UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MAY 22 2012

Ms. Rachel Jakuba
Vice President, Advocacy
Buzzards Bay Coalition
114 Front Street
New Bedford, MA 02740

Dear Rachel:

Please the enclosed responses to the questions submitted by the Coalition to EPA after the April 25th, 2012 meeting of the Technical Working Group (TWG) for the Lower Harbor CAD Cell Project. If you have questions, please let me know.

Sincerely,

David O. Lederer
Remedial Project Manager

Cc: Paul Craffey, MA DEP
Edward Anthes-Washburn, HDC
Paul L'Heureux, Corps of Engineers
Ellen Iorio, Corps of Engineers
Steven Fox, Jacobs Engineering
David Peterson, US EPA, OES, Attorney
Elaine Stanley, USEPA
Margaret McDonough, USEPA
Kelsey O'Neil, USEPA
Steven Lester, CHEJ

EPA Responses to Questions raised by the Buzzards Bay Coalition from April 25th, 2012 meeting of Technical Working Group regarding Air issues.

a. The technical experts had a variety of questions for the presenters which largely focused on the assumptions that the model and risk assessment are based on. The outstanding concerns of the experts are:
   i. Air quality model assumptions/inputs:
      1. Is the air quality monitoring proposed of adequate frequency to ascertain an elevated risk to human health?
      2. Should there be greater consideration of how the sampling day for a month is chosen?

         Response to 1 &2: The pre-dredge sampling date is set usually one to two weeks in advance of project mobilization. The next round is typically collected two weeks after the dredge activities are initiated. Each round after that is set at approximately 30 days thereafter. The sample day for the round is selected based on forecasted weather conditions. On occasion the round has been pushed up or back by a week so that samples are not collected when the chance of precipitation is greater than 30 per cent or if thunderstorms are forecast. In this way, the samples are conservatively biased to obtain a sample that is not affected by moisture. For each round, the sample locations are based on established receptor locations surrounding the dredging area. Even considering prevailing winds, the marine environment tends to produce winds of varying directions and velocities within the 24 hour sample period.

      3. Is the empirical PCB sediment concentration that is the input for the model based on one discrete sample or multiple samples?

         Response: The dredging volumes and average PCB concentrations for each zone outlined in Table 4-17 of the December 2001, Foster Wheeler titled, *Draft Final Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, New Bedford Harbor, Massachusetts (or "Foster Wheeler, 2001").* This document is available on EPA's CAD Cell web page, at: http://www.epa.gov/nbh/lhcadcell.html

         The PCB sediment concentration for the dredging areas used in the CAD cell air quality impact model are based on each management unit (MU) and weighted-average of MU for the area as shown in Table 4 of

the CAD cell air modeling report (Final Evaluation of the Impact of Dredging and CAD Cell Disposal on Air Quality, Jacobs Engineering, (or "Jacobs, 2010"). For each MU, the PCB sediment concentration was based multiple samples in both horizontal area and vertical profile determined during detailed remedial investigation during 1990-2000 at NBH.

PCB emission rate is related to PCB sediment concentration. Estimation of PCB emission rates associated with dredging, processing, and disposal operations have been studied in detail in New Bedford since 1980; see "Transmittal of 4/1/1989 Laboratory Assessment of Volatilization from Site Sediment", (USACE, 1989), as well as Theoretical Models for Evaluation of Volatile Emissions to Air During Dredged Material Disposal (Thibodeaux, 1989). These documents are available at
http://www.epa.gov/region1/superfund/sites/newbedford/49530.pdf
and
http://www.epa.gov/region1/superfund/sites/newbedford/200526.pdf.
Also see the above referenced Foster Wheeler document (Foster Wheeler, 2001).

Thibodeaux et al. (1989) developed theoretical models to estimate emissions from each of the potential sources of the process using equilibrium relationships and mass transfer correlations. A pre-design field test was conducted to evaluate dredging technology to use in designing the dredging and disposal plan for the full scale cleanup (Section 4.3 of the Foster Wheeler report (Foster Wheeler, 2001)). Flux measurements at several potential sources were conducted.

Multiple sediment samples were also collected to submit to USACE Waterways Experiment Station (WES) for further laboratory flux box testing (See Section 4.3 and Appendix K (Foster Wheeler, 2001)). These laboratory data in conjunction with empirical equations allow the estimation of PCB emission rates for various sources and processes.

For the 2010 CAD cell air dispersion modeling (Jacobs, 2010), the location specific sediment concentrations as listed in Table 4 were used to estimate the PCB emission rates.

4. Does the model consider the PCB contaminated sediment in the barge will remain uncovered at the surface for 2 hours (value in 2010 Jacobs report) or for 2 days (value mentioned Wednesday April 25, 2012 by Jacobs modeler Cheng Sheng Lu)?

   Response: Table 3 of the June 2010 "Final Evaluation of the Impact of Dredging and CAD Cell Disposal on Air Quality" (Jacobs, 2010) gives the assumptions used in the modeling. Specifically, it lists assumption that the surface of the barge is exposed for 2 hours per location, in addition to the other "Emission Durations" listed. The barge is modeled as a small moving areal source and it is assumed to be in the entire footprint area being dredged at that time. The modeling assumed that the barge may stay in a MU area for 2 days to be filled, while not in a particular location for the entire time. So the answer is that the dredge material is assumed to be exposed to the air on the barge for 2 days in total before disposal, and is loaded for 2 hours at each "micro" dredging location.

5. What dredging rate was assumed for the model and will that be considered in developing the contract protocols for dredging?

   Response: The dredging volume for the 2 year operation is 280,000 cubic years (93,961 cubic yards for year one and 187,628 cubic yards for year two, as listed in Table 1 of the Modeling Report (Jacobs, 2010)). The dredging rates were based on assumptions that 180 and 156 days of dredging will be conducted for years 1 and 2, respectively.

ii. PCB air quality risk assessment assumptions/inputs

   General Response: Very small amounts of volatile PCBs may be released to ambient air during the CAD cell activities. The concentration attributable to this release of volatiles was estimated for areas where exposure is possible including residential and commercial properties. The estimates were based on modeling of volatilization and dispersion of PCBs using conservative assumptions. The estimated concentrations were compared to health based values that are also based on very conservative assumptions with respect to the frequency and duration of exposure of to individuals including children. The concentration of PCBs predicted by the model in air are far below

EPA's acceptable cancer risk range of 1 x10^{-6} to 1 x 10^{-4} and far below the non-cancer Hazard Index (HI) of 1.

1. Greater clarity needs to be provided on the use of homologue, total and congener specific analyses in the measurements (air, sediments and risk calculations).

Response: The air samples are collected and analyzed according to the Sampling and Analysis Plan (SAP) which references Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, (EPA/625/R-96/010b), Compendium Method TO-10A; Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD). The laboratory reports out each sample for the 10 homologue groups. Those results are summed and reported at a total PCB concentration for each sample station.

The PCB concentrations in sediment of each of the dredging zones were based upon a sediment sampling and analysis program that was conducted by Foster Wheeler. The data is summarized on EPA's website at http://epa.gov/nbh/data.html#EarlySedimentSamplingWork under the heading: **Early Sediment Sampling Work "Sediment Characterization"** In this data set, a combination of 18 NOAA congener and total homologue group analysis were reported.

Risk assessment calculations used total PCBs

2. EPA is explicit about the need to examine early life exposures (for carcinogens) – this information is not discussed either in the review documents or in the presentation. Justification for not considering these exposures is warranted.

Response: The risk estimates presented by Margaret McDonough at the April 25th, 2012 meeting included consideration of exposure to a young child (age 0 to 6 years) quantitatively for both cancer and non-cancer effects for residential exposure areas. The risks associated with estimated airborne PCB concentrations attributable to CAD cell activities are well below levels of concern.

Margaret McDonough's slides are available at the EPA website, http://www.epa.gov/NBH/lhcadcell.html.

3. Based on recent health data, pregnant women should also be the target receptor (in addition to a child)

   Response: EPA's Integrated Risk Information System (IRIS) is EPA's program for evaluating risk information on human health effects that may result from exposure to environmental contaminants. The toxicity values currently available in IRIS were used to assess the potential for non-cancer effects as well as cancer risk. The PCB toxicity value used for developing a target risk level for volatile PCBs is based on reproductive effects. EPA has begun the process of updating the IRIS value for non-cancer effects associated with environmental exposure to PCBs. Under the IRIS program, EPA considers all available relevant peer-reviewed studies. EPA has made available a list of these studies and instructions and how to submit additional studies at http://www.epa.gov/iris.

   More detailed information on the IRIS process is available at http://www.epa.gov/iris/process.htm

4. The risk assessment report only covers cancer risk. How were non-cancer risks considered?

   Response: Potential non-cancer hazards were considered in the development of target air concentrations in 2001 as well as in the revised target air concentrations presented on April 25, 2012. (Margaret McDonough presentation slides on EPA website at: http://www.epa.gov/NBH/lhcadcell.html). The maximum predicted impact in a residential area is 0.207 ng/m^3. The non-cancer hazard index (HI) associated with exposure to this concentration is approximately 0.002 or nearly 1000 times lower than the target level for non-cancer effects of 110 ng/m3.

5. Is the 1 in 100,000 cancer risk rate conservative enough? Were New Bedford residents (who will bear the risk) adequately engaged when determining the 1 in 100,000 cancer risk rate?

   Response: The potential incremental increase in cancer risk associated with the CAD cell activity is extremely low. The

maximum predicted impact in a residential area is 0.207 ng/m^3.The risk associated with exposure to this concentration is in the range of a 10-8 cancer risk. The use of excess cancer risk levels as a protective standard under CERCLA is discussed in EPA guidance (see http://www.epa.gov/oswer/riskassessment/pdf/baseline.pdf). As indicated elsewhere, EPA involved the public in the ESD process through meetings, as well as a lengthy written comment period.

6. Recent article in the Boston Globe (April 29, *Waterways headed in right direction*) shows teens rowing in the Harbor. While the model may show that the local resident remains the focus, how will EPA respond to questions about the non-residents?

   Response: Given the very low risk associated with exposure based on 24 hours per day for 365 days per year, risks to rowers exposed for a short time is not a health concern for exposure to PCBs in air.

iii. Analysis of risks beyond air borne PCBs

1. What level of risk is posed by other sediment contaminants (e.g., metals, PAHs, dioxin)? The risk-based concentrations may still be based on PCBs, but the analyses conducted lack transparency.

   Response: PCBs are the contaminant of greatest concern based on concentrations in sediment and the potential volatility of many individual PCB compounds or congeners. Very conservative exposure assumptions were developed in calculating risk-based target levels. The estimated air concentrations from the CAD cell activity from the air model are far below the target concentrations. Other contaminants are present in lower concentrations in sediments and/or are not volatile. Dust generation from CAD cell activity will not be a pathway of concern because the sediments will remain wet per the requirements of the ESD.

2. What are the long-term risks of leaving the PCBs buried in the harbor?

   Response: The Administrative Record for ESD #4 documents why EPA has determined that the disposal of sediment into the LHCC is protective in the short and long-term and meets the other requirements of CERCLA. Section III.B of the ESD concerns the evaluation of the short and long-term impacts of the LHCC. The ESD is available at EPA's lower harbor CAD cell website, http://www.epa.gov/nbh/lhcadcell.html

II. Public Questions

There were a variety of comments/questions from members of the public in attendance. Some of these included:

a. How valid is the risk assessment given that it is based on 5-10 years of exposure and the current remedy is expected to take 40-50 years?

Response: Although at current minimum funding levels the entire Harbor cleanup is estimated to take several decades, any one shoreline area is only expected to be impacted for a much more limited timeframe.

Additionally, the Jacobs (2010) report produced predictions of annual average air concentrations for each of the two years the Lower Harbor CAD cell project is expected to last (dredging contaminated material, filling, and capping). It concluded the risks posed air exposure to receptors by the Lower Harbor CAD cell project are far below levels of concern. In addition,

b. Have there been any health studies or risk assessments for the effects of dioxin-contaminated PCBs?

Response: With regard to air emissions, as pointed out by Wendy Heiger-Bernays, the Coalition's consultant, dioxins are not expected to be a significant air pollutant as a result of dredging operations due to their physical and chemical properties.

c. What are the health benefits of the CAD cell given that it will speed up the clean-up by ~7 years?

Response: Any action that meets sediment cleanup goals of the remedy sooner will incrementally prevent human PCB exposure to contaminated sediments, eliminate human PCB exposure from consuming seafood, and help restore the New Bedford Harbor ecosystem.

d. While the public process may have fulfilled the legal requirements, it has not provided adequate public participation.

Response: The New Bedford Harbor Site has fulfilled all the legal requirements under the National Contingency Policy, the regulation EPA follows in implementing the Superfund law. In fact, EPA has held numerous additional public meetings over past years in which the CAD cell was discussed prior to the proposal of the ESD.

The fact that EPA included the founding of a group to discuss the design of the CAD cell project, and the TAG grant issued to the Buzzard's Bay Coalition are further evidence of its commitment to public participation. EPA intends to continue its commitment to provide opportunities for public education and participation throughout the Harbor remediation process.

e. If the EPA wants to gain public support for the CAD cell, they need to do a better job of presenting information that documents how the CAD cell will be protective to the environment and the citizens of New Bedford.

Response: See answer d. above for information on EPA's public participation efforts. The majority of the public comments received during the CAD Cell ESD comment period in 2011 were in favor of the Lower Harbor CAD Cell. Information has been posted regarding the CAD cell on EPA's website, at public meetings, and through the technical working group over past years as the process has advanced. In fact, the Technical Working Group's purpose is to provide a process to explain the design of the project and to solicit input from the community.

Responses to Comments Received from Mr. Stephen Lester on behalf of the Buzzards Bay Coalition regarding "Final Evaluation of the Impact of Dredging and CAD Cell Disposal on Air Quality", June 2010, by Jacobs Engineering Corporation.

Comment 1. The target cancer risk value used by the Corps was arbitrarily selected and is not the most commonly used *acceptable* target cancer risk value. The Corps chose a target cancer risk value of one-in-100,000 (1 x 10-5) as the "allowable ambient limit" (Jacobs Report, p. 4-7). No rationale or explanation for why the Corps chose this value is provided. This selection appears to be arbitrary, especially since there is no clear federal standard that defines what this value should be.

Response: For clarification, the Jacobs report was generated under a contract with the Corps of Engineers. The work was done on behalf of US EPA's Superfund program.

The 10-5 value used in the Jacobs Report is in the middle of EPA's allowable risk range established by EPA CERCLA guidance from 10-4 to 10-6. In any case, the modeling performed by Jacobs demonstrated that the risk was below the bottom of this range, even including background effects at the most impacted of the residential or commercial locations. EPA's calculation of the potential non-cancer risks at these same locations/receptors was also far below the Hazard Index of 1 as discussed during the presentation given by Margaret McDonough on April 25th, 2012 at the Coalition's offices. Her presentation is attached to this document for reference.

Comment 2: By using the one-in-a million target cancer risk instead of the one-in-100,000 target cancer risk value, several estimated ambient air PCB concentration levels from all sources exceed the allowable ambient limit. The subsequent cancer risk at these locations would no longer be considered acceptable, especially for children. In addition, the ambient air PCB concentrations at 5 other locations are within a factor of 4 of the allowable ambient limits for children. These findings highlight how much the residents in New Bedford are currently being exposed to PCBs and how small the "Margin of Exposure" is, especially for children. The contribution from the proposed dredging plan only adds to this burden.

Response: See the previous response.

In addition, Mr. Lester's comment is followed by a table showing the 10-6 levels for acceptable air concentrations and comparisons to locations he says the model has predicted exceedances of those levels.

The locations cited in most cases by Mr. Lester aren't relevant because they contain no receptors; in fact the CDF-C locations in the table are in fact not even on shore, so there are no receptors there. The model predicted concentrations at that location because the earlier Foster Wheeler report assessed this location as a future location of potential receptors during an

earlier report. As you know, CDF-C does not exist at this time and there is no current potential for an exposure.

Setting aside the CDF-C locations, the highest remaining predicted air concentrations that potential receptors could be exposed to as predicted by the model are in fact, 4.7 ng/m3 for residential exposure, and 32.7 ng/m3 for commercial, which are in fact below even the 10-6 standard that Mr. Lester wishes EPA to apply.

Comment 3: The public health risks considered by the air dispersion investigation (The Jacobs Report) are too narrow to justify abandoning the original remedial plan for the New Bedford Harbor. The air dispersion investigation only considers potential air emissions resulting from the proposed mechanical dredging and CAD disposal in the harbor (Jacobs Report, p. 1-1). There are many additional risks that need to be considered to more fully define whether the proposed new remedial approach is better than the existing plan. These additional risks include the following:

The long term impact of leaving concentrated PCB sediment in the CAD cell in the harbor.

The risks from exposure to other contaminants in the river sediment.

The non-cancer risks of PCBs such as reproductive, neurological, neurobehavioral, and immune effects, as well as from other contaminants present in the river sediment.

Past exposures residents have suffered, in many cases, for years.

Response: It is unclear to EPA what Mr. Lester means by the phrase 'abandoning the original remedial plan'. The Lower Harbor CAD cell under ESD #4 will receive dredge material from the Lower Harbor and the southern portion of the Upper Harbor just north of Coggeshall Street, with concentrations ranging between 50-190 ppm.

The Lower Harbor CAD cell was added as a component of the Harbor Superfund remedy after extensive public comment in March 2011. The March 2011 Lower Harbor CAD Cell ESD and its accompanying administrative record documents the reasons EPA believes that the LHCC represents a better balance of the nine criteria EPA is supposed to follow in remedy selection than the previous plan to hydraulically dredge and dewater the lower harbor sediments and dispose of them off-site.

Based on the ESD, a stable 3 foot cap would be highly effective in isolating the contaminated dredged material; and therefore the exposure pathways of the PCBs to the environment will be eliminated once the Lower Harbor CAD cell is capped.

Comment 4: According to the Jacobs Report, the current remedial approach "consists of hydraulic dredging, de-sanding and dewatering of dredged sediments, treatment of the wastewater generated in the dewatering process, and disposal of de-sanded and dewatered sediment at an approved off-site landfill (Jacobs Report, p. 1-1). This remedial approach was initially chosen by the Corps in part because it will "lessen the impact to the environment" (Jacobs Report, p. 3-2). Now the Corps, in collaboration with the U.S. Environmental Protection Agency (EPA), is reconsidering this remedial approach in order to "shorten the remediation timeframe and lower the overall harbor remediation cost" (Jacobs report, p. 1-1). No other risk information or risk analysis other than the air dispersion investigation is presented in support of this decision. Nor is any other information provided to justify this change in strategy.

Response: Again, to clarify, US EPA is responsible for the Superfund program. The Corps of Engineers oversees the contracting functions at the New Bedford Harbor site for US EPA.

The Jacobs Report was written before the ESD was signed in March 2011, so that may be the source of Mr. Lester's confusion about the current selected remedy. The current selected remedy includes the Lower Harbor CAD cell (ESD#4), as well as the remedy described in the 1998 Record of Decision and the other three ESDs. The ROD and ESDs can be accessed at: http://epa.gov/nbh/data.html#1998RODESDs

ESD #4, also available online at EPA's website includes a great deal of information regarding the rationale used by EPA in its development in 2011.

Comment 5: Furthermore, the levels of PCBs present in the sediment in many of the areas targeted for this change in remedial strategy are not substantially different than parts of the harbor currently being remediated using the current dredging plan. These are areas in the northern portion of the harbor (Zones 1, 2, and 3) that have the "highest PCB concentrations (>100 parts per million [ppm])" (Jacobs Report, p. 3-2). Yet the PCB concentrations in Management Units (MU) -25, -26, -30, and -31 of Zones 3 and 4 that are targeted for this new remedial strategy all exceed 100 ppm (see Jacobs Report, Table 4). This is in contrast to the statement that "Zones 4 and 5 have much lower PCB concentrations and are being proposed for mechanical dredging and CAD disposal" (Jacobs Report, p. 3-2). In fact, the composite PCB concentrations for both Zone 4 (187 ppm) and Zone 5 (113 ppm) exceed the 100 ppm threshold. Although the overall PCB concentration in many areas of Zones 1 and 2 may be greater in general than the overall levels found in Zones 3 and 4, there are many areas of Zones 3 and 4 that are not substantially different from many portions of Zones 1 and 2.

Response: The Jacobs report indicated that Zones 1, 2, and 3 generally have the highest PCB sediment concentrations found in the harbor. It is also true that Zones 4 and 5 have lower PCB sediment concentrations than zones 1, 2, and 3. PCB contaminated sediment to be disposed of in the Lower Harbor CAD cell ranges in concentration between 50-190 ppm.

Comment 6: As a result, this report alone does not provide sufficient risk-based information to justify abandoning the original remedial plan for the New Bedford Harbor.

> Response: See previous responses regarding the current status of the selected remedy which includes the Lower Harbor CAD cell. Also as noted previously, Mr. Lester should review ESD #4 and its administrative record, used by EPA to add the LHCC as a component to the Harbor Superfund Remedy which evaluated related risk-based information.

Comment 7: The risk calculations conducted by the Corps to evaluate the impact of PCBs in ambient air caused by the proposed mechanical dredging, transport, and CAD disposal do not consider the long-term future risks that the New Bedford residents face as a result of leaving the contaminated sediment in an unlined CAD cell in the harbor.

> Response: The Administrative Record for ESD #4 documents why EPA has determined that disposal of sediment into the LHCC is protective in the short and long-term and meets the other requirements of the CERCLA statute. Section III.B of the ESD #4 concerns the evaluation of the short and long-term impacts of the LHCC. The ESD as well as all of the other decision documents for the Site are available on EPA's website, http://www.epa.gov/NBH. Sediments once disposed of in the LHCC will have no air exposure pathway to pose a risk to human health.

Comment 8. The ambient air risk calculations only consider exposure to PCBs. There are other contaminants in the harbor sediment including heavy metals such as lead, mercury, arsenic, cadmium, and chromium, and polycyclic aromatic hydrocarbons (PAHs) that also need to be considered in order to fully assess the risks posed by the proposed dredging, transport, and CAD disposal of contaminated sediment.

> Response: EPA has determined that PCBs have the highest potential health effects due to their relative volatility, toxicity, and the concentrations that they present in New Bedford Harbor. Section VIII.F of the ESD requires that the mechanically dredged sediment not be allowed to dry out before placement to minimize any potential for dust generation during the cleanup which eliminates the potential for exposure to particulate associated metals. Site specific air monitoring for PCBs will also be performed per the ESD.

Comment 9: The ambient air risk calculations only consider cancer risk as a result of exposure to PCBs.

> Response: Please review Margaret McDonough's (EPA Risk Assessor) slides from the public meeting held on April 25, 2012 (available on EPA's website at http://www.epa.gov/nbh/lhcadcell.html) for the risk calculation for non-cancer effects. The anticipated air impacts from the LHCC are below cancer and non-cancer target levels at modeled receptor locations.

Comment 10: The Corps' risk estimate fails to consider long term historical exposures that New Bedford residents have already suffered.

Response:

The risk calculations performed addressed future potential excess incremental risk as required under the Superfund statute, CERCLA and its associated guidance. As stated in the modeling report, these potential risks are expected to be well below estimated background concentrations receptors would be exposed to under the baseline condition, and are below levels of concern with respect to cancer and non-cancer effects.

Comment 11: The ambient air dispersion model used by the Corps relies on a long list of assumptions (see Section 3 of the Jacobs Report) that are not corroborated or verified by ambient monitoring results.

Response:

Annual dispersion modeling has been conducted by the Corps and EPA for the upcoming dredging season to provide assessment of air quality impact. For each of the modeling efforts, the previous year field monitoring data has been used to compare to the model predicted results to verify, refine, and validate the model assumptions and input parameters (such as applied emission flux rates). The field sampling data included monthly measurements during dredging period at key on-land locations surrounding the harbor, nearby locations of treatment buildings, and dredging barge. A set of samples were also collected for the pre- and after-dredging period to provide ambient concentrations. All these data were used for model verification and refinement.

Comment 12: The discrete receptor locations used to evaluate the impact of the ambient air dispersion modeling are not identified in the report.

Response: There is a map in the Jacobs Report, labeled Figure 7.

Comment 13: It is unclear when the contaminated sediments that will be placed in the CAD cell will be covered. The proposed dredging is expected to occur over a two year period. In the first year, dredging would occur from May to October and then continue in the following year from June to October. The Corps does not say how quickly they will cover, or whether they will cover at all, the contaminated sediment placed in the CAD cell at the end of the first year. In fact, in the discussion of the simulated exposure model, the Corps assumes that the CAD cell will remain **uncovered** during the time between these two dredging periods (Jacobs Report, p. 4-3) and for some time after the second year of dredging (Jacobs Report, p. 4-4). While this may be considered the "worst case scenario" for purposes of the simulated exposure model, one has to ask whether the contaminated sediment will in fact be covered during the period between the two dredging periods.

If covering the contaminated sediment is not part of the proposed new remedial plan, then the residents of the New Bedford community will be placed unnecessarily at risk. The uncovered PCBs will be subject to redistribution and re-suspension. They will evaporate into the air and may enter groundwater due to surface water runoff. They may even be redistributed to areas outside of the CAD cell, especially if a significant storm or other natural weather event hits the area. If the proposed new remedial plan were to be implemented, then the Corps must include plans to cover the dredged contaminated sediment between the two dredging periods, from October (in the first year) to June (in the second year) and immediately following the completion of the second year. If necessary, a temporary cap could be used until the final cap could be installed.

Response: EPA has stated in the ESD that the material will be allowed to consolidate from 6-9 months. Modeling performed by ERCD shows that there will be no impact on surrounding water bodies from the LHCC. Similarly, air dispersion modeling show minimal impacts are expected to air from the cell.