



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

December 4, 2014

Paul Craffey
Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108

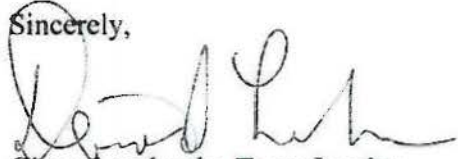
RE: New Bedford Harbor State Enhanced Remedy

Dear Paul:

Enclosed please find the Division Director's TSCA Determination for the State Enhanced Remedy as described in the December 2014 Work Plan. As you know this is part of the Performance Standards for that work.

After reviewing the submittals from the Commonwealth for the interim dredging of the federal navigation channel, EPA finds that the work proposed in the December 2014 Work Plan does not conflict with and is not inconsistent with the New Bedford Harbor Superfund remedy.

Sincerely,



FOR GINNY LOMBARDO

Ginny Lombardo, Team Leader
New Bedford Harbor Superfund Site
Office of Site Remediation & Restoration

cc: Cindy Catri, EPA
Dave Lederer, EPA
Kim Tisa, EPA
File

Modifications to 2008 and 2012 TSCA 40 CFR Section 761.61(c) Determinations to Allow Disposal of Federal Channel Dredged Sediments

In its Second Modification to the November 12, 2008 TSCA Determination (“Modified November 2008 Determination”), EPA found that disposal of PCB-contaminated sediments generated from navigational dredging into CAD cell #2 located north of Route 6 in New Bedford Harbor would not pose an unreasonable risk to health or the environment as long as certain conditions were met. In its November 19, 2012 TSCA Determination (“November 2012 Determination”), EPA found that PCB-contaminated sediment in New Bedford Harbor likely meets the definition of a *PCB remediation waste* as defined under 40 CFR Section 761.3. EPA also found that the dredging and disposal of PCB-contaminated sediments generated during navigational dredging associated with the South Terminal Project into CAD cell #3 would not pose an unreasonable risk to human health or the environment as long as certain conditions were met.

The Commonwealth of Massachusetts (“the Commonwealth”) submitted a request and work plan to remove and dispose of PCB-contaminated sediments generated from interim dredging of portions of the federal navigation channel into CAD Cell #2 and CAD Cell #3. The work plan also included dredging and disposal of areas 21 and 22, located outside the federal channel, into CAD cells #2 and #3. In its request, the Commonwealth has estimated that up to 114,000 cubic yards of PCB-contaminated sediments may be generated from this interim dredging project. A map of the proposed dredge area is included as **Attachment 1**. Data generated since EPA issued the 1998 Record of Decision for Operable Unit 1 (“1998 ROD”) indicate PCB concentrations in the sediments range from non-detect to an average of 48 parts per million (ppm) in and adjacent to the portions of federal navigation channel that would be impacted as part of the interim dredging operations. Sample S-0200-3 and duplicate sample S-0200-3DUP had a PCB concentration of 60 ppm and 35 ppm, respectively for an average PCB concentration of 48 ppm. Documents supporting this request are included in **Attachment 2**.

Consistent with 40 CFR Section 761.61(c) of TSCA, I have reviewed these documents regarding the proposed work and have determined that dredging and disposal of the identified PCB-contaminated sediments will not pose an unreasonable risk of injury to health or the environment as long as the following conditions are met:

1. Compliance with the Phase IV Work Plan for interim federal navigation channel dredging dated December 3, 2014, Revision 2;
2. At a minimum, maintain compliance with water quality and turbidity performance standards as specified by **Attachment 3** to this TSCA Determination;
3. Compliance is maintained with conditions previously established for management and disposal of PCB-contaminated sediments into CAD cells #1 and #2 under the TSCA Determination dated November 12, 2008, as modified on June 18, 2012, and November 19, 2012, and with the conditions previously established for management and disposal of PCB-contaminated sediments into CAD cell #3 under the TSCA Determination dated November 19, 2012, as modified on September 30, 2013, and September 30, 2014.

4. Areas 21 and 22 as shown on Attachment 1 are not authorized for excavation and disposal in either CAD cell #2 or #3 under this TSCA Determination as insufficient *in situ* PCB sampling data exists to support that PCB concentrations are less than (“<”) 50 ppm. In the event that the Commonwealth provides PCB data to EPA confirming PCB concentrations are < 50 ppm within Areas 21 and 22, these PCB-contaminated sediments may be excavated and disposed within CAD cell #2 and/or CAD cell #3 in accordance with the conditions set out in this TSCA Determination.

EPA has also determined that dredging and disposal of < 50 ppm PCB-contaminated sediments into CAD cells #2 and #3 from other locations within the federal navigation channel located in New Bedford Harbor will not pose an unreasonable risk to health or the environment provided the conditions specified above and below are met.

1. Development, submittal, and approval of a final work plan for the sediment dredging, management, and disposal, including supporting analytical data, maps, performance standards, and any other relevant information for the proposed project.

This TSCA Determination is based on the information contained in Attachment 2 and is limited to the proposed excavation areas as shown in Attachment 1, except as provided in the conditions specified above.

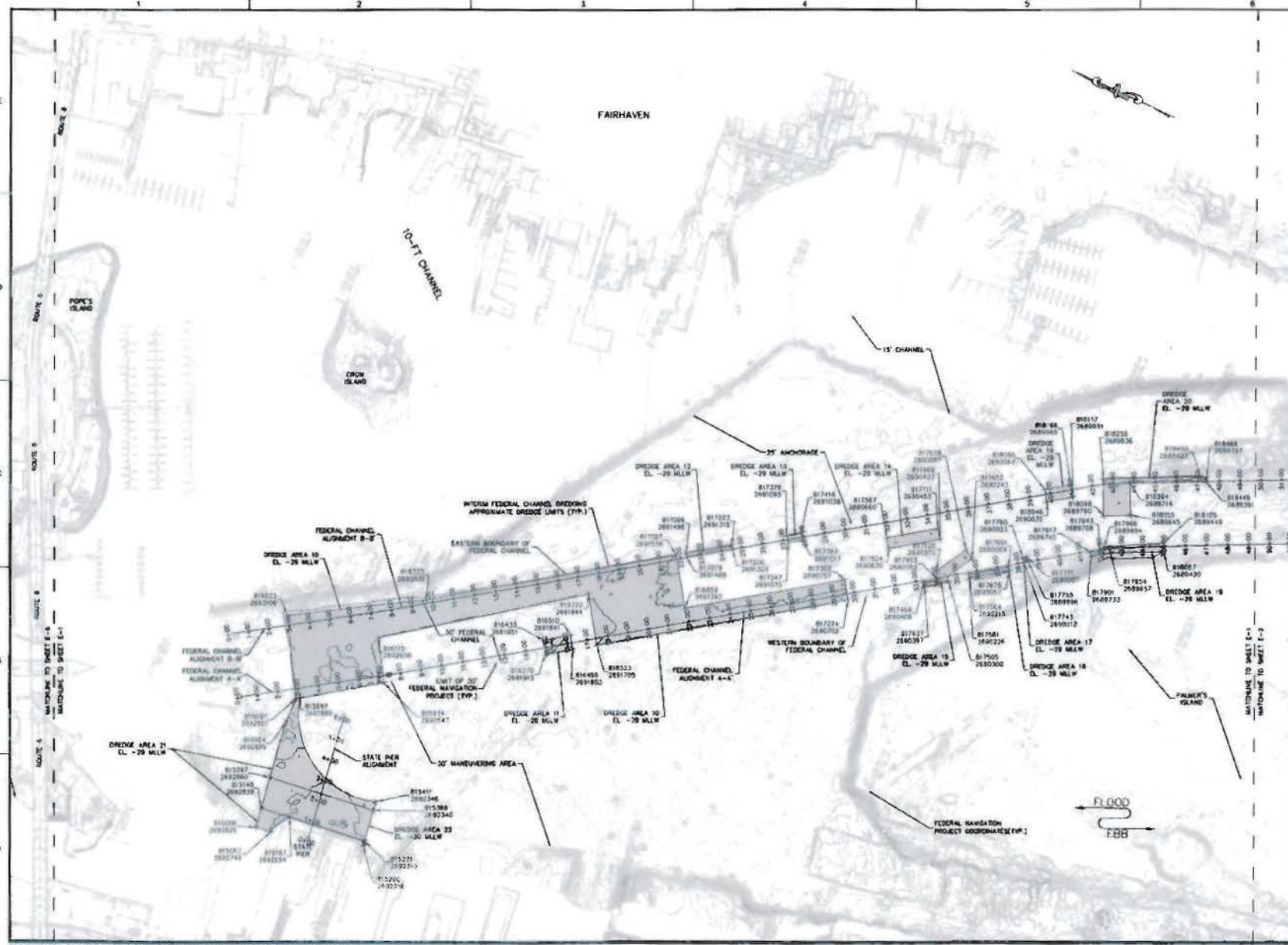
Any proposed change to work described in the submissions contained in Attachment 2 shall be provided to EPA. Upon review, EPA may find it necessary to revise this TSCA Determination, a condition herein, or issue a new TSCA determination based on the proposed change(s).



James T. Owens, III
Director, Office of Site Remediation and Restoration

12/5/14
Date

- Attachment 1: Maps of Proposed Dredge Areas
- Attachment 2: List of Supporting Documents and Reference Documents
- Attachment 3: State Enhanced Remedy – Water Quality and Turbidity Performance Standards



APEX
 ROCKVILLE, MD
 SOUTH WINDSOR CT - BOSTON, MA
 NEW BRIDFORD, MA - HOLYOKE, MA
 10 BRAD STREET, 8TH FLOOR
 BOSTON, MA 02109
 617-552-3000
 100 CONNOR STREET, SUITE 200
 SOUTH WINDSOR, CT
 203-261-1000
 100 BRADFORD STREET, SUITE 200
 NEW BRIDFORD, MA 01906

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PROJECT
 INTERIM FEDERAL CHANNEL DREDGING

CLIENT
 EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
 MASSACHUSETTS OFFICE OF COASTAL ZONE MANAGEMENT
 201 CALVERT STREET, SUITE 400
 BOSTON, MASSACHUSETTS 02114

NO.	DATE	DESCRIPTION	BY
1	PROJECT NO.	880	
2	TRACED FILE	PL_16_79.dwg	
3	DESIGNED BY	WJF	
4	DRAWN BY	WJF	
5	CHECKED BY	CCO	
6	DATE	SEPTEMBER 23, 2014	
7	DRAWING SCALE	AS SHOWN	

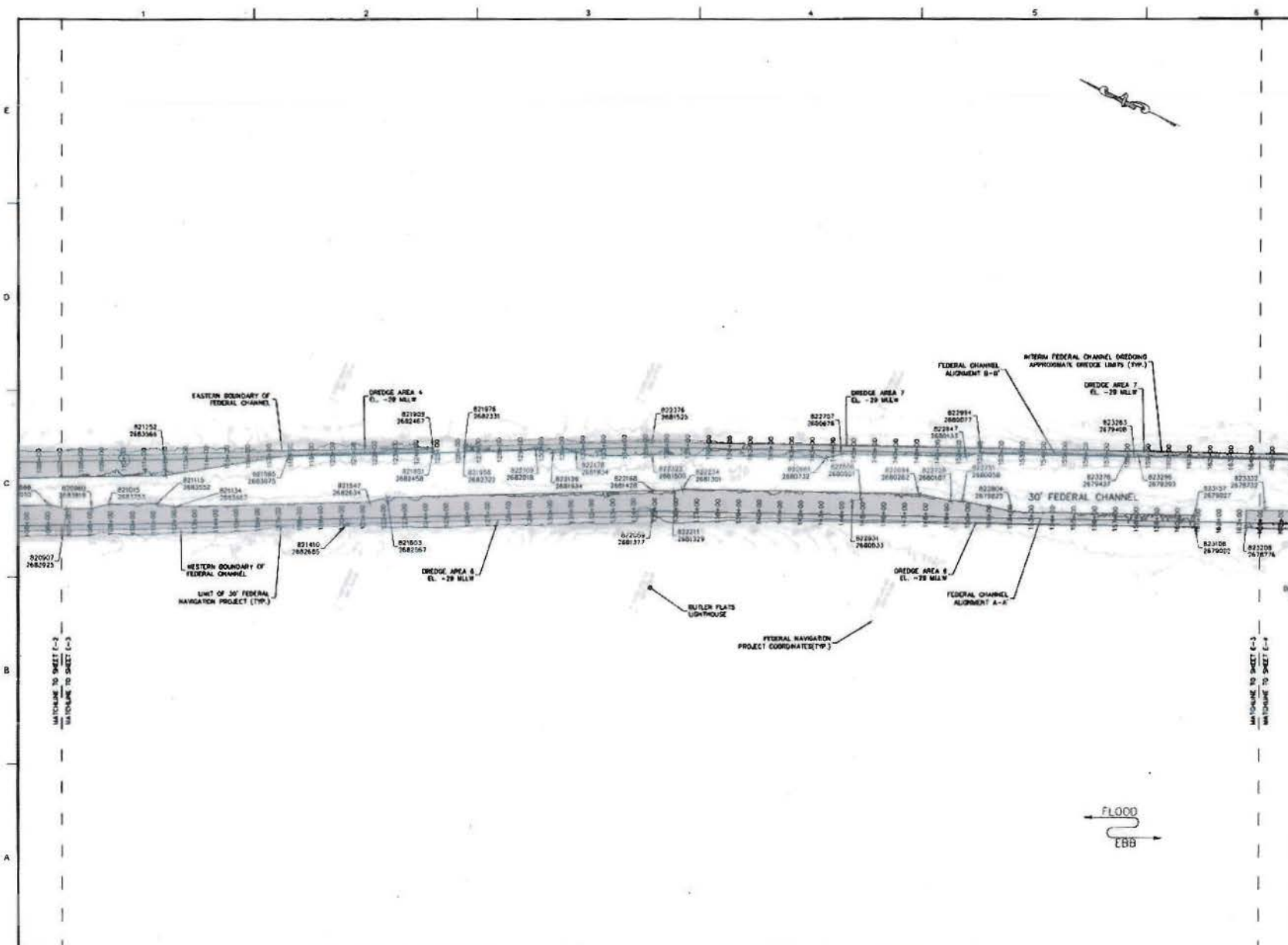
GRAPHIC SCALE
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 SHEET TITLE

INTERIM FEDERAL CHANNEL DREDGING PROPOSED CONDITIONS

DRAWING NO.
P-1
 19 OF 21

ATTACHMENT 1 PAGE 1 OF 5

1. L:\01680\016 - Plans\Figures\DWG_PLANS\01680\FEDERAL CHANNEL DREDGING SET\PL_16_79.dwg



WILKINSON, JR. INC.
 200 W. HUNTER CT. BOSTON, MA
 NEW BEDFORD, MA • MELROSE, MA
 20 BROAD STREET STE/FLOOR
 BOSTON, MA 02108
 508-552-0000 FAX 508-552-0001
 1215 PURCHASE STREET WENDELL
 NEW BEDFORD, MA 01940

PROJECT
 INTERIM FEDERAL CHANNEL
 DREDGING

OWNER
 EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
 MASSACHUSETTS OFFICE OF COASTAL ZONE MANAGEMENT
 201 CALHOUN STREET SUITE 800
 BOSTON, MASSACHUSETTS 02114

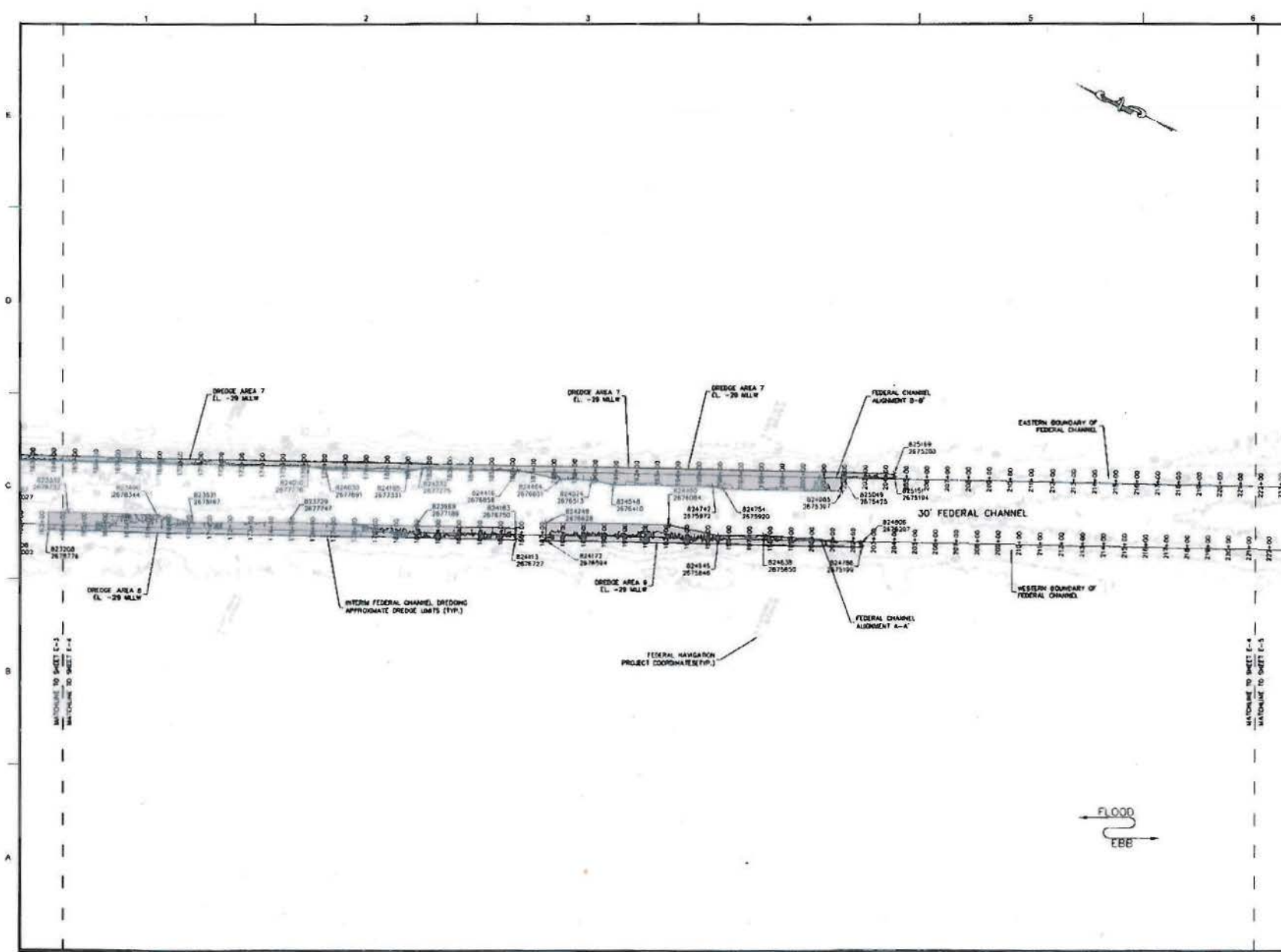
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DRAWN BY	WJT		
CHECKED BY	GCO		
DATE	SEPTEMBER 23, 2004		
DRAWING SCALE	AS NOTED		



SHEET TITLE
INTERIM FEDERAL CHANNEL DREDGING PROPOSED CONDITIONS

DRAWING NO.
P-3

* SUBMISSION NO.: P:\04\PLANS\PLAN\201\FUNCTIONAL\NEW FEDERAL CHANNEL DREDGING 2004\PL_P-3.dwg



LIST OF SUPPORTING DOCUMENTS

Work Plan for Interim Dredging of the Federal Navigation Channel New Bedford Harbor.
December 3, 2014, Revision 2

Paul Craffey (MassDEP) to EPA. Response to October 31, 2014 EPA Comments on Work Plan.
December 2, 2014

Ginny Lombardo (EPA) to Kimberly Tisa (EPA). Email New Bedford Harbor – EPA Data south
of hurricane barrier. December 2, 2014

Paul Craffey (MassDEP) to EPA. Email dated December 1, 2014 transmitting following plans:

New Bedford Harbor Interim Dredging of the Federal Navigation Channel Contractor
Oversight Plan November 25, 2014, Revision 2

Work Plan for Interim Dredging of the Federal Navigation Channel New Bedford
Harbor. November 25, 2014, Revision 1

Site Specific health and Safety Plan for Interim Federal Navigation Channel Dredging
New Bedford Harbor. November 25, 2014, Revision 2 (not reviewed)

Maryellen Iorio (US Army Corps of Engineers) to Dave Lederer (EPA). Stability Analysis of
CAD Cell 3 due to increase of final fill volume. Email December 1, 2014

Dave Lederer (EPA) to Kimberly Tisa (EPA). Email regarding 50 NTU action level for
dredging liquid (water) discharge. November 20, 2014

Work Plan for Interim Dredging of the Federal Navigation Channel New Bedford Harbor.
November 2014

Water Quality Monitoring Plan (WQMP) Interim Dredging of the Federal Navigation Channel
New Bedford Harbor. November 2014, revised

New Bedford Harbor Interim Dredging of the Federal Navigation Channel Contractor Oversight
Plan November 2014, revised

Ginny Lombardo (EPA) to Kimberly Tisa (EPA). Emails clarifying sample location PCB
concentrations at S-ac338-1 and S-0200-3. October 28, 2014 thru November 10, 2014

Dave Lederer (EPA) to Paul Craffey (MassDEP). EPA Comments on Work Plan for Interim
Dredging of the Federal Navigation Channel New Bedford Harbor. October 30, 2014

John McAllister (APEX) to MassDEP and EPA. Email transmitting Addendum #6 to federal
channel dredging and explanation of volume differences between Addendums 3 and 4. October
30, 2014

New Bedford Harbor Interim Federal Channel Dredging Bid Addendum #5, October 27, 2014

New Bedford Harbor Interim Federal Channel Dredging Bid Addendum #4, October 24, 2014

John McAllister and Jay Borkland (APEX) to Kimberly Tisa (EPA). Request for Toxic Substances Control Act Determination. October 7, 2014

New Bedford Harbor Development Commission State Enhanced Remedy. Work Plan for Interim Dredging of the Federal Navigation Channel New Bedford Harbor. October 2014

New Bedford Harbor Interim Federal Channel Dredging Bid Addendum #3, October 6, 2014

Ginny Lombardo (EPA) to Kimberly Tisa (EPA). Transmittal of USACE sediment suitability determination memo dated May 30, 2014 and sediment chemistry package supporting determination. Email September 18, 2014

Final Summary Report New Bedford Harbor Long Term Monitoring V. November 2010

<http://www.epa.gov/region1/superfund/sites/newbedford/454688.pdf>

Final New Bedford Harbor Long Term Monitoring Survey IV: Summary Report. December 2005

<http://www.epa.gov/region1/superfund/sites/newbedford/457650.pdf>

The above referenced documents will be available at the EPA-New England Record Center, 5 Post Office Square, 1st Floor, Boston, MA (617-918-1440) or in the New Bedford Public Library, 613 Pleasant Street, 2nd Floor Reference Dept., New Bedford, MA (508-961-3067).

REFERENCE DOCUMENTS

November 12, 2008 TSCA Determination

<http://www.epa.gov/region1/superfund/sites/newbedford/525556.pdf> (Appendix J(2), Attachment 1, pdf page 304)

June 18, 2012 Modification to the November 12, 2008 TSCA Determination

<http://www.epa.gov/region1/superfund/sites/newbedford/525556.pdf> (Appendix J(2), Attachment 2, pdf page 307)

November 19, 2012 TSCA Determination

<http://www.epa.gov/region1/superfund/sites/newbedford/525556.pdf> (Appendix J(1), pdf page 256)

November 19, 2012 Second Modification to the November 12, 2008 TSCA Determination

<http://www.epa.gov/region1/superfund/sites/newbedford/525556.pdf> (Appendix J(2), pdf page 302)

September 30, 2013 First Modification to the November 12, 2012 TSCA Determination

<http://www2.epa.gov/sites/production/files/2013-09/documents/547295.pdf> (Appendix D, pdf page 93)

September 30, 2014 Second Modification to the November 12, 2012 TSCA Determination

<http://www2.epa.gov/sites/production/files/2014-10/documents/565833.pdf> (Appendix E, pdf page 105)

Interim Dredging of the Federal Navigation Channel New Bedford, Massachusetts Proposed Performance Standards

A. Use of Silt Curtains

Silt curtains shall be utilized for disposal activities occurring within New Bedford Harbor that take place between January 15 and June 15 of any year (except where noted below), or in the case that the Water Quality Performance Standards (see Section C below) are exceeded.

1. The silt curtain shall be extended around the complete perimeter of the active CAD Cell being used for the disposal of interim Federal Navigation Channel dredged materials. The only opening shall be a "door" to allow vessel traffic into and out of the CAD Cell area; this "door" shall be returned to the closed position during all dredged material placement into a CAD Cell. The silt curtain shall extend from the water surface to within approximately six inches of the harbor bottom at Mean Lower-Low Water (MLLW), unless it is determined via monitoring that the curtain needs to be deepened (for higher tides) to better contain dredged material in the CAD cell. Note that a deeper curtain would rest on the harbor bottom at lower tides and could thus generate water column turbidity as a result.
2. The silt curtain shall be securely anchored by using sheet pilings (or equivalent) at appropriate spacing, and be of sufficiently strong material construction, to withstand high winds, storm-driven waves, large vessel wake, etc. The silt curtain shall be anchored along its bottom as necessary to maintain its position. Sheet piles shall be fitted with lighted navigational aids to avoid vessel strikes.
3. The separate sections making up the perimeter silt curtain shall be sufficiently overlapped (minimum of five feet) to prevent releases of any turbidity plumes or oil sheens between sections. The top foot of the curtain shall be a solid material to similarly prevent/minimize releases of oil sheen. The mesh size opening of the rest of the silt curtain shall be the smallest commercially available for such applications (typically an Equivalent Opening Size (EOS) of 100 - 0.0059 inch or 0.15mm mesh opening).
4. An oil-absorbent boom shall be placed along the entire interior of the silt curtain during placement operations. This boom shall be overlapped as specified in 3 above, and shall be replaced per manufacturer's direction or as needed to retain the ability to absorb any oil sheens that may be present.

B. Use of an Environmental Bucket

For the mechanical dredging of unsuitable contaminated sediments (or for surficial, fine-grained, silty sediments) to be placed into the CAD Cell, an environmental bucket shall be used, to the extent practicable, that is specifically designed for environmental rather than navigational dredging. The environmental bucket shall be designed to minimize sediment re-suspension and the loss of dredged material and related seawater during dredging. If an environmental bucket cannot be used due to site restrictions water quality controls and monitoring will maintain the protectiveness of the operation. EPA, in consultation with the SER PM, must approve any contaminated sediment dredging not using

the environmental bucket before such dredging may recommence. The dredging process will be operated in a careful, well-designed manner so that the project-specific turbidity criterion (see Section C below) are not exceeded.

Free-standing water collected in the scows/hoppers shall be decanted and filtered using activated carbon (as required) to ensure compliance with a project-specific discharge criterion of 50 nephelometric turbidity units (ntu). Please note that this standard is a point-of-discharge standard for effluent from the decant-water treatment system only, and is not intended to replace the water quality standards in Section C, Part c, below.

During placement of dredged material into the CAD Cell, if the material is to be placed via bucket (rather than split-hull scow) the bucket shall be lowered into the water column as far as possible (if mechanically-armed) or a minimum of 10 feet (if cable supported) prior to release to minimize sediment resuspension. If additional measures are required to completely empty sediments from the scow (e.g., for the final scow load), they will be conducted in a manner that maintains compliance with the project turbidity criterion.

C. Water Quality Performance Standards

The following Performance Standards shall be followed for filling of CAD Cells and for dredging operations associated with the interim dredging of the Federal Navigation Channel, as outlined below:

a. Filling of CAD Cells:

1. *From January 15 through June 15 of any year*, CAD cells that are being filled shall be completely encircled by silt curtains and absorbent booms for the duration of the filling activity.

A. Monitoring: Turbidity monitoring must be conducted outside of and within 15 feet from the outside edge of silt curtain and at a reference site located 200 feet from the silt curtain. Turbidity standards outlined below must be satisfied.

2. *From June 16 through January 14 of any year*, CAD cell filling may proceed without silt curtains unless necessary to ensure compliance with turbidity standards.

A. Monitoring: Turbidity monitoring is required at a reference location established approximately 200-feet up-current from the dredge and at a monitoring location established 200-feet down-current from the dredge. Turbidity standards outlined below must be satisfied.

B. If silt curtains are deployed to ensure compliance with turbidity standards, turbidity monitoring must be conducted outside of and within 15 feet from the outside edge of silt curtain and at a reference site located 200 feet from the silt curtain. Turbidity standards outlined in below must be satisfied.

b. Dredging:

1. Work may proceed without silt curtains due to the impracticality and navigational hazards associated with deploying silt curtains in a high traffic, strongly tidally influenced dredge area.

A. Monitoring: Turbidity monitoring is required at a reference location established approximately 200-feet up-current from the dredge and at a monitoring location established 200-feet down-current from the dredge. Turbidity standards outlined below must be satisfied.

c. Turbidity Standards:

1. *When disposal activities are conducted within a silt-curtained area*, the following water-quality monitoring program shall be carried out daily for the first three days of activities commencing and once a week thereafter:

A. Turbidity shall be measured, using an optical backscatter sensor, at both the reference and monitoring locations, at established depths: near the water's surface, at the mid-point of the water column and near the bottom. The three values obtained shall be averaged, such that a single, representative turbidity value is calculated for the monitoring site and a single, representative value is calculated for the reference site.

B. Turbidity shall be measured at both the monitoring and reference site prior to the start of dredging, and once every two hours during dredging.

C. An exceedance of the project turbidity standard shall be attributed to project activities when the average turbidity at the monitoring site exceeds the average reference site turbidity plus the permissible turbidity increase, as outlined in the following table:

Reference Site Turbidity (NTUs)	Permissible Turbidity Increase Over Reference
≤10	20 NTUs
11-20	15 NTUs
≥21	30% of reference

D. If, in two consecutive monitoring events, the average turbidity at the monitoring site exceeds the average turbidity at the reference site by more than the permissible turbidity increase, then water samples, composited over the entire water column, from both the monitoring and reference sites shall be

collected and submitted for analysis of Total Suspended Solids, total and dissolved PCBs, and total metals for arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. When samples are submitted to the laboratory, a 36-hour turn-round time shall be requested. Additionally, the Contractor shall take operational action(s) designed to limit such exceedances as outlined within the approved Contractor's Contingency Plan, (such as increasing the dredge cycle time, inspection and any necessary repair of the silt curtains, deployment of an additional row of silt curtains or other mitigation measures). Turbidity monitoring shall continue until compliance is reestablished.

E. If compliance cannot be reestablished within 48 hours, in-water work shall cease and the SER Committee shall review the operational actions undertaken, the results of the analyses of the water samples and evaluate the biological significance of the available data. EPA shall have final authority to determine the requirements for additional mitigation, if any.

2. *When in-water work is not conducted within a silt curtain area* the following water-quality monitoring program shall be carried out daily for the first three days of activities commencing and twice a week thereafter:

A. Turbidity shall be measured, using an optical backscatter sensor, at both the reference location and the monitoring location, at established depths: near the water's surface, at the mid-point of the water column and near the bottom. The three depth values obtained shall be averaged, such that a single, representative turbidity value is calculated for the reference location and a single, representative turbidity value is calculated for the monitoring location.

B. Turbidity shall be measured at both the reference location and the monitoring site prior to the start of dredging, and once every two hours of dredging.

C. An exceedance of the project turbidity standard shall be attributed to project activities when the average turbidity at the monitoring site exceeds the reference site turbidity plus the permissible turbidity increase, as outlined in the following table:

Reference Site Turbidity (NTUs)	Permissible Turbidity Increase Over Reference
≤10	20 NTUs
11-20	15 NTUs
21-30	10 NTUs
≥31	30% of reference

D. If, in two consecutive monitoring events, the average turbidity at the monitoring site exceeds the average turbidity at the reference site plus the permissible turbidity increase, then water samples, composited over the entire water column, from both the reference site and the monitoring site shall be

collected and submitted for analysis of Total Suspended Solids, total and dissolved PCBs, and total metals for arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. When samples are submitted to the laboratory, a 36-hour turn-round time shall be requested. Additionally, the Contractor shall take operational action(s) designed to limit such exceedances as outlined within the approved Contractor's Contingency Plan, (such as increasing the dredge cycle time, inspection and any necessary repair of the silt curtains, deployment of an additional row of silt curtains or other mitigation measures). Turbidity monitoring shall continue until compliance is reestablished.

E. If compliance cannot be reestablished within 48 hours, in-water work shall cease and SER Committee shall review the operational actions undertaken, the results of the analyses of the water samples and evaluate the biological significance of the available data. EPA shall have final authority to determine the requirements for additional mitigation, if any.

d. Contractor Contingency Plan:

1. The Contractor shall, prior to the start of any in-water work, submit to the SER Committee for review and approval, a Contingency Plan, outlining the steps that the contractor will take, should dredging or filling activities cause an exceedance of the Turbidity Standards outlined within these Performance Standards. At a minimum, the Contingency Plan shall include measures that may be undertaken by the contractor to reduce turbidity such as reduction of the rate of operations, use of silt curtains and absorbent booms, alternate dredging or filling methodologies, and the total halt of operations.

E. Special Conditions

1. Dredge material shall be only be transported to a designated CAD Cell for disposal facilities; unregulated dumping of dredge materials is NOT permitted.
2. The Contractor shall develop and implement a Navigation Plan to address and mitigate temporary impacts to navigation during dredging activities.
3. The Contractor shall provide and maintain in good working order appropriate United States Coast Guard (USCG) approved navigation aids (for example, buoys and/or lights, as appropriate) to assist mariners in avoiding work areas as required by the USCG.
4. The Contractor shall maintain vehicular access to water-dependent users throughout construction activities.
5. The Contractor shall remove and properly dispose of all temporary structures no later than three (3) months after completion of the dewatering and amendment of the sediments. Temporary structures are defined as berms and dikes; lime silo; dewatering tanks, erosion and sediment control systems, pipes, and siltation curtains.