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Summary of the
Public Informational Meeting
on
EPA's Proposed Plan and Feasibility Study
for the
New Bedford Harbor Superfund Site
Estuary, Lower Harbor and Bay Operable Unit

January 30, 1992
Days Inn, Hathaway Road
New Bedford, Massachusetts

INTRODUCTION

On January 30, 1992 the U.S. Environmental Protection Agency (EPA) Region 1 hosted a public informational meeting on the Proposed Plan and Feasibility Study for the Estuary, Lower Harbor and Bay Operable Unit of the New Bedford Harbor Superfund site. The meeting was held at the Days Inn, Hathaway Road, New Bedford, Massachusetts. Topics discussed included the following: an introduction to the New Bedford Harbor site, including a description of the contaminated areas throughout the site; a description of the preferred remedial alternative and the proposed construction schedule; the risk assessment process; and a discussion of the other alternatives considered by EPA as described in the Proposed Plan.

Project personnel attending the meeting included: Merrill Hohman, EPA Region 1 Waste Management Division Director, Mary Sanderson, EPA Region 1 Project Manager/Section Chief; Gayle Garman, EPA Region 1 Remedial Project Manager; Paul Craffey, Massachusetts Department of Environmental Protection (DEP) Site Manager; Jim Sebastian, EPA Region 1 Community Relations Coordinator; Alan Fowler, Environmental Engineer, EBASCO Environmental, EPA's technical contractor; Beth Ryan Walter, Senior Project Manager, ABB Environmental, EPA's Risk Assessment contractor; and John Lindsay, National Oceanographic and Atmospheric Administration (NOAA). Other project-related personnel sitting on the panel

and in the audience included: Mark Otis, U.S. Army Corps of Engineers (U.S. ACE); Lisa Coté, ICF Kaiser Engineers, EPA's community relations contractor; John Connelly, Hydroqual, and Steve Yabusaki and Richard McGrath, Battelle, consultants on the hydrodynamic and food chain model, and on the ecologic and risk assessment portions of the project.

Approximately 100 citizens attended the meeting including several members of Hands Across the River, a grass-roots community group interested in the site, members of local government, and other interested community members. Local media personnel were also present for the meeting. Copies of the Proposed Plan, mailed by EPA on January 17, 1992 to addresses on the Site mailing list, were available at the sign-in table prior to the start of the meeting. Because a large Portuguese-speaking community resides in the area, summaries of the Proposed Plan were available at the meeting in both Portuguese and English. These summaries, additional copies of the Proposed Plan and an attendance/mailing list addition forms were located at a sign-in area at the entrance to the meeting room. The meeting consisted of panel introduction and presentations describing the contents of the Proposed Plan and EPA's preferred alternative. Presentations were followed by a question and answer session. EPA personnel and other project contractors were available for informal discussions with community members following the close of the meeting.

PRESENTATIONS

Mr. Hohman, EPA Region 1 Waste Management Division Director, opened the meeting by introducing Mr. Correia, a member of the audience present to provide Portuguese translation, if required. Next, Mr. Hohman introduced panel members and reviewed the meeting agenda. The purpose of the meeting was to discuss the Estuary/Lower Harbor/Bay Operable Unit, and was not intended to address issues associated with the Hot Spot Operable Unit. Mr. Hohman asked

that questions regarding the Hot Spot be raised at the monthly meetings instituted for that purpose. He announced that the next scheduled monthly meeting was planned for February 26, 1992. However he added that, time permitting, some Hot Spot questions could be answered at the end of this meeting. Mr. Hohman explained that an extended public comment period for the Proposed Plan (120 days) has been set by EPA, but added that EPA would prefer to receive public comment as soon as possible. The comment period is scheduled for January 31, 1992 through May 31, 1992. The public comment period was extended by community request and also because EPA and NOAA are considering the appropriateness of additional remediation in Upper Buzzard's Bay. EPA intends to issue a proposed plan for Upper Buzzards Bay in April 1992. Mr. Hohman explained that the 120 day comment period would allow ample opportunity for the public to comment on this Proposed Plan and any additional Bay remediation, and said that the final remedial action plans for both portions of the site would be included in one record of decision. The extended comment period would also allow for an overlap period, when comments on both portions of the site would be accepted simultaneously by EPA.

As a follow up to this meeting, Mr. Hohman announced that EPA has scheduled an informal public hearing to accept verbal and written comments from the public. The public hearing has been scheduled for March 5, 1992 at the Days Inn in New Bedford, beginning at 7:30 p.m.

Paul Craffey, DEP Site Manager, presented a brief history of the site. Mr. Craffey also discussed the good working relationship between the DEP and the EPA with regard to site cleanup. He described the current DEP involvement with the site and requested that DEP-related questions be addressed to him during the question and answer period of the meeting.

Mr. Hohman then introduced John Lindsay, NOAA, who briefly described NOAA's interest in the cleanup and his activity at the site. Mr. Lindsay explained that NOAA is a natural

resource trustee and is appointed to ensure the protection/restoration of resources within its jurisdiction, including the resources of New Bedford Harbor. Mr. Lindsay said that NOAA and EPA have had a cooperative relationship during the Feasibility Study, and that NOAA is most concerned with the effects on Buzzards Bay fishery resources. Mr. Lindsay stated that NOAA expects to continue to work closely with EPA.

Mr. Hohman, acting as moderator of the event, asked that the audience hold their questions until the end of the three presentations. He then introduced Mary Sanderson, EPA Region 1 Project Manager/Section Chief, who described the general areas of contamination examined during the Feasibility Study (FS) and the process followed by EPA in selecting the preferred alternative. Ms. Sanderson discussed the site history, including the FS and the Engineering Pilot Study, and oriented the audience to the areas of the Harbor which are addressed in the Proposed Plan, as well as the extent of the contamination addressed by the preferred alternative. Additionally, Ms. Sanderson described the steps which must be taken to comply with federal mandates and explained the nine criteria by which each alternative is measured. Then she explained the concept of a confined disposal facility (CDF), and by slide presentation, illustrated what a CDF would look like during project operation. She explained that the CDFs would extend the shoreline where they are located. During her slide presentation, Ms. Sanderson showed the CDF constructed during the Pilot Study and described the proposed dredging operation which will use a cutterhead dredge, the dredge which performed the best during the Pilot Study. Further, Ms. Sanderson distinguished between an action level and a residual level and described the planned remedial activity in the wetland areas. Ms. Sanderson described the logistics of working with CDFs and the water treatment phase of the remedial project. Ms. Sanderson ended her presentation by describing the anticipated construction schedule of the preferred alternative. She also stated that EPA does not currently have an

estimate of when the Harbor/Bay can be reopened to fishing, but she stated that monitoring of the harbor for residual contaminant levels in biota, water, and sediment will be conducted. The fishing ban could be lifted if the data indicate it is appropriate.

Mr. Hohman introduced Beth Walter of ABB Environmental, EPA's risk assessment contractor. Ms. Walter described the issues addressed by the risk assessment and the methodology used in conducting the assessment. Ms. Walter explained that the target risk ranges which EPA has established are protective of human health and the environment, and that based upon the study conducted by her company for EPA, a risk to human health exists from various potential sources of exposure to the contaminated sediments, including direct dermal contact, incidental sediment ingestion, or ingestion of contaminated fish (biota). Ms. Walter explained that both carcinogenic and non-carcinogenic (including teratogenic) risks were considered in the human health risk assessment and that ecological risks were also addressed in the risk assessment. Ms. Walter explained that a determination was made based on the results of the study that the site poses an unacceptable risk to the community due to the levels of contaminants and the various exposure pathways. The risk assessment report concluded that a cleanup level of 50 parts per million (ppm) PCBs would prevent an unacceptable risk from direct dermal contact with the contaminants, a 0.02 ppm PCB concentration was acceptable for human ingestion of biota, and a 1 ppm action level was acceptable to mitigate ecological risks. Ms. Walter explained that these recommendations were then given to the environmental engineers to consider when determining various means of cleaning up the site to meet these risk target levels. With that, Ms. Walter completed her presentation and introduced Alan Fowler.

Mr. Fowler, Environmental Engineer, EBASCO Environmental, described how environmental engineers used the target clean up levels from the risk assessment and evaluated a 1 ppm PCB action level, as recommended by the ecological risk assessment, and 50 ppm PCB

action level as recommended by the human health risk assessment for contact risk. In addition, engineers evaluated the feasibility of remediating to a 10 ppm action level to determine the effects at that level.

Because of the volume of material contaminated above 1 ppm (over 2 million cubic yards in the estuary and harbor alone), a cleanup action to that level was deemed technically impracticable. A 1 ppm action level would require capping of the entire harbor or would necessitate disposal facilities to accommodate the more than 2 million cubic yards of sediment which would be generated by a dredging alternative. Because of the impracticability of these proposals, the engineers evaluated other remedial action levels. At a 10 ppm action level, Mr. Fowler explained, nearly one million cubic yards of contaminated sediments would be dredged, necessitating the construction of ten confined disposal facilities (CDFs). Due to the large volume of the material, off-site transport and disposal of the material was not deemed practicable. Engineers analyzed the 50 ppm action level scenario and determined that approximately 300,000 cubic yards of contaminated sediments would be generated by dredging.

The engineers working on the Feasibility Study developed nine alternatives, three with a 50 ppm action level and five with a 10 ppm action level, to determine the feasibility and costs associated with each alternative. A minimal "No-Action" alternative was included, as is required by law. Mr. Fowler described the nine alternatives for the audience, including the logistical issues surrounding each alternative.

Mr. Fowler described that a proposal to cap the sediments throughout the Harbor, which was considered by EPA, would necessitate a three-foot layer of capping material and would destroy the biota which now exist in the Harbor. Evaluating the impacts to the biota from the 50 ppm and 10 ppm action levels, engineers determined that the residual contamination levels would be similar, and the resulting impact on the biota, determined by the use of a modeling scenario,

would be nearly equal. Mr. Fowler explained that the preferred alternative was selected due to the level of protection it will provide to human health and the environment. He added that when evaluated under the EPA's selection criteria, the preferred alternative appeared to be the best choice. Upon the completion of his presentation, Mr. Fowler opened the meeting to questions and comments from the audience.

QUESTIONS AND ANSWERS

Mr. Hohman moderated this portion of the meeting and invited panel members and other project-related personnel in the audience to answer questions and address issues as their expertise provided. These questions and comments, as well as the panel's responses, are summarized according to the following categories:

1. Confined Disposal Facilities (CDFs)
2. Other Cleanup Options
3. Dredging
4. Incineration
5. Health Issues
6. Contaminant Characteristics (PCBs and Heavy Metals)
7. Miscellaneous

1. Confined Disposal Facilities

Question: One resident asked the panel what they proposed to do with regard to wildlife impacts of the operation. Specifically, the resident stated that birds and other wildlife have no protection from the Pilot Study CDF which has not been capped. Also, the chairperson of Hands Across the River asked the panel why the Pilot Study CDF has not been capped since the

Engineering Feasibility Study (EFS) was completed in 1988 and what EPA proposed to do about this exposure.

Response: Ms. Sanderson responded that the contaminated sediments are covered by a layer of non-contaminated material which is monitored, and that it is the non-contaminated material that community members see on top of the CDF. She said that the Pilot Study CDF is planned for use in the final clean-up and will be modified as part of the construction phase of the RD/RA.

Question: The chairperson of Hands Across the River asked to see monitoring records of the impacts from the Pilot Study CDF and asked what was protecting the community from the "sludge" (contaminated sediments) stored there. He asked that these results be presented to the City Council of New Bedford.

Response: Mr. Sebastian responded that those records were available at EPA's regional headquarters in Boston. Mr. Hohman asked Mr. Sebastian to ensure that the chairperson received those records.

Question: A citizen asked whether the EPA would be relieved of all responsibility with regard to the CDFs upon completion of the remedial action when the State DEP assumes the operation and maintenance of the Site.

Response: Mr. Hohman responded by explaining that EPA is required to perform a 5-year monitoring program at the site to ensure that the cleanup is complete and adequate to protect the community/environment. He added that DEP would be conducting continuous monitoring of the CDFs, and should a problem arise, EPA and DEP would be required to address that problem.

Question: One audience member asked the panel how EPA would be able to monitor contamination from the CDFs if residual levels of 50 ppm were allowed to remain in the Harbor.

Response: Mr. Fowler explained that monitoring wells would be installed around the CDFs which would allow for baseline sampling and CDF monitoring; if sample analysis revealed higher levels than the baseline sampling, an investigation into the cause of the elevated levels would begin.

Question: One audience member asked if the CDFs will effectively contain the dredged sediments.

Response: Mr. Hohman said that the studies conducted by EPA and the past performance of similar containment facilities have proved that CDFs are reliable.

Question: An audience member asked about the life expectancy of the CDF caps and how expensive they are to replace.

Response: Ms. Sanderson explained that the idea of the long-term operations and maintenance program to be conducted by DEP is to keep the CDF caps maintained so that complete replacement would not be necessary. She said that given proper installation and maintenance, they are expected to last indefinitely. Ms. Sanderson explained that the cover is constructed of many layers of impermeable material and is approximately three feet thick. She said that the materials include clay, geotextiles and a vegetative cover to prevent erosion. Mr. Fowler added that geomembranes are also used, and enforced the statement that installation is critical to the performance of the cover. Mr. Fowler said that with proper installation, maintenance is minimal and easy to perform.

Question: One audience member asked about the capability of the CDFs to withstand hurricanes, by which the harbor is frequently effected.

Response: Mr. Fowler said that the proposed CDF locations were selected because they provided additional protection from storms. He said that the CDFs are designed and constructed to withstand the waves generated during a hurricane. He said the CDFs will not be constructed to withstand the brunt of a hurricane because the proposed locations are inside the Hurricane Barrier which provides that protection from hurricane forces.

Question: One citizen asked whether any CDFs have withstood a hurricane.

Response: Mr. Otis explained that a similar facility to those proposed in the preferred alternative has been constructed in Chesapeake Bay, and that the facility has withstood hurricanes.

Question: One citizen asked how large the proposed CDF #3 is expected to be.

Response: Mr. Fowler explained that CDF #3 is planned to be located approximately 200 feet north of the Coggeshall Street Bridge on the Fairhaven side of the Harbor and will be located approximately 200 feet behind the Medeiros Bus Co. facility.

Question: The same citizen asked if any of the current owners of the properties on which EPA proposes to located CDFs #1, #2 or #3 have been contacted about this proposed siting.

Response: Ms. Sanderson responded that EPA's intent was to bring this to the public's attention in general and that the meeting was the first step in the process. She explained that an extensive outreach to potential CDF abutters and property owners has not yet been conducted by EPA.

Question: One citizen asked about the extent of EPA's responsibility to perform contingency action in the event of a failure of the CDFs.

Response: Mr. Hohman explained that if, during the five year review process, during the long-term monitoring operation or, in the event of an accident, evidence is revealed that the cleanup action is not protective of the environment, EPA is required by law to mitigate the problem and develop a long-term solution.

Question: The same citizen asked what portion of the monitoring was deferred to the State DEP.

Response: Mr. Hohman explained that the Superfund law of 1980 and amendments in 1986 and 1991, DEP will cover 10% of the remedial action costs during construction and provide for all operation and maintenance costs after the site is remediated. Mr. Hohman explained that, because EPA has made agreements with PRPs, 90% of the funds received from the PRPs will be used by EPA in the remedial process, and 10% will go to the State to fund its portion of the cleanup.

Question: An audience member asked if earthquake impacts and seismic zones were considered in the design of the CDFs, and whether the seismic impacts from the blasts at the Quarry were considered.

Response: Mr. Hohman said that these issues would be factored into the final design plan of the CDFs.

Question: An audience member asked if the air around the CDFs would be monitored while they are being filled with the contaminated sediment. Another citizen asked how dust emissions from the contaminated sediment would be controlled during pumping into the CDFs.

Response: Ms. Sanderson explained that during the pumping there will be water in the CDF and that the sediment will be pumped in underneath the surface of the water to prevent emissions. As the CDF is filled, the water will be slowly pumped off the top and treated at a treatment plant prior to discharge back into the Harbor. She stated that this technique is an important protection measure during the disposal operation.

Question: An audience member asked what protective measures would be taken in the interim after the CDF is filled, but prior to the final capping, to prevent the community from being exposed.

Response: Mr. Otis explained that the last part of the dredging process would be to place a layer of uncontaminated sediment on top of the contaminated sediment to act as an interim cover before the final cover is in place.

Question: An audience member asked how the CDF areas would be used once the final cap was in place and asked if it would be a safe place for children to play.

Response: Mr. Hohman said that the cap will be impermeable and will be safe to play on, but will not be suitable for tree planting, gardening, or other activities which might disturb the cap.

2.0 OTHER CLEANUP OPTIONS

Question: A citizen asked which upland disposal sites (mentioned during Ms. Sanderson's presentation) were considered and why an upland site was not chosen.

Response: Ms. Sanderson responded that the applicable state and federal regulations regarding off-site disposal of materials contaminated with PCB levels greater than 50 ppm require that these materials be disposed of in a secure disposal facility or undergo treatment prior to disposal. Ms. Sanderson said that EPA evaluated commercial treatment facilities and other off-site disposal options; however, there were no disposal sites within Massachusetts suitable to dispose of the sediments, nor was there a commercial off-site treatment considered feasible due to the volume of contaminated sediments. Ms. Sanderson said the only local upland site which may have been suitable was a local quarry. That option was ruled out because of the impracticability of transporting the large quantities of sediment.

Question: A citizen asked whether EPA considered building a PCB landfill in which to dispose the sediments.

Response: Mr. Hohman said that no sites in Massachusetts were suitable to accept the volume and type of wastes in compliance with state landfill siting requirements.

Question: A citizen asked what state requirements could not be met.

Response: Mr. Hohman explained that because of the volume of contaminated sediments, basic criteria were difficult to meet: 1) to find or construct a landfill large enough to accommodate the sediments, and 2) to locate a landfill where sufficient groundwater protection could be provided. Ms. Sanderson explained that groundwater protection is a key issue in landfill siting. She said that regulatory agencies have a very difficult time siting solid waste landfills which

provide sufficient groundwater protection, and that siting a hazardous waste landfill would have been increasingly difficult.

Question: One audience member asked why, after spending $58 million, the Harbor and River will not soon be opened to fishing. She asked if a newer technology has been developed which would restore the Harbor/River to use again. She asked also if EPA is staying up to date on new technologies that are being developed.

Response: Mr. Fowler explained that, since the FS was completed in 1990, he has kept up to date with all new technologies. He said that it is to everyone's advantage to find something more effective than current technology permits. He said that despite the efforts into research and design, no new technologies have been developed which have been tested and are proven and ready for use at this time.

Question: An audience member asked whether EPA had considered storing the contaminated material in an abandoned mill building along the harbor as a means of removing the sediments from shoreline altogether.

Response: Mr. Hohman responded by saying that EPA did not consider storing sediments in abandoned mill structures. He said that EPA acknowledges that if they could make PCBs disappear, they would. He said that EPA's preferred alternative is a means of isolating the contaminants in an area where they can be monitored.

Question: One citizen, referring to a March, 1991 Wall Street Journal article, quoted that newspaper as reporting that when quicklime is mixed with PCBs the PCBs "disappeared." She asked whether that remedial alternative was investigated by EPA.

Response: Mr. Fowler responded that EPA published a report in the Fall of 1991 responding to that report and similar reports. The EPA findings concluded that when PCBs were mixed with quicklime or cement the PCBs are not destroyed, but volatilized as steam into the air. EPA concluded that this trans-media migration of contaminants did not constitute a solution or destruction of the contamination.

Question: One citizen said that he has lived in the community throughout his life and swam in the harbor and has not developed cancer. He asked why the EPA was proposing to disturb it now.

Response: Ms. Sanderson said that one of the alternatives which EPA is required by law to evaluate is a "no-action" alternative. She explained that EPA is required to determine whether "no-action" was protective for the community. She expressed EPA's concern regarding problems the contaminants may present over time. For example, whether the contaminants could migrate into the Bay and contaminate greater areas. Also, commercial use of the Harbor could be effected, as well as possible adverse affects to human health and the environment. EPA determined that some remedial action is required at the site because it poses an ongoing threat to the public and to the environment which otherwise will not be mitigated.

Question: One citizen suggested that EPA take a poll of the community to determine how many citizens want to see any remedial action take place.

Response: Mr. Hohman suggested that if such a poll were taken and indicated that the community does not want a remedial action to take place, and if the DEP indicated that they don't want any remedial action in the Harbor, these comments will be considered by EPA.

Question: One citizen asked whether, without remediation, the Harbor would ever be opened to fishing.

Response: Mr. Hohman explained that the Harbor will not be opened to fishing without some degree of cleanup.

Question: One citizen asked about the technology being used at another local site, known as Resolve.

Response: Mr. Hohman said that thermal extraction technology is being used to remediate contaminated soils. He said that due to site conditions, contaminant make-up and contaminant levels at that site, thermal extraction was a feasible technology at Resolve. The conditions at New Bedford Harbor are very different.

Question: An audience member asked if depuration was a possible remedial alternative for the site.

Response: Ms. Sanderson explained that depuration is an adequate remedial measure for short-term effectiveness, but that EPA is required to evaluate long-term effectiveness as well. She said that the Natural Resource Trustees (including NOAA) is considering depuration as a part of the resource damage assessment.

Question: An audience member asked for clarification on the quicklime solidification issue.

Response: Mr. Fowler explained that solidification of PCB contaminants with quicklime does not degrade or destroy the PCBs, but converts them to an air contaminant by volatization.

Question: The same citizen asked if there is any other way to treat the PCBs. He suggested that dechlorination of PCBs has occurred for the contaminants in oil and could be used to treat contaminants in other media.

Response: Mr. Fowler agreed that dechlorination treatments were developed and proven for oil based PCB contaminants, but stated that dechlorination techniques for vapor and soil contamination is not a proven technology.

Question: An audience member asked why EPA doesn't cap the Hot Spot.

Response: Mr. Fowler explained that the concentrations in the Hot Spot are so high that a huge volume of material would be required and that the sediment cap would eventually become contaminated, so in essence you are adding more volume to the problem, as well as causing a back up from filling of the estuary.

3. DREDGING

Question: One audience member asked about the dredging schedule and the duration of the dredging operation. He was particularly concerned with how the dredging operation would disrupt the fish population, as well as how the contaminants would be disturbed during the dredging. He asked whether the dredging would effect the fish migration and whether, during migration, the fish would spread contamination to other areas of the harbor.

Response: Ms. Sanderson explained that the Pilot Study showed the there was no disruption of the sediment or fish outside a 500 foot radius of the cutterhead dredge. She said that booms

and curtains would be utilized during the dredging to further reduce disturbance. EPA estimates the dredging operation to last three years.

Question: An audience member asked the panel to describe the curtain which would be used to limit disturbance during dredging.

Response: Ms. Sanderson explained that a cheese-cloth-like material is used to assist against sediment disturbance around the dredge. She said, however, that the most significant control is conducted with the dredge operation itself, and reminded audience members that some disruption will occur.

Question: One citizen asked about the current rate of toxins volatizing into the air, and questioned if the volatization rate will change during dredging.

Response: Ms. Garman explained that the volatization rates won't be significantly effected because dredging will only occur when sediments are covered by water to prevent air transfer of contaminants. She also explained that volatization rates from the Harbor when the sediments are covered with water were not available at the time of the meeting, but said that during low tide the levels near the Hot Spot were as high as 471 nanograms per cubic meter (nan/cm^3). She compared that rate to a DEP ambient air quality standard of 0.5 nan/cm^3 and explained that the Hot Spot level is approximately 1000 times above the air quality standard. .

Question: One citizen asked whether the Hurricane Barrier will be opened or closed during the dredging operations to prevent migration of contaminants into the Bay.

Response: Ms. Sanderson reiterated her earlier statement that the Pilot Study has shown that areas outside a 500 foot radius from the dredge are not disturbed by the dredging operation. Therefore, no migration of the contaminants outside of the Barrier is expected.

4. INCINERATION

Question: One citizen asked if EPA has a vested interest in incineration?

Response: Mr. Hohman responded that EPA does not make a profit from choosing incineration as a remedial alternative.

Question: The same citizen asked how much money EPA has spent on research and design of hazardous waste incineration.

Response: Mr. Hohman responded by saying that he did not know the figures, but that EPA has spent a great deal of money on incineration, as it has on other hazardous waste treatment alternatives.

Question: The same citizen asked whether incineration is a multi-million dollar business.

Response: Mr. Hohman responded affirmatively, but said that other hazardous materials treatment technologies are similarly profitable. Mr. Hohman reaffirmed that incineration of contaminated sediments was not chosen as the preferred alternative and suggested that incineration-related questions be raised at the Hot Spot monthly meetings.

Question: An audience member asked about the dioxin levels produced during incineration.

Response: Mr. Hohman responded that further incinerator-related questions should be raised at the Hot Spot monthly meetings.

Question: An audience member asked why incineration was not included as part of the preferred alternative.

Response: Ms. Sanderson explained that incineration was considered as one of the remedial alternatives investigated during the FS. She said that the pros and cons of that remedial alternative were considered and are discussed in the Proposed Plan. One of the disadvantages to incineration was a cost of approximately $600 million to incinerate the volume of material proposed for excavation. Ms. Sanderson explained that one of the advantages to incineration is its permanent destruction of the contaminants. However, incineration would extend the handling of the contaminated sediments, and the period of construction which could provide for additional exposure to the site workers and/or the community. Given that there are significantly lower contaminant levels in the estuary, lower harbor and bay portions of the site with respect to the Hot Spot sediments and the large volume of contaminated sediments, it was decided that incineration was not the best means of remediating the site.

Question: A citizen asked to see monetary figures of the investment EPA has placed in the research and design of incineration.

Response: Mr. Hohman explained that EPA's investment into research and design of all remedial alternatives, including incineration, has been extensive. He asked Mr. Sebastian to make EPA's remediation R&D figures available to the community.

5. Health Issues

Question: A citizen asked if long-term health insurance coverage would be provided to the community should illness result from the use of an incinerator to destroy Hot Spot contaminants.

Response: Mr. Hohman reminded the audience that incineration was not chosen as the preferred alternative for this Operable Unit and suggested that the question be raised at the Hot Spot monthly meeting.

Question: A citizen announced that the Lupus Foundation has been following EPA's work and the Foundation suggests that, due to the high incidence of Lupus in the area, a comprehensive epidemiological study should be conducted.

Response: Mr. Hohman requested that the citizen give a copy of the Lupus Foundation statement to Mr. Sebastian so that it can be addressed in the Responsiveness Summary and included in the Record of Decision.

Question: One citizen asked about the health impacts from the dust which would occur during dredging and dewatering operations. He was concerned that the dust being blown from the Pilot Study CDF and during the Engineering Feasibility Study was contaminated. He asked what monitoring was conducted during these operations to protect the community.

Response: Mr. Otis responded that air monitoring was conducted during these operations and have shown no threatening ambient air levels of contaminants. Mr. Sebastian added that the air quality monitoring data was available for public review.

Question: An audience member asked what long-term health studies have been conducted around the U.S. following Superfund clean-ups to determine impacts from the clean-up activities.

Response: Mr. Hohman explained that very few clean-ups have been completed in the nation since Superfund was started in the 1980s and he did not have information on post-remedial health studies. Ms. Sanderson added that the Massachusetts Department of Public Health (DPH) has conducted a health study in the community, and the results of that study can be obtained from that department.

Question: An audience member asked the panel what has been done to prevent public health exposure during the investigation period.

Response: Mr. Hohman explained that originally warning signs were posted along the shoreline and in the Harbor to caution the public of the contamination. He said that the signs later proved to serve as an attraction to children, so EPA instituted a school information program where children were alerted to the dangers in the Harbor.

6. Contaminant Characteristics

Question: An audience member wanted to know if there has been any studies conducted on the health impacts of long-term storage of heavy metal-contaminated sediments.

Response: Mr. Fowler explained that the storage and disposal method for heavy metals was evaluated during the Feasibility Study. Mr. Fowler described how samples of the metal contaminated sediments were obtained and analyzed in various laboratory tests throughout the FS. Mr. Fowler stated that if the infiltration component is removed (i.e. rainwater) no leachate will be

produced. So, with proper engineering and construction, the CDF can be built to eliminate infiltration.

Question: After receiving that response, the same citizen asked what long-term studies had been conducted to evaluate the impact of such a system 20, 30, or 40 years after completion. The citizen was concerned about the reaction of the heavy metals with other inorganic and organic constituents contained within the sediments under the proposed disposal conditions.

Response: Mr. Fowler responded by explaining the various conditions under which the sediment samples were analyzed during the Feasibility Study. Mr. Otis also remarked that data has been acquired from similar contaminated sediment disposal facilities over the past 30 to 40 years and stated that the acquired data reveals that CDFs are a proven effective containment technology.

Question: One audience member asked if PCBs accumulate in eggs.

Response: Mr. Hohman responded that PCBs are known to bioaccumulate in fatty tissues.

Question: An audience member asked how PCBs behave in an air medium.

Response: Mr. Fowler explained that the PCBs are not necessarily volatile as a pure substance, but said their behavior in water depends on their low solubility. At the concentrations in the Harbor, PCBs tend to volatilize.

7. MISCELLANEOUS

Question: A citizen asked which parties were responsible for the contamination of the sediments, and whether or not these companies were still discharging PCBs and other contaminants into the harbor.

Response: Mr. Hohman responded by saying that PCBs were banned by the federal government and are no longer allowed to be manufactured or sold, so that the ongoing discharge of these contaminants is illegal. Mr. Hohman said that any discharge to the Harbor must comply with the Clean Water Act and is regulated by both state and federal environmental agencies. Ms. Sanderson added to Mr. Hohman's response stating that the historic activities which caused the PCB contamination have ended.

Question: An audience member wanted to know how the local wetlands would be impacted by constructing CDFs in wetland areas and what compensation would be made for the destroyed wetlands.

Response: Ms. Garman responded that the wetland areas of the planned CDF locations are already degraded by contamination, which was a consideration in the selection of the preferred alternative. Ms. Garman reminded the audience that EPA is particularly concerned about the wetland areas, and she requested feed-back from the audience regarding the wetlands, specifically regarding the necessity of replication of wetlands impacted or filled by the CDFs.

Question: One citizen asked Mr. Fowler whether the local TAG Community Work Group (CWG) had retained EBASCO as their technical consultant.

Response: Mr. Fowler said his firm (EBASCO) was not the technical consultant to the TAG group. Ms. Sanderson said that an environmental consulting firm based in Washington, D.C. was retained by the CWG called Environ.

Comment: One audience member congratulated EPA on their decision not to cap the Estuary. He said that at low tide, there would be no water in the Estuary at all if capping took place. He also expressed his belief that EPA is "on the right track" with their proposal.

Question: One audience member asked about the toxic air emissions from the local Aerovox plant.

Response: Mr. Hohman explained that EPA has reached an agreement with Aerovox for cleanup of the Harbor site. He also said the Aerovox emissions are regulated by both EPA and the DEP. He said that the air emissions criteria with which Aerovox must comply are regulated such that they will not impact human health.

Question: One audience member raised an issue regarding the nine criteria evaluated by EPA for the site, and noted that the cost was higher on the list than either State or community input. He asked whether EPA believes cost to be of greater importance over State and local comment.

Response: Mr. Hohman responded that the criteria were listed during the presentation in the same order as they appear in the Superfund law and its amendments. He said that by law cost-efficiency is a factor which must be considered by EPA in selecting a preferred remedial alternative but is not necessarily more important than other criteria.

Question: One citizen asked for clarification on the action level concept and how a 50 ppm action level would yield a similar exposure as a 10 ppm action level.

Response: Mr. Fowler explained that a 50 ppm action level yields residual contaminant levels significantly below 50 ppm in many cases, and that tests and models using the residual levels -- not the action levels -- were conducted to determine the exposure. For instance, he explained, at a dredging depth of 2 feet the residual level is often below 50 ppm and closer to 10 ppm. Since there is limited control over the dredging operation, EPA must order to dredge to below the level where action level contaminants are found, which will often leave residual contaminant levels significantly lower than the action level.

Question: An audience member asked for clarification on the Hot Spot monthly meetings which have been instituted to address community concerns with regard to that Operable Unit and the incineration remedy.

Response: Mr. Hohman explained that the next monthly meeting is scheduled for February 26, 1992 at the Wilkes Branch of the New Bedford Free Library at Brooklawn in New Bedford, MA.

Question: An audience member asked why Superfund money isn't being used for the clean-up. He suggested that the industry was paying the debt for producing products used by the federal government, and that federal money should pay for at least part of the cleanup.

Response: Mr. Hohman explained that, by law, EPA is required to obtain cleanup funds from Potentially Responsible Parties (PRPs) whenever possible.

Question: One citizen asked why EPA hasn't placed an interim cap on the contaminated sediments at the bottom of the harbor while they were investigating long term remedial solutions.

Response: Mr. Hohman explained that sufficient information was not available to allow EPA to make that decision. Mr. Fowler added that there have been logistical hydraulic problems which have prevented interim capping or the construction of cofferdams in the harbor. He also said that the equipment which would be required to install an interim sheet cofferdam would cause significant turbulence and exacerbate problems when developing a long term solution.

CONCLUSION

Mr. Hohman asked the audience if there were any more questions. He reminded the audience of the March 5, 1992 public hearing to be held at the same location at 7:30 p.m., and adjourned the meeting at 10:40 p.m.