RETURN TO SER AR INDEX

From: Chet Myers
To: Ann Williams; Davis, Gary (DCR)
Cc: Carl Dierker; Jay Borkland; Cynthia Catri; Phil Colarusso; Mike Marsh; Sneeringer, Paul J NAE; Jackie Leclair; Carl Deloi; William Walshrogalski; Jay Borkland; Weinberg, Philip (DEP)
Subject: RE: Follow up questions re New Bedford/South Terminal
Date: Friday, June 29, 2012 5:17:11 PM
Attachments: Commonwealth_Response_to_6-26-12_EPA_E-Mail_.pdf

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Hi Ann,

Attached are the Commonwealth's responses to your 6/26/12 e-mail.

We will be hand-delivering CDs with the attachments as soon as we can get them over to you. Are you still at work?

Please note that we are still in the process of re-delineating wetlands onsite and will get that supplementary information to EPA early next week.

Thanks!

<http://www.apexcos.com/>

Chet Myers

Apex Companies, LLC

184 High Street, Suite 502

Boston, MA 02210

O) 617-728-0070 M) 617-908-5778

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From: Ann Williams [mailto:Williams.Ann@epamail.epa.gov]
Sent: Tuesday, June 26, 2012 10:03 AM
To: Davis, Gary (DCR)
Cc: Carl Dierker; Chet Myers; Jay Borkland; Cynthia Catri; Phil Colarusso; Mike Marsh; paul.j.sneeringer@usace.army.mil; Jackie Leclair; Carl Deloi; William Walshrogalski
Subject: RE: Follow up questions re New Bedford/South Terminal

Dear Gary:

Attached are the Region's questions following our review of the Commonwealth's June 18, 2012 submission. These questions all pertain to evaluations we are making in order to prepare a draft decision. Therefore we would appreciate responses as soon as possible. If some answers are available sooner than others, we encourage the Commonwealth to provide those early responses right away rather than waiting until all of the responses are complete. In addition to the attached questions, we have also asked for information about the "Readiness Plan" in a June 20, 2012 email to you.

Please call me at 617-918-1097 if you have any questions about the attached.

Sincerely,

Ann

Ann H. Williams
Senior Assistant Regional Counsel
U.S. EPA Region 1
5 Post Office Square – Suite 100
Mail Code ORA18-1
Boston, MA 02109-3912
617-918-1097 (phone)
617-918-0097 (fax)
williams.ann@epa.gov

(See attached file: EPA questions 6.25.12.docx)

Responses to USEPA's 6/26/12 Questions

1. **Question:** Please provide a detailed description of the newly proposed project revisions, including engineering plans and elevations (cross sections) showing the revised project design, including the expanded deep draft quay-side areas, the new 50 foot expansion of the navigational channels, the resultant expansion of CAD cell #3, the reduced northern mooring area, the expanded winter flounder spawning habitat creation area, the expanded OU-3 capping mitigation area, and any other changes or revisions proposed for the project that are not reflected in the current plan sets and figures. Figures 2, 5, 10, 11 and similar figures representing the proposed project should be updated to include all revisions.

   Response: The revised plans for the project include engineering plans for the expansion of the winter flounder spawning habitat creation area, the expanded OU-3 capping mitigation area, and the reduction in the mooring mitigation dredge area. Updated plans outlining the potential expansions/reductions for these proposed work elements are attached as **Attachment A**. The channel expansion and deep-draft expansion items noted in the plans represent construction elements that are not part of the currently proposed facility plans and currently are not expected to be constructed, but could become contractual alternate add-ons in the future. Updated engineering plans outlining the potential expansions of the proposed work for the possible channel expansion and expansion of the deep-draft area have been created and are also attached in **Attachment A.** These attachments show the proposed outlines of the areas that the Commonwealth would anticipate impacting should the Commonwealth implement any of the optional items that were presented for EPA's consideration within the within the Commonwealth's June 18, 2012 submittal to EPA. The plans include:

   - Alternate plans P-2.1, P-2.2, P-2.3, P-2.5, and P-2.6 which show the draft plans for the Top of Dredge, Intermediate Dredge and Bottom of Dredge, should the Commonwealth decide to pursue both the expanded channel and expansion of the deep-draft area at the terminal to the north and south.
   - Plans P-2.8 and X-2.4, which outline the reduction in the size of the Northern Mooring Mitigation Area.
   - Replacement plans P-5.1, P-5.2 and X-5.1, which reflect the increased mitigation associated with the Winter Flounder Mitigation Area and the OU-3 Capping Mitigation Area, and should replace plans of the same name included within Attachment A of the Commonwealth's June 18, 2012 submission to EPA.
   - Alternate plans P-13, P-14, P-26, and X-4 which outline the largest anticipated configuration for CAD Cell #3. Please note that this largest configuration for CAD Cell #3 was the basis for the Commonwealth's determination that the resource area impacts for CAD Cell #3 would be 8.76 acres. The CAD Cell #3 design included within the Commonwealth's responses to EPA questions submitted on June 18, 2012 contained a smaller configuration for CAD Cell #3, one which did not include the potential increases in size to the channel or

deep-draft berth, and whose impact is approximately 6.3 acres. Please see the answer to EPA's Question 5 below for additional explanation.

- Revised Figures: 2, 3, 6, 8, 10, and 11 from the Commonwealth's January 18, 2012 submittal to EPA.
- An updated General Site Plan previously included as Attachment H of the Commonwealth's June 18, 2012 submittal to EPA.

A revised Figure 5 is awaiting the results of wetland flagging which is currently being completed by the Commonwealth. The revised Figure 5 will accompany the Commonwealth's response to Question 4, which will be submitted as soon as they are complete.

2. **Question:** Please provide information that describes the impacts associated with disposal of dredged material into the CAD cells (referenced on page 14).

   Response: Disposal of dredged material into CAD Cell #2 and CAD Cell #3 involves the deposition, via split-hull scow, of material mechanically dredged into the CAD Cell via gravity. Minor re-suspension of sediment is anticipated to take place associated with disposal of sediment within the CAD Cell. For a detailed analysis of the environmental impacts of re-suspension of sediment due to dredging and disposal of sediment, please review Section 6.4.5.9, Impairment of Water Quality, of the Commonwealth's Essential Fish Habitat Assessment (pages 193 to 198 of the Commonwealth's January 18, 2012 submittal to EPA).

   The Commonwealth also conducted multiple studies associated with potential re-suspension and potential consequential environmental impacts in its Draft and Final Environmental Impact Assessment associated with the Dredge Materials Management Plan for New Bedford Harbor completed in 2003. Please see Appendices D through K of the Commonwealth's Final Environmental Impact Report for New Bedford and Fairhaven's Dredge Materials Management Plan. The link to that document is:

   http://www.mass.gov/czm/dredgereports/2003/feirnb-f.htm

   Finally, the U.S. Army Corps of Engineers document titled "Assessment of Contaminant Loss and Sizing for Proposed Lower Harbor Confined Aquatic Disposal Cell", dated May 2010 assessed re-suspension of sediment associated with a proposed 300,000 cubic yard Confined Aquatic Disposal Cell under design by USEPA. The Commonwealth anticipates that USACE's modeling would likely be similarly representative of the potential re-suspension that would be associated with the Commonwealth's proposed CAD Cell #3.

3. **Question:** The last two sentences of the response to Question 4A on page 21 are confusing. Please clarify whether the 0.18 acres of salt marsh is or is not included in the 1.94 acre calculation of intertidal area.

Response: The 0.18 acres of salt marsh are not included within the 1.94 acre calculation of intertidal area. These are considered two separate resource area impacts by the Commonwealth and the two numbers do not overlap.

4. **Question:** On page 22, the submission discusses two wetlands on the upland portion of the site. Based on the description and revised Figure 5 (Attachment N) these wetlands appear to be adjacent to (i.e., neighboring) a traditionally navigable water (New Bedford Harbor), rather than isolated, and therefore are likely subject to federal jurisdiction. Please identify the total acreage of these wetlands and provide any other currently available information, including a description of the vegetation, soils and hydrology present and any photographs that depict these areas.

   Response: Based on a prior assessment undertaken by Commonwealth and EPA staff last year, the Commonwealth questions whether the areas in question qualify as wetlands. Nevertheless, these areas are currently being re-delineated by the Commonwealth in order to provide the additional information that EPA is requesting. The results of this re-delineation will be submitted as soon as they are completed, as well as an updated Figure 5, which will reflect any changes in the outlines of the updated re-delineation of the wetland areas. In the meantime, the Commonwealth will continue to explore ways to confirm the conclusions reached last year.

5. **Question:** According to page 10, the size of the CAD cell is unchanged from the January 18, 2012 submittal. However, page 28 refers to "associated increases in the size of CAD cell #3 to accommodate additional impacted dredge spoils for disposal." Please describe how much larger the CAD cell will be, what additional impacts will result from its expansion, and what additional mitigation is proposed.

   Response: The 8.76 acre impact area associated with CAD Cell #3 listed on page 10 of the Commonwealth's June 18, 2012 submittal to EPA (8.76 acres) is based upon the anticipated largest CAD Cell that would potentially be constructed in association with the anticipated work. While this larger (8.76 acres) CAD Cell is not part of the current project plans, it is possible that the larger CAD Cell may be needed if other project alternatives become realities, and therefore the design for the larger CAD is being submitted for EPA's consideration. The design for that larger CAD Cell is attached to this document as **Attachment A**, which includes designs for Top of CAD #3, Bottom of CAD #3, Cross Sections, and a CAD #3 disposal plan for the largest CAD Cell anticipated by the Commonwealth, which, again, is correlated with the 8.76 acres of impact.

   The design forwarded to EPA as Attachment A to the Commonwealth's June 18, 2012 response to EPA Questions is a smaller CAD Cell, associated with the 600 foot deep-draft quay-side, 175 foot wide channel, and 100 foot wide tug channel (without dredging in the Federal Channel). That design of CAD Cell #3 correlates to a smaller area of impact (approximately 6.3 acres).

The current proposed mitigation associated with this project assumes that the larger (i.e. 8.76 acre) CAD Cell will be constructed, even though the Commonwealth currently anticipates that only the smaller (i.e. approximately 6.3 acre) CAD Cell will be constructed in association with this project. Therefore, the Commonwealth does not anticipate a larger CAD Cell impact than the 8.76 acres stated on page 10 of the Commonwealths June 18, 2012 submittal and therefore no additional mitigation is proposed.

6. **Question:** We have a number of questions related to the turbidity information provided in response to Question 5L, pages 34-36. First, the January 18, 2012 submission referenced the potential use of tackifiers and polymer emulsions to temporarily stabilize construction areas. EPA had asked for more details about their use (see Question 5L on page 34) but the response does not address the question. Please provide a response to this question, as it may have a bearing on potential contamination of stormwater. Second, please explain the basis (i.e., literature-based, water quality standards-based, etc.) for the criteria for permissible turbidity increases mentioned in the response to Question 5L (pages 34-36), and in particular whether these are sufficient to protect existing and designated uses. Third, please explain the basis for the proposed locations of turbidity monitoring stations at 200 feet up- and down-current from the dredging activity, mentioned in the response to Question 5L (page 34-36). Fourth, when silt curtains are used, the proposal is to locate the monitoring station outside and within 15 feet of the silt curtain. Please state how far from the activity the silt curtain will be placed.

Response: The Commonwealth has re-evaluated its statements regarding the use of tackifiers and polymer emulsions associated with application of straw mulch for soil stabilization that were contained within its January 18, 2012 submission to EPA. The Commonwealth is also revising the time periods for which the temporary stabilization measures should be implemented. The following temporary measures for stabilization of soil stockpiled onsite and for exposed areas are proposed:

- For Dredge Material to be Utilized Within the New Bedford Marine Commerce Terminal or the Former Dartmouth Finishing Site: Stockpiles and areas to be left bare for more than 15 days shall be treated with air dried wood chip mulch or seeded with perennial fescue-grass.
- For “Upper Existing Material”: Stockpiles and areas to be left bare for more than 7 days shall be treated with air dried wood chip mulch or seeded with perennial fescue-grass.

The use of tackifiers and polymer emulsions is hereby rescinded.

EPA’s second, third, and fourth points are associated with the State Enhanced Performance Standards, which were promulgated by MassDEP, and have been utilized within the context of the Navigational Dredging within New Bedford Harbor since 2004, in collaboration and under the oversight of EPA. MassDEP has provided

the following background information regarding the genesis of the SER Performance Standards:

- The provision related to turbidity is a subjective, not a quantitative standard in the Commonwealth of Massachusetts. The Commonwealth of Massachusetts' Surface Water Quality Standard: 314 CMR 4.05(2)(b)(6) provides that "waters shall be free from color and turbidity in concentrations that are aesthetically objectionable or would impair any use assigned to the Class."
- New Bedford Harbor is a Class B water, which requires consistently good aesthetic value.
- MassDEP typically applies a 50 NTU standard, taking background into consideration, as an upper limit for turbidity caused by dredging. If that level is detected in sampling, all dredging must stop until subsequent monitoring shows a level < 50 in the sampling area.
- MassDEP typically uses 25 NTUs as an action level to trigger that additional mitigation measures be introduced to reduce turbidity in order to avoid reaching the exceedance threshold.
- These levels have been historically approved/adopted by the ACOE in the dredging permits that MassDEP has been jointly involved in within the Commonwealth of Massachusetts.
- MassDEP have used its best professional judgment in setting these levels. The basis of the values has been a visual comparison of the relative opacity of water samples at different turbidity as measured via NTUs.
- The action levels proposed in the ARAR are significantly lower, and therefore arguably more protective, than the action levels typically conditioned in other dredge permits.

There is no evidence from the multiple dredging projects approved under the 50NTU level, or the more conservative ARAR level applied in the existing SER Performance Standards associated with prior Harbor navigational dredge projects, that indicates that these standards have resulted in impairment to aquatic life, particularly winter flounder spawning or the alewife fish run, or the impairment to the use of the water for recreational purposes.

7. **Question:** The response to Question 7D on page 40 acknowledges that the tern survey planned for Spring/Summer of 2012 has not been completed. Please state when it will be completed.

   Response: EPA's statement is correct. The Commonwealth has agreed to conduct the tern survey as mitigation for the impacts associated with its proposed project, and will proceed with the survey once the Commonwealth is assured that the project may move forward. As terns are migratory birds, the best time to conduct the survey will be in the Spring/Summer, after the project has been approved. At this time, and under the Commonwealth's anticipated schedule for approval of the project, the Commonwealth anticipates conducting the survey during the Spring/Summer of 2013.

8. **Question:** Regarding the flood storage loss issue, the response on page 42 to Question 7F describes the Marsh Island mitigation project and states that "the final volume of material to be removed from the flood storage band of +2 to +6 NGVD29 is unknown at this time...," but later states that the "project has been designed and is the process of being permitted." Please obtain and provide the information necessary to enable an evaluation to be made of the flood storage capacity between +2 and +6 that will result from this mitigation project, or if it is not yet available, state when it will be available. Also please identify when the mitigation work will occur.

   Response: Plans of the Marsh Island mitigation project design have been collected by the Commonwealth and are included in **Attachment B**. The Commonwealth has analyzed the pre-construction elevations, and compared them to the post-construction planned elevations in NGVD 29. Based on the information contained within the plans, the volume of material to be removed from the elevations of +2 to +6 NGVD 29 in association with the Marsh Island mitigation project is approximately 64,000 cubic yards. The increase in flood storage capacity within New Bedford Harbor between +2 and +6 NGVD 29 that will result from this mitigation is 39.67 acre feet. The Marsh Island mitigation project has a projected start date of the Spring of 2014. The construction is proposed to be completed one year from ground breaking.

9. Q**uestion:** Two additional items need further explanation so that we may evaluate the extent of impacts. First, please identify the size of the intertidal salt marsh at the site that would remain after 0.18 acres of it are filled for the project, and provide a description of any secondary impacts likely to occur to the remaining salt marsh due to erosion or sedimentation from altered wave action, tidal currents, prop wash, etc., from the construction and operation of the facility. Second, please provide an estimate of the volume of water that the international vessels will take in from the harbor for ballast for their return trip. This question is relevant to the potential entrainment of eggs and larvae and associated impacts to aquatic species.

   Response: The total area of the salt marsh is 0.95 acres; 0.18 acres will be filled, leaving 0.77 acres remaining. The salt marsh will have protection from wave action, and tidal currents in much the same manner as pre-project state. The New Bedford Hurricane Barrier currently protects the salt marsh from significant wave action and associated erosional forces from the south of New Bedford. Similarly, the existing sand bar that exists immediately to the east of the salt marsh protects the wetland from waves and currents generated within New Bedford Harbor. The existing sand bar will remain intact. The connection to New Bedford Harbor that allows the ebb and flood of water to nourish the wetland is located on the southern end of the wetland, and the new facility should not interrupt the flow of water into and out of the wetland from New Bedford Harbor on the south.

   It is currently anticipated that prop wash from the new facility will not impact areas to the south of the New Bedford Marine Commerce Terminal due to its geometry. Vessels will be located to the east of the facility and the forces from prop wash will

be directed in either a northern or southern direction. The wetland is located to the south of the facility, significantly to the west of the line of the anticipated prop-wash forces. The wetland will be sheltered from forces coming directly from the east by the structure of the facility itself.

The southern face of the New Bedford Marine Commerce Terminal will be covered with rip-rap, which is intended to protect the southern face from erosion that could impact the salt marsh. Additionally, southern face of the terminal is graded away from the edge, toward a stormwater collection interceptor trench which also is designed to collect stormwater that flows toward the south. As a result, stormwater will be collected prior to it being able to discharge off of the southern end of the facility (and will also be re-directed away from that face), which will also protect the salt marsh area from impact associated with operation of the facility.

As stated within the Commonwealth's January 18, 2012 submittal to EPA, the New Bedford Marine Commerce Terminal anticipates that, for the first user of the facility, approximately 26 international vessels will arrive at port for unloading of offshore renewable energy components within a one-year period, which would mean that a vessel would be arriving approximately every two weeks. It is the Commonwealth's understanding that large vessels similar to the size of those anticipated to arrive at the New Bedford Marine Commerce Terminal can take on as much as a million gallon of water depending on their hull design and return transit conditions; however, typical procedure is to utilize less volume (200,000 to 300,000 gallons) when setting out, and adding more volume as needed during transit.

For comparison purposes, the volume of water within which the deep-draft berth and adjacent channel will occupy in front of the New Bedford Marine Commerce Terminal (i.e. the volume of water along the length of the deep-draft section of the bulkhead, extending 275 feet from the eastern edge of the bulkhead, and extending from the water surface to -30 MLLW, which represents the water immediately surrounding a vessel that could be taking on ballast) is approximately 55.5 million gallons. Thus the ballast water utilized by a vessel in port (200,000-300,000 gallons) will represent approximately 0.36%-0.54% of the total deep-draft water adjacent to the terminal (55.5 million gallons).

It is currently the Commonwealth's understanding, based upon discussion held between MassDEP, EPA, and resource agencies over the last year, that the dredged channel areas immediately adjacent to the New Bedford Marine Commerce Terminal will not provide good spawning habitat for aquatic species; and as a result, the Commonwealth is providing mitigation for impacts to winter flounder spawning habitat in this very area on the assumption that the creation of the deep-draft berthing area and the adjacent channel as part of the project will cause those areas to no longer be viable winter flounder spawning habitat due to its post-construction depth. Other species may be more likely to spawn in the deeper water where the vessels will be berthed while collecting ballast; however, it seems likely that this area will have a lower level of spawning activity due to the deeper water and the human activity.

Thus, it is anticipated that the removal of a relatively small quantity (0.36%-0.54%) of water from this area adjacent to the bulkhead that will be deepened will not result in a significant impact associated with entrainment of eggs and larvae.

10. Q**uestion:** P. 11 of (the Commonwealth's June 18, 2012 response to EPA questions) states that navigational "blasting may be required if necessary channel depths cannot be achieved through conventional means." Although the review discusses the potential impacts of blasting on water quality, it does not discuss potential impacts on paleosols or other historic properties. This omission should be addressed.

    Response: The Commonwealth has compared the scope of its previous cultural resource investigations with the changes proposed within the Commonwealth's June 18, 2012 submittal and has determined that the actions will take place within areas that have previously been investigated and are significantly far from the existing delineated subtidal and/or intertidal paleosol areas that have been delineated as a result of investigations completed to date, and therefore will not adversely effect the subtidal or intertidal paleosol areas.

    The potential expansion of the deep draft area to the north and south, the potential blasting, and the potential expanded width of the navigational channel are all located on the northern portion of the eastern face of the proposed bulkhead. The anticipated maximum radius of impact of blasting will be approximately 50 feet. The nearest paleosol area is located on the southern face of the proposed bulkhead, which is a considerable distance from the proposed additional work.

    The Commonwealth's Contractor will be required to demarcate areas of cultural resource area significance (such as the subtidal and intertidal paleosol areas) prior to the start of construction. No equipment will be allowed within or floating above a paleosol area.

    No dredging or other work activities will take place within 100 feet of a paleosol area without the implementation of Temporary Excavation Support (anticipated to be in the form of sheet piling to support the Paleosol area), which will ensure that that the Cultural Resource will not be disturbed during dredging or other work activities.

    Should unanticipated finds or human remains be discovered during the course of the work, the Commonwealth has included the following procedures within its specifications: "Policy Guidance on the Discovery of Unanticipated Human Remains" and/or "Policy Guidance for the Discovery of Unanticipated Underwater Archaeological Resources", promulgated by the Commonwealth of Massachusetts Board of Underwater Archaeological Resources, Office of Coastal Zone Management. These are attached as **Attachment C**.