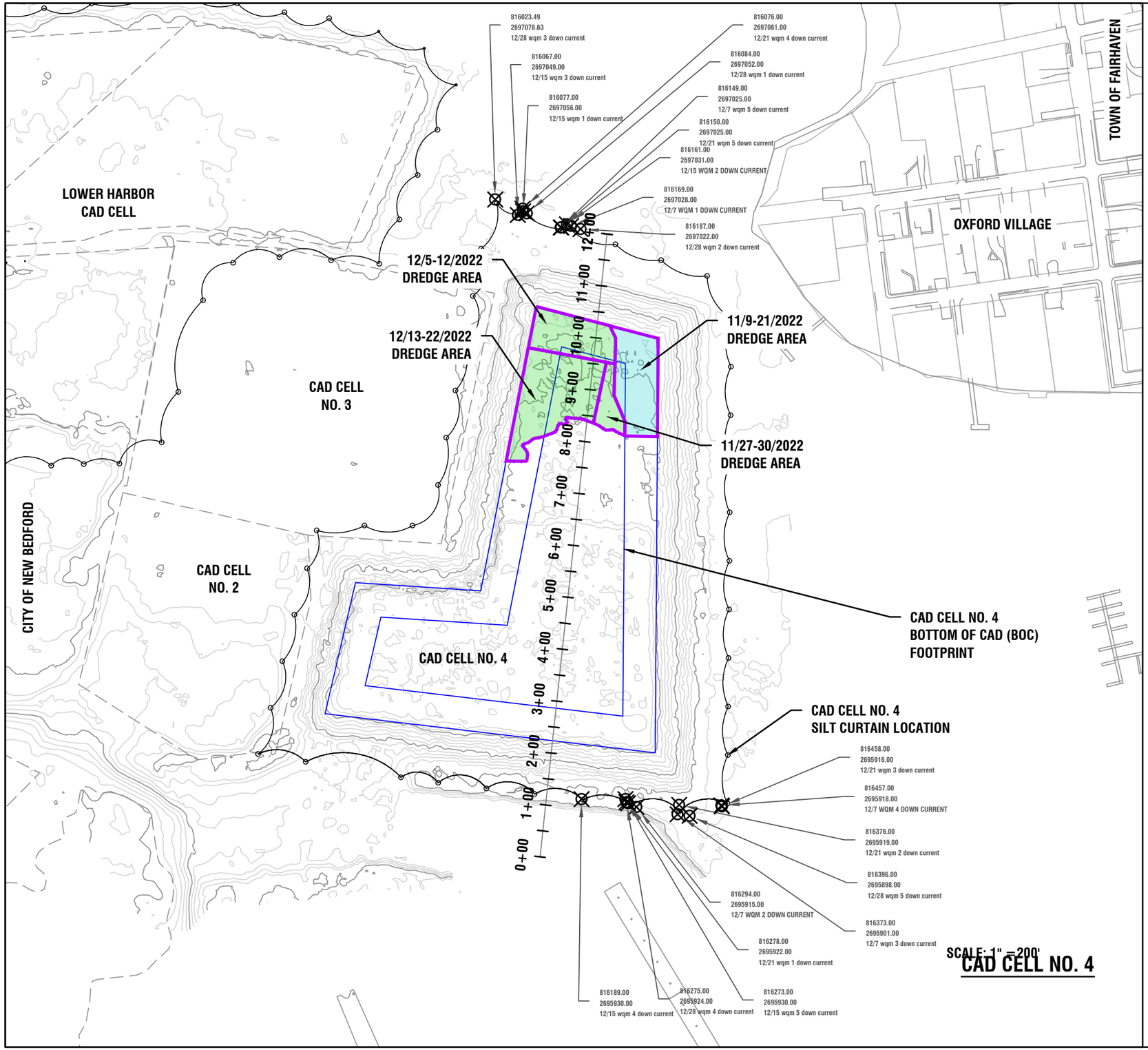
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
122822-00-ML-2	2697052 , 816084	7:05	7'	2	2.57		FLOOD	0	0
122822-00-ML-4		7:05		4	3.22				
122822-00-ML-5		7:05		5	3.49				
			AVERAGE TURBIDITY:		3.09				
			TURBIDITY INCREASE:		-0.31				
122822-02-ML-2	2697022 , 816187	9:10	8'	2	4.47		FLOOD	0	2
122822-02-ML-4		9:10		4	3.05				
122822-02-ML-6		9:10		6	8				
			AVERAGE TURBIDITY:		5.17				
			TURBIDITY INCREASE:		1.96				
122822-04-2	2697079 , 816023	11:05	10'	2	2.43		FLOOD	0	4
122822-04-5		11:05		5	5.63				
122822-04-8		11:05		8	4.06				
			AVERAGE TURBIDITY:		4.04				
			TURBIDITY INCREASE:		0.61				
122822-06-2	2695924 , 816275	13:10	13'	2	2.18		EBB	0	6
122822-06-6		13:10		6	2.32				
122822-06-11		13:10		11	5.24				
			AVERAGE TURBIDITY:		3.25				
			TURBIDITY INCREASE:		-0.74				
122822-08-2	2695898 , 816396	15:00	10'	2	3.64		EBB	0	8
122822-08-5		15:00		5	4.45				
122822-08-8		15:00		8	3.73				
			AVERAGE TURBIDITY:		3.94				
			TURBIDITY INCREASE:		0.77				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	12-30-22
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

WQM - DEC. 7, 2022
WQM - DEC. 15, 2022
WQM - DEC. 21, 2022
WQM - DEC. 28, 2022

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Dec. 5th– 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Figure 2 Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 12/5/2022 TO 12/9/2022

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
12/5/2022	16	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/5/2022	17	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/6/2022	18	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/6/2022	19	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/7/2022	20	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/7/2022	21	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/8/2022	22	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/8/2022	23	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/8/2022	24	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/9/2022	25	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/9/2022	26	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
			Weekly Total	2650	CY			
			CUMULATIVE TOTAL	6850	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 12/12/2022 TO 12/16/2022

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
12/12/2022	27	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/12/2022	28	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/13/2022	29	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/13/2022	30	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/14/2022	31	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/14/2022	32	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/15/2022	33	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/15/2022	34	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
			Weekly Total	2000	CY			
			CUMULATIVE TOTAL	8850	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 12/19/2022 TO 12/23/2022

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
12/19/2022	35	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/19/2022	36	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/20/2022	37	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/20/2022	38	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/20/2022	39	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/21/2022	40	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/21/2022	41	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/22/2022	42	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/22/2022	43	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
			Weekly Total	2350	CY			
			CUMULATIVE TOTAL	11200	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 12/27/2022 TO 12/30/2022

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
12/27/2022	44	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 1		NA
12/28/2022	45	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/28/2022	46	Komatsu 1250	Little Jeff	100	CAD4	NT-Cell 1		NA
12/29/2022	47	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/29/2022	48	Komatsu 1250	Little Jeff	100	CAD4	NT-Cell 1		NA
12/30/2022	49	Komatsu 1250	B-61	350	CAD4	NT-Cell 1		NA
12/30/2022	50	Komatsu 1250	Little Jeff	107	CAD4	NT-Cell 1		NA
			Weekly Total	1507	CY			
			CUMULATIVE TOTAL	12707	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jan. 2nd– Feb. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of January 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal expansion project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 10th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of January 2nd through February 3rd, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of January 2nd through February 3rd, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;
    - Figure 2 – Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheet showing estimated volumes of dredged material for each deck barge transferred for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jan. 2nd– Feb. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the bottom of CAD Cell #4 on November 9th, 2022. The PC-1250, associated deck barges fitted with coamings, and tugs continued this work intermittently thru February 3rd, 2023.

All dredging activities performed at CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Dredging has continued each day of this reporting period as Bottom of CAD Cell #4 dredging continues.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	16,493
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	29,200
Approximate Bottom of CAD Cell #4 Dredging Remaining	124,850
Total Approximate Cofferdam Filling Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	16,493
Approximate Cofferdam Capacity Filled to Date	29,200
Approximate Cofferdam Fill Capacity Remaining	350

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 1/4, 1/10, 1/17, 1/24 & 1/31). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jan. 2nd– Feb. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	44	51	Cloud/Fogy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in northern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	22	38	Clear	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

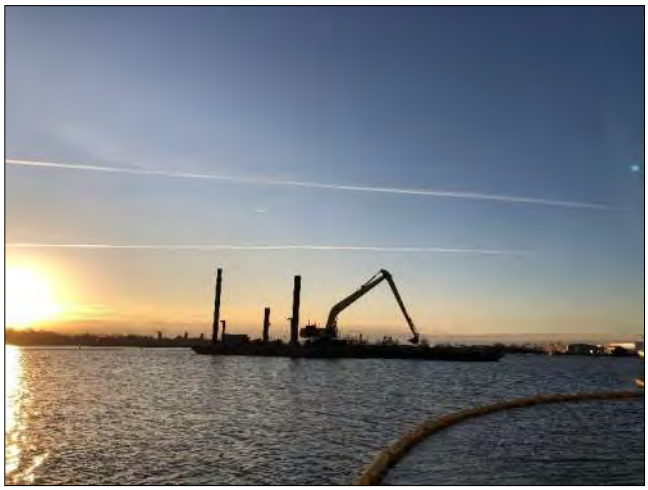
DWW – Dredge PC-1250 on Barge KS1502 in northern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in central area of CAD Cell #4.

Construction Observation Report



Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	30	49	Clear	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the central area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in central area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	30	40	Clear	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the central area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

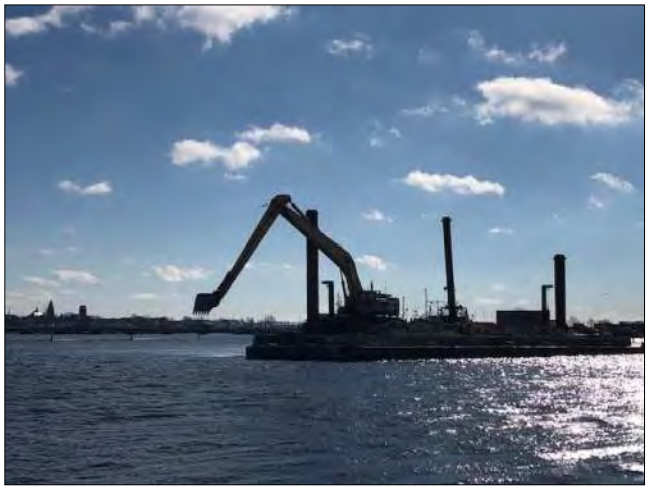
Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in central area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.



Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 1/31/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	28	35	Cloudy	None	0	0	Wind 5-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the central area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Mike Campagnone	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in central area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jan. 2nd– Feb. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 1/4/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / ~~DISPOSAL~~ / ~~CAPPING~~ / ~~BED LEVELING~~
TIDE **High:** 06:05a / 6:22p **Low:** 12:17a / 11:23p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
010423-00-RL-2	2697032 , 816178	7:00	10'	2	1.02		EBB	0'	0
010423-00-RL-5		7:00		5	1.6				
010423-00-RL-8		7:00		8	2.19				
			AVERAGE TURBIDITY:		1.60				
010423-02-RL-2	2696808 , 815982	9:00	13'	2	1.12		EBB	0'	2
010423-02-RL-7		9:00		7	3.77				
010423-02-RL-11		9:00		11	6.69				
			AVERAGE TURBIDITY:		3.86				
010423-04-RL-2	2697088 , 815985	11:10	6'	2	0.95		EBB	0'	4
010423-04-RL-3		11:10		3	1.49				
010423-04-RL-4		11:10		4	2.25				
			AVERAGE TURBIDITY:		1.56				
010423-06-RL-2	2695953 , 816087	13:15	13'	2	1.25		FLOOD	0'	6
010423-06-RL-6		13:15		6	1.82				
010423-06-RL-11		13:15		11	2.14				
			AVERAGE TURBIDITY:		1.74				
010423-08-RL-2	2695933 , 81175	15:00	9'	2	1.56		FLOOD	0'	8
010423-08-RL-4		15:00		4	1.63				
010423-08-RL-7		15:00		7	2.75				
			AVERAGE TURBIDITY:		1.98				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
010423-00-ML-2	2695929 , 816474	7:05	11'	2	1.49		EBB	0	0
010423-00-ML-5		7:05		5	1.73				
010423-00-ML-9		7:05		9	1.58				
			AVERAGE TURBIDITY:		1.60				
			TURBIDITY INCREASE:		0.00				
010423-02-ML-2	2695913 , 816362	9:05	9'	2	1.66		EBB	0	2
010423-02-ML-4		9:05		4	1.77				
010423-02-ML-7		9:05		7	2.31				
			AVERAGE TURBIDITY:		1.91				
			TURBIDITY INCREASE:		-1.95				
010423-04-2	2695925 , 816270	11:15	14'	2	1.53		EBB	0	4
010423-04-7		11:15		7	1.82				
010423-04-12		11:15		12	2.88				
			AVERAGE TURBIDITY:		2.08				
			TURBIDITY INCREASE:		0.51				
010423-06-2	2696972 , 815999	13:25	6'	2	2.45		FLOOD	0	6
010423-06-3		13:25		3	3.12				
010423-06-4		13:25		4	3.82				
			AVERAGE TURBIDITY:		3.13				
			TURBIDITY INCREASE:		1.39				
010423-08-2	2697030 , 816154	15:10	7'	2	2.18		FLOOD	0	8
010423-08-4		15:10		4	3.65				
010423-08-5		15:10		5	4.24				
			AVERAGE TURBIDITY:		3.36				
			TURBIDITY INCREASE:		1.38				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 1/11/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 10:25a / 10:58p **Low:** 3:37a / 4:09p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
011123-00-RL-2	2695901 , 816360	7:00	9'	2	1.84		FLOOD	0'	0
011123-00-RL-4		7:00		4	1.85				
011123-00-RL-7		7:00		7	3.14				
			AVERAGE TURBIDITY:		2.28				
011123-02-RL-2	2695926 , 816280	9:00	12'	2	2.44		FLOOD	0'	2
011123-02-RL-6		9:00		6	3.06				
011123-02-RL-10		9:00		10	4.05				
			AVERAGE TURBIDITY:		3.18				
011123-04-RL-2	2697047 , 816109	11:00	10'	2	1.57		EBB	0'	4
011123-04-RL-5		11:00		5	1.77				
011123-04-RL-8		11:00		8	1.61				
			AVERAGE TURBIDITY:		1.65				
011123-06-RL-2	2697029 , 816114	13:00	9'	2	1.92		EBB	0'	6
011123-06-RL-4		13:00		4	6.86				
011123-06-RL-7		13:00		7	2.25				
			AVERAGE TURBIDITY:		3.68				
011123-08-RL-2	2697047 , 816068	15:00	7'	2	2.45		EBB	0'	8
011123-08-RL-4		15:00		4	1.68				
011123-08-RL-5		15:00		5	2.64				
			AVERAGE TURBIDITY:		2.26				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
011123-00-ML-2	2696816 , 815968	7:05	13'	2	1.99		FLOOD	0	0
011123-00-ML-6		7:05		6	4.42				
011123-00-ML-11		7:05		11	3.17				
			AVERAGE TURBIDITY:		3.19				
			TURBIDITY INCREASE:		0.92				
011123-02-ML-2	2696893 , 815989	9:05	13'	2	2.11		FLOOD	0	2
011123-02-ML-6		9:05		6	2				
011123-02-ML-11		9:05		11	1.36				
			AVERAGE TURBIDITY:		1.82				
			TURBIDITY INCREASE:		-1.36				
011123-04-ML-2	2695921 , 816171	11:05	12'	2	1.53		EBB	0	4
011123-04-ML-6		11:05		6	1.82				
011123-04-ML-12		11:05		10	2.88				
			AVERAGE TURBIDITY:		2.08				
			TURBIDITY INCREASE:		0.43				
011123-06-ML-2	2695950 , 816094	13:05	12'	2	2.38		EBB	0	6
011123-06-ML-6		13:05		6	5.7				
011123-06-ML-10		13:05		10	16.08				
			AVERAGE TURBIDITY:		8.05				
			TURBIDITY INCREASE:		4.38				
011123-08-ML-2	2695922 , 816272	15:05	10'	2	3.2		EBB	0	8
011123-08-ML-5		15:05		5	7.01				
011123-08-ML-8		15:05		8	13.06				
			AVERAGE TURBIDITY:		7.76				
			TURBIDITY INCREASE:		5.50				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 1/17/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 3:06a / 3:36p **Low:** 9:35a / 9:08p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
011723-00-RL-2	2697054 , 816081	7:00	7'	2	2.14		EBB	0'	0
011723-00-RL-4		7:00		4	4.34				
011723-00-RL-5		7:00		5	2.02				
			AVERAGE TURBIDITY:		2.83				
011723-02-RL-2	2697029 , 816172	9:00	7'	2	1.5		EBB	0'	2
011723-02-RL-4		9:00		4	1.5				
011723-02-RL-5		9:00		5	2.2				
			AVERAGE TURBIDITY:		1.73				
011723-04-RL-2	2695931 , 816261	11:10	9'	2	1.55		FLOOD	0'	4
011723-04-RL-4		11:10		4	2.8				
011723-04-RL-7		11:10		7	3.4				
			AVERAGE TURBIDITY:		2.58				
011723-06-RL-2	2697029 , 816114	13:10	14'	2	1.94		FLOOD	0'	6
011723-06-RL-7		13:10		7	3.78				
011723-06-RL-12		13:10		12	4.7				
			AVERAGE TURBIDITY:		3.47				
011723-08-RL-2	2695937 , 816116	15:05	12'	2	1.75		FLOOD	0'	8
011723-08-RL-6		15:05		6	3.13				
011723-08-RL-10		15:05		10	3.59				
			AVERAGE TURBIDITY:		2.82				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
011723-00-ML-2	2695939 , 816094	7:10	10'	2	2.26		EBB	0	0
011723-00-ML-5		7:10		5	2.2				
011723-00-ML-8		7:10		8	2.54				
			AVERAGE TURBIDITY:		2.33				
			TURBIDITY INCREASE:		-0.50				
011723-02-ML-2	2695938 , 816181	9:05	9'	2	3.77		EBB	0	2
011723-02-ML-4		9:05		4	5.13				
011723-02-ML-7		9:05		7	5.91				
			AVERAGE TURBIDITY:		4.94				
			TURBIDITY INCREASE:		3.20				
011723-04-ML-2	2696775 , 815954	11:15	11'	2	2.84		FLOOD	0	4
011723-04-ML-5		11:15		5	5.29				
011723-04-ML-9		11:15		9	3.78				
			AVERAGE TURBIDITY:		3.97				
			TURBIDITY INCREASE:		1.39				
011723-06-ML-2	2696780 , 815969	13:15	12'	2	6.92		FLOOD	0	6
011723-06-ML-6		13:15		6	6.96				
011723-06-ML-10		13:15		10	4.77				
			AVERAGE TURBIDITY:		6.22				
			TURBIDITY INCREASE:		2.74				
011723-08-ML-2	2696891 , 815995	15:10	11'	2	1.63		FLOOD	0	8
011723-08-ML-5		15:10		5	4.4				
011723-08-ML-9		15:10		9	3.72				
			AVERAGE TURBIDITY:		3.25				
			TURBIDITY INCREASE:		0.43				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 1/24/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 9:41a / 10:07p **Low:** 2:53a / 3:34p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
012423-00-RL-2	2695950 , 816102	7:00	11'	2	1.53		FLOOD	0'	0
012423-00-RL-6		7:00		6	1.44				
012423-00-RL-11		7:00		9	3.93				
			AVERAGE TURBIDITY:		2.30				
012423-02-RL-2	2695937 , 816449	9:00	11'	2	1.82		FLOOD	0'	2
012423-02-RL-6		9:00		6	1.68				
012423-02-RL-9		9:00		9	2.67				
			AVERAGE TURBIDITY:		2.06				
012423-04-RL-2	2696688 , 815949	11:00	13'	2	1.18		EBB	0'	4
012423-04-RL-7		11:00		7	1.33				
012423-04-RL-11		11:00		11	4.75				
			AVERAGE TURBIDITY:		2.42				
012423-06-RL-2	2696775 , 815963	13:00	11'	2	9.24		EBB	0'	6
012423-06-RL-6		13:00		6	1.5				
012423-06-RL-9		13:00		9	2.19				
			AVERAGE TURBIDITY:		4.31				
012423-08-RL-2	2696798 , 815954	15:00	10'	2	9.7		EBB	0'	8
012423-08-RL-5		15:00		5	17.65				
012423-08-RL-8		15:00		8	3.78				
			AVERAGE TURBIDITY:		10.38				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
012423-00-ML-2	2697093 , 815991	7:05	8'	2	1.45		FLOOD	0	0
012423-00-ML-4		7:05		4	12.31				
012423-00-ML-6		7:05		6	1.63				
			AVERAGE TURBIDITY:		5.13				
			TURBIDITY INCREASE:		2.83				
012423-02-ML-2	2696971 , 815998	9:05	9'	2	1.38		FLOOD	0	2
012423-02-ML-5		9:05		5	2.19				
012423-02-ML-7		9:05		7	1.16				
			AVERAGE TURBIDITY:		1.58				
			TURBIDITY INCREASE:		-0.48				
012423-04-ML-2	2695939 , 81075	11:05	16'	2	1.94		EBB	0	4
012423-04-ML-8		11:05		8	3.03				
012423-04-ML-14		11:05		14	1.95				
			AVERAGE TURBIDITY:		2.31				
			TURBIDITY INCREASE:		-0.11				
012423-06-ML-2	2695918 , 816260	13:05	10'	2	1.75		EBB	0	6
012423-06-ML-5		13:05		5	1.87				
012423-06-ML-8		13:05		8	1.51				
			AVERAGE TURBIDITY:		1.71				
			TURBIDITY INCREASE:		-2.60				
012423-08-ML-2	2695912 , 816371	15:05	7'	2	2.33		EBB	0	8
012423-08-ML-4		15:05		4	2.25				
012423-08-ML-5		15:05		5	2.16				
			AVERAGE TURBIDITY:		2.25				
			TURBIDITY INCREASE:		-8.13				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 1/31/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / ~~DISPOSAL~~ / ~~CAPPING~~ / ~~BED LEVELING~~
TIDE **High:** 3:54a / 4:16p **Low:** 10:47a / 9:30p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
013123-00-RL-2	2697710 , 815955	7:00	12'	2	2.18		EBB	0'	0
013123-00-RL-6		7:00		6	2.61				
013123-00-RL-10		7:00		10	3.14				
				AVERAGE TURBIDITY:	2.64				
013123-02-RL-2	2696794 , 815957	9:00	12'	2	2.26		EBB	0'	2
013123-02-RL-6		9:00		6	3.01				
013123-02-RL-10		9:00		10	2.85				
				AVERAGE TURBIDITY:	2.71				
013123-04-RL-2	2695940 , 816174	11:00	10'	2	1.97		FLOOD	0'	4
013123-04-RL-5		11:00		5	3.8				
013123-04-RL-8		11:00		8	2.52				
				AVERAGE TURBIDITY:	2.76				
013123-06-RL-2	2695939 , 816094	13:00	14'	2	2.23		FLOOD	0'	6
013123-06-RL-7		13:00		7	5.63				
013123-06-RL-12		13:00		12	2.32				
				AVERAGE TURBIDITY:	3.39				
013123-08-RL-2	2695918 , 816179	14:50	11'	2	3.05		FLOOD	0'	8
013123-08-RL-6		14:50		6	7.13				
013123-08-RL-9		14:50		9	3.28				
				AVERAGE TURBIDITY:	4.49				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

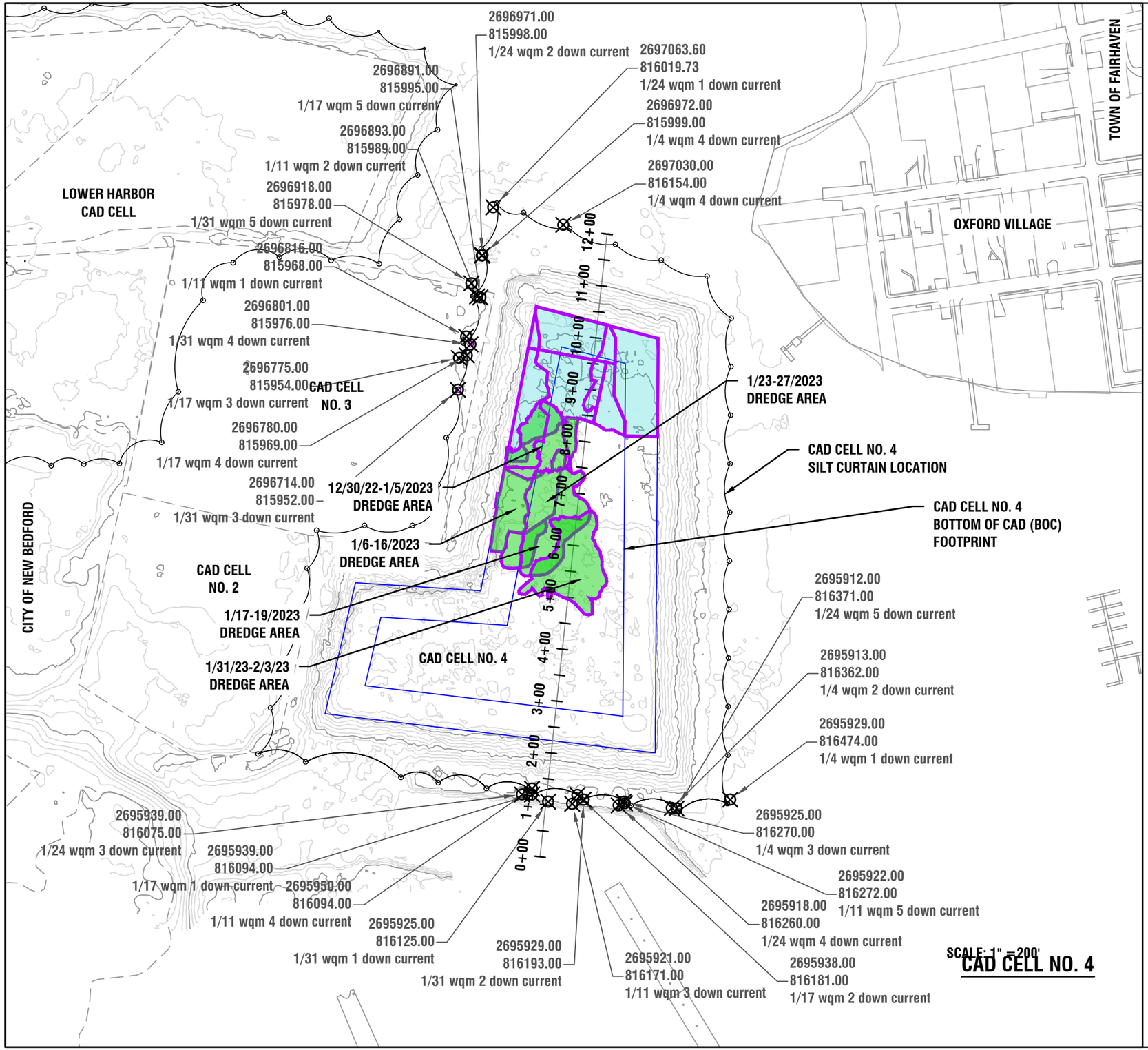
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
013123-00-ML-2	2695925 , 816125	7:05	10'	2	3.2		EBB	0	0
013123-00-ML-5		7:05		5	3.3				
013123-00-ML-8		7:05		8	3.88				
				AVERAGE TURBIDITY:	3.46				
				TURBIDITY INCREASE:	0.82				
013123-02-ML-2	2695929 , 816193	9:05	10'	2	1.84		EBB	0	2
013123-02-ML-5		9:05		5	2.6				
013123-02-ML-8		9:05		8	2.8				
				AVERAGE TURBIDITY:	2.41				
				TURBIDITY INCREASE:	-0.29				
013123-04-ML-2	2696714 , 815952	11:05	12'	2	1.84		FLOOD	0	4
013123-04-ML-6		11:05		6	4.62				
013123-04-ML-10		11:05		10	5.91				
				AVERAGE TURBIDITY:	4.12				
				TURBIDITY INCREASE:	1.36				
013123-06-ML-2	2696801 , 815976	13:05	12'	2	3.64		FLOOD	0	6
013123-06-ML-6		13:05		6	8.57				
013123-06-ML-10		13:05		10	16.62				
				AVERAGE TURBIDITY:	9.61				
				TURBIDITY INCREASE:	6.22				
013123-08-ML-2	2696918 , 815978	15:05	13'	2	3.61		FLOOD	0	8
013123-08-ML-7		15:05		7	2.26				
013123-08-ML-11		15:05		11	3.69				
				AVERAGE TURBIDITY:	3.19				
				TURBIDITY INCREASE:	-1.30				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 INCH = 200 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	2-3-23
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

WQM - JAN. 4, 2023

DRAWING NO.

WQM - JAN. 17, 2023
WQM - JAN. 24, 2023
WQM - JAN. 11, 2023
WQM - JAN. 31, 2023

Attachment 4

Figure 2 Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 1/2/2023 TO 1/6/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
1/3/2023	51	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/3/2023	52	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/4/2023	53	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/4/2023	54	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/5/2023	55	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/5/2023	56	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/5/2023	57	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/6/2023	58	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/6/2023	59	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/6/2023	60	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
			Weekly Total	3000	CY			
			CUMULATIVE TOTAL	15707	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 1/9/2023 TO 1/13/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
1/9/2023	61	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/9/2023	62	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/10/2023	63	Komatsu 1250	B-61	400	CAD4	NT-Cell 3		NA
1/10/2023	64	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 3		NA
1/11/2023	65	Komatsu 1250	B-61	400	CAD4	NT-Cell 2a		NA
1/11/2023	66	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 2a		NA
1/12/2023	67	Komatsu 1250	B-61	400	CAD4	NT-Cell 2a		NA
1/12/2023	68	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 2a		NA
			Weekly Total	2400	CY			
			CUMULATIVE TOTAL	18107	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 1/16/2023 TO 1/20/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
1/16/2023	69	Komatsu 1250	Little Jeff	400	CAD4	NT-Cell 4		NA
1/17/2023	70	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/17/2023	71	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/18/2023	72	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/18/2023	73	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/18/2023	74	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/19/2023	75	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/19/2023	76	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/20/2023	77	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/20/2023	78	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/20/2023	79	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
			Weekly Total	3400	CY			
			CUMULATIVE TOTAL	21507	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 1/23/2023 TO 1/27/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
1/23/2023	80	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/23/2023	81	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/23/2023	82	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/24/2023	83	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/24/2023	84	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/24/2023	85	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/25/2023	86	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/25/2023	87	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/26/2023	88	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/26/2023	89	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/26/2023	90	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/26/2023	91	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
1/27/2023	92	Komatsu 1250	B-61	400	CAD4	NT-Cell 4		NA
1/27/2023	93	Komatsu 1250	Little Jeff	200	CAD4	NT-Cell 4		NA
			Weekly Total	4200	CY			
			CUMULATIVE TOTAL	25707	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 1/30/2023 TO 2/03/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
1/30/2023	94	Komatsu 1250	B-61	350	CAD4	NT-Cell 4		NA
1/30/2023	95	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 4		NA
1/31/2023	96	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
1/31/2023	97	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 5		NA
1/31/2023	98	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
2/1/2023	99	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 5		NA
2/1/2023	100	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
2/1/2023	101	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 5		NA
2/2/2023	102	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
2/2/2023	103	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 5		NA
2/2/2023	104	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
2/3/2023	105	Komatsu 1250	Little Jeff	150	CAD4	NT-Cell 5		NA
2/3/2023	106	Komatsu 1250	B-61	350	CAD4	NT-Cell 5		NA
2/3/2023	107	Komatsu 1250	Little Jeff	151	CAD4	NT-Cell 5		NA
			Weekly Total	3501	CY			
			CUMULATIVE TOTAL	29208	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Feb. 6th– Mar. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of February 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal expansion project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 11th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of February 3rd through March 3rd, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of February 3rd through March 3rd, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.

    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;
    - Figure 2 – Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheet showing estimated volumes of dredged material for each deck barge transferred for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Feb. 6th– Mar. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the bottom of CAD Cell #4 on November 9th, 2022. The PC-1250, associated deck barges fitted with coamings, pocket dump scow, and tugs continued this work intermittently thru March 3rd, 2023.

All dredging activities performed at CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Dredging has continued each day of this reporting period as Bottom of CAD Cell #4 dredging continues. Intermittent disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the Mary P. pocket dump scow.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area

Dredge Area (cy)	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	5,963
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	35,163
Approximate Bottom of CAD Cell #4 Dredging Remaining	116,047
Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	350
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	5,613
Approximate Infield Capacity Filled to Date	5,613
Approximate Infield Fill Capacity Remaining	63,137

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 2/7, 2/17, & 3/1). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Feb. 6th– Mar. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	27	39	Clear	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the central area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Dredging began into pocket scow "Mary P" for disposal in the infield area west of new cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

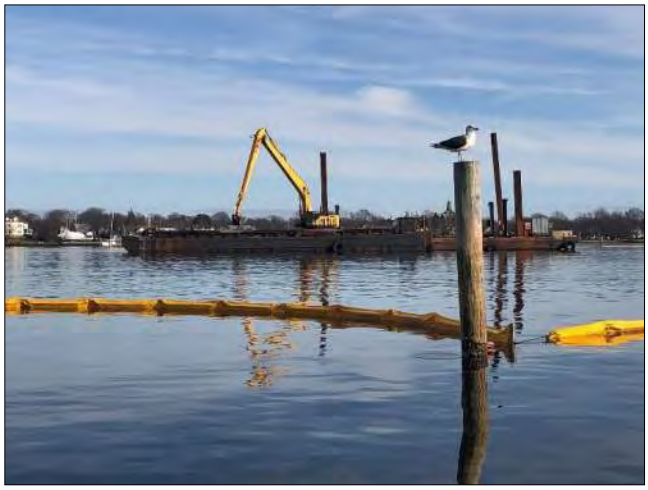
Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in central area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.



Dredge PC-1250 dredging at CAD Cell #4.

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	28	56	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the southern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Dredging continued intermittently into pocket scow "Mary P" for disposal in the infield area west of new cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in southern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 3/1/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	32	46	Clear	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the southern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Dredging continued intermittently into pocket scow "Mary P" for disposal in the infield area west of new cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in southern area of CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Feb. 6th– Mar. 3rd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Form

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 2/7/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 8:47a / 9:08p **Low:** 2:02a / 2:41p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
020723-00-RL-2	2695922 , 816201	7:00	16'	2	2.86		FLOOD	0'	0
020723-00-RL-8		7:00		8	3.36				
020723-00-RL-14		7:00		14	9.78				
			AVERAGE TURBIDITY:		5.33				
020723-02-RL-2	2695932 , 816083	8:40	16'	2	4.38		FLOOD	0'	2
020723-02-RL-8		8:40		8	3.31				
020723-02-RL-14		8:40		14	4.31				
			AVERAGE TURBIDITY:		4.00				
020723-04-RL-2	2696704 , 815947	11:05	13'	2	2.73		EBB	0'	4
020723-04-RL-7		11:05		7	2.43				
020723-04-RL-11		11:05		11	2.87				
			AVERAGE TURBIDITY:		2.68				
020723-06-RL-2	2696708 , 815940	12:40	13'	2	2.46		EBB	0'	6
020723-06-RL-7		12:40		7	5.47				
020723-06-RL-11		12:40		11	5.13				
			AVERAGE TURBIDITY:		4.35				
020723-08-RL-2	2695918 , 816179	15:00	10'	2	3.04		FLOOD	0'	8
020723-08-RL-5		15:00		5	3.46				
020723-08-RL-8		15:00		8	5.27				
			AVERAGE TURBIDITY:		3.92				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
020723-00-ML-2	2696736 , 815952	7:05	15'	2	2.69		FLOOD	0	0
020723-00-ML-8		7:05		8	3.68				
020723-00-ML-13		7:05		13	3.52				
			AVERAGE TURBIDITY:		3.30				
			TURBIDITY INCREASE:		-2.04				
020723-02-ML-2	2696942 , 816002	8:45	15'	2	2.98		FLOOD	0	2
020723-02-ML-8		8:45		8	3.43				
020723-02-ML-13		8:45		13	2.72				
			AVERAGE TURBIDITY:		3.04				
			TURBIDITY INCREASE:		-0.96				
020723-04-ML-2	2695932 , 816096	11:10	16'	2	5.24		EBB	0	4
020723-04-ML-8		11:10		8	5.93				
020723-04-ML-14		11:10		14	9.42				
			AVERAGE TURBIDITY:		6.86				
			TURBIDITY INCREASE:		4.19				
020723-06-ML-2	2695938 , 816187	12:50	13'	2	5.56		EBB	0	6
020723-06-ML-7		12:50		7	5.02				
020723-06-ML-11		12:50		11	6.1				
			AVERAGE TURBIDITY:		5.56				
			TURBIDITY INCREASE:		1.21				
020723-08-ML-2	2696904 , 815992	15:05	12'	2	2.32		FLOOD	0	8
020723-08-ML-6		15:05		6	3.05				
020723-08-ML-10		15:05		10	4.05				
			AVERAGE TURBIDITY:		3.14				
			TURBIDITY INCREASE:		-0.78				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 2/7/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 8:47a / 9:08p Low: 2:02a / 2:41p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DISPOSAL/SILT CURTAIN	INFIELD DISPOSAL #
020723-00-RL-2	2696984 , 814271	12:30	12'	2	3.35		EBB	0'	1
020723-00-RL-8		12:30		6	4.77				
020723-00-RL-14		12:30		10	4.91				
			AVERAGE TURBIDITY:		4.34				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
020723-00-ML-2	2695470 , 814464	12:35	17'	2	4.17		EBB	0	0
020723-00-ML-8		12:35		8	3.99				
020723-00-ML-15		12:35		15	3.5				
			AVERAGE TURBIDITY:		3.89				
			TURBIDITY INCREASE:		-0.46				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 2/17/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 5:01a / 5:28p **Low:** 11:24a / 11:01p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
021723-00-RL-2	2696521 , 815918	7:00	14'	2	1.13		EBB	0'	0
021723-00-RL-7		7:00		7	1.35				
021723-00-RL-12		7:00		12	3.21				
			AVERAGE TURBIDITY:		1.90				
021723-02-RL-2	2696535 , 815913	9:00	12'	2	1.35		EBB	0'	2
021723-02-RL-6		9:00		6	1.3				
021723-02-RL-10		9:00		10	2.67				
			AVERAGE TURBIDITY:		1.77				
021723-04-RL-2	2696725 , 815947	11:00	11'	2	2.1		EBB	0'	4
021723-04-RL-5		11:00		5	1.89				
021723-04-RL-9		11:00		9	1.53				
			AVERAGE TURBIDITY:		1.84				
021723-06-RL-2	2695919 , 816272	13:00	9'	2	1.94		FLOOD	0'	6
021723-06-RL-5		13:00		5	2.76				
021723-06-RL-7		13:00		7	11.75				
			AVERAGE TURBIDITY:		5.48				
021723-08-RL-2	2695928 , 816274	15:00	10'	2	1.69		FLOOD	0'	8
021723-08-RL-5		15:00		5	2				
021723-08-RL-8		15:00		8	5.34				
			AVERAGE TURBIDITY:		3.01				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
021723-00-ML-2	2695915 , 816272	7:05	11'	2	1.59		EBB	0	0
021723-00-ML-6		7:05		6	1.53				
021723-00-ML-9		7:05		9	2.52				
			AVERAGE TURBIDITY:		1.88				
			TURBIDITY INCREASE:		-0.02				
021723-02-ML-2	2695885 , 816248	9:05	10'	2	4.18		EBB	0	2
021723-02-ML-5		9:05		5	5.24				
021723-02-ML-8		9:05		8	3.79				
			AVERAGE TURBIDITY:		4.40				
			TURBIDITY INCREASE:		2.63				
021723-04-ML-2	2695944 , 816217	11:05	10'	2	1.71		EBB	0	4
021723-04-ML-5		11:05		5	1.44				
021723-04-ML-8		11:05		8	1.77				
			AVERAGE TURBIDITY:		1.64				
			TURBIDITY INCREASE:		-0.20				
021723-06-ML-2	2696463 , 815867	13:05	11'	2	1.42		FLOOD	0	6
021723-06-ML-6		13:05		6	2.06				
021723-06-ML-9		13:05		9	3.32				
			AVERAGE TURBIDITY:		2.27				
			TURBIDITY INCREASE:		-3.22				
021723-08-ML-2	2696723 , 815945	15:05	12'	2	1.49		FLOOD	0	8
021723-08-ML-6		15:05		6	1.51				
021723-08-ML-10		15:05		10	2				
			AVERAGE TURBIDITY:		1.67				
			TURBIDITY INCREASE:		-1.34				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/1/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF CAD DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 3:22a / 3:45p **Low:** 10:18a / 9:04p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
030123-00-RL-2	2696517 , 815935	7:00	13'	2	1.32		EBB	0'	0
030123-00-RL-7		7:00		7	2.13				
030123-00-RL-11		7:00		11	2.25				
			AVERAGE TURBIDITY:		1.90				
030123-02-RL-2	2696487 , 815914	9:00	12'	2	1.74		EBB	0'	2
030123-02-RL-6		9:00		6	1.64				
030123-02-RL-10		9:00		10	1.66				
			AVERAGE TURBIDITY:		1.68				
030123-04-RL-2	2695974 , 816279	11:00	13'	2	1.93		FLOOD	0'	4
030123-04-RL-6		11:00		6	4.41				
030123-04-RL-11		11:00		11	18.34				
			AVERAGE TURBIDITY:		8.23				
030123-06-RL-2	2695950 , 816107	13:00	10'	2	1.1		FLOOD	0'	6
030123-06-RL-5		13:00		5	1.62				
030123-06-RL-8		13:00		8	2.35				
			AVERAGE TURBIDITY:		1.69				
030123-08-RL-2	2695938 , 816112	15:00	12'	2	1.72		FLOOD	0'	8
030123-08-RL-6		15:00		6	1.39				
030123-08-RL-10		15:00		10	13.69				
			AVERAGE TURBIDITY:		5.60				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

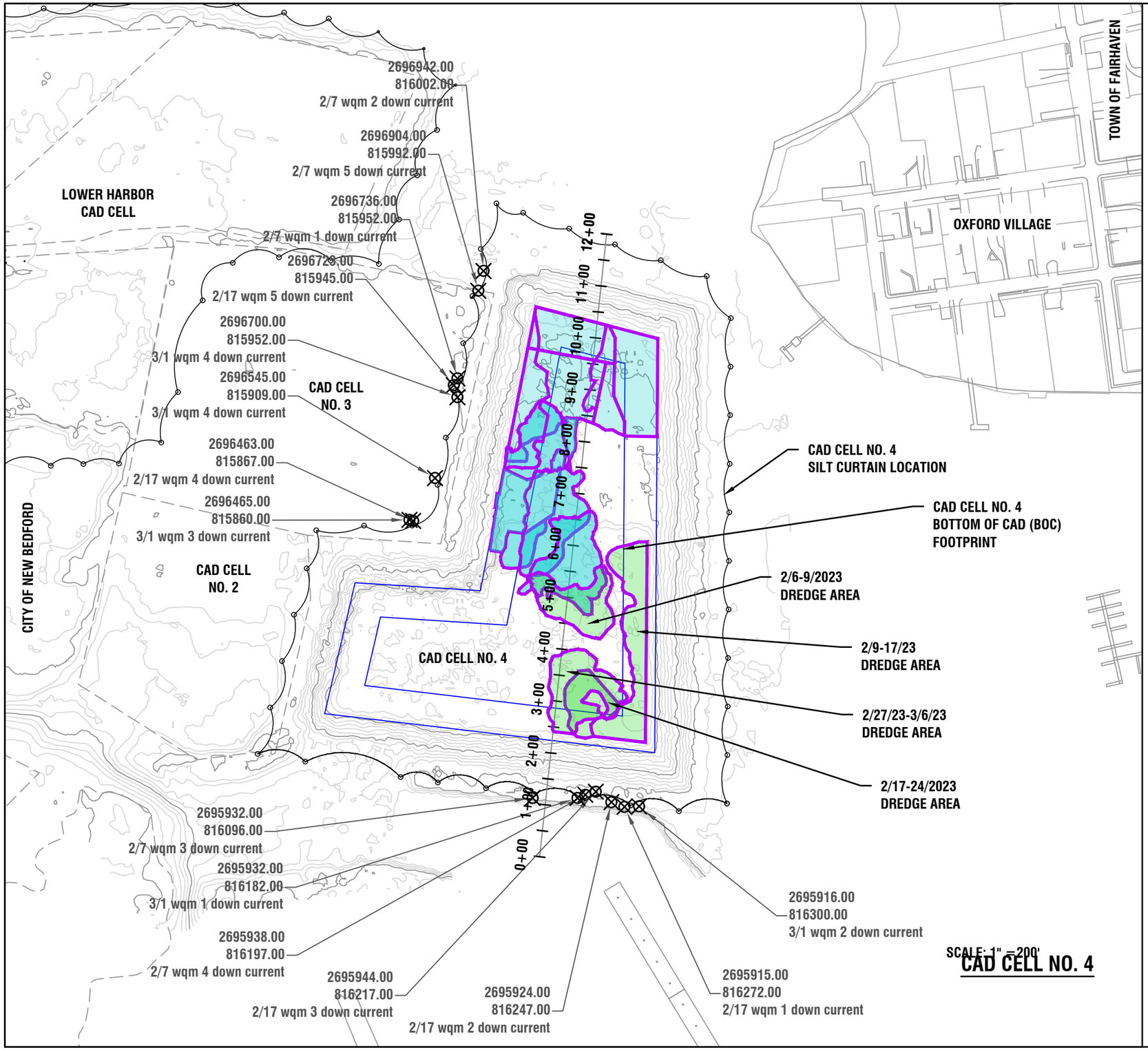
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
030123-00-ML-2	2695932 , 816182	7:05	10'	2	2.71		EBB	0	0
030123-00-ML-5		7:05		5	1.38				
030123-00-ML-8		7:05		8	2.46				
			AVERAGE TURBIDITY:		2.18				
			TURBIDITY INCREASE:		0.28				
030123-02-ML-2	2695916 , 816300	9:05	13'	2	1.26		EBB	0	2
030123-02-ML-6		9:05		6	1.31				
030123-02-ML-11		9:05		11	5.01				
			AVERAGE TURBIDITY:		2.53				
			TURBIDITY INCREASE:		0.85				
030123-04-ML-2	2696465 , 815860	11:05	12	2	1.44		FLOOD	0	4
030123-04-ML-6		11:05		6	1.6				
030123-04-ML-10		11:05		10	2.55				
			AVERAGE TURBIDITY:		1.86				
			TURBIDITY INCREASE:		-6.36				
030123-06-ML-2	2696545 , 815909	13:05	13'	2	4.21		FLOOD	0	6
030123-06-ML-7		13:05		7	4.63				
030123-06-ML-11		13:05		11	6.23				
			AVERAGE TURBIDITY:		5.02				
			TURBIDITY INCREASE:		3.33				
030123-08-ML-2	2696700 , 815952	15:05	13'	2	1.52		FLOOD	0	8
030123-08-ML-7		15:05		7	1.57				
030123-08-ML-11		15:05		11	7.95				
			AVERAGE TURBIDITY:		3.68				
			TURBIDITY INCREASE:		-1.92				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	3-3-23
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

~~WQM - FEB. 7, 2023~~

DRAWING NO.

WQM - MAR. 1, 2023
WQM - FEB. 17, 2023

Attachment 4

Figure 2 Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 2/6/2023 TO 2/10/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
2/6/2023	108	Komatsu 1250	B-61	200	CAD4	NT-Cell 4		NA
2/6/2023	109	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 4		NA
2/6/2023	110	Komatsu 1250	B-61	200	CAD4	NT-Cell 5		NA
2/7/2023	111	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/7/2023	112	Komatsu 1250	Mary P	500	CAD4	Infield		NA
2/7/2023	113	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/8/2023	114	Komatsu 1250	Mary P	500	CAD4	NT-Cell 5		NA
2/8/2023	115	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/8/2023	116	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/9/2023	117	Komatsu 1250	B-61	200	CAD4	NT-Cell 5		NA
2/9/2023	118	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/10/2023	119	Komatsu 1250	B-61	200	CAD4	NT-Cell 5		NA
2/10/2023	120	Komatsu 1250	Little Jeff	75	CAD4	NT-Cell 5		NA
2/10/2023	121	Komatsu 1250	B-61	200	CAD4	NT-Cell 5		NA
			Weekly Total	2525	CY			
			CUMULATIVE TOTAL	31725	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 2/13/2023 TO 2/17/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
2/13/2023	122	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/13/2023	123	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/14/2023	124	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/14/2023	125	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/15/2023	126	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/16/2023	127	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/17/2023	128	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/17/2023	129	Komatsu 1250	Mary P	300	CAD4	Infield		NA
			Weekly Total	1950	CY			
			CUMULATIVE TOTAL	33675	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 2/20/2023 TO 2/24/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
2/21/2023	130	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/22/2023	131	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/22/2023	132	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/23/2023	133	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/23/2023	134	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/23/2023	135	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/24/2023	136	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/24/2023	137	Komatsu 1250	Little Jeff	63	CAD4	Infield		NA
			Weekly Total	1488	CY			
			CUMULATIVE TOTAL	35163	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Mar. 6th – Mar. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of March 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal expansion project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 12th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of March 6th through March 31st, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of March 6th through March 31st, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;
    - Figure 2 – North Terminal Pre-Cell Extension Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;

- Figure 3 – Lower Harbor CAD Cell Disposal Plan which shows areas of the disposal and daily approximate locations of the water quality monitoring events conducted during disposal activities;
- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site, and North Terminal Pre-Cell Extension dredging for disposal into LHCC.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging continued from March 6th, 2023 through March 8th. A change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. Pre-cell expansion area dredging was disposed into Lower Harbor CAD Cell (LHCC). DWW began bed leveling operations at LHCC on March 29th, 2023. The PC-1250, fitted with bed leveling beam continued bed leveling intermittently in LHCC through March 31st, 2023.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the North Terminal pre-cell extension area and CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Dredging of CAD Cell #4 continued until March 8th, 2023 and is expected to resume in early April. Intermittent disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the Mary P. pocket dump scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and continued through March 31st, 2023.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	2,982
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	38,145
Approximate Bottom of CAD Cell #4 Dredging Remaining	115,905
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	350
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	2,982
Approximate Infield Capacity Filled to Date	8,595
Approximate Infield Fill Capacity Remaining	60,155
Estimate Total Pre-Cell Extension Capacity Available	8,100
Approximate Pre-Cell Extension Volume Dredged (This Reporting Period	6,910
Approximate Pre-Cell Extension Volume Dredged to Date	6,910
Approximate Pre-Cell Extension Capacity Remaining	1,190

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 3/7, 3/15, & 3/24). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Mar. 6th – Mar. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 3/7/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	35	43	Clear	None	0	0	Wind 10-20	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

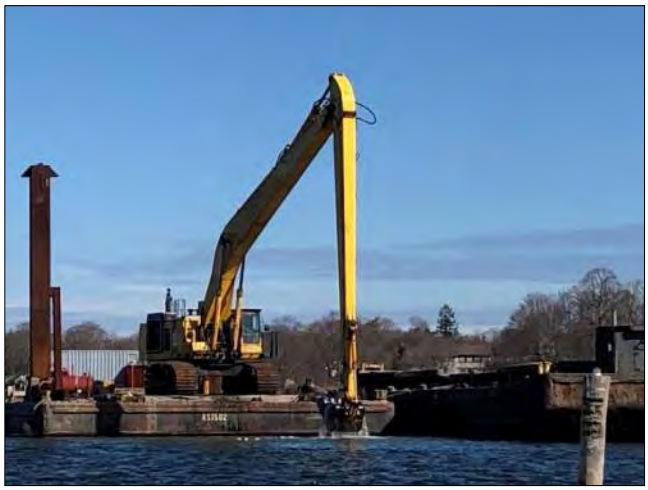
DWW – Dredge PC-1250 on Barge KS1502 in the southern area of CAD 4. Dredging continues into flat top barges "B" and "Little Jeff" for transfer into cofferdam cells. Dredging continued intermittently into pocket scow "Mary P" for disposal in the infield area west of new cofferdam cells. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in southern area of CAD Cell #4.

Construction Observation Report



Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 3/15/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	35	44	Clear	None	0	0	Wind 20-25	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the pre-cell dredge area for cofferdam cofferdam cells 5a-7. Dredging began in the pre-cell expansion area on March 13,2023. Dredging continues into pocket scow "Mary P" for disposal in the Lower Harbor CAD Cell. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in pre-cell expansion area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Disposal of Scow Mary P into LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 3/24/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	41	54	Clear	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 in the pre-cell dredge area for cofferdam cells 5a-7. Dredging began in the pre-cell expansion area on March 13,2023. Dredging of the pre-cell expansion area was completed on March 24th, 2023. All pre-cell expansion dredging utilized pocket scow "Mary P" for disposal in the Lower Harbor CAD Cell. Crews completed dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued dredge activities in pre-cell expansion area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Disposal of Scow Mary P into LHCC.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Mar. 6th – Mar. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/7/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD4 BOTTOM OF ~~CAD DREDGING~~
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 7:45a /8:03p **Low:** 1:06a / 1:36p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
030723-00-RL-2	2695940 , 816179	7:00	13'	2	1.35		FLOOD	0'	0
030723-00-RL-6		7:00		6	1.42				
030723-00-RL-11		7:00		11	2.34				
			AVERAGE TURBIDITY:		1.70				
030723-02-RL-2	2696693 , 815944	9:00	14'	2	1.06		EBB	0'	2
030723-02-RL-7		9:00		7	1.45				
030723-02-RL-12		9:00		12	1.24				
			AVERAGE TURBIDITY:		1.25				
030723-04-RL-2	2696452 , 815865	11:00	13'	2	1		EBB	0'	4
030723-04-RL-6		11:00		6	1.25				
030723-04-RL-11		11:00		11	1.1				
			AVERAGE TURBIDITY:		1.12				
030723-06-RL-2	2696469 , 815780	13:00	12'	2	1.53		EBB	0'	6
030723-06-RL-6		13:00		6	1.14				
030723-06-RL-10		13:00		10	5.39				
			AVERAGE TURBIDITY:		2.69				
030723-08-RL-2	2695930 , 816194	15:00	14'	2	1.5		FLOOD	0'	8
030723-08-RL-7		15:00		7	1.41				
030723-08-RL-12		15:00		12	8.18				
			AVERAGE TURBIDITY:		3.70				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
030723-00-ML-2	2696550 , 815929	7:05	14'	2	1.23		FLOOD	0	0
030723-00-ML-7		7:05		7	1.63				
030723-00-ML-12		7:05		12	1.28				
			AVERAGE TURBIDITY:		1.38				
			TURBIDITY INCREASE:		-0.32				
030723-02-ML-2	2695973 , 815832	9:05	15'	2	2.45		EBB	0	2
030723-02-ML-7		9:05		7	4.03				
030723-02-ML-13		9:05		13	6.95				
			AVERAGE TURBIDITY:		4.48				
			TURBIDITY INCREASE:		3.23				
030723-04-ML-2	2695917 , 816274	11:05	18'	2	2.41		EBB	0	4
030723-04-ML-9		11:05		9	4.7				
030723-04-ML-16		11:05		16	2.03				
			AVERAGE TURBIDITY:		3.05				
			TURBIDITY INCREASE:		1.93				
030723-06-ML-2	2695931 , 816192	13:05	13'	2	2.76		EBB	0	6
030723-06-ML-6		13:05		6	2.49				
030723-06-ML-11		13:05		11	3.72				
			AVERAGE TURBIDITY:		2.99				
			TURBIDITY INCREASE:		0.30				
030723-08-ML-2	2696700 , 815952	15:05	13'	2	1.52		FLOOD	0	8
030723-08-ML-7		15:05		7	1.57				
030723-08-ML-11		15:05		11	7.95				
			AVERAGE TURBIDITY:		3.68				
			TURBIDITY INCREASE:		-0.02				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/15/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 2:17a /2:50p **Low:** 8:14a / 8:02p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
031523-00-RL-2	2697184 , 814349	7:00	10'	2	1.98		EBB	0'	0
031523-00-RL-5		7:00		5	1.34				
031523-00-RL-8		7:00		8	1.32				
			AVERAGE TURBIDITY:		1.55				
031523-02-RL-2	2696886 , 814443	9:20	11'	2	10.99		FLOOD	0'	2
031523-02-RL-6		9:20		6	29.75				
031523-02-RL-9		9:20		9	12.54				
			AVERAGE TURBIDITY:		17.76				
031523-04-RL-2	2696899 , 814448	11:00	11'	2	4.01		FLOOD	0'	4
031523-04-RL-6		11:00		6	1.13				
031523-04-RL-9		11:00		9	0.83				
			AVERAGE TURBIDITY:		1.99				
031523-06-RL-2	2696906 , 814468	13:00	13'	2	2.06		FLOOD	0'	6
031523-06-RL-7		13:00		7	1.57				
031523-06-RL-11		13:00		11	0.79				
			AVERAGE TURBIDITY:		1.47				
031523-08-RL-2	2696900 , 814470	14:40	13'	2	2.16		FLOOD	0'	8
031523-08-RL-7		14:40		7	2				
031523-08-RL-11		14:40		11	0.97				
			AVERAGE TURBIDITY:		1.71				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
031523-00-ML-2	2696896 , 814421	7:05	14'	2	2.06		EBB	0	0
031523-00-ML-7		7:05		7	1.54				
031523-00-ML-12		7:05		12	1.78				
			AVERAGE TURBIDITY:		1.79				
			TURBIDITY INCREASE:		0.25				
031523-02-ML-2	2697195 , 814339	9:25	10'	2	20.65		FLOOD	0	2
031523-02-ML-5		9:25		5	31.36				
031523-02-ML-8		9:25		8	27.38				
			AVERAGE TURBIDITY:		26.46				
			TURBIDITY INCREASE:		8.70				
031523-04-ML-2	2697187 , 814378	11:05	12'	2	7		FLOOD	0	4
031523-04-ML-6		11:05		6	40.71				
031523-04-ML-10		11:05		10	17.34				
			AVERAGE TURBIDITY:		21.68				
			TURBIDITY INCREASE:		19.69				
031523-06-ML-2	2697178 , 814445	13:05	16'	2	37.97		FLOOD	0	6
031523-06-ML-8		13:05		8	3.34				
031523-06-ML-14		13:05		14	5.2				
			AVERAGE TURBIDITY:		15.50				
			TURBIDITY INCREASE:		14.03				
031523-08-ML-2	2697180 , 814440	14:45	15'	2	26.1		FLOOD	0	8
031523-08-ML-9		14:45		9	21.7				
031523-08-ML-13		14:45		13	16.05				
			AVERAGE TURBIDITY:		21.28				
			TURBIDITY INCREASE:		19.57				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/15/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 2:17a /2:50p Low: 8:14a / 8:02p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	DISPOSAL TIME
031523-D1-000-RL-2	2696553 , 815183	8:50	6'	2	3.44		FLOOD	0'	8:57
031523-D1-000-RL-3		8:50		3	2.85				
031523-D1-000-RL-4		8:50		4	2.44				
			AVERAGE TURBIDITY:		2.91				
031523-D2-000-RL-2	2696533 , 815106	11:50	7'	2	3.74		FLOOD	0'	11:50
031523-D2-000-RL-4		11:50		4	2.11				
031523-D2-000-RL-5		11:50		5	1.59				
			AVERAGE TURBIDITY:		2.48				
031523-D3-000-RL-2	2696534 , 815094	13:40	8'	2	2.8		FLOOD	0'	13:45
031523-D3-000-RL-4		13:40		4	2.52				
031523-D3-000-RL-6		13:40		6	1.46				
			AVERAGE TURBIDITY:		2.26				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	Disposal Time
031523-D1-003-ML-2	2697442 , 815131	9:00	8'	2	1.46		FLOOD	0	8:57
031523-D1-003-ML-4		9:00		4	1.16				
031523-D1-003-ML-6		9:00		6	1.05				
			AVERAGE TURBIDITY:		1.22				
			TURBIDITY INCREASE:		-1.69				
031523-D2-005-ML-2	2697440 , 815140	11:55	10'	2	8.32		FLOOD	0	11:50
031523-D2-005-ML-5		11:55		5	6.57				
031523-D2-005-ML-8		11:55		8	1.99				
			AVERAGE TURBIDITY:		5.63				
			TURBIDITY INCREASE:		3.15				
031523-D3-005-ML-2	2697430 , 815095	13:50	11'	2	4.04		FLOOD	0	13:45
031523-D3-005-ML-6		13:50		6	4.66				
031523-D3-005-ML-9		13:50		9	3.42				
			AVERAGE TURBIDITY:		4.04				
			TURBIDITY INCREASE:		1.78				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/24/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE **High:** 10:43a /11:06p **Low:** 4:12a / 3:58p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
032423-00-RL-2	2696593 , 814420	7:00	13'	2	1		FLOOD	0'	0
032423-00-RL-7		7:00		7	1.56				
032423-00-RL-11		7:00		11	1.25				
				AVERAGE TURBIDITY:	1.27				
032423-02-RL-2	2696862 , 814414	9:00	14'	2	1.44		FLOOD	0'	2
032423-02-RL-7		9:00		7	1.45				
032423-02-RL-12		9:00		12	1.17				
				AVERAGE TURBIDITY:	1.35				
032423-04-RL-2	2697199 , 814427	11:05	15'	2	2.55		EBB	0'	4
032423-04-RL-7		11:05		7	11.11				
032423-04-RL-13		11:05		13	6.08				
				AVERAGE TURBIDITY:	6.58				
032423-06-RL-2	2697208 , 814436	13:10	15'	2	1.41		EBB	0'	6
032423-06-RL-7		13:10		7	14.27				
032423-06-RL-13		13:10		13	6.07				
				AVERAGE TURBIDITY:	7.25				
032423-08-RL-2	2697241 , 814478	15:00	14'	2	2.52		EBB	0'	8
032423-08-RL-7		15:00		7	48				
032423-08-RL-12		15:00		12	22.8				
				AVERAGE TURBIDITY:	24.44				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
032423-00-ML-2	2697185 , 814463	7:05	12'	2	2.02		FLOOD	0	0
032423-00-ML-6		7:05		6	3.06				
032423-00-ML-10		7:05		10	2.69				
				AVERAGE TURBIDITY:	2.59				
				TURBIDITY INCREASE:	1.32				
032423-02-ML-2	2697196 , 814457	9:05	14'	2	1.94		FLOOD	0	2
032423-02-ML-7		9:05		7	24.72				
032423-02-ML-12		9:05		12	2.21				
				AVERAGE TURBIDITY:	9.62				
				TURBIDITY INCREASE:	8.27				
032423-04-ML-2	2696870 , 814434	11:10	17'	2	3.64		EBB	0	4
032423-04-ML-8		11:10		8	36.65				
032423-04-ML-15		11:10		15	5.29				
				AVERAGE TURBIDITY:	15.19				
				TURBIDITY INCREASE:	8.61				
032423-06-ML-2	2696882 , 814445	13:15	11'	2	16.34		EBB	0	6
032423-06-ML-5		13:15		5	14.03				
032423-06-ML-9		13:15		9	40.33				
				AVERAGE TURBIDITY:	23.57				
				TURBIDITY INCREASE:	16.32				
032423-08-ML-2	2696931 , 814459	15:05	11'	2	23.22		EBB	0	8
032423-08-ML-5		15:05		5	30.4				
032423-08-ML-9		15:05		9	29.16				
				AVERAGE TURBIDITY:	27.59				
				TURBIDITY INCREASE:	3.15				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 3/24/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 10:43a /11:06p **Low:** 4:12a / 3:58p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	DISPOSAL TIME
032423-D1-010-RL-2	2697450 , 815135	13:00	10'	2	1.33		EBB	0'	12:50
032423-D1-010-RL-5		13:00		5	1.75				
032423-D1-010-RL-8		13:00		8	1.52				
			AVERAGE TURBIDITY:		1.53				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	Disposal Time
031523-D1-015-ML-2	2696552 , 815129	13:05	8'	2	1.63		EBB	0	12:50
031523-D1-015-ML-4		13:05		4	1.36				
031523-D1-015-ML-6		13:05		6	1.37				
			AVERAGE TURBIDITY:		1.45				
			TURBIDITY INCREASE:		-0.08				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring

Figure 2 Weekly North Terminal Pre-Cell Extension Tracking and Water Quality Monitoring

Figure 3 Weekly Bottom of Lower Harbor CAD Cell Disposal Tracking and Water Quality Monitoring

LOWER HARBOR
CAD CELL

2696700.00
815952.00
3/7 wqm 5 down current

2696550.00
815929.00
3/7 wqm 1 down current

CAD CELL
NO. 3

CAD CELL
NO. 2

CITY OF NEW BEDFORD

CAD CELL NO. 4

OXFORD VILLAGE

TOWN OF FAIRHAVEN

7+00
8+00
9+00
10+00
11+00
12+00
6+00
5+00
4+00
3+00
2+00
1+00
0+00

CAD CELL NO. 4
SILT CURTAIN LOCATION

CAD CELL NO. 4
BOTTOM OF CAD (BOC)
FOOTPRINT

3/7-9/23
DREDGE AREA

2/27/23-3/6/23
DREDGE AREA

2695973.00
815832.00
3/7 wqm 2 down current

2695917.00
816274.00
3/7 wqm 3 down current

2695931.00
816192.00
3/7 wqm 4 down current

SCALE: 1" = 200'

CAD CELL NO. 4

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 INCH = 200 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	03-31-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

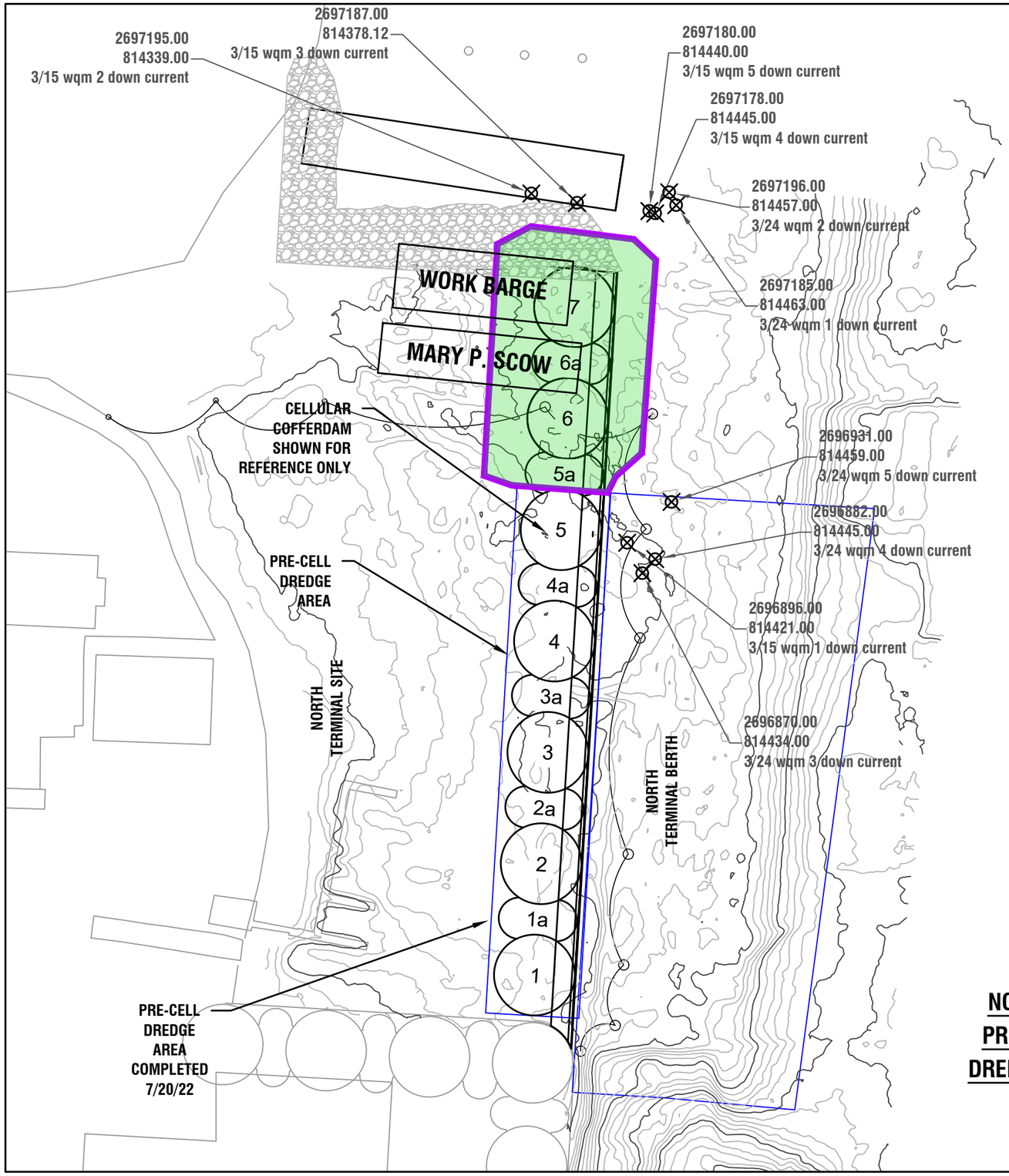
SHEET TITLE

**BOTTOM OF
CAD CELL NO. 4
DREDGE PROGRESS**

FIGURE 1

DRAWING NO.

WQM - MAR. 7, 2023



NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

SCALE: 1" =100'

LEGEND:

- AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL
- LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS
- WATER QUALITY MONITORING TARGET
- AREA DREDGED TO DATE
- APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	03-31-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

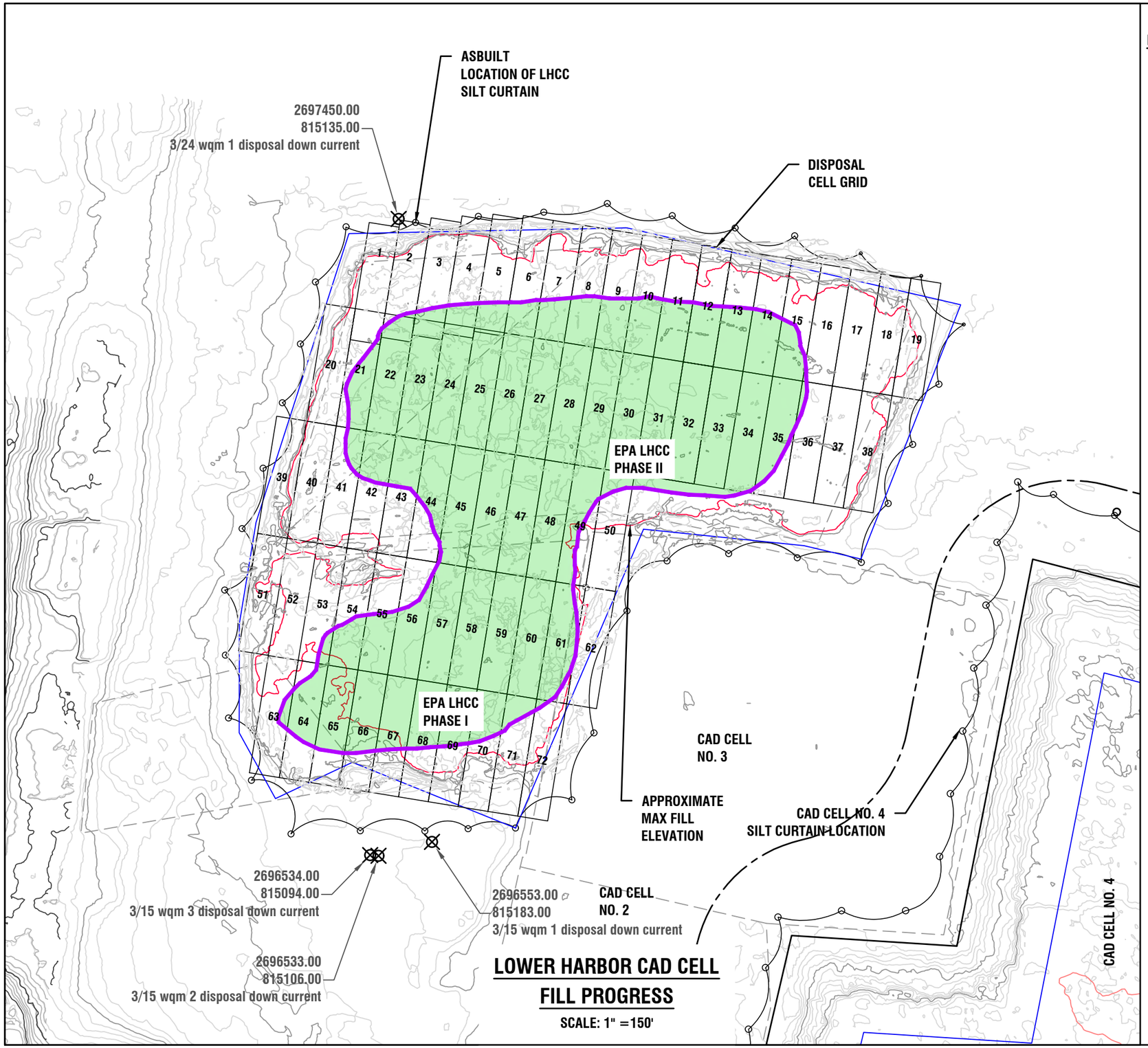
SHEET TITLE

NORTH TERMINAL PRE-CELL & BERTH DREDGING PROGRESS

FIGURE 2

DRAWING NO.

WQM - MAR. 15, 2023
WQM - MAR. 24, 2023



LOWER HARBOR CAD CELL
FILL PROGRESS
SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY FILL AREA

AREA FILLED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE
0 75 150 300
(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	03-31-2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL FILL PROGRESS

FIGURE 3:

DRAWING NO.
WQM - MAR. 15, 2023
WQM - MAR. 24, 2023

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Mar. 6th – Mar. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 2/27/2023 TO 3/3/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
2/27/2023	139	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/27/2023	140	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/28/2023	141	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
2/28/2023	142	Komatsu 1250	Mary P	300	CAD4	Infield		NA
2/28/2023	143	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/1/2023	144	Komatsu 1250	Mary P	300	CAD4	Infield		NA
3/1/2023	145	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/1/2023	146	Komatsu 1250	Mary P	300	CAD4	Infield		NA
3/2/2023	147	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/2/2023	148	Komatsu 1250	Mary P	300	CAD4	Infield		NA
3/3/2023	149	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/3/2023	150	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/3/2023	151	Komatsu 1250	Mary P	300	CAD4	Infield		NA
			Weekly Total	2025	CY			
			CUMULATIVE TOTAL	37188	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 3/6/2023 TO 3/10/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
3/6/2023	152	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/6/2023	153	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/7/2023	154	Komatsu 1250	Mary P	200	CAD4	Infield		NA
3/7/2023	155	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/7/2023	156	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/8/2023	157	Komatsu 1250	Mary P	200	CAD4	Infield		NA
3/8/2023	158	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/8/2023	159	Komatsu 1250	Mary P	200	CAD4	Infield		NA
3/8/2023	160	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/8/2023	161	Komatsu 1250	Little Jeff	75	CAD4	Infield		NA
3/8/2023	162	Komatsu 1250	Mary P	232	CAD4	Infield		NA
			Weekly Total	1357	CY			
			CUMULATIVE TOTAL	38145	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 3/13/2023 TO 3/17/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
3/13/2023	1	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/13/2023
3/13/2023	2	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/13/2023
3/15/2023	3	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/15/2023
3/15/2023	4	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/15/2023
3/15/2023	5	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/15/2023
3/15/2023	6	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/15/2023
3/16/2023	7	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/16/2023
3/16/2023	8	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/16/2023
3/16/2023	9	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/16/2023
3/16/2023	10	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/16/2023
3/17/2023	11	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/17/2023
3/17/2023	12	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/17/2023
3/17/2023	13	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/17/2023
3/17/2023	14	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/17/2023
			Weekly Total	3600	CY			
			CUMULATIVE TOTAL	3600	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 3/20/2023 TO 3/24/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
3/20/2023	15	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/20/2023
3/20/2023	16	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/20/2023
3/20/2023	17	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/20/2023
3/20/2023	18	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/20/2023
3/21/2023	19	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/21/2023
3/21/2023	20	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/21/2023
3/21/2023	21	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/21/2023
3/22/2023	22	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/22/2023
3/22/2023	23	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/22/2023
3/24/2023	24	Komatsu 1250	Mary P	300	PRECELLEXP	LHCC		3/24/2023
3/24/2023	25	Komatsu 1250	Mary P	310	PRECELLEXP	LHCC		3/24/2023
			Weekly Total	3310	CY			
			CUMULATIVE TOTAL	6910	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Apr. 3rd– Apr. 28th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of April 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal expansion project area and bed leveling activities with Lower Harbor CAD Cell.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 13th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of April 3rd through April 28th, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of April 3rd through April 28th, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 3a – Lower Harbor CAD Cell Pre Bed Leveling Plan which shows areas requiring bed leveling and daily approximate locations of the water quality monitoring events conducted during disposal events;
    -
    - Figure 3b – Lower Harbor CAD Post Bed Leveling Pal which shows areas results of bed leveling activities and daily approximate locations of the water quality monitoring events conducted during bed leveling events;

-
- Figure 4 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;
-
- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site, and North Terminal Pre-Cell Extension dredging for disposal into LHCC.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023 and has continued in through April 28th, 2023.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the “Mary P.” pocket dump, and flat barges “Little Jeff” and “B” scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC . Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023 and continued through April 28th, 2023.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	8,371
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	46,516
Approximate Bottom of CAD Cell #4 Dredging Remaining	107,534
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	350
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	8,371
Approximate Infield Capacity Filled to Date	16,966
Approximate Infield Fill Capacity Remaining	51,784
Estimate Total Pre-Cell Extension Capacity Available	8,100
Approximate Pre-Cell Extension Volume Dredged (This Reporting Period	0
Approximate Pre-Cell Extension Volume Dredged to Date	6,910
Approximate Pre-Cell Extension Capacity Remaining	1,190

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 4/4, 4/19, & 4/24). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	35	64	Clear	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW – Dredge PC-1250 on Barge KS1502 completed pre-cell extension of cofferdam cells 5a through 7 on March 24, 2023. Dredge PC-1250 on Barge KS1502 began bed leveling activities at Lower Harbor CAD Cell on March 29, 2023. Crews continued bed leveling activities from 07:00am to 17:00pm.

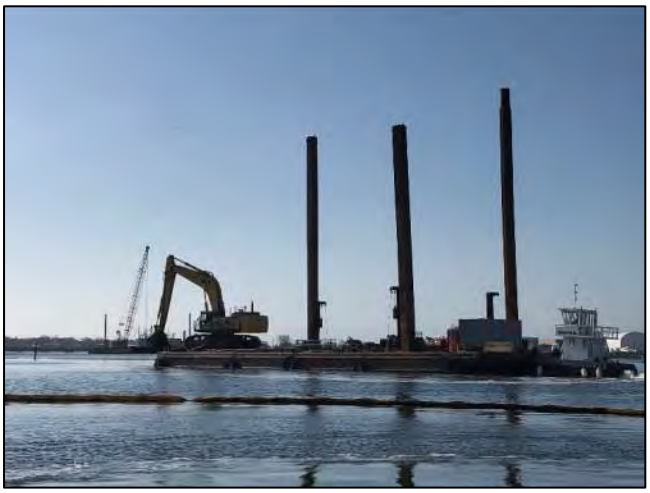
Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued bed leveling activities in LHCC disposal area.

Construction Observation Report

Dredge PC-1250 bed leveling at LHCC.



Dredge PC-1250 bed leveling at LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 4/19/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	34	49	Clear	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 completed bed leveling activities at Lower Harbor CAD Cell on April 11, 2023. Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Daniel Espinosa	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 4/24/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	44	58	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 completed bed leveling activities at Lower Harbor CAD Cell on April 11, 2023. Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Joe Baranello	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 4/4/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 7:38a /7:56p **Low:** 1:03a / 1:21p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
040423-00-RL-2	2696884 , 815469	7:00	15'	2	1.95		FLOOD	0'	0
040423-00-RL-8		7:00		8	1.98				
040423-00-RL-13		7:00		13	1.24				
				AVERAGE TURBIDITY:	1.72				
040423-02-RL-2	2697450 , 815161	9:00	9'	2	1.99		EBB	0'	2
040423-02-RL-4		9:00		4	2.67				
040423-02-RL-7		9:00		7	6.51				
				AVERAGE TURBIDITY:	3.72				
040423-04-RL-2	2697453 , 815137	11:00	9'	2	22.84		EBB	0'	4
040423-04-RL-4		11:00		4	26.76				
040423-04-RL-7		11:00		7	16.14				
				AVERAGE TURBIDITY:	21.91				
040423-06-RL-2	2697437 , 815044	13:00	8'	2	14.84		EBB	0'	6
040423-06-RL-4		13:00		4	27.81				
040423-06-RL-6		13:00		6	21.43				
				AVERAGE TURBIDITY:	21.36				
040423-08-RL-2	2696555 , 814971	14:30	8'	2	5.23		FLOOD	0'	8
040423-08-RL-4		14:30		4	12.97				
040423-08-RL-6		14:30		6	23.2				
				AVERAGE TURBIDITY:	13.80				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
040423-00-ML-2	2697483 , 815602	7:05	6'	2	2.03		FLOOD	0	0
040423-00-ML-3		7:05		3	2.35				
040423-00-ML-4		7:05		4	3.27				
				AVERAGE TURBIDITY:	2.55				
				TURBIDITY INCREASE:	0.83				
040423-02-ML-2	2696957 , 815533	9:05	15'	2	5.96		EBB	0	2
040423-02-ML-8		9:05		7	8.63				
040423-02-ML-13		9:05		12	3.2				
				AVERAGE TURBIDITY:	5.93				
				TURBIDITY INCREASE:	2.21				
040423-04-ML-2	2696554 , 815192	11:05	8'	2	26.36		EBB	0	4
040423-04-ML-4		11:05		4	8.42				
040423-04-ML-6		11:05		6	10.62				
				AVERAGE TURBIDITY:	15.13				
				TURBIDITY INCREASE:	-6.78				
040423-06-ML-2	2696629 , 814915	13:05	10'	2	16.13		EBB	0	6
040423-06-ML-5		13:05		5	20.16				
040423-06-ML-8		13:05		8	12.94				
				AVERAGE TURBIDITY:	16.41				
				TURBIDITY INCREASE:	-4.95				
040423-08-ML-2	2697440 , 815050	15:05	9'	2	26.43		FLOOD	0	8
040423-08-ML-5		15:05		5	28.87				
040423-08-ML-7		15:05		7	31.04				
				AVERAGE TURBIDITY:	28.78				
				TURBIDITY INCREASE:	14.98				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 4/19/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 8:02a /8:24p **Low:** 1:44a / 1:30p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
041923-00-RL-2	2695929 , 816192	7:00	13'	2	1.57		FLOOD	0'	0
041923-00-RL-7		7:00		7	1.89				
041923-00-RL-11		7:00		11	2.6				
			AVERAGE TURBIDITY:		2.02				
041923-02-RL-2	2696516 , 815915	9:00	14'	2	1.32		EBB	0'	2
041923-02-RL-7		9:00		7	1.27				
041923-02-RL-12		9:00		12	1.06				
			AVERAGE TURBIDITY:		1.22				
041923-04-RL-2	2696786 , 815943	11:00	12'	2	1.01		EBB	0'	4
041923-04-RL-6		11:00		6	1.09				
041923-04-RL-10		11:00		10	1.04				
			AVERAGE TURBIDITY:		1.05				
041923-06-RL-2	2696708 , 815947	13:00	10	2	1.2		EBB	0'	6
041923-06-RL-5		13:00		5	1.33				
041923-06-RL-8		13:00		8	1.15				
			AVERAGE TURBIDITY:		1.23				
041923-08-RL-2	2695902 , 816373	15:00	7'	2	2.05		FLOOD	0'	8
041923-08-RL-3		15:00		3	1.74				
041923-08-RL-5		15:00		5	1.73				
			AVERAGE TURBIDITY:		1.84				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
041923-00-ML-2	2696615 , 815926	7:05	14'	2	1.18		FLOOD	0	0
041923-00-ML-7		7:05		7	1.26				
041923-00-ML-12		7:05		12	1.14				
			AVERAGE TURBIDITY:		1.19				
			TURBIDITY INCREASE:		-0.83				
041923-02-ML-2	2695906 , 816267	9:05	12'	2	2.27		EBB	0	2
041923-02-ML-6		9:05		6	1.8				
041923-02-ML-10		9:05		10	1.65				
			AVERAGE TURBIDITY:		1.91				
			TURBIDITY INCREASE:		0.69				
041923-04-ML-2	2695897 , 816383	11:05	8'	2	5.26		EBB	0	4
041923-04-ML-4		11:05		4	2.43				
041923-04-ML-6		11:05		6	2.31				
			AVERAGE TURBIDITY:		3.33				
			TURBIDITY INCREASE:		2.29				
041923-06-ML-2	2695915 , 816472	13:05	9'	2	2.45		EBB	0	6
041923-06-ML-4		13:05		4	1.67				
041923-06-ML-7		13:05		7	2.07				
			AVERAGE TURBIDITY:		2.06				
			TURBIDITY INCREASE:		0.84				
041923-08-ML-2	2696518 , 815916	15:05	10'	2	1.44		FLOOD	0	8
041923-08-ML-5		15:05		5	1.24				
041923-08-ML-8		15:05		8	1.17				
			AVERAGE TURBIDITY:		1.28				
			TURBIDITY INCREASE:		-0.56				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion	
JOB NUMBER: 02N001.10	
DATE:	**4/19/2023**
MONITORS: JR/MW	
WEATHER CONDITIONS:	**CLEAR**
WIND: 5-10 NW	
PRIOR STORM EVENTS:	**None**
DREDGE UPDATE:	**NORTH TERMINAL PRE-CELL ~~DREDGING~~**
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING	
TIDE High: 08:02a /08:24p	**Low:** ~~1:44a / 1:30p~~

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	DISPOSAL TIME
041923-D1-005-RL-2	2697170 , 814327	13:00	14'	2	0.82		EBB	0'	12:50
041923-D1-005-RL-7		13:00		7	1				
041923-D1-005-RL-12		13:00		12	1.15				
			AVERAGE TURBIDITY:		0.99				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	Disposal Time
041923-D1-010-ML-2	2696455 , 814407	13:05	17'	2	0.96		EBB	0	12:50
041923-D1-010-ML-8		13:05		8	1.1				
041923-D1-010-ML-15		13:05		15	0.89				
			AVERAGE TURBIDITY:		0.98				
			TURBIDITY INCREASE:		-0.01				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 4/24/2023
MONITORS: JR/JB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 11:55a **Low:** 5:03a / 4:46p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
042423-00-RL-2	2696048 , 816363	7:00	10'	2	1.12		FLOOD	0'	0
042423-00-RL-5		7:00		5	1.06				
042423-00-RL-8		7:00		8	1.67				
			AVERAGE TURBIDITY:		1.28				
042423-02-RL-2	2695881 , 816277	9:00	15'	2	6.27		FLOOD	0'	2
042423-02-RL-7		9:00		7	8.01				
042423-02-RL-13		9:00		13	5.88				
			AVERAGE TURBIDITY:		6.72				
042423-04-RL-2	2695895 , 816280	11:00	14'	2	1.52		FLOOD	0'	4
042423-04-RL-7		11:00		7	1.03				
042423-04-RL-12		11:00		12	14.9				
			AVERAGE TURBIDITY:		5.82				
042423-06-RL-2	2696756 , 815914	13:00	14'	2	1.21		EBB	0'	6
042423-06-RL-7		13:00		7	1.33				
042423-06-RL-12		13:00		12	1.58				
			AVERAGE TURBIDITY:		1.37				
042423-08-RL-2	2696724 , 815923	15:00	12'	2	1.21		EBB	0'	8
042423-08-RL-6		15:00		6	1.19				
042423-08-RL-10		15:00		10	1.12				
			AVERAGE TURBIDITY:		1.17				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
042423-00-ML-2	2696738 , 815941	7:05	12'	2	1.32		FLOOD	0	0
042423-00-ML-6		7:05		6	1.17				
042423-00-ML-10		7:05		10	1.19				
			AVERAGE TURBIDITY:		1.23				
			TURBIDITY INCREASE:		-0.06				
042423-02-ML-2	2696551 , 815905	9:05	13'	2	1.06		FLOOD	0	2
042423-02-ML-6		9:05		6	1.08				
042423-02-ML-11		9:05		11	1.5				
			AVERAGE TURBIDITY:		1.21				
			TURBIDITY INCREASE:		-5.51				
042423-04-ML-2	2696491 , 815772	11:05	15'	2	1.3		FLOOD	0	4
042423-04-ML-7		11:05		7	1.65				
042423-04-ML-13		11:05		13	1.25				
			AVERAGE TURBIDITY:		1.40				
			TURBIDITY INCREASE:		-4.42				
042423-06-ML-2	2695923 , 816165	13:05	12'	2	1.5		EBB	0	6
042423-06-ML-6		13:05		6	2.92				
042423-06-ML-10		13:05		10	7.6				
			AVERAGE TURBIDITY:		4.01				
			TURBIDITY INCREASE:		2.63				
042423-08-ML-2	2695916 , 816250	15:05	10'	2	2.35		EBB	0	8
042423-08-ML-5		15:05		5	2.14				
042423-08-ML-8		15:05		8	3				
			AVERAGE TURBIDITY:		2.50				
			TURBIDITY INCREASE:		1.32				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

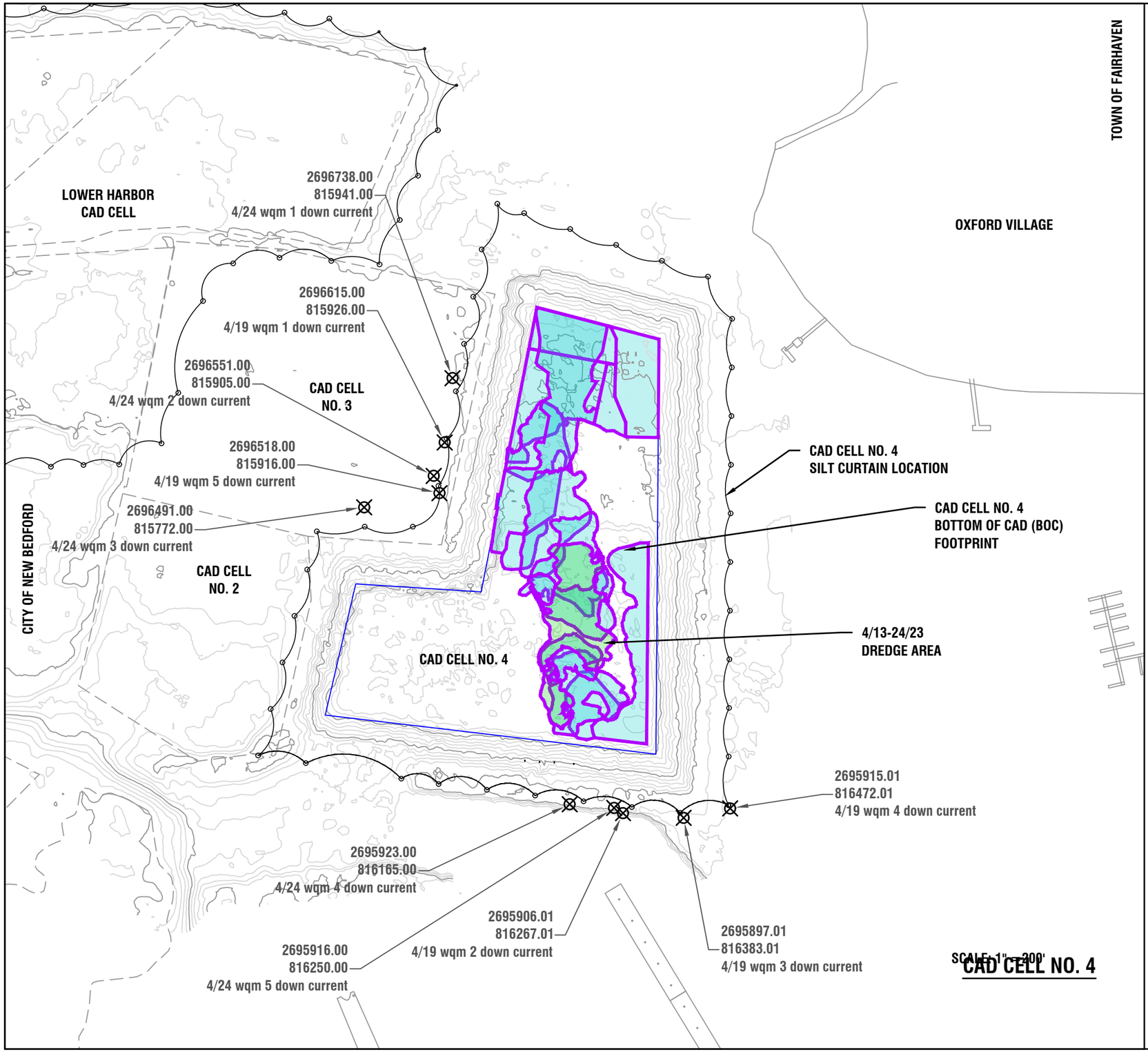
* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 3a Weekly Lower Harbor CAD Cell Pre-Bed Leveling

Figure 3b Weekly Lower Harbor CAD Cell Post-Bed Leveling

Figure 4 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	04-28-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

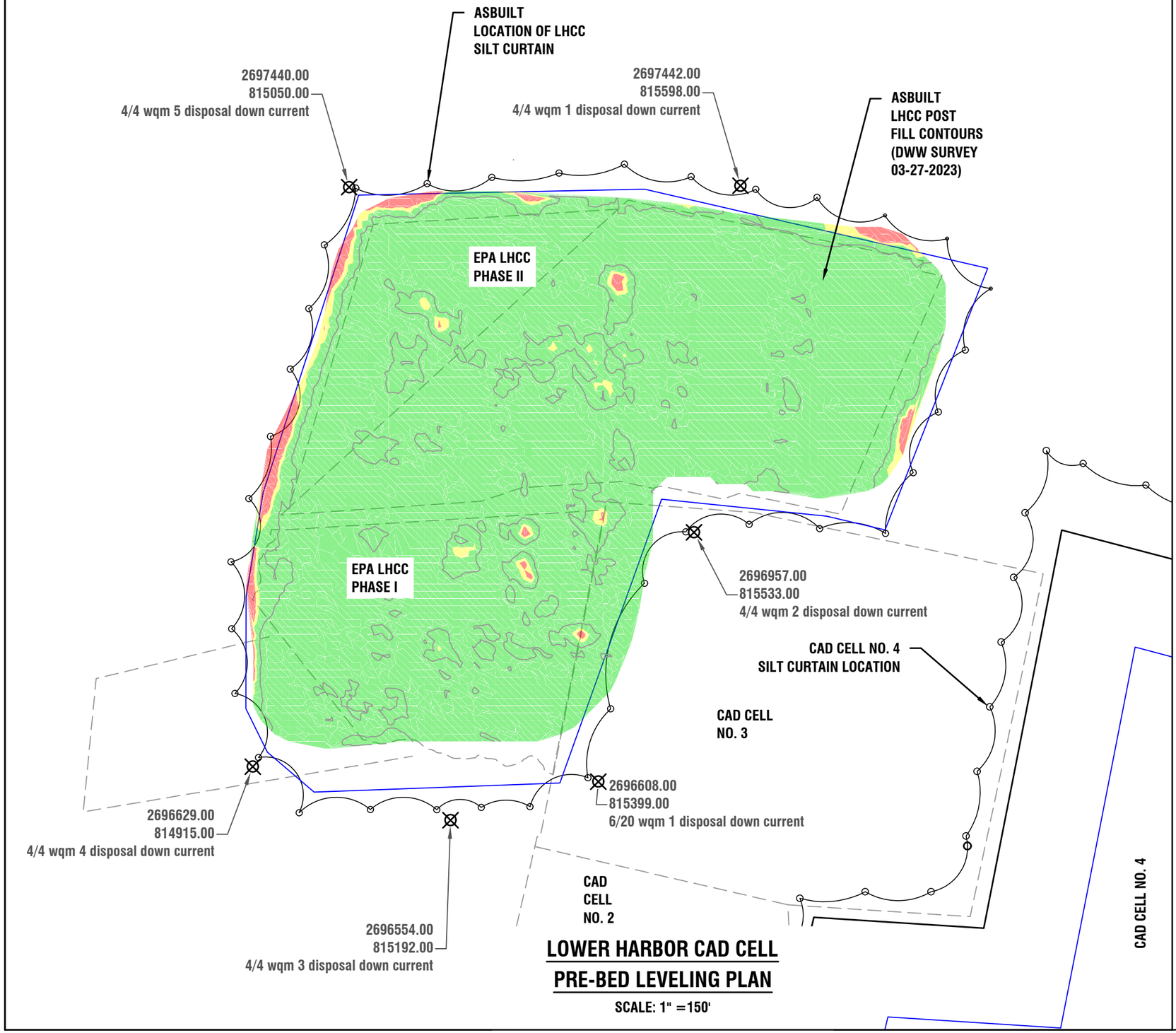
SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

WQM - APR. 19, 2023
WQM - APR. 28, 2023

FIGURE 4



LOWER HARBOR CAD CELL
PRE-BED LEVELING PLAN
SCALE: 1" =150'

LEGEND:

LIMIT OF LHCC DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

BED LEVELING TARGET AREAS

EL . -10.5 TO -9
EL. -9 TO -8.5
EL. -8.5 TO -8

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE
0 75 150 300
(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

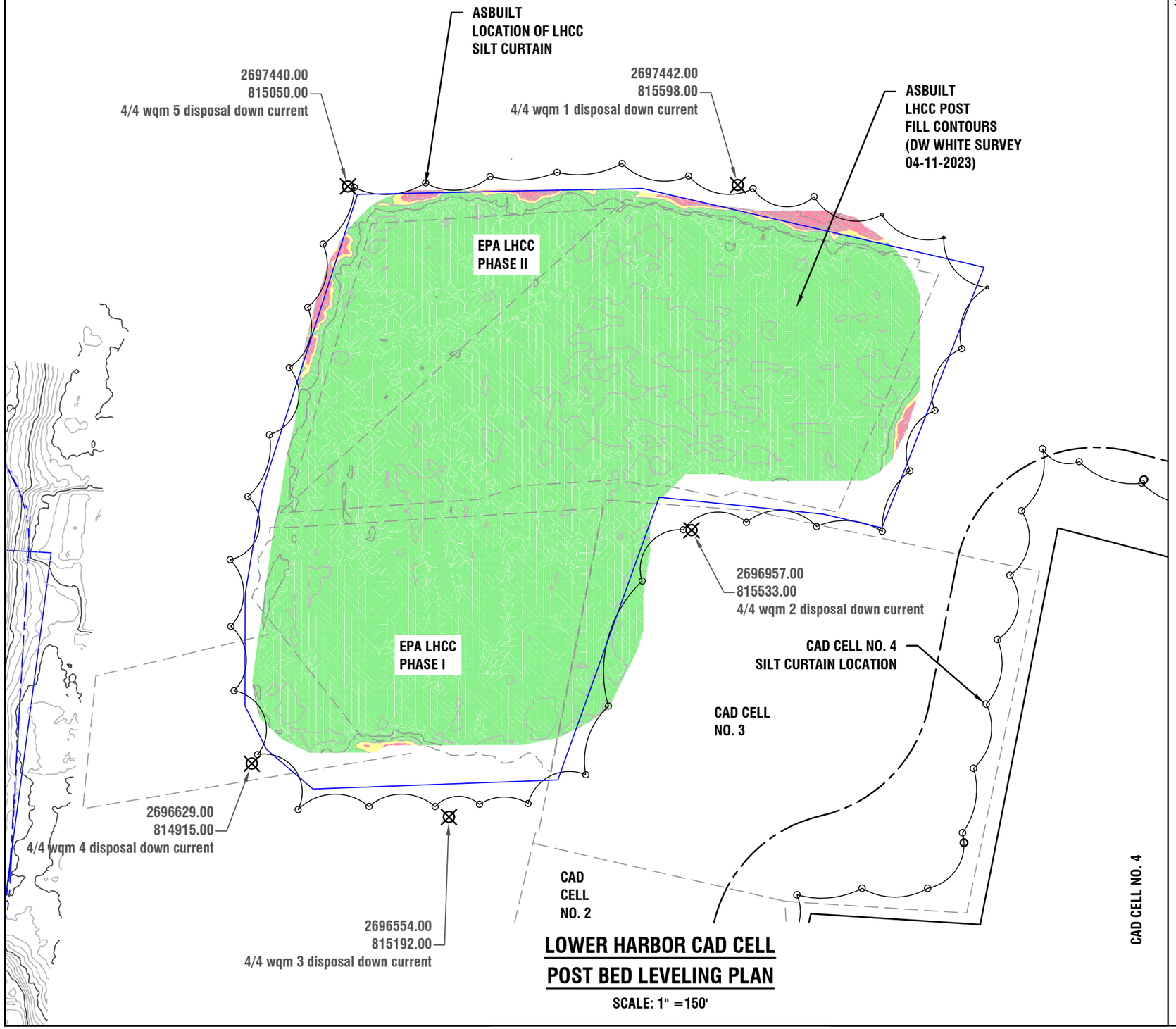
DATE:	05/10/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL
PRE-BED LEVELING PLAN

DRAWING NO.

FIGURE 3a



LOWER HARBOR CAD CELL
POST BED LEVELING PLAN
SCALE: 1" =150'

LEGEND:

LIMIT OF LHCC
DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

BED LEVELING TARGET AREAS

EL . -10.5 TO -9
EL. -9 TO -8.5
EL. -8.5 TO -8

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE
0 75 150 300
(IN FEET)
1 INCH = 150 FEET

Foth
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	05/10/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL POST-BED LEVELING PLAN

DRAWING NO.

FIGURE 3b

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Apr. 3rd– Apr. 28th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 4/3/2023 TO 4/7/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
NONE		Komatsu 1250			CAD4			
			Weekly Total	0	CY			
			CUMULATIVE TOTAL	38145	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 4/10/2023 TO 4/14/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
4/13/2023	163	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/13/2023
4/13/2023	164	Komatsu 1250	B	400	CAD4	Infield		4/13/2023
4/14/2023	165	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/14/2023
4/14/2023	166	Komatsu 1250	B	400	CAD4	Infield		4/14/2023
			Weekly Total	1200	CY			
			CUMULATIVE TOTAL	39345	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 4/17/2023 TO 4/21/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
4/18/2023	167	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/18/2023
4/18/2023	168	Komatsu 1250	B	400	CAD4	Infield		4/18/2023
4/19/2023	169	Komatsu 1250	Mary P.	450	CAD4	Infield		4/19/2023
4/19/2023	170	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/19/2023
4/19/2023	171	Komatsu 1250	B	400	CAD4	Infield		4/19/2023
4/20/2023	172	Komatsu 1250	Mary P.	450	CAD4	Infield		4/20/2023
4/20/2023	173	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/20/2023
4/20/2023	174	Komatsu 1250	B	400	CAD4	Infield		4/20/2023
4/21/2023	175	Komatsu 1250	Mary P.	450	CAD4	Infield		4/21/2023
4/21/2023	176	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/21/2023
4/21/2023	177	Komatsu 1250	B	400	CAD4	Infield		4/21/2023
			Weekly Total	3750	CY			
			CUMULATIVE TOTAL	43095	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 4/24/2023 TO 4/28/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
4/24/2023	178	Komatsu 1250	Mary P.	421	CAD4	Infield		4/24/2023
4/24/2023	179	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/24/2023
4/25/2023	180	Komatsu 1250	B	400	CAD4	Infield		4/25/2023
4/25/2023	181	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/25/2023
4/26/2023	182	Komatsu 1250	B	400	CAD4	Infield		4/26/2023
4/26/2023	183	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/26/2023
4/27/2023	184	Komatsu 1250	B	400	CAD4	Infield		4/27/2023
4/27/2023	185	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/27/2023
4/27/2023	186	Komatsu 1250	B	400	CAD4	Infield		4/27/2023
4/28/2023	187	Komatsu 1250	Little Jeff	200	CAD4	Infield		4/28/2023
4/28/2023	188	Komatsu 1250	B	400	CAD4	Infield		4/28/2023
			Weekly Total	3421	CY			
			CUMULATIVE TOTAL	46516	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	May. 1st– Jun. 2nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of May 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 14th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of May 1st through June 2nd, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of May 1st through June 2nd, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;

    - Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	May. 1st– Jun. 2nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023 and has continued through June 2nd, 2023.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC . Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023 and continued through June 2nd, 2023.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	12,909
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	59,425
Approximate Bottom of CAD Cell #4 Dredging Remaining	94,625
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	350
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	12.,909
Approximate Infield Capacity Filled to Date	29,875
Approximate Infield Fill Capacity Remaining	38,875
Estimate Total Pre-Cell Extension Capacity Available	8,100
Approximate Pre-Cell Extension Volume Dredged (This Reporting Period	0
Approximate Pre-Cell Extension Volume Dredged to Date	6,910
Approximate Pre-Cell Extension Capacity Remaining	1,190

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 5/2, 5/12, 5/15, 5/22 & 6/2). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	May. 1st– Jun. 2nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 5/2/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	41	56	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Joe Baranello	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 5/12/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	49	78	Sunny	None	0	0	Wind 10-15	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Paul Marsala	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 5/15/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	38	70	Sunny	None	0	0	Wind 15-20	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Ethan Bowe	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 5/22/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	42	62	Sunny	None	0	0	Wind 20-25	NE

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Paul Marsala	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge continued Bottom of CAD Cell dredge activities in CAD #4 dredge area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 6/02/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	55	81	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm. Dredge PC-1250 down for repairs on 6/2/2023. Trucks delivering import fill to infield site.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Ethan Bowe	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge down for repairs.
    b. Completed Water Quality Monitoring at Infield Fill area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	May. 1st– Jun. 2nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 5/2/2023
MONITORS: JR/JB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 6:17a/6:40p **Low:** 12:00p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
050223-00-RL-2	2696448 , 816669	7:00	14'	2	1.71		EBB	0'	0
050223-00-RL-7		7:00		7	1.96				
050223-00-RL-12		7:00		12	1.88				
				AVERAGE TURBIDITY:	1.85				
050223-02-RL-2	2696526 , 815917	9:00	13'	2	2.1		EBB	0'	2
050223-02-RL-6		9:00		6	1.97				
050223-02-RL-11		9:00		11	2.15				
				AVERAGE TURBIDITY:	2.07				
050223-04-RL-2	2696529 , 815918	11:00	12'	2	1.6		EBBB	0'	4
050223-04-RL-6		11:00		6	2.03				
050223-04-RL-10		11:00		10	2.64				
				AVERAGE TURBIDITY:	2.09				
050223-06-RL-2	2695929 , 816194	13:00	11'	2	2.11		FLOOD	0'	6
050223-06-RL-5		13:00		5	1.88				
050223-06-RL-9		13:00		9	1.8				
				AVERAGE TURBIDITY:	1.93				
050223-08-RL-2	2695916 , 816285	15:00	15'	2	2.84		FLOOD	0'	8
050223-08-RL-7		15:00		7	1.6				
050223-08-RL-13		15:00		13	2.26				
				AVERAGE TURBIDITY:	2.23				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
050223-00-ML-2	2695934 , 816195	7:05	12'	2	1.6		EBB	0	0
050223-00-ML-6		7:05		6	1.97				
050223-00-ML-10		7:05		10	2.34				
				AVERAGE TURBIDITY:	1.97				
				TURBIDITY INCREASE:	0.12				
050223-02-ML-2	2695915 , 816285	9:05	16'	2	1.7		EBB	0	2
050223-02-ML-8		9:05		8	1.89				
050223-02-ML-14		9:05		14	2.05				
				AVERAGE TURBIDITY:	1.88				
				TURBIDITY INCREASE:	-0.19				
050223-04-ML-2	2695939 , 816104	11:05	16'	2	2.26		EBB	0	4
050223-04-ML-8		11:05		8	1.98				
050223-04-ML-14		11:05		14	2.42				
				AVERAGE TURBIDITY:	2.22				
				TURBIDITY INCREASE:	0.13				
050223-06-ML-2	2696810 , 815947	13:05	11'	2	2.09		FLOOD	0	6
050223-06-ML-5		13:05		5	1.86				
050223-06-ML-9		13:05		9	4.66				
				AVERAGE TURBIDITY:	2.87				
				TURBIDITY INCREASE:	0.94				
050223-08-ML-2	2696529 , 815917	15:05	12'	2	2.6		FLOOD	0	8
050223-08-ML-6		15:05		6	3.74				
050223-08-ML-10		15:05		10	9.69				
				AVERAGE TURBIDITY:	5.34				
				TURBIDITY INCREASE:	3.11				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 5/12/2023
MONITORS: JR/JB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE **High:** 1:53a/2:28p **Low:** 8:17a/8:06p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
051223-00-RL-2	2696703 , 815951	7:00	11'	2	0.98		EBB	0'	0
051223-00-RL-5		7:00		5	1.15				
051223-00-RL-9		7:00		9	1.43				
			AVERAGE TURBIDITY:		1.19				
051223-02-RL-2	2695930 , 816189	9:00	10'	2	1.41		FLOOD	0'	2
051223-02-RL-5		9:00		5	1.85				
051223-02-RL-8		9:00		8	2.14				
			AVERAGE TURBIDITY:		1.80				
051223-04-RL-2	2695938 , 816100	11:00	11'	2	1.36		FLOOD	0'	4
051223-04-RL-5		11:00		5	1.56				
051223-04-RL-9		11:00		9	1.88				
			AVERAGE TURBIDITY:		1.60				
051223-06-RL-2	2695930 , 816193	13:00	12'	2	3.81		FLOOD	0'	6
051223-06-RL-6		13:00		6	1.94				
051223-06-RL-10		13:00		10	2.44				
			AVERAGE TURBIDITY:		2.73				
051223-08-RL-2	2696703 , 815950	15:00	14'	2	1.65		EBB	0'	8
051223-08-RL-7		15:00		7	2.98				
051223-08-RL-12		15:00		12	1.83				
			AVERAGE TURBIDITY:		2.15				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
051223-00-ML-2	2695930 , 816191	7:05	9'	2	1.68		EBB	0	0
051223-00-ML-4		7:05		4	1.6				
051223-00-ML-7		7:05		7	1.93				
			AVERAGE TURBIDITY:		1.74				
			TURBIDITY INCREASE:		0.55				
051223-02-ML-2	2696704 , 815945	9:05	11'	2	1.12		FLOOD	0	2
051223-02-ML-5		9:05		5	2.06				
051223-02-ML-9		9:05		9	2.56				
			AVERAGE TURBIDITY:		1.91				
			TURBIDITY INCREASE:		0.11				
051223-04-ML-2	2696519 , 815915	11:05	13'	2	1.43		FLOOD	0	4
051223-04-ML-6		11:05		6	4.59				
051223-04-ML-11		11:05		11	2.57				
			AVERAGE TURBIDITY:		2.86				
			TURBIDITY INCREASE:		1.26				
051223-06-ML-2	2696703 , 815948	13:05	13'	2	1.47		FLOOD	0	6
051223-06-ML-7		13:05		7	6.62				
051223-06-ML-11		13:05		11	8.5				
			AVERAGE TURBIDITY:		5.53				
			TURBIDITY INCREASE:		2.80				
051223-08-ML-2	2695935 , 816107	15:05	13'	2	1.5		EBB	0	8
051223-08-ML-6		15:05		6	1.67				
051223-08-ML-11		15:05		11	11.8				
			AVERAGE TURBIDITY:		4.99				
			TURBIDITY INCREASE:		2.84				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 5/15/2023
MONITORS: JR/JB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 5:00a/5:32p **Low:** 11:07a

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
051523-00-RL-2	2696689 , 815959	7:00	13'	2	0.95		EBB	0'	0
051523-00-RL-6		7:00		6	1.07				
051523-00-RL-11		7:00		11	1.71				
			AVERAGE TURBIDITY:		1.24				
051523-02-RL-2	2696526 , 815917	9:00	11'	2	1.06		EBB	0'	2
051523-02-RL-5		9:00		5	1.11				
051523-02-RL-9		9:00		9	1.17				
			AVERAGE TURBIDITY:		1.11				
051523-04-RL-2	2696519 , 815915	10:45	11'	2	1.08		EBB	0'	4
051523-04-RL-5		10:45		5	1.05				
051523-04-RL-9		10:45		9	2.02				
			AVERAGE TURBIDITY:		1.38				
051523-06-RL-2	2695929 , 816192	13:00	10'	2	1.33		FLOOD	0'	6
051523-06-RL-5		13:00		5	1.76				
051523-06-RL-8		13:00		8	3.56				
			AVERAGE TURBIDITY:		2.22				
051523-08-RL-2	2695931 , 816194	14:50	12'	2	1.1		FLOOD	0'	8
051523-08-RL-6		14:50		6	1.39				
051523-08-RL-10		14:50		10	4.96				
			AVERAGE TURBIDITY:		2.48				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
051523-00-ML-2	2695935 , 816194	7:05	14'	2	1.75		EBB	0	0
051523-00-ML-7		7:05		7	1.2				
051523-00-ML-12		7:05		12	1.65				
			AVERAGE TURBIDITY:		1.53				
			TURBIDITY INCREASE:		0.29				
051523-02-ML-2	2695936 , 816095	9:05	14'	2	1.36		EBB	0	2
051523-02-ML-7		9:05		7	1.52				
051523-02-ML-12		9:05		12	1.77				
			AVERAGE TURBIDITY:		1.55				
			TURBIDITY INCREASE:		0.44				
051523-04-ML-2	2695914 , 816283	10:50	13'	2	1.39		EBB	0	4
051523-04-ML-6		10:50		6	1.49				
051523-04-ML-11		10:50		11	2.08				
			AVERAGE TURBIDITY:		1.65				
			TURBIDITY INCREASE:		0.27				
051523-06-ML-2	2696528 , 815919	13:05	11'	2	1.2		FLOOD	0	6
051523-06-ML-5		13:05		5	1.45				
051523-06-ML-9		13:05		9	3.44				
			AVERAGE TURBIDITY:		2.03				
			TURBIDITY INCREASE:		-0.19				
051523-08-ML-2	2696714 , 815948	14:55	13'	2	1.93		FLOOD	0	8
051523-08-ML-6		14:55		6	1.44				
051523-08-ML-11		14:55		11	3.81				
			AVERAGE TURBIDITY:		2.39				
			TURBIDITY INCREASE:		-0.09				
						circle			
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 5/22/2023
MONITORS: JR/JB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING
TIDE High: 10:42a/10:59p **Low:** 04:06a/3:39p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
052223-00-RL-2	2695934 , 816091	7:00	10	2	1.5		FLOOD	0'	0
052223-00-RL-5		7:00		5	1.59				
052223-00-RL-8		7:00		8	1.88				
			AVERAGE TURBIDITY:		1.66				
052223-02-RL-2	2695931 , 816178	9:00	11'	2	1.72		FLOOD	0'	2
052223-02-RL-5		9:00		5	1.58				
052223-02-RL-9		9:00		9	1.98				
			AVERAGE TURBIDITY:		1.76				
052223-04-RL-2	2696522 , 815913	11:00	14'	2	1.64		EBB	0'	4
052223-04-RL-7		11:00		7	1.73				
052223-04-RL-12		11:00		12	2.16				
			AVERAGE TURBIDITY:		1.84				
052223-06-RL-2	2697075 , 815982	13:00	9'	2	1.54		EBB	0'	6
052223-06-RL-5		13:00		5	1.54				
052223-06-RL-7		13:00		7	2.32				
			AVERAGE TURBIDITY:		1.80				
052223-08-RL-2	2697080 , 815980	14:55	7'	2	1.44		EBB	0'	8
052223-08-RL-4		14:55		4	1.73				
052223-08-RL-5		14:55		5	1.82				
			AVERAGE TURBIDITY:		1.66				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
052223-00-ML-2	2696526 , 815912	7:05	13'	2	1.86		FLOOD	0	0
052223-00-ML-6		7:05		6	1.69				
052223-00-ML-10		7:05		10	2.92				
			AVERAGE TURBIDITY:		2.16				
			TURBIDITY INCREASE:		0.50				
052223-02-ML-2	2696456 , 815764	9:05	13'	2	1.44		FLOOD	0	2
052223-02-ML-6		9:05		6	1.51				
052223-02-ML-11		9:05		11	1.8				
			AVERAGE TURBIDITY:		1.58				
			TURBIDITY INCREASE:		-0.18				
052223-04-ML-2	2695933 , 816092	11:05	12'	2	2.26		EBB	0	4
052223-04-ML-6		11:05		6	2.39				
052223-04-ML-10		11:05		10	2.73				
			AVERAGE TURBIDITY:		2.46				
			TURBIDITY INCREASE:		0.62				
052223-06-ML-2	2695912 , 816282	13:05	11'	2	1.8		EBB	0	6
052223-06-ML-5		13:05		5	1.77				
052223-06-ML-9		13:05		9	1.82				
			AVERAGE TURBIDITY:		1.80				
			TURBIDITY INCREASE:		0.00				
052223-08-ML-2	2695940 , 816088	15:00	9'	2	1.45		EBB	0	8
052223-08-ML-5		15:00		5	1.58				
052223-08-ML-7		15:00		7	1.73				
			AVERAGE TURBIDITY:		1.59				
			TURBIDITY INCREASE:		-0.08				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/2/2023
MONITORS: JR/EB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:04a/7:27p **Low:** 12:48a/12:27p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
060223-00-RL-2	2697455 , 814736	7:00	13'	2	1.23		FLOOD	0'	0
060223-00-RL-7		7:00		7	1.73				
060223-00-RL-11		7:00		11	1.76				
			AVERAGE TURBIDITY:		1.57				
060223-02-RL-2	2697443 , 815031	9:00	11'	2	1.35		EBB	0'	2
060223-02-RL-5		9:00		5	1.49				
060223-02-RL-9		9:00		9	1.59				
			AVERAGE TURBIDITY:		1.48				
060223-04-RL-2	2697450 , 815050	11:00	8'	2	1.32		EBB	0'	4
060223-04-RL-4		11:00		4	1.46				
060223-04-RL-6		11:00		6	1.58				
			AVERAGE TURBIDITY:		1.45				
060223-06-RL-2	2697468 , 815000	12:10	8'	2	1.15		EBB	0'	6
060223-06-RL-4		12:10		4	1.22				
060223-06-RL-6		12:10		6	1.29				
			AVERAGE TURBIDITY:		1.22				
060223-08-RL-2	2696710 , 814870	13:00	11'	2	1.31		FLOOD	0'	8
060223-08-RL-5		13:00		5	1.39				
060223-08-RL-9		13:00		9	1.88				
			AVERAGE TURBIDITY:		1.53				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

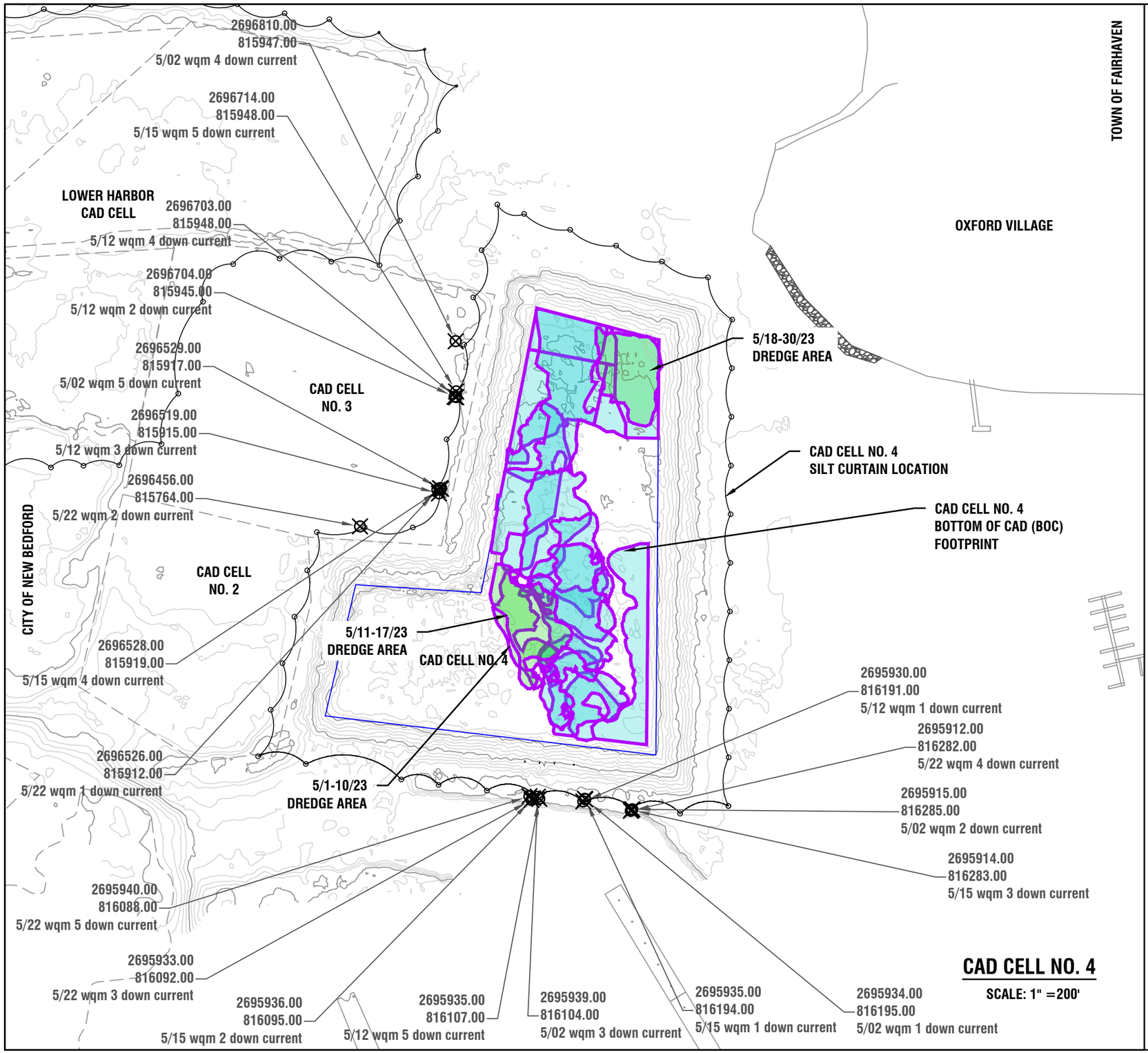
Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
060223-00-ML-2	2697194 , 814370	7:05	13'	2	1.53		FLOOD	0	0
060223-00-ML-7		7:05		7	3.76				
060223-00-ML-11		7:05		11	15.85				
			AVERAGE TURBIDITY:		7.05				
			TURBIDITY INCREASE:		5.47				
060223-02-ML-2	2697189 , 814402	9:05	12'	2	1.48		EBB	0	2
060223-02-ML-6		9:05		6	8.9				
060223-02-ML-10		9:05		10	34.14				
			AVERAGE TURBIDITY:		14.84				
			TURBIDITY INCREASE:		13.36				
060223-04-ML-2	2697170 , 814315	11:05	9'	2	2.98		EBB	0	4
060223-04-ML-4		11:05		4	6.12				
060223-04-ML-7		11:05		7	15.51				
			AVERAGE TURBIDITY:		8.20				
			TURBIDITY INCREASE:		6.75				
060223-06-ML-2	2697165 , 814340	12:20	11'	2	5.04		EBB	0	6
060223-06-ML-5		12:20		5	18.65				
060223-06-ML-9		12:20		9	20.97				
			AVERAGE TURBIDITY:		14.89				
			TURBIDITY INCREASE:		13.67				
060223-08-ML-2	2697175 , 814365	13:05	10'	2	2.11		FLOOD	0	8
060223-08-ML-5		13:05		5	1.68				
060223-08-ML-8		13:05		8	3.25				
			AVERAGE TURBIDITY:		2.35				
			TURBIDITY INCREASE:		0.82				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring

Figure 2 Weekly North Terminal Tracking and Water Quality Monitoring



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	06-02-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

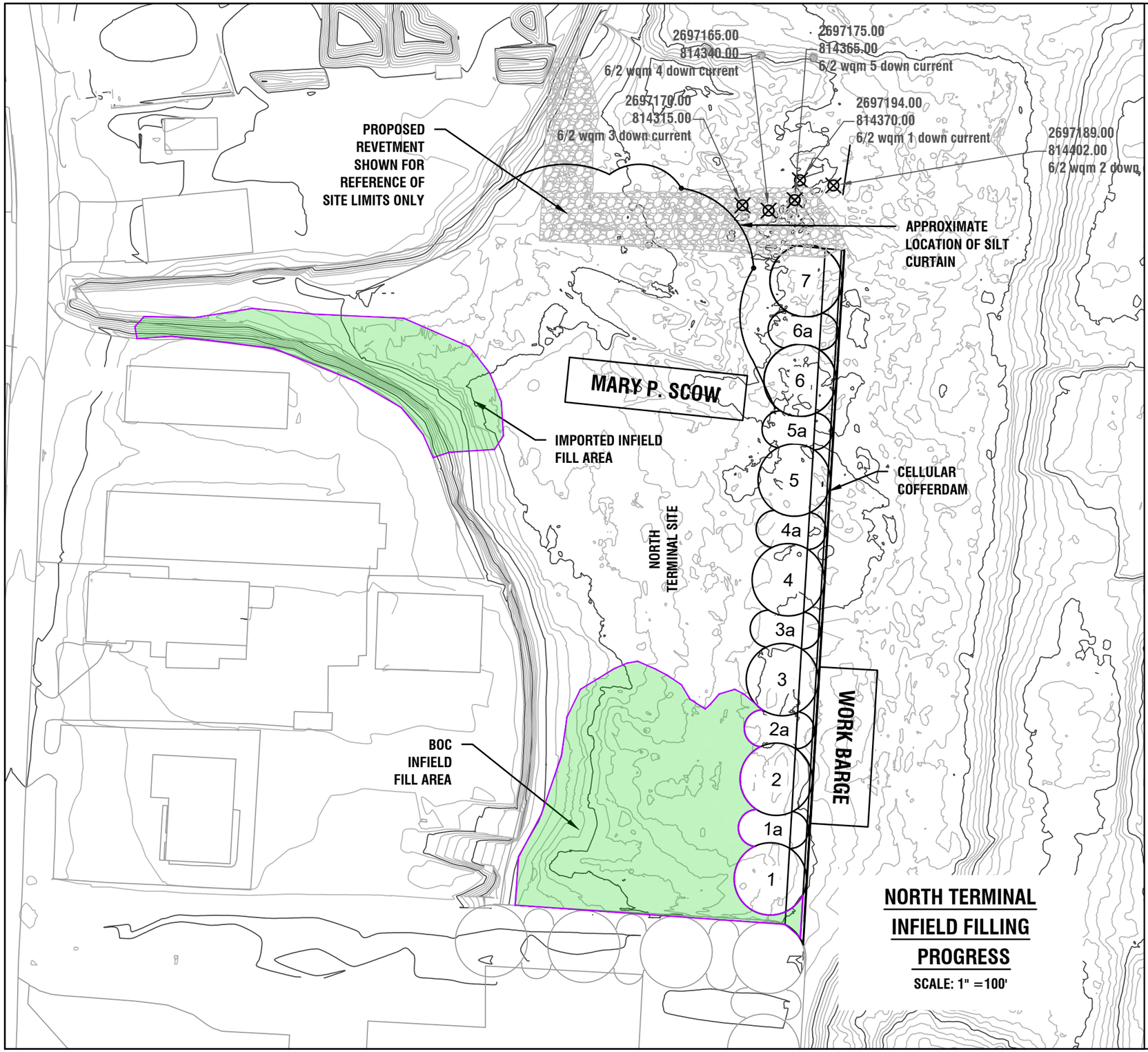
SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - MAY 2, 2023 WQM - MAY 12, 2023
WQM - MAY 15, 2023 WQM - MAY 22, 2023



NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	06-02-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
WQM - JUN. 2, 2023

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	May. 1st– Jun. 2nd
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 5/1/2023 TO 5/5/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
5/1/2023	189	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/1/2023
5/1/2023	190	Komatsu 1250	B	400	CAD4	Infield		5/1/2023
5/2/2023	191	Komatsu 1250	B	400	CAD4	Infield		5/2/2023
5/3/2023	192	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/2/2023
5/3/2023	193	Komatsu 1250	B	400	CAD4	Infield		5/3/2023
5/4/2023	194	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/3/2023
5/4/2023	195	Komatsu 1250	B	400	CAD4	Infield		5/4/2023
5/4/2023	196	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/4/2023
5/5/2023	197	Komatsu 1250	B	400	CAD4	Infield		5/5/2023
5/5/2023	198	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/5/2023
			Weekly Total	3000	CY			
			CUMULATIVE TOTAL	49516	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 5/8/2023 TO 5/12/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
5/8/2023	199	Komatsu 1250	B	400	CAD4	Infield		5/8/2023
5/9/2023	200	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/9/2023
5/9/2023	201	Komatsu 1250	B	400	CAD4	Infield		5/9/2023
5/10/2023	202	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/10/2023
5/10/2023	203	Komatsu 1250	B	400	CAD4	Infield		5/10/2023
5/11/2023	204	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/11/2023
5/11/2023	205	Komatsu 1250	B	400	CAD4	Infield		5/11/2023
5/11/2023	206	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/11/2023
5/12/2023	207	Komatsu 1250	B	400	CAD4	Infield		5/12/2023
5/12/2023	208	Komatsu 1250	Little Jeff	200	CAD4	Infield		5/12/2023
			Weekly Total	3000	CY			
			CUMULATIVE TOTAL	52516	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 5/15/2023 TO 5/19/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
5/15/2023	209	Komatsu 1250	B	400	CAD4	Infield		
5/15/2023	210	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/16/2023	211	Komatsu 1250	B	400	CAD4	Infield		
5/16/2023	212	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/17/2023	213	Komatsu 1250	B	400	CAD4	Infield		
5/17/2023	214	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/18/2023	215	Komatsu 1250	B	400	CAD4	Infield		
5/18/2023	216	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/19/2023	217	Komatsu 1250	Mary P	500	CAD4	Infield		
5/19/2023	218	Komatsu 1250	B	400	CAD4	Infield		
			Weekly Total	3300	CY			
			CUMULATIVE TOTAL	55816	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 5/22/2023 TO 5/26/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
5/23/2023	219	Komatsu 1250	B	500	CAD4	Infield		
5/23/2023	220	Komatsu 1250	Mary P	600	CAD4	Infield		
5/23/2023	221	Komatsu 1250	B	500	CAD4	Infield		
5/24/2023	222	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/25/2023	223	Komatsu 1250	Mary P	600	CAD4	Infield		
5/25/2023	224	Komatsu 1250	B	500	CAD4	Infield		
5/26/2023	225	Komatsu 1250	Little Jeff	200	CAD4	Infield		
5/26/2023	226	Komatsu 1250	B	509	CAD4	Infield		
			Weekly Total	3609	CY			
			CUMULATIVE TOTAL	59425	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 5/29/2023 TO 6/02/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
		Komatsu 1250			CAD4	Infield		
			Weekly Total	0	CY			
			CUMULATIVE TOTAL	59425	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jun. 5th – Jun. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of June 2023 for the dredging of Bottom of CAD Cell #4 and disposal within the North Terminal project area.

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 15th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of June 5th through June 30th, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of June 5th through June 30th, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities;

    - Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jun. 5th – Jun. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023 and has continued through June 30th, 2023.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC . Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023 and continued through June 30th, 2023.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	10,461
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	69,886
Approximate Bottom of CAD Cell #4 Dredging Remaining	84,164
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	10,461
Approximate Infield Capacity Filled to Date	40,336
Approximate Infield Fill Capacity Remaining	28,414
Estimate Total Pre-Cell Extension Capacity Available	8,100
Approximate Pre-Cell Extension Volume Dredged (This Reporting Period	0
Approximate Pre-Cell Extension Volume Dredged to Date	6,910
Approximate Pre-Cell Extension Capacity Remaining	1,190

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 6/7, 6/13, 6/22 & 6/26). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jun. 5th – Jun. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	45	65	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Ethan Bowe	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge down for repairs.
    b. Completed Water Quality Monitoring at Infield Fill area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 6/13/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	61	73	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Ethan Bowe	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge down for repairs.
    b. Completed Water Quality Monitoring at Infield Fill area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 6/22/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	53	70	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge down for repairs.
    b. Completed Water Quality Monitoring at Infield Fill area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 6/26/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High	Mixed	None	Rain	Snow		
	65	77			0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 resumed Bottom of CAD Cell #4 dredging on April 13, 2023. Dredging continues into flat top barges "B", "Little Jeff", and pocket scow "Mary P" as needed for offloading or disposal into the infield area. Crews continued dredging activities from 07:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Josh Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge down for repairs.
    b. Completed Water Quality Monitoring at Infield Fill area.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/7/2023
MONITORS: JR/EB
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 11:18a/11:42p **Low:** 4:46a/4:32p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
060723-00-RL-2	2695914 , 816283	7:00	9'	2	1.79		FLOOD	0'	0
060723-00-RL-4		7:00		4	1.9				
060723-00-RL-7		7:00		7	2.09				
			AVERAGE TURBIDITY:		1.93				
060723-02-RL-2	2695914 , 816283	9:00	11'	2	2.47		FLOOD	0'	2
060723-02-RL-5		9:00		5	2.76				
060723-02-RL-9		9:00		9	2.9				
			AVERAGE TURBIDITY:		2.71				
060723-04-RL-2	2695914 , 816283	11:00	14'	2	2.35		FLOOD	0'	4
060723-04-RL-7		11:00		7	2.76				
060723-04-RL-12		11:00		12	3.04				
			AVERAGE TURBIDITY:		2.72				
060723-06-RL-2	2696795 , 815966	13:00	13'	2	1.73		EBB	0'	6
060723-06-RL-6		13:00		6	1.99				
060723-06-RL-11		13:00		11	2.28				
			AVERAGE TURBIDITY:		2.00				
060723-08-RL-2	2696796 , 816966	15:00	12'	2	1.57		EBB	0'	8
060723-08-RL-6		15:00		6	1.88				
060723-08-RL-10		15:00		10	3.69				
			AVERAGE TURBIDITY:		2.38				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
060723-00-ML-2	2696527 , 815921	7:05	10'	2	1.62		FLOOD	0	0
060723-00-ML-5		7:05		5	1.54				
060723-00-ML-8		7:05		8	1.79				
			AVERAGE TURBIDITY:		1.65				
			TURBIDITY INCREASE:		-0.28				
060723-02-ML-2	2696708 , 815950	9:05	13'	2	1.79		FLOOD	0	2
060723-02-ML-6		9:05		6	4.83				
060723-02-ML-11		9:05		11	2.4				
			AVERAGE TURBIDITY:		3.01				
			TURBIDITY INCREASE:		0.30				
060723-04-ML-2	2696795 , 815966	11:05	14'	2	2.28		FLOOD	0	4
060723-04-ML-7		11:05		7	3.53				
060723-04-ML-12		11:05		12	2.02				
			AVERAGE TURBIDITY:		2.61				
			TURBIDITY INCREASE:		-0.11				
060723-06-ML-2	2695930 , 816188	13:05	11'	2	2.75		EBB	0	6
060723-06-ML-5		13:05		5	2.84				
060723-06-ML-9		13:05		9	4.87				
			AVERAGE TURBIDITY:		3.49				
			TURBIDITY INCREASE:		1.49				
060723-08-ML-2	2695929 , 816189	15:05	11'	2	2.54		EBB	0	8
060723-08-ML-5		15:05		5	3.37				
060723-08-ML-9		15:05		9	3.19				
			AVERAGE TURBIDITY:		3.03				
			TURBIDITY INCREASE:		0.65				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/13/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 4:34a/5:10p **Low:** 10:24a/11:55p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
061323-00-RL-2	2696708 , 815950	7:00	11'	2	1		EBB	0'	0
061323-00-RL-5		7:00		5	1.9				
061323-00-RL-9		7:00		9	2.1				
			AVERAGE TURBIDITY:		1.67				
061323-02-RL-2	2696716 , 815956	9:00	10'	2	1.6		EBB	0'	2
061323-02-RL-5		9:00		5	3.2				
061323-02-RL-8		9:00		8	5.1				
			AVERAGE TURBIDITY:		3.30				
061323-04-RL-2	2695930 , 816300	11:00	9'	2	1.4		FLOOD	0'	4
061323-04-RL-4		11:00		4	2.8				
061323-04-RL-7		11:00		7	4.7				
			AVERAGE TURBIDITY:		2.97				
061323-06-RL-2	2695922 , 816286	13:00	11'	2	3		FLOOD	0'	6
061323-06-RL-5		13:00		5	2.7				
061323-06-RL-9		13:00		9	11.7				
			AVERAGE TURBIDITY:		5.80				
061323-08-RL-2	2695912 , 816376	15:00	10'	2	1.4		FLOOD	0'	8
061323-08-RL-5		15:00		5	1.3				
061323-08-RL-8		15:00		8	2.8				
			AVERAGE TURBIDITY:		1.83				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
061323-00-ML-2	2695907 , 816291	7:05	9'	2	1.6		EBB	0	0
061323-00-ML-4		7:05		4	4.8				
061323-00-ML-7		7:05		7	12				
			AVERAGE TURBIDITY:		6.13				
			TURBIDITY INCREASE:		4.47				
061323-02-ML-2	2695920 , 816367	9:05	8'	2	1.9		EBB	0	2
061323-02-ML-4		9:05		4	3				
061323-02-ML-6		9:05		6	8.4				
			AVERAGE TURBIDITY:		4.43				
			TURBIDITY INCREASE:		1.13				
061323-04-ML-2	2696712 , 815956	11:05	10'	2	2.3		FLOOD	0	4
061323-04-ML-5		11:05		5	1.7				
061323-04-ML-8		11:05		8	2.9				
			AVERAGE TURBIDITY:		2.30				
			TURBIDITY INCREASE:		-0.67				
061323-06-ML-2	2696520 , 815914	13:05	12'	2	3		FLOOD	0	6
061323-06-ML-6		13:05		6	3.6				
061323-06-ML-10		13:05		10	7.1				
			AVERAGE TURBIDITY:		4.57				
			TURBIDITY INCREASE:		-1.23				
061323-08-ML-2	2696532 , 815921	15:05	13'	2	2.2		FLOOD	0	8
061323-08-ML-6		15:05		6	3.8				
061323-08-ML-11		15:05		11	6.4				
			AVERAGE TURBIDITY:		4.13				
			TURBIDITY INCREASE:		2.30				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/22/2023
MONITORS: JR/MW
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 11:45a/11:54p **Low:** 4:59a/4:49p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062223-00-RL-2	2695921 , 815959	7:00	17'	2	1		FLOOD	0'	0
062223-00-RL-8		7:00		8	4.6				
062223-00-RL-15		7:00		15	2.6				
			AVERAGE TURBIDITY:		2.73				
062223-02-RL-2	2695947 , 816002	9:00	12'	2	5		FLOOD	0'	2
062223-02-RL-6		9:00		6	4.1				
062223-02-RL-10		9:00		10	18.7				
			AVERAGE TURBIDITY:		9.27				
062223-04-RL-2	2695965 , 816048	11:00	12'	2	4.6		FLOOD	0'	4
062223-04-RL-6		11:00		6	4.2				
062223-04-RL-10		11:00		10	9.9				
			AVERAGE TURBIDITY:		6.23				
062223-06-RL-2	2696532 , 815912	13:00	13'	2	2.2		EBB	0'	6
062223-06-RL-6		13:00		6	1.4				
062223-06-RL-11		13:00		11	1.9				
			AVERAGE TURBIDITY:		1.83				
062223-08-RL-2	2696494 , 815876	15:00	12'	2	2.3		EBB	0'	8
062223-08-RL-6		15:00		6	2.3				
062223-08-RL-10		15:00		10	8.3				
			AVERAGE TURBIDITY:		4.30				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062223-00-ML-2	2696464 , 815744	7:05	12'	2	1.3		FLOOD	0	0
062223-00-ML-6		7:05		6	3.8				
062223-00-ML-10		7:05		10	6.6				
			AVERAGE TURBIDITY:		3.90				
			TURBIDITY INCREASE:		1.17				
062223-02-ML-2	2696518 , 815883	9:05	12'	2	3.4		FLOOD	0	2
062223-02-ML-6		9:05		6	9.7				
062223-02-ML-10		9:05		10	7.1				
			AVERAGE TURBIDITY:		6.73				
			TURBIDITY INCREASE:		-2.53				
062223-04-ML-2	2696533 , 815919	11:05	13'	2	2.2		FLOOD	0	4
062223-04-ML-6		11:05		6	2.5				
062223-04-ML-11		11:05		11	2.5				
			AVERAGE TURBIDITY:		2.40				
			TURBIDITY INCREASE:		-3.83				
062223-06-ML-2	2695972 , 815918	13:05	9'	2	5.4		EBB	0	6
062223-06-ML-4		13:05		4	5.3				
062223-06-ML-7		13:05		7	4.8				
			AVERAGE TURBIDITY:		5.17				
			TURBIDITY INCREASE:		3.33				
062223-08-ML-2	2695945 , 816092	15:05	11'	2	4.9		EBB	0	8
062223-08-ML-5		15:05		5	5				
062223-08-ML-9		15:05		9	7.9				
			AVERAGE TURBIDITY:		5.93				
			TURBIDITY INCREASE:		1.63				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 6/26/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 1:57a/2:36p **Low:** 7:45a/8:36p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062623-00-RL-2	2696598 , 815810	7:00	12'	2	1.11		EBB	0'	0
062623-00-RL-6		7:00		6	1.12				
062623-00-RL-10		7:00		10	1.84				
			AVERAGE TURBIDITY:		1.36				
062623-02-RL-2	2695817 , 815921	9:00	9'	2	1.54		FLOOD	0'	2
062623-02-RL-4		9:00		4	1.77				
062623-02-RL-7		9:00		7	1.78				
			AVERAGE TURBIDITY:		1.70				
062623-04-RL-2	2695962 , 815921	11:00	11'	2	1.59		FLOOD	0'	4
062623-04-RL-5		11:00		5	1.72				
062623-04-RL-9		11:00		9	1.57				
			AVERAGE TURBIDITY:		1.63				
062623-06-RL-2	2695865 , 815845	13:00	20'	2	1.39		FLOOD	0'	6
062623-06-RL-10		13:00		10	4.75				
062623-06-RL-18		13:00		18	1.1				
			AVERAGE TURBIDITY:		2.41				
062623-08-RL-2	2695886 , 815992	14:30	21'	2	1.65		FLOOD	0'	8
062623-08-RL-10		14:30		10	6.39				
062623-08-RL-19		14:30		19	1.67				
			AVERAGE TURBIDITY:		3.24				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

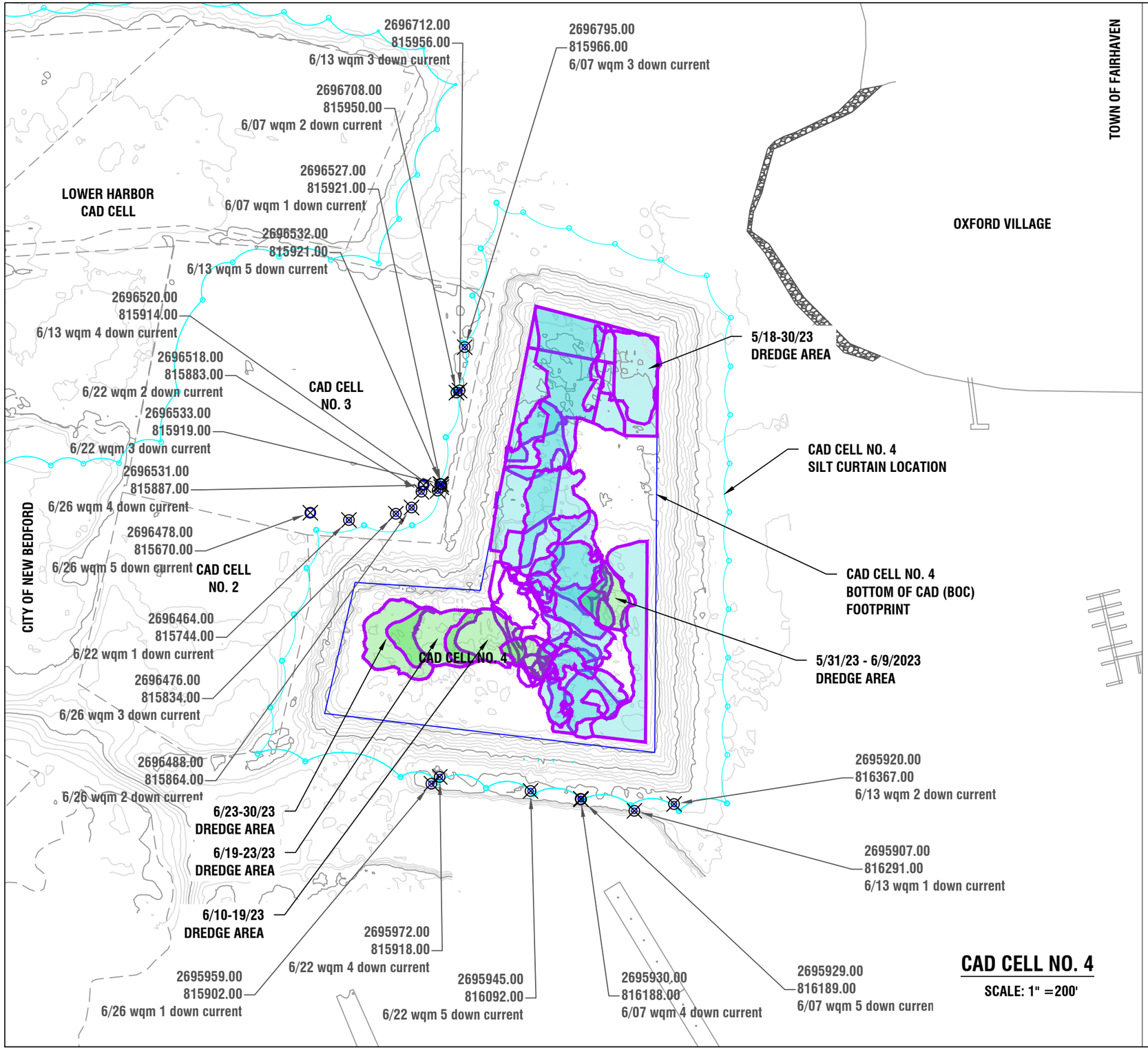
Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
062623-00-ML-2	2695959 , 815902	7:05	11'	2	1.12		EBB	0	0
062623-00-ML-5		7:05		5	1.18				
062623-00-ML-9		7:05		9	1.24				
			AVERAGE TURBIDITY:		1.18				
			TURBIDITY INCREASE:		-0.18				
062623-02-ML-2	2696488 , 815864	9:05	12'	2	1.11		FLOOD	0	2
062623-02-ML-6		9:05		6	1.33				
062623-02-ML-10		9:05		10	2.48				
			AVERAGE TURBIDITY:		1.64				
			TURBIDITY INCREASE:		-0.06				
062623-04-ML-2	2696476 , 815834	11:05	13'	2	1.31		FLOOD	0	4
062623-04-ML-6		11:05		6	1.33				
062623-04-ML-11		11:05		11	1.26				
			AVERAGE TURBIDITY:		1.30				
			TURBIDITY INCREASE:		-0.33				
062623-06-ML-2	2696531 , 815887	13:05	14'	2	1.26		FLOOD	0	6
062623-06-ML-7		13:05		7	1.37				
062623-06-ML-12		13:05		12	7.8				
			AVERAGE TURBIDITY:		3.48				
			TURBIDITY INCREASE:		1.06				
062623-08-ML-2	2696478 , 815670	14:35	14'	2	1.52		FLOOD	0	8
062623-08-ML-7		14:35		7	1.59				
062623-08-ML-12		14:35		12	1.51				
			AVERAGE TURBIDITY:		1.54				
			TURBIDITY INCREASE:		-1.70				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking and Water Quality Monitoring



CAD CELL NO. 4

SCALE: 1" =200'

LEGEND:

AS BUILT LIMIT OF EXISTING
CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL
DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	06-30-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - JUN 7, 2023 WQM - JUN 13, 2023
WQM - JUN 22, 2023 WQM - JUN 26, 2023

PROPOSED REVETMENT SHOWN FOR REFERENCE OF SITE LIMITS ONLY

APPROXIMATE LOCATION OF SILT CURTAIN

MARY P. SCOW

IMPORTED INFIELD FILL AREA

CELLULAR COFFERDAM

NORTH TERMINAL SITE

WORK BARGE

BOC INFIELD FILL AREA

7
6a
6
5a
5
4a
4
3a
3
2a
2
1a
1

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	06-30-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
WQM - JUN. 30, 2023

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jun. 5th – Jun. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/5/2023 TO 6/9/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
6/6/2023	227	Komatsu 1250	Mary P	300	CAD4	Infield		
6/7/2023	228	Komatsu 1250	Mary P	300	CAD4	Infield		
6/7/2023	229	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/8/2023	230	Komatsu 1250	Mary P	300	CAD4	Infield		
6/8/2023	231	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/9/2023	232	Komatsu 1250	Mary P	300	CAD4	Infield		
			Weekly Total	1500	CY			
			CUMULATIVE TOTAL	60925	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/12/2023 TO 6/16/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
6/12/2023	233	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/12/2023	234	Komatsu 1250	Mary P	300	CAD4	Infield		
6/13/2023	235	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/13/2023	236	Komatsu 1250	Mary P	300	CAD4	Infield		
6/14/2023	237	Komatsu 1250	B	300	CAD4	Infield		
6/14/2023	238	Komatsu 1250	Mary P	300	CAD4	Infield		
6/15/2023	239	Komatsu 1250	B	300	CAD4	Infield		
6/15/2023	240	Komatsu 1250	Mary P	300	CAD4	Infield		
6/15/2023	241	Komatsu 1250	Mary P	300	CAD4	Infield		
6/16/2023	242	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/16/2023	243	Komatsu 1250	B	300	CAD4	Infield		
			Weekly Total	2850	CY			
			CUMULATIVE TOTAL	63775	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/19/2023 TO 6/23/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
6/19/2023	244	Komatsu 1250	Mary P	300	CAD4	Infield		
6/19/2023	245	Komatsu 1250	B	300	CAD4	Infield		
6/20/2023	246	Komatsu 1250	Mary P	300	CAD4	Infield		
6/20/2023	247	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/21/2023	248	Komatsu 1250	B	300	CAD4	Infield		
6/21/2023	249	Komatsu 1250	Mary P	300	CAD4	Infield		
6/21/2023	250	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/22/2023	251	Komatsu 1250	Mary P	300	CAD4	Infield		
6/22/2023	252	Komatsu 1250	B	300	CAD4	Infield		
6/23/2023	253	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/23/2023	254	Komatsu 1250	Mary P	300	CAD4	Infield		
6/23/2023	255	Komatsu 1250	B	300	CAD4	Infield		
			Weekly Total	3150	CY			
			CUMULATIVE TOTAL	66925	CY			

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 6/26/2023 TO 6/30/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
6/26/2023	256	Komatsu 1250	Mary P	250	CAD4	Infield		
6/26/2023	257	Komatsu 1250	B	250	CAD4	Infield		
6/27/2023	258	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/27/2023	259	Komatsu 1250	Mary P	250	CAD4	Infield		
6/27/2023	260	Komatsu 1250	B	250	CAD4	Infield		
6/28/2023	261	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/28/2023	262	Komatsu 1250	B	250	CAD4	Infield		
6/28/2023	263	Komatsu 1250	Mary P	250	CAD4	Infield		
6/29/2023	264	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/29/2023	265	Komatsu 1250	B	250	CAD4	Infield		
6/29/2023	266	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/30/2023	267	Komatsu 1250	B	250	CAD4	Infield		
6/30/2023	268	Komatsu 1250	Little Jeff	150	CAD4	Infield		
6/30/2023	269	Komatsu 1250	B	211	CAD4	Infield		
			Weekly Total	2961	CY			
			CUMULATIVE TOTAL	69886	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jul. 3rd – Jul. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of July 2023 for the dredging of Bottom of CAD Cell #4 (CAD4) and backfilling within the North Terminal project area along with Capping of Lower Harbor CAD Cell (LHCC).

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 16th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of July 3rd through July 31st, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of July 3rd through July 31st, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.
    - Performed observations of capping/bed leveling at LHCC.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities.

- Figure 2 – Infield Filling Progress Plan, which shows areas of backfill activities at the North Terminal site for both reuse of dredge material as well as imported backfill material.

- Figure 3 – Lower Harbor CAD Cell Capping Progress, which shows areas of the isolation cap layer placed to date along with confirmatory sample location and % of TOC results, and approximate locations of the water quality monitoring events conducted during capping activities.

- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023. For the month of July 2023 DWW has continued dredging at CAD Cell #4 and has continued capping and bed leveling operations at LHCC through July 31st, 2023.

Beginning in July 2023 DWW updated the working hours to two 8-hr. shifts with a window of 6am to 11pm working the tides for a total of 16 total hours daily.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th,

2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023. For the month of July 2023 DWW has continued dredging at CAD Cell #4.

LHCC Capping:

Beginning on June 29th, DWW began importing isolation layer cap materials and loading the dump scow Mary P for placements within LHCC. DWW continued capping and bed leveling operations at LHCC through July 31st, 2023. Through the Month of July DWW has placed cap material over approximately 45% of the coverage area.

DWW collected 12 confirmatory sample within the capped area. See Figure 3 for results.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	19,203
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	89,089
Approximate Bottom of CAD Cell #4 Dredging Remaining	64,961
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	68,750
Approximate Infield Fill Volume (This reporting period)	19,203
Approximate Infield Capacity Filled to Date	59,539
Approximate Infield Fill Capacity Remaining	9,211
Estimate Total Pre-Cell Extension Capacity Available	8,100
Approximate Pre-Cell Extension Volume Dredged (This Reporting Period	0
Approximate Pre-Cell Extension Volume Dredged to Date	6,910
Approximate Pre-Cell Extension Capacity Remaining	1,190

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 7/3, 7/10, 7/18, 7/24 & 7/31). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 7/3/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	71	85	Cloudy	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from July 3rd through July 8th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Harrison Chouinard	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 7/10/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High	Mixed	None	Rain	Snow		
	67	73			0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from July 10th through July 15th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.
    c. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Dredge PC-1250 dredging at CAD Cell #4.

Dredge PC-1250 dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 7/18/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	62	82	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from July 17th through July 22nd, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.
    c. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Bed Leveling at LHCC.

Bed Leveling at LHC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 7/24/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	62	82	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from July 24th through July 29th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.
    c. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Bed Leveling at LHCC.

Bed Leveling at LHC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 7/31/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	53	82	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from July 31st through August 4th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Harrison Chouinard	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.
    c. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Bed Leveling at LHCC.

Bed Leveling at LHC.

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/3/2023
MONITORS: HC/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL ~~PRE-CELL~~ DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 8:22a/8:46p **~~Low:~~** 2:05a/1:42p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
070323-00-RL-2	2695904 , 816297	7:00	17'	2	0.5		FLOOD	0'	0
070323-00-RL-9		7:00		9	1.7				
070323-00-RL-15		7:00		15	5.4				
			AVERAGE TURBIDITY:		2.53				
070323-02-RL-2	2696450 , 815664	9:00	14'	2	0.2		EBB	0'	2
070323-02-RL-7		9:00		7	0.8				
070323-02-RL-12		9:00		12	2.1				
			AVERAGE TURBIDITY:		1.03				
070323-04-RL-2	2696450 , 815664	11:00	13'	2	1.1		EBB	0'	4
070323-04-RL-6		11:00		6	3				
070323-04-RL-11		11:00		11	6				
			AVERAGE TURBIDITY:		3.37				
070323-06-RL-2	2696450 , 815664	13:00	9'	2	0.9		EBB	0'	6
070323-06-RL-4		13:00		4	1.1				
070323-06-RL-7		13:00		7	5.9				
			AVERAGE TURBIDITY:		2.63				
070323-08-RL-2	2695904 , 816297	14:30	10'	2	0.9		FLOOD	0'	8
070323-08-RL-5		14:30		5	1				
070323-08-RL-8		14:30		8	1.8				
			AVERAGE TURBIDITY:		1.23				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
070323-00-ML-2	2696450 , 815664	7:05	16'	2	1		FLOOD	0	0
070323-00-ML-8		7:05		8	1.4				
070323-00-ML-14		7:05		14	3.4				
			AVERAGE TURBIDITY:		1.93				
			TURBIDITY INCREASE:		-0.60				
070323-02-ML-2	2695904 , 816297	9:05	14'	2	0.1		EBB	0	2
070323-02-ML-7		9:05		7	0.4				
070323-02-ML-12		9:05		12	3.4				
			AVERAGE TURBIDITY:		1.30				
			TURBIDITY INCREASE:		0.27				
070323-04-ML-2	2695904 , 816297	11:05	13'	2	3.2		EBB	0	4
070323-04-ML-6		11:05		6	3.3				
070323-04-ML-11		11:05		11	5.2				
			AVERAGE TURBIDITY:		3.90				
			TURBIDITY INCREASE:		0.53				
070323-06-ML-2	2695904 , 816297	13:05	10'	2	1		EBB	0	6
070323-06-ML-5		13:05		5	0.5				
070323-06-ML-8		13:05		8	3.8				
			AVERAGE TURBIDITY:		1.77				
			TURBIDITY INCREASE:		-0.87				
070323-08-ML-2	2696450 , 815664	14:35	13'	2	3.2		FLOOD	0	8
070323-08-ML-7		14:35		7	6.3				
070323-08-ML-11		14:35		11	6.5				
			AVERAGE TURBIDITY:		5.33				
			TURBIDITY INCREASE:		4.10				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/10/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 2:11a/2:47p **Low:** 7:52a/9:45p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071023-00-RL-2	2696545 , 815893	7:00	12'	2	1.89		EBB	0'	0
071023-00-RL-6		7:00		6	1.84				
071023-00-RL-10		7:00		10	1.68				
			AVERAGE TURBIDITY:		1.80				
071023-02-RL-2	2695885 , 816028	9:00	10'	2	1.97		FLOOD	0'	2
071023-02-RL-5		9:00		5	1.98				
071023-02-RL-8		9:00		8	1.87				
			AVERAGE TURBIDITY:		1.94				
071023-03-RL-2	2696562 , 815159	9:10	7'	2	2.17		FLOOD	0'	CAPPING
071023-03-RL-4		9:10		4	2.02				
071023-03-RL-5		9:10		5	1.81				
			AVERAGE TURBIDITY:		2.00				
071023-04-RL-2	2695960 , 815929	11:00	11'	2	2.84		FLOOD	0'	4
071023-04-RL-5		11:00		5	2.96				
071023-04-RL-9		11:00		9	3.5				
			AVERAGE TURBIDITY:		3.10				
071023-05-RL-2	2695938 , 816109	12:00	15'	2	2.34		FLOOD	0'	5
071023-05-RL-7		12:00		7	2				
071023-06-RL-13		12:00		13	3.08				
			AVERAGE TURBIDITY:		2.47				
071023-06-RL-2	2695937 , 816100	13:00	14'	2	6.08		FLOOD	0'	6
071023-06-RL-7		13:00		7	1.73				
071023-06-RL-12		13:00		12	2.02				
			AVERAGE TURBIDITY:		3.28				
071023-07-RL-2	2695937 , 816102	14:00	13'	2	2.87		FLOOD	0'	7
071023-07-RL-6		14:00		6	2.83				
071023-07-RL-11		14:00		11	3.53				
			AVERAGE TURBIDITY:		3.08				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071023-00-ML-2	2695961 , 816063	7:05	10'	2	1.53		EBB	0	0
071023-00-ML-5		7:05		5	1.74				
071023-00-ML-8		7:05		8	1.75				
			AVERAGE TURBIDITY:		1.67				
			TURBIDITY INCREASE:		-0.13				
071023-02-ML-2	2696462 , 815772	9:05	12'	2	1.72		FLOOD	0	2
071023-02-ML-6		9:05		6	1.67				
071023-02-ML-10		9:05		10	4.78				
			AVERAGE TURBIDITY:		2.72				
			TURBIDITY INCREASE:		0.78				
071023-03-ML-2	2697442 , 815061	9:15	9	2	2.84		FLOOD	0	CAPPING
071023-03-ML-4		9:15		4	2.81				
071023-03-ML-7		9:15		7	3.49				
			AVERAGE TURBIDITY:		3.05				
			TURBIDITY INCREASE:		1.05				
071023-04-ML-2	2696463 , 815777	11:05	13'	2	1.84		FLOOD	0	4
071023-04-ML-6		11:05		6	1.99				
071023-04-ML-11		11:05		11	2.16				
			AVERAGE TURBIDITY:		2.00				
			TURBIDITY INCREASE:		-1.10				
071023-05-ML-2	2696448 , 815672	12:05	13'	2	2.33		FLOOD	0	5
071023-05-ML-6		12:05		6	6.36				
071023-05-ML-11		12:05		11	20.22				
			AVERAGE TURBIDITY:		9.64				
			TURBIDITY INCREASE:		7.16				
071023-06-ML-2	2696468 , 815772	13:05	15'	2	1.95		FLOOD	0'	6
071023-06-ML-7		13:05		7	2.12				
071023-06-ML-13		13:05		13	1.64				
			AVERAGE TURBIDITY:		1.90				
			TURBIDITY INCREASE:		-1.37				
071023-07-ML-2	2696480 , 815830	14:05	17'	2	2.84		FLOOD	0'	7
071023-07-ML-8		14:05		8	2.17				
071023-07-ML-15		14:05		15	2.04				
			AVERAGE TURBIDITY:		2.35				
			TURBIDITY INCREASE:		-0.73				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/18/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL ~~PRE-CELL~~ DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / ~~DISPOSAL~~ / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 9:12a/9:30p **~~Low:~~** 2:54a/2:18p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071823-00-RL-2	2695941 , 816112	7:00	12'	2	2.42		FLOOD	0'	0
071823-00-RL-6		7:00		6	13.03				
071823-00-RL-10		7:00		10	4.4				
			AVERAGE TURBIDITY:		6.62				
071823-02-RL-2	2695925 , 816202	9:00	12'	2	2.08		FLOOD	0'	2
071823-02-RL-6		9:00		6	2.6				
071823-02-RL-10		9:00		10	5.5				
			AVERAGE TURBIDITY:		3.39				
071823-04-RL-2	2696713 , 815947	11:00	13'	2	4.88		EBB	0'	4
071823-04-RL-4		11:00		6	6.2				
071823-04-RL-5		11:00		11	6.3				
			AVERAGE TURBIDITY:		5.79				
071823-06-RL-2	2696471 , 815851	13:00	12'	2	5.81		EBB	0'	6
071823-06-RL-6		13:00		6	8.52				
071823-06-RL-10		13:00		10	3.91				
			AVERAGE TURBIDITY:		6.08				
071823-08-RL-2	2695916 , 816280	15:00	14'	2	3.51		FLOOD	0'	8
071823-08-RL-7		15:00		7	4.86				
071823-08-RL-12		15:00		12	4.32				
			AVERAGE TURBIDITY:		4.23				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
071823-00-ML-2	2696466 , 815774	7:05	14'	2	2.4		FLOOD	0	0
071823-00-ML-7		7:05		7	2.29				
071823-00-ML-12		7:05		12	1.98				
			AVERAGE TURBIDITY:		2.22				
			TURBIDITY INCREASE:		-4.39				
071823-02-ML-2	2696526 , 815915	9:05	15'	2	2.08		FLOOD	0	2
071823-02-ML-8		9:05		8	2.46				
071823-02-ML-13		9:05		13	2.39				
			AVERAGE TURBIDITY:		2.31				
			TURBIDITY INCREASE:		-1.08				
071823-04-ML-2	2695935 , 816106	11:05	11'	2	2.1		EBB	0	4
071823-04-ML-6		11:05		6	5.89				
071823-04-ML-9		11:05		11	3.93				
			AVERAGE TURBIDITY:		3.97				
			TURBIDITY INCREASE:		-1.82				
071823-06-ML-2	2695935 , 816102	13:05	10'	2	5.84		EBB	0	6
071823-06-ML-5		13:05		5	4.09				
071823-06-ML-8		13:05		8	4.58				
			AVERAGE TURBIDITY:		4.84				
			TURBIDITY INCREASE:		-1.24				
071823-08-ML-2	2696527 , 815911	15:05	11'	2	3.7		FLOOD	0	8
071823-08-ML-5		15:05		5	6.55				
071823-08-ML-9		15:05		9	2.7				
			AVERAGE TURBIDITY:		4.32				
			TURBIDITY INCREASE:		0.09				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/24/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:34a/1:09p **Low:** 6:04a/6:40p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072423-00-RL-2	2695938 , 816097	7:00	10'	2	1.99		FLOOD	0'	0
072423-00-RL-5		7:00		5	2.35				
072423-00-RL-8		7:00		8	2.94				
			AVERAGE TURBIDITY:		2.43				
072423-02-RL-2	2695934 , 816108	9:00	11'	2	2.65		FLOOD	0'	2
072423-02-RL-5		9:00		5	2.58				
072423-02-RL-9		9:00		9	3.24				
			AVERAGE TURBIDITY:		2.82				
072423-03-RL-2	2696564 , 815164	10:00	7'	2	5.86		FLOOD, LEVELING	0'	3
072423-03-RL-3		10:00		3	7.05				
072423-03-RL-5		10:00		5	7.03				
			AVERAGE TURBIDITY:		6.65				
072423-04-RL-2	2695933 , 816107	11:00	12'	2	2.43		FLOOD	0'	4
072423-04-RL-6		11:00		6	2.41				
072423-04-RL-10		11:00		10	2.93				
			AVERAGE TURBIDITY:		2.59				
072423-05-RL-2	2696959 , 815618	11:15	14'	2	2.95		FLOOD, LEVELING	0'	5
072423-05-RL-7		11:15		7	2.71				
072423-05-RL-12		11:15		12	3.47				
			AVERAGE TURBIDITY:		3.04				
072423-06-RL-2	2695933 , 816098	13:00	20'	2	2.07		FLOOD	0'	6
072423-06-RL-10		13:00		10	3.36				
072423-06-RL-18		13:00		18	0.34				
			AVERAGE TURBIDITY:		1.92				
072423-07-RL-2	2697459 , 815045	14:00	10	2	8.42		EBB	0'	7
072423-07-RL-5		14:00		5	8.69				
072423-07-RL-8		14:00		8	7.33				
			AVERAGE TURBIDITY:		8.15				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
072423-00-ML-2	2696442 , 815668	7:05	12'	2	2.37		FLOOD	0'	0
072423-00-ML-6		7:05		6	2.39				
072423-00-ML-10		7:05		10	2.61				
			AVERAGE TURBIDITY:		2.46				
			TURBIDITY INCREASE:		0.03				
072423-02-ML-2	2696461 , 815760	9:05	13'	2	2.83		FLOOD	0'	2
072423-02-ML-6		9:05		6	2.62				
072423-02-ML-11		9:05		11	3.29				
			AVERAGE TURBIDITY:		2.91				
			TURBIDITY INCREASE:		0.09				
072423-03-ML-2	2697536 , 815045	10:05	10'	2	4.68		FLOOD, LEVELING	0'	3
072423-03-ML-5		10:05		5	5.3				
072423-03-ML-8		10:05		8	7.12				
			AVERAGE TURBIDITY:		5.70				
			TURBIDITY INCREASE:		-0.95				
072423-04-ML-2	2696469 , 815771	11:05	15'	2	2.96		FLOOD	0'	4
072423-04-ML-7		11:05		7	2.49				
072423-04-ML-13		11:05		13	2.6				
			AVERAGE TURBIDITY:		2.68				
			TURBIDITY INCREASE:		0.09				
072423-05-ML-2	2697451 , 815068	11:25	11'	2	6.22		FLOOD, LEVELING	0'	5
072423-05-ML-5		11:25		5	8.17				
072423-05-ML-9		11:25		9	8.97				
			AVERAGE TURBIDITY:		7.79				
			TURBIDITY INCREASE:		4.74				
072423-06-ML-2	2696465 , 815785	13:05	15'	2	8.95		FLOOD	0'	6
072423-06-ML-7		13:05		7	7.66				
072423-06-ML-13		13:05		13	3.76				
			AVERAGE TURBIDITY:		6.79				
			TURBIDITY INCREASE:		4.87				
072423-07-ML-2	2696555 , 815095	14:05	10'	2	7.01		EBB	0'	7
072423-07-ML-5		14:05		5	7.41				
072423-07-ML-8		14:05		8	8.49				
			AVERAGE TURBIDITY:		7.64				
			TURBIDITY INCREASE:		-0.51				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/31/2023
MONITORS: HC/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:11a/7:39p **Low:** 12:56a/12:35p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-RL-2	2695929 , 816201	7:00	13'	2	3		FLOOD	0'	0
073123-00-RL-7		7:00		7	2				
073123-00-RL-11		7:00		11	1.5				
			AVERAGE TURBIDITY:		2.17				
073123-02-RL-2	2696805 , 815949	9:00	14'	2	6.7		EBB	0'	2
073123-02-RL-7		9:00		7	9.3				
073123-02-RL-12		9:00		12	8.9				
			AVERAGE TURBIDITY:		8.30				
073123-03-RL-2	2696805 , 815949	11:00	12'	2	14.7		EBB	0'	4
073123-03-RL-6		11:00		6	11.1				
073123-03-RL-10		11:00		10	13.2				
			AVERAGE TURBIDITY:		13.00				
073123-04-RL-2	2696805 , 815949	12:00	11'	2	15.8		EBB	0'	5
073123-04-RL-5		12:00		5	13.9				
073123-04-RL-9		12:00		9	20.1				
			AVERAGE TURBIDITY:		16.60				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-ML-2	2696805 , 815949	7:05	16'	2	4.8		FLOOD	0	0
073123-00-ML-8		7:05		8	4.5				
073123-00-ML-14		7:05		14	14				
			AVERAGE TURBIDITY:		7.77				
			TURBIDITY INCREASE:		5.60				
073123-02-ML-2	2695929 , 816201	9:05	10'	2	2		EBB	0	2
073123-02-ML-5		9:05		5	1.4				
073123-02-ML-8		9:05		8	2.9				
			AVERAGE TURBIDITY:		2.10				
			TURBIDITY INCREASE:		-6.20				
073123-03-ML-2	2695929 , 816201	11:05	11'	2	2.7		EBB	0	4
073123-03-ML-5		11:05		5	5				
073123-03-ML-9		11:05		9	8.1				
			AVERAGE TURBIDITY:		5.27				
			TURBIDITY INCREASE:		-7.73				
073123-04-ML-2	2695929 , 816201	12:05	9'	2	6.4		EBB	0	5
073123-04-ML-4		12:05		4	5.8				
073123-04-ML-7		12:05		7	3.3				
			AVERAGE TURBIDITY:		5.17				
			TURBIDITY INCREASE:		-11.43				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 7/31/2023
MONITORS: JR/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: NORTH TERMINAL PRE-CELL DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 7:11a/7:39p **Low:** 12:56a/12:35p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-RL-2	2697030 , 815840	7:10	10'	2	8.5		FLOOD	0'	0
073123-00-RL-5		7:10		5	6.6				
073123-00-RL-8		7:10		8	12				
			AVERAGE TURBIDITY:		9.03				
073123-02-RL-2	2697371 , 815015	9:10	9'	2	2.9		EBB	0'	2
073123-02-RL-4		9:10		4	1.94				
073123-02-RL-7		9:10		7	3.3				
			AVERAGE TURBIDITY:		2.71				
073123-03-RL-2	2697371 , 815015	11:10	7'	2	2.2		EBB	0'	4
073123-03-RL-3		11:10		3	3.9				
073123-03-RL-5		11:10		5	8.6				
			AVERAGE TURBIDITY:		4.90				
073123-04-RL-2	2697371 , 815015	12:10	4'	2	2.9		EBB	0'	5
073123-04-RL-3		12:10		3	3				
073123-04-RL-3		12:10		3	3				
			AVERAGE TURBIDITY:		2.97				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
073123-00-ML-2	2697371 , 815015	7:15	10'	2	1.7		FLOOD	0	0
073123-00-ML-5		7:15		5	3				
073123-00-ML-8		7:15		8	1.3				
			AVERAGE TURBIDITY:		2.00				
			TURBIDITY INCREASE:		-7.03				
073123-02-ML-2	2697030 , 815840	9:15	8'	2	8.2		EBB	0	2
073123-02-ML-4		9:15		4	9.6				
073123-02-ML-6		9:15		6	11.4				
			AVERAGE TURBIDITY:		9.73				
			TURBIDITY INCREASE:		7.02				
073123-03-ML-2	2697030 , 815840	11:15	7'	2	5		EBB	0	4
073123-03-ML-3		11:15		3	5.3				
073123-03-ML-5		11:15		5	6.6				
			AVERAGE TURBIDITY:		5.63				
			TURBIDITY INCREASE:		0.73				
073123-04-ML-2	2697030 , 815840	12:15	6'	2	26.3		EBB	0	5
073123-04-ML-3		12:15		3	25.9				
073123-04-ML-4		12:15		4	24.9				
			AVERAGE TURBIDITY:		25.70				
			TURBIDITY INCREASE:		22.73				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

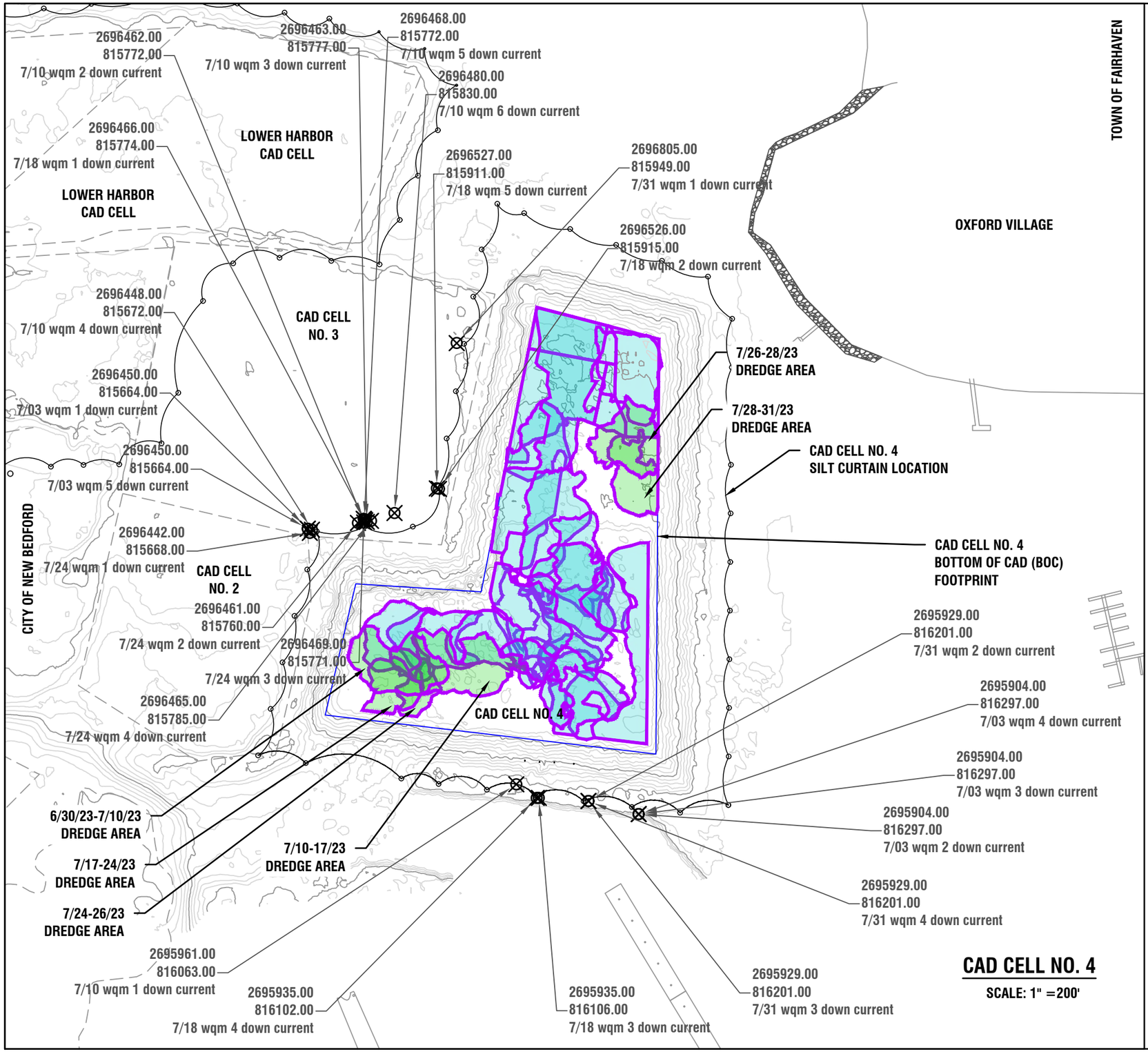
* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking

Figure 2 – Infield Filling Progress Plan

Figure 3 – Lower Harbor CAD Cell Capping Progress



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF NORTH TERMINAL DREDGING SITES & DISPOSAL AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	07-31-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - JUL 3, 2023 WQM - JUL 10, 2023
WQM - JUL 18, 2023 WQM - JUL 24, 2023
WQM - JUL 31, 2023

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

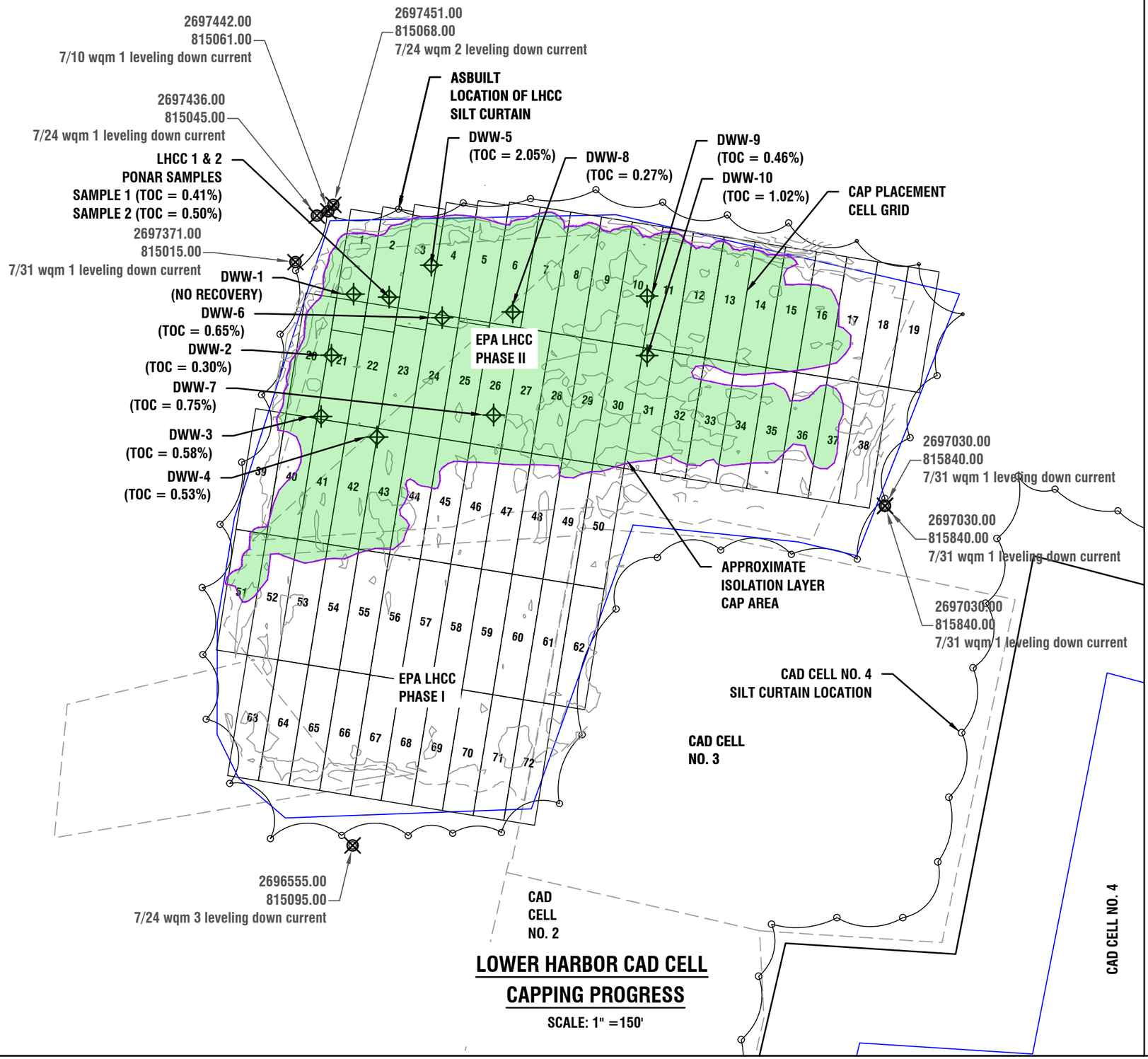
DATE:	07-31-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
JULY 31, 2023



LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

APPROXIMATE LIMIT OF LHCC AREAS

WATER QUALITY MONITORING TARGET

ISOLATION LAYER SAMPLE LOCATION (TOC RESULTS)

PREVIOUSLY CAPPED AREA

AREA CAPPED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	08/15/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Jul. 3rd – Jul. 31st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority

Bottom of CAD Cell No. 4 & North Terminal Expansion

Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/3/2023 TO 7/8/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
7/3/2023	270	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/3/2023	271	Komatsu 1250	B	300	CAD4	Infield		
7/3/2023	272	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/5/2023	273	Komatsu 1250	B	300	CAD4	Infield		
7/6/2023	274	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/6/2023	275	Komatsu 1250	B	300	CAD4	Infield		
7/6/2023	276	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/7/2023	277	Komatsu 1250	B	300	CAD4	Infield		
7/7/2023	278	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/7/2023	279	Komatsu 1250	B	300	CAD4	Infield		
7/7/2023	280	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/8/2023	281	Komatsu 1250	B	300	CAD4	Infield		
7/8/2023	282	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/8/2023	283	Komatsu 1250	B	300	CAD4	Infield		
			Weekly Total	3500	CY			
			CUMULATIVE TOTAL	73386	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/10/2023 TO 7/15/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
7/10/2023	284	Komatsu 1250	B	300	CAD4	Infield		
7/10/2023	285	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/10/2023	286	Komatsu 1250	B	300	CAD4	Infield		
7/10/2023	287	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/11/2023	288	Komatsu 1250	B	300	CAD4	Infield		
7/11/2023	289	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/11/2023	290	Komatsu 1250	B	300	CAD4	Infield		
7/11/2023	291	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/12/2023	292	Komatsu 1250	B	300	CAD4	Infield		
7/12/2023	293	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/12/2023	294	Komatsu 1250	B	300	CAD4	Infield		
7/12/2023	295	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/13/2023	296	Komatsu 1250	B	300	CAD4	Infield		
7/13/2023	297	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/13/2023	298	Komatsu 1250	B	300	CAD4	Infield		
7/14/2023	299	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/14/2023	300	Komatsu 1250	B	300	CAD4	Infield		
7/14/2023	301	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/15/2023	302	Komatsu 1250	B	300	CAD4	Infield		
7/15/2023	303	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/15/2023	304	Komatsu 1250	B	300	CAD4	Infield		
			Weekly Total	5300	CY			
			CUMULATIVE TOTAL	78686	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/17/2023 TO 7/22/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
7/17/2023	305	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/17/2023	306	Komatsu 1250	B	300	CAD4	Infield		
7/17/2023	307	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/18/2023	308	Komatsu 1250	B	300	CAD4	Infield		
7/18/2023	309	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/19/2023	310	Komatsu 1250	B	300	CAD4	Infield		
7/19/2023	311	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/19/2023	312	Komatsu 1250	B	300	CAD4	Infield		
7/20/2023	313	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/20/2023	314	Komatsu 1250	B	300	CAD4	Infield		
7/20/2023	315	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/20/2023	316	Komatsu 1250	B	300	CAD4	Infield		
7/20/2023	317	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/21/2023	318	Komatsu 1250	B	300	CAD4	Infield		
7/21/2023	319	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/21/2023	320	Komatsu 1250	B	300	CAD4	Infield		
7/21/2023	321	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/22/2023	322	Komatsu 1250	B	300	CAD4	Infield		
7/22/2023	323	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/22/2023	324	Komatsu 1250	B	300	CAD4	Infield		
			Weekly Total	5000	CY			
			CUMULATIVE TOTAL	83686	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/24/2023 TO 7/29/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
7/24/2023	325	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/24/2023	326	Komatsu 1250	B	300	CAD4	Infield		
7/24/2023	327	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/25/2023	328	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/25/2023	329	Komatsu 1250	B	300	CAD4	Infield		
7/26/2023	330	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/26/2023	331	Komatsu 1250	B	300	CAD4	Infield		
7/26/2023	332	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/26/2023	333	Komatsu 1250	B	300	CAD4	Infield		
7/27/2023	334	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/27/2023	335	Komatsu 1250	B	300	CAD4	Infield		
7/27/2023	336	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/27/2023	337	Komatsu 1250	B	300	CAD4	Infield		
7/27/2023	338	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/28/2023	339	Komatsu 1250	B	250	CAD4	Infield		
7/28/2023	340	Komatsu 1250	Little Jeff	150	CAD4	Infield		
7/28/2023	341	Komatsu 1250	B	250	CAD4	Infield		
7/28/2023	342	Komatsu 1250	Little Jeff	150	CAD4	Infield		
7/28/2023	343	Komatsu 1250	B	250	CAD4	Infield		
7/28/2023	344	Komatsu 1250	Little Jeff	150	CAD4	Infield		
7/29/2023	345	Komatsu 1250	B	250	CAD4	Infield		
7/29/2023	346	Komatsu 1250	Little Jeff	150	CAD4	Infield		
7/29/2023	347	Komatsu 1250	B	250	CAD4	Infield		
7/29/2023	348	Komatsu 1250	Little Jeff	153	CAD4	Infield		
			Weekly Total	5403	CY			
			CUMULATIVE TOTAL	89089	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 1st – Sept. 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of August 2023 for the dredging of Bottom of CAD Cell #4 (CAD4) and backfilling within the North Terminal project area along with Capping of Lower Harbor CAD Cell (LHCC).

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 17th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of August 1st through September 1st, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of August 1st through September 1st, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.
    - Performed observations of capping/bed leveling at LHCC.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities.

- Figure 2 – Infield Filling Progress Plan, which shows areas of backfill activities at the North Terminal site for both reuse of dredge material as well as imported backfill material.

- Figure 3 – Lower Harbor CAD Cell Capping Progress, which shows areas of the isolation cap layer placed to date along with confirmatory sample location and % of TOC results, and approximate locations of the water quality monitoring events conducted during capping activities.

- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023. For the month of August 2023 DWW has continued dredging at CAD Cell #4 and has continued capping and bed leveling operations at LHCC through September 1st, 2023.

Beginning in July 2023 DWW updated the working hours to two 8-hr. shifts with a window of 6am to 11pm working the tides for a total of 16 total hours daily.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th,

2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023. For the month of August 2023 DWW has continued dredging at CAD Cell #4.

LHCC Capping:

Beginning on June 29th, DWW began importing isolation layer cap materials and loading the dump scow Mary P for placements within LHCC. DWW continued capping and bed leveling operations at LHCC through September 1st, 2023. Through the Month of August DWW has placed cap material over approximately 100% of the coverage area.

DWW collected 22 confirmatory samples within the capped area. See Figure 3 for results.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	21,001
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	110,090
Approximate Bottom of CAD Cell #4 Dredging Remaining	43,960
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	77,540
Approximate Infield Fill Volume (This reporting period)	18,001
Approximate Infield Capacity Filled to Date	77,540
Approximate Infield Fill Capacity Remaining	0
Estimate Total Approximate LHCC Capping Volume	30,000
Approximate LHCC Capping Fill Volume (This reporting period)	0
Approximate LHCC Capping Fill Volume Remaining	30,000
Estimate Total Approximate Stockpile Capacity Available	16,960
Approximate Stockpile Fill Volume (This reporting period)	3,000
Approximate Stockpile Fill Capacity Remaining	13,960
Estimate Total Pre-Cell Extension Capacity Available	8,100

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 8/9, 8/15, 8/25, & 8/31). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 1st – Sept. 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 8/9/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	68	83	Sunny	None	0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 7:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from August 7th through August 12th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Maura Harbaugh	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Dredge oversight.
    b. Completed Water Quality Monitoring at CAD Cell #4.
    c. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 8/15/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High	Sunny	None	Rain	Snow		
	67	75			0	0	Wind 5-10	SW

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from August 14th through August 19th, 2023. Dredging continues into flat top barges "B", "Jonathan", "Little Jeff", and pocket scow "Mary P" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed. Crews continued dredging activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Mike Campagnone	Water Quality Monitoring, Hydro Surveys

Work observation report, comments: Dredge down for repairs on 8/15/23.

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at LHCC.

Construction Observation Report

Bed Leveling at LHCC.

Bed Leveling at LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 8/25/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	64	70	Rain	None	0.39	0	Wind 10-15	S

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from August 21st through August 26th, 2023. Dredging continues into flat top barges "B", "Jonathan", and "Little Jeff" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow and the drag barge. Crews continued dredging and capping activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys

Work observation report, comments: Dredge down for repairs on 8/15/23.

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 8/31/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	66	83	Clear	None	0.00	0	Wind 10-15	SW

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from August 28th through September 1st, 2023. Dredging continues into flat top barges "B", "Jonathan", and "Little Jeff" as needed for offloading into the infield area. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow and the drag barge. Crews continued dredging and capping activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Ethan Bowe	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 1st – Sept. 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/9/2023
MONITORS: HC/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 2:42a/3:19p **Low:** 7:56a/10:33p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-RL-2	2696719 , 815962	7:00	11'	2	3.53		EBB	0'	0
080923-00-RL-5		7:00		5	4.76				
080923-00-RL-9		7:00		9	7.18				
			AVERAGE TURBIDITY:		5.16				
080923-02-RL-2	2695905 , 816298	9:00	9'	2	6.04		FLOOD	0'	2
080923-02-RL-4		9:00		4	4.3				
080923-02-RL-7		9:00		7	4.16				
			AVERAGE TURBIDITY:		4.83				
080923-04-RL-2	2695914 , 816200	11:00	10'	2	4.8		FLOOD	0'	4
080923-04-RL-5		11:00		5	3.91				
080923-04-RL-8		11:00		8	5.26				
			AVERAGE TURBIDITY:		4.66				
080923-06-RL-2	2695920 , 816208	13:00	11'	2	9.08		FLOOD	0'	6
080923-06-RL-5		13:00		5	8				
080923-06-RL-9		13:00		9	7.83				
			AVERAGE TURBIDITY:		8.30				
080923-08-RL-2	2695926 , 816111	15:00	12'	2	7.7		FLOOD	0'	8
080923-08-RL-6		15:00		6	7.6				
080923-08-RL-10		15:00		10	6.56				
			AVERAGE TURBIDITY:		7.29				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-ML-2	2695903 , 816295	7:05	9'	2	3.97		EBB	0	0
080923-00-ML-4		7:05		4	8.19				
080923-00-ML-7		7:05		7	7.82				
			AVERAGE TURBIDITY:		6.66				
			TURBIDITY INCREASE:		1.50				
080923-02-ML-2	2696890 , 815971	9:05	11'	2	4.18		FLOOD	0	2
080923-02-ML-5		9:05		5	4.31				
080923-02-ML-9		9:05		9	7.59				
			AVERAGE TURBIDITY:		5.36				
			TURBIDITY INCREASE:		0.53				
080923-04-ML-2	2696716 , 815937	11:05	12'	2	9.3		FLOOD	0	4
080923-04-ML-6		11:05		6	10.77				
080923-04-ML-10		11:05		10	12.29				
			AVERAGE TURBIDITY:		10.79				
			TURBIDITY INCREASE:		6.13				
080923-06-ML-2	2696800 , 815954	13:05	13'	2	13.25		FLOOD	0	6
080923-06-ML-6		13:05		6	11.06				
080923-06-ML-11		13:05		11	13.08				
			AVERAGE TURBIDITY:		12.46				
			TURBIDITY INCREASE:		4.16				
080923-08-ML-2	2696704 , 815941	15:05	13'	2	9.13		FLOOD	0	8
080923-08-ML-6		15:05		6	20.15				
080923-08-ML-11		15:05		11	13.37				
			AVERAGE TURBIDITY:		14.22				
			TURBIDITY INCREASE:		6.93				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/9/2023
MONITORS: HC/MH
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 2:42a/3:19p **Low:** 7:56a/10:33p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-RL-2	2696547 , 815082	9:10	6'	2	30.68		FLOOD	0'	2
080923-00-RL-3		9:10		3	19.25				
080923-00-RL-4		9:10		4	25.76				
			AVERAGE TURBIDITY:		25.23				
080923-02-RL-2	2696552 , 815237	11:10	6'	2	15.17		FLOOD	0'	4
080923-02-RL-4		11:10		3	15.01				
080923-02-RL-7		11:10		4	16.27				
			AVERAGE TURBIDITY:		15.48				
080923-04-RL-2	2696870 , 815475	13:10	14'	2	9.09		FLOOD	0'	6
080923-04-RL-7		13:10		7	8.31				
080923-04-RL-12		13:10		12	6.08				
			AVERAGE TURBIDITY:		7.83				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
080923-00-ML-2	2697434 , 815044	9:15	6'	2	11		FLOOD	0	2
080923-00-ML-3		9:15		3	13.42				
080923-00-ML-4		9:15		4	10.45				
			AVERAGE TURBIDITY:		11.62				
			TURBIDITY INCREASE:		-13.61				
080923-02-ML-2	2696890 , 815971	11:15	9'	2	8.25		FLOOD	0	4
080923-02-ML-4		11:15		4	6.49				
080923-02-ML-7		11:15		7	5.7				
			AVERAGE TURBIDITY:		6.81				
			TURBIDITY INCREASE:		-8.67				
080923-04-ML-2	2697446 , 815046	13:15	9'	2	8.71		FLOOD	0	6
080923-04-ML-4		13:15		4	10.19				
080923-04-ML-7		13:15		7	10.04				
			AVERAGE TURBIDITY:		9.65				
			TURBIDITY INCREASE:		1.82				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/15/2023
MONITORS: JR/MC
WEATHER CONDITIONS: CLEAR
WIND: 5-10 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 8:08a/8:29p **Low:** 1:53a/1:18p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
081523-00-RL-2	2696553 , 815067	7:00	10'	2	2.92		FLOOD	0'	0
081523-00-RL-5		7:00		5	2.55				
081523-00-RL-8		7:00		8	4.81				
			AVERAGE TURBIDITY:		3.43				
081523-02-RL-2	2697266 , 814974	9:00	10'	2	3.27		EBB	0'	2
081523-02-RL-5		9:00		5	3.55				
081523-02-RL-8		9:00		8	4.84				
			AVERAGE TURBIDITY:		3.89				
081523-04-RL-2	2697427 , 815043	11:00	8'	2	3.69		EBB	0'	4
081523-04-RL-4		11:00		4	3.68				
081523-04-RL-6		11:00		6	4.25				
			AVERAGE TURBIDITY:		3.87				
081523-06-RL-2	2697439 , 815046	13:00	6'	2	3.65		EBB	0'	6
081523-06-RL-3		13:00		3	4.23				
081523-06-RL-4		13:00		4	3.64				
			AVERAGE TURBIDITY:		3.84				
081523-08-RL-2	2696555 , 815363	14:30	12'	2	4.45		FLOOD	0'	8
081523-08-RL-6		14:30		6	4.14				
081523-08-RL-10		14:30		10	4.25				
			AVERAGE TURBIDITY:		4.28				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
081523-00-ML-2	2697432 , 815076	7:05	10'	2	3.32		FLOOD	0	0
081523-00-ML-5		7:05		5	3.15				
081523-00-ML-8		7:05		8	8.76				
			AVERAGE TURBIDITY:		5.08				
			TURBIDITY INCREASE:		1.65				
081523-02-ML-2	2696569 , 815153	9:05	9'	2	3.01		EBB	0	2
081523-02-ML-4		9:05		4	3.26				
081523-02-ML-7		9:05		7	6.91				
			AVERAGE TURBIDITY:		4.39				
			TURBIDITY INCREASE:		0.51				
081523-04-ML-2	2696876 , 815463	11:05	14'	2	3.65		EBB	0	4
081523-04-ML-7		11:05		7	3.64				
081523-04-ML-12		11:05		12	4.82				
			AVERAGE TURBIDITY:		4.04				
			TURBIDITY INCREASE:		0.16				
081523-06-ML-2	2696874 , 815463	13:05	12'	2	4.23		EBB	0	6
081523-06-ML-6		13:05		6	3.98				
081523-06-ML-10		13:05		10	5.57				
			AVERAGE TURBIDITY:		4.59				
			TURBIDITY INCREASE:		0.75				
081523-08-ML-2	2697355 , 814992	14:35	7'	2	4.06		FLOOD	0	8
081523-08-ML-4		14:35		4	3.87				
081523-08-ML-5		14:35		5	5.29				
			AVERAGE TURBIDITY:		4.41				
			TURBIDITY INCREASE:		0.13				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/25/2023
MONITORS: JR/MC
WEATHER CONDITIONS: RAIN
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 2:36a/3:08p **Low:** 7:52a/9:38p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
082523-00-RL-2	2696487 , 815769	7:00	12'	2	4.26		EBB	0'	0
082523-00-RL-6		7:00		6	4.73				
082523-00-RL-10		7:00		10	6.23				
			AVERAGE TURBIDITY:		5.07				
082523-02-RL-2	2695938 , 816097	9:00	11'	2	4.41		FLOOD	0'	2
082523-02-RL-5		9:00		5	4.6				
082523-02-RL-9		9:00		9	4.39				
			AVERAGE TURBIDITY:		4.47				
082523-04-RL-2	2695937 , 816100	11:00	11'	2	4.04		FLOOD	0'	4
082523-04-RL-5		11:00		5	4.28				
082523-04-RL-9		11:00		9	4.44				
			AVERAGE TURBIDITY:		4.25				
082523-06-RL-2	2695927 , 816199	13:00	12'	2	5.34		FLOOD	0'	6
082523-06-RL-6		13:00		6	5.36				
082523-06-RL-10		13:00		10	5.77				
			AVERAGE TURBIDITY:		5.49				
082523-08-RL-2	2695935 , 816104	15:00	14'	2	0.81		FLOOD	0'	8
082523-08-RL-7		15:00		7	1.99				
082523-08-RL-12		15:00		12	3.59				
			AVERAGE TURBIDITY:		2.13				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
082523-00-ML-2	2695938 , 816097	7:05	10'	2	4.18		EBB	0	0
082523-00-ML-5		7:05		5	4.03				
082523-00-ML-8		7:05		8	4.5				
			AVERAGE TURBIDITY:		4.24				
			TURBIDITY INCREASE:		-0.84				
082523-02-ML-2	2696444 , 815679	9:05	12'	2	4.17		FLOOD	0	2
082523-02-ML-6		9:05		6	4.92				
082523-02-ML-10		9:05		10	4.61				
			AVERAGE TURBIDITY:		4.57				
			TURBIDITY INCREASE:		0.10				
082523-04-ML-2	2696463 , 815777	11:05	13'	2	4.3		FLOOD	0	4
082523-04-ML-6		11:05		6	4.35				
082523-04-ML-11		11:05		11	4.91				
			AVERAGE TURBIDITY:		4.52				
			TURBIDITY INCREASE:		0.27				
082523-06-ML-2	2696443 , 815671	13:05	14'	2	3.37		FLOOD	0	6
082523-06-ML-7		13:05		7	3.53				
082523-06-ML-12		13:05		12	3.76				
			AVERAGE TURBIDITY:		3.55				
			TURBIDITY INCREASE:		-1.94				
082523-08-ML-2	2696469 , 815771	15:05	14'	2	3.95		FLOOD	0	8
082523-08-ML-7		15:05		7	5.31				
082523-08-ML-12		15:05		12	12.91				
			AVERAGE TURBIDITY:		7.39				
			TURBIDITY INCREASE:		5.26				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 8/31/2023
MONITORS: JR/EB
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 8:37a/9:03p **Low:** 2:11a/2:23p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
083123-00-RL-2	2695945 , 816005	7:00	20'	2	3.14		FLOOD	0'	0
083123-00-RL-10		7:00		10	3.51				
083123-00-RL-18		7:00		18	3.47				
			AVERAGE TURBIDITY:		3.37				
083123-02-RL-2	2696796 , 815965	9:00	15'	2	2.49		EBB	0'	2
083123-02-RL-7		9:00		7	3.54				
083123-02-RL-13		9:00		13	3.69				
			AVERAGE TURBIDITY:		3.24				
083123-04-RL-2	2696798 , 815964	11:00	13'	2	4.06		EBB	0'	4
083123-04-RL-6		11:00		6	3.7				
083123-04-RL-11		11:00		11	4.94				
			AVERAGE TURBIDITY:		4.23				
083123-06-RL-2	2696800 , 815964	13:00	10'	2	4.75		EBB	0'	6
083123-06-RL-5		13:00		5	4.35				
083123-06-RL-8		13:00		8	4.25				
			AVERAGE TURBIDITY:		4.45				
083123-08-RL-2	2695934 , 816187	15:00	11'	2	3.5		FLOOD	0'	8
083123-08-RL-5		15:00		5	3.44				
083123-08-RL-9		15:00		9	3.51				
			AVERAGE TURBIDITY:		3.48				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
083123-00-ML-2	2696796 , 815964	7:05	14'	2	2.86		FLOOD	0	0
083123-00-ML-7		7:05		7	2.91				
083123-00-ML-12		7:05		12	4.17				
			AVERAGE TURBIDITY:		3.31				
			TURBIDITY INCREASE:		-0.06				
083123-02-ML-2	2695929 , 816186	9:05	20'	2	4.14		EBB	0	2
083123-02-ML-10		9:05		10	4.08				
083123-02-ML-18		9:05		18	3.95				
			AVERAGE TURBIDITY:		4.06				
			TURBIDITY INCREASE:		0.82				
083123-04-ML-2	2695938 , 816093	11:05	18'	2	4.97		EBB	0	4
083123-04-ML-9		11:05		9	4.64				
083123-04-ML-16		11:05		16	5.66				
			AVERAGE TURBIDITY:		5.09				
			TURBIDITY INCREASE:		0.86				
083123-06-ML-2	2695934 , 816187	13:05	12'	2	4.62		EBB	0	6
083123-06-ML-6		13:05		6	4.32				
083123-06-ML-10		13:05		10	4.88				
			AVERAGE TURBIDITY:		4.61				
			TURBIDITY INCREASE:		0.16				
083123-08-ML-2	2696797 , 815964	15:05	10'	2	4.96		FLOOD	0	8
083123-08-ML-5		15:05		5	5.44				
083123-08-ML-8		15:05		8	7.31				
			AVERAGE TURBIDITY:		5.90				
			TURBIDITY INCREASE:		2.42				

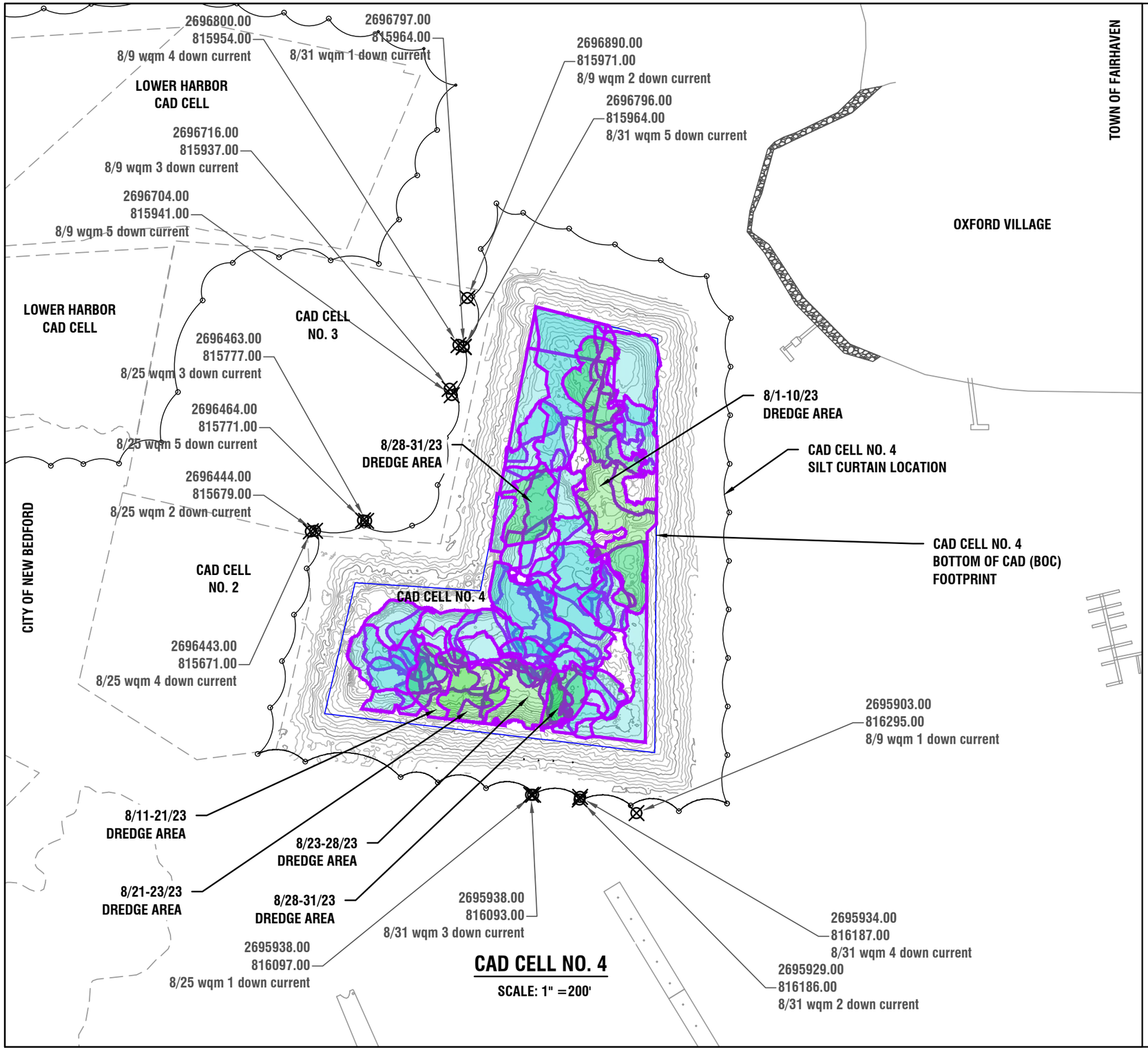
* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking

Figure 2 – Infield Filling Progress Plan

Figure 3 – Lower Harbor CAD Cell Capping Progress



CAD CELL NO. 4

SCALE: 1" =200'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF BOTTOM OF CAD CELL NO.4 DREDGE AREA

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	09-1-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - AUG 9, 2023 WQM - AUG 15, 2023
WQM - AUG 25, 2023 WQM - AUG 31, 2023

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

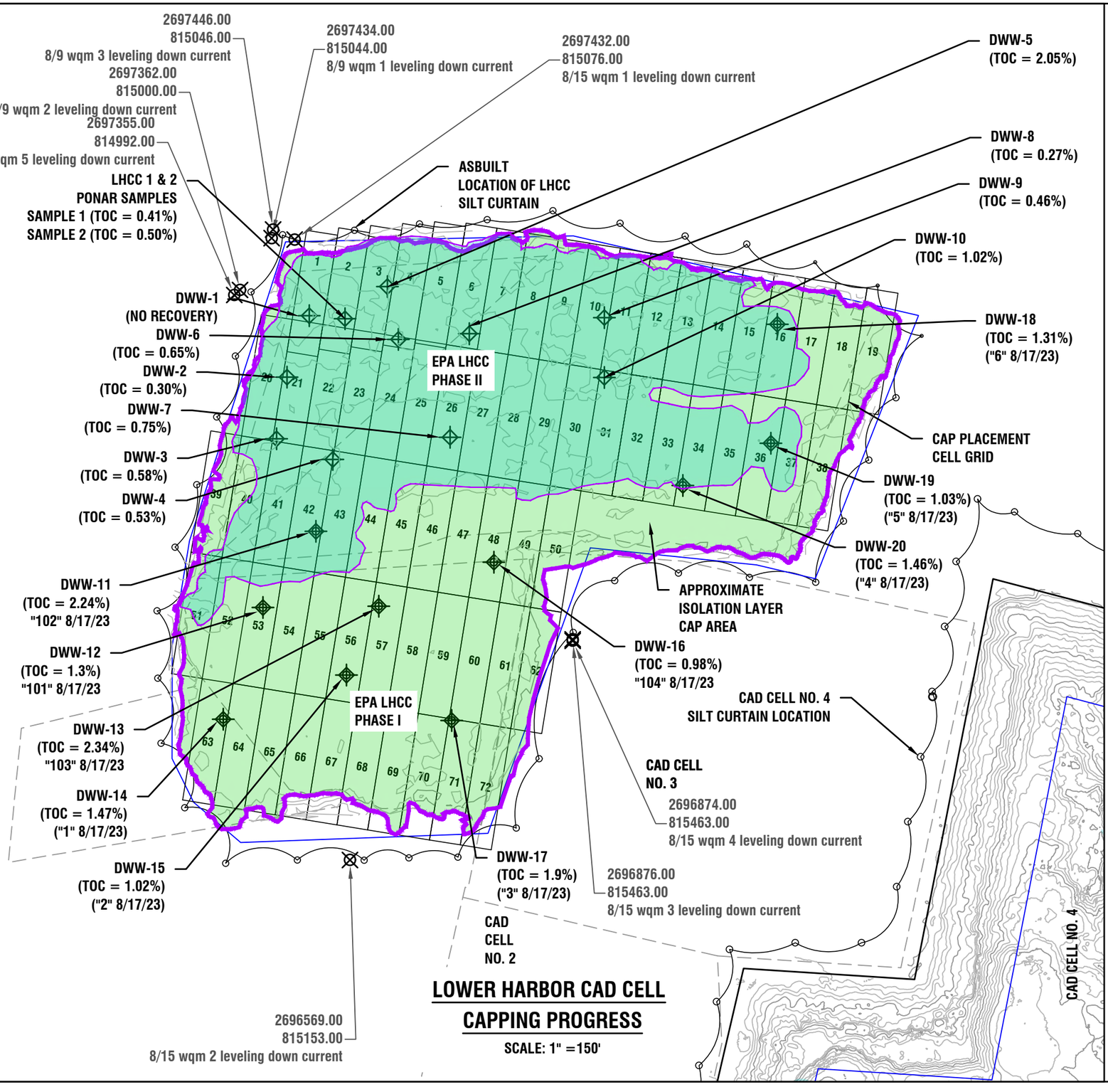
DATE:	09-01-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
SEPTEMBER 1, 2023



LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

- AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL
- APPROXIMATE LIMIT OF LHCC AREAS
- WATER QUALITY MONITORING TARGET
- ISOLATION LAYER SAMPLE LOCATION (TOC RESULTS)
- PREVIOUSLY CAPPED AREA
- AREA CAPPED THIS PERIOD
- APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	09/1/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Aug. 1st – Sept. 1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 7/31/2023 TO 8/5/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
7/31/2023	349	Komatsu 1250	B	300	CAD4	Infield		
7/31/2023	350	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/31/2023	351	Komatsu 1250	B	300	CAD4	Infield		
7/31/2023	352	Komatsu 1250	Little Jeff	200	CAD4	Infield		
7/31/2023	353	Komatsu 1250	B	300	CAD4	Infield		
7/31/2023	354	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/1/2023	355	Komatsu 1250	B	300	CAD4	Infield		
8/1/2023	356	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/1/2023	357	Komatsu 1250	B	300	CAD4	Infield		
8/2/2023	358	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/2/2023	359	Komatsu 1250	B	300	CAD4	Infield		
8/2/2023	360	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/3/2023	361	Komatsu 1250	B	250	CAD4	Infield		
8/3/2023	362	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/3/2023	363	Komatsu 1250	B	250	CAD4	Infield		
8/3/2023	364	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/5/2023	365	Komatsu 1250	B	250	CAD4	Infield		
8/5/2023	366	Komatsu 1250	Little Jeff	150	CAD4	Infield		
			Weekly Total	4200	CY			
			CUMULATIVE TOTAL	93289	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 8/7/2023 TO 8/10/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
8/7/2023	367	Komatsu 1250	B	300	CAD4	Infield		
8/7/2023	368	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/7/2023	369	Komatsu 1250	B	300	CAD4	Infield		
8/7/2023	370	Komatsu 1250	Little Jeff	200	CAD4	Infield		
8/8/2023	371	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/8/2023	372	Komatsu 1250	B	300	CAD4	Infield		
8/8/2023	373	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/8/2023	374	Komatsu 1250	B	300	CAD4	Infield		
8/9/2023	375	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/9/2023	376	Komatsu 1250	B	300	CAD4	Infield		
8/9/2023	377	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/9/2023	378	Komatsu 1250	B	250	CAD4	Infield		
8/9/2023	379	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/10/2023	380	Komatsu 1250	B	250	CAD4	Infield		
8/10/2023	381	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/10/2023	382	Komatsu 1250	B	250	CAD4	Infield		
			Weekly Total	4450	CY			
			CUMULATIVE TOTAL	97739	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 8/14/2023 TO 8/19/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
8/17/2023	383	Komatsu 1250	B	300	CAD4	Infield		
8/17/2023	384	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/17/2023	385	Komatsu 1250	B	300	CAD4	Infield		
8/18/2023	386	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/18/2023	387	Komatsu 1250	B	300	CAD4	Infield		
8/18/2023	388	Komatsu 1250	Jonathan	300	CAD4	Infield		
8/19/2023	389	Komatsu 1250	B	300	CAD4	Infield		
8/19/2023	390	Komatsu 1250	Jonathan	300	CAD4	Infield		
			Weekly Total	2400	CY			
			CUMULATIVE TOTAL	100139	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 8/21/2023 TO 8/26/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
8/21/2023	391	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/21/2023	392	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/21/2023	393	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/21/2023	394	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/22/2023	`395	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/22/2023	396	Komatsu 1250	B	275	CAD4	Infield		
8/22/2023	397	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/22/2023	398	Komatsu 1250	B	275	CAD4	Infield		
8/23/2023	399	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/23/2023	400	Komatsu 1250	B	275	CAD4	Infield		
8/23/2023	401	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/23/2023	402	Komatsu 1250	B	275	CAD4	Infield		
8/24/2023	403	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/24/2023	404	Komatsu 1250	B	275	CAD4	Infield		
8/24/2023	405	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/24/2023	406	Komatsu 1250	B	275	CAD4	Infield		
8/25/2023	407	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/25/2023	408	Komatsu 1250	B	275	CAD4	Infield		
8/25/2023	409	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/26/2023	410	Komatsu 1250	B	275	CAD4	Infield		
8/26/2023	411	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/26/2023	412	Komatsu 1250	B	275	CAD4	Infield		
			Weekly Total	5800	CY			
			CUMULATIVE TOTAL	105939	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 8/28/2023 TO 9/1/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
8/28/2023	413	Komatsu 1250	Little Jeff	100	CAD4	Infield		
8/28/2023	414	Komatsu 1250	Jonathan	275	CAD4	Infield		
8/28/2023	415	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/28/2023	416	Komatsu 1250	B	275	CAD4	Infield		
8/29/2023	417	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/29/2023	418	Komatsu 1250	B	275	CAD4	Infield		
8/29/2023	419	Komatsu 1250	B	275	CAD4	Infield		
8/30/2023	420	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/30/2023	421	Komatsu 1250	B	275	CAD4	Infield		
8/30/2023	422	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/30/2023	423	Komatsu 1250	B	275	CAD4	Infield		
8/30/2023	424	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/31/2023	425	Komatsu 1250	Mary P	275	CAD4	LHCC		
8/31/2023	426	Komatsu 1250	Mary P	275	CAD4	LHCC		
8/31/2023	427	Komatsu 1250	Little Jeff	150	CAD4	Infield		
8/31/2023	428	Komatsu 1250	Mary P	275	CAD4	LHCC		
9/1/2023	429	Komatsu 1250	Mary P	275	CAD4	LHCC		
9/1/2023	430	Komatsu 1250	Mary P	275	CAD4	LHCC		
9/1/2023	431	Komatsu 1250	Little Jeff	126	CAD4	Infield		
			Weekly Total	4151	CY			
			CUMULATIVE TOTAL	110090	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Sept. 4th – Sept. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of September 2023 for the dredging of Bottom of CAD Cell #4 (CAD4) and backfilling within the North Terminal project area along with Capping of Lower Harbor CAD Cell (LHCC).

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 18th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of September 4th through September 30th, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of September 4th through September 30th, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.
    - Performed observations of capping/bed leveling at LHCC.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities.

- Figure 2 – Infield Filling Progress Plan, which shows areas of backfill activities at the North Terminal site for both reuse of dredge material as well as imported backfill material.

- Figure 3 – Lower Harbor CAD Cell Capping Progress, which shows areas of the isolation cap layer placed to date along with confirmatory sample location and % of TOC results, and approximate locations of the water quality monitoring events conducted during capping activities.

- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023. DWW began capping LHCC on June 29, 2023. Initial cap layer included TOC (total organic carbon) amended import fill. DWW completed initial cap layer on August 30, 2023. DWW continued capping LHCC with BOC (bottom of CAD) dredged material for the secondary cap layer to complete the LHCC cap. For the month of September 2023 DWW has continued dredging at CAD Cell #4 and has continued capping and bed leveling operations at LHCC through September 30th, 2023.

Beginning in July 2023 DWW updated the working hours to two 8-hr. shifts with a window of 6am to 11pm working the tides for a total of 16 total hours daily.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell

extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023. For the month of September 2023 DWW has continued dredging at CAD Cell #4.

LHCC Capping:

Beginning on June 29th, 2023, DWW began importing isolation layer cap materials and loading the dump scow Mary P for placements within LHCC. On August 30, 2023 DWW completed importing isolation layer cap material and began the second layer of LHCC cap with material from CAD Cell #4. DWW continued capping and bed leveling operations at LHCC through September 30th, 2023. Through the Month of September DWW has placed cap material from bottom of CAD 4 over approximately 85% of the coverage area of LHCC.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	20,016
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	130,106
Approximate Bottom of CAD Cell #4 Dredging Remaining	23,944
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	77,540
Approximate Infield Fill Volume (This reporting period)	0
Approximate Infield Capacity Filled to Date	77,540
Approximate Infield Fill Capacity Remaining	0
Estimate Total Approximate LHCC Capping Volume	30,000
Approximate LHCC Capping Fill Volume (This reporting period)	20,016
Approximate LHCC Capping Fill Volume Remaining	9,984
Estimate Total Approximate Stockpile Capacity Available	16,960
Approximate Stockpile Fill Volume (This reporting period)	0
Approximate Stockpile Fill Capacity Remaining	13,960

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 9/6, 9/13, 9/21, & 9/26). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 9/06/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	68	88	Clear	None	0.00	0	Wind 5-10	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from September 4th through September 8th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat top barges "B" and "Little Jeff", and the drag barge. Crews continued dredging and capping activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

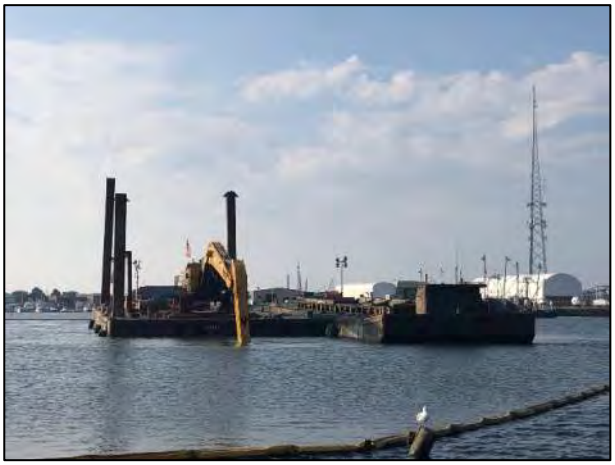
Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Paul Marsala	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.



Dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 9/13/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)		Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	63	77	T-Storms		0.37	0	Wind 10-15	S

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from September 11th through September 15th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Muraad Washington	Water Quality Monitoring, Hydro Surveys
Kristina Arabatzis	

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 9/21/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	48	74	Clear	None	0.0	0	Wind 5-10	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from September 18th through September 22nd, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Capping at LHCC..

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	59	60	Cloudy	None	0.0	0	Wind 20-25	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from September 25th through September 29th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4..

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Sept. 4th – Sept. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/6/2023
MONITORS: JR/PM
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 1:21a/1:54p **Low:** 6:17a/8:55p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
090623-00-RL-2	2695938 , 816093	7:00	17'	2	2.27		FLOOD	0'	0
090623-00-RL-8		7:00		8	2.47				
090623-00-RL-15		7:00		15	3.68				
			AVERAGE TURBIDITY:		2.81				
090623-02-RL-2	2695935 , 816094	9:00	16'	2	3.01		FLOOD	0'	2
090623-02-RL-8		9:00		8	3.34				
090623-02-RL-14		9:00		14	4.07				
			AVERAGE TURBIDITY:		3.47				
090623-04-RL-2	2695937 , 816100	11:00	13'	2	2.02		FLOOD	0'	4
090623-04-RL-6		11:00		6	1.97				
090623-04-RL-11		11:00		11	5.32				
			AVERAGE TURBIDITY:		3.10				
090623-06-RL-2	2695939 , 816093	13:00	16'	2	2.54		FLOOD	0'	6
090623-06-RL-8		13:00		8	3.41				
090623-06-RL-14		13:00		14	6.12				
			AVERAGE TURBIDITY:		4.02				
090623-08-RL-2	2696292 , 815630	15:00	16'	2	2.69		EBB	0'	8
090623-08-RL-8		15:00		8	3.37				
090623-08-RL-14		15:00		14	2.17				
			AVERAGE TURBIDITY:		2.74				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
090623-00-ML-2	2696528 , 815915	7:05	12'	2	2.39		FLOOD	0	0
090623-00-ML-6		7:05		6	2.24				
090623-00-ML-10		7:05		10	5.6				
			AVERAGE TURBIDITY:		3.41				
			TURBIDITY INCREASE:		0.60				
090623-02-ML-2	2696463 , 815775	9:05	12'	2	2.18		FLOOD	0	2
090623-02-ML-6		9:05		6	2.65				
090623-02-ML-10		9:05		10	7.26				
			AVERAGE TURBIDITY:		4.03				
			TURBIDITY INCREASE:		0.56				
090623-04-ML-2	2696713 , 815947	11:05	14'	2	3.23		FLOOD	0	4
090623-04-ML-7		11:05		7	5.9				
090623-04-ML-12		11:05		12	5.36				
			AVERAGE TURBIDITY:		4.83				
			TURBIDITY INCREASE:		1.73				
090623-06-ML-2	2696470 , 815773	13:05	16'	2	3.33		FLOOD	0	6
090623-06-ML-8		13:05		8	2.8				
090623-06-ML-14		13:05		14	2.56				
			AVERAGE TURBIDITY:		2.90				
			TURBIDITY INCREASE:		-1.13				
090623-08-ML-2	2695937 , 816102	15:05	18'	2	2.83		EBB	0	8
090623-08-ML-9		15:05		9	4.44				
090623-08-ML-16		15:05		16	7.49				
			AVERAGE TURBIDITY:		4.92				
			TURBIDITY INCREASE:		2.18				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/13/2023
MONITORS: JR/PM
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:40a/7:59p **Low:** 1:15a/1:04p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-RL-2	2696475 , 815777	9:00	15'	2	0.2		EBB	0'	0
091323-00-RL-7		9:00		7	3.5				
091323-00-RL-13		9:00		13	20.8				
			AVERAGE TURBIDITY:		8.17				
091323-02-RL-2	2696451 , 815670	11:00	12'	2	0.9		EBB	0'	2
091323-02-RL-6		11:00		6	1.4				
091323-02-RL-10		11:00		10	3.1				
			AVERAGE TURBIDITY:		1.80				
091323-04-RL-2	2695935 , 816107	13:00	10'	2	2.8		FLOOD	0'	4
091323-04-RL-5		13:00		5	5.6				
091323-04-RL-8		13:00		8	2				
			AVERAGE TURBIDITY:		3.47				
091323-06-RL-2	2695962 , 815903	14:00	11'	2	2.7		FLOOD	0'	6
091323-06-RL-6		14:00		6	4.5				
091323-06-RL-9		14:00		9	7.6				
			AVERAGE TURBIDITY:		4.93				
091323-08-RL-2	2695935 , 816094	15:00	14'	2	4.5		FLOOD	0'	8
091323-08-RL-7		15:00		7	2.9				
091323-08-RL-12		15:00		12	3.1				
			AVERAGE TURBIDITY:		3.50				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-ML-2	2695948 , 816093	9:05	12'	2	4.3		EBB	0	0
091323-00-ML-6		9:05		6	8.2				
091323-00-ML-10		9:05		10	11.2				
			AVERAGE TURBIDITY:		7.90				
			TURBIDITY INCREASE:		-0.27				
091323-02-ML-2	2695962 , 815921	11:05	12'	2	1.2		EBB	0	2
091323-02-ML-6		11:05		6	2.1				
091323-02-ML-10		11:05		10	6.2				
			AVERAGE TURBIDITY:		3.17				
			TURBIDITY INCREASE:		1.37				
091323-04-ML-2	2696462 , 815777	13:05	12'	2	4		FLOOD	0	4
091323-04-ML-6		13:05		6	9.8				
091323-04-ML-10		13:05		10	8.8				
			AVERAGE TURBIDITY:		7.53				
			TURBIDITY INCREASE:		4.07				
091323-06-ML-2	2696461 , 815772	14:05	11'	2	5.2		FLOOD	0	6
091323-06-ML-6		14:05		6	4.7				
091323-06-ML-9		14:05		9	5.1				
			AVERAGE TURBIDITY:		5.00				
			TURBIDITY INCREASE:		0.07				
091323-08-ML-2	2696468 , 815680	15:05	12'	2	4.6		FLOOD	0	8
091323-08-ML-6		15:05		6	12.2				
091323-08-ML-10		15:05		10	8.1				
			AVERAGE TURBIDITY:		8.30				
			TURBIDITY INCREASE:		4.80				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/13/2023
MONITORS: JR/MW/KA
WEATHER CONDITIONS: RAIN
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC CAPPING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 7:40a/7:59p **Low:** 1:15a/1:04p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-RL-2	2697437 , 815046	11:10	7'	2	3.8		EBB	0'	0
091323-00-RL-3		11:10		3	2.5				
091323-00-RL-5		11:10		5	6.9				
			AVERAGE TURBIDITY:		4.40				
091323-02-RL-2	2696566 , 815160	13:35	12'	2	6		FLOOD	0'	2
091323-02-RL-4		13:35		4	4.2				
091323-02-RL-6		13:35		6	3.7				
			AVERAGE TURBIDITY:		4.63				
091323-04-RL-2	2696562 , 815164	14:20	7	2	3.4		FLOOD	0'	4
091323-04-RL-4		14:20		4	3				
091323-04-RL-5		14:20		5	2.9				
			AVERAGE TURBIDITY:		3.10				
			AVERAGE TURBIDITY:						
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
091323-00-ML-2	2696566 , 814987	11:15	8'	2	6.6		EBB	0	0
091323-00-ML-4		11:15		4	7.8				
091323-00-ML-6		11:15		6	18.8				
			AVERAGE TURBIDITY:		11.07				
			TURBIDITY INCREASE:		6.67				
091323-02-ML-2	2697364 , 815009	13:40	8'	2	4		FLOOD	0	2
091323-02-ML-4		13:40		4	3.6				
091323-02-ML-6		13:40		6	3.7				
			AVERAGE TURBIDITY:		3.77				
			TURBIDITY INCREASE:		-0.87				
091323-04-ML-2	2697440 , 815046	14:25	8'	2	2.9		FLOOD	0	4
091323-04-ML-4		14:25		4	3.1				
091323-04-ML-6		14:25		6	8.9				
			AVERAGE TURBIDITY:		4.97				
			TURBIDITY INCREASE:		1.87				
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/21/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 12:25a/12:50p **Low:** 5:27a/6:24p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-RL-2	2695932 , 816100	7:00	11'	2	2.7		FLOOD	0'	0
092123-00-RL-6		7:00		6	2.87				
092123-00-RL-9		7:00		9	4.4				
			AVERAGE TURBIDITY:		3.32				
092123-02-RL-2	2695936 , 816092	9:00	10'	2	2.6		FLOOD	0'	2
092123-02-RL-5		9:00		5	3.21				
092123-02-RL-8		9:00		8	4.93				
			AVERAGE TURBIDITY:		3.58				
092123-04-RL-2	2695943 , 816090	11:00	12'	2	2.31		FLOOD	0'	4
092123-04-RL-6		11:00		6	2.85				
092123-04-RL-10		11:00		10	7.21				
			AVERAGE TURBIDITY:		4.12				
092123-06-RL-2	2696465 , 815774	13:00	14'	2	2.86		EBB	0'	6
092123-06-RL-7		13:00		7	2.19				
092123-06-RL-12		13:00		12	1.4				
			AVERAGE TURBIDITY:		2.15				
092123-08-RL-2	2696539 , 815935	15:00	14'	2	2.72		EBB	0'	8
092123-08-RL-7		15:00		7	5.46				
092123-08-RL-12		15:00		12	2.03				
			AVERAGE TURBIDITY:		3.40				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-ML-2	2696458 , 815766	7:05	12'	2	2.6		FLOOD	0	0
092123-00-ML-6		7:05		6	3.28				
092123-00-ML-10		7:05		10	6				
			AVERAGE TURBIDITY:		3.96				
			TURBIDITY INCREASE:		0.64				
092123-02-ML-2	2696458 , 815766	9:05	13'	2	3.36		FLOOD	0	2
092123-02-ML-6		9:05		6	3.34				
092123-02-ML-11		9:05		11	4.28				
			AVERAGE TURBIDITY:		3.66				
			TURBIDITY INCREASE:		0.08				
092123-04-ML-2	2696464 , 815770	11:05	14'	2	3.62		FLOOD	0	4
092123-04-ML-7		11:05		7	3.1				
092123-04-ML-12		11:05		12	6.06				
			AVERAGE TURBIDITY:		4.26				
			TURBIDITY INCREASE:		0.14				
092123-06-ML-2	2695943 , 816090	13:05	12'	2	2.66		EBB	0	6
092123-06-ML-6		13:05		6	3.64				
092123-06-ML-10		13:05		10	9.21				
			AVERAGE TURBIDITY:		5.17				
			TURBIDITY INCREASE:		3.02				
092123-08-ML-2	2695943 , 816089	15:05	13'	2	2.33		EBB	0	8
092123-08-ML-6		15:05		6	3.79				
092123-08-ML-11		15:05		11	10.74				
			AVERAGE TURBIDITY:		5.62				
			TURBIDITY INCREASE:		2.22				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/21/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:25a/12:50p **Low:** 5:27a/6:24p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-RL-2	2696571 , 815167	7:15	7'	2	2.56		FLOOD	0'	0
092123-00-RL-4		7:15		4	2.28				
092123-00-RL-5		7:15		5	7				
			AVERAGE TURBIDITY:		3.95				
092123-02-RL-2	2697355 , 815007	9:15	9'	2	5.02		FLOOD	0'	2
092123-02-RL-4		9:15		4	5.71				
092123-02-RL-7		9:15		7	2.94				
			AVERAGE TURBIDITY:		4.56				
092123-04-RL-2	2696557 , 815235	11:15	7	2	5.31		FLOOD	0'	4
092123-04-RL-4		11:15		4	5.96				
092123-04-RL-5		11:15		5	5.02				
			AVERAGE TURBIDITY:		5.43				
092123-06-RL-2	2697275 , 815001	13:15	11'	2	2.99		EBB	0'	6
092123-06-RL-5		13:15		5	4.59				
092123-06-RL-9		13:15		9	4.84				
			AVERAGE TURBIDITY:		4.14				
092123-08-RL-2	2697096 , 814938	14:55	10'	2	2.36		EBB	0'	8
092123-08-RL-5		14:55		5	3.36				
092123-08-RL-8		14:55		8	9.15				
			AVERAGE TURBIDITY:		4.96				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092123-00-ML-2	2697460 , 815031	7:20	8'	2	2.4		FLOOD	0	0
092123-00-ML-4		7:20		4	2.93				
092123-00-ML-6		7:20		6	3.21				
			AVERAGE TURBIDITY:		2.85				
			TURBIDITY INCREASE:		-1.10				
092123-02-ML-2	2697355 , 815007	9:20	9'	2	2.92		FLOOD	0	2
092123-02-ML-4		9:20		4	3.61				
092123-02-ML-7		9:20		7	8.44				
			AVERAGE TURBIDITY:		4.99				
			TURBIDITY INCREASE:		0.43				
092123-04-ML-2	2697276 , 814994	11:20	10'	2	4.58		FLOOD	0	4
092123-04-ML-5		11:20		5	7.3				
092123-04-ML-8		11:20		8	13.62				
			AVERAGE TURBIDITY:		8.50				
			TURBIDITY INCREASE:		3.07				
092123-06-ML-2	2696567 , 815084	13:20	10'	2	3.8		EBB	0	6
092123-06-ML-5		13:20		5	3.24				
092123-06-ML-8		13:20		8	1.45				
			AVERAGE TURBIDITY:		2.83				
			TURBIDITY INCREASE:		-1.31				
092123-08-ML-2	2696556 , 815119	15:00	9'	2	7.79		EBB	0	8
092123-08-ML-4		15:00		4	7.85				
092123-08-ML-7		15:00		7	3.95				
			AVERAGE TURBIDITY:		6.53				
			TURBIDITY INCREASE:		1.57				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/26/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 5:38a/6:09p **Low:** 11:26a

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-RL-2	2696451 , 815768	7:00	14'	2	2.4		EBB	0'	0
092623-00-RL-7		7:00		7	2.05				
092623-00-RL-12		7:00		12	1.45				
			AVERAGE TURBIDITY:		1.97				
092623-02-RL-2	2696450 , 815769	9:00	13'	2	2.16		EBB	0'	2
092623-02-RL-6		9:00		6	3.33				
092623-02-RL-11		9:00		11	3.54				
			AVERAGE TURBIDITY:		3.01				
092623-04-RL-2	2696450 , 815768	11:00	12'	2	2.72		EBB	0'	4
092623-04-RL-6		11:00		6	3.29				
092623-04-RL-10		11:00		10	4.56				
			AVERAGE TURBIDITY:		3.52				
092623-06-RL-2	2695910 , 815985	13:00	17'	2	3.65		FLOOD	0'	6
092623-06-RL-8		13:00		8	4.17				
092623-06-RL-15		13:00		15	4.75				
			AVERAGE TURBIDITY:		4.19				
092623-08-RL-2	2695966 , 815912	14:40	11'	2	3.31		FLOOD	0'	8
092623-08-RL-5		14:40		5	3.58				
092623-08-RL-9		14:40		9	5				
			AVERAGE TURBIDITY:		3.96				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-ML-2	2695963 , 815931	7:05	12'	2	2.99		EBB	0	0
092623-00-ML-6		7:05		6	3.3				
092623-00-ML-10		7:05		10	3.6				
			AVERAGE TURBIDITY:		3.30				
			TURBIDITY INCREASE:		1.33				
092623-02-ML-2	2695938 , 816101	9:05	12'	2	3.54		EBB	0	2
092623-02-ML-6		9:05		6	3.91				
092623-02-ML-10		9:05		10	9.13				
			AVERAGE TURBIDITY:		5.53				
			TURBIDITY INCREASE:		2.52				
092623-04-ML-2	2695942 , 815932	11:05	16'	2	3.27		EBB	0	4
092623-04-ML-8		11:05		8	3.19				
092623-04-ML-14		11:05		14	4.14				
			AVERAGE TURBIDITY:		3.53				
			TURBIDITY INCREASE:		0.01				
092623-06-ML-2	2696461 , 815780	13:15	12'	2	3.94		FLOOD	0	6
092623-06-ML-6		13:15		6	4.07				
092623-06-ML-10		13:15		10	7.91				
			AVERAGE TURBIDITY:		5.31				
			TURBIDITY INCREASE:		1.12				
092623-08-ML-2	2696443 , 815682	14:45	13'	2	4.43		FLOOD	0	8
092623-08-ML-6		14:45		6	5.27				
092623-08-ML-11		14:45		11	8.48				
			AVERAGE TURBIDITY:		6.06				
			TURBIDITY INCREASE:		2.10				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 9/26/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 5:38a/6:09p **Low:** 11:26a

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-RL-2	2697362 , 815025	9:10	8'	2	2.14		EBB	0'	0
092623-00-RL-4		9:10		4	2.66				
092623-00-RL-6		9:10		6	2.62				
			AVERAGE TURBIDITY:		2.47				
092623-02-RL-2	2697363 , 815022	11:10	7'	2	2.65		EBB	0'	2
092623-02-RL-4		11:10		4	2.93				
092623-02-RL-5		11:10		5	2.6				
			AVERAGE TURBIDITY:		2.73				
092623-04-RL-2	2696571 , 815312	13:10	11'	2	9.42		FLOOD	0'	4
092623-04-RL-5		13:10		5	8.88				
092623-04-RL-9		13:10		9	5.2				
			AVERAGE TURBIDITY:		7.83				
092623-06-RL-2	2696623 , 815384	14:50	13'	2	6.2		FLOOD	0'	6
092623-06-RL-6		14:50		6	5.54				
092623-06-RL-11		14:50		11	4.37				
			AVERAGE TURBIDITY:		5.37				
								0'	8
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
092623-00-ML-2	2696631 , 815395	9:15	13'	2	3.92		EBB	0	0
092623-00-ML-6		9:15		6	3.4				
092623-00-ML-11		9:15		11	4.72				
			AVERAGE TURBIDITY:		4.01				
			TURBIDITY INCREASE:		1.54				
092623-02-ML-2	2696555 , 815248	11:15	5'	2	16.47		EBB	0	2
092623-02-ML-3		11:15		3	18.97				
092623-02-ML-4		11:15		4	17.73				
			AVERAGE TURBIDITY:		17.72				
			TURBIDITY INCREASE:		15.00				
092623-04-ML-2	2697285 , 814996	13:05	8'	2	3.3		FLOOD	0	4
092623-04-ML-4		13:05		4	3.33				
092623-04-ML-6		13:05		6	3.1				
			AVERAGE TURBIDITY:		3.24				
			TURBIDITY INCREASE:		-4.59				
092623-06-ML-2	2697444 , 815062	14:55	8'	2	4.77		FLOOD	0	6
092623-06-ML-4		14:55		4	4.3				
092623-06-ML-6		14:55		6	5.72				
			AVERAGE TURBIDITY:		4.93				
			TURBIDITY INCREASE:		-0.44				
								0	8
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

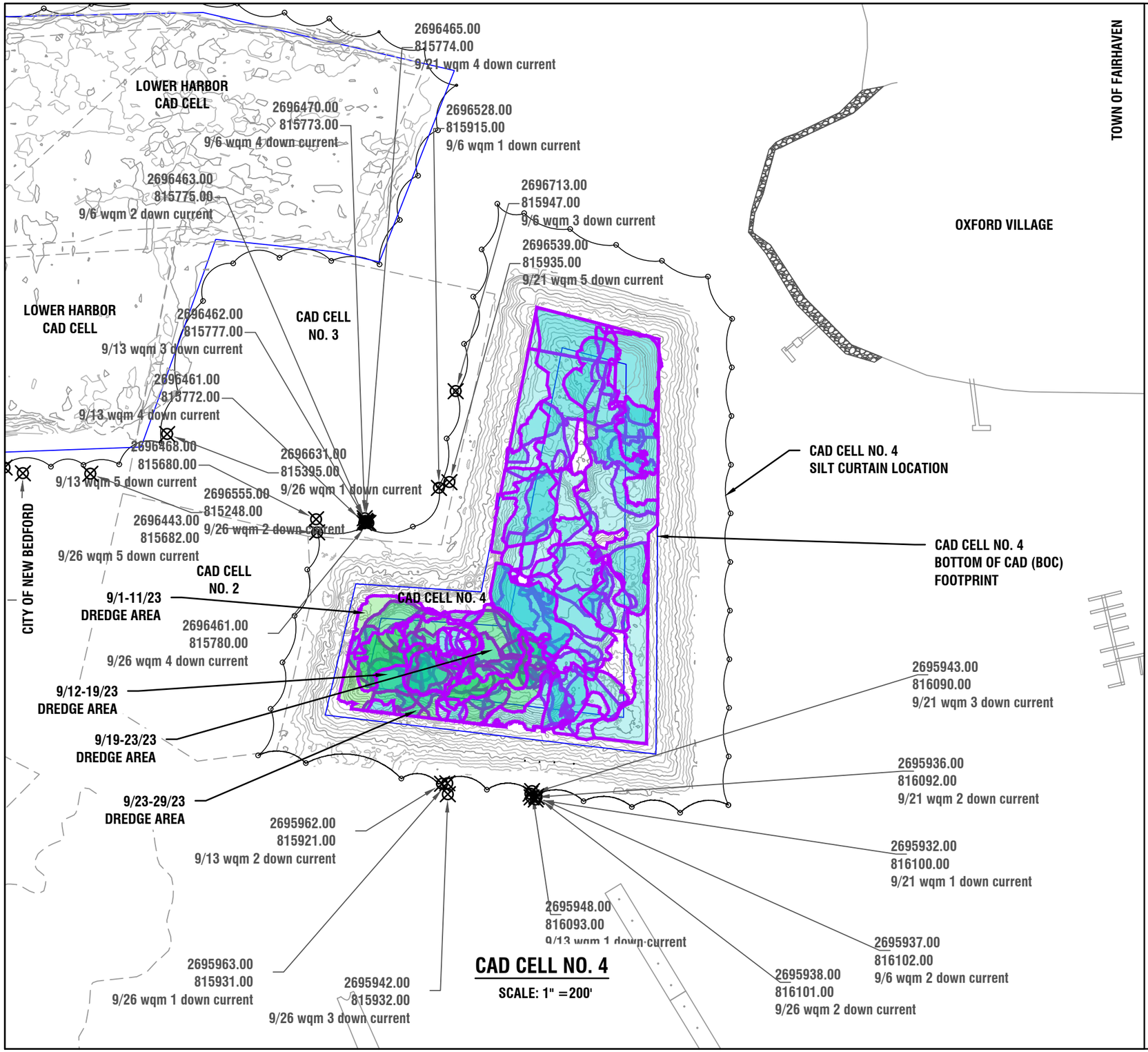
* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking

Figure 2 – Infield Filling Progress Plan

Figure 3 – Lower Harbor CAD Cell Capping Progress



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF BOTTOM OF CAD CELL NO.4 DREDGE AREA

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	09-30-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - SEPT 6, 2023 WQM - SEPT 13, 2023
WQM - SEPT 21, 2023 WQM - SEPT 26, 2023

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

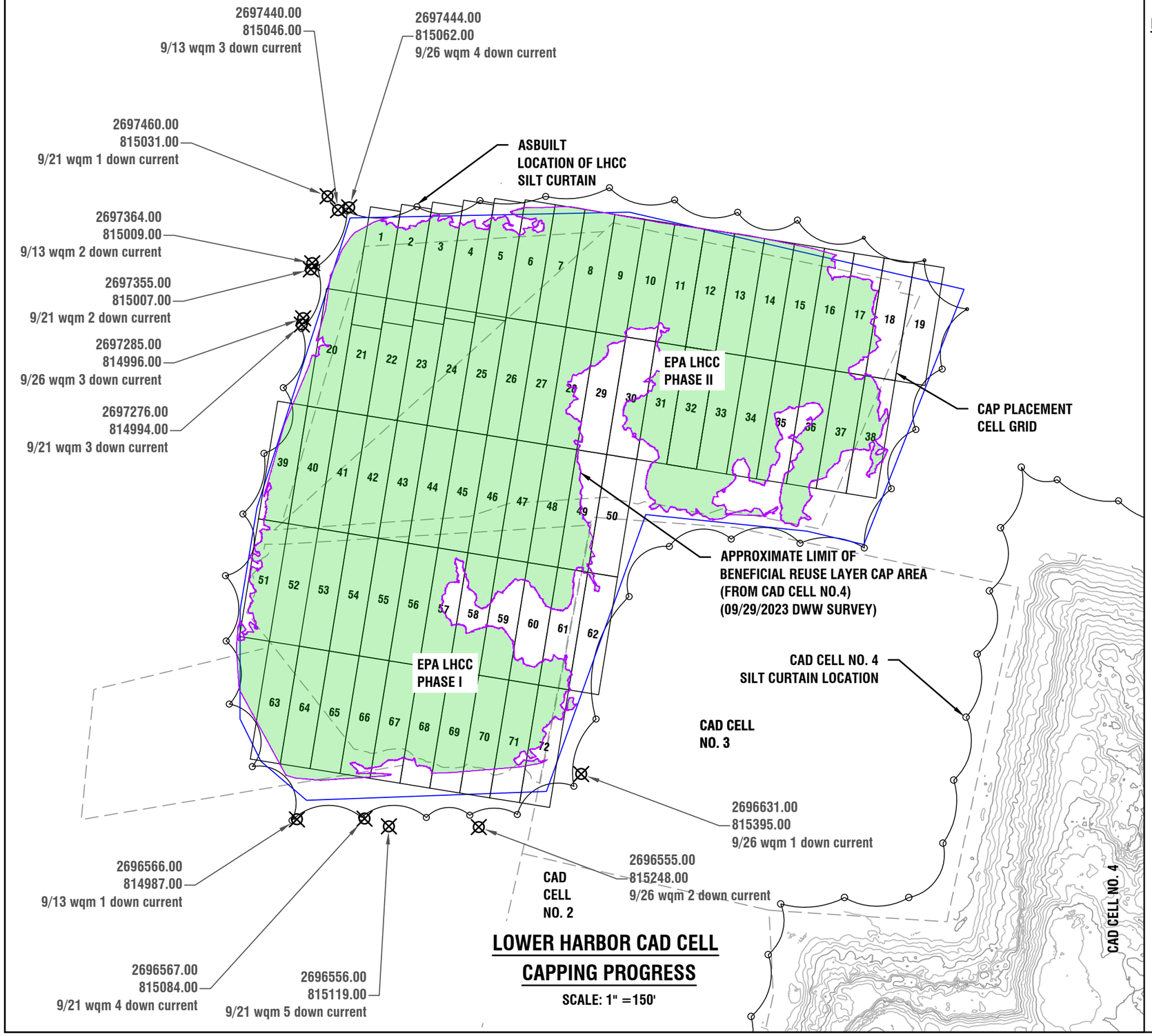
DATE:	09-30-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
SEPTEMBER 30, 2023



LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

APPROXIMATE LIMIT OF LHCC AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY CAPPED AREA

AREA CAPPED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	10/01/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Sept. 4th – Sept. 30th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 9/4/2023 TO 9/9/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
9/5/2023	432	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/5/2023	433	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/5/2023	434	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/5/2023	435	Komatsu 1250	Little Jeff	100	CAD4	Infield		
9/6/2023	436	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/6/2023	437	Komatsu 1250	B	200	CAD4	LHCC		
9/6/2023	438	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/7/2023	439	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/7/2023	440	Komatsu 1250	B	200	CAD4	LHCC		
9/7/2023	441	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/7/2023	442	Komatsu 1250	B	200	CAD4	LHCC		
9/7/2023	443	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/7/2023	444	Komatsu 1250	B	200	CAD4	LHCC		
9/7/2023	445	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/8/2023	446	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/8/2023	447	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/8/2023	448	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/8/2023	449	Komatsu 1250	B	200	CAD4	LHCC		
9/8/2023	450	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/8/2023	451	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/8/2023	452	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/9/2023	453	Komatsu 1250	B	200	CAD4	LHCC		
9/9/2023	454	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/9/2023	455	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/9/2023	456	Komatsu 1250	Mary P	200	CAD4	LHCC		
			Weekly Total	4600	CY			
			CUMULATIVE TOTAL	114690	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 9/11/2023 TO 9/16/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
9/11/2023	457	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/11/2023	458	Komatsu 1250	B	200	CAD4	LHCC		
9/11/2023	459	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/11/2023	460	Komatsu 1250	B	200	CAD4	LHCC		
9/11/2023	461	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/11/2023	462	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/11/2023	463	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/12/2023	464	Komatsu 1250	B	200	CAD4	LHCC		
9/12/2023	465	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/12/2023	466	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/12/2023	467	Komatsu 1250	B	200	CAD4	LHCC		
9/12/2023	468	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/13/2023	469	Komatsu 1250	B	200	CAD4	LHCC		
9/14/2023	470	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/14/2023	471	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/14/2023	472	Komatsu 1250	B	200	CAD4	LHCC		
9/14/2023	473	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/15/2023	474	Komatsu 1250	B	200	CAD4	LHCC		
9/15/2023	475	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/15/2023	476	Komatsu 1250	B	200	CAD4	LHCC		
9/15/2023	477	Komatsu 1250	Mary P	200	CAD4	LHCC		
			Weekly Total	3700	CY			
			CUMULATIVE TOTAL	118390	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 9/18/2023 TO 9/23/2023

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
9/18/2023	478	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/18/2023	479	Komatsu 1250	B	200	CAD4	LHCC		
9/18/2023	480	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/18/2023	481	Komatsu 1250	B	200	CAD4	LHCC		
9/18/2023	482	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/19/2023	483	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/19/2023	484	Komatsu 1250	B	200	CAD4	LHCC		
9/19/2023	485	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/19/2023	486	Komatsu 1250	B	200	CAD4	LHCC		
9/19/2023	487	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/19/2023	488	Komatsu 1250	B	200	CAD4	LHCC		
9/20/2023	489	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/20/2023	490	Komatsu 1250	B	200	CAD4	LHCC		
9/20/2023	491	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/20/2023	492	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/20/2023	493	Komatsu 1250	B	200	CAD4	LHCC		
9/20/2023	494	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/20/2023	495	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/21/2023	496	Komatsu 1250	B	200	CAD4	LHCC		
9/21/2023	497	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/21/2023	498	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/21/2023	499	Komatsu 1250	B	200	CAD4	LHCC		
9/21/2023	500	Komatsu 1250	Mary P	200	CAD4	LHCC		
9/22/2023	501	Komatsu 1250	B	200	CAD4	LHCC		
9/22/2023	502	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/22/2023	503	Komatsu 1250	B	200	CAD4	LHCC		
9/22/2023	504	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/22/2023	505	Komatsu 1250	Mary P	200	CAD4	LHCC		
			Weekly Total	4400	CY			
			CUMULATIVE TOTAL	122790	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 9/25/2023 TO 9/30/2023 **1 of 2**

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
9/25/2023	506	Komatsu 1250	B	225	CAD4	LHCC		
9/25/2023	507	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/25/2023	508	Komatsu 1250	B	225	CAD4	LHCC		
9/25/2023	509	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/25/2023	510	Komatsu 1250	B	225	CAD4	LHCC		
9/25/2023	511	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/26/2023	512	Komatsu 1250	B	225	CAD4	LHCC		
9/26/2023	513	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/26/2023	514	Komatsu 1250	B	225	CAD4	LHCC		
9/26/2023	515	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/26/2023	516	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/26/2023	517	Komatsu 1250	B	225	CAD4	LHCC		
9/26/2023	518	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/26/2023	519	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/27/2023	520	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/27/2023	521	Komatsu 1250	B	225	CAD4	LHCC		
9/27/2023	522	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/27/2023	523	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/27/2023	524	Komatsu 1250	B	225	CAD4	LHCC		
9/27/2023	525	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/27/2023	526	Komatsu 1250	B	225	CAD4	LHCC		
9/27/2023	527	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/27/2023	528	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/27/2023	529	Komatsu 1250	B	225	CAD4	LHCC		
9/28/2023	530	Komatsu 1250	B	225	CAD4	LHCC		
9/28/2023	531	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/28/2023	532	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/28/2023	533	Komatsu 1250	B	225	CAD4	LHCC		
9/28/2023	534	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/28/2023	535	Komatsu 1250	B	225	CAD4	LHCC		
9/28/2023	536	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/29/2023	537	Komatsu 1250	B	225	CAD4	LHCC		
9/29/2023	538	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
			Weekly Total	5800	CY			
			CUMULATIVE TOTAL	128590	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 9/25/2023 TO 9/30/2023 **2 of 2**

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
9/29/2023	539	Komatsu 1250	B	225	CAD4	LHCC		
9/29/2023	540	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/29/2023	541	Komatsu 1250	B	225	CAD4	LHCC		
9/29/2023	542	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
9/29/2023	543	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/30/2023	544	Komatsu 1250	Mary P	225	CAD4	LHCC		
9/30/2023	545	Komatsu 1250	B	200	CAD4	LHCC		
9/30/2023	546	Komatsu 1250	Mary P	216	CAD4	LHCC		
			Weekly Total	1516	CY			
			CUMULATIVE TOTAL	130106	CY			

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 2nd – Oct. 27th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of October 2023 for the dredging of Bottom of CAD Cell #4 (CAD4) and backfilling within the North Terminal project area along with Capping of Lower Harbor CAD Cell (LHCC).

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 19th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of October 2nd through October 27th, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of October 2nd through October 27th,, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.
    - Performed observations of capping/bed leveling at LHCC.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities.

- Figure 2 – Infield Filling Progress Plan, which shows areas of backfill activities at the North Terminal site for both reuse of dredge material as well as imported backfill material.

- Figure 3 – Lower Harbor CAD Cell Capping Progress, which shows areas of the beneficial reuse capping layer placed to date along, and approximate locations of the water quality monitoring events conducted during capping activities.

- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023. DWW began capping LHCC on June 29, 2023. Initial cap layer included TOC (total organic carbon) amended import fill. DWW completed initial cap layer on August 30, 2023. DWW continued capping LHCC with BOC (bottom of CAD) dredged material for the secondary cap layer to complete the LHCC cap. For the month of October 2023 DWW has continued dredging at CAD Cell #4 and has continued capping and bed leveling operations at LHCC through October 27th, 2023.

Beginning in July 2023 DWW updated the working hours to two 8-hr. shifts with a window of 6am to 11pm working the tides for a total of 16 total hours daily.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within the CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal

pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023. For the month of October 2023 DWW has continued dredging at CAD Cell #4.

LHCC Capping:

Beginning on June 29th, 2023, DWW began importing isolation layer cap materials and loading the dump scow Mary P for placements within LHCC. On August 30, 2023 DWW completed importing isolation layer cap material and began the second layer of LHCC cap with material from CAD Cell #4. DWW continued capping and bed leveling operations at LHCC through October 27th, 2023. Through the month of October 2023 DWW has placed cap material from bottom of CAD 4 over 100% of the coverage area of LHCC and is working to achieve final 3' of cover requirements.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	17,494
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	130,106
Approximate Bottom of CAD Cell #4 Dredging Remaining	6,450
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	80,506
Approximate Infield Fill Volume (This reporting period)	0
Approximate Infield Capacity Filled to Date	80,506
Approximate Infield Fill Capacity Remaining	0
Estimate Total Approximate LHCC Capping Volume	32,000
Approximate LHCC Capping Fill Volume (This reporting period)	30,000
Approximate LHCC Capping Fill Volume Remaining	2,000
Estimate Total Approximate Stockpile Capacity Available	13,994
Approximate Stockpile Fill Volume (This reporting period)	4,487
Approximate Stockpile Fill Capacity Remaining	9,507

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 10/4, 10/13, 10/20, 10/25, & 11/1). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 2nd – Oct. 27th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 10/04/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	54	83	Clear	None	0.0	0	Wind 0-5	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 2nd through October 7th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Capping at LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 10/13/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	47	64	Clear	None	0.0	0	Wind 10-15	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 9th through October 13th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Bed Leveling and Capping at LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 10/20/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High	Clear	None	Rain	Snow		
	51	64			0.0	0	Wind 5-10	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 11:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 16th through October 21st, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Crews continued dredging, capping, and bed leveling activities from 06:00am to 23:00pm utilizing two 8-hr shifts.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Bed Leveling at LHCC.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 10/25/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	54	71	Clear	None	0.0	0	Wind 5-10	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 23rd through October 27th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the "Mary P" dump scow, flat barges "B", and "Little Jeff" and the drag barge. Dredging for stockpiling has also continued with flat barges "B" and :Little Jeff" as needed. Crews continued dredging, capping, and bed leveling activities from 06:00am to 17:00pm.

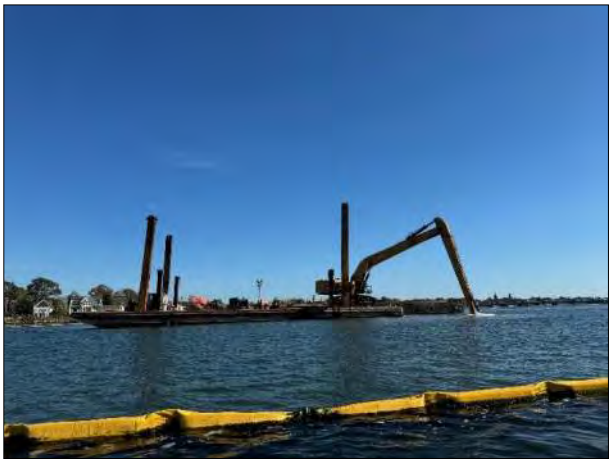
Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.



Dredging at CAD Cell #4.

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Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)		Site Conditions (describe)	
WEATHER	Low	High	Scattered Rain		Rain	Snow		
	32	48			0.10	0	Wind 10-15	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

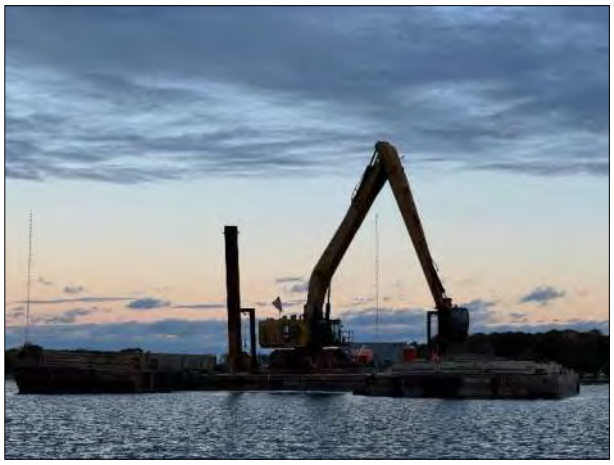
DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 30th through November 3rd, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the flat barges "B", and "Little Jeff" and the drag barge. Dredging for stockpiling has also continued with flat barges "B" and :Little Jeff" as needed. Crews continued dredging, capping, and bed leveling activities from 06:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report



Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

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Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 2nd – Oct. 27th
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/4/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 12:00a/12:28p **Low:** 4:57a/6:12p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-RL-2	2696576 , 815305	9:10	10'	2	0.4		FLOOD	0'	0
100423-00-RL-5		9:10		5	0.3				
100423-00-RL-8		9:10		8	6.5				
			AVERAGE TURBIDITY:		2.40				
100423-02-RL-2	2696573 , 815242	11:10	9'	2	0.9		FLOOD	0'	2
100423-02-RL-4		11:10		4	0.8				
100423-02-RL-7		11:10		7	4.7				
			AVERAGE TURBIDITY:		2.13				
100423-04-RL-2	2697736 , 815020	13:10	12'	2	2.6		EBB	0'	4
100423-04-RL-6		13:10		6	3.2				
100423-04-RL-10		13:10		10	0.6				
			AVERAGE TURBIDITY:		2.13				
100423-06-RL-2	2697199 , 814985	14:50	11'	2	4.2		EBB	0'	6
100423-06-RL-5		14:50		5	11.3				
100423-06-RL-9		14:50		9	4.8				
			AVERAGE TURBIDITY:		6.77				
								0'	8
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-ML-2	2697194 , 814972	9:15	8'	2	0.5		FLOOD	0	0
100423-00-ML-4		9:15		4	1.4				
100423-00-ML-6		9:15		6	1.7				
			AVERAGE TURBIDITY:		1.20				
			TURBIDITY INCREASE:		-1.20				
100423-02-ML-2	2697183 , 814973	11:15	10'	2	4.7		FLOOD	0	2
100423-02-ML-5		11:15		5	1.3				
100423-02-ML-8		11:15		8	3.1				
			AVERAGE TURBIDITY:		3.03				
			TURBIDITY INCREASE:		0.90				
100423-04-ML-2	2696571 , 815083	13:15	10'	2	0.9		EBB	0	4
100423-04-ML-5		13:15		5	17.7				
100423-04-ML-8		13:15		8	36.4				
			AVERAGE TURBIDITY:		18.33				
			TURBIDITY INCREASE:		16.20				
100423-06-ML-2	2696571 , 815086	14:55	8'	2	3.8		EBB	0	6
100423-06-ML-4		14:55		4	5.6				
100423-06-ML-6		14:55		6	4.3				
			AVERAGE TURBIDITY:		4.57				
			TURBIDITY INCREASE:		-2.20				
								0	8
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/4/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 12:00a/12:28p **Low:** 4:57a/6:12p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-RL-2	2695905 , 816377	7:00	9'	2	0.3		FLOOD	0'	0
100423-00-RL-4		7:00		4	1.3				
100423-00-RL-7		7:00		7	8.1				
			AVERAGE TURBIDITY:		3.23				
100423-02-RL-2	2695921 , 816260	9:00	10'	2	0.2		FLOOD	0'	2
100423-02-RL-5		9:00		5	0.7				
100423-02-RL-8		9:00		8	2.5				
			AVERAGE TURBIDITY:		1.13				
100423-04-RL-2	2695943 , 816110	11:00	12'	2	0.2		FLOOD	0'	4
100423-04-RL-6		11:00		6	2.3				
100423-04-RL-10		11:00		10	1.4				
			AVERAGE TURBIDITY:		1.30				
100423-06-RL-2	2696440 , 815804	13:00	14'	2	0.4		EBB	0'	6
100423-06-RL-7		13:00		7	1.2				
100423-06-RL-12		13:00		12	3.2				
			AVERAGE TURBIDITY:		1.60				
100423-08-RL-2	2696536 , 815917	14:30	13'	2	6.2		EBB	0'	8
100423-08-RL-6		14:30		65	14.9				
100423-08-RL-11		14:30		11	10.1				
			AVERAGE TURBIDITY:		10.40				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
100423-00-ML-2	2696531 , 815920	7:05	13'	2	0.4		FLOOD	0	0
100423-00-ML-6		7:05		6	6.1				
100423-00-ML-11		7:05		11	7.9				
			AVERAGE TURBIDITY:		4.80				
			TURBIDITY INCREASE:		1.57				
100423-02-ML-2	2696454 , 815854	9:05	12'	2	0.1		FLOOD	0	2
100423-02-ML-6		9:05		6	1.3				
100423-02-ML-10		9:05		10	14.4				
			AVERAGE TURBIDITY:		5.27				
			TURBIDITY INCREASE:		4.13				
100423-04-ML-2	2696466 , 815862	11:05	14'	2	4.7		FLOOD	0	4
100423-04-ML-7		11:05		7	0.6				
100423-04-ML-12		11:05		12	4.3				
			AVERAGE TURBIDITY:		3.20				
			TURBIDITY INCREASE:		1.90				
100423-06-ML-2	2695946 , 816206	13:05	14'	2	0.8		EBB	0	6
100423-06-ML-7		13:05		7	8.9				
100423-06-ML-12		13:05		12	7.4				
			AVERAGE TURBIDITY:		5.70				
			TURBIDITY INCREASE:		4.10				
100423-08-ML-2	2695935 , 816104	14:35	13'	2	2.1		EBB	0	8
100423-08-ML-6		14:35		6	7.6				
100423-08-ML-11		14:35		11	19.5				
			AVERAGE TURBIDITY:		9.73				
			TURBIDITY INCREASE:		-0.67				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/13/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 7:42a/7:55p **Low:** 1:00a/1:42p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-RL-2	2697352 , 815020	9:10	10'	2	0.4		EBB	0'	0
101323-00-RL-5		9:10		5	0.4				
101323-00-RL-8		9:10		8	1.2				
				AVERAGE TURBIDITY:	0.67				
101323-02-RL-2	2697267 , 815004	11:10	9'	2	0.6		EBB	0'	2
101323-02-RL-4		11:10		4	0.6				
101323-02-RL-7		11:10		7	1.2				
				AVERAGE TURBIDITY:	0.80				
101323-04-RL-2	2697364 , 815022	13:10	7'	2	0.4		EBB	0'	4
101323-04-RL-4		13:10		4	0.5				
101323-04-RL-5		13:10		5	0.6				
				AVERAGE TURBIDITY:	0.50				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-ML-2	2696563 , 815092	9:15	9'	2	8.6		EBB	0	0
101323-00-ML-4		9:15		4	8.4				
101323-00-ML-7		9:15		7	2.7				
				AVERAGE TURBIDITY:	6.57				
				TURBIDITY INCREASE:	5.90				
101323-02-ML-2	2696558 , 814985	11:15	9'	2	18.8		EBB	0	2
101323-02-ML-4		11:15		4	18.2				
101323-02-ML-7		11:15		7	16.7				
				AVERAGE TURBIDITY:	17.90				
				TURBIDITY INCREASE:	17.10				
101323-04-ML-2	2696567 , 815085	13:15	7'	2	18.4		EBB	0	4
101323-04-ML-4		13:15		4	23.3				
101323-04-ML-5		13:15		5	11.8				
				AVERAGE TURBIDITY:	17.83				
				TURBIDITY INCREASE:	17.33				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/13/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 7:42a/7:55p **Low:** 1:00a/1:42p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-RL-2	2695917 , 816276	7:00	13'	2	2.1		FLOOD	0'	0
101323-00-RL-6		7:00		6	9.3				
101323-00-RL-11		7:00		11	9.3				
			AVERAGE TURBIDITY:		6.90				
101323-02-RL-2	2696701 , 815954	9:00	14'	2	0.2		EBB	0'	2
101323-02-RL-7		9:00		7	5.9				
101323-02-RL-12		9:00		12	6.6				
			AVERAGE TURBIDITY:		4.23				
101323-04-RL-2	2696788 , 815972	11:00	12'	2	0.2		EBB	0'	4
101323-04-RL-6		11:00		6	1.3				
101323-04-RL-10		11:00		10	2.8				
			AVERAGE TURBIDITY:		1.43				
101323-06-RL-2	2696724 , 815963	13:00	10'	2	0.4		EBB	0'	6
101323-06-RL-5		13:00		5	0.6				
101323-06-RL-8		13:00		8	0.8				
			AVERAGE TURBIDITY:		0.60				
101323-08-RL-2	2695935 , 816104	14:45	10'	2	0.1		FLOOD	0'	8
101323-08-RL-5		14:45		5	0.9				
101323-08-RL-8		14:45		8	5.6				
			AVERAGE TURBIDITY:		2.20				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
101323-00-ML-2	2696701 , 815954	7:05	13'	2	4.4		FLOOD	0	0
101323-00-ML-6		7:05		6	6.7				
101323-00-ML-11		7:05		11	5.5				
			AVERAGE TURBIDITY:		5.53				
			TURBIDITY INCREASE:		-1.37				
101323-02-ML-2	2695917 , 816276	9:05	13'	2	0.3		EBB	0	2
101323-02-ML-6		9:05		6	2.9				
101323-02-ML-11		9:05		11	18.3				
			AVERAGE TURBIDITY:		7.17				
			TURBIDITY INCREASE:		2.93				
101323-04-ML-2	2695908 , 816367	11:05	10'	2	1		EBB	0	4
101323-04-ML-5		11:05		5	0.2				
101323-04-ML-8		11:05		8	1.1				
			AVERAGE TURBIDITY:		0.77				
			TURBIDITY INCREASE:		-0.67				
101323-06-ML-2	2695918 , 816459	13:05	8'	2	0.2		EBB	0	6
101323-06-ML-4		13:05		4	1.7				
101323-06-ML-6		13:05		6	0.5				
			AVERAGE TURBIDITY:		0.80				
			TURBIDITY INCREASE:		0.20				
101323-08-ML-2	2696790 , 815973	14:50	10'	2	0.2		FLOOD	0	8
101323-08-ML-5		14:50		5	3.1				
101323-08-ML-8		14:50		8	4.6				
			AVERAGE TURBIDITY:		2.63				
			TURBIDITY INCREASE:		0.43				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/20/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 12:10a/12:34p **Low:** 5:08a/6:09p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-RL-2	2696561 , 815164	9:10	7'	2	5.46		FLOOD	0'	0
102023-00-RL-4		9:10		4	6.66				
102023-00-RL-5		9:10		5	6.67				
			AVERAGE TURBIDITY:		6.26				
102023-02-RL-2	2696974 , 815589	11:10	14'	2	6.72		FLOOD	0'	2
102023-02-RL-7		11:10		7	4.63				
102023-02-RL-12		11:10		12	2.23				
			AVERAGE TURBIDITY:		4.53				
102023-04-RL-2	2697424 , 815054	13:10	10'	2	8.88		EBB	0'	4
102023-04-RL-5		13:10		5	6.62				
102023-04-RL-8		13:10		8	6.04				
			AVERAGE TURBIDITY:		7.18				
102023-06-RL-2	2697432 , 815061	14:55	12'	2	3.36		EBB		
102023-06-RL-6		14:55		6	3.08				
102023-06-RL-10		14:55		10	3.5				
			AVERAGE TURBIDITY:		3.31				
			AVERAGE TURBIDITY:		#DIV/0!				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-ML-2	2697450 , 815069	9:15	8'	2	5.15		FLOOD	0	0
102023-00-ML-4		9:15		4	6.09				
102023-00-ML-6		9:15		6	6.82				
			AVERAGE TURBIDITY:		6.02				
			TURBIDITY INCREASE:		-0.24				
102023-02-ML-2	2697449 , 815081	11:15	10'	2	5.65		FLOOD	0	2
102023-02-ML-5		11:15		5	7.19				
102023-02-ML-8		11:15		8	8.15				
			AVERAGE TURBIDITY:		7.00				
			TURBIDITY INCREASE:		2.47				
102023-04-ML-2	2696957 , 815527	13:15	15'	2	2.74		EBB	0	4
102023-04-ML-7		13:15		7	2.33				
102023-04-ML-13		13:15		13	1.54				
			AVERAGE TURBIDITY:		2.20				
			TURBIDITY INCREASE:		-4.98				
102023-04-ML-2	2696957 , 815710	15:00	13'	2	13.77		EBB		
102023-04-ML-6		15:00		6	16.06				
102023-04-ML-11		15:00		11	13.17				
			AVERAGE TURBIDITY:		14.33				
			TURBIDITY INCREASE:		11.02				
			AVERAGE TURBIDITY:		#DIV/0!				
			TURBIDITY INCREASE:		#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/20/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 12:10a/12:34p **Low:** 5:08a/6:09p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-RL-2	2695914 , 816378	7:00	10'	2	2.13		FLOOD	0'	0
102023-00-RL-5		7:00		5	1.82				
102023-00-RL-8		7:00		8	3.84				
			AVERAGE TURBIDITY:		2.60				
102023-02-RL-2	2695931 , 816187	9:00	11'	2	1.81		FLOOD	0'	2
102023-02-RL-5		9:00		5	2.14				
102023-02-RL-9		9:00		9	2.61				
			AVERAGE TURBIDITY:		2.19				
102023-04-RL-2	2695941 , 816183	11:00	13'	2	1.54		FLOOD	0'	4
102023-04-RL-6		11:00		6	1.55				
102023-04-RL-11		11:00		11	1.91				
			AVERAGE TURBIDITY:		1.67				
102023-06-RL-2	2696903 , 815992	13:00	14'	2	6.68		EBB	0'	6
102023-06-RL-7		13:00		7	6.01				
102023-06-RL-12		13:00		12	8.28				
			AVERAGE TURBIDITY:		6.99				
102023-08-RL-2	2696792 , 816971	14:45	14'	2	18.52		EBB	0'	8
102023-08-RL-7		14:45		7	17.97				
102023-08-RL-12		14:45		12	19.24				
			AVERAGE TURBIDITY:		18.58				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102023-00-ML-2	2696980 , 815993	7:05	7'	2	2.66		FLOOD	0	0
102023-00-ML-4		7:05		4	2.62				
102023-00-ML-5		7:05		5	2.79				
			AVERAGE TURBIDITY:		2.69				
			TURBIDITY INCREASE:		0.09				
102023-02-ML-2	2696891 , 815993	9:05	12'	2	2.17		FLOOD	0	2
102023-02-ML-6		9:05		6	2.57				
102023-02-ML-10		9:05		10	2.46				
			AVERAGE TURBIDITY:		2.40				
			TURBIDITY INCREASE:		0.21				
102023-04-ML-2	2696795 , 815967	11:05	14'	2	1.98		FLOOD	0	4
102023-04-ML-7		11:05		7	2.14				
102023-04-ML-12		11:05		12	1.92				
			AVERAGE TURBIDITY:		2.01				
			TURBIDITY INCREASE:		0.35				
102023-06-ML-2	2695932 , 816185	13:05	13'	2	1.56		EBB	0	6
102023-06-ML-6		13:05		6	1.69				
102023-06-ML-11		13:05		11	3.64				
			AVERAGE TURBIDITY:		2.30				
			TURBIDITY INCREASE:		-4.69				
102023-08-ML-2	2695912 , 816377	14:50	12'	2	3.49		EBB	0	8
102023-08-ML-6		14:50		6	3.76				
102023-08-ML-10		14:50		10	3.75				
			AVERAGE TURBIDITY:		3.67				
			TURBIDITY INCREASE:		-14.91				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 10/25/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 5:20a/5:48p **Low:** 11:30a/11:48p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102523-00-RL-2	2696982 , 815996	7:00	9'	2	1.31		EBB	0'	0
102523-00-RL-5		7:00		5	1.63				
102523-00-RL-7		7:00		7	1.79				
			AVERAGE TURBIDITY:		1.58				
102523-02-RL-2	2696906 , 815996	9:00	10'	2	2.07		EBB	0'	2
102523-02-RL-5		9:00		5	2.14				
102523-02-RL-8		9:00		8	2.58				
			AVERAGE TURBIDITY:		2.26				
102523-04-RL-2	2696796 , 815971	11:00	11'	2	1.68		EBB	0'	4
102523-04-RL-5		11:00		5	1.63				
102523-04-RL-9		11:00		9	3.4				
			AVERAGE TURBIDITY:		2.24				
102523-06-RL-2	2695918 , 816367	13:00	9'	2	2.24		FLOOD	0'	6
102523-06-RL-5		13:00		5	2.5				
102523-06-RL-7		13:00		7	2.27				
			AVERAGE TURBIDITY:		2.34				
102523-08-RL-2	2695936 , 816184	14:55	11'	2	1.63		FLOOD	0'	8
102523-08-RL-5		14:55		5	1.85				
102523-08-RL-9		14:55		9	2.03				
			AVERAGE TURBIDITY:		1.84				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
102523-00-ML-2	2695936 , 816100	7:05	12'	2	1.56		EBB	0	0
102523-00-ML-6		7:05		6	1.56				
102523-00-ML-10		7:05		10	2.36				
			AVERAGE TURBIDITY:		1.83				
			TURBIDITY INCREASE:		0.25				
102523-02-ML-2	2695928 , 816186	9:05	10'	2	1.94		EBB	0	2
102523-02-ML-5		9:05		5	2.44				
102523-02-ML-8		9:05		8	2.89				
			AVERAGE TURBIDITY:		2.42				
			TURBIDITY INCREASE:		0.16				
102523-04-ML-2	2695926 , 816279	11:05	9'	2	2.04		EBB	0	4
102523-04-ML-4		11:05		4	4.48				
102523-04-ML-7		11:05		7	2.37				
			AVERAGE TURBIDITY:		2.96				
			TURBIDITY INCREASE:		0.73				
102523-06-ML-2	2696984 , 815995	13:05	7'	2	2.12		FLOOD	0	6
102523-06-ML-3		13:05		3	2.25				
102523-06-ML-5		13:05		5	2.15				
			AVERAGE TURBIDITY:		2.17				
			TURBIDITY INCREASE:		-0.16				
102523-08-ML-2	2696904 , 815997	14:50	10'	2	1.97		FLOOD	0	8
102523-08-ML-5		14:50		5	2.03				
102523-08-ML-8		14:50		8	1.94				
			AVERAGE TURBIDITY:		1.98				
			TURBIDITY INCREASE:		0.14				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking

Figure 2 – Infield Filling Progress Plan

Figure 3 – Lower Harbor CAD Cell Capping Progress

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

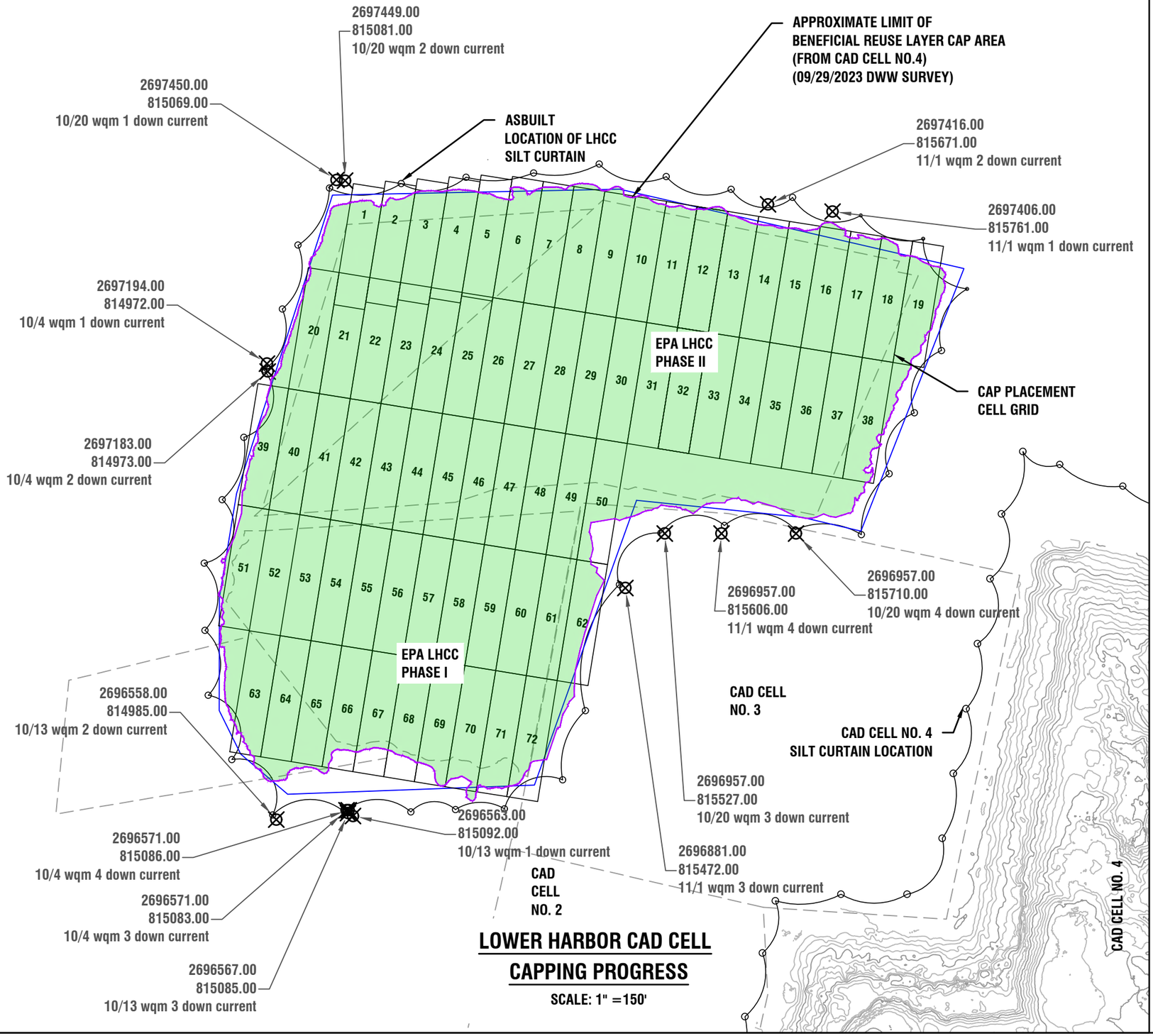
DATE:	11-3-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
NOVEMBER 3, 2023



LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

APPROXIMATE LIMIT OF LHCC AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY CAPPED AREA

AREA CAPPED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

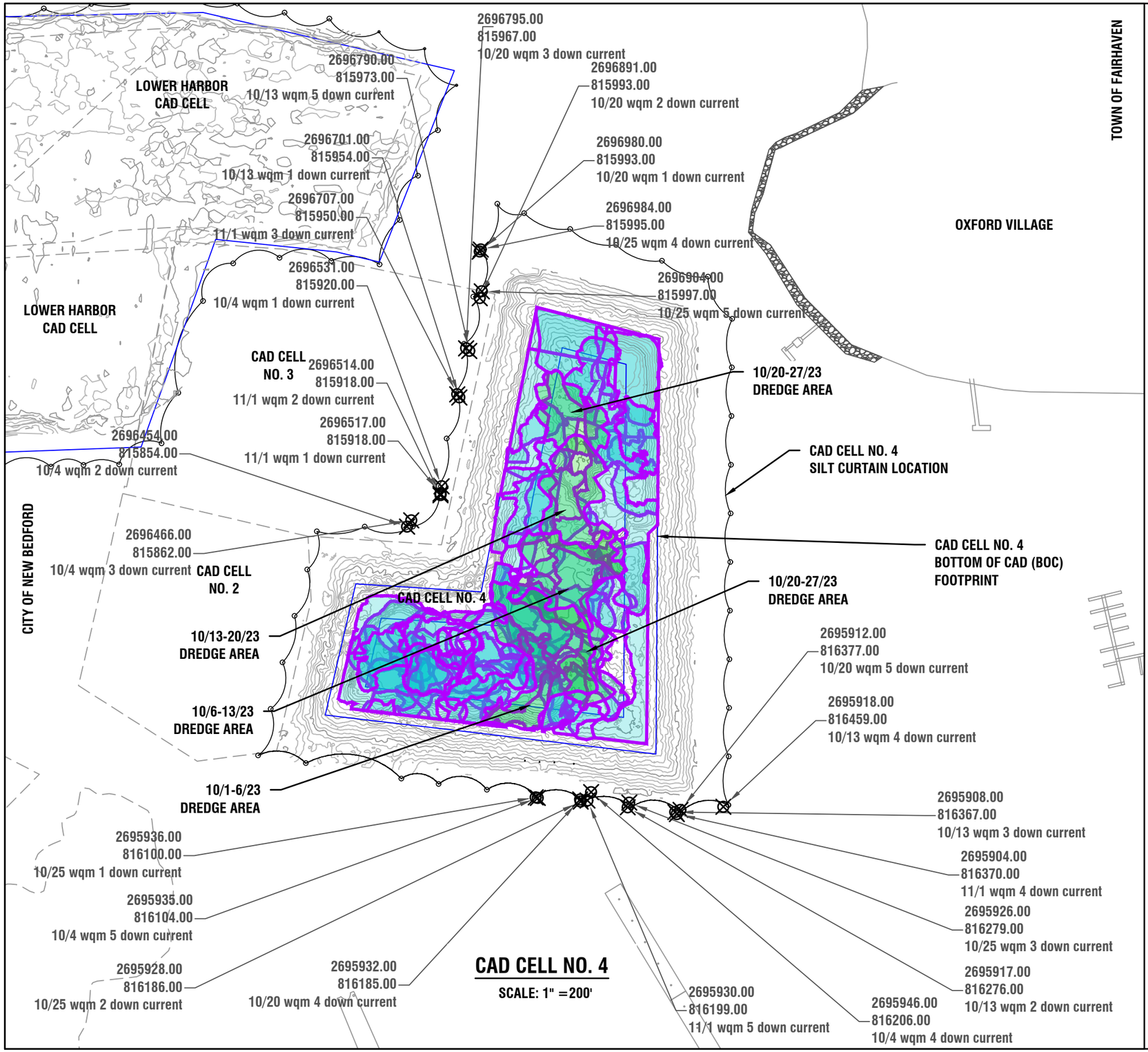
DATE:	11/03/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF BOTTOM OF CAD CELL NO.4 DREDGE AREA

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	11-3-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - OCT 4, 2023 WQM - OCT 13, 2023
WQM - OCT 20, 2023 WQM - OCT 25, 2023
WQM - NOV 1, 2023

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 30th – Dec.1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Bottom of CAD Cell #4 Construction Summary Report

This Field Report was prepared to serve as a summary of field activities conducted throughout the noted reporting period for the Bottom CAD Cell No. 4 & North Terminal Expansion project in New Bedford, Massachusetts. Reporting Period is for the month of November 2023 for the dredging of Bottom of CAD Cell #4 (CAD4) and backfilling within the North Terminal project area along with Capping of Lower Harbor CAD Cell (LHCC).

1. Introduction:

The field report describes the activities carried out by the Contractor DW White (DWW), the Owner's Representative (Foth), and any subcontractors completing work within the scope of the project requirements.

This Field Report represents a compilation of daily reports and inspection reports associated with the dredging and the associated handling and placement of dredged materials at designated disposal sites authorized for the disposal of dredge materials for this Project.

This 20th Field Report for the Bottom of CAD Cell No. 4 & North Terminal dredging activities includes:

- Daily Inspection Reports from dredging oversight performed during the weeks of October 30th through December 1st, 2023. These reports include notes on the equipment used on site, and a summary of contractor activities. (See Attachment 1) The weekly Quantity Tracking Log Sheet will also be included (Estimated volumes by contractor reporting to be verified by Foth survey). (See Attachment 4)

- Water Quality Monitoring Forms completed for the weeks of October 30th through December 1st, 2023, summarizing monitoring data recorded during active dredging (Attachment 2). Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period, Foth has:

    - Conducted water quality monitoring as required by the Performance Standards during dredging once per week.
    - Performed observation of dredging at CAD Cell #4.
    - Performed observations of capping/bed leveling at LHCC.

- Figures:
    - Figure 1 – CAD Cell #4 Dredging Plan, which shows areas of the dredging and daily approximate locations of the water quality monitoring events conducted during dredging activities.

- Figure 2 – Infield Filling Progress Plan, which shows areas of backfill activities at the North Terminal site for both reuse of dredge material as well as imported backfill material.

- Figure 3 – Lower Harbor CAD Cell Capping Progress, which shows areas of the beneficial reuse capping layer placed to date along, and approximate locations of the water quality monitoring events conducted during capping activities.

- Weekly Bottom of CAD Cell #4 Quantity Tracking Log sheets showing estimated volumes of dredged material for each deck barge transferred from CAD Cell #4 for reuse at the North Terminal site.

Summary:

DWW began dredging the North Terminal pre-cell area for cofferdam installation on June 20, 2022 and completed that effort on July 20, 2022. CAD Cell #4 dredging began on November 9th, 2022 continued through March 8th, 2023 when a change order was initiated to extend the North Terminal project two cofferdam cells further north. DWW began dredging North Terminal pre-cell extension area on March 13, 2023 and completed that effort on March 24th, 2023. CAD Cell #4 dredging resumed on April 13, 2023. DWW began capping LHCC on June 29, 2023. Initial cap layer included TOC (total organic carbon) amended import fill. DWW completed initial cap layer on August 30, 2023. DWW continued capping LHCC with BOC (bottom of CAD) dredged material for the secondary cap layer to complete the LHCC cap. In the month of November 2023 DWW completed dredging at CAD Cell #4 on November 17, 2023 and completed capping and bed leveling operations at LHCC on November 15, 2023. Preparations have begun for North Terminal berth dredging scheduled to begin in early December 2023.

Beginning in July 2023 DWW updated the working hours to two 8-hr. shifts with a window of 6am to 11pm working the tides for a total of 16 total hours daily.

All dredging activities performed at North Terminal or CAD Cell #4 were contained with a silt curtain perimeter.

2. Notes/Clarifications:

Dredging:

During this reporting period, dredging operations were conducted within CAD Cell #4 only.

Dredge Material Reuse/ Disposal:

Placement of material from Bottom of CAD Cell #4 into the newly constructed cofferdam cells at North Terminal began on November 9th, 2022. Disposal in the infield area (west of the constructed cofferdam cells) began in February 2023 with the "Mary P." pocket dump, and flat barges "Little Jeff" and "B" scow and continued through March 8th, 2023. Dredging the North Terminal pre-cell

extension area began on March 13th, 2023 and continued through March 24th, 2023. North Terminal pre-cell extension dredge material was disposed into approved locations within LHCC. Bed leveling of disposed dredged sediments in LHCC began on March 29th, 2023 and completed on April 11th, 2023. Disposal of material in the infield resumed with CAD Cell #4 dredging on April 13th, 2023. On November 17, 2023 DWW completed dredging CAD Cell #4. Preparations have begun for North Terminal berth dredging scheduled to begin in early December 2023.

LHCC Capping:

Beginning on June 29th, 2023, DWW began importing isolation layer cap materials and loading the dump scow Mary P for placements within LHCC. On August 30, 2023 DWW completed importing isolation layer cap material and began the second layer of LHCC cap with material from CAD Cell #4. DWW continued capping and bed leveling operations at LHCC through October 27th, 2023. On November 15, 2023 DWW completed capping and has achieved capping coverage requirements.

Table 1 – Cumulative Dredging Progress- Bottom of CAD Cell #4 Dredge Area	
Dredge Area	Volume (cy)
Estimate Total Bottom of CAD Cell #4 Volume	154,050
Approximate Bottom of CAD Cell #4 Volume Dredged (This reporting period)	7,604
Approximate Bottom of CAD Cell #4 Volume Dredged to Date	155,204
Approximate Bottom of CAD Cell #4 Dredging Remaining	0
Estimate Total Approximate Cofferdam Capacity Available	29,550
Approximate Cofferdam Fill Volume (This reporting period)	0
Approximate Cofferdam Capacity Filled to Date	29,550
Approximate Cofferdam Fill Capacity Remaining	0
Estimate Total Approximate Infield Capacity Available	80,506
Approximate Infield Fill Volume (This reporting period)	0
Approximate Infield Capacity Filled to Date	80,506
Approximate Infield Fill Capacity Remaining	0
Estimate Total Approximate LHCC Capping Volume	32,000
Approximate LHCC Capping Fill Volume (This reporting period)	30,000
Approximate LHCC Capping Fill Volume Remaining	0
Estimate Total Approximate Stockpile Capacity Available	13,994
Approximate Stockpile Fill Volume (This reporting period)	5,909
Approximate Stockpile Fill Capacity Remaining	0

3. Monitoring Summary:

Turbidity monitoring was performed for dredge operations and met the SER performance standards (1 day per week – 11/1, 11/10, 11/15). There were no water quality exceedances observed during this reporting period related to the bed leveling operations. Since there were no exceedances, no water quality samples were collected for chemical analysis.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 30th – Dec.1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 1

Daily Dredge Reports

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)		Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	32	48	Scattered Rain		0.01	0	Wind 10-15	N

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

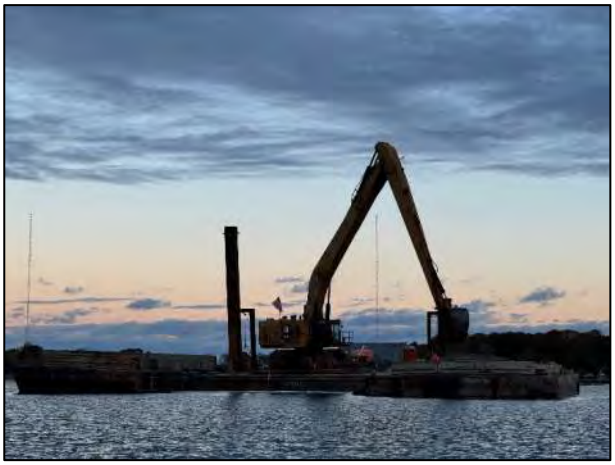
DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from October 30th through November 3rd, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the flat barges "B", and "Little Jeff" and the drag barge. Dredging for stockpiling has also continued with flat barges "B" and :Little Jeff" as needed. Crews continued dredging, capping, and bed leveling activities from 06:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Kristina Arabatzis	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report



Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 11/10/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	32	52	Cloudy	None	0	0	Wind 10-15	

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from November 6th through November 11th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the flat barges "B", and "Little Jeff" and the drag barge. Dredging for stockpiling has continued with flat barges "B" and Little Jeff" as needed. Crews continued dredging, capping, and bed leveling activities from 06:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Mike Campagnone	Dredging Observations,
Jared Munch	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

.

Client: NBPA
Project: Bottom of CAD Cell No. 4 and North Terminal
Prepared by: J. Ray

Project #: 0220N00.1

Date: 11/15/2023

Construction Observation Report

Location New Bedford – Bottom of CAD Cell #4 Dredge Area

	Temp (° F)		Sky Cond.	Precip. (in.)			Site Conditions (describe)	
WEATHER	Low	High			Rain	Snow		
	27	49	Clear	None	0	0	Wind 10-15	

Contractors Dredging Work Hours

Start: 6:00 A.M. End: 5:00 P.M.

Contractors on site *(at start of work)*

DWW –Dredge PC-1250 on Barge KS1502 continued Bottom of CAD Cell #4 dredging from November 13th through November 17th, 2023. Capping and bed leveling of LHCC has continued intermittently as needed with the flat barges "B", and "Little Jeff" and the drag barge. Dredging for stockpiling has continued with flat barges "B" and :Little Jeff" as needed. Crews continued dredging activities from 06:00am to 17:00pm.

Other personnel on site:	*Purpose:*
Joshua Ray	Dredging Observations,
Bill Gray	Water Quality Monitoring, Hydro Surveys

Work observation report, comments:

1. WQMP – Every 2 hours for 8 hours worked and one disposal event.
2. Site Inspections Performed –
    a. Completed Water Quality Monitoring at CAD Cell #4.

Construction Observation Report

Dredging at CAD Cell #4.

Dredging at CAD Cell #4.

.

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 30th – Dec.1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 2

Water Quality Monitoring Forms

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/1/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 11:07a/11:35p **Low:** 3:46a/4:52p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-RL-2	2695932 , 816278	7:00	11'	2	2.45		FLOOD	0'	0
110123-00-RL-5		7:00		5	3.17				
110123-00-RL-9		7:00		9	2.88				
			AVERAGE TURBIDITY:		2.83				
110123-02-RL-2	2695939 , 816196	9:00	13'	2	2.32		FLOOD	0'	2
110123-02-RL-6		9:00		6	2.39				
110123-02-RL-11		9:00		11	4.14				
			AVERAGE TURBIDITY:		2.95				
110123-04-RL-2	2695908 , 816381	10:40	13'	2	1.98		EBB	0'	4
110123-04-RL-6		10:40		6	2.06				
110123-04-RL-11		10:40		11	5				
			AVERAGE TURBIDITY:		3.01				
110123-06-RL-2	2696526 , 815918	13:00	15'	2	6.75		EBB	0'	6
110123-06-RL-7		13:00		7	5.13				
110123-06-RL-13		13:00		13	2.11				
			AVERAGE TURBIDITY:		4.66				
110123-08-RL-2	2696805 , 815973	14:45	13'	2	2.61		EBB	0'	8
110123-08-RL-6		14:45		6	2.68				
110123-08-RL-11		14:45		11	4.8				
			AVERAGE TURBIDITY:		3.36				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-ML-2	2696517 , 815918	7:05	13'	2	1.97		FLOOD	0	0
110123-00-ML-6		7:05		6	2.01				
110123-00-ML-11		7:05		11	5.64				
			AVERAGE TURBIDITY:		3.21				
			TURBIDITY INCREASE:		0.37				
110123-02-ML-2	2696514 , 815918	9:05	14'	2	2.25		FLOOD	0	2
110123-02-ML-7		9:05		7	3.95				
110123-02-ML-12		9:05		12	6.67				
			AVERAGE TURBIDITY:		4.29				
			TURBIDITY INCREASE:		1.34				
110123-04-ML-2	2696707 , 815950	10:45	15'	2	2.51		EBB	0	4
110123-04-ML-7		10:45		7	3.61				
110123-04-ML-13		10:45		13	3.67				
			AVERAGE TURBIDITY:		3.26				
			TURBIDITY INCREASE:		0.25				
110123-06-ML-2	2695904 , 816320	13:05	11'	2	4.72		EBB	0	6
110123-06-ML-5		13:05		5	3.76				
110123-06-ML-9		13:05		9	5.09				
			AVERAGE TURBIDITY:		4.52				
			TURBIDITY INCREASE:		-0.14				
110123-08-ML-2	2695930 , 815199	14:50	11'	2	5.26		EBB	0	8
110123-08-ML-5		14:50		5	6.01				
110123-08-ML-9		14:50		9	6.38				
			AVERAGE TURBIDITY:		5.88				
			TURBIDITY INCREASE:		2.52				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/1/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE **High:** 11:07a/11:35p **Low:** 3:46a/4:52p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-RL-2	2696963 , 815711	9:10	13'	2	2.49		FLOOD	0'	0
110123-00-RL-4		9:10		6	3.21				
110123-00-RL-5		9:10		11	2.55				
				AVERAGE TURBIDITY:	2.75				
110123-02-RL-2	2696940 , 815795	10:50	15'	2	3.52		FLOOD	0'	2
110123-02-RL-7		10:50		7	3.79				
110123-02-RL-13		10:50		13	2.11				
				AVERAGE TURBIDITY:	3.14				
110123-04-RL-2	2697476 , 815432	13:10	6'	2	1.62		EBB	0'	4
110123-04-RL-3		13:10		3	1.61				
110123-04-RL-4		13:10		4	1.76				
				AVERAGE TURBIDITY:	1.66				
110123-06-RL-2	2697476 , 815248	14:55	7'	2	2.16		EBB		
110123-06-RL-3		14:55		3	2.17				
110123-06-RL-5		14:55		5	2.37				
				AVERAGE TURBIDITY:	2.23				
				AVERAGE TURBIDITY:	#DIV/0!				
				AVERAGE TURBIDITY:	#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
110123-00-ML-2	2697406 , 815761	9:15	8'	2	1.86		FLOOD	0	0
110123-00-ML-4		9:15		4	3.64				
110123-00-ML-6		9:15		6	6.87				
				AVERAGE TURBIDITY:	4.12				
				TURBIDITY INCREASE:	1.37				
110123-02-ML-2	2697416 , 815671	10:55	8'	2	2.52		FLOOD	0	2
110123-02-ML-4		10:55		4	3.18				
110123-02-ML-6		10:55		6	2.64				
				AVERAGE TURBIDITY:	2.78				
				TURBIDITY INCREASE:	-0.36				
110123-04-ML-2	2696881 , 815472	13:15	15'	2	2.15		EBB	0	4
110123-04-ML-7		13:15		7	2.33				
110123-04-ML-13		13:15		13	2.38				
				AVERAGE TURBIDITY:	2.29				
				TURBIDITY INCREASE:	0.62				
110123-04-ML-2	2696957 , 815606	15:00	13'	2	10.2		EBB		
110123-04-ML-6		15:00		6	11.91				
110123-04-ML-11		15:00		11	9.04				
				AVERAGE TURBIDITY:	10.38				
				TURBIDITY INCREASE:	8.15				
				AVERAGE TURBIDITY:	#DIV/0!				
				TURBIDITY INCREASE:	#DIV/0!				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/10/2023
MONITORS: MC/JM
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 5:28a/5:42p **Low:** 11:20a/11:17p

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111023-00-RL-2	2696612 , 815923	8:00	12'	2	1.5		EBB	0'	0
111023-00-RL-6		8:00		6	1.5				
111023-00-RL-10		8:00		10	1.5				
			AVERAGE TURBIDITY:		1.50				
111023-02-RL-2	2696612 , 815923	10:00	10'	2	1.4		EBB	0'	2
111023-02-RL-5		10:00		5	1.5				
111023-02-RL-8		10:00		8	1				
			AVERAGE TURBIDITY:		1.30				
111023-04-RL-2	2695935 , 816015	12:00	16'	2	3.6		FLOOD	0'	4
111023-04-RL-8		12:00		8	3				
111023-04-RL-14		12:00		14	2.9				
			AVERAGE TURBIDITY:		3.17				
111023-06-RL-2	2695935 , 816015	13:45	15'	2	6.75		FLOOD	0'	6
111023-06-RL-7		13:45		7	5.13				
111023-06-RL-13		13:45		13	2.11				
			AVERAGE TURBIDITY:		4.66				
111023-08-RL-2	2695935 , 816015	16:00	13'	2	2.61		FLOOD	0'	8
111023-08-RL-6		16:00		6	2.68				
111023-08-RL-11		16:00		11	4.8				
			AVERAGE TURBIDITY:		3.36				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111023-00-ML-2	2695960 , 814840	8:05	14'	2	3.1		FLOOD	0	0
111023-00-ML-6		8:05		6	1.1				
111023-00-ML-12		8:05		12	1				
			AVERAGE TURBIDITY:		1.73				
			TURBIDITY INCREASE:		0.23				
111023-02-ML-2	2695950 , 815940	10:05	17'	2	3		FLOOD	0	2
111023-02-ML-8		10:05		8	1.8				
111023-02-ML-15		10:05		15	1.3				
			AVERAGE TURBIDITY:		2.03				
			TURBIDITY INCREASE:		0.73				
111023-04-ML-2	2696460 , 815777	12:05	12'	2	3.2		EBB	0	4
111023-04-ML-6		12:05		6	1.6				
111023-04-ML-10		12:05		10	1.6				
			AVERAGE TURBIDITY:		2.13				
			TURBIDITY INCREASE:		-1.03				
111023-06-ML-2	2696630 , 815930	13:50	11'	2	4.72		EBB	0	6
111023-06-ML-5		13:50		5	3.76				
111023-06-ML-9		13:50		9	5.09				
			AVERAGE TURBIDITY:		4.52				
			TURBIDITY INCREASE:		-0.14				
111023-08-ML-2	2696630 , 815930	16:05	11'	2	5.26		EBB	0	8
111023-08-ML-5		16:05		5	6.01				
111023-08-ML-9		16:05		9	6.38				
			AVERAGE TURBIDITY:		5.88				
			TURBIDITY INCREASE:		2.52				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: Bottom of CAD Cell No. 4 & North Terminal Expansion
JOB NUMBER: 02N001.10
DATE: 11/15/2023
MONITORS: JR/KA
WEATHER CONDITIONS: CLEAR
WIND: 10-15 NW
PRIOR STORM EVENTS: None
DREDGE UPDATE: CAD CELL #4 DREDGING AND LHCC BED LEVELING
TYPE OF WATER QUALITY MONITORING EVENT: DREDGING / DISPOSAL / CAPPING / BED LEVELING / INFIELD FILLING
TIDE High: 11:07a/11:35p **Low:** 3:46a/4:52p

Foth

UP-CURRENT

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111523-00-RL-2	2695942 , 815910	7:00	21'	2	1.84		FLOOD	0'	0
111523-00-RL-10		7:00		10	2.12				
111523-00-RL-19		7:00		19	0.76				
			AVERAGE TURBIDITY:		1.57				
111523-02-RL-2	2696472 , 815665	9:00	17'	2	2.5		EBB	0'	2
111523-02-RL-8		9:00		8	2.5				
111523-02-RL-15		9:00		15	4.61				
			AVERAGE TURBIDITY:		3.20				
111523-04-RL-2	2696470 , 815765	11:00	15'	2	1.13		EBB	0'	4
111523-04-RL-7		11:00		7	1.09				
111523-04-RL-13		11:00		13	1.12				
			AVERAGE TURBIDITY:		1.11				
111523-06-RL-2	2696375 , 815676	13:00	13'	2	0.9		EBB	0'	6
111523-06-RL-6		13:00		6	1.26				
111523-06-RL-11		13:00		11	1.91				
			AVERAGE TURBIDITY:		1.36				
111523-08-RL-2	2696389 , 815643	14:45	13'	2	0.87		FLOOD	0'	8
111523-08-RL-6		14:45		6	0.94				
111523-08-RL-11		14:45		11	1.9				
			AVERAGE TURBIDITY:		1.24				
			AVERAGE TURBIDITY:		#DIV/0!				

Down-Current

Monitoring ID #	NORTHING/ EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM DREDGE/SILT CURTAIN	NUMBER OF HOURS DREDGING
111523-00-ML-2	2696460 , 815687	7:05	16'	2	3.1		FLOOD	0	0
111523-00-ML-8		7:05		8	3.06				
111523-00-ML-14		7:05		14	0.76				
			AVERAGE TURBIDITY:		2.31				
			TURBIDITY INCREASE:		0.73				
111523-02-ML-2	2695949 , 815904	9:05	15'	2	2.72		EBB	0	2
111523-02-ML-7		9:05		7	2.01				
111523-02-ML-13		9:05		13	1.31				
			AVERAGE TURBIDITY:		2.01				
			TURBIDITY INCREASE:		-1.19				
111523-04-ML-2	2695935 , 816015	11:05	20'	2	5.23		EBB	0	4
111523-04-ML-10		11:05		10	4				
111523-04-ML-18		11:05		18	2.45				
			AVERAGE TURBIDITY:		3.89				
			TURBIDITY INCREASE:		2.78				
111523-06-ML-2	2695950 , 816080	13:05	11'	2	1.88		EBB	0	6
111523-06-ML-5		13:05		5	2.22				
111523-06-ML-9		13:05		9	2.04				
			AVERAGE TURBIDITY:		2.05				
			TURBIDITY INCREASE:		0.69				
111523-08-ML-2	815995 , 2697000	14:50	10'	2	1.89		FLOOD	0	8
111523-08-ML-5		14:50		5	2.08				
111523-08-ML-8		14:50		8	2.15				
			AVERAGE TURBIDITY:		2.04				
			TURBIDITY INCREASE:		0.80				

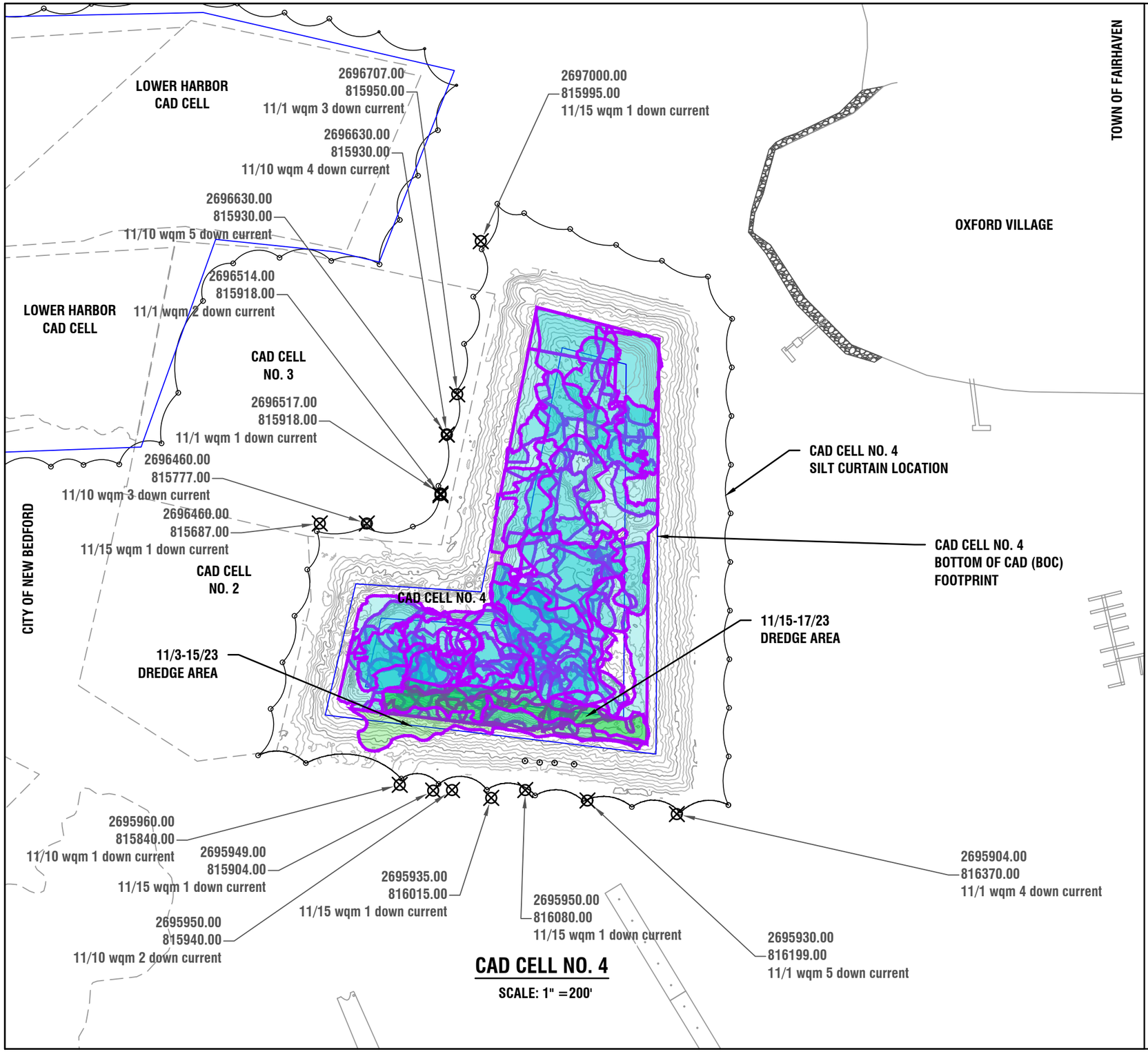
* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Attachment 3

Figure 1 Weekly Bottom of CAD Cell #4 Tracking

Figure 2 – Infield Filling Progress Plan

Figure 3 – Lower Harbor CAD Cell Capping Progress



LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

LIMIT OF BOTTOM OF CAD CELL NO.4 DREDGE AREA

WATER QUALITY MONITORING TARGET

PREVIOUSLY DREDGED AREA

AREA DREDGED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 INCH = 200 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740

NEW BEDFORD PORT AUTHORITY

DATE:	12-1-2023
SCALE:	1" = 200'
DRAWN BY:	MEC4
CHECKED BY:	SEN
JOB NO.:	020N001

SHEET TITLE

BOTTOM OF CAD CELL NO. 4 DREDGE PROGRESS

DRAWING NO.

FIGURE 1

WQM - NOV 1, 2023 WQM - NOV 10, 2023
WQM - NOV 15, 2023

PROPOSED REVETMENT SHOWN FOR REFERENCE OF SITE LIMITS ONLY

APPROXIMATE LOCATION OF SILT CURTAIN

IMPORTED INFIELD FILL AREA

CELLULAR COFFERDAM

BOC INFIELD FILL AREA

NORTH TERMINAL SITE

7
6a
6
5a
5
4a
4
3a
3
2a
2
1a
1

WORK BARGE

MARY P. SCOW

9/21

9/26 wp

9/21 W

10/4

NORTH TERMINAL INFIELD FILLING PROGRESS

SCALE: 1" =100'

LEGEND:

WATER QUALITY MONITORING TARGET

AREA FILL TO DATE

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

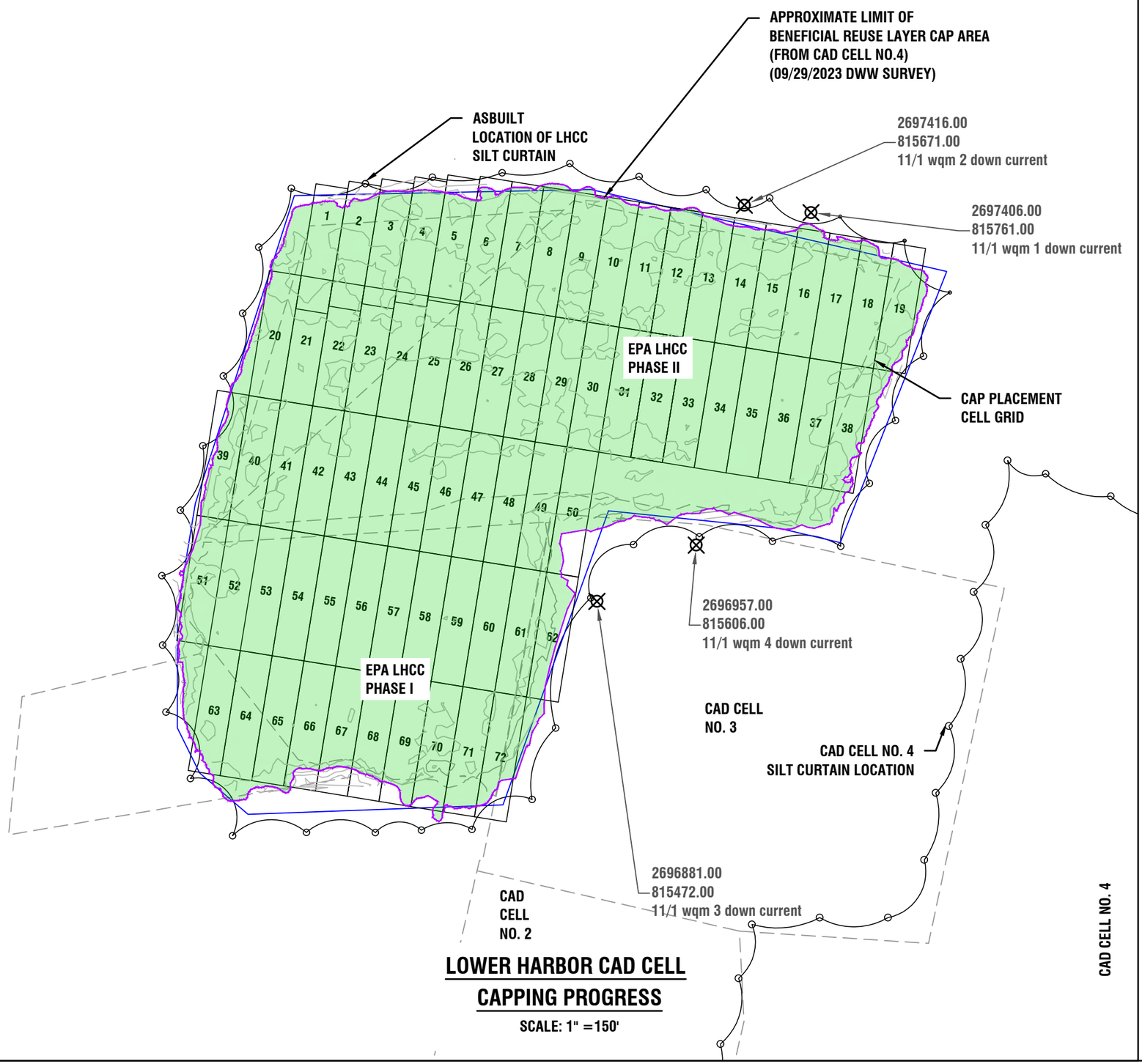
DATE:	12-1-2023
SCALE:	1" = 100'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

NORTH TERMINAL INFIELD FILL PROGRESS

DRAWING NO.

FIGURE 2:
DECEMBER 1, 2023



LOWER HARBOR CAD CELL CAPPING PROGRESS

SCALE: 1" =150'

LEGEND:

AS BUILT LIMIT OF EXISTING CAD CELLS & ACCESS CHANNEL

APPROXIMATE LIMIT OF LHCC AREAS

WATER QUALITY MONITORING TARGET

PREVIOUSLY CAPPED AREA

AREA CAPPED THIS PERIOD

APPROXIMATE SILT CURTAIN LOCATION

GRAPHIC SCALE

0 75 150 300

(IN FEET)

1 INCH = 150 FEET

Foth

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
15 CREEK ROAD, MARION, MA 02738

NEW BEDFORD & FAIRHAVEN
BOTTOM OF CAD CELL NO. 4,
LHCC CAPPING, & NORTH TERMINAL
STATE ENHANCED REMEDY

123 MACARTHUR BLVD.
NEW BEDFORD, MA 02740
NEW BEDFORD PORT AUTHORITY

DATE:	12/01/2023
SCALE:	1" = 150'
DRAWN BY:	PSR
CHECKED BY:	SEN
JOB NO.:	02N001.10

SHEET TITLE

LOWER HARBOR CAD CELL CAPPING PROGRESS

DRAWING NO.

FIGURE 3:
DECEMBER 1, 2023

Client:	New Bedford Port Authority	Project #:	0020N001.100
Project:	Bottom of CAD Cell No. 4 & North Terminal	Weeks of:	Oct. 30th – Dec.1st
Prepared by:	Patrick Rezendes	Contractor:	DW White (DWW)

Attachment 4

Weekly Bottom of CAD Cell #4 Quantity Tracking Log Sheet

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 10/30/2023 TO 11/3/2023 **1 of 1**

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
10/30/2023	653	Komatsu 1250	B	225	CAD4	STOCKPILE		
	654	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
10/31/2023	655	Komatsu 1250	B	225	CAD4	STOCKPILE		
	656	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/1/2023	657	Komatsu 1250	B	225	CAD4	LHCC		
	658	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
	659	Komatsu 1250	B	225	CAD4	LHCC		
11/2/2023	660	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
	661	Komatsu 1250	B	225	CAD4	LHCC		
	662	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
11/3/2023	663	Komatsu 1250	B	225	CAD4	LHCC		
	664	Komatsu 1250	Little Jeff	100	CAD4	LHCC		
	665	Komatsu 1250	B	225	CAD4	LHCC		
			Weekly Total	2175	CY			
			CUMULATIVE TOTAL	149775	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 11/6/2023 TO 11/11/2023 **1 of 1**

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
11/6/2023	666	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/6/2023	667	Komatsu 1250	Little Jeff	150	CAD4	STOCKPILE		
11/6/2023	668	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/7/2023	669	Komatsu 1250	B	275	CAD4	LHCC		
11/7/2023	670	Komatsu 1250	Little Jeff	150	CAD4	STOCKPILE		
11/7/2023	671	Komatsu 1250	Little Jeff	150	CAD4	LHCC		
11/8/2023	672	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/8/2023	673	Komatsu 1250	Little Jeff	150	CAD4	STOCKPILE		
11/8/2023	674	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/9/2023	675	Komatsu 1250	Little Jeff	150	CAD4	STOCKPILE		
11/10/2023	676	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/10/2023	677	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/11/2023	678	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/11/2023	679	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
			Weekly Total	2875	CY			
			CUMULATIVE TOTAL	152650	CY			

New Bedford Port Authority
Bottom of CAD Cell No. 4 & North Terminal Expansion
Contract No. NBPA-FY22-001

QUANTITY TRACKING LOG SHEET

WEEK OF: 11/11/2023 TO 11/17/2023 **1 of 1**

*BASED ON ESTIMATED VOLUME BY DRAFT

Date	Load No.	Dredge	Scow No.	Estimated Quantity* (CY)	Dredge Location	Disposal Location	Dredged Position	Date Unloaded
11/13/2023	676	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/13/2023	677	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/14/2023	678	Komatsu 1250	B	275	CAD4	LHCC		
11/14/2023	679	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/15/2023	670	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/15/2023	671	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/15/2023	672	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/15/2023	673	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/15/2023	674	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/15/2023	675	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/16/2023	676	Komatsu 1250	B	275	CAD4	STOCKPILE		
11/16/2023	677	Komatsu 1250	Little Jeff	100	CAD4	STOCKPILE		
11/17/2023	678	Komatsu 1250	B	200	CAD4	STOCKPILE		
11/17/2023	679	Komatsu 1250	Little Jeff	104	CAD4	STOCKPILE		
			Weekly Total	2554	CY			
			CUMULATIVE TOTAL	155204	CY			

Appendix E

Post-cap Baseline Sampling (January 2024)

15 Creek Road
Marion, MA 02738
(508) 748-0937
foth.com

May 20, 2024

Mr. Ceasar Duarte
Director of Engineering and Operations
New Bedford Port Authority
123 MacArthur Blvd.
New Bedford, MA 02740

David J. Dickerson
Remedial Project Manager
USEPA - Region 1 OSRR0 7-4
5 Post Office Square
Boston, MA 02109-3912

RE: New Bedford Port Authority and USEPA
Baseline Sampling Report 2024
Lower Harbor CAD Cell (LHCC), New Bedford Harbor
New Bedford, MA

Dear Mr. Duarte and Mr. Dickerson:

Foth Infrastructure and Environment, LLC., on behalf of New Bedford Port Authority(NBPA) and the United States Environmental Protection Agency (USEPA), has completed the Baseline Sampling tasks for the above referenced project. The project objective was to provide the NBPA USEPA with the baseline sampling results for newly constructed Lower Harbor CAD Cell (LHCC) Sand Cap. The following report will provide detailed analysis on the characteristics of the sand cap completed in November 2023.

LHCC last received navigational dredge material on April 13, 2023. Capping LHCC began on June 29, 2023, and was completed in two layers. The first layer or isolation layer, completed on August 30, 2023, included sediment amended with total organic carbon (TOC) which serves as a binder for low level contamination. The second upper layer, completed on October 27, 2023, was made of clean dredge spoils from CAD Cell No. 4 which was under construction at the time.

Capping of LHCC was determined to be complete on November 15, 2023 after a period of bed leveling to create a uniform surface sufficient for capping.

Approximately 12.87 acres (consisting of 3.85 acres at LHCC Phase I and 9.02 acres at LHCC Phase II) of area was capped with import fill to meet the TOC requirement and clean material dredged from the footprint of the New Bedford Port Authority's CAD Cell No. 4 dredge project in New Bedford. The cap was designed to encapsulate the dredged material within a manageable location within the harbor and cover the previously placed navigational dredge material. The sand cap layer creates a physical barrier between the contaminated material and the environment. The investigations detailed within this report were established by USEPA to develop a baseline for comparison to future Operations & Maintenance actives related to the LHCC Cap.

As part of update for the NBPA LHCC Baseline Sampling, Foth has completed the following field

investigation tasks:

1) Multibeam Hydrographic Survey of LHCC
2) Sediment Monitoring

List of Figures:

Figure 1 – LHCC Sand Cap As-Built & Baseline Sample Locations

List of Attachments:

Attachment 1 – 2023 Vibrocore/Sampling Reporting

Overview

The project utilized a high-resolution wideband multi-beam echosounder (MBES) to measure full bottom coverage mudline elevations from within the vicinity of the LHCC in New Bedford Harbor. Vibrocore samples were collected by a third-party contractor and processed internally by Foth staff. Multibeam data collection took place on multiple days, completing that effort on January 8th, 2024. Vibrocore samples were collected on January 17, 2024. The following is a description of the methodology and findings.

The hydrographic surveys utilized methods and accuracies outlined in the Army Corps of Engineers' November 2013, Hydrographic Surveying Manual (EM 1110-2-1003).

The sections below comprise a narrative of the survey procedures including a discussion of the survey setup, equipment used, data collection methods followed, data quality control and assurance (QC/QA) measures applied, and post-processing techniques.

1) Multibeam Hydrographic Survey of Lower Harbor CAD Cell

For the multibeam survey the crew utilized the 26' vessel "Oscar". The "Oscar is a Scully work boat that is powered by twin outboard motors that can effectively maneuver the vessel into tight areas. The use of twin motors provides a safety backstop as the vessel can operate with one motor. All Foth vessels are professionally maintained in good condition and inspected prior to all survey events. All onboard personnel are required to meet the project safety requirements as defined in the corporate HASP or site-specific HASP. This typically includes: OSHA Level D PPE, steel toed shoes, ear protection, eye protection, and USCG certified flotation devices as required.

Project team members:

- Michael Campagnone, PE(MA) – Surveyor
- Jared Munch – Surveyor, Operator
- Joshua Ray – Surveyor, Data Processor
- Joe Baranello - Operator

Equipment List:

- 26' "Oscar" – Scully Boats
- Reason T50-R, 190-400 KHz, 10-1024 Beams, 0.5 degrees
- AML – SVP at transducer head
- Applanix POS/MV – RTK Enabled
- GPS Corrections Keynet VRS
- Hypack 2022

Project Control

All data was processed and reduced to the project vertical datum of MLLW, based on the datum information provided by the United States Army Corps of Engineers (USACE) and NOAA tide station "Clarks Point, MA #8447712". Horizontal coordinates are based on the NAD83 State Plane grid system for the State of Massachusetts, Mainland Zone with units in US Survey Feet.

The project control is based on the published benchmark station bolt 2008 established by USACE-NAD-NE in April 2008. No independent verification of the bench-mark provided by USACE was done by Foth. The offset between NAVD88 and MLLW for the project is -1.92'.

During the survey event the control point was used as a positioning check, to verify the proper function of the GPS equipment by occupying the point before and after the survey and comparing the results of the occupation to the reported values of the control point in both the horizontal and

vertical directions. In addition, the point was used to confirm the value of the tides created by Hypack and logged along with sounding data during the survey. The results of the analysis indicate that tides were collected within ±0.1' of the measured elevations. Horizontal deltas were ±0.05'.

Data Acquisition

Data was acquired utilizing the Reason T50-R at a frequency of 340 KHz. The survey frequency was selected by running several preliminary lines and adjusting the settings to produce the highest quality data. During survey operations the sonar power settings were tuned to optimize bathymetry accuracy for the survey area and to maximize the dynamic range of the acoustic intensity returns while avoiding oversaturation of the sonar signal. Lines were run in pre-described lines that are aligned with banks and structures within the survey area. The sonar swath was limited to 90 degrees with 50% overlap (200% coverage) between passes to meet USACE requirements.

GPS Corrections were processed in real-time from a VRS service provided by Keynet. Keynet provides an internet-based solution for GPS corrections that utilizes several static base stations to create site specific corrections for the actual location of the survey.

The MBES horizontal and vertical positions and attitude were measured in real-time with an Applanix POS MV. The POS MV is a real-time kinematic (RTK) global navigation satellite system (GNSS)-augmented navigation system that provides accurate real-time position, heading, and attitude measurements for the survey vessel. The system provides inertially-derived positions allowing for data collection to continue in situations where GNSS-compromised environments are encountered.

Xylem Hypack Hysweep 2018 software was used for MBES data acquisition and processing. The system provided precise time tagging of the sensor data and facilitated real-time data displays of survey coverage and data quality control.

Quality Control

As required by the USACE EM, quality control test procedures for the survey included: survey documentation, pre/post survey bar checks, patch testing (MB), periodic sound velocity profiles, and manual sounding verification of sounder depths. In addition to the QC testing and to ensure data quality, data collection procedures were limited to; beam angle width max 45 degrees (MB), 200% bottom coverage (MB), max GPS DOP, and max vessel speed.

Summary of Results

For quick reference, below is a brief description of the 2023 survey:

The final elevation of the LHCC cap was designed to roughly match the surrounding elevations. As this is the first iteration of survey efforts post-capping for LHCC, more detailed analysis will be required in future years regarding further siltation/accretion or settling that may occur within the LHCC footprint.

2) Sediment Monitoring

On January 17th, 2023 Foth completed sediment sampling of the CAD Cell caps to verify the structural integrity of the CAD Cell cap and analyze the sediments within the cap. Foth subcontracted the collection of the samples to a third-party, and Foth completed the processing of the samples internally. A 3-inch barrel was driven to a depth of 1.5 feet in order to penetrate the cap surface, but not puncture through the entire cap, therefore leaving the capped material beneath undisturbed. Foth completed vibrocores at ten locations. Samples were visually classified and collected for laboratory analysis. Laboratory analysis was conducted to test for PCBs using the full 209 Congeners (EPA Method 8270E-SIM/680(M), total metals, total solids, and moisture. Results are shown below in Table #1.

SAMPLE	PCBs	Cadmium	Chromium	Copper	Lead	Zinc	TS (%)	M (%)
LHCC-VC-1	0.0177	ND	2.15	2.86	2.15	6.56	80.1	19.9
LHCC-VC-2	0.00949	ND	2.23	3.37	3.92	8.92	83.8	16.2
LHCC-VC-3	0.062	0.068	7.17	11	5.9	19.2	82.2	17.8
LHCC-VC-4	0.0155	ND	6.38	5.29	4.2	14.8	78.8	21.2
LHCC-VC-5	0.0694	ND	32.9	7.44	4.29	10.6	80	20
LHCC-VC-6	0.00288	ND	2.4	2.52	2.01	7.03	81.3	18.7
LHCC-VC-7	0.0363	0.062	6.61	10.6	6.24	22	82.5	17.5
LHCC-VC-8	0.0174	ND	3.42	4.26	4.09	9.97	82.9	17.1
LHCC-VC-9	0.0833	0.057	5.83	9.85	5.75	18.1	84.2	15.8
LHCC-VC-10	0.0249	ND	8.17	5.91	3.02	12.1	80.5	19.5

All analytical values are given in mg/kg (ppm), except where shown as percentage (TS, M)

3) Deliverables

Multibeam Survey

See Figures 1 for the results of the 2023 multibeam bathymetric survey plan with contours shown at 1' interval based on a 10' x 10' average value data set.

Sediment Monitoring

See Figure 1 for sampling plan information including 2023 vibrocore locations. See Attachment 1 for vibrocore reporting including photos, logs and Alpha Analytical laboratory report for the results of the ten vibrocore samples collected in LHCC.

4) Summary

Foth has completed the request baseline sampling for the sand capping of LHCC constructed in 2023. Vibrocore sample results show very low levels of PCBs (<0.1ppm) in the cap material along with low levels of various heavy metals.

If there are any further questions or comments, feel free to contact Foth regarding this report at (508) 748-0937

Sincerely,

Foth Infrastructure & Environment, LLC

Michael Campagnone, P.E
Lead Civil Engineer – Geophysical Surveys
Licensed in (MA)

Attachment 1 –2023 Vibrocore Reporting

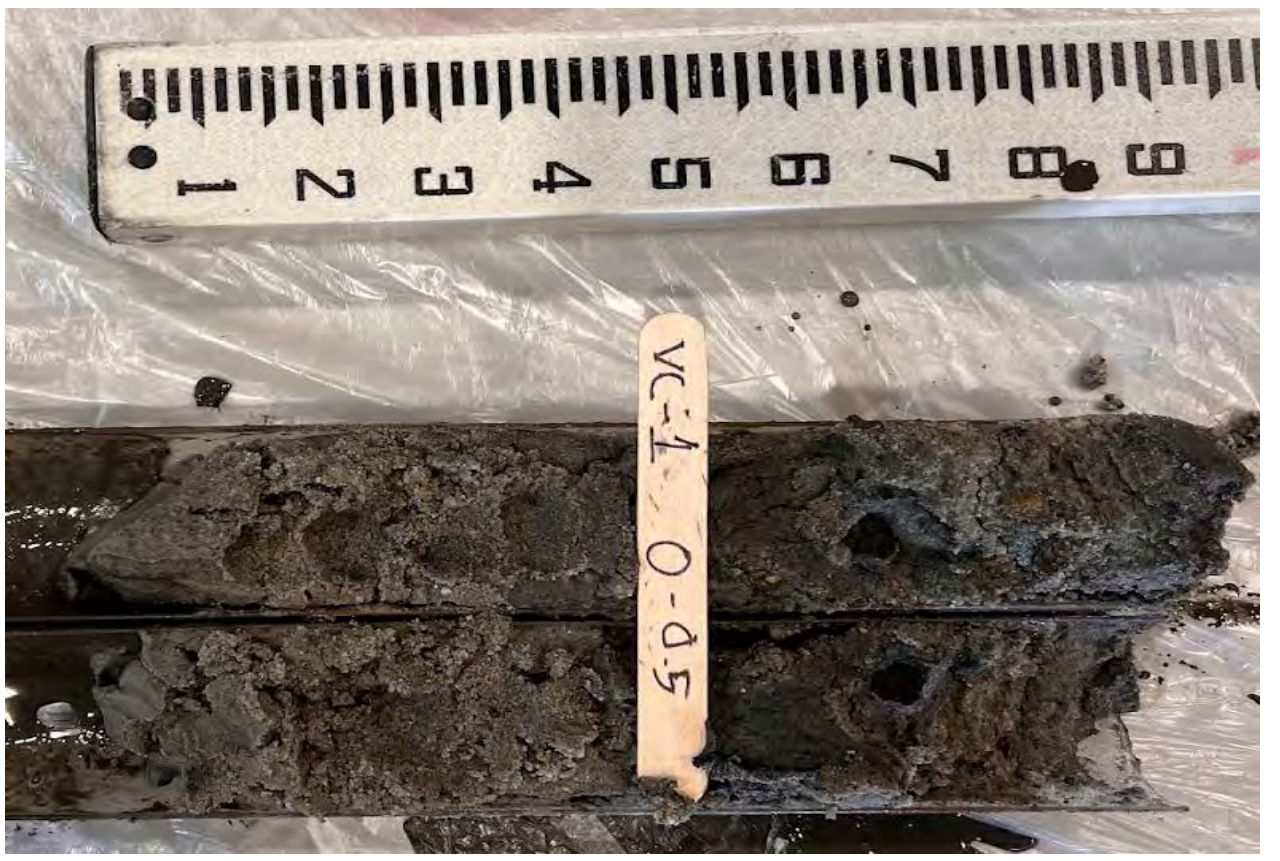
LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC1**		**Page**		**1 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	8.9	**feet**	**Sample Collection Time**	09:20	
Tide (Station)	1.6	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.3	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.3	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	2.0	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.8	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.8	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	40	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2696725.000	**N**	**No. of Coring Attempts**	1	
	815002.000	**E**	**Field Engineer on Site**	EB & CR	
	41.6464273°	**Lat**	**Additional Notes**		
	-070.9188667°	**Long**			

Depth (feet)	Elev. (feet)	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.3'				
.5'	-7.8			0.0' - 0.5'	Light Grey Medium to Fine Sand with Trace Gravel. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'



Top 0.5'

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard
Signature of Field Engineer:	

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC2**		**Page**		**2 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	10.0	**feet**	**Sample Collection Time**	10:20	
Tide (Station)	2.4	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.6	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.1	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.8	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.8	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	50	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2696776.430	**N**	**No. of Coring Attempts**	1	
	815266.040	**E**	**Field Engineer on Site**	EB & CR	
	41.6465635°	**Lat**	**Additional Notes**		
	-070.9178994°	**Long**			

Depth feet	Elev. feet	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.6'				
.5'	-8.1			0.0' - 0.5'	Brown Medium to Coarse Sand. Medium to Fine Sand Top 0.2' of Sample. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'

Bottom 0.5'

Notes:

Name (Density, Color, Classification), Moisture, Secondary Grain Size.

Key:

Fines Content: trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100%
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black
Odor: Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic
Relative Density (Non-Cohesive) : v. loose, loose, med. , dense, v. dense
Consistency (Cohesive) : v. soft, soft, firm, hard and v. hard

Signature of Field Engineer:

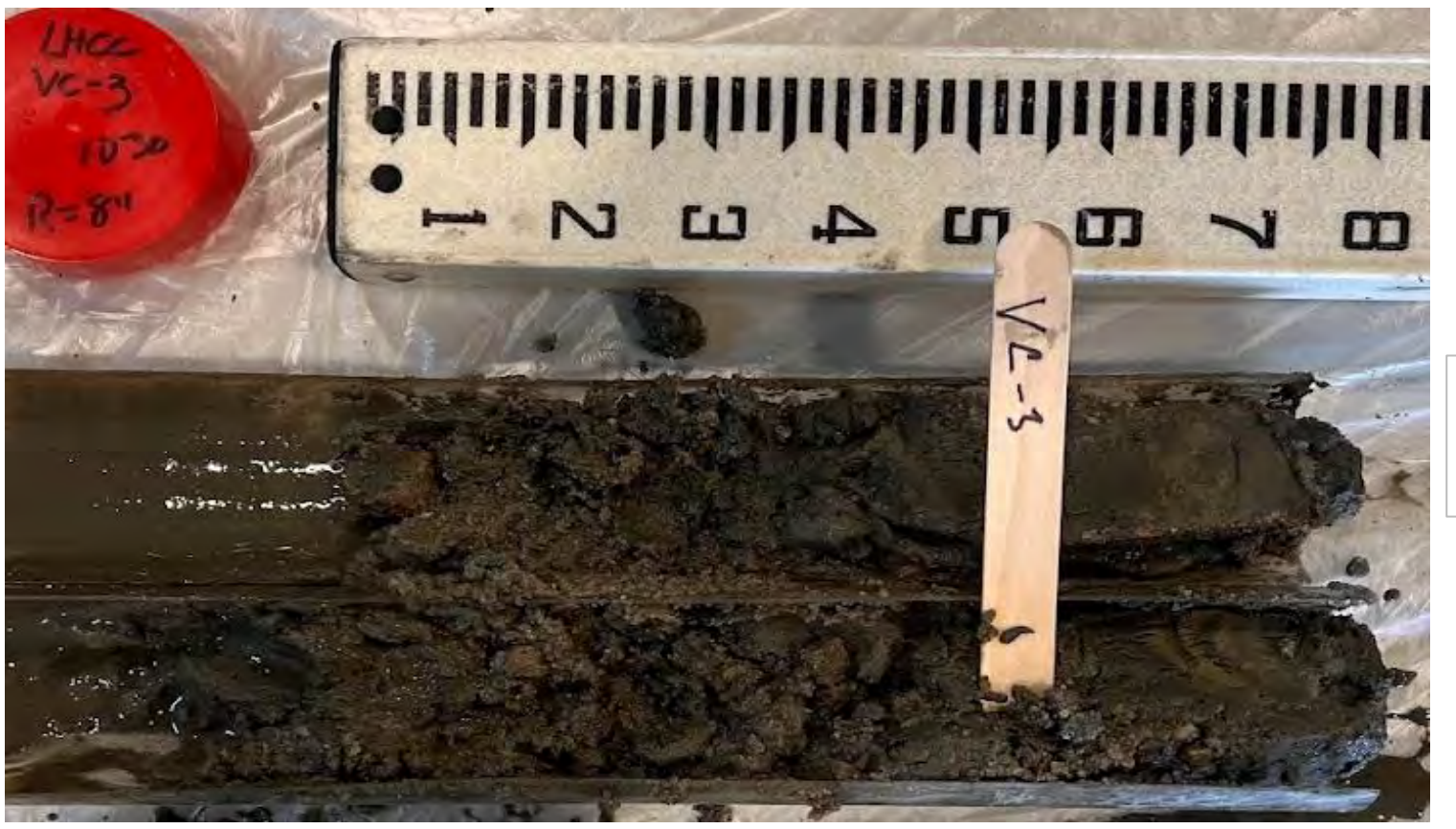
LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC3**		**Page**		**3 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	9.9	**feet**	**Sample Collection Time**	10:30	
Tide (Station)	2.7	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.2	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth (Bottom El.)	-8.7	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
			Driller	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.7	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.7	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	45	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2696927.940	**N**	**No. of Coring Attempts**	1	
	815048.500	**E**	**Field Engineer on Site**	EB & CR	
	41.6469834°	**Lat**	**Additional Notes**		
	-070.9186915°	**Long**			

Depth feet	Elev. feet	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.2'				
.5'	-7.7			0.0' - 0.5'	Brown Medium to Fine Sand with Silt. Some Gravel. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'



Bottom

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard
Signature of Field Engineer:	

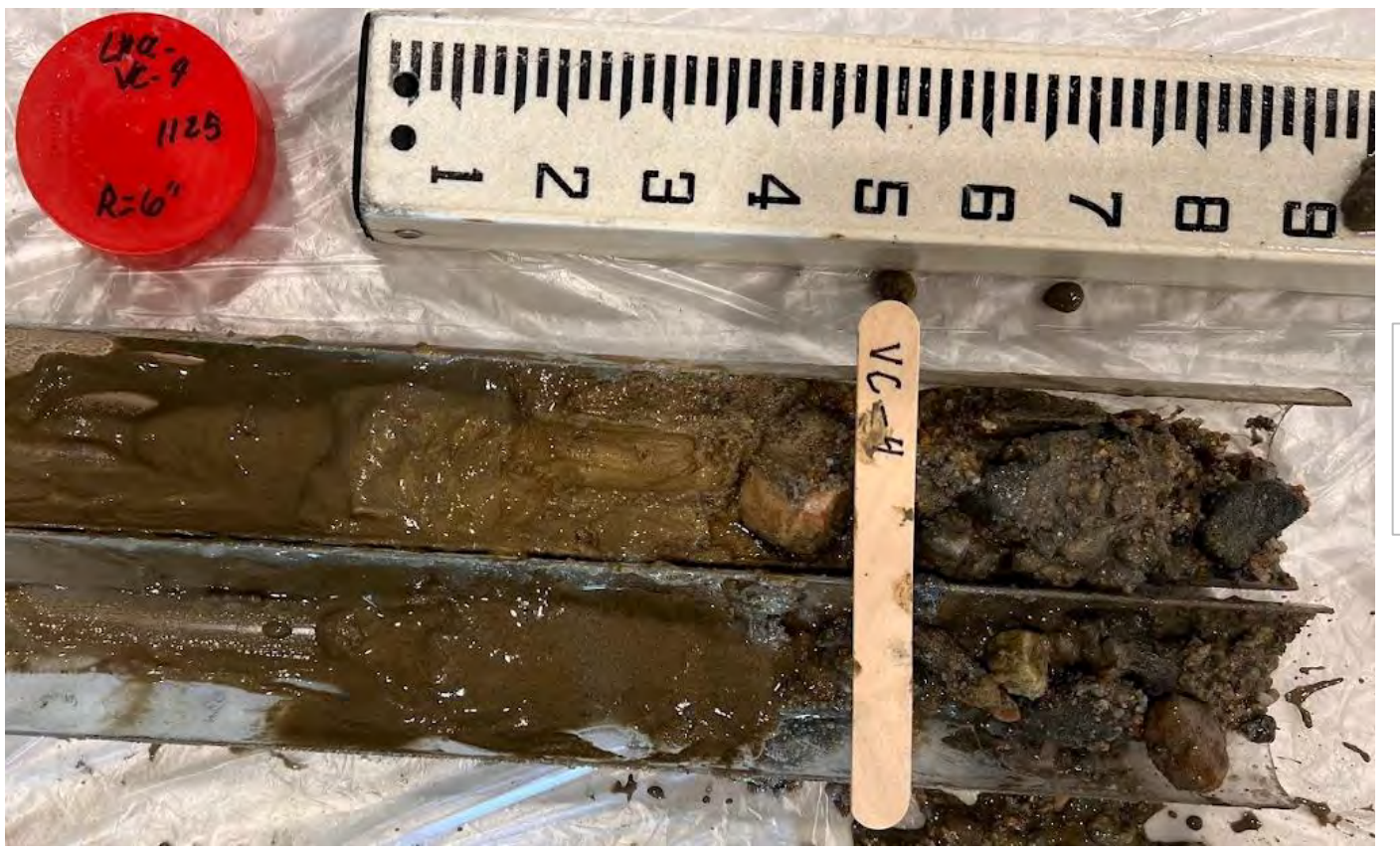
LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC4**		**Page**		**4 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	10.9	**feet**	**Sample Collection Time**	11:25	
Tide (Station)	3.2	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.7	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.2	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.5	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.5	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	33	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2696942.270	**N**	**No. of Coring Attempts**	1	
	815297.540	**E**	**Field Engineer on Site**	EB & CR	
	41.6470180°	**Lat**	**Additional Notes**		
	-070.9177800°	**Long**			

Depth (feet)	Elev. (feet)	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.7'				
.5'	-8.2			0.0' - 0.5'	Brown Fine Sands with Dense, Light Brown Silt. High Plasiticity Silt. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'



Bottom 0.5'

Notes:

Name (Density, Color, Classification), Moisture, Secondary Grain Size.

Key:

Fines Content: trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100%
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black
Odor: Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic
Relative Density (Non-Cohesive) : v. loose, loose, med. , dense, v. dense
Consistency (Cohesive) : v. soft, soft, firm, hard and v. hard

Signature of Field Engineer:

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC5**		**Page**		**5 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	11.6	**feet**	**Sample Collection Time**	11:50	
Tide (Station)	3.6	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-8.0	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth (Bottom El.)	-9.5	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
			Driller	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.5	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.5	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	36	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697125.310	**N**	**No. of Coring Attempts**	1	
	815074.190	**E**	**Field Engineer on Site**	EB & CR	
	41.4469774°	**Lat**	**Additional Notes**		
	-071.4484143°	**Long**			

Depth feet	Elev. feet	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-8.0'				
.5'	-8.5			0.0' - 0.5'	Brown Medium to Coarse Sand with Dense, Grey High Plasticity Silt. Medium to Coarse Sand with Some Gravel Bottom 3". No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Notes:

Name (Density, Color, Classification), Moisture, Secondary Grain Size.

Key:

Fines Content: trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100%
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black
Odor: Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic
Relative Density (Non-Cohesive) : v. loose, loose, med. , dense, v. dense
Consistency (Cohesive) : v. soft, soft, firm, hard and v. hard

Signature of Field Engineer:

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC6**		**Page**		**6 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	11.8	**feet**	**Sample Collection Time**	12:30	
Tide (Station)	3.9	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.9	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.4	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.6	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.6	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	40	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697070.100	**N**	**No. of Coring Attempts**	1	
	815415.880	**E**	**Field Engineer on Site**	EB & CR	
	41.6473666°	**Lat**	**Additional Notes**		
	-070.9173438°	**Long**			

Depth feet	Elev. feet	Legend	Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.9'			
.5'	-8.4		0.0' - 0.5'	Brown Medium to Fine Sand Top 0.3' of Core. Medium to Coarse Sand with Gravel Bottom of Sample. No Odor.
				Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'

Bottom

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard
Signature of Field Engineer:	

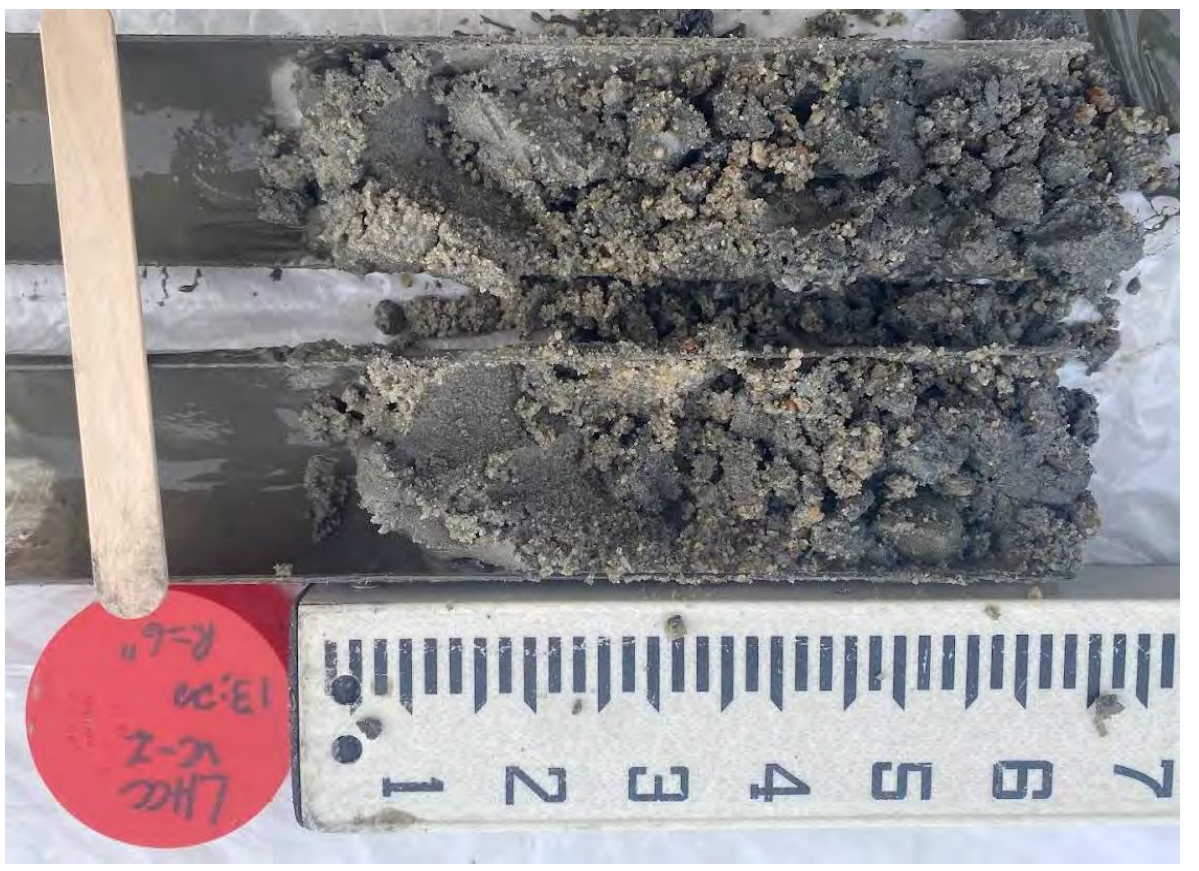
LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC7**		**Page**		**7 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	12.0	**feet**	**Sample Collection Time**	13:00	
Tide (Station)	4.2	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.8	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth (Bottom El.)	-9.3	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
			Driller	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.5	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.5	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	33	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697053.580	**N**	**No. of Coring Attempts**	1	
	815703.670	**E**	**Field Engineer on Site**	EB & CR	
	41.6473159°	**Lat**	**Additional Notes**		
	-070.9162913°	**Long**			

Depth (feet)	Elev. (feet)	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.8'				
.5'	-8.3			0.0' - 0.5'	Brown Medium to Fine Sand with Some Dense, High Plasticity Silt. Bottom of Sample Trace Gravel. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'



Bottom 0.5'

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard
Signature of Field Engineer:	

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC8**		**Page**		**8 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	11.6	**feet**	**Sample Collection Time**	13:20	
Tide (Station)	4.1	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.5	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.0	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.8	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.8	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	56	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697358.640	**N**	**No. of Coring Attempts**	1	
	815138.550	**E**	**Field Engineer on Site**	EB & CR	
	41.6481636°	**Lat**	**Additional Notes**		
	-070.9183513°	**Long**			

Depth feet	Elev. feet	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.5'				
.5'	-8.0			0.0' - 0.5'	Brown Medium to Fine Sand. Pockets of Dense Light Brown Silt. Trace Coarse Sand. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'

Bottom 0.5'

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard
Signature of Field Engineer:	

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC9**		**Page**		**9 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	11.3	**feet**	**Sample Collection Time**	13:45	
Tide (Station)	3.8	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.5	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-9.0	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.5	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.5	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	33	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697326.750	**N**	**No. of Coring Attempts**	1	
	815480.030	**E**	**Field Engineer on Site**	EB & CR	
	41.6480697°	**Lat**	**Additional Notes**		
	-070.9171027°	**Long**			

Depth (feet)	Elev. (feet)	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.5'				
.5'	-8.0			0.0' - 0.5'	Top 0.3' of Core; Dense Grey Silt, High Plasticity. Bottom 0.2' of Core; Dense Grey Silt with Medium to Fine Sand. Trace Gravel. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'

Bottom 0.5'

Notes:	Name (Density, Color, Classification), Moisture, Secondary Grain Size.
Key:	**Fines Content:** trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100% **Color:** br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black **Odor:** Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic **Relative Density (Non-Cohesive) :** v. loose, loose, med. , dense, v. dense **Consistency (Cohesive) :** v. soft, soft, firm, hard and v. hard

Signature of Field Engineer:

LOWER HARBOR CAD CELL
CAP BASELINE SAMPLING

Sample ID	**NBPA-LHCC-VC10**		**Page**		**10 of 10**
Vertical Datum	**MLLW**		**Date**		**1/17/2024**
Lead Line Depth	10.4	**feet**	**Sample Collection Time**	14:30	
Tide (Station)	3.0	**feet**	**Weather**	Partly Cloudy, 53°	
Corrected Mudline El. (Top of core El.)	-7.4	**feet**	**Wind/Seas**	10-15 mph W / 0-1ft	
			USACE Permit #		
Total Core Depth	-8.9	**feet**	**Project Name & No.**	New Bedford LHCC Cap Baseline Sampling - 0024N002.00	
(Bottom El.)			**Driller**	TG&B	
Required Core Length	0.5	**feet**	**Sampling Method**	Vibrocore using Bin Hopper head (BH-5)	
Total Penetration	1.5	**feet**	**Positioning**	RTK (Sub-Centimeter Accuracy)	
Total Recovery	0.8	**feet**	**GPS Accuracy**	Fixed RTK	
Total 15 Min. Recovery	0.8	**feet**	**Proposed Sample El.**	0.5' below existing cap	
Final % Recovery	56	**%**	**Est. Core Length (ft) (per SAP)**	1.0'	
As-Built Sample Coordinates	2697303.860	**N**	**No. of Coring Attempts**	1	
	815781.520	**E**	**Field Engineer on Site**	EB & CR	
	41.6480012°	**Lat**	**Additional Notes**		
	-070.9160002°	**Long**			

Depth feet	Elev. feet	Legend		Sample ID & Interval	ASTM-D2488 Material Description/Classification
0.0'	-7.4'				
.5'	-7.9			0.0' - 0.5'	Brown, Soft Silt Top 0.2' of Core. Medium to Coarse Sand with Trace Gravel. No Odor.
					Bottom of Core (Only material 0.5' from top of core observed)

FIELD PHOTOGRAPHS

Top 0.0'

Bottom 0.5'

Notes:

Name (Density, Color, Classification), Moisture, Secondary Grain Size.

Key:

Fines Content: trace = <5%, few = 5-10%, little = 15-25%, some = 30-45%, mostly = 50-100%
Color: br = brown, gy = grey, gn = green, yl = yellow, ol = olive, og = orange, bl = black
Odor: Slight, moderate, or strong/ petroleum, hydrocarbon, chemical, sulfur, organic
Relative Density (Non-Cohesive) : v. loose, loose, med. , dense, v. dense
Consistency (Cohesive) : v. soft, soft, firm, hard and v. hard

Signature of Field Engineer: