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UNITES STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1

MEMORANDUM

DATE: December 23, 2009

SUBJ: **ACTION MEMORANDUM;** Request for a Non-Time-Critical Removal Action (NTCRA) at the Aerovox Site, New Bedford, Massachusetts

FROM: James T. Owens, III, Director
Office of Site Remediation & Restoration

TO: Mathy Stanislaus, Assistant Administrator
Office of Solid Waste & Emergency Response

THRU: Larry Brill, Branch Chief
Office of Site Remediation and Restoration

Debbie Dietrich, Director
Office of Emergency Management

ATTN: Gilberto Irizarry, Director
Program Operations and Coordination Division

Site ID # 0120

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a NTCRA for the Aerovox Site (the "Site"), located at 740 Belleville Avenue, New Bedford, Bristol County, Massachusetts. This Action Memorandum also requests and documents the approval of a "consistency" exemption from the $2 million and 12-month statutory limits for Fund-financed removal sites. This NTCRA is expected to be completed within 22 months and cost not more than $24 million (in 2010 dollars, see Section VI.B.2 below), but will be implemented in a mixed-work approach with a potentially responsible party (PRP) financing and performing mill demolition and capping and the City of New Bedford (using $9.8 million through a Cooperative Agreement with EPA) performing transportation and offsite disposal of the demolition debris, and with any remaining funds, providing backfill and conducting post-removal site controls. No regional Removal Authority funds will be used; instead, the Cooperative Agreement funding for the City portion of the work is a combination of Aerovox bankruptcy funds and EPA funds made available by the exchange of appropriated annual funds for the New Bedford Harbor Site for Harbor settlement funds held in a court registry account. The NTCRA is necessary to prevent, minimize, stabilize, and mitigate potential threats to human health and the environment posed by a release of hazardous substances to the environment at the Site.

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In particular, the NTCRA will address the threats posed by the Site's deteriorating mill facility which is severely contaminated with polychlorinated biphenyls (PCBs) and other hazardous materials by demolishing the facility and leaving the foundation in place. The basement will be filled to the existing grade with clean fill and all areas of the Site with soil PCB levels above 2 ppm will be capped under a protective cap that complies with the requirements of the Toxic Substances Control Act, 15 U.S.C. §§2601, *et. seq.* (TSCA). The demolition debris will be transported offsite for disposal to appropriately-licensed facilities.

The NTCRA is consistent with the long-term remedial strategy for this Site to minimize exposure to and migration of contaminants. While the Site is not expected to be listed on the National Priorities List (NPL), the NTCRA is consistent with future expected remedial actions under Chapter 21E of the Massachusetts General Laws (21E) and the regulations promulgated thereunder, the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000 (e.g., groundwater assessment and remediation, additional capping), which will be conducted under the direction of a Massachusetts Licensed Site Professional (LSP). As part of the forthcoming global settlement for the Site, the 21E assessment and cleanup will begin immediately after the NTCRA work is completed and approved by EPA. AVX Corporation (AVX), the PRP, will perform the demolition and capping work as authorized by this Action Memorandum pursuant to the forthcoming settlement with EPA. AVX will then, as part of the 21E cleanup, further evaluate the full nature and extent of contamination at the Site, not addressed by this NTCRA, and implement further cleanup actions to address remaining soil and groundwater contamination. This work will be performed pursuant to the anticipated settlement with the Commonwealth of Massachusetts (State). As part of the forthcoming global settlement, AVX will also implement institutional controls at the Site that are required to ensure both the NTCRA and 21E cleanups are protective under CERCLA, TSCA and 21E in the long-term. Moreover, AVX will fund an escrow account that will finance long-term operation and maintenance of the cap and groundwater response actions as well as groundwater monitoring activities.

Finally, although the Aerovox Site was not included in the New Bedford Harbor Site when EPA settled with the responsible parties in the 1990s, the Aerovox facility, which abuts the Harbor, is one of the major sources of PCB contamination to New Bedford Harbor. The response action authorized by this Action Memorandum, along with the 21E cleanup, will result in a complete source control and management of migration remedy for the Aerovox site, effectively controlling or eliminating any further source of PCBs or other contaminants (e.g., volatile organic compounds (VOCs)) from this facility to the Harbor. The actions taken pursuant to this NTCRA are thus consistent with the long-term remedial actions for both the Aerovox Site and the New Bedford Harbor Superfund Site.

AVX will perform the NTCRA work pursuant to a forthcoming EPA Administrative Order on Consent (AOC). The City of New Bedford (the City) will perform portions of the NTCRA pursuant to a Cooperative Agreement with EPA, including the offsite transportation and disposal (T&D) of the demolition waste. The 21E cleanup will be conducted by AVX pursuant to a forthcoming Administrative Consent Order (ACO) with the State.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS Identifier: MAN000103307
Site Identifier: 0120
Removal Category: Non-Time-Critical
NPL status: Non-NPL

A. Site Description

1. Removal Site Evaluation

The vacant Aerovox plant located at 740 Belleville Avenue in New Bedford, MA, consists of an approximately 450,000 square foot former manufacturing facility located on approximately 10.3 acres of industrial-zoned land abutting the Acushnet River. From c.1940 to c.1978, PCBs were used at the facility in the manufacture of electrical capacitors. As a result of this manufacturing history, soil and groundwater at the Site as well as the mill facility itself are heavily contaminated with PCBs. The soil and groundwater are also contaminated with VOCs, most notably trichloroethylene and chlorobenzene. The facility is considered one of the major sources of historic PCB contamination to the New Bedford Harbor Superfund Site.

In 1997, EPA conducted an inspection of the building and performed building and soil sampling, with Aerovox, Inc. (Aerovox), a prior owner of the Site, performing follow-up sampling. High levels of PCBs were identified throughout the interior of the building and in Site soils. Subsequent sampling found PCBs and VOCs in groundwater and PCBs mixed into the asphalt parking lot. In July 1998, EPA issued an Approval Memorandum to initiate the non-time critical removal action process by having Aerovox perform an Engineering Evaluation/Cost Analysis (EE/CA) for the implementation of a NTCRA for the Site. The EE/CA was prepared by Blasland, Bouck & Lee, Inc., contractor to Aerovox, under EPA oversight, and issued in August 1998. The EE/CA evaluated three alternatives for demolishing the contaminated building, disposing of the demolition waste and then capping the entire Site. EPA's preferred alternative included the demolition of the facility, offsite disposal of most demolition debris, leaving the concrete foundation in-place, backfilling the building footprint with clean fill and capping the entire Site. Pursuant to the National Contingency Plan (NCP), the EE/CA and its administrative record were made available for public comment in 1998, but no comments were received.

In 2000, Aerovox entered into a consent order with the Commonwealth of Massachusetts to monitor groundwater elevations at the Site. Aerovox also entered into a RCRA Section 7003 Administrative Order on Consent with EPA in late 1999 in which Aerovox was required to, among other things, demolish the building and cap the entire Site. Interim measures were taken to protect workers in the building. However, the building was vacated in 2001 when operations were relocated to an alternate site in New Bedford. While relocating, Aerovox left behind, among other things, a substantial amount of contaminated equipment and machinery, PCB-contaminated rinse water, PCB-contaminated personal protective gear, solvents, acids and compressed gas cylinders. Aerovox subsequently filed for bankruptcy in June 2001 and the primary response actions required by the RCRA consent order were never implemented. EPA settled its claim against Aerovox in the bankruptcy proceedings in 2003.

Since 2001, the facility has deteriorated. The main manufacturing building has been subject to flooding from burst pipes and a malfunction in the sprinkler system, as well as lack of maintenance to pump out routine basement flooding. There has been resulting significant water damage to the PCB-contaminated wooden floors causing them to weaken and buckle; the wooden roof, sections of which are highly deteriorated, leaks into the interior of the building; and structural columns have fallen out of plum. PCB-contaminated stormwater continues to run off the contaminated buildings and parking lot into the Acushnet River. The capped area of the Site also showed signs of deterioration with cracks in the pavement and vegetation pushing through the hydraulic asphalt concrete (HAC) cap.

In addition, despite implementation of Site security measures, trespassing (with the potential for tracking contamination offsite) and vandalism have occurred at the Site. Damage includes broken windows which could allow PCB-contaminated dust to be released outside the building. Broken switches, thermostats and other mercury-containing equipment resulted in mercury spills. Direct contact with mercury and PCB-contaminated floors, building material and equipment allows contamination to be tracked outside the building. Asbestos is also present in the building.

A Preliminary Assessment/Site Investigation (PA/SI) was conducted in February 2004. Representatives from EPA. MassDEP and the City of New Bedford were in attendance. Various drums, gas cylinders and containers of waste material were found inside the building. (A second PA/SI was performed in 2007 specifically for mercury; see below.)

In 2004, EPA issued an action memorandum to initiate a Time-Critical-Removal Action (TCRA) at the Site. The purpose of the TCRA was to remove drums and containers abandoned at the Site and general repair of the cap installed by Aerovox pursuant to a 1982 order (See Section II.B.1. below for more details regarding this order). EPA implemented the TCRA to remove waste drums and containers and to remove vegetation from and seal cracks in the existing cap.

From 2004 to 2008 EPA performed further sampling at the Site and found PCBs mixed into the asphalt parking lot, the continued presence of PCBs in groundwater, stormwater runoff and in building materials, and elevated levels of airborne PCBs at the eastern end of the Site. A January 2005 Site Information and Preplan prepared by the New Bedford Fire Department describes the fire hazards posed by the manufacturing building, includes a fire plan as to how the Fire Department should respond to a fire at the building, and describes the existing fire suppression equipment in the building.

In April 2006, EPA issued a Supplemental EE/CA (SEE/CA) to the 1998 EE/CA to update the costs, and to reflect Site activities and conditions since the 1998 EE/CA was issued, including the continuing deterioration of the facility and the significant potential for fire. The SEE/CA also identified two new alternatives: disposal of all demolition waste onsite; and disposal of all demolition waste offsite. The SEE/CA recommended that all demolition waste be disposed of onsite. Additional objectives were added including coordination of the NTCRA with future reuse of the Site.

Sixteen comments regarding the SEE/CA were received. These comments and EPA's response to the comments may be found as part of the administrative record for the NTCRA and are

attached as Appendix A of this document. Based on these comments, EPA has selected offsite disposal rather than onsite disposal for the NTCRA demolition waste. See Section VI below for more details on all the alternatives considered and the selected alternative.

See also Sections II.B.1. and II.B.2 below, which detail other previous and recent response actions taken at the Site.

2. Physical Location

The property is located at 740 Belleville Avenue, Bristol County, New Bedford, Massachusetts, and directly abuts two active industrial mills to the north and south, and a large, densely populated, urban residential neighborhood on the opposite (west) side of Belleville Avenue (Figure 1). Nearby residential areas also exist one block north of the Site (east side of Belleville Avenue), as well as in the towns of Acushnet and Fairhaven on the opposite side of the Acushnet River. The Acushnet River abuts the property to the east. The elevation along Belleville Avenue at the western boundary of the Site is approximately 14 feet above mean sea level (MSL) while the elevation at the eastern boundary of the property (at a seawall constructed along the bank of the Acushnet River) is generally between 3 and 4 feet above MSL.

Portions of the Site are also located within the 100-year floodplain. Because of its unique location along the shoreline, the property could provide public access to the shoreline once cleanup actions are complete and fencing is relocated.

3. Site Characteristics

The Aerovox main building consists of a western section that contains two floors and an eastern section that contains three floors. A parking lot is located south of the building. The exterior walls of the building are brick while the roof is constructed of wood. The first floor in the western section of the main building varies between 4 and 8 feet below ground surface, while the first floor in the eastern section of the main building varies between 4 and zero feet below grade. The floor and walls of the first floor of the entire building is constructed of concrete, and serves as the main building's foundation. Structural components of the building include interior wood columns and steel I-beam floor joists. The second floor of the building consists of both concrete and wood; and the third floor is constructed of wood. Ancillary structures include a brick sewer pump station, a brick smoke-stack, a wooden loading dock building, a concrete block tank enclosure, a concrete block boiler house and a brick structure housing electrical switching equipment.

The Site began to be used for electrical component manufacturing in approximately 1938. Beginning in approximately the 1940's, dielectric fluid containing PCBs was used in capacitor manufacturing. Various solvents were also used in manufacturing operations. Operations and disposal practices during this period involving PCBs and solvents constituted a release and a disposal of hazardous substances that contributed to the contamination of soils, building materials and equipment, surface water runoff and groundwater at the Site. Use of PCBs in the

manufacturing process ceased on or about October 1978. The building has been vacant since 2001.

AVX's predecessor, Aerovox Corporation, owned and operated an electronic component manufacturing business at the Site from 1938 to January 2, 1973. On June 4, 1973, Aerovox Corporation merged into AVX Ceramics Corporation, which changed its name to AVX Corporation. On or about January 2, 1973, the Site and the Aerovox name, among other assets, were purchased from Aerovox Corporation by a company named Belleville Industries, Inc., which later changed its name to Aerovox Industries, Inc. Aerovox Industries, Inc. operated the Site from January 1973 to October 1978. In October 1978, Aerovox, Inc. (Aerovox) became the owner and operator of the Site, but relocated and then filed for bankruptcy in 2001. As a result of the bankruptcy settlement, after a certain holding period, the Site became the property of 740 Belleville Avenue LLC. In October 2008, the City acquired a majority of the Site through a tax foreclosure action and subsequently took title to the remainder of the Site in September 2009.

4. Release or Threatened Release into the Environment of a Hazardous Substance or Pollutant or Contaminant

The facility building, soils beneath the building foundation, soils outside the building, and groundwater are contaminated with PCBs. VOCs, most notably trichloroethylene and chlorobenzene, have been found in groundwater. PCBs are also mixed into the asphalt parking lot.

On June 25 and 26, 1997, EPA inspectors took samples from one of the manufacturing areas, known as the impregnation tank room, consisting of shavings from the wood floor. Tests of the samples revealed very high PCB levels in the wood shavings, well above the TSCA regulatory level of 50 ppm, with one sample as high as 128,000 ppm. Aerovox's contractor conducted subsequent investigations and found the following:

Building materials (wood, brick, concrete): PCBs at concentrations of greater than 50 ppm were present in the wood floors, concrete floors, dust and dirt scrape samples; PCBs were detected in full core samples collected from the brick exterior walls and wood ceilings. Analytical results of wipe samples collected from non-porous building materials, appurtenances and equipment contained PCBs at concentrations greater than 10 ug/100cm^2;

Soil samples: Beneath the building PCBs were present at concentrations up to 18,000 ppm and VOCs were detected between 0.7 ppm and 30 ppm; underneath the asphalt parking lot PCBs were detected at concentrations up to 2,900 ppm and VOCs were detected between 0.22ppm and 1.1 ppm;

Groundwater samples: PCBs were present at 36 ppb and VOCs were detected up to 5,000 ppb;

Interior air samples: PCBs were detected at concentrations exceeding 0.001 mg/m^3 inside the building.

In July 1998, EPA issued an Approval Memorandum for the performance of an EE/CA at the Site. Aerovox completed the EE/CA in August 1998. See Section I.A.1. above for details regarding the EE/CA.

In 2004-2005, EPA commissioned additional groundwater and stormwater monitoring at the Site. Evaluation of data estimated that a relatively low mass flux of 0.4 kg of PCBs per year enters the Harbor via groundwater and similarly 0.4 kg/year of PCBs enters the Harbor via stormwater. Stormwater monitoring showed continued releases of PCBs to the Acushnet River from the Site's drainage system.

During this same period EPA also performed PCB analysis of the top ½ inch of the asphalt parking lot and found PCBs in all but one of 14 samples ranging from 0.8 to 46 ppm. Fuel oil impacted Site soils, potentially contaminated with PCBs, had been used to manufacture the base course of the asphalt parking lot.

EPA conducts ambient air monitoring as part of the New Bedford Harbor Superfund Site cleanup. At the Aerovox Site, two locations are monitored, one at the eastern boundary of the Site near the river and one at the western boundary near Belleville Avenue. Results from the eastern boundary routinely show airborne PCBs that are the highest of any location monitored around the harbor. Results from the western location show significantly lower levels of airborne PCBs.

The building continues to deteriorate with time as explained more fully above; more recent inspections inside the building report that roof leaks have increased. Trespassing and vandalism of the fire suppression system's copper piping had been a recurring problem until the last few months when site security was increased. The City has installed temperature monitoring which is designed to notify the fire department in the event of fire. In addition, without on-going maintenance, the HAC cap will continue to deteriorate.

Elemental mercury was identified in the building (used as controls and switches within the mill), some of which had spilled onto the floor. Approximately 25 pounds of mercury were removed and disposed offsite in December 2007, and approximately 1,000 pounds of mercury and associated debris were removed and disposed offsite in February and March 2008. Additional mercury spills and releases will be investigated and addressed by AVX during its demolition activities.

Fire and fire suppression pose significant potential release threats to area workers and residents and to the harbor environment. There are two industrial facilities which abut the Site; one to the immediate north of the Aerovox building and one which is south of the Aerovox parking lot. Hundreds of employees work three shifts per day at these facilities. Directly across Belleville Avenue to the west is a densely populated residential neighborhood made up of double and triple-decker homes. If a fire were to erupt, building materials would emit airborne PCBs,

asbestos and other hazardous materials as well as the potential for emission of dioxins and furans formed by PCB combustion. A large scale evacuation of the impacted neighborhoods would likely be required, depending on the size of the fire and weather conditions present.[1] Expanded offsite cleanup of PCBs and other residues could be required. In addition, fire suppression activities would likely produce contaminated surface water runoff that would discharge to the Acushnet River.

5. NPL Status

This Site is not listed, nor is it expected to be listed, on the NPL.

B. Other Actions to Date

1. Previous Actions

Pursuant to a 1982 Consent Order entered into by Aerovox and EPA, Aerovox (which was an operating facility at the time) conducted a site investigation, focusing on an unpaved area at the eastern end of the Site bordering the Acushnet River and an unpaved strip of land north of the manufacturing building. At the same time, Aerovox also entered into a similar Consent Agreement with the Massachusetts Department of Environmental Quality Engineering now named MassDEP. Results of the investigation indicated that PCBs were present in the soil at concentrations exceeding 50 ppm, and as high as 65,000 ppm, and also present within the shallow, perched groundwater at the Site.

Under the EPA and State Consent Orders, Aerovox capped the impacted soil areas with the HAC cap and installed a steel sheet pile cutoff wall to serve as a vertical barrier to groundwater and tidal flow into and out of the impacted soils. Construction was completed in June 1984.

In 1984, EPA and Aerovox entered into a Supplemental CERCLA Consent Order. As part of the agreement, Aerovox commenced a long-term monitoring and maintenance program, including compliance with reporting requirements outlined in the program and to take maintenance measures, as necessary, to maintain onsite containment and prevent the release of PCBs.

In 1988, Aerovox removed two 10,000 gallon No. 6 fuel oil storage tanks and one 250 gallon condensate collection tank from a bunker following a request by MassDEP after Aerovox reported a release of petroleum on the property. After removal of the tanks, soil borings and groundwater monitoring wells were installed to assess the extent of petroleum released in the vicinity of a former concrete oil bunker located south of the manufacturing building boiler room.

Upon another request by MassDEP in 1989, an additional assessment of soil and groundwater was conducted by Aerovox in this area. MassDEP required that a short-term measure be

[1] The Emergency Management Department of the City of New Bedford has prepared an Aerovox Evacuation Plan in the event of a facility fire that includes 500-foot, ¼- mile and ½- mile evacuation zones. This plan, included in the administrative record, identifies all special needs facilities and special institutions (i.e., schools, child care facilities and assisted living facilities) within each of these zones.

implemented to eliminate or significantly reduce the potential for further oil migration by removing source material from the vicinity of the bunker. Petroleum product and water from the bunker was removed; petroleum impacted soils were excavated and treated and recycled onsite into an asphalt base course for the parking lot; an oil-water separator was installed to control and recover floating petroleum product; and post construction monitoring of the oil-water separator system was performed. The work was completed in 1990.

2. Current Actions

In 2008, PCB-contaminated wall panels and carpeting in the western-most office annex portion of the building were removed by EPA/U.S. Army Corps of Engineers (Corps) contractors and placed elsewhere in the building to allow the remainder of the office annex to be demolished and disposed offsite as non-TSCA waste. In fall 2008, EPA/Corps contractors resealed the HAC cap after the shoreline area was used during mechanical dredging of Aerovox shoreline sediment as part of the New Bedford Harbor Superfund cleanup. The HAC cap area impacted by these operations was protected from truck traffic during the implementation of this work.

More recently, since early February 2009, 24-hour manned security has been provided by the City, with funding assistance provided by AVX.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

Beginning in the 1980's, the State issued various cleanup orders to prior property owners to address soil and groundwater contamination at the Site. See Section I.B1 above for details of these enforcement actions.

Under the bankruptcy settlement, the City was designated as first responder for problems at the Site during the time that Aerovox retained legal and record title to the Site. The City received $250,000 on its administrative claim for the purpose of maintaining the fire suppression system and performing other property maintenance and security measures at the Site. Since that time, the City has provided Site security, electricity, fire suppression measures and purchased insurance for the vacant building. In January 2005 a Site Information and Preplan was prepared by the City's Fire Department and, within the last few months, the City, with financial assistance from AVX, has hired 24-hour guard service at the Site.

Also pursuant to the bankruptcy settlement, after a certain holding period, the Site became the property of 740 Belleville Avenue LLC, which was organized as a Massachusetts limited liability company for the purpose of facilitating the transfer of the property to a Brownfield's developer and whose members were the City and the New Bedford Redevelopment Authority. In October 2008, the City took possession of the majority of the Site after a judgment was issued in a tax lien case for the property; the City subsequently took title to the remainder of the property in September 2009.

Since 2001, the City has targeted the Site for Brownfields redevelopment but efforts to attract a developer have been unsuccessful to date. In 2006, with the release of the SEE/CA, EPA entered into a Cooperative Agreement with the City in an effort to jump start Site cleanup activities and attract a potential developer. With the change in cleanup approach from onsite to offsite disposal, the Cooperative Agreement remains in place and the funds will be used by the City for offsite disposal of the building demolition debris and, if funds are remaining, for backfilling and post-removal site controls.

2. Potential for Continued State/Local Response

The City and MassDEP will continue to be involved with the Site; both are expected in the near future to enter into settlement agreements with AVX for cleanup activities at the Site. Once the NTCRA is complete, AVX, pursuant to the forthcoming settlement with the State, is expected to further evaluate the full nature and extent of contamination at the Site not addressed by this NTCRA or the prior removal actions, and implement further cleanup actions to address remaining soil and groundwater contamination. This work will be performed in cooperation with the City, under State oversight. Once the NTCRA and 21E cleanups have been completed, the Site is expected to enter into the operation, maintenance and monitoring phase (OMM) required under TSCA and expected to be required under 21E which the City is expected to perform using funds that will include the escrow account funds provided by AVX (see Section I).

As part of its settlement with AVX, the City will implement institutional controls in the form of a deed restriction to prevent future use of groundwater, required pursuant to TSCA and, upon completion of the 21E cleanup, an activity and use limitation (AUL) to ensure the integrity of the capped areas pursuant to 21E. To ensure future Site use is consistent with these cleanup actions, any future redevelopment of the Site, subsequent to the NTCRA and 21E cleanups, will be required to involve an LSP.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Based on Site conditions and information available on the hazardous substances present, the Site poses the following threats to public health, welfare, or the environment:

"Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants" [300.415(b)(2)(i)];
The property is bordered by a residential neighborhood to the west, two large industrial facilities to the north and south, and the Acushnet River to the east.

Contaminant migration during a fire, as a result of further deterioration of the roofs and other structural components of the buildings, or through unauthorized or unintentional removal of contaminated materials could potentially expose nearby human populations, animals, or the food chain to PCBs, VOCs and other breakdown products. In responding to a fire at the Site, firefighters may be exposed to various hazardous substances present in the buildings, including PCBs, asbestos, and potentially dioxins and furans formed by PCB combustion. In addition, if access to the buildings and its contents is not sufficiently restricted, this could result in exposure to humans from hazardous substances should trespassers come into contact with these materials or if these materials are intentionally or unintentionally removed from the Site.

"Actual or potential contamination of drinking water supplies or sensitive ecosystems" [40 CFR 300.415(b)(2)(ii)];
There is potential that releases from within the buildings to an existing network of drain lines or to sub-slab soils could potentially affect groundwater or the Acushnet River. It is likely that unsealed cracks in the facility floors and sumps have been pathways for migration of the contamination into the groundwater or river. Site groundwater is contaminated at levels exceeding state standards for industrial/commercial areas (groundwater in this area is not a drinking water source). In addition, precipitation runoff from the highly contaminated buildings or water runoff from firefighting should the facility catch on fire could further contaminate stormwater and groundwater, and would discharge into the Harbor, causing recontamination issues to areas already dredged during Harbor remediation.

"Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release" [300.415(b)(2)(iii)];
Drums and containers of hazardous materials have been removed from the facility as part of the TCRA (see above). Only miscellaneous items such as small propane tanks, fire extinguishers and refrigerants remain.

"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released" [300.415(b)(2)(v)];
Due to the deteriorating condition of the facility and leaks in the roof, the PCB-contamination present throughout the interior of the facility can be released to the environment through rainwater or snowmelt entering the buildings through these leaks, followed by contaminant migration through floor drains, cracks and sumps. Similarly, PCB-contamination on the exterior of the facility can be released to the environment through weather-related processes. In addition, friable asbestos and asbestos-laden dust within the building can be released through broken windows. Over the long term and absent routine maintenance, weather conditions and UV radiation could damage the HAC cap and contribute to further PCB contamination of groundwater.

"Threat of fire or explosion" [300.415(b)(2)(vi)]; and
There is a threat of fire or explosion at the Site for several reasons. At least two other vacant mills in the area have caught on fire in recent years. There are large volumes of combustible material (e.g. office paper, wooden furniture, wooden building materials, wooden pallets) that may ignite. The dilapidated condition of the building and potential for trespassers and vandals also increases the potential for fire. Since building materials throughout the facility are contaminated with PCBs, in a fire or explosion these PCBs, as well as potentially dioxins and furans caused by combustion, could be released and expose nearby human populations, animals, or the food chain. In responding to a fire, firefighters may be exposed to various hazardous substance present in the building, including PCBs, asbestos, and potentially dioxins and furans formed by PCB combustion.

"The availability of other appropriate federal or state response mechanisms to respond to the release" [300.415(b)(2)(vii)].

EPA is the lead agency for this NTCRA, and has negotiated a settlement wherein a) AVX will demolish the facility, b) the City, using EPA funds through a Cooperative Agreement, will properly dispose the demolition debris offsite, and c) AVX will implement further characterization and cleanup under 21E. No other funds or response mechanisms are known to be available to respond to the release.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances at or from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and the environment. Hazardous substances were disposed of and released at or from the Site as a result of historical manufacturing operations at the facility during the period from 1938 to 2001. Such substances include, without limitation, PCBs and VOCs such as chlorobenzene and trichloroethylene. PCBs have been detected in Site soil, air, building materials and equipment, surface water runoff, parking lot asphalt and groundwater. VOCs have been detected in Site soils and groundwater. PCBs are very stable compounds that can persist for years when released into the environment.

Based on data derived from animal experiments and human studies, EPA has concluded that human exposure to PCBs constitutes a health threat. EPA has classified PCBs as a B2, probable human carcinogen, under its weight of evidence classification system. PCBs above regulatory levels have been detected in virtually all interior building materials and equipment. Specifically, exposure pathways to PCBs at the Site after an indoor spill include inhalation, dermal exposure, and ingestion. PCBs spilled indoors may be distributed into other areas of a building in a number of ways, such as through ventilation equipment or ductwork or by tracking. Industrial equipment and other non-structural materials such as clothing also can become contaminated. Trespassers may thus be subject to dermal exposure during illegal entry into the plant, may be subject to oral exposure during smoking or eating, and may inadvertently track contamination outside of the building.

In addition, vacancy of the former manufacturing facility poses a significant fire threat (other vacant mill buildings in the area have caught on fire in recent years). Air emissions created by a fire and run off from fire suppression activities into the harbor pose threats to human health and the environment. In the event of a fire, firefighters and abutters may be exposed to various hazardous substances present in the building, including PCBs, asbestos, and potentially dioxins and furans formed by PCB combustion. Since Aerovox vacated the building, significant deterioration has occurred, including increased roof leaks and heavy water damage throughout the building. Trespassing and vandalism (and the potential for tracking contamination offsite) has been a recurring problem.

V. EXEMPTION FROM STATUTORY LIMITS

This removal will require funding above $2 million and will require more than one year to implement, thereby exceeding the statutory cost and time limits on Fund-financed removal actions established under Section §104(c) of CERCLA and Section 300.415(b)(5) of the NCP. The NTCRA is estimated to cost not more than $24 million (in 2010 dollars) and take approximately 22 months to complete. A "consistency" exemption as explained below is invoked through this Action Memorandum to allow for the proposed removal action to exceed the $2 million ceiling and the 12-month limit for Fund-financed removal actions. Note that a previous time-critical removal action was undertaken in 2004 using approximately $290,000 of Aerovox bankruptcy funds: that action removed various drums and containers and other wastes abandoned at the Site and included general repair of the cap installed by Aerovox pursuant to the 1982 Order.

CERCLA §104(c) states that Fund-financed removal actions can exceed the $2 million and 12-month statutory limits if conditions meet either the "emergency exemption" criteria or the "consistency exemption" criteria. The consistency exemption requires that the proposed removal be appropriate and consistent with the remedial action to be taken. As described below, conditions and proposed actions at the Site meet the criteria for a consistency exemption.

A. Appropriateness

EPA OSWER directive 9360.0-12A, "Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions," June 12, 1989, states that an action is appropriate if the activity is necessary for any *one* of the following reasons:

1. To avoid a foreseeable threat;
2. To prevent further migration of contaminants;
3. To use alternatives to land disposal; or,
4. To comply with the offsite policy.

The NTCRA described herein meets criteria one and two identified above. The proposed removal action permanently avoids the foreseeable threat of fire and subsequent release of PCBs (and the potential breakdown products of dioxins and furans) and other contaminants to the surrounding urban neighborhoods posed by the manufacturing facility and its contents. The proposed NTCRA also prevents further migration of contaminants via stormwater to the harbor and exposure to contaminated soils and elevated airborne PCBs due to the contaminated building materials. In addition, by addressing the building and capping the Site at this time, the removal action will reduce the scope of the 21E cleanup. The state cleanup will also address the need for permanent groundwater source control.

The proposed removal action is therefore appropriate and necessary.

B. Consistent With the Remedial Action

The proposed NTCRA is consistent with EPA's remedial action at the abutting New Bedford Harbor Superfund Site, since it serves to minimize further releases of PCBs from the Aerovox

Site to the harbor as a result of surface water runoff and groundwater flow, and since it eliminates potential releases of PCBs to the harbor in the event of a mill fire (e.g., from fire fighting water runoff and PCB-contaminated soot deposition). Two other vacant mills in the area have caught fire in recent years.

The proposed NTCRA is also consistent with the anticipated additional cleanup actions to be performed pursuant to 21E under the direction of an LSP. (No additional EPA remedial action beyond the NTCRA is anticipated.) Since the highly contaminated and deteriorating building would need to be demolished under a state cleanup action, the proposed NTCRA is consistent in the broadest sense with the remedial action for the Site. Demolition of the building also provides AVX the ability to conduct a full site characterization (e.g., including underneath the building foundation) pursuant to 21E. Once the NTCRA has been completed, AVX pursuant to the ACO between AVX and MassDEP, will further evaluate the full nature and extent of contamination at the Site not addressed by the NTCRA and implement further cleanup actions to address remaining soil and groundwater contamination. All 21E activities will be conducted under the direction of an LSP, with oversight by MassDEP.

As part of its settlement with AVX, the City will implement institutional controls in the form of a deed restriction to prevent future use of groundwater, required pursuant to TSCA, and an AUL to ensure the integrity of the capped areas pursuant to 21E. Moreover, AVX will fund an escrow account that will finance long-term operation and maintenance of the cap and a groundwater containment system as well as groundwater monitoring activities that are required pursuant to TSCA.

Finally, the response action authorized by this Action Memorandum, along with the 21E cleanup, will result in a complete source control and management of migration remedy for the Aerovox Site, effectively controlling or eliminating any further source of PCBs or potential VOCs from this facility over the long term to the New Bedford Harbor sediments and waters.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Removal Action Alternatives

Virtually all building samples indicate that building materials are contaminated at or above TSCA-regulated levels for PCBs. While developing the 1998 EE/CA, Aerovox commissioned a Preliminary Building Cleanup Alternatives Evaluation, which is now part of the Administrative Record for this Site. In that evaluation Aerovox looked at two alternatives that might have allowed continued use rather than demolition of the existing building. Alternative A consisted of removal of TSCA-regulated materials ($13,200,000); Alternative B consisted of encapsulation of the TSCA-regulated materials ($4,500,000) but both included a number of unrealistic major assumptions. Both were ultimately rejected in favor of the building demolition alternatives that were evaluated in the EE/CA and SEE/CA. Both alternatives involved interior surface cleaning techniques, and a surface cleaning pilot study of non-porous surfaces was conducted as part of the evaluation. Results of that pilot study indicated that a one time washing process was NOT

effective in reaching the safe regulatory criteria of 10 ug/100 cm^2 PCB concentrations for non-porous surfaces. Because a) cost estimates were based on the assumption that repeated rounds of verification sampling and recleaning of interior surfaces would NOT be required, b) the pilot study showed that cleanup levels would NOT be reached and c) it was unknown how many washings of the 450,000 square foot building would be needed (or that all non-porous surfaces could ever reach safe levels), neither alternative was carried forward into the EE/CA.

Therefore, the 1998 EE/CA evaluated three alternatives for demolition and capping of the Aerovox Site, with the underlying assumption for all alternatives that the land use would remain industrial/commercial. The alternatives differ in the way the first floor's concrete walls and floor (i.e., the main building's foundation, portions of which are PCB-contaminated) would be dealt with.

Alternative 1: Building Demolition - the concrete foundation would be left in place.

Alternative 2: Building Demolition - the more highly contaminated western portion of the concrete foundation would be removed and disposed offsite.

Alternative 3: Building Demolition – the entire concrete foundation would be removed and disposed off-site.

All three alternatives include the following basic components:

- asbestos and other hazardous materials inside the building would be inventoried and removed prior to demolition;
- the building would be demolished in compliance with health and safety and air monitoring plans;
- demolished waste above TSCA thresholds would be disposed at a licensed offsite TSCA facility;
- demolished waste below TSCA thresholds would be disposed both on- and offsite;
- highly PCB-contaminated soils below the basement's concrete floor and in soil outside of the building would remain in place; and
- the entire 10.3 acre Site would be covered with an impermeable cap.

The 1998 EE/CA recommended that the first alternative be implemented, concluding that it was equally effective and implementable as the other two alternatives, yet would cost significantly less. As mentioned above, the EE/CA was issued for public comment, but no comments were received. The subsequent bankruptcy of Aerovox, the performing party at the time, caused a significant delay in executing the proposed EE/CA cleanup.

As a result, in the 2006 SEE/CA, EPA updated the EE/CA to reflect the current status of the Site by modifying the objectives to minimize releases of PCBs via stormwater, groundwater and air through demolition and capping, to coordinate the NTCRA with future reuse plans and to assist in establishing post-removal site controls. In addition, the SEE/CA included a draft TSCA risk-based determination that found the recommended alternative did not pose an unreasonable risk to

human health or the environment as long as certain conditions were met, including the need for institutional controls that prohibit any use or contact with groundwater and which prohibit land use activities that would adversely affect the site cover.

In addition, the SEE/CA evaluated two additional alternatives for the Site - New Alternative 1 and New Alternative 2, as explained below:

New Alternative 1: Building Demolition with Disposal of All Demolition Waste Onsite

Similar to the first three alternatives, the basic components are the same except that all of the demolition waste, including that above the TSCA regulatory thresholds would be disposed on-site within the building footprint. During the demolition and disposal process, the waste would be segregated and/or processed for size reduction and ease of handling prior to final disposition in the basement. The concrete foundation would be left in place, similar to the 1998 EE/CA Alternative 1. Once the demolition waste is placed inside the basement, all areas of the Site with soil PCB levels greater than 2 ppm would be covered with a protective cap.

New Alternative 2: Building Demolition with Disposal of All Demolition Waste OffSite (the selected alternative)

This is the same as New Alternative 1 except that under this alternative (now EPA's selected alternative) all demolition waste would be disposed offsite at properly licensed facilities. Unless certain waste streams can be shown to be non-TSCA, the demolition waste would be disposed at licensed TSCA landfills.

The demolition and segregation/processing and environmental standards would be the same as for New Alternative 1; similarly, the first floor's concrete floor and walls would remain in place. and all areas of the Site with soil PCB levels greater than 2 ppm would be covered with a protective cap.

Recognizing the lapse of time and the changed Site circumstances, EPA issued the SEE/CA for public comment. Of the sixteen comments received, fifteen did not support the initial remedy selected by EPA (New Alternative 1) and instead supported an alternative that did not leave contaminated building debris buried onsite. Based on the negative public comment received, this Action Memorandum includes offsite disposal of contaminated building debris.

Comparison of Alternatives

As required under CERCLA and the NCP, during the EE/CA and SEE/CA process, all of the alternatives were evaluated independently based upon cost, effectiveness, and implementability. Cost was used to assess options of similar effectiveness and implementability. Effectiveness was based upon the ability of the alternative to meet the removal action objectives. The effectiveness evaluation also involved the assessment of federal and state applicable or relevant and appropriate requirements (ARARs). Implementability involved the assessment of technical

feasibility, availability, and administrative feasibility. After comparing these alternatives and after considering public comments received on the SEE/CA, EPA has selected New Alternative 2 as presented below as the best balance of human health, environmental protection and public acceptance considering cost, effectiveness, and implementability of each of the alternatives. Immediately below is a comparison of the five alternatives based on effectiveness, implementability, and cost. Please see the 1998 EE/CA and the 2006 SEE/CA for a more detailed presentation of the cost and components of each alternative.

Effectiveness

Since all five alternatives include the demolition of the mill facility and capping of soils with PCB levels above 2 ppm, all alternatives are considered effective at meeting the removal action goals. However, since New Alternative 2 removes all demolition material from the site, this alternative is considered the most effective and protective of human health and the environment and provides for easier redevelopment of the Site.

All five alternatives would require post removal site controls (e.g., cap maintenance and institutional controls) to maintain a protective response action.

Implementability

Technical Feasibility – All alternatives are technically feasible, and have been implemented at other similar sites around the country. Removal of the increased volumes of concrete foundation pursuant to Alternatives 2 and 3 would involve additional technical issues and the potential for increased emissions from the concrete cutting and processing that would be required.

Also, for New Alternative #1, the inherent uncertainty of the final volume of processed demolition material creates some uncertainty regarding whether the disposal volume offered by the basement would be sufficient. If the basement volume proved to be insufficient, a slight mounding of the waste might be required in order to implement this alternative.

Administrative feasibility – All alternatives are considered administratively feasible with respect to the need for disposal facility approvals, access issues and implementing institutional controls since the City is the current Site owner. All alternatives would require exemptions from statutory limits for cost and duration for removal actions.

Cost

The updated capital cost estimates from the SEE/CA for all five alternatives considered are summarized below. **Costs listed are in 2007 dollars**. Also see the further discussion on cost in section VI.B.2. Again, none of the funding for this NTCRA will be from the Regional removal allowance. Rather it will be funded by a mix of sources including a PRP and a Cooperative Agreement between EPA and the City (with funds from the Aerovox bankruptcy and funds made available through an exchange of appropriated annual funds for the New Bedford Harbor Site for Harbor settlement funds held in a court registry account.

	EE/CA Alt. 1	EE/CA Alt. 2	EE/CA Alt. 3	SEE/CA New Alt. 1	SEE/CA New Alt. 2
Capital cost	$15.0 million	$16.4 million	$18.1 million	$7.9 million	$14.5 million

B. Proposed Action

The proposed action for this NTCRA is to achieve a controlled demolition of the PCB-contaminated vacant mill building, leaving the concrete foundation in place, with offsite disposal of all demolition materials (New Alternative 2). This response action also includes capping of all site soils above 2 ppm PCBs. Upon completion of all NTCRA work, there will be an efficient transition to the state cleanup program in accordance with the ACO between AVX and MassDEP, under the direction of a Massachusetts LSP, and with oversight by MassDEP, that will include capping of impacted soils as required by 21E and that will address contaminated groundwater.

This NTCRA entails the following work elements:

- Comply with air and water quality performance standards;
- Utility decommissioning;
- Hazardous and regulated material removal and offsite disposal;
- Other interior equipment and material removal;
- Demolition of building;
- Debris processing and loading for offsite disposal;
- Offsite disposal;
- Basement backfilling;
- Filling of subsurface features;
- Placement of a TSCA compliant asphalt cap in areas exceeding 2 ppm PCBs in soil (including soil covered by the current asphalt parking lot);
- TSCA groundwater monitoring;
- Post-removal site control;

In this instance, the NTCRA is to be implemented in a mixed-work approach, wherein a PRP will perform all demolition and capping activities, and the City (using EPA funds in a Cooperative Agreement) will perform all transportation and disposal activities and, with any remaining funds, provide backfill and perform post-removal site controls. The PRP will also fund the City's performance of groundwater monitoring and any remaining post-removal site controls not funded by the Cooperative Agreement.

1. Removal Action Objectives

Based on the conditions described above, the overall removal action goals are to minimize impacts to human health and the environment caused by the presence of high levels of PCBs in the vacated mill facility and in surrounding Site soils. These conditions present a significant risk

that will be addressed under this NTCRA, while long-term remedial actions for the Site will be evaluated and implemented under the 21E program.

The following performance standards and Removal Action Objectives have been developed with respect to disposition of the building and its contents. The Removal Action Objectives were developed in consideration of the potential human health and ecological risks associated with exposure to these media.

a. Meet Performance Criteria during Removal Action

Performance standards for air and water quality shall be complied with at all times during the performance of the work. In the event of an exceedance, the work shall immediately stop and a proposed corrective action plan shall be submitted. Work shall only resume with EPA's approval and upon implementation of the corrective action plan.

i. Air Quality

Work shall be designed and implemented in a manner that minimizes airborne PCBs, particulates, asbestos, silica, mercury and lead to the maximum degree possible. The point of compliance for air quality performance standards shall be the Site boundary for the northern, southern and eastern boundaries. The point of compliance for the western boundary shall be on the western side of Belleville Avenue, due west of the Aerovox property. At no time shall the levels exceed the following standards:

- Airborne particulates (PM_{10}): not to exceed **100 $\mu g/m^3$** (10 hour Time Weighted Average)
- Airborne PCBs:

  at the northern, southern and eastern points of compliance: not to exceed **10 $\mu g/m^3$**

  at the western point of compliance: station-specific average not to exceed **0.25 $\mu g/m^3$**
- Airborne asbestos: not to exceed **0.1 fiber/cubic centimeter**
- Airborne silica: not to exceed **25 $\mu g/m^3$**
- Airborne mercury (inorganic): not to exceed **50 $\mu g/m^3$**
- Lead: not to exceed **50 $\mu g/m^3$**

ii. Water Quality

Stormwater

Contaminant migration in stormwater during the work shall be designed to meet the stormwater performance standards listed below. An active stormwater collection program shall be installed prior to implementation of the work. Best management practices shall be employed during the work to minimize the potential for PCB contamination of stormwater.

Best management practices shall include, but not be limited to:

- Placement of hay bales or similar erosion control devices and oil booms around all catch basins, stockpiles and debris processing areas;
- Strategic placement of debris processing facilities to minimize travel distance to and from the building unless such processing is performed inside the existing building; and
- Whenever possible, avoiding processed debris stockpiling by loading the transportation and disposal vehicles directly from the debris processing area.

The point of compliance for collected stormwater runoff shall be the end of the discharge pipe if direct discharge to the Acushnet River is selected. PCB concentrations in stormwater runoff shall not exceed the maximum PCB level of **13 µg/l** as measured at any one of the stormwater discharge outfalls. Collected stormwater runoff may also be discharged to the City sewer located on Belleville Avenue, provided that the maximum PCB concentration is less than or equal to **5 µg/l** and a discharge permit from the City is secured and is fully complied with, including the required monitoring frequency.

Once a stormwater PCB level exceeding 13 µg/l has been documented, the stormwater management program shall continue to be operated for all non-compliant outfalls until compliance is documented and EPA approves discontinuing the active stormwater collection program. Compliance at the outfalls shall be documented by achieving the 13 µg/l discharge standard during a significant rain event (<0.25 inches) or during a lesser rain event with EPA's prior approval.

Dust Suppression Water

Prior to implementation of dust suppression activities, runoff control measures shall be implemented to prevent offsite migration of dust suppression water. Runoff control measures may be part of or in addition to the stormwater control measures described above. All dust suppression water runoff exterior to the building footprint will be collected, treated if necessary, and discharged to the Acushnet River or the City sewer on Belleville Avenue provided that the PCB concentration is less than or equal to 13 µg/l and 5 µg/l respectively (a discharge permit from the City shall be secured for City sewer discharge).

T&D Vehicle Decontamination Water

All T&D vehicle decontamination water will be collected, treated if necessary, and discharged to the Acushnet River or the City sewer on Belleville Avenue provided that the PCB concentration is less than or equal to 13 µg/l and 5 µg/l respectively (a discharge permit from the City shall be secured for City sewer discharge).

b. Safely Demolish Building

The PCB-contaminated building shall be safely demolished in a manner, to the extent practicable, that is both in compliance with ARARs (applicable or relevant and appropriate

regulations) and cost-effective, and which occurs in a timely manner prior to excessive building deterioration or a potential mill fire.

c. Prevent Direct Contact with Site Soils

Direct contact with Site soils containing PCBs at concentrations greater than 2 ppm will be prevented through the installation of a protective cap.

Once the buildings have been demolished and the building footprint backfilled with clean soil, the building footprint will be covered with an asphalt cap within 12 months of completing the building demolition.

Cracks, depressions, holes or other damage to the existing HAC cap will be repaired using material similar to the existing HAC material.

Any other portion of the Site where soil or asphalt PCB levels exceed 2 ppm (at surface or depth) will be covered with an asphalt cap that includes, at a minimum, the following:

- placement of a visual barrier layer (e.g., warning tape, orange snow fence) on existing (or reconditioned) grade;
- placement of a 2-inch thick asphalt binder coarse; and
- placement of a 1-inch thick asphalt wearing coarse.

In areas where the existing ground conditions are unsuitable to support a new asphalt cap, the existing ground surface will be reconditioned or engineered as appropriate to support such a cap.

For the portions of Hadley and Graham Streets that are part of the Site, the existing asphalt surface shall suffice in lieu of the above asphalt cap requirements, provided that an EPA-approved representative sampling program demonstrates that the PCB levels in these existing surfaces are below 2 ppm.

All capped areas shall be maintained in accordance with an EPA-approved monitoring and maintenance plan until a 21E-based monitoring and maintenance program, consistent with the TSCA Determination (Appendix C to this Action Memorandum), is in place.

d. Minimize Future Releases

Demolition of the building and placement of a protective cap at the Site will minimize future releases of PCBs via stormwater and groundwater discharges to New Bedford Harbor and will minimize future emissions of airborne PCBs from the Site.

e. Coordinate Activities for Future Redevelopment of the Site

To the extent practicable, building demolition and site capping will be performed so that these activities do not interfere with future commercial or industrial redevelopment of the Site.

f. Establish Institutional Controls

As part of its settlement with AVX, the City will implement institutional controls in the form of a deed restriction to prevent future use of groundwater, required pursuant to TSCA, and, upon completion of the 21E cleanup, an AUL to ensure the integrity of the capped areas pursuant to 21E. To ensure future Site use is consistent with these cleanup actions, any future redevelopment of the Site, subsequent to the NTCRA and 21E cleanups, will be required to involve an LSP.

2. Proposed action description

The removal action includes demolition of the manufacturing building, leaving the concrete foundation in place; disposal of all demolition waste offsite; filling the basement to grade with clean fill; capping the Site where PCB concentrations in soil are equal to or greater than 2 ppm; and performing post-removal site controls (including cap monitoring and maintenance and groundwater monitoring). See Section VI.B above for additional information on the proposed action.

Effectiveness

This alternative would eliminate the threat of fire and its attendant consequences. This alternative also provides the greatest protection in that the risk from direct contact, from a release, or from exposure to the building and its contents would be eliminated since hazardous substances on or in the facility would be removed permanently from the Site and contaminated site soils would be capped. During the performance of this work, all short-term risks posed to the community, onsite workers, or the environment would be fully addressed through stringent air monitoring, stormwater monitoring and through other engineering controls (such as dust suppression and erosion control measures). Protection of workers conducting removal action activities would include the use of engineering controls, personal protective equipment, worker and area air monitoring, and compliance with a site-specific health and safety plan.

Ability to Achieve Removal Objectives – This alternative would fully meet all of the Removal Action Objectives. The threats of release and direct exposure would be eliminated by removing contaminated materials and building materials for offsite disposal and capping site soils. New Alternative 2 would effectively contribute to the additional site characterization and cleanup to be performed under 21E.

Ability to Achieve ARARs – This alternative would attain ARARs to the extent practicable.

Implementability

Technically feasibility – This alternative is technically feasible, and has been performed on other similar sites. This work is currently estimated to take approximately 22 months from the effective date of this Action Memorandum to complete, more than the statutory one-year limit for Fund-financed removal actions.

Availability – Equipment, personnel, transportation and offsite disposal services and laboratory testing capacity are available to complete this alternative.

Administrative Feasibility – This alternative is considered administratively feasible, in that no permits will be required for onsite work (although AVX has agreed to secure a demolition permit), no easements or rights-of-way will be required, nor are impacts to adjoining properties considered likely. The City has also provided access to the Site to all parties involved with the work. The cost of this alternative, however, exceeds the statutory limit of $2,000,000 for a Fund-financed removal action. As noted above, the duration of this alternative also exceeds the statutory time limit for a Fund-financed removal action. However, as provided above, the "consistency" exemption from the statutory limits has been satisfied. The technical scope of the removal action would be "appropriate and consistent with the remedial action to be taken" (as defined in the *Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions* (OSWER Directive 9360.0-12A, June 1989), as outlined above.

Cost

The cost for New Alternative 2 was estimated to be $14.5 million in the 2006 SEE/CA, in 2007 dollars. Consistent with EPA guidance, cost estimates at the feasibility study stage (which the SEE/CA represents) are considered accurate within a range of 50% above and 30% below the actual estimated value. The upper end of the cost range for New Alternative 2, when converted to 2010 dollars (assuming 3.5% escalation per year due to inflation)[2], is therefore estimated to be approximately $24.1 million. Given the uncertainties regarding the total tonnage of the large amount of equipment and materials left inside the building when it was vacated, EPA believes the final cost of the NTCRA could be closer to this upper end of the estimate.

3. Community relations

In advance of and during performance of this NTCRA, EPA will continue its active outreach and information campaign to keep residents, local citizen groups and abutters well informed of the NTCRA activities. Public meetings will be held as necessary during the NTCRA work. See the Community Relations Plan attached as Appendix B to this Action Memorandum.

The City and State fully support EPA's decision to pursue New Alternative #2 for this NTCRA.

4. Contribution to remedial performance

Contribution to the efficient performance of remedial activities

Under Section 104(a)(2) of CERCLA and Section 300.415(d) of the NCP, removal activities shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned. See EPA's OSWER Directive 9360.0-13, "Guidance on Implementation of the 'Contribute to Remedial Performance" Provision." This provision was meant to avoid repetitive removal actions that do not take into account their impact on the performance of subsequent remedial actions and to allow for more

[2] A 3.5% escalation factor was used in order to create a conservative cost estimate for New Alternative 2 and provide an upper bound on the estimated cost range.

permanent tasks to be completed under removal authorities. 53 Federal Register 51409-51410 (December 21, 1988). Together, Sections 104(a)(2) and 104(c) ("consistency" exemption) are intended to promote and enhance efficiency and continuity.

This removal action will contribute to the efficient performance of the long term cleanup action to be conducted at the Site under 21E by eliminating the potential for further release of hazardous substances found on or in the facility buildings at the Site. The NTCRA will also facilitate soil borings underneath the concrete foundation needed for the 21E cleanup as it will be easier to mobilize drilling rigs with the buildings demolished. Demolition will also be required under any long-term cleanup plan due to the deteriorating condition of the buildings and the potential for collapse of the buildings due to disrepair or fire. The proposed NTCRA therefore contributes to the efficient performance of the long term remedial work expected to take place, for this Site, under 21E.

In addition, while the Aerovox Site is not part of the New Bedford Harbor Site, its location abutting the Harbor and its historic connection to the contamination in the Harbor heighten the importance that the NTCRA action be consistent with the remedial action underway at the Harbor. This NTCRA action, combined with the 21E cleanup will ensure long-term source control of PCB discharges from the Aerovox Site via stormwater or groundwater to the New Bedford Harbor sediment and waters.

5. Description of alternative technologies considered

As discussed above in Section VI.A., Aerovox commissioned a Preliminary Building Cleanup Alternatives Evaluation to determine if the building could be decontaminated. This evaluation determined that it was unrealistic to expect that the building could be decontaminated.

In addition, EPA commissioned an evaluation of alternative methods and decontamination approaches to reduce the PCB contamination of the building materials to be disposed. This evaluation concluded that certain debris materials (e.g., granite window sills), but not the majority of materials, have the potential to be disposed as non-TSCA waste. The T&D contractor will be required to use these decontamination approaches to the extent they can be used cost-effectively during offsite disposal of the demolition debris.

6. Applicable or Relevant and Appropriate Requirements (ARARs)

Pursuant to 40 CFR 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. A comprehensive list of ARARs that will be met to the extent practicable during the performance of this NTCRA, including state ARARs, is attached as Table 1. MassDEP had been informed of the revised removal action and, in February 2009, reviewed the ARARs in the August 1998 EE/CA and the April 2006 SEE/CA. As a result, MassDEP has clarified certain ARARs and identified some additional guidance documents that it believes should be included in the ARARs list. Table 1 reflects the final universe of ARARs from the potential ARARs set out in Tables 13 and 14 of the EE/CA, Table 2 of the SEE/CA and those identified by the State.

Also attached as Appendix C is the final TSCA Determination issued in accordance with 40 CFR 761.61(c) of TSCA which finds that the NTCRA will not pose an unreasonable risk of injury to health or the environment as long as the conditions set out in the Determination are met. These conditions require that all performance standards be met during demolition, processing and capping activities, that a long-term operation, monitoring and maintenance program be implemented and that institutional controls be imposed that prohibit any use or contact with groundwater and prohibit land use activities that would adversely affect the site cover or containment barrier.

The list below reflects the revised ARARs resulting from the changes made to the recommended alternative in the SEE/CA based on public comments received by EPA.

TSCA: 49 CFR 761.61(a) which includes prescriptive cleanup standards for porous, non-porous and bulk remediation waste has been deleted since this removal action is being conducted under the risk based cleanup process in 40 CFR 761.61(c). If material is being cleaned for recycling, reuse or smelting purposes, the decontamination standards in 40 CFR 761.79 will apply.

Asbestos: The requirements set out in 40 CFR 763, Appendix D to Subpart E relating to asbestos containing materials in schools were included in the SEE/CA as applicable to offsite disposal or onsite landfilling of asbestos. The option for onsite landfilling of asbestos has been eliminated in this Action Memorandum; therefore, the provisions regulating onsite landfilling no longer apply. In addition, because these regulations directly apply to schools, they are not applicable but rather relevant and appropriate since handling of asbestos, whether from a school or this facility, is either the same or similar. Asbestos will be properly wetted during loading into leak-tight containers in accordance with the requirements set out in 40 CFR 763, Appendix D to Subpart E.

Hazardous Waste: MassDEP asked that 310 CMR 30.305, 30.310 and 30.320 of the Massachusetts Hazardous Waste Regulations be included as ARARs. Originally, the 1998 EE/CA included certain substantive provisions of these regulations. However, they were subsequently eliminated in the SEE/CA based on the exemption provided in 310 CMR 30.105 for PCB waste that is regulated pursuant to TSCA[3]. MassDEP correctly points out that in addition to PCB waste, other hazardous or listed waste or potentially regulated recyclable material will likely be generated during site preparation and building demolition. It is true that transportation and disposal of these materials would be governed by 310 CMR 30.305, 30.310 and 30.320; however, ARARs only apply to activities conducted onsite. Therefore, EPA is not including them in Table 1; instead, EPA expects that those parts of the response action involving offsite disposal activities will comply with these and any other laws that apply to actions occurring offsite.

Acknowledging the State's concern that waste other than adequately regulated PCB waste will be generated during site preparation and building demolition, EPA is adding back the substantive requirements of Massachusetts Hazardous Waste Regulations 310 CMR 30.100 which establish standards for the identification and listing of hazardous waste including 310 CMR 30.125 as it applies to mercury and mercury-containing equipment onsite, 310 CMR 30.680 governing the use and management of containers as it applies to the containerization of mercury or other hazardous waste encountered onsite, and 310 CMR 30.1044 which establishes standards for

[3] EPA acknowledges that some of the demolition waste may be listed waste under MA02 and would not be exempt from the Massachusetts Hazardous Waste regulations.

management of universal waste, including batteries, thermostats, mercury-containing devices and mercury containing lamps.

Finally, for clarification, EPA is eliminating the requirements for closure and post closure care of a landfill or cell (310 CMR 30.633, 30.660-669) since all demolition material will be disposed of offsite, a TSCA-compliant cap will be installed onsite wherever PCB concentrations in soil equal or exceed 2 ppm, and a 21E action to address remaining contamination left onsite will directly follow this NTCRA. Post-removal site controls consisting of long-term monitoring of the cap, containment barrier and groundwater and institutional controls consistent with the TSCA Determination will also be implemented at the Site.

Massachusetts Contingency Plan: MassDEP had requested that the provisions of 310 CMR 40.0996(4) and (5), which govern capping requirements where soil remaining onsite under a protective cover may exceed the MCP Upper Concentration Limits (UCL) for certain contaminants, be considered as ARARs. However, MassDEP also noted in its request that these requirements would not be relevant if the NTCRA is followed by further cleanup under 21E and the MCP. Because that is the case, EPA will not evaluate these requirements as ARARs. (See further discussion concerning MCP requirements below.)

MassDEP also requested that 310 CMR 40.0017, which sets forth administrative requirements for environmental sample collection and analyses, and 310 CMR 40.0191(2), which describes criteria for response action performance standards, be considered as ARARs. Several guidance documents concerning environmental sampling were also identified. As the State noted, these regulations and policies will control the subsequent 21E cleanup after the removal is completed. Should any data collected during the removal action be used to support the MCP response action, risk characterization and/or Site closure under the MCP, then these regulations and policies would apply. For informational purposes, these guidance documents have been included in Table 1 for consideration with a notation to also refer to the specific statutory citations.

MassDEP, pursuant to 310 CMR 40.0110, considers response actions at a disposal site to be adequately regulated for the purposes of complying with the MCP if the site is regulated by, among other things, another government agency. In particular, MassDEP considers a site adequately regulated if the site is subject to a CERCLA response action (310 CMR 40.0111). Because this removal is conducted under CERCLA, EPA will not consider these regulations of the MCP as ARARs. Similarly, EPA is deleting the reference to the MCP in Table 13 of the EE/CA which had cited the Method 1 soil and groundwater cleanup standards. Groundwater is beyond the scope of this NTCRA and will be addressed as part of the 21E action that follows the NTCRA cleanup. In accordance with the final TSCA Determination attached as Appendix C any soil remaining onsite with PCB concentrations of 2 ppm or above will be covered with a TSCA compliant cover and maintained in accordance with the TSCA Determination.

Again, EPA notes that a 21E cleanup will occur directly after the removal action is completed. Inasmuch as that action will be governed by the MCP, EPA recommends that any portion of the CERCLA action that will be carried forward into the 21E action, including sampling activities, be conducted in accordance with the MCP.

Solid Waste Regulations: MassDEP also identified the now promulgated 310 CMR 19.017, governing the disposal of certain identified solid waste streams as an ARAR and requested that MassDEP's Guide to Regulations for Using or Processing Asphalt, Brick and Concrete Rubble be included as a guidance document. While EPA believes that a very high percentage of the waste stream resulting from the demolition will be TSCA waste not subject to 310 CMR 19.017,

the SEE/CA included 310 CMR 19.017 as a "to be considered" (TBC) since portions of the regulation were not yet effective. The entire regulation is now effective and applies to all offsite transportation and disposal activities. Consistent with the paragraph above concerning offsite disposal of hazardous waste, only regulations governing onsite actions are ARARs; EPA expects that any part of the response action occurring offsite will comply with all laws, including this regulation. EPA understands that coordination with MassDEP would be required for disposal of waste ban material that does not exceed levels requiring disposal at a TSCA or hazardous waste landfill, but still remains contaminated above recycling or reuse levels for compliance with this regulation.

Clean Water Act: The substantive requirements of Section 402 (NPDES) and its implementing regulations (40 CFR 122-125, 131) which regulate the discharge of collected stormwater, dust suppression water and decontamination water that may be discharged to the Harbor, and of 40 CFR 122.4(i) which can be interpreted to prohibit any discharge to a degraded water body will be met to the extent practicable considering the urgency of the situation and the scope of the removal action. If discharge to the Harbor occurs, concentrations of contaminants will be treated so as not to exceed 13 ug/l, which is recent background levels detected in site stormwater runoff. The discharge of dust suppression and decontamination water is only temporary and it is preferable to keep this discharge in a class SB waterway rather than an SA waterway which is the discharge area for the City POTW. Upon completion of the NTCRA, PCBs in site stormwater runoff will likely be below detection levels or greatly reduced from current levels.

Wetlands: No wetlands have been identified at the Site therefore, the Wetlands Protection – Executive Order 1190 and its associated Appendix to Part 6, initially identified in the EE/CA as a potential ARAR, is eliminated as an ARAR. It should be noted that the State wetland regulations encompass other resource areas and, except as otherwise noted below, those ARARs have been retained.

Resource Areas: The actions to be taken to comply with the regulations protecting resource areas (310 CMR 10.00) have been clarified. Section 10.25 (Land Under the Ocean) is eliminated since the Site is not located under the ocean nor is it located below mean low water; 310 CMR 10.34 (Land Containing Shellfish) is eliminated because this Site is not located on land under the ocean, in a tidal flat, rocky intertidal shore, a salt marsh or under a salt pond; 310 CMR 10.35 (Banks of or Land Under the Ocean, Ponds, Streams, Rivers, Lakes, or Creeks that Underlie an Anadromous/Catadromous Fish Run) is eliminated since the Site is not located within these areas.

7. Project schedule

The NTCRA is estimated to be complete within approximately 22 months from the effective date of this Action Memorandum.

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

In the absence of the removal action described herein, conditions at the Site can be expected to remain unaddressed, and threats associated with the presence of the contaminated facility, the contaminated equipment and materials contained therein and contaminated site soils will continue to pose a threat of release. In addition, the threat of a mill fire is expected to increase as the vacant mill facility continues to deteriorate; as mentioned above two other vacant mills in the area have caught on fire in recent years.

VIII. OUTSTANDING POLICY ISSUES

There have been no outstanding policy issues identified to date.

IX. ENFORCEMENT

As described above, EPA, AVX, MassDEP and the City have agreed to achieve a mixed-work type approach to the NTCRA, wherein AVX will demolish the building and the City (using EPA funds through a Cooperative Agreement) will perform the transportation and offsite disposal work. Also, as discussed above, upon completion of the NTCRA, AVX, with MassDEP oversight will further characterize and cleanup the Site pursuant to 21E. The City, with funding provided by AVX and potentially the Cooperative Agreement (if unused funds are available after offsite disposal) will take on the responsibility for post-removal site controls.

X. RECOMMENDATION

This decision document represents the selected removal action for the Aerovox Site in New Bedford, MA, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. The decision is based on documents contained in the Administrative Record for the Site.

Conditions at the Site meet the criteria set out in the NCP due to:

"Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants" [300.415(b)(2)(i)];

"Actual or potential contamination of drinking water supplies or sensitive ecosystems" [300.415(b)(2)(ii)];

"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released" [300.415(b)(2)(v)];

"Threat of fire or explosion" [300.415(b)(2)(vi)]; and

"The availability of other appropriate federal or state response mechanisms to respond to the release" [300.415(b)(2)(vii)].

Conditions at the Site meet the NCP section 300.415(b)(2) criteria for a removal and the CERCLA Section 104(c) consistency exemption from the $2 million and 12-month limitation, and I recommend your approval of the proposed removal action and 12-month exemption. The

proposed NTCRA, if approved, is estimated to not exceed $24 million (in 2010 dollars). None of this funding will be from the Regional removal allowance; instead the work will be funded by a mix of sources including a PRP, Aerovox bankruptcy funds, and a Cooperative Agreement between EPA and the City.

Your signature will also reflect that an exemption pursuant to Section 104(c) of CERCLA and Section 300.415(b)(5)(ii) of the NCP has been granted.

APPROVAL: _____ DATE: 1/27/10
Assistant Administrator
Office of Solid Waste and Emergency Response

DISAPPROVAL: _____ DATE: _____
Assistant Administrator
Office of Solid Waste and Emergency Response

Figure 1 – Site Map

Table 1 – ARARs

Appendix A – Responsiveness Summary

Appendix B – Community Action Plan

Appendix C – TSCA Determination

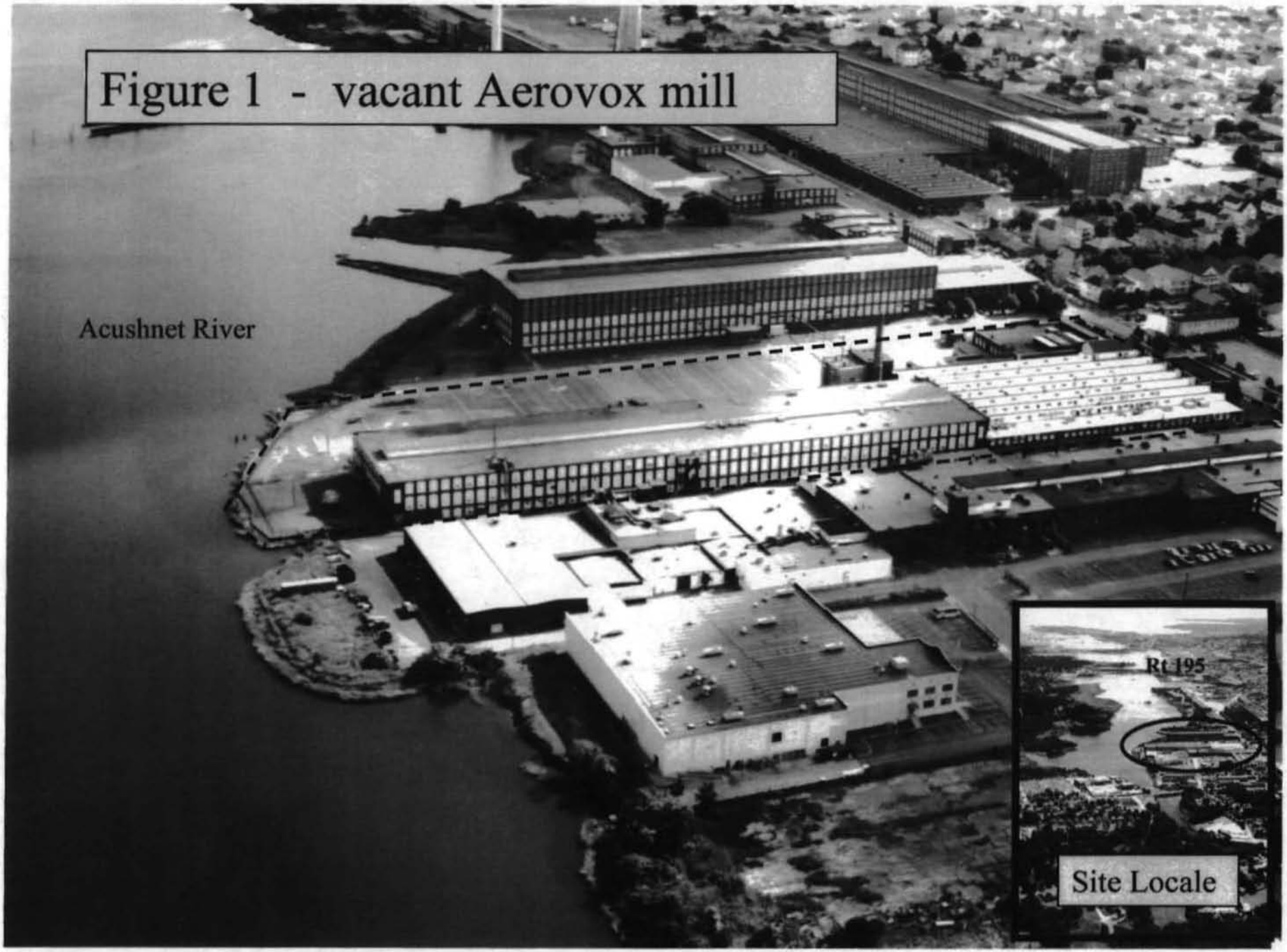

Figure 1 - vacant Aerovox mill

TABLE 1 – ARARs

Chemical-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Toxic Substance Control Act (TSCA) 40 CFR 761.61(c) Risk-based cleanup approval requirements for PCB remediation waste	Applicable	Applies to sampling, cleanup or disposal of PCB remediation waste in a manner other than the self-implementing provisions of 40 CFR 761.61(a) or performance-based provisions of 40 CFR 761.61(b), or storage of PCB remediation waste in a manner other than in 40 CFR 761.65.	The EPA Regional Administrator has determined in the TSCA Determination attached to this Action Memorandum that, if the conditions in the Determination are followed, the removal action will not pose an unreasonable risk of injury to health or the environment. In particular, any area where soil PCBs meet or exceed 2 ppm will be capped with a TSCA-compliant cover.
USEPA's Integrated Risk Information System (IRIS) Cancer Slope Factors (CSFs) and Reference Doses (RfDs)	To Be Considered	CSFs and RfDs are guidance values used to evaluate the potential carcinogenic and noncarcinogenic hazard, respectively, caused by exposure to certain contaminants from the site.	Demolition of the facility and installing a TSCA-compliant cover will minimize exposure to potential receptors and provide protection of human health from dermal contact.
PCB Cancer Dose – Response Assessment and Application for Environmental Mixtures (EPA/600/P-96/001A, January 1996) *Note*: Citation corrected from previous tables.	To Be Considered	Guidance for USEPA's reassessment of the carcinogenicity of PCBs.	Demolition of the facility and installing a PCB-compliant cover will minimize exposure to potential receptors and provide protection of human health from dermal contact.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 40.0111 Federal Superfund Program	Applicable	Establishes requirements and procedures for limiting the applicability of M.G.L. c. 21E and 310 CMR 40.0000 (MCP) to response actions at disposal sites subject to CERCLA.	This removal action is conducted pursuant to CERCLA and is therefore adequately regulated for the purposes of compliance with 310 CMR 40.0000 (MCP) for the scope of the removal action. Subsequent site work pursuant to M.G.L. c. 21E will be subject to the MCP.
Toxic Substance Control Act (TSCA) 40 CFR 761.61(c) Risk-based cleanup approval requirements for PCB remediation waste	Applicable	Applies to sampling, cleanup or disposal of PCB remediation waste in a manner other than the self-implementing provisions of 40 CFR 761.61(a) or performance-based provisions of 40 CFR 761.61(b), or storage of PCB remediation waste in a manner other than in 40 CFR 761.65.	The EPA Regional Administrator has determined in the TSCA Determination attached to this Action Memorandum that, if the conditions in the determination are followed, the removal action will not pose an unreasonable risk of injury to health or the environment.
TSCA 40 CFR 761.60 Disposal requirements for certain PCB containing materials	Applicable	Applies to the disposal of certain PCB containing materials, including PCB liquids and PCB articles which include PCB small capacitors.	PCB liquids and PCB articles will be disposed of in accordance with this requirement during the building demolition process in accordance with this regulation.
TSCA 40 CFR 761.62 Disposal requirements for PCB bulk product waste	Applicable	Applies to the disposal of PCB bulk product waste resulting from implementation of the removal action, including fluorescent light ballasts containing PCBs in potting material	Fluorescent light ballasts, and any other qualifying PCB bulk product waste will be disposed of in accordance with this regulation or decontaminated in accordance with the provisions of 40 CFR 761.79.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
TSCA 40 CFR 761.65(a) and (c)(9) Storage for disposal	Applicable	Applies to PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater.	Any PCB waste generated from the removal action will be disposed of within one year. Bulk PCB remediation waste or PCB bulk product waste may be stored at the site for 180 days subject to the conditions specified in 40 CFR 761.65(c)(9).
TSCA 40 CFR 761.79 Decontamination standards	Applicable	Establishes decontamination standards and procedures for removing PCBs which are regulated for disposal from water, organic liquids, non-porous surfaces (including scrap metal from disassembled electrical equipment), concrete, and non-porous surfaces covered with a porous surface such as paint or coating on metal.	Decontamination procedures and standards will be met if material is to be recycled, reused or smelted. Any water discharged to navigable waters will not exceed 13 ug/l , which is recent background PCB levels in stormwater runoff from the site.
TSCA PCB Spill Cleanup Policy 40 CFR 761 Subpart G, §§ 761.120-761.135	To Be Considered	This policy establishes criteria to determine the adequacy of the cleanup of spills resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater.	The requirements of this policy will be considered, as appropriate, when determining the appropriate method(s) to address PCB spills or leaks (if any) that may occur during implementation of the NTCRA.
Guidance on Remedial Actions for Superfund Sites with PCB Contamination, OSWER Directive No. 9355.4-01, August 1990	To Be Considered	This guidance describes the recommended approach for evaluating and remediating Superfund sites with PCB contamination.	This document was considered, as appropriate, as guidance during the development of the EE/CA, SEE/CA and removal action process.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 30.105, Exemption for PCB Wastes Regulated Pursuant to Toxic Substance Control Act.	Applicable	Provides that PCB Waste that would be subject to hazardous waste regulation due to the presence of PCBs are exempt from the hazardous waste regulations provided certain conditions are met.	PCB Waste will be handled in accordance with the conditions set out in the TSCA Determination unless otherwise noted in this table.
310 CMR 30.100, including 310 CMR 30.125 (Federal RCRA base program and Universal Waste Rule (except for Cathode Ray Tubes) has been delegated in Massachusetts. Federal standards are identified for information.) RCRA – 40 C.F.R. 261.24	Applicable	Identifies solid wastes as hazardous wastes if the waste exhibits characteristics of ignitability, corrosivity, reactivity or toxicity. TCLP results with mercury concentrations equal to or greater than 0.2 mg/L is characteristically toxic.	Mercury or mercury containing material with TCLP concentrations equal to or greater than 0.2 mg/L will be handled as hazardous waste during demolition and disposal activities.
310 CMR 680 Use and Management of Containers RCRA – 264.170, Subpart I, Use and Management of Containers	Applicable if mercury or other hazardous waste is stored in containers before offsite disposal	Regulates condition, compatibility, management, location and design of containers and containment systems of hazardous waste.	Mercury or other hazardous waste may be containerized before offsite transportation. If so, containers will be in good conditions, compatible with the contained waste, closed except when necessary to add or remove waste, and not placed in or near incompatible waste.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 30.1044 Universal Waste Rule RCRA Universal Waste Rule: Mercury containing equipment 40 CFR 273.4 and 273.9; Lamps 40 CFR 273.5 and 273.9; Batteries 40 CFR 273.2 and 273.9	Applicable	Streamlined collection requirements for certain wastes.	Mercury-containing equipment, fluorescent lamps and batteries will be handled, collected and contained in accordance with these regulations and disposed of offsite at a licensed facility.
RCRA 40 CFR 264.1100 Containment Buildings Subpart DD	Applicable	Provides standards for containment buildings that store or treat hazardous waste.	Process building(s), if needed, will be constructed and operated in accordance with these regulations to the extent practicable. When processing is completed, the structure will be decontaminated as required. The interior of the existing mill building may also be used for waste processing and will comply with these regulations to the extent practicable.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Collection and Sampling for 21E cleanup purposes WSC #02-320 Compendium of Quality Assurance & Quality Control Requirements and Performance Standards for Selected Analytical Methods; WSC #07-350 MCP Representativeness Evaluations and Data Usability Assessments, and MassDEP Methods for Determination of Air-Phase Petroleum Hydrocarbons (APH) dated Dec. 2008	To Be Considered	These policies are identified for informational purposes. Should any data collected and sampled during the removal action be used to support MCP response actions, risk characterization and/or site closure under the MCP, these policies should be considered. 310 CMR 40.0017 and 40.0191(2) should also be consulted for the 21E work.	Procedures and criteria for sampling collection and analysis should be considered if the data will be used for the subsequent 21E cleanup.
Clean Water Act, § 402, National Pollutant Discharge Elimination System (NPDES) 40 CFR 122-125, 131	Applicable	These standards govern discharge of water into surface waters. Due to the degraded nature of New Bedford Harbor waters, discharges into the waterway must meet ambient water quality criteria (AWQC) at the discharge point.	The substantive portions of these requirements will be met to the extent practicable considering the urgency of the situation and the scope of the removal action in that collected stormwater and dust suppression water and decontamination water, if discharged to the Harbor waters, will not exceed 13 ug/l, which is recent background PCB levels in site stormwater runoff.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Clean Water Act, § 402, NPDES, Prohibitions, 40 CFR 122.4(i)	Applicable	Prohibits new discharges into waters that do not meet applicable water quality criteria unless certain conditions are met.	This regulation will be met to the extent practicable considering the urgency of the situation and the scope of the removal action in that (1) discharge levels will not exceed 13 ug/l, which is recent background PCB levels in site stormwater, and (2) it is preferable to keep this discharge in a class SB waterway rather than an SA waterway which is the discharge area for the New Bedford POTW. The discharge of dust suppression and decontamination water is only temporary. The NTCRA should in the long-term eliminate the problem of PCBs in site stormwater altogether.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Surface Water Discharge 314 CMR 3.11(4), (5) and (9)(a); 314 CMR 3.19(1), (3)-(7), (10), (12)(a)-(b) and (13) *Note*: Citation corrected from previous tables	Applicable	This section outlines the requirements for obtaining a NPDES permit in Massachusetts. The waters of New Bedford Harbor adjacent to the Aerovox facility are classified as SB.	The substantive portions of these requirements will be met to the extent practicable considering the urgency of the situation and the scope of the removal action in that collected stormwater, dust suppression water, and decontamination water, if discharged to the Harbor waters, will not exceed 13 ug.l, which is recent background PCB levels in site stormwater runoff. Discharges will be monitored in accordance with the site monitoring plans. The discharge facility will be properly operated and maintained; discharge will be reduced or halted if facility fails to function properly while corrective action is undertaken. The discharge of dust suppression and decontamination water is only temporary. The NTCRA should in the long-term eliminate the problem of PCBs in site stormwater altogether.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges, 314 CMR 12.03(8); 12.04(2), (5), (8)-(12); 12.05(1), (6), (12); 12.06(1)-(3).	Relevant and Appropriate	Establishes operation and maintenance standards for treatment works.	Relevant to an onsite water treatment facility if used during the NTCRA. The water treatment facility, although not "treatment works," will be maintained properly and safely with adequate tools, equipment, parts, personnel, etc. Sampling and analysis will be conducted according to the applicable site plan.
Stormwater Control, 40 CFR 122.26(b)(14)(x) and (c)(ii)(C) and (D)	Applicable	Applies to construction activities that result in the disturbance of greater than five acres of total land area.	Demolition and covering activities will include best management practices to control pollutants in stormwater discharges during construction and will implement erosion and sediment control measures to control pollutants in stormwater discharges after the NTCRA is complete.
National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 61.145	Applicable	Provides regulations for emission of particular air pollutants from specific sources, including standards for demolition of asbestos-containing materials. Based on the results of an asbestos survey conducted for the building, asbestos removal will be necessary and these regulations apply.	Asbestos removal will occur prior to demolition. During demolition additional measures will take place including dust suppression, appropriate wetting, and monitoring to ensure compliance.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 7.09 and 7.15 Massachusetts Air Pollution Control Regulations	Applicable	Requires that building demolition activities shall not cause or contribute to a condition of air pollution.	Appropriate measures such as proper asbestos removal, dust suppression measures and stormwater collection will be implemented during building demolition and loading for offsite disposal activities to prevent excessive emissions of particulate matter. A stringent air monitoring program will be conducted throughout the demolition process.
310 CMR 19.061(3) and (6)(b)1.d Special Waste - Asbestos	Applicable	Establishes asbestos as a special waste in Massachusetts. Special waste can be disposed at a solid waste facility that is licensed to accept special waste. Subsection (6) specifies management requirements for asbestos.	Prior to demolition, asbestos will be removed from the building and disposed of at a facility licensed to accept asbestos. Asbestos will be properly wetted, containerized and labeled and managed so as to maintain the integrity of its containers and to prevent emission of asbestos fibers to the ambient air.
TSCA 40 CFR 763, Subpart E, Appendix D Transport and Disposal of Asbestos Waste	Relevant and Appropriate	Established for asbestos containing material (ACM) in schools, this regulation provides standards for transport and disposal of ACM. Requires proper wetting and containerization prior to offsite transportation. Because the facility contains ACM, this regulation is relevant and appropriate to the removal site preparation activity addressing asbestos disposal.	ACM removed from the building will be handled and loaded into transportation vehicles in accordance with the regulation.

TABLE 1 – ARARs

Action-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 6.04 Ambient Air Quality Standards for the Commonwealth of Massachusetts	Applicable	Provides primary and secondary ambient air quality standards including standards for particulate matter and lead.	An air monitoring program will be developed and implemented as part of the NTCRA. Dust suppression controls also will be in place.
MassDEP Recommended Threshold Effect Exposure Limits (TELs) & Allowable Ambient Limits (AALs)	To Be Considered	TEL and AAL values are long-term exposure concentrations for air contaminants.	These values will be considered in the development of an air monitoring plan to be implemented during the removal action.
310 CMR 7.10 MassDEP Noise Regulation	Applicable	Prohibits willful, negligent, or through failure to provide necessary maintenance or take necessary precautions, the unnecessary emission of sounds that may cause noise.	Heavy equipment and machinery will be required during the removal action. All equipment will be properly operated and maintained so as to not emit more noise than a typical demolition project.
MassDEP Division of Air Quality Control Policy – Allowable Sound Emissions, Policy 90-001, dated February 1, 1990	To Be Considered	This policy sets forth criteria to determine if a sound is in violation of the Department's noise regulation which applies to building demolition activities.	This policy will be considered in managing noise during the removal action.

TABLE 1 – ARARs

Location-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 701 Facility Location Standards RCRA 40 CFR 264.18(b)	Applicable to process building, if used; Relevant and Appropriate to capped areas	A hazardous waste facility must be designed, constructed, operated and maintained to prevent the washout of any hazardous waste by a 100-year flood.	If used during the NTCRA, the temporary process building if located within the zone A-1, 100-year floodplain portion of the site will be constructed so that the waste can be removed safely away from potential flood waters. As part of the NTCRA a stable, protective cap will be installed that will withstand floodwaters. The existing hurricane barrier will also assist with flood control measures.
Section 106 of the National Historic Preservation Act, 16 U.S.C. 470(f)	Applicable	Requires federal agencies to take into account the effects of their undertakings on historic properties.	The Aerovox facility may be eligible for historical building status; however, widespread PCB contamination within the building will preclude its preservation. EPA will continue to coordinate with the appropriate federal and state historic officers prior to demolition.
Fish and Wildlife Coordination Act, 16 U.S.C. 662(g)	Applicable	Requires consultation with appropriate agencies to protect fish and wildlife when federal actions may alter waterways. Must develop measures to prevent and mitigate potential loss to the maximum extent possible.	Appropriate agencies will be consulted prior to discharges to the Harbor of treated site water to find ways to minimize any adverse effects to fish and wildlife resulting from the discharge.

TABLE 1 – ARARs

Location-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
Floodplain Management – Executive Order 11988	Applicable	Applicable to work activities conducted in the 100-500 year floodplain and 100 year coastal floodplain (Federal Emergency Agency Flood Insurance Rate Map, Community Panel No. 255216-007B, dated January 5, 1984). The removal action selected must be the best practical acceptable alternative. (Draft updated maps may be found at www.newbedford-ma.gov/Environmental/FloodPlain_2008_North_36x48.pdf)	The NTCRA will remove the contaminated building that is currently sited within Zone B, and will cap the site in a manner to withstand future flooding. A hurricane barrier in the Harbor also exists as a flood control measure.
Coastal Zone Management 16 USC Parts 1452 et. seq., 301 CMR 21.00	Applicable	Establishes procedures and requirements for the protection of the coastal zone. The entire site is located in a coastal zone management area.	The NTCRA will be consistent with the state approved coastal zone management programs to the maximum extent practicable.
Protection of Waterways 301 CMR 9.00	Applicable	These regulations will be applicable if any portion of the site is within a filled tideland and are designed to promote and protect public interest in tidelands, Great Ponds, and non-tidal rivers and streams.	The site will be inaccessible to the public during the removal action and the subsequent 21E cleanup. At the completion of the 21E cleanup, reasonable accommodations for shoreline public access will be provided to the level of at least what was available prior to the cleanup work.
Protection of wetlands and other natural resource areas 310 CMR 10.00 (see specific sections below)	See specific sections below	Establishes requirements for the protection of wetlands and other natural resource areas. The site is located within the buffer zone of several coastal resource areas.	See particular resource areas listed below and actions to be taken within these areas.

TABLE 1 – ARARs

Location-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 10.02 Areas Subject to Protection	See specific sections below	Establishes jurisdiction over areas subject to protection from activities likely to alter said areas. Demolition activities along with grading and capping activities will occur in areas within 100 feet (the buffer zone) of certain resource areas and within 25 feet of a riverfront area.	See particular resource areas listed below and actions to be taken within these areas.
310 CMR 10.24(7)(c)6 General Provisions	Applicable	General provisions for remediation activities conducted under state law within coastal resource areas and buffer zones to ensure coastline development is conducted to protect public interests in coastal resources.	Best management practices will be used to minimize adverse impacts during remediation occurring in the buffer zones including dust suppression measures during demolition, collection, and treatment as necessary of stormwater, dust suppression water and decontamination water. Erosion control and covering of stockpiles will be used during demolition, grading and capping work. Temporary structures and access roads will be removed at the completion of the work.
310 CMR 10.32 Salt Marshes	Applicable	Establishes requirements for conducting activities within a salt marsh, within its buffer zone or in a body of water adjacent to a salt marsh when a salt marsh is determined to be significant to the protection of marine fisheries, the prevention of pollution, storm damage prevention or groundwater supply. The site is within 100 feet of a small fringing salt marsh area.	No work will occur in the saltmarsh. Collection and treatment as necessary of stormwater, dust suppression water and decontamination water will be conducted during demolition. Erosion control and covering of stockpiles will be used during demolition, grading and capping work. Temporary structures and access roads will be removed at the completion of the work.

TABLE 1 – ARARs

Location-Specific ARARs			
Requirement	**Status**	**Synopsis**	**Action to be Taken**
310 CMR 10.58 Riverfront Area	Applicable	Establishes requirements for the protection of private and public water supply; groundwater; provide flood control; prevent storm damage; prevent pollution; protect land containing shellfish; protect wildlife habitat; and to protect the fisheries.	Based on the Massachusetts Mouth of Coastal River Maps, a portion of the site is situated in a Riverfront Area. The shoreline is currently capped and bulkheaded from prior cleanup actions, and there is little to no vegetation along the shoreline. Dust suppression water, decontamination water and stormwater will be collected and treated if above discharge standards. Erosion and, if necessary, sedimentation control will be used during demolition and capping. The site will be graded and properly capped to prevent wash out from flooding. A hurricane barrier is also in place in the lower Harbor to control flooding.

1881179.4

AEROVOX NTCRA ACTION MEMO - APPENDIX A RESPONSIVENESS SUMMARY

I. Introduction

EPA received 16 comments on its Supplemental EE/CA during the public comment period held June 14 through August 15, 2006 for the Aerovox Site. These include comments from the following:

State Representative Robert Kozera
Local Officials from the Town of Acushnet
Bullard Street Neighborhood Association
9 Property Owners
Acushnet Rubber Company/Precix (abutting commercial property owner)
Buzzards Bay Coalition
AVX Corporation, a potentially responsible party (PRP)

A. Summary of Comments

Almost all comments support EPA's plan to demolish the Aerovox building to alleviate the current threat to human health and the environment posed by the vacant mill facility that is infused throughout with PCBs. However, many commented that the demolition debris should be taken offsite for disposal rather than be disposed in the existing foundation and covered with a protective cap. Some commented that the building foundation and contaminated Site soils should be removed as well. Related comments concern potential air emissions during cleanup activities, stormwater runoff, offsite migration of contaminated groundwater and redevelopment potential.

In addition to the above comments, AVX Corporation, a potentially responsible party (PRP) at the Site, submitted comments concerning the administrative record, the EE/CA, the SEE/CA, and use of a consistency waiver; and recommending a building stabilization approach as the lowest cost alternative and questioning whether the recommended alternative attains ARARs. EPA's responses to AVX's comments are responded to in Section II.C.

All comment letters are attached as Appendix 1 to this Responsiveness Summary. Below are EPA's responses to these comments.

II. Response to Comments

A. General Comments

1. Many commentors agreed with EPA for the need to demolish the Aerovox building, but argued

that the demolition waste should be disposed off-site rather than onsite because PCBs could migrate offsite and because onsite disposal could negatively impact redevelopment at the Site.

EPA Response:

In response to comments and concerns voiced by community and Site stakeholders, EPA has agreed to pursue a remedy that includes offsite rather than onsite disposal of the demolition waste.

2. A few commentors not only wanted the building demolition waste taken off-site for disposal but also the building foundation. Some asked that all contaminated Site soils be removed as well.

EPA Response:

EPA's primary concern at the Site is addressing the immediate threat of potential fire and subsequent release of contaminants, and neither the foundation nor soils pose a fire risk. In addition, contaminated soils and the foundation will be covered with a protective cap thereby removing any dermal contact risk and minimizing the potential for contaminant migration. Consistent with the TSCA determination, groundwater monitoring will occur on a regular basis.

In addition, immediately after the NTCRA is complete, the Site will be fully characterized pursuant to the Massachusetts c. 21E cleanup program (21E). This 21E cleanup will include further measures to address Site soils wherever concentrations in soil exceed upper concentration limits for certain contaminants and will also address Site groundwater contamination.

3 Many commentors felt that New Alternative #1 would reduce the redevelopment potential of the Site, since the demolition waste would be placed inside the existing building basement. Some also commented that the square footage of the Site available for reuse would be reduced from 450,000 square feet (sf) to 150,000 sf pursuant to New Alternative #1.

EPA Response:

As explained below, EPA disagrees that New Alternative #1 would have interfered with the reuse potential of the Site, but notes that the revised cleanup approach (using offsite disposal) should further increase the Site's redevelopment potential since the Site will be free of demolition waste.

New Alternative #1 would have provided a similar amount of buildable footprint (approximately 155,000 square feet (sf) compared to the existing 175,000 sf), by "flip-flopping" the locations of the building and the parking area. In other words, any new building would be located where the parking lot is currently located, and the new parking area would be located where the main building is currently located.

EPA notes that some commentors incorrectly used the total square footage of all three floors (approximately 450,000 sf) instead of the building's existing footprint (approximately 175,000 sf) to compare the current and future development potential.

B. Detailed Comments

1. One commentor agreed with EPA that New Alternative #1 (building demolition, onsite disposal of building debris within the basement, and capping) is the alternative that should be implemented.

EPA Response:

EPA agrees that New Alternative #1 would have been a protective approach and would have allowed for ample redevelopment, but as mentioned above, due to comments and concerns voiced by community stakeholders, EPA has agreed to pursue a remedy that includes offsite rather than onsite disposal of the demolition debris.

2. Some commentors objected to the recommended approach in the SEE/CA because they believe it was selected based on it being the least cost alternative.

EPA Response:

EPA disagrees that New Alternative #1 would have been the least costly approach since it would cost less to do nothing and not proactively address the risks posed by the Site. In addition, building stabilization may be a less expensive approach, at least in the short term. However, the ultimate Site cleanup cost under a building stabilization approach could be significantly more than the recommended approach if building maintenance needs and Site security stretch far into the future, the building deteriorates significantly, or a fire erupts at the Site.

3. One commentor questioned the lack of funding from Aerovox, a prior owner and operator, for the cleanup, and, instead, the use of tax dollars to pay for the cleanup.

EPA Response:

The comment incorrectly characterizes the funding approach for the Site. EPA filed a claim against the bankrupt Aerovox estate and recovered approximately $2.72 million. With ongoing earned interest EPA's bankruptcy settlement proceeds now stand at approximately $3.13 million. These funds, in combination with the settlement proceeds the City of New Bedford (City) recovered in its bankruptcy claim, are being used to address threats at this site. However, that amount alone is insufficient for Site cleanup, and as a result, EPA, in cooperation with other federal agencies and the Commonwealth of Massachusetts, worked to secure additional funds to

address this facility without the need for tax dollars. Further, through a forthcoming settlement, another prior owner, AVX, will contribute to the cleanup

4. One commentor expressed concern that in the future the City may be interested in rezoning the Site from commercial/industrial use to residential use given the abutting residential neighborhood.

EPA Response

While land use and zoning are local issues beyond EPA's authority in this action, based on EPA's coordination to date with both the City and MassDEP, it is EPA's understanding that the property will NOT be converted to residential use. Land use restrictions required pursuant to the NTCRA and the State 21E cleanup will prevent residential use.

However, should a higher use for this property be desired in the future, further cleanup would be necessary and must be performed in accordance with 21E and with EPA's TSCA program. Land use restrictions would also need to be revised and recorded.

5. Many commentors urged that the demolition of the building be done safely citing concerns about air emissions and stormwater runoff.

EPA Response:

EPA agrees with the commentors in this regard, and has developed stringent air and stormwater runoff criteria to ensure that the demolition does not cause the quality of air and stormwater runoff to worsen during the cleanup activities. EPA will ensure that these criteria are adhered to during the performance of the work through an air and stormwater monitoring program. EPA and the U.S, Army Corps of Engineers (COE) will also monitor and oversee the project's implementation to ensure that the project is performed safely. Results of all monitoring efforts will be made available to the public for review as they are finalized.

In addition, EPA will require that certain hazardous wastes that require special handling, such as mercury, asbestos, flourescent light fixtures, refrigerants, propane tanks and batteries be removed from the building prior to demolition.

Also, see Table 1 of this Action Memorandum for applicable or relevant and appropriate requirements (ARARs) that must be complied with during the cleanup.

6. One commentor asked about the need for cap venting.

EPA Response:

Due to the non-volative nature of the PCB contamination, EPA does not believe there is a need for cap venting.

7. Some commentors recommended that the sheet metal piling along the eastern shoreline seawall be monitored for effectiveness or replaced to prevent contamination from migrating to the River.

EPA Response:

As part of past removal actions, Aerovox installed sheet pile barriers within the eastern area of its property, capped certain areas, and installed groundwater monitoring wells to measure groundwater elevations. Recent groundwater and surface water investigations conducted for EPA concluded that the sheet pile barriers remains effective at hydraulically isolating the Site's shallow groundwater system from the Acushnet River. During the cleanup, through its oversight authority, EPA will ensure that the cleanup is implemented in a way that keeps the existing groundwater wells operable so that the effectiveness of these sheetpile barriers can continue to be monitored.

In addition, groundwater contamination will be addressed as part of the 21E cleanup that will immediately follow the NTCRA action. Addressing contaminated groundwater will further reduce any chance of contaminant migration from the Aerovox Site to the Acushnet River.

8. *Some commentors argued that the proposed minimum cap is insufficient for protectiveness at the Site.*

EPA Response:

As stated in the TSCA Determination (Appendix C of this Action Memorandum) the Site cap, along with the existing hydraulic asphalt cement (HAC) cap, functions as a barrier to direct contact exposure to contaminated soils at the Site. The NTCRA cap, which will be asphalt, must meet the requirements described in the Action Memorandum and will cover any portion of the Site where soil or asphalt PCB levels exceed 2 ppm and will be subject to a long-term monitoring and maintenance program. Moreover, the 21E cleanup that directly follows the NTCRA requires that an engineered barrier be placed at the Site wherever soil exceeds State upper concentration limits for certain contaminants. As a result, the MCP process will define the specific type and thickness of the cap to be placed during the 21E cleanup taking into consideration further Site characterization and expected land use. The Site will also be protected through land use controls that will ensure the integrity of the Site caps.

9. Some commentors expressed concerns that the disposal of the demolition debris in the existing

basement will interfere with reuse of the property, or that a parking lot constructed on top of the capped demolition debris will be prone to settlement and cracking.

EPA Response:

As previously noted, EPA has considered the comments it received and, consistent with those comments, revised its cleanup approach so that demolition debris will be disposed of offsite rather than in the basement. See also response to comments B.1 and B.3.

10. One commentor noted some confusion regarding the nature of PCB risk, believing that the danger was only in cooking and eating fish from the Acushnet River.

EPA Response:

PCBs can pose a risk to human health through a variety of exposure routes, provided the level of PCBs is sufficiently elevated during the exposure. These exposure routes include consumption of PCB-contaminated seafood and dermal (i.e., skin) contact with PCB-contaminated soils and sediments. In addition, when burned (such as in a building fire), PCBs break down into dangerous dioxins and furans which are toxic to humans. Consumption of PCB-contaminated seafood and dermal contact with PCB-contaminated sediments are the primary exposure routes associated with the New Bedford Harbor Site; and dermal contact with PCB-contaminated soil and potential fire are the primary exposure routes associated with the Aerovox Site.

11. One commentor asked whether EPA has any information regarding subsurface assessments of contamination at any abutting properties, or any information "to support the delineation of the Aerovox Site as identical to the Aerovox property boundary".

EPA Response:

EPA does have some information on subsurface contamination, but because this is not a remedial action under CERCLA, but rather a removal action, a full site characterization was not performed. The primary concern of the NTCRA is to address the potential threat of release of contaminants that would result from a building fire as well as dermal contact with contaminated Site soils. Addressing contaminated groundwater is beyond the scope of this NTCRA. As a result, no subsurface assessments of abutting properties were conducted by EPA as part of the NTCRA. The scope of the NTCRA is limited to the Aerovox property boundary. However, as explained in the Action Memorandum, immediately following completion of the NTCRA, a 21E cleanup will occur which will require a full Site characterization and ensuing cleanup to address Site contamination in accordance with State requirements.

12. *One commentor asked whether EPA has consulted with the Massachusetts Department of*

Environmental Protection (MassDEP) about the Aerovox site.

EPA Response:

Yes, EPA continues to coordinate and consult very closely with the MassDEP (as well as the City) regarding the Aerovox cleanup. MassDEP will also be performing oversight of the 21E cleanup that will immediately follow the NTCRA cleanup.

13. One commentor asked whether any studies have "been conducted to determine if the sheet-pile barrier or other subsurface conditions may be causing DNAPL (dense non-aqueous phase liquid) to migrate to adjacent properties".

EPA Response:

As explained in EPA's response to comment C.7 and C.11 above, specific studies of the type referenced have not been performed by EPA since they are beyond the scope of the NTCRA. The 21E cleanup, immediately following the completion of the NTCRA work, may include such studies.

14. *One commentor asked "(i)f contaminants have migrated to adjacent properties...would USEPA consider contamination located on such adjacent properties to be part of the 'Aerovox site'".*

EPA Response:

As stated in EPA's response to comment C.11 a complete site characterization that would help address this question has not been performed for this removal action since it is beyond the scope of the NTCRA. However, as explained above, further site characterization is planned as part of the Massachusetts 21E program and the extent of the 21E cleanup will be further defined at that time.

15. *One commentor asked if "existing subsurface conditions at the 'Aerovox Site' constitute an immediate threat to public health (sic) safety and the environment".*

EPA Response:

As explained in the 2006 SEE/CA, and in EPA's response to comment C.11 above, the main objective of the NTCRA is to address the imminent risks to human health and the environment posed by the contaminated and deteriorating building, especially in the event of a fire. While the Site subsurface is contaminated, EPA does not consider it to be an immediate threat to public health, safety or the environment.

16. One commentor asked whether EPA "has evaluated the possibility of immediately taking alternate short-term steps to further secure the Aerovox site", and inquired as to the status and funding of the fire suppression system.

EPA Response:

Pursuant to the Aerovox bankruptcy settlement, the City is required to take certain measures to secure the Aerovox building; the City has been fulfilling these requirements. More recently, AVX has provided funding to the City to continue Site security as the bankruptcy funding became depleted. EPA coordinates extensively with the City to ensure that these short-term actions are being implemented to secure the Aerovox Site. EPA is confident that the on-going maintenance and security systems in place are adequate until the NTCRA is conducted. It is also worth noting that COE and its contractors are on-site at various times to conduct certain New Bedford Harbor Superfund Site activities as well as Aerovox-related activities. Their presence also contributes to a more secure Site.

EPA has also coordinated with the City and its fire department to ensure that the fire suppression and alarm system are functional, another requirement from the bankruptcy settlement. The City, with funds from its Aerovox bankruptcy settlement, has upgraded the fire alarm system within the building and has developed a fire suppression system that functions within the unheated conditions inside the building. The fire department is responsible for the ongoing testing and maintenance of the system, and its January 2005 "Site Information and Preplan" has been included in the Administrative Record for the Aerovox Site.

17. One commentor asked about flooding issues adjacent to the Aerovox Site and Belleville Avenue and whether this has caused contamination of adjacent properties or structures.

EPA Response:

Belleville Avenue runs in a north/south direction along the western side of the Aerovox facility. Environmental monitoring performed to date in the western portion of the Site exterior to the main building, including sampling of soil, groundwater, air and structures, indicates that this western-most area contains only very low, if any, PCB contamination and therefore is not likely to cause additional PCB contamination during high water events All soil samples from this area resulted in less than 1 ppm PCBs, and no PCBs were detected in groundwater in this area. Similarly, recent interior samples of the office annex (western-most) portion of the main building abutting Belleville Avenue showed low PCB results. In addition, surface water drainage in this area flows towards the River, since the ground elevation along Belleville Avenue is roughly ten feet higher than that along the eastern edge of the Site abutting the River. As a result, EPA does not believe that any temporary surface water flooding in this western portion of the Site would

contaminate nearby properties or structures.

18. One commentor raised concerns about the scope of the removal action and questioned whether the information EPA made available in the SEE/CA and its administrative record were sufficient to document "the full nature and extent of contamination" and whether that information has "limited the 'cleanup' options to a handful of interim steps".

EPA Response:

Again, as explained in EPA's response to comment C.11, this is a CERCLA removal action not a remedial action. This means that a full remedial investigation/feasibility study (RI/FS - a complete characterization of the nature and extent of contamination and a full range of alternatives) is not part of the removal action process. EPA believes that the SEE/CA and its administrative record adequately characterizes the nature and extent of contamination that provide the basis for taking the action set out in the Action Memorandum. For example, Section 2 of the 1998 EE/CA describes in detail the sampling results of the building material and equipment investigations along with the soil and groundwater sampling performed at that time. The 2006 ENSR Conceptual Site Model reports results of more recent soil and groundwater monitoring. See also other documents in the administrative record that support the NTCRA such as: The On-Site Containment of PCB Contaminated Soils at Aerovox (Administrative Record number (AR) 248154); Final Aerovox New Bedford Plant Stormwater Study (AR 248155); Building Demolition Alternative Report (AR 248156); Aerovox Pavement Sampling (AR 248162); and Description of the General Deterioration of the Aerovox Building (AR 249905).

EPA disagrees that these Site investigations in any way limited the cleanup options to interim steps. In accordance with EPA's Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA, EPA "should identify and assess a limited number of alternatives appropriate for addressing the removal action objectives". (OSWER 9360.0-32, 8/93 at page 34.) Demolition of the building and installation of a protective cover meets the objectives of this NTCRA. The SEE/CA, together with the EE/CA, present five different alternatives, all of which meet the objectives and any of which could function as long-term protective actions.

19. One commentor stated that it "appears that USEPA has not demonstrated the proposed response action will make the Aerovox Site safer" and argued that the proposed cleanup could exacerbate releases to the environment and increase costs due to handling of contaminated material several times instead of just once during removal from the Site.

EPA Response:

EPA disagrees and believes the 1998 EE/CA, 2006 SEE/CA and other documents included in the administrative record document the main risks posed by the Site from toxic air emissions in the

event of a mill building fire, contaminated surface water runoff (from both firefighting and as the building deteriorates) as well as in building material due to trespassers and vandals both outside and inside the building. Demolishing the building removes the threat of fire (which could result in the spread of dioxins and furans over a widespread area). The building demolition process will be closely monitored with rigorous protocols to limit emissions. Dust-suppression water, and, if contaminated above action levels, storm water runoff will be captured and treated before discharge, and air monitoring will be conducted frequently during the cleanup. The state 21E cap together with EPA's TSCA cap will prevent dermal contact with PCB contaminated soils and will be protective in the long-term if properly maintained. These parameters will be included in contractor documents and both EPA and COE will be performing oversight of the project. For these reasons, EPA is confident the proposed cleanup approach mitigates these risks and makes the Site safer.

Also, EPA's revised cleanup plan using offsite instead of onsite disposal will alleviate any concerns about the potential for double-handling of demolition debris.

20. One commentor listed thirteen items that "USEPA appeared during the June 14, 2006 meeting to acknowledge".

EPA Response:

Many of the listed items are incorrect and misrepresent the discussion that occurred during the June public meeting. More specifically, those items are paraphrased below with a response following each item:

The impact of contamination on the deep water table was not studied:

- while the nature and extent of contamination at the Site has not been fully characterized, the impact of contamination on deep groundwater has been evaluated. See the 1998 EE/CA and ENSR, 2006. EPA recommends that the commentor review these documents for information on contamination in deep groundwater. In addition, EPA continues to conduct annual ground water monitoring at the Aerovox Site, including both shallow and deep aquifer wells;

The protective cap would not be impermeable nor permanent:

- the NTCRA cap will cover all areas of the Site where soil or asphalt PCB concentrations are equal to or exceed 2 ppm; the subsequent 21E cleanup will require that an engineered barrier be placed on the Site, including any areas covered by the NTCRA cap, wherever soil exceeds State upper concentration limits for certain contaminants; the MCP process will define the specific type and thickness of the cap to be placed during the 21E cleanup taking into consideration further Site characterization and expected land use. Both will be permanent caps, and provisions for proper

monitoring and maintenance of the caps have been incorporated into the forthcoming settlement documents. The Site will also be protected through land use controls that will ensure the integrity of the Site caps;

Over time, the protective cap and sheet pile barriers will breakdown:

- EPA's response immediately above and to comment C.6 address the long-term viability of the shoreline sheetpile wall;

Contaminated debris [and asbestos] buried on-site may come into contact with groundwater:

-with the revised cleanup, none of this material will remain on-site;

Doesn't one excursion of applicable standards constitute a health risk?

- PCBs are a type of contaminant that in this case, where there are no longer workers in the building, do not cause acute or short term health risks; rather it is the long term or chronic exposure to PCBs that are the concern during the NTCRA. Thus one excursion of a particular standard does not necessarily indicate that an acute health risk is present. If, however, excursions were to continue such that average or long term exposures continue then concerns about health risk may be warranted. During the NTCRA, the Action Memorandum requires that extensive air monitoring be performed; these results will be tracked and averaged (and be available to the public) over the duration of NTCRA operations so that the chronic nature of any exposures can be evaluated.

Response actions could increase airborne releases to a level of concern:

- this statement is misinterpreted. EPA reiterates its presentation at the meeting that due to the POTENTIAL for air quality concerns during demolition, the Action Memorandum includes strict air quality standards. Through its oversight, EPA along with COE, will ensure that the demolition contractor implements effective engineering controls and complies with the strict air quality standards. In addition, an air monitoring program will be conducted to ensure that the contractor complies with these air quality standards (see also response to comment C.5);

Potential impacts to abutting properties, aside from the fire hazard, were not considered:

- EPA strongly disagrees with this statement. As discussed above, the use of strict air quality standards will ensure that potential airborne contaminants are not released above existing levels, and a surface water collection and management program will be implemented to ensure that runoff does not contaminate abutting properties. Further, EPA and the City have met and continue to meet with abutting businesses, neighborhood groups and other organizations to

discuss any concerns they may have about the cleanup; and

Redevelopment is the time for permanent cleanup and it will be funded by an unspecified developer and redevelopment needs will only be factored into the cleanup if a developer is involved:

- an "unspecified developer" will NOT pay for the cleanup. Rather, funding secured by EPA will cover the offsite transportation and disposal of demolition waste, and a PRP will fund costs related to the demolition of the building. It should also be noted that a clean utility corridor will also be incorporated into the cleanup to further future redevelopment at the Site.

21. One commentor listed thirteen "unresolved questions' that the public meeting and Site documentation raised.

EPA Response:

Many of the questions listed are responded to elsewhere in this Responsiveness Summary (in response to other similar comments) and those comments and responses are noted. Other questions are paraphrased and responded to below:

Should additional investigations be conducted to discover the full nature and extent of the contamination in order to appropriately evaluate options?

-using existing wells put in place by the prior Site owner during a prior removal action, EPA has continued to monitor groundwater at the Site, as well as sample certain building materials, to assist with the preparation for the Site cleanup. EPA acknowledges that a full characterization of the nature and extent of contamination at the Site has not been conducted as would generally happen for a remedial action. However, this is not a remedial action; rather, it is a removal action. Removal actions have a more focused approach to address more immediate threats of contaminant releases. EPA believes its administrative record shows that this Site has been adequately characterized for the NTCRA to identify Site risks, develop removal objectives and a range of alternatives, and a recommended cleanup plan (see also response to comments C.11 and C.18);

Over time, will buried materials concentrate PCBs and other contaminants?

-concerning groundwater impacts on buried contaminated material, see response to comment B.1check;

How will the breakdown of the cap and other barriers impact Site contamination?

-concerning break down of the protective cover and other barriers, see response to comments C.7 and C.8;

Will buried contaminated materials impact groundwater?

With the revised cleanup, building demolition materials will no longer be buried;

Regarding air modeling to determine potential impacts to public health and safety from potential air emissions during the proposed actions:

- as part of the adjacent New Bedford Harbor Superfund Site cleanup, air modeling has been performed, including at the Aerovox Site area. EPA can make use of this model specifically for the Aerovox Site should the need arise;

Concerning controls during the removal action to prevent unintentional releases:

-see response to comments C.5 and C.19;

Who is responsible for injuries arising from the Aerovox Site during the response action?

-all contractors working at the Site are required to carry workers' compensation insurance as well as comprehensive general liability and automobile insurance;

What specifications will assure capture of the misting water and/or airborne contaminants?

- the Action Memorandum contains specific, detailed requirements to capture and manage storm water runoff (including water from dust suppression activity) during the cleanup activities (see also response to comments C.5 and C.19);

Regarding protective actions for surrounding residents and properties during the cleanup:

- the Action Memorandum requires stringent safeguards be implemented throughout the performance of the work so that surrounding properties will not require protective actions or relocations. A comprehensive oversight and field monitoring program will be performed by EPA and COE to ensure that the demolition contractor complies with these safeguards. Should any performance standards be exceeded, EPA will immediately order the work stopped or take other action to control the situation until the issue is resolved;

How would the proposed cleanup impact the cost and possibility of a permanent cleanup?

- the revised cleanup approach, along with the ensuing 21E cleanup will be a permanent cleanup

for the Site and allows for future redevelopment: Building demolition debris will be removed and disposed of off-site, and, as envisioned as part of the 21E cleanup, a clean utility corridor will be constructed;

With regard to compliance with state laws and regulations during the cleanup:

- it is unclear as to which State solid and hazardous waste laws and regulations the commentor is referring in its comment. EPA directs the commentor to Table 1 of the Action Memorandum which sets out all of the federal and state laws that have been identified as applicable or relevant and appropriate (ARARs) to the work. (See also Section VI.B.6 of the Action Memorandum for a discussion of ARARs). Prior to demolition, the items containing hazardous or special waste such as asbestos, mercury containing devices, and fluorescent lights will be removed and properly disposed of offsite in accordance with all state laws. Under the original recommended cleanup approach, the building debris would have been processed, disposed onsite and covered with a TSCA-compliant cap; the Site then would have been controlled by the State 21E program. Under the revised cleanup plan, again all hazardous and special waste will be removed and properly disposed of offsite. In addition, all demolition debris will now be disposed of offsite as well and a further 21E cleanup will directly follow at the Site once the NTCRA is completed;

Did the cost estimate include long-term monitoring if a permanent cleanup is not implemented?

- the revised cleanup, along with the ensuing 21E cleanup will be a permanent cleanup for the Site. The NTCRA action will remove the contaminated building to prevent the threat of fire and subsequent release of contaminants, and will cap the Site to prevent direct contact. The 21E action may require further capping in certain areas of the Site and will also address contaminated groundwater. Long-term operation, maintenance and monitoring of the caps and any measures to address groundwater are included in the cleanup plans and are funded through the forthcoming settlements. In addition, land use restrictions will be recorded to ensure the cleanup remains protective. EPA believes the cost estimates in the SEE/CA allowed a fair comparison between all alternatives under review. As noted above, funding for long-term monitoring will be provided as part of the forthcoming settlements; and

Is it reasonable to assume that a developer will pay for permanent cleanup at some later date?

– yes, EPA believes it is reasonable, depending on economic conditions, that a developer will pay to enhance a federal or state cleanup, depending on the developer's desired use and impacts that use may have on the remediated Site.

22. One commentor raised the concern that access to abutting facilities would be disrupted during the proposed cleanup, and inquired whether EPA intends to offer any assistance to mitigate impacts to area businesses and residents.

EPA Response:

EPA has coordinated and will continue to coordinate with the City and Site abutters to ensure that access to abutting properties is not disrupted during the cleanup action. Some limited access disruption may be necessary for short periods of time, but access for public safety vehicles will not be disrupted during these short periods. In addition, as described in earlier responses, EPA will ensure that the cleanup is done safely and properly to avoid adverse impacts to area residents and workers. (See also response to comments C.5 and C.19).

23. One commentor recognized "that something must be done to respond to the environmental conditions of the Aerovox Site", but suggested that additional Site evaluations are needed and that emergency response planning such as evacuation and pre-fire plans should be a priority in the meantime.

EPA Response:

EPA appreciates the recognition that the status-quo is unacceptable for the vacant Aerovox Site, but (as described above in response to comments C.11 and C.18) disagrees that additional Site evaluations are necessary before proceeding with the NTCRA. While the Site will be fully characterized as part of the 21E cleanup that will directly follow the NTCRA action, there is no reason to delay the building demolition to eliminate the immediate risk of release of contaminants should a fire occur at the facility.

Furthermore, evacuation and pre-fire plans for the Site have been completed by the City, and EPA will continue to coordinate with the City regarding emergency response planning.

III. Response to AVX Comments

Below are EPA's responses to comments from AVX Corporation (AVX), a potentially responsible party at the Aerovox Site. Because of the broad nature of AVX's comment letter (statements made in Sections I and II of AVX's letter were not clearly identified as comments; Section III appears to contain the actual comments), EPA offers the following preface to this section of responses. To capture all of the issues in all three sections of AVX's letter, Section III.A below summarizes AVX's overall concerns relevant to the NTCRA raised in Sections I and II of its comment letter and EPA's response, and Section III.B responds to the actual comments in Section III of AVX's letter. EPA notes that much of Section II is devoted to background information and conclusions provided by AVX. EPA is not specifically responding to these facts as they do not appear to be comments on the NTCRA; however, this lack of rebuttal does not affirm in any way the veracity of this information or the conclusions provided by AVX, and EPA reserves its right to do so at a later time if necessary.

A. NTCRA Concerns in Sections I and II of AVX Comment Letter

1. AVX questioned which documents, including guidance documents, constituted the Administrative Record File (ARF), why the ARF did not include an Action Memorandum, and whether the ARF was sufficient for the public to assess and comment on the proposed removal action.

EPA Response:

"The administrative record file, a subset of the site file, is the body of documents EPA uses to form the basis for the selection of a response. It should not be confused with the administrative record, which is not complete until a response action has been selected." *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA,* EPA/540-R-93-057, Publication 9360.0-32, August 1993, (NTCRA Guidance) p. 14. This means that EPA compiles documentation of its decision-making up to the time the Action Memorandum is issued. The Action Memorandum and all its attachments are the last document in the ARF and the administrative record (AR) closes at that time. Therefore, because it was not yet issued, the Action Memorandum was not included in the ARF at the time the 2006 SEE/CA was issued for public comment.

EPA directs AVX to the Aerovox Removal Site Administrative Record File Index which clearly describes the full contents of the Aerovox AR. The AR includes all the documents originally included when the 2006 SEE/CA was issued. Additional documents have been added since the 2006 SEE/CA was issued including those which reflect the comments EPA received on the SEE/CA, any additional documents EPA relied on when it revised the recommended alternative based on public comments, further sampling results, and the Action Memorandum, including all of its attachments.

With regard to guidance documents, EPA directs AVX to the AR Index which includes a guidance compendium for the 2006 SEE/CA and the 2004 Aerovox removal, which is incorporated by reference, along with its compendium which includes four guidance documents. EPA notes that additional guidance documents have been included in the guidance compendium Finally, AVX will find additional guidance documents in the ARARs table in the Action Memorandum.

EPA is confident that with the addition of the Action Memorandum along with all of its attachments and certain new post-SEE/CA documents added to reflect the revised remedy, the AR is complete. EPA believes its actions in establishing the AR along with the additional step of issuing the SEE/CA for additional public comment, holding a public meeting during the comment period, as well as other continuing outreach activities, not only meets its statutory requirements but go beyond those requirements to show a willingness to provide meaningful public

participation.

2. *AVX commented that it is necessary to review more than eight years of documents - from July 1998 (Approval Memorandum) to April 2006 (SEE/CA) in order to provide a meaningful response to EPA's request for comments on the proposed removal action.*

EPA Response:

While the Aerovox Site does have a long regulatory history, EPA disagrees that review of over eight years of documents is necessary to provide meaningful comments to the SEE/CA, and notes that the SEE/CA's executive summary outlined the response action and regulatory history of the Site. The ARs for the 1999 AOC and the 2004 Aerovox removal, which are incorporated by reference into the AR for this NTCRA, along with the EE/CA, also outline the history of the Site. The focus of this removal action is to address the highly contaminated vacant facility and address the imminent and substantial endangerment presented. The SEE/CA ARF updated the documentation regarding the deteriorated condition of the building, as well as the risks to human health and the environment. The SEE/CA also provided a range of alternatives and costs. EPA also granted AVX's request to extend the comment period to allow a more thorough review of these documents.

3. AVX commented that the July 1998 Approval Memorandum does not support the removal action objectives set out in the 1998 EE/CA nor the 2006 SEE/CA and questioned the consistency of these documents.

EPA Response:

EPA disagrees with the comment and notes that AVX did not submit comments during the public comment period held for the EE/CA.

The 1998 Approval Memorandum fully supports the removal action objectives set out in the EE/CA and SEE/CA, which are primarily source control objectives. The NTCRA Guidance states that the Approval Memorandum, which is prepared in advance of the Action Memorandum and the actual site work, serves three purposes: 1) secure management approval and funding; 2) document that the situation meets the NCP criteria for taking the NTCRA; and 3) provides specific site information, including current *and future site risks if the site conditions change or if no action is taken or delayed* (emphasis added). NTCRA guidance at page 6.

The basis for the removal action is grounded in the NCP factors as outlined in the Approval Memorandum: actual/potential exposure to nearby human population and animals (300.415(b)(2)(i)); migration of high levels of hazardous substances, pollutants or contaminants in soil at or near the surface (300.415(b)(2)(iv); the threat of fire or explosion (300.415(b)(2)(vi));

and other situations posing threats (300.415(b)(2)(viii). Site investigations reveal the presence of PCBs in soil and building materials throughout the Site, often at percent levels, as well as in Site groundwater and in the air. Volatile organic compounds (VOCs) are also found in Site soils and groundwater at elevated levels. Characteristics of the Site are also documented in the Approval Memorandum including its location in a highly developed urban/ industrial area of the City, and the decreasing elevation of the property as it slopes down to the abutting Acushnet River. Not only did the Approval Memorandum note the ingestion and dermal contact risk for workers to PCBs, but also noted the potential for tracking contamination offsite and the potential for fire, specifically stating that should the building become vacant with no security measures, the threat of fire increases.

Since the Approval Memorandum was issued, the scope of the removal action has always been for a source control action. Consistent with the Approval Memorandum, the EE/CA's general goal and objectives were to minimize future potential impacts to human health and the environment caused by PCBs in the building and in Site soils. Specifically, this would be achieved through building demolition and capping of Site soils in a way that would facilitate redevelopment of the Site.

In the intervening years since the Approval Memorandum and EE/CA were issued, the PCB contamination has remained unabated and, in fact, Site conditions have worsened. Although there are no longer workers present, the building has deteriorated and vandalism and trespassing had increased until a better Site security presence was arranged. Moreover, without a daily workforce present, the potential for fire has also increased, with its concomitant potential release of dioxins and furans generated from the fire. The SEE/CA continues the goals and objectives of the EE/CA while reflecting current conditions at the Site. The overall goal is still to minimize impacts to human health and the environment caused by PCBs in the vacant mill and surrounding Site soils. The SEE/CA carries forward the objectives for building demolition given its deteriorating status and heightened potential for fire as well as and for installing a protective cover to prevent direct contact with Site soil. The SEE/CA added an objective to minimize future releases of PCBs via storm water, air and groundwater. The presence of PCBs in groundwater and air were identified in the Approval Memorandum.;[1] PCBs in stormwater were identified in the conceptual site model.

B. Comments on the SEE/CA in Section III of AVX Comment Letter

1. AVX commented that the 2006 SEE/CA does not meet its statutory or regulatory requirements under CERCLA for a removal action for the following reasons:

[1] The Approval Memorandum also notes the existence of VOCs in Site soils and groundwater; however, it recognizes that a prior removal action was taken in an effort to address contaminants, including PCBs, migrating to the Acushnet River in groundwater.

a. AVX commented that the SEE/CA does not satisfy CERCLA §104(a)(1) requirements to define the manner in which the facility constitutes a substantial threat of release of a hazardous substance into the environment.

EPA Response:

EPA disagrees that the SEE/CA does not satisfy CERCLA § 104(a)(1) requirements. AVX points to two exposure pathways identified in the Approval Memorandum (ingestion and dermal inhalation (sic)) and the purported lack of any other basis in the Approval Memorandum or the EE/CA for the SEE/CA's statements a) that PCBs in soil and groundwater pose a potential threat to human health and the environment,[2] b) that stormwater runoff poses a potential threat to surface water and c) that there is a threat of release of contaminants in the event of a fire at the facility. EPA disagrees that the SEE/CA's recommended action is without a basis or foundation in the Approval Memorandum and the ARF and refers AVX to, among other things, the following items:

EPA's response to AVX comment A.3 which cites the specific factors in the NCP § 300.415(b)(2) that are presented in the Aerovox Approval Memorandum that establish the necessary site specific findings for a removal action at the Aerovox Site under CERCLA § 104(a)(1);

Section IV of the Approval Memorandum (Basis for EE/CA and Non-Time Critical Removal Action) which includes a finding that the potential for tracking of contamination to offsite areas also exists and "Should the building become vacant with no security measures the threat of fire increases.";

The EE/CA which describes Site characteristics including a description of higher elevations on the western edge of the property sloping to lower elevations at the eastern edge of the property along the shoreline of the Acushnet River;

The ARF which presents Site investigations, including groundwater, soil and building sampling results which identifies concentrations of contaminants in groundwater, soil and building material that exceed regulatory standards;

The March 2006 CSM which concludes that increased PCB releases to surface water (and thus to the harbor) are expected as the building continues to deteriorate (ENSR, 2006 at

[2] EPA notes, however, that groundwater contamination is beyond the scope of this NTCRA and will be addressed through the subsequent 21E action that will be implemented at the completion of the NTCRA.

p.4-4); and

The April 2006 SEE/CA which points out that in the event of a fire at the vacant mill, the fire suppression water would likely become contaminated with PCBs. This contaminated surface water would then drain into New Bedford Harbor and potentially the abutting properties as well.

AVX's comment implies that CERCLA and the NCP require that the basis for taking a removal action should be the same as or close to that which forms the basis for a remedial action. EPA disagrees and points to the NTCRA Guidance which emphasizes that the purpose of removal authority is to address the worst problems first and achieve prompt risk reduction. The Guidance goes on to describe the streamlined risk evaluation which is "intermediate in scope between the limited risk evaluation undertaken for emergency removal action and the conventional baseline assessment normally conducted for remedial actions." (p. 29). A risk assessment was performed for Site worker exposure scenarios to contamination inside and outside the building. Based on the NTCRA Guidance and the statutory authority for removal actions, EPA did not deem it necessary to complete further risk assessments for the potential pathways of tracking contamination to offsite areas or potential fire exposure pathways. The Approval Memorandum and EE/CA AR describe instances of trespassing onto the Site and into the building (and thereby coming into contact with contaminated surfaces) as well as the location of the building in a densely populated urban area.

At the time the 1998 EE/CA was being written, the working assumption was that the building would be demolished, since only building demolition alternatives were presented. It should be no surprise therefore that the EE/CA did not address the scenarios of building deterioration or mill fire. With the subsequent Aerovox bankruptcy in 2001 and the vacant, unheated status of the building since then, it is reasonable and prudent to consider the threat of releases in such scenarios. To disregard these threats, especially with the knowledge that two other nearby vacant mills have caught fire in recent years, would be an abdication of responsibility.

Although the 2006 SEE/CA does not reference the Aerovox Preplan specifically, the Preplan was included in the AR and EPA was well aware of its contents and conclusions. The Preplan itself captures the risks of the vacant mill, saying that "Due to the hazards present, the use of interior crews would not be advisable except for fires of a very limited size. The physical positioning of the building, its chemical contamination, and its exposures will present serious problems." EPA coordinated with the City and its Fire Department prior to issuance of the SEE/CA, was aware of their concerns, and included the Preplan in the AR to help capture the risks posed by a fire scenario in the public record.

b. AVX commented that the SEE/CA does not comply with the NCP for the following reasons:

it improperly relies on an unsubstantiated risk evaluation based on incomplete site characterization;

EPA Response:

AVX appears to be troubled by the passage of time between the issuance of the Approval Memorandum and SEE/CA and the intervening change in Site conditions and attempts to portray the NCP and the NTCRA Guidance as requiring a full risk assessment and Site characterization to justify a removal action. EPA refers AVX to its response to AVX comments A.3 and B.1. As stated in those responses, the goals and objectives contained in the SEE/CA remain consistent with the Approval Memorandum and the EE/CA. The Approval Memorandum, the EE/CA, and the ARF all contain sampling results of elevated levels of VOCs in groundwater and soils and PCB-contamination in building materials and building equipment, and in Site soils, surface water runoff, groundwater and air. These documents also noted the population density of the area surrounding the building. The SEE/CA includes additional sampling results that show elevated levels of PCBs in the parking lot asphalt at the Site and marks further deterioration of the building. The Approval Memorandum found the building to be unsafe for workers and trespassers and a significant threat of release of PCBs (and dioxins and furans) in the event of fire and noted the increased threat of fire if the building were to be vacated. The recommended alternative in the EE/CA, which was authorized by the Approval Memorandum, was to demolish the building and cap the Site because of these documented Site conditions. The Site risks remain whether or not workers are in the building. Even after Aerovox relocated, the building was to be demolished given its level of contamination and potential for significant impacts to the surrounding community in the event of fire.

AVX fails to note that the NTCRA Guidance also provides another stated purpose of an Approval Memorandum which is to provide information about threats to public health, welfare, or the environment posed by sites including those from expected changes in the situation if no action is taken or if the action is delayed (NTCRA Guidance, p 6). The SEE/CA is consistent with this NTCRA guidance and the Approval Memorandum in that it reflects the changed conditions of the Site.

it fails to state clear and appropriate risk-based objectives;

EPA Response:

EPA disagrees and notes that the SEE/CA's objectives (Section 2) address the need to abate, prevent minimize, stabilize, mitigate or eliminate the release or threat of release of PCBs from the highly contaminated (and deteriorating) building and from the property. Again, EPA believes AVX is confusing remedial action with removal action. The scope of the removal action could

range from site stabilization to total site cleanup. "Specific objectives vary with the type of removal" and can be guided by, among other things, applying appropriate federal or state ARARs. (NTCRA Guidance, p. 32)

The goal of this NTCRA is to prevent current and future releases of PCBs and control risks to human health and the environment. Consistent with (i), (iv), (vi) and (vii) factors in 40 CFR 300.425(b)(2), the SEE/CA's objectives define the scope of the removal action. They are targeted to safely demolish the building in accordance with ARARs, prevent direct contact with contaminated soils (and asphalt) through capping, minimize future releases to surface water, groundwater and air, through demolition and capping, perform these actions in a way to allow future reuse of the Site and assist in establishing land use controls to ensure the integrity of the cap and prevent the use of Site groundwater.

the recommended alternative fails to address properly the only 40 CFR 300.415(b)(2) factors that apply;

EPA Response:

EPA disagrees with AVX's assertion that only two of the 300.415(b)(2) factors apply in this case. In addition to 40 CFR 300.415(b)(2(i) and (vi), the two factors that AVX agrees with, the Site has high if not percent levels of PCBs in soils that may migrate (factor iv), the Site could contaminate the Acushnet River estuary, a sensitive ecosystem and part of the Buzzards Bay national estuary of concern, and weather conditions could cause PCBs to be released by causing further building deterioration (factor viii).

With regard to the two factors that AVX recognizes as applicable to the Site (actual or potential exposure to humans, animals or the food chain and threat of fire or explosion), AVX's comments incorrectly minimize the potential exposure from the Site. Airborne PCBs *have* in fact been detected on the west (Belleville Avenue) side of the property across from an urban residential neighborhood. Similarly, the March 2006 Conceptual Site Model did not account for the possibility of solvent-induced PCB groundwater flux to the Acushnet River, a scenario now considered more plausible since the discovery of extremely high levels of solvents in the sediments abutting the Site in summer 2006.

Further, EPA disagrees that better security and building stabilization/fire code compliance would be an effective long term option to address the threat of fire from this Site. Due to the highly contaminated and deteriorated condition of the building(s) and property, the Site could reasonably be expected to linger in this troubled state in perpetuity given the absence of any other public resources to address it. Given that two other vacant mills have caught fire in the area in recent years, EPA believes a building fire at this Site is an accident waiting to happen. EPA thus believes a permanent rather a temporary remedy is the best approach to address this urgent risk

and threat of exposure.

the recommended alternative does not contribute to efficient performance of any long-term remedial action; and

EPA Response:

Refer to EPA's response to AVX comment B.6.

there is no accounting for costs of post-removal site control (PRSC)

EPA Response:

EPA expects that the costs for PRSCs would be similar across all alternatives, so that the alternatives as presented in the SEE/CA can be comparatively evaluated. More importantly, there are provisions in the forthcoming settlements for the responsibility and funding for implementation of PRSCs.

2. AVX commented that the recommended alternative is not implementable because EPA's calculations for the total volume of demolition waste are low, and as a result the actual amount of waste will exceed the disposal capacity available at the Site. AVX also questioned other EPA calculations for demolition and disposal costs.

EPA Response:

Although there is inherent uncertainty and difficulty regarding estimating a crushed disposal volume of demolition debris for a project of this scale, especially given the large volume of interior equipment and materials (E&M) left behind when the building was vacated (the volume of E&M is estimated to be significantly more than the volume of building demolition debris) EPA disagrees that the SEE/CA's recommended alternative would not have been implementable. AVX bases its comments on an incorrect building material disposal volume (not including E&M) of 14,771 cy, which as indicated in Table 11-1 of the EE/CA includes the volume of the concrete foundation. As indicated on p.6 of the SEE/CA, "the basement concrete floor slab and side walls...would remain in place." The EE/CA estimated this foundation volume to be 3,690 cy, thus the correct building material volume for this analysis should be approximately 11,100 cy, not the 14,771 cy as used by AVX.

Furthermore, EPA commissioned a room-by-room analysis of the vast amount of E&M that remain inside the building as well as a basement volume measurement to generate as accurate an estimate as possible. This evaluation concluded that, even in a worst case scenario in which void spaces within the disposed debris were assumed to be very conservative, onsite disposal

could be accommodated by a slight mounding or crowning of the debris once placed within the basement - something that would be desirable regardless of the volume to promote surface water runoff. With all disposal thus accommodated onsite, it should also be noted that AVX's comments regarding the cost estimate being flawed for not including offsite disposal costs (p.31) are irrelevant.

More importantly, however, given the remedy change to offsite disposal discussed above, the question of whether sufficient onsite disposal volume would be available becomes moot.

Regarding other AVX comments on the SEE/CA's cost estimate, unfortunately AVX provides no detailed information to support its various claims that a) the cost of the recommended alternative should be $7.45 million not $7.90 million, b) building demolition costs are underestimated by $600,000 or c) asbestos removal costs are underestimated by approximately $200,000 due to an incomplete survey. EPA does note that the asbestos cost estimate was based on a 2006 asbestos survey commissioned by EPA to provide as accurate an estimate as possible. Overall, EPA believes that the cost estimates are consistent across all alternatives and meet the level of accuracy required for the planning and response selection stage.

3. AVX commented that EPA originally endorsed a building stabilization alternative in the 1999 AOC before Aerovox filed for bankruptcy and that such an alternative is still implementable and represents the lowest cost to address the building. AVX also views the recommended alternative as a temporary measure.

EPA Response:

Building stabilization was only envisioned as a temporary approach in the 1999 AOC, until such time as funding from the agreed-upon payment plan was in place to demolish the building. Moreover, the pre-bankruptcy remedial scenario was quite different than after bankruptcy, since Aerovox would have, prior to filing for bankruptcy, provided financing for Site security, building repairs, fire suppression, and alarms. This was obviously not the case post-bankruptcy. Maintaining a vacant building would consume considerable funds over what could be a very long time, if not in perpetuity if no developer were to step forward. The building deterioration would only get worse and require additional funds to repair over time (e.g., roof leaks). Vandalism and trespassing would continue to be ongoing problems. Without additional funds, bankruptcy settlement funds would be insufficient in the long-term to maintain a building stabilization alternative and it would actually be more costly. Demolition is the immediate answer to the threats and risks posed by the building, whereas building stabilization is only a temporary measure.

EPA disagrees that the recommended alternative in the SEE/CA was a temporary measure, as it would have fully achieved the response action objectives.

4. *AVX commented that the recommended alternative does not attain ARARs.*

EPA Response:

As a general response, EPA notes that pursuant to 40 CFR 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. EPA has made every effort to attain ARARs to the extent practicable given the Site circumstances and the need to address the threats posed by Site conditions. EPA refers to the Section VI.B.6 and Table 1 of the Action Memorandum for a complete discussion of ARARs. Below are EPA's responses to AVX's specific comments on Site ARARs.

In particular:

State hazardous waste regulations require an engineered barrier and post closure care;

EPA Response:

EPA agrees with AVX's comment that the NTCRA capping requirements may be confusing and believes some of that confusion may be attributable to the interaction of CERCLA, TSCA and state 21E capping requirements. The NTCRA as presented in the EE/CA and SEE/CA is protective under CERCLA and TSCA. This doesn't mean, however, that the Aerovox Site, once the NTCRA is completed, would not be subject to further cleanup and capping requirements under the state 21E cleanup program. Pursuant to the 21E program and its associated regulations, soils remaining onsite under a protective cover that exceed Massachusetts Contingency Plan (MCP) upper concentration limits (UCLs) for certain contaminants may require an engineered barrier in addition to the NTCRA's protective cover. The NTCRA will include a protective cover that meets the TSCA determination conditions for capping to prevent dermal contact. The NTCRA also includes long-term groundwater monitoring and maintenance of the cap, including regular sealcoating, as well as the need to implement land use restrictions to insure the NTCRA remains protective. It is still possible, however, that after the NTCRA is completed an engineered barrier under the state 21E program will be required in certain areas. The SEE/CA identified provisions of the MCP and state hazardous waste regulations that recognize that CERCLA actions performed at sites can result in sites being adequately regulated for the purposes of these state regulations. (See response to the comment directly following this one.)

With the subsequent revision of the removal action and the forthcoming settlements, the confusion has cleared. Once the NTCRA work is completed, AVX will commence a 21E evaluation and cleanup of the Site which may include an engineered barrier if required by state regulations. The NTCRA will include a protective cover wherever PCBs in soil exceed 2 ppm; the ensuing 21E cleanup will include an engineered barrier wherever soil exceeds state UCLs.

With regard to post closure care, as stated above, the TSCA determination includes as a condition for protectiveness, a long-term monitoring and maintenance program for the Site caps, a long-term groundwater monitoring program, and land use controls to prevent groundwater use and land use activities that would adversely affect the cleanup. Moreover, the forthcoming settlements assure that these activities will be funded and performed.

The NTCRA does not meet state requirements for adequately regulated sites pursuant to the MCP;

EPA Response:

EPA disagrees that the NTCRA is not adequately regulated pursuant to the MCP, 310 CMR 40.0111. As stated in MassDEP's own fact sheet, *The New MCP: Adequately Regulated Fact Sheet 1, May 2004,* "The provisions limit the applicability of the MCP in cases where response actions are adequately overseen by other authorities." It goes on to state, "DEP included the adequately regulated provisions in the MCP in order to avoid duplication of regulatory procedures and oversight, thus streamlining site cleanup at sites subject to multiple jurisdictions". The fact sheet goes on to specifically identify "Federal Superfund Sites or other removal actions taken in accordance with CERCLA..." as adequately regulated sites. This NTCRA is carried out under the authority of CERCLA §104(a) with oversight by EPA and its representatives. The fact sheet also states that a response action is adequately regulated if it is conducted according to the procedures of one of the listed regulatory authorities, including CERCLA. The NCP contains the procedures that regulate Superfund cleanups. As stated throughout these responses to comments, including III.A.3 and III.B.1.b. this NTCRA meets all the NCP factors and requirements necessary to conduct a removal action.

EPA also refers to MassDEP *The New MCP: Adequately Regulated Fact Sheet 2, May 2004,* which provides further information about adequately regulated provisions specific to response actions conducted under CERCLA, including when DEP deems a CERCLA site to be adequately regulated. Contrary to AVX's comments, EPA has been coordinating with MassDEP for many years at this Site. In fact, in accordance with CERCLA, the NCP and its own fact sheet, MassDEP identified ARARs for the NTCRA. (See MassDEP correspondence dated February 2009 in administrative record).[3]

The NTCRA does not meet state requirements for adequately regulated sites pursuant to the state hazardous waste regulations;

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[3] EPA notes that MassDEP also provided a letter identifying ARARs just before the 2006 SEE/CA was issued; however, it was not received in a timely manner to be adequately considered in the SEE/CA. A copy of that letter is included in the administrative record for reference.

Pursuant to 310 CMR 30.105 of the state hazardous waste regulations, PCB waste that would be subject to hazardous waste regulations due to the presence of PCBs are exempt from the regulations provided certain conditions are met, including that the waste is regulated pursuant to 40 CFR 761. As evidenced by the TSCA Determination (Appendix C of the Action Memorandum), the NTCRA has been determined, in accordance with 40 CFR 761.61(c) of TSCA, not to pose an unreasonable risk to health or the environment as long as the conditions in the TSCA Determination are followed. EPA has acknowledged in the Action Memorandum that some of the demolition waste may not be included in the exemption provided by 310 CMR 30.105 and it will be handled accordingly to the extent practicable.

EPA does agree to a certain extent with AVX's comment in that Section VI.B.6 of the Action Memorandum notes that certain provisions of the state hazardous waste regulations have been reinserted into the ARARs table. As pointed out by MassDEP in its 2009 ARARs letter, NTCRA activities will address waste that may not be included in the exemption provided by 310 CMR 30.105 such as asbestos, mercury and various universal waste items. These wastes would be governed by those sections of the regulations identified in the ARARs table in the Action Memorandum.

There is insufficient information known about the Site upon which to base a 40 CFR 761.61(c) TSCA determination;

EPA Response:

EPA strongly disagrees with this comment and refers to its response to comment III.B.1.b., among other responses. Removal actions do not require comprehensive site-specific risk assessments prior to taking action nor is that a requirement contained in 40 CFR 761.61(c). The Approval Memorandum, the EE/CA, and the ARF all contain sampling results of elevated levels of PCBs in building materials and building equipment, and in Site soils, surface water runoff, groundwater and air. These documents also noted the population density of the area surrounding the building, the prior presence of workers and frequency of trespassing and vandalism. The SEE/CA includes additional sampling results that show elevated levels of PCBs in the parking lot asphalt at the Site and notes the further deterioration of the building. The TSCA Determination finds that the NTCRA's steps for demolishing the building and capping the Site to prevent dermal contact with PCB contamination will not pose an unreasonable risk to health or the environment as long at the conditions in the Determination are met. EPA also notes that with the revised NTCRA that now includes sending all demolition waste offsite, the conditions in the final TSCA Determination have been revised accordingly.

With regard to the *Guidance on Remedial Action for Superfund Sites with PCB Contamination*, as stated in the ARARs table, EPA identified that the guidance was considered, as appropriate,

during the development of the EE/CA, SEE/CA and removal action process. EPA notes that the guidance is written to guide the development of an RI/FS at a remedial site with PCB contamination. Although not a remedial site EPA nevertheless believes the NTCRA is consistent with the guidance. Building demolition and site capping is a permanent remedy for the Site; no further removal or remedial action pursuant to CERCLA is currently envisioned beyond the NTCRA work. As noted in the Action Memorandum and in these comments, there will be further site assessment and cleanup as necessary to meet the state 21E program requirements; however, the NTCRA cleanup is considered protective regardless of any further state cleanup. EPA agrees that the guidance also recites the statutory preference for remedies that include treatment to reduce mobility, toxicity or volume of hazardous waste. While the NTCRA does not include treatment as a component, it complies with the guidance to the extent practicable in that certain waste streams of the demolition debris will be treated/decontaminated to reduce PCB levels where such treatment can be accomplished cost-effectively. PCBs in soil remaining onsite, while already generally immobile, will be rendered even more so through Site capping. More importantly, however, the NTCRA through the building demolition eliminates the release of contaminants in the event of fire.

Onsite disposal of building demolition debris meets the requirements of a solid waste disposal landfill; however, the Site is not a suitable location for a solid waste management facility;

EPA Response:

EPA disagrees that onsite disposal of the building debris would have triggered state solid waste regulations, except for the proposed waste ban regulations as identified in the SEE/CA. The majority of the waste, except asbestos, mercury and universal waste was assumed to be TSCA waste and would be addressed as such. TSCA disposal regulations were included as ARARs in the EE/CA and SEE/CA and conditions governing the Site cleanup were included in the draft TSCA determination. The waste ban provisions (governing disposal of asphalt, brick and concrete) were not promulgated at the time the SEE/CA was issued but were noted and held for further review in the Action Memorandum.

With the revised response action now including offsite disposal of the building debris, this becomes a moot point, leaving only the waste ban provisions for reconsideration. In its ARARs letter, MassDEP noted that these provisions were now promulgated and asked that they be included as an ARAR. The Action Memorandum reflects that EPA believes these provisions govern offsite transportation and disposal activities and therefore is not an ARAR since ARARs apply only to onsite activities. EPA expects that any part of the NTCRA occurring offsite will comply with all laws, including this regulation. EPA understands that coordination with MassDEP would be required for disposal of waste ban material that does not exceed levels requiring disposal at a TSCA or hazardous waste landfill, but still remains contaminated above

recycling or reuse levels for compliance with the regulation.

The NTCRA does not comply with Floodplain Executive Order 11988; and

EPA Response:

AVX took issue with EPA's explanation of its ability to comply with the Floodplain Executive Order to the extent practicable. Based on the funding available at the time the SEE/CA was issued and the exigencies of the Site circumstances, EPA's only practicable alternative was to address the threats posed by the building and soils that already existed in the floodplain through demolition and capping. To the extent there was funding available, some material would be taken offsite, but without additional funding, waste would have been left onsite in the floodplain. EPA noted the existence of the hurricane barrier in the Harbor that would afford flood protection as well as other measures we would take to reduce impacts, including decontamination, installing a protective cover that could withstand flooding, minimum grading, and maintaining floodplain vegetation to reduce erosion.

EPA again notes that this comment is now moot with the revision of the NTCRA to include offsite disposal of the building demolition debris.

The protectiveness of air emission standards vary for residential and business abutters.

EPA Response:

AVX commented that a single risk-based standard for airborne PCBs should be used. Based on the substantial amount of monitoring that EPA has performed to date at the Site, use of a risk-based airborne PCB standard would not make sense for the simple reason that airborne PCB levels have at certain times exceeded risk-based levels even without response work underway. EPA's approach is therefore to use these background airborne PCB levels as the controlling standard for the project, i.e., to not allow airborne PCB levels to be greater than currently documented during the demolition of the building.

5. AVX commented that the removal of asbestos and mercury from the building is not a proper response action under CERCLA.

EPA Response:

EPA agrees that CERCLA precludes removals in response to a release or threat of release from products which are part of a structure's building material, result in exposure only within a building, and which haven't migrated or threatened to migrate outside a building. However, as documented in the AR this is clearly not the case at this Site and many pathways for contaminants

to escape exist. The building is in great disrepair; vandalism and trespassing occurred regularly until more recent heightened Site security was put in place; doors and windows have frequently been broken and repaired.

Many mercury spills have been documented, some existing near floor drains, thus posing an acute threat of release to the exterior of the building. Vandalism and trespassing also presented a risk of release via tracking mercury and friable asbestos outside the building. Asbestos and PCB-contaminated dust are also released outside the building through broken windows, doors, openings in the roof and floor drains when mixed with flood waters.

All hazardous materials in the building including mercury and asbestos need to be safely removed prior to demolition to avoid risks to human health and the environment during demolition via airborne emissions.

EPA does not view the remainder of this comment regarding liability as being relevant to the request for comments on the 2006 SEE/CA.

6. AVX commented that the SEE/CA's recommended removal action does not meet the requirements for a consistency waiver.

EPA Response:

This removal will require funding above $2 million and will require more than one year to implement, thereby exceeding the statutory cost and time limits on Fund-financed removal actions established under Section §104(c) of CERCLA and Section 300.415(b)(5) of the NCP. The NTCRA is estimated to cost not more than $24.1 million (in 2010 dollars) and take approximately 22 months to complete. A statutory waiver is therefore required. Because this action is a mixed funding action and there will be additional cleanup pursuant to the State 21E program, a consistency exemption pursuant to CERCLA § 104(c) is appropriate.

The NTCRA is appropriate. EPA OSWER directive 9360.0-12A, "Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions," June 12, 1989, states that an action is appropriate if the activity is necessary for any *one* of the following reasons:

1. To avoid a foreseeable threat;
2. To prevent further migration of contaminants;
3. To use alternatives to land disposal; or,
4. To comply with the offsite policy.

This NTCRA meets criteria one and two identified above: (1) It will permanently avoid the foreseeable threat of fire and subsequent release of PCBs (and the potential breakdown products of dioxins and furans) and other contaminants to the surrounding urban neighborhoods posed by the manufacturing facility and its contents; and (2) It will prevent further migration of contaminants via stormwater to the Acushnet River and exposure to contaminated soils and elevated airborne PCBs due to the contaminated building materials. By addressing the building and capping the Site at this time, the NTCRA will reduce the scope of the 21E cleanup. The 21E action will also address the need for permanent groundwater source control.

The NTCRA is consistent with long-term actions at the Site. Pursuant to the forthcoming settlement with AVX, there will be additional cleanup actions performed pursuant to 21E. Since the highly contaminated and deteriorating building would need to be demolished under a state \cleanup action, the proposed NTCRA is consistent in the broadest sense with the ensuing 21E action planned for the Site. Demolition of the building provides AVX with the ability to conduct a full site characterization (e.g., including underneath the building foundation) pursuant to 21E. Once the NTCRA has been completed, AVX, pursuant to the Administrative Consent Order between AVX and MassDEP, will further evaluate the full nature and extent of contamination at the Site not addressed by the NTCRA and implement further cleanup actions to address remaining soil and groundwater contamination. All 21E activities will be conducted under the direction of an LSP, with oversight by MassDEP.

As part of its settlement with AVX, the City will implement post-removal Site controls in the form of a deed restriction to prevent future use of groundwater, required pursuant to TSCA, and an AUL to ensure the integrity of the capped areas pursuant to 21E. Moreover, AVX will fund an escrow account that will finance long-term operation and maintenance of the cap and a groundwater containment system as well as groundwater monitoring activities that are required pursuant to TSCA.

Finally, the response action authorized by this Action Memorandum, along with the 21E cleanup, will result in a complete source control and management of migration remedy for the Aerovox Site, effectively controlling or eliminating any further source of PCBs, VOCs or other contaminants from this facility over the long term to the New Bedford Harbor sediments and waters. These actions are also consistent with EPA's remedial action at the abutting New Bedford Harbor Superfund Site, since it provides long term source control of the Aerovox Site. Potential releases of PCBs to the Harbor in the event of a mill fire (e.g., from fire fighting water runoff and PCB-contaminated soot deposition) are also eliminated.

7. AVX commented that the recommended alternative is not effective and implementable alternative with lowest cost.

EPA Response

The building stabilization approach recommended by AVX is not as it contends "the approach endorsed by EPA in the 1999 AOC". While there was a need for the building to be secured and stabilized until Aerovox's funding payments were sufficient to pay for the demolition, this was simply a temporary stop-gap measure in consideration of Aerovox's inability to fully pay for the remedy at the outset. AVX's comment that the City's $250,000 in bankruptcy proceeds could have been used for more comprehensive building stabilization is incorrect, as this amount is barely sufficient to pay for electricity, minor repairs and upgrades to the fire alarm system over a limited period of years whereas such an approach could be needed in perpetuity given the egregious contamination of the facility. In other words, it is unlikely given the cost of cleanup that the property would be redeveloped using private funds. And for EPA to use its bankruptcy proceeds on short term building stabilization measures would have eliminated the ability to use these funds for a permanent building remedy.

Furthermore, EPA disagrees with AVX's assertion that demolition of the building is "a termporary measure"; building demolition permanently remedies the risks that the building poses while building stabilization, AVX's preferred approach, does not.

8. AVX recommended that a building stabilization approach be pursued until a long-term solution under the State's Chapter 21E program could be implemented. AVX commented that this approach would be protective, easy to implement and less expensive than the recommended alternative, which they believed raised significant technical and legal issues.

EPA Response:

In light of the risks to human health and the environment and the risk of fire at the highly PCB-contaminated and vacant Aerovox facility, EPA disagrees that a building stabilization approach would be the best alternative for this Site. In addition to all the long-term care and costs that would be required to keep the existing building in place, EPA notes that several nearby vacant mills have caught fire in recent years. When burned (such as in a building fire), PCBs can break down and potentially form more toxic compounds such as dioxins and furans.

Again, however, as described throughout this Responsiveness Summary, through forthcoming settlement agreements with AVX as well as with MassDEP and the City, the building will be demolished, demolition debris will be disposed offsite and the Site will be capped. Once this NTCRA work is completed, the Site will be addressed under the State 21E program.

AEROVOX ACTION MEMORANUDUM

RESPONSIVENESS SUMMARY
APPENDIX 1
(Comment Letters)

The Commonwealth of Massachusetts

HOUSE OF REPRESENTATIVES
STATE HOUSE, BOSTON 02133-1054

ROBERT M. KOCZERA
REPRESENTATIVE
11TH BRISTOL DISTRICT
119 JARRY STREET
NEW BEDFORD, MA 02745
HOME: (508) 998-8041

Vice-Chair
Personnel and Administration

Committees
Economic Development & Emerging Technologies
Revenue

ROOM 448, STATE HOUSE
TEL. (617) 722-2582
FAX (617) 722-2879
Rep.RobertKoczera@hou.state.ma.us

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 461007

August 21, 2006

Mr. David Dickinson, Project Manager
US EPA _ New England
1 Congress Street Suite 1100 (HBO)
Boston, MA 02114-2023

Dear Mr. Dickinson:

I am writing to convey my opposition to the cleanup and reuse option recommended by the Environmental Protection Agency in the 2006 Supplemental Engineering Evaluation and Cost Analysis for the Aerovox site at 740 Belleville Avenue in New Bedford. I support the demolition of the Aerovox building and the removal of demolition debris from the site as well as the removal of contaminated soils from the site. The EPA should not consider containment of contaminants as an acceptable option under any circumstance. Just as our community demanded the removal of harbor contaminants from the site we insist on the removal of building debris and contaminated soil from the Aerovox site as well.

The high level of contamination of the Aerovox building and soil requires the removal of debris and contaminants from the site. To do otherwise is to put the population at risk to carcinogens and re-polluting the Acushnet River.

Sincerely,

Robert M. Koczera

Robert M. Koczera
State Representative
Eleventh Bristol District

SDMS DocID 461007

"Koczera, Robert - Rep. (HOU)" <Robert.Koczera@state.ma.us>
08/21/2006 04:42 PM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox site cleanup and reuse proposal

Mr. David Dickinson:

Please accept the attached letter as my comments on the proposed cleanup and reuse of the Aerovox site at 740 Belleville Avenue New Bedford. I am faxing a copy of the attached letter and mailing the letter to you as well. Aerovox EPA letter.doc

COMMONWEALTH OF MASSACHUSETTS HOUSE OF REPRESENTATIVES

REPRESENTATIVE ROBERT M. KOCZERA

Phone Number: 617-722-2582
Fax Number: 617-722-2879

To: Mr. David Dickinson (HBO)
617- 918- 0329

From: Rep. Robert M. Koczera

Number of Pages 2 **(Including Cover Page)**

SITE: Aerovox
AREA: 2.2
OTHER: 458685

Alan Coutinho
<acoutinho@acushnettown.mec.edu>
08/15/2006 09:01 AM

To Group commentsnbh@EPA
cc
bcc
Subject

Dear Mr. Dickerson,

The Board of Selectmen at their August 14, 2006 meeting discussed the EPA's alternative for the contaminated Aerovox Site. The Board is very concerned about the immediate threat that the Aerovox site poses. While the Board acknowledges the cost associated with remediation of the on site PCB's, they do not feel leaving the demolition waste on site is in anyone's best long term interest. If history has taught us anything in matters such as this it is that the least costly route turns into the most costly route long term. The Board feels the EPA's Alternative #3 will ultimately be the best option for cleaning the site and best for the community.

Alan G. Coutinho
Town Administrator
Town of Acushnet
122 Main Street
Acushnet, MA 02743
(508)998-0299

SDMS DocID 458685

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458683

THE COMMONWEALTH OF MASSACHUSETTS

ACUSHNET CONSERVATION COMMISSION

TOWN OF ACUSHNET

122 MAIN STREET, ACUSHNET MA 02743

TEL: 508.998.0202 FAX: 508.998.0203

Robert Rocha, Chairman
Ted Cioper, Vice-Chair
Patricia Picard
Marc Brodeur
Carol Chongarlides
Joe Botelho

Merilee K. Woodworth, Conservation Agent

Mr. David Dickerson, Project Manager
US EPA – New England
1 Congress St., Suite 1100 (HBO)
Boston, MA 02114-2023

August 15, 2006

Dear Mr. Dickerson,

On behalf of the Acushnet Conservation Commission I am writing to express our concerns regarding the Aerovox Site Clean-up Project. It is the position of the Commission that the clean-up option chosen by the EPA, called New Alternative #1, does not go far enough in removing the hazards that PCB contamination of this site poses to the people and the environment of the surrounding Acushnet /New Bedford area. We join with the Coalition for Buzzards Bay and the Acushnet Board of Selectmen in strongly urging the EPA to reconsider the alternatives for cleaning up this site and removing the health hazards this site presents. Leaving the contaminated soil and debris on this site does nothing to ameliorate the problems of runoff and groundwater infiltration that are possible from this site for many, many years to come. In addition this option would make it nearly impossible to safely and economically redevelop this site. We urge the EPA to consider removing the contaminated materials off-site and out of the New Bedford / Acushnet area. Please consider the health and safety of our residents and the environmental, economic, and recreational value of the Acushnet River and New Bedford Harbor when deciding which option will be used to clean up the Aerovox site.

Thank you for the opportunity to comment on the Clean-up options offered by the EPA.

Sincerely,

Merilee K. Woodworth

Merilee K. Woodworth
Acushnet Conservation Agent

SDMS DocID 458683

Merilee Woodworth
<mwoodworth@acushnettown.mec.edu>
08/15/2006 12:48 PM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox Site Clean-up comments

Attached please find a letter from the Acushnet Conservation Commission commenting on the clean-up of the Aerovox Site in New Bedford. Thank you for the opportunity to present the opinion of the Commission on this matter.

merilee

Merilee K. Woodworth
Conservation Agent
Town of Acushnet
122 Main Street
Acushnet, MA 02743
Tel (508) 998-0202
Fax (508) 998-0203

ACC ltr to EPA on Aerovox.doc

Site: Acravox
Break: 2.2
Other: 458684

Bsna02746@aol.com
08/14/2006 11:19 PM

To Group commentsnbh@EPA
cc
bcc
Subject Arevox

Dave Dickerson:

An opinion on the Arevox clean up. After hearing of all the problems with the problems with the new Keith Junior High School and the problems at New Bedford High School even after all these years. I feel the EPA should rethink burying the demolition waste on site. It seems that even years later the PCB's still come back to haunt us. Even though the EPA is assuming the land will still be used for commercial/industrial use and you recommend changing the footprint of the land, putting a parking lot over the contaminated demolition material in the cellar, I wonder about settlement of the buried material over time. Will it cause the asphalt to crack and allow rain water to seep into the cellar and begin to force seepage of contaminated material out? I realize we are talking years, but this material will be there forever and parking lot maintenance is never a top priority with anybody. I know this project will be closely monitored by EPA, however if complete removal of the contaminated material is not in the budget and it probably is not, I would like to see the material sealed with cement or at least a rubber bladder of some kind before it is covered with any dirt. Will there be a need for any vent pipes to allow any gas vapors to escape.

I hope that complete removal of the demolition waste is in the budget given the close proxcimity of the property to the water and for the peace of mind of everyone concerned.

Thank you for keeping the Bullard Street Neighborhood Association informed of the progress of the harbor clean up and the EPA is welcomed at our meetings any time.

Ken Resendes
President
B.S.N.A.

SDMS DocID 458684

Mr. Philip Bargioni
415 Summer Street
New Bedford MA 02740

June 15th 2006

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458686

Mr. David Dickerson, Project Manager
US EPA - New England
1 Congress Street, Suite 1100 (HBO)
Boston, MA 02114-2023

E-MAIL commentsnbh@epa.gov

Re: Aerovox Site

Dear Mr. Dickerson,

Thank you very much for your presentation on Wednesday evening 6/14/2006, I found your answers to questions to be direct and informative. Your colleagues including city officials clearly described some of the immediate dangers associated with the site, as well as reviewed a number of different options for cleaning-up this property. It is a great pity that past industrialists were not more caring of our environment, and that we as a community are now stuck with this expensive problem to resolve.

As you are aware New Bedford has a number of sites that have been, or need to be abated of various hazardous products, and residents have become more educated over the years about clean-up options. There is also a level of intolerance when it comes to leaving any toxins in the land that could affect our health, or our ability to develop property in the future. The City has had a very high unemployment rate for a long period of time, which has been exacerbated by contaminated parcels of land such as the Aerovox location stopping industrial development.

The City of New Bedford is currently building a new middle school on an old city dump, and the project costs have increased by at least $30M to mitigate residents concerns about environmental issues at the new building. At the design stage the city was probably informed that with today's technology it is not a problem to build on an old dump site, but what was not fully explained is that it cost an extraordinary amount of money to build on marginal land. This lack of information disclosed to the City of New Bedford by the building designers, could be an avenue for the city to gain compensation from the designers of the school building in the future.

I have no issues related to the proposed demolition of the existing structures at the Aerovox site, just the thoroughness of the proposed work. The sooner the demolition of the building can start, the safer the local neighborhood will be from this enormous fire hazard.

I am sure you will take all the normal precautions to monitor the air quality during demolition, as well as protect the water resource from any contaminated run-of from the site.

It is normal good practice when demolishing a building in Massachusetts; to not only remove the building above grade, but also the foundations to that structure. After the

SDMS DocID 458686

foundations have been removed the void or basement to the original structure is then filled with what is normally termed as non organic clean ordinary fill material. The finish grade of where the building was is subsequently brought up to match the surrounding land, being careful not to impose a drainage problem on abutting property owners. This is my understanding of the requirements of the Massachusetts State Building Code, and it is what needs to happen on this site. This is not a dump site but a parcel of land that needs to be restored to its original condition prior to the mill structure on the land.

Many of your proposals state that you would fill the existing basement with bricks from the demolished mill, but this creates an enormous land area where you cannot construct a new building in the future. Brick rubble is not a suitable material to construct a new building on, and would have to be entirely removed to facilitate the construction of even a relatively light single story industrial structure. A filled site with unsuitable material is also a problem for the installation of services such as drains and water lines, which will break if they are not adequately supported by the ground.

A reduced effective area of land that can be built on will lower the value of the land. Land that is not buildable has little value, and will not return any taxation to the residents of the City of New Bedford. A small area of land that can support development might have to be constructed in a more expensive way, because of the long narrow shape of the residual land.

In conclusion, as a resident of the City of New Bedford I would prefer to see a complete removal of contaminated materials from the site, including a complete restoration of the soils at this location. This will remove environmental health issues from the area as well as not limiting future development of the land.

Yours Most Sincerely

Mr. Philip Bargioni

pbargioni@comcast.net
06/15/2006 10:19 AM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox Site

Mr. David Dickerson,

Please find attached my comments related to the Aerovox site project.

Yours Most Sincerely

Mr. Philip Bargioni Aerovox Site.doc

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458687

Rcmsaber711@aol.com
08/15/2006 09:01 AM

To Group commentsnbh@EPA
cc catherine.rollins@ci.new-bedford.ma.us, NBWard1Councilor@aol.com
bcc
Subject Aerovox demolition

Dear Mr. Dickerson
Unless I have missed a critical piece of the Aerovox demolition project, where is all of the airborn contaminated material from the building going to go?
All I have heard or read about is the danger of the contaminated material in that building being buried without sufficient feet of cover. How about all of the people who live in the north east of the City and Acushnet ,as well as all of the schools including Normandin, Ottiwell, Lincoln, Ashley, St. Joseph's.That section of Ward 1 and Ward 2 are so densely populated. How are we going to be protected from all of the air born contamination.
The air quality is already terribly compromised in that area.
I think this issue should be brought before the New Bedford Board of Health as well.
How can residents of this City protect themselves from breathing the air---short of moving away.
If the contamination issue has been grave around Keith, what do you anticipate it will be throughout the City.
Sincerely,
Rosemary and Charles Saber
Property owners

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458688

rick english
<fasmaros6797@yahoo.com
>

06/24/2006 08:07 PM

To Group commentsnbh@EPA
cc
bcc
Subject ground contamination will be worse and never cured

THE PROPOSSED PLAN? you want to demo the waste on site within the basement and leave it there and cap it. DONT YOU THINK,that it will be safer to have the waste removed from the site and this will help make it a cleaner and safer enviroment for the people ,the acushnet river cleanup ,the wild life ,the fish . but who cares right ..its all about the money to hell with the people!! take the cheapest way out . Think about when it rains .with all that waste there it will saturate the ground with the rain water into the soil that will there for run into the river through the ground water and soil that has all that garbage there. i think it will be safer to have that waste removed..and i will inform my neighbors as well . i live within 100 feet of this hell hole that will be created.. and why should the tax payers pay out of our pockets ..we are not the ones who profited here for years.. maybe aerovox should have to pay for the cleanup..they are the ones who damaged the area and they should be responsible. just like they are the major ones who polluted the river but who cares ? / letb the tax money suck it up ...and to hell with the people and ther future health issues..

Yahoo! Sports Fantasy Football '06 - Go with the leader. Start your league today!

SDMS DocID 458688

Aerovox
2.2
458689

Sherron Pires
<spiresrt@hotmail.com>
06/23/2006 01:41 PM

To Group commentsnbh@EPA
cc
bcc
Subject aerovox site public comment

I vote for new alternative #1.

Thank you,
Sherron Engel

Don't just search. Find. Check out the new MSN Search!
http://search.msn.click-url.com/go/onm00200636ave/direct/01/

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458690

Karen Vilandry
<kav704@yahoo.com>
07/07/2006 11:06 AM

To Group commentsnbh@EPA
cc Scott Alfonse <Scott.Alfonse@ci.new-bedford.ma.us>, Fairhaven Board of Health <boh@fairhaven-ma.gov>, healthyschools@aol.com, Mark Howland
bcc
Subject Aerovox cleanup

David Dickerson, Project Manager:

I am writing you to request a complete cleanup of the Aerovox site which as you know was responsible for the contamination in the Acushnet River, now, a Superfund site.
I have reviewed your Short-Term Cleanup Options and feel that they are grossly inadequate given the degree of highly toxic contamination at that site. As was written in your EPA June 2006 newsletter, page two, "All options ***assume*** continued commercial/industrial use and therefore apply commercial/industrial cleanup standards. All options ***leave*** some levels of PCB-contaminated soil or concrete under the new protective cap." Please again review the fact that this site is adjacent to an apartment complex which in my opinion would furnish the City of New Bedford, interest in later rezoning the Aerovox site for the same. When cleaning up such a highly toxic and deadly site, I feel nothing less than the ONLY option to insure COMPLETE safety to all humans is to REMOVE ALL CONTAMINATION COMPLETELY!
I am suggesting the following proposal, entitled, "New Alternative 3# 2006", as follows:
Demolish building
Entire concrete foundation disposed of off-site (such contamination permeates all material)
All demolition waste disposed off-site
All contamination **INCLUDING PCB'S** removed off-site to appropriate landfill or treatment site out of state
New protective cap over entire site if then needed

I understand that you are working within the budgetary framework of this project HOWEVER, ALL resources need to be addressed even to the US President and DC headquarters governing environmental affairs. Please insure that all resources are approached with a strong appeal for funds for complete cleanup! Again, this site is responsible for the contamination into Buzzards Bay one of this area's finest resources!
Thank you for your time and consideration of my proposal!

Sincerely,
Karen A. Vilandry

Do you Yahoo!?
Get on board. You're invited to try the new Yahoo! Mail Beta.

SDMS DocID 458690

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458691

Bobbyrzde58@aol.com
08/02/2006 07:29 PM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox building

Thanks for giving me this opportunity:

My oppinion as far as the options presented to demolish and clean up the contaminated old facility is:

Regardless of cost effectiveness, they should undertake this job making sure they're taking all precautions to avoid the spread of any contaminated material. As simple as it sounds, this is what should be done. The surrounding area of the old site is very populated and the public is well aware of its toxic agents such as PCPs, aspestos among others. By using the resources at your disposal, please make sure this job will be done in the most professional and safe manner.

Thanks

Aerovox
2.2
458692

Joan Akin
<joan.akin@verizon.net>
08/07/2006 01:06 PM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox Superfund Site

To Whom It Concerns:

I've lived in the Aerovox 'neighborhood' since 1975. I am also very near the Acushnet River 'hot spot.'

I have been lead to believe that the PCBs in the river were not extremely dangerous because they were 'cold,' and the danger was in cooking and eating fish from the river. I did strongly caution my kids not to play down there on the riverbank, but you know kids ...

Until I got your mailing I never realized that my family was in jeopardy of inhaling 'cooked & thus very dangerous' PCBs if the old mill ever caught fire. Shame on those who knew and didn't tell until now. I suppose it's better late than never.

You have asked lay people for input concerning a serious matter; many of us do not feel qualified or knowledgeable enough about the issue of PCB contamination to respond. That does not imply that people don't care what you do to solve the problem. We are putting our trust into your hands, thinking you at the Environmental Protection Agency, have the necessary knowledge to make a correct choice. Please do the right thing.

Please please please don't go with lowest cost as the final deciding factor. The contaminant will rear its ugly head again if you do something with only cost in mind. The subsequent repairs and/or do-it-over-correctly will be way more costly in the long run. (Think Big Dig.)

Please treat the problem as if YOUR child, or a loved one's child lived in the densely populated neighborhood.

We who live here want, of course, the safest and most permanent option. This may or may not be the most expensive alternative, but it probably isn't the least costly alternative either! (Although somehow I suspect the most costly is also the most thorough answer.)

Again, please do it right the first time so no one has to do it over.

Sincerely,

Joan M. Akin
43 Jean St.
Acushnet, MA 02743

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458693

Karen or Dennis
<brrdrains@verizon.net>
08/08/2006 09:39 AM

To Group commentsnbh@EPA
cc
bcc
Subject Aerovox site

In light of the recent discovery at the Keith Junior High School site of PCB's and the protective cap being compromised and the corrupt officials involved in the cleanup, I would like to see the removal and off-site disposal of the entire concrete foundation.

The cost should be considered last after the cost of human life and the health conditions of the people in the surrounding area.

If I had faith in the system and trust in contractors and the government to do the right thing by the people, Alternative 1 could be considered, however, how do I know that it would be done correctly, that someone won't look the other way in order to save money or for out of pure laziness breach our safety.

I have no faith in a protective cap the only way to properly clean this up is to remove it from the site!

106 Main St.
Acushnet, MA

SDMS DocID 458693

Aerovox
2.2
458694

D N Dumont
<dndumont@hotmail.com>
08/14/2006 01:50 PM

To Group commentsnbh@EPA
cc
bcc
Subject NB Areovox

August 14, 2006

EPA New England

ATTN; David Dickerson (HBO)

Hello Mr. Dickerson,

The following are my comments regarding the cleanup up of the Aerovox plant located on Belleville Avenue in New Bedford, Massachusetts.

I prefer the " 1998 EE/CA Alternative # 3 for $ 18 million. As a resident of this neignbiorhood, we have lived with this contaminated plant for decades and it is now time to " put it away".

Any option used to cleanup this property must included;
A. New sheet metal pilings abuting the Acushnet River to replace the aging ones in place.
B. Any cap over the property should be a minimum of 3 feet thick.

Thank You,

D N Dumont

Check the weather nationwide with MSN Search: Try it now!

SHEPHARD S. JOHNSON, JR.*
JAMES W. MARSH

*ALSO ADMITTED IN VT

SHEPHARD S. JOHNSON, JR.
& ASSOCIATES, P.C.
Attorneys-at-Law
BOSTON ♦ NEW BEDFORD

60 STATE STREET, SUITE 700
BOSTON, MA 02109

MAILING ADDRESS:
628 PLEASANT STREET, SUITE 428
NEW BEDFORD, MA 02740

508-991-5000
FAX: 508-991-5252
www.shepjlaw.com

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VIA FACSIMILE (617) 918-0329 &
FIRST-CLASS MAIL

RECEIVED
8-21-06
DMD
Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458681

August 15, 2006

Dave Dickerson, Project Manager
U.S. Environmental Protection Agency-New England
One Congress Street, Suite 1100 (HBO)
Boston, MA 02114-2023

RE: Aerovox, 740 Belleville Avenue, New Bedford, MA

Dear Mr. Dickerson:

The United States Environmental Protection Agency, New England ("USEPA") held an informational meeting on June 14, 2006 to raise awareness of current site dangers, proposed cleanup options and explain the potential to coordinate demolition with redevelopment at the above-referenced property (the "Aerovox Site"). We understand that, at this time, no such redevelopment is proposed. USEPA undertook an *Engineering Evaluation and Cost Analysis* in 1998 and, in 2006 prepared a *Supplemental Engineering Evaluation and Cost Analysis* (hereinafter collectively "EE/CA"). USEPA is seeking public comment on the five (5) cleanup options presented in the EE/CA for the Aerovox Site. These comments are timely delivered on or before August 15, 2006, the published, extended public comment period deadline.

This office represents Acushnet Rubber Company Inc., d/b/a PRECIX in connection with this matter. Our client currently operates a manufacturing facility located at 744 Belleville Avenue, New Bedford, Massachusetts, immediately north of the Aerovox Site. Documents prepared for the USEPA by contractors and information published by USEPA confirm that extremely high levels of polychlorinated biphenols ("PCBs") are found throughout the walls, floors and interior of the building and in the soil and groundwater at the Aerovox Site.

USEPA's June 2006 notice entitled *Making the Vacant Aerovox Site Safe* acknowledges that a threat to the neighborhood currently exists and indicates that the "vacant Aerovox building needs to be demolished to keep neighborhood safe". The specific language used in said USEPA notice implies that dangerous environmental conditions are present at the so-called Aerovox Site.

Record documents maintained by USEPA and the City of New Bedford (the "City") do not refer to impacts from the so-called Aerovox Site on immediately abutting properties, north,

PRINTED ON RECYCLED PAPER

west or south. Given that contamination does not respect property lines, what information does USEPA have to support the delineation of the Aerovox Site as identical to the Aerovox property boundary? Have USEPA or its contractors undertaken any subsurface assessment of properties located to the north, south or west of the Aerovox Site? Does USEPA or any of its contractors have information to support the proposition that contamination is currently limited to the property now or formerly owned by Aerovox?

The EE/CA and other public information we reviewed do not refer to communications between USEPA and/or the City and the Commonwealth of Massachusetts Department of Environmental Protection (DEP), nor refer to potentially applicable state laws and regulations. DEP personnel are knowledgeable and could be an important source of valuable commentary on proposed actions. Has DEP been consulted with respect to the proposed actions and, if records of such communications are available to the public kindly provide us copies of the same.

The Existing Threat

A document entitled *Aerovox Facility-Conceptual Site Model*, dated March 2006, prepared by ENSR Corporation, reported that an evaluation was performed to "assess the ongoing potential for site-related PCBs to be transported to the adjacent harbor". The report states that "the mass of PCBs in soils beneath the [Aerovox] site was estimated at over 100,000 kg", and that "a large mass of PCBs is also expected to be contained within the [Aerovox] building's structure and contents". Said report identifies four (4) pathways for potential transport of PCBs from the Aerovox Site to "the Harbor": stormwater drainage, groundwater discharge, migration of separate phase oil (DNAPL) and airborne transport. The executive summary of the report states as follows:

> "DNAPL [dense non-aqueous phase liquid] migration and airborne transport were not considered to be significant transport mechanisms at present, but could increase in potential with deterioration of the building's roof and outer shell and paved areas (for airborne transport) and with deterioration of the sheet-pile barrier that currently exists between the site and the Harbor [DNAPL migration]."

The foregoing statement implies that DNAPL is present on the Aerovox Site and that migration of DNAPL into the harbor is being prevented by the sheet-pile barrier.

- Has any work been conducted to determine if the sheet-pile barrier or other subsurface conditions may be causing DNAPL to migrate to adjacent properties?

- If contaminants have migrated to adjacent properties via any of the transport pathways identified, would USEPA consider contamination located on such adjacent properties to be part of the "Aerovox Site"?

- Do existing subsurface conditions at the "Aerovox Site" constitute an immediate threat to public health safety and the environment?

The June 2006 USEPA notice concerning the Aerovox Site identifies an "immediate threat of air emissions due to fire and contaminated run-off to the Harbor" and indicates that "trespassers entering the building illegally are also at risk from contacts from these hazardous substances and can tract the contamination outside the building when leaving". In response, USEPA proposes to demolish the building and put a "temporary protective cap" in place.

- Has USEPA evaluated the possibility of immediately taking alternate short-term steps to further secure the Aerovox Site?

- Has USEPA evaluated the possibility of attaining the objectives of placing a temporary protective cap through alternatives other than demolishing the building?

We understand from the comments of New Bedford Fire Chief Ledger at the June 14, 2006 meeting that the Fire Department is preparing a "pre-fire plan", but that such a plan was not complete at that time. We also understand from his comments that an "evacuation plan" for area occupants is not yet complete.

- Is USEPA provided funding for this work by the Fire Department or is the City of New Bedford funding this effort?

- Has any testing been undertaken to demonstrate that the fire suppression system currently at the premises is still operable? When was the system tested? Who conducted the testing?

- Are all the alarms currently operable? Who is responsible for maintaining the system?

- If site security is an issue, why is the gate at the site sometimes open and not locked?

PRECIX is interested in learning more about any "pre-fire plan" and/or "evacuation plan" that may exist. Is that information available at this time and if so, where?

Area residents at the June 14, 2006 meeting reported that flooding has occurred in or about the area adjacent to the Aerovox Site, including water reportedly backing up onto Belleville Street and adjacent properties.

- What is being done to prevent this occurring in the future?
- Have any samples been taken to determine if current contamination at the Aerovox Site has impacted utility connectors, sewer lines or area properties?
- Will the proposed actions address these issues?

Removal Action Scope

The EE/CA claims to be "a study of the site's contamination and cleanup options". However, the information presented falls short of documenting the full nature and extent of contamination and has limited the "cleanup" options to a handful of interim steps. The information presented to the public does not include specific details of any proposed site or contractor controls when the building is razed and appears to provide incomplete information regarding present projected costs. It further appears that USEPA has not demonstrated the proposed response action will make the Aerovox Site safer. The proposed temporary measures could actually exacerbate both short term and long term releases to the environment and could increase the overall costs to remove contamination and permanently secure the Aerovox Site by proposing that the contaminated material be handled several times, rather than one time during removal from the premises. Insufficient information is provided to justify the chosen alternative as cost-effective, when numerous assumptions made in reaching that conclusion remain unquantified.

USEPA appeared during the June 14, 2006 meeting to acknowledge the following:

- No study of the impact of contamination on the deep water table was conducted;
- The so-called "protective cap" would not be impermeable nor permanent;

- Over time, the "protective cap" and sheet pile barriers will breakdown and neither are permanent solutions;
- Contaminated debris planned for burial at the Aerovox Site may come in contact with groundwater;
- Asbestos located with the building at the Aerovox Site may be disposed of on site;
- Expected dust during removal actions will require water misting as a mitigation technique;
- Windows at premises surrounding the Aerovox Site may be open during warm seasons;
- "one excursion of applicable standards does not constitute an acute health risk";
- Response actions "could bump [airborne releases] to a level of concern";
- Demolition could easily take 12 months (or more);
- Potential impacts to abutters properties, with the exception of the fire hazard, were not considered;
- Redevelopment will be the time for permanent cleanup to occur, and an unspecified developer would pay for the cleanup; and
- Needs of site redevelopment would only be factored into the demolition and cap plans if a developer were involved during the demolition phase.

The issues that were raised at the public meeting and the documents prepared to date in connection with the Aerovox Site raise many unresolved questions, including without limitation, the following:

- Should additional investigations be conducted to discover the full nature and extent of the contamination in order to appropriately evaluate options?
- Over time, will buried materials concentrate PCBs and other contaminants?
- How will the contamination be impacted when the non-permanent cap and other barriers currently at the Aerovox Site begin to break down?
- Will buried contaminated materials impact groundwater?
- Has USEPA modeled air dispersion patterns for airflows to determine potential impacts to public health and safety in the area from airborne transport during the proposed actions?
- What controls of site activities during the removal action will prevent unintentional releases into the atmosphere and/or to the subsurface?
- Who is responsible for any injuries arising from the Aerovox Site during the response action?
- What specifications will assure capture of the misting water and/or airborne contaminants?
- Are protective actions for surrounding properties or relocation of populations necessary during the time removal actions are occurring? Have such costs been considered?
- How would the proposed response actions impact the cost and possibility of a "permanent cleanup"?

- The proposed response action appears to bypass Massachusetts' laws and regulations that prohibit on-site disposal of solid and hazardous waste; on what basis?

- Did the cost estimate include permanent, post-response action monitoring that would be required if a permanent cleanup is not immediately implemented?

- Is it reasonable to assume that a developer will pay for permanent cleanup at some later date?

Business Interruptions to PRECIX

A number of logistical questions arise in connection with the proposed response actions. It is inconceivable that the proposed activities could occur without significant impacts to PRECIX and other abutters. Access for PRECIX's vendors, customers and contractors and parking near the front entrance of the business will be disrupted. It appears that the current entrance and parking facilities will be compromised. Vendors, visitors and customers will be inconvenienced. PRECIX maintains a parking area on the westerly side of Belleville Avenue. Persons required to park there and cross Belleville Avenue already face a significant safety hazard due to speeding traffic; this will become a larger problem.

Does the City or USEPA intend to offer any assistance to mitigate the foreseeable impacts to area businesses and/or residents? Such impacts or related costs were not identified in the public documents, the EE/CA or discussed at the public hearing.

Conclusion

We appreciate the recognition that something must be done to respond to the environmental conditions at the Aerovox Site. Before taking such actions, however, a complete understanding of the nature and extent of the contamination and the natural and other transport mechanisms impacting movement of the contaminates should be undertaken. Such studies appear not to be complete at this time; studies to date are limited to impacts to the "harbor". The record does not include discussion of the current potential impacts on abutters, nor does it appropriately and reliably identify how area populations will be protected from releases that will inevitably occur during the proposed actions. We suggest that while such further evaluations proceed, emergency response planning such as evacuation and pre-fire plans should be a priority.

It appears that the proposed response actions do not include consideration of all reasonably foreseeable costs, including without limitation, post-burial monitoring. Assuming that the proposed actions are in fact temporary and not permanent, burial of contaminated

demolition debris would increase the long-term costs by requiring the contaminated material to be handled multiple times. It seems questionable that moving the contaminated materials multiple times will cost less than doing so one time. To assume that a future developer will pay to remove of the buried contamination at some future time also appears to be unsubstantiated.

Beyond the economic analysis, numerous questions remain about the standard-of-care to be required of site contractors and about the likelihood of related impacts to area populations. Each time the contaminated materials are handled, there is an opportunity for releases to the environment and for impacts to occur.

It would certainly be preferable by PRECIX to remove all of the contaminated material from the Aerovox Site and find a permanent off-site disposal location for such materials.

Kindly consider our numerous questions raised above to be formal requests for answers and any applicable documents and related information.

Thank you for the opportunity to provide these comments. We look forward to receiving at our New Bedford office a written response to our inquiries.

Very truly yours,
Shephard S. Johnson, Jr. & Associates, P.C.

Shephard S. Johnson, Jr.

SSJ/zca
cc: Acushnet Rubber Company Inc.

THE COALITION FOR
BUZZARDS BAY

Nashawena Mills
620 Belleville Avenue
New Bedford, MA 02745

tel: (508)999-6363
fax: (508)984-7913

www.savebuzzardsbay.org

July 14, 2006

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458682

Mr. David Dickerson
Project Manager
US EPA – New England
1 Congress Street, Suite 1100 (HBO)
Boston, MA 02114-2023

RE: Supplemental Engineering Evaluation and Cost Analysis for the Aerovox Site in New Bedford, Massachusetts

Dear Mr. Dickerson,

Please accept the following as The Coalition for Buzzards Bay's ("The Coalition's") comments on the US Environmental Protection Agency's ("US EPA's") proposed demolition and containment of the PCB contaminated Aerovox site on the Acushnet River in New Bedford, Massachusetts. The Coalition is a nonprofit membership organization dedicated to the restoration and protection of Buzzards Bay and its more than 30 harbors and coves, including New Bedford Harbor and the Acushnet River. We represent more than 4,700 individuals, families, organizations, and businesses in Southeastern Massachusetts.

Contamination Status of the Aerovox Site

The site under consideration is a highly contaminated eleven acre industrial zoned parcel abutting the Acushnet River, and located directly between two active manufacturing facilities employing hundreds of workers daily. The site is also directly across the street from a densely populated residential neighborhood. The 450,000 square foot building situated on this site served as a manufacturing facility for electrical capacitors and transformers from c. 1940 to c. 1977 and as a result is saturated with high levels of polychlorinated biphenyls ("PCBs"), a probable carcinogen. PCBs have been identified at hazardous levels throughout the walls, floor, foundation, as well as throughout the soils, groundwater, air, and parking lot. In fact, this site is widely considered one of the primary sources of the historic PCB contamination to New Bedford Harbor, a superfund site subject to a separate lengthy and expensive clean up.

The Coalition recognizes and agrees with the US EPA that this "facility presents an imminent and substantial threat to the environment and must be addressed as quickly as possible." (Supplemental Engineering Evaluation and Cost Analysis April 2006, page 10) In addition to the major fire risk the vacant facility currently poses, the site itself continues to leach PCBs into the Acushnet River through groundwater and stormwater. PCBs do not readily breakdown in the water. Instead, they bind to organic matter and persist for very long periods of time. PCBs can be taken up by small marine

life which when consumed by larger predators, multiplies their toxicity by the thousands. It is a disturbing notion that despite the extensive and costly dredge project ongoing in the Acushnet River and New Bedford Harbor to remove the PCB contaminated sediment, the source actually remains unremediated and continues to contaminate the river.

Inadequacy of US EPA's Preferred Alternative

The US EPA's overall removal action objective is to "minimize impacts to human health and the environment caused by the presence of high levels of PCBs in the vacated mill building and surrounding site soils." (Supplemental Engineering Evaluation and Cost Analysis April 2006, page 4). The Coalition commends the efforts this objective seeks to achieve and argues that the Acushnet River estuary and the communities who rely and recreate on this resource deserve nothing less.

Surprisingly, however, the US EPA has chosen the least environmentally protective alternative to meet this objective. New Alternative #1, the US EPA's preferred choice, includes demolishing the building, and leaving the waste, regardless of toxicity level, on site within the foundation of the former building and placing an undefined protective cap over the entire site. In short, this alternative does nothing to promote real redevelopment opportunities and in fact leaves in place extremely high level of PCB contamination. While this alternative reduces the risk to human health and the environment from fire, it cannot be legitimately argued that this meets the stated objective of "minimizing" impacts due to the "presence" of PCBs. Furthermore, the Coalition fails to see the logic in the long term containment of PCBs in a flood plain, making it more likely that the contamination will migrate off site during a severe weather event. The Coalition requests that the US EPA reevaluate their proposed alternatives to choose a more meaningful and appropriate solution to meet the removal action objective.

Limited Site Redevelopment Opportunities Under the Preferred Alternative

The Coalition fully supports the US EPA's and City of New Bedford's intention to partner in order to insure redevelopment of this site. However, the US EPA's preferred alternative fails to go far enough in facilitating multiple redevelopment opportunities. New Alternative #1 fills the facility's foundation with contaminated demolition waste which would prohibit future building construction on some 450,000 square feet, a majority, of the site. Only 150,000 square feet of the site, the current contaminated parking lot area, would be available for development. At a time when the liability, risk and costs associated with acquiring a contaminated property are prohibitive for most redevelopers, every effort must be made on behalf of the US EPA to prepare the site for as many redevelopment opportunities as possible.

At a minimum the US EPA must remove all contaminated demolition waste from the site in order to create the greatest number of redevelopment opportunities for the entire property. If New Alternative #1 is ultimately chosen, a significant risk remains that the

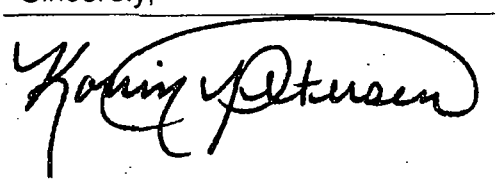
site will be left vacant in the long term. This is an unacceptable outcome to a community whose environment is littered with contaminated vacant lots. In other words, a highly contaminated Aerovox lot would not be an anomaly for the City of New Bedford, but rather the unfortunate status quo and more must be done to reverse this trend. The City's environment and its surrounding community deserve more than the minimum from the US EPA.

The Coalition for Buzzards Bay's Recommendation

Of all the alternatives presented by the US EPA for public comment, the Coalition argues that Alternative #3 most properly meets the removal action objective. This alternative orders the removal of most of the toxic material, including the foundation, thus substantially reducing the amount of PCBs on the property, reducing environmental risks, and opening up many more redevelopment opportunities. The Coalition is aware that this is the most expensive alternative but argues that it is the smartest investment. Failing to properly remediate the site now will cost the City, the environment, and the greater community far more in the future.

Again, we thank you for this opportunity to comment and are eager to move forward with the stabilization of the Aerovox site.

Sincerely,



Korrin N. Petersen, Esq.
Advocacy Director

Korrin Petersen
<Petersen@savebuzzardsbay.org>
07/14/2006 03:30 PM

To Group commentsnbh@EPA
cc
bcc
Subject David Dickerson (HBO)

Please find attached The Coalition for Buzzards Bay's comments on EPA's proposed alternative for the Aerovox site in New Bedford, Massachusetts.
Thank you for the opportunity to comment.

Sincerely,

Korrin Petersen

Korrin N. Petersen, Esq.
Advocacy Director
The Coalition for Buzzards Bay
620 Belleville Avenue
New Bedford, MA 02745
(508) 999-6363 ext 206
(508) 984-7913 fax
www.savebuzzardsbay.org

Aerovox July 14.pdf

Nutter

Gary L. Gill-Austern
Direct Line: 617 439-2250
Fax: 617 310-9250
E-mail: glg@nutter.com

Superfund Records Center
SITE: Aerovox
BREAK: 2.2
OTHER: 458680

August 15, 2006
11478-130

SDMS DocID 458680

BY E-MAIL (*comments.nbh@epa.gov*) & U.S. FIRST CLASS MAIL

Mr. David J. Dickerson
Project Manager
U.S. Environmental Protection Agency - New England
One Congress Street
Suite 1100 (HBO)
Boston, Massachusetts 02114-2023

Re: April 2006 Supplemental Engineering Evaluation and Cost Analysis
Former Aerovox Facility, New Bedford, Massachusetts

Dear Mr. Dickerson:

This letter provides the comments of AVX Corporation ("AVX") on the April 2006 *Supplemental Engineering Evaluation and Cost Analysis* (the "Supplemental EE/CA" or "SEE/CA") with respect to the facility at 740 Belleville Avenue, New Bedford, Massachusetts (the "Facility" or "Site") previously owned and operated by Aerovox, Inc. ("Aerovox"). On June 7 and 11, 2006, EPA published notice of a public meeting and the beginning of a 30-day public comment period on June 14, 2006. EPA has asked for public comment on the five non-time critical removal action alternatives presented in the Supplemental EE/CA. The SEE/CA also includes EPA's specific request for comment on a proposed (draft) finding by the Regional Administrator, entitled "TSCA 761.61(c) Determination," included as Attachment 3 to the Supplemental EE/CA. (AVX's comments on the draft determination can be found in Section III.E.2. below.)

The public comment period was subsequently extended to August 15, 2006. These comments, therefore, are timely submitted. Please note that AVX has had the specialized technical assistance of URS Corporation ("URS"), including the expertise of a Massachusetts Licensed Site Professional ("LSP"), in the preparation of these comments. (Please refer to the attached *curricula vitae* for information on the qualifications of members of the technical team.) Please also note that by submission of these comments, AVX does not acknowledge or accept any liability with respect to the proposed response actions but fully reserves its rights with respect to the letter regarding "Confirmation of Potential Liability; Demand and Notice of Decision Not to Use Special Notice Procedures" sent by EPA on May 31, 2006, and received

by AVX on June 2, 2006. AVX will respond to that demand on or before the agreed-upon date of August 31, 2006.

Removal actions are authorized by statute, CERCLA §§ 104 and 106(a); the National Contingency Plan (the "NCP")[1], in particular 40 CFR 300.415; and guidance.[2] Based on this authority,

> EPA has categorized removal actions in three ways: emergency, time-critical, and non-time-critical, based on the type of situation, the urgency and threat of the release or potential release, and the subsequent time frame in which the action must be initiated. Emergency and time-critical removal actions respond to releases requiring action within 6 months; non-time-critical removal actions

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[1] CERCLA and the NCP define a removal action as "the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release." CERCLA § 101(23); 40 CFR 300.5.

[2] The following guidance documents have been consulted in the preparation of these comments:

(1) *Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent-Setting Issues* (OSWER Directive No. 9360.0-19, March 3, 1989) (hereinafter "Non-NPL Removal Action Guidance");
(2) *Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions* (OSWER Directive No. 9360.0-12A, June 12, 1989) (hereinafter "Consistency Exemption Guidance");
(3) *Superfund Removal Procedures Action Memorandum Guidance* (OSWER Directive No. 9360.3-01, September 1990) (hereinafter "Action Memorandum Guidance");
(4) *Final Guidance on Administrative Records for Selecting CERCLA Response Actions* (OSWER *Directive* No. 9833-3A-1, December 3, 1990) (hereinafter "Administrative Record Guidance");
(5) *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (OSWER Directive No. 9360.0-32, August 1993) (hereinafter "NTCRA Guidance");
(6) *Response Actions at Sites with Contamination Inside Building* (OSWER Directive No. 9360.3-12, *August* 12, 1993) (hereinafter "Contamination Inside Building Guidance");
(7) *Conducting Non-Time-Critical Removal Actions Under CERCLA* (OSWER Fact Sheet 9360.0-32FS, December 1993) (hereinafter "NTCRA Fact Sheet");
(8) *Superfund Removal Procedures, Response Management: Removal Action Start-Up to Close-Out* (OSWER Directive No. 9360.344, September 1996); (hereinafter "Removal Action Procedures Guidance"); and
(9) *Use of Non-Time Critical Removal Authority in Superfund Response Actions* (memorandum from Stephen Luftig and Barry Breen to Regional Program and Legal Division Directors, February 14, 2000) (hereinafter "NTCRA Removal Authority Memorandum").

respond to releases requiring action that can start later than 6 months after the determination that a response is necessary.[3]

In the present instance, we deal with a response action under CERCLA § 104 belonging to the third of these categories, i.e., a non-time-critical removal action ("NTCRA"). The above-cited authorities call for the following multi-stepped process in the performance of any NTCRA:

1. Discovery or notification;
2. Site assessment;
3. EE/CA Approval Memorandum;
4. Perform EE/CA;
5. Solicit, receive and review public comment on EE/CA;
6. Action Memorandum (select alternative, and obtain NTCRA approval and, if needed, statutory waivers);
7. Implement NTCRA;
8. Removal site closeout; and
9. Post-removal site control.[4]

EPA guidance requires that removal alternatives be developed and evaluated against three criteria: (1) effectiveness; (2) implementabilty; and (3) cost. CERCLA § 104(a)(2) and 300 CFR 300.415(d) further require that an EE/CA consider how well a proposed removal action will contribute to the efficient performance of any anticipated long-term remedial action.[5]

A primary reason for the above carefully-delineated process is to enable public involvement, a statutory and regulatory requirement.[6] Public involvement has two components: community relations; and the creation and maintenance of an administrative

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[3] NTCRA Guidance at 3-4.

[4] *Id.* at 5 (Exhibit 1).

[5] The requirement for a removal action to contribute to the efficient performance of any anticipated long-term remedial action is one of two explicit requirements in 40 CFR 300.415(b)(5) that applies when the lead agency - EPA in the present instance - seeks a waiver of the $2,000,000/12-month NTCRA limits. This is discussed more fully in Section III.G. below.

[6] *See* CERCLA § 113(k), 40 CFR 300.415(n) & 300.820. In the present context, EPA New England asserts that it "considers community involvement an integral part of the cleanup process." SEE/CA at 16.

record file ("AR file").[7] An evaluation of compliance with each of the above procedural requirements for any NTCRA, and the sufficiency of the prerequisite EE/CA, therefore, necessarily involves attention to (1) AR file requirements, and (2) the specific facts of the site at issue, including past investigatory, enforcement and related actions. Accordingly, these comments begin by describing in Section I the status of the AR file, and providing relevant factual background in Section II, before articulating AVX's comments on the Supplemental EE/CA in Section III.

I. ADMINISTRATIVE RECORD FILE.

CERCLA § 113(k)(1) mandates the creation of an administrative record to serve as the basis for the selection of a response action. The regulations "establishing procedures for the appropriate participation of interested persons in the development of the administrative record on which [EPA] will base the selection of removal actions and on which judicial review of removal actions will be based," are found in Subpart I of the NCP, 40 CFR 300.800 to 300.825.[8]

The NCP articulates at 40 CFR 300.800(a) the general requirement for "[t]he lead agency [to] establish an administrative record that contains the documents that form the basis for the selection of a response action. The lead agency shall compile and maintain the administrative record in accordance with this subpart." Guidance states this simply: "[T]he administrative record must contain all documents used by the Agency in making its decision to undertake a removal action."[9]

On June 14, 2006, AVX received three CDs from EPA in response to a request for a copy of the AR file for the proposed response action. Collectively, the CDs contained 50 files, among them 47 documents and three indices.[10] The indices are entitled: (A) *Index (Updated September 22, 1999)*; (B) *Removal Action Administrative Record File and Index, July 2004*; and (C) *Aerovox Removal Site Administrative Record File, Supplemental Engineering Evaluation / Cost Analysis (EE/CA), April 2006, Index, Released: June 2006.*" They list 22, 5, and 19 documents, respectively.[11]

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[7] *See* NTCRA Guidance at 12-14.

[8] As required by CERCLA § 113(k)(2)(A).

[9] Action Memorandum Guidance at 3-251.

[10] The indices are the same as those posted on the web for the public at large. *See* http://yosemite.epa.gov/r1/npl_pad.nsf/51dc4f173ceef51d85256adf004c7ec8/7e8432e074d476d5852571710049eb24!OpenDocument.

[11] The sum of these is 46. One of the three CDs included a May 8, 1998 letter from Blasland, Bouck & Lee to EPA, Region 1, regarding comments on a soil sampling plan. It appears that this document (AR #248127) should have been included on index "A."

Review of the above-referenced documents raises two questions. The first involves uncertainty regarding what constitutes the AR file for the proposed response action. The second involves the AR file's lack of reference to applicable guidance.

With respect to the first question, the titles of the three indices reasonably lead to the conclusion that index "C" is the index for the SEE/CA's AR file. Among other reasons, it is so labeled. Further, index "A" appears to encompass events associated with the administrative order on consent executed by Aerovox and EPA in 1999, and index "B," which includes in its title the words "administrative record file," presumably lists the documents related to the time-critical removal action implemented in 2004. The SEE/CA's executive summary indicates that the documents on index "A" have been incorporated into the AR file for the SEE/CA,[12] but nothing is said in that context as to the documents on index "B." At the same time, it is reasonable to infer that EPA believes all of these documents constitute the AR file for the presently proposed removal action. After all, EPA provided these documents in response to AVX's request for the documents in the AR file for the proposed response action.

In addition to the above uncertainty as to which documents constitute the AR file, another factor points to its lack of comprehensiveness. Specifically, since June 14, 2006, AVX has received from EPA or independently located a number of documents that unquestionably qualify as documents that serve as the basis for "the selection of a response action."[13] Further, AVX is awaiting additional documents from EPA in response to other requests, several of which, no doubt, will similarly qualify.[14] If AVX is unable to determine what is and is not in the AR file (or what should be), having had the benefit of EPA's cooperation, how is it possible for the public at large to be assured that they are able to competently assess and comment on the proposed removal action?

Turning to the second concern regarding the AR file, we note that indices "A" and "B" comply with the NCP's requirement for the AR file to include applicable guidance.[15]

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[12] SEE/CA at ii.

[13] CERCLA § 113(k)(1). *See* Exhibit A, attached hereto, which includes 27 entries with respect to documents that AVX has so received or located. The last entry encompasses in excess of 50 documents, received late on Friday, August 11, 2006, two business days before the close of the public comment period.

[14] Among the requested documents that have direct bearing on the SEE/CA is the Preliminary Assessment / Site Investigation ("PA/SI") conducted on February 18, 2004, according to the March 29, 2004 Action Memorandum.

[15] The NCP, at 40 CFR 300.805(a)(2), states that an administrative record file for the selection of a response action typically contains, among other things, "Guidance documents, technical literature, and site-specific policy memoranda that may form a basis for the selection of the response action. Such documents may include guidance on conducting remedial investigations and feasibility studies, guidance on determining applicable or relevant and appropriate requirements, guidance on risk/exposure assessments, engineering handbooks, articles from technical journals, memoranda on the application of a specific regulation to a site, and memoranda on off-site disposal capacity." This is supported by guidance: "Guidance documents, or portions of guidance documents, that are

Unfortunately, however, each index only refers to one guidance: "B" refers to the Action Memorandum Guidance, and "C" lists the NTCRA Guidance. As demonstrated in the below comments, other guidance is also pertinent, and EPA's apparent failure to use such guidance in preparation of the SEE/CA suggests a shortcoming in the basis for the proposed removal action.

II. BACKGROUND.

From 1978 to 2001, when it relocated to another manufacturing facility in New Bedford, Aerovox manufactured electrical capacitors at the Site.[16] In 1981, Versar, Inc., under contract with EPA, conducted an inspection at the Site for the presence of polychlorinated biphenyls ("PCBs"). Based on this early inspection, EPA determined that PCBs were present in the soils at the Site, in various locations in the manufacturing facility at the Site, and in the air in that building. In May 1982, EPA and Aerovox entered into an administrative order pursuant to Section 106 of CERCLA (the "1982 Order"). Among other things, the 1982 Order required Aerovox to: (i) conduct an investigation of certain areas of the Site; (ii) assess the relative costs of alternative remedial actions; (iii) recommend a responsive course of action to EPA; and (iv) implement such course of action, subject to EPA approval. Pursuant to the 1982 Order, Aerovox recommended the installation of a cap over certain contaminated soils and a steel sheet pile cutoff wall to serve as a vertical barrier to groundwater due to the fact that its investigation revealed that PCBs were present in soil and in shallow groundwater at the Site. Aerovox's recommended course of action was approved by EPA, which concluded at that time that there may have been "an imminent and substantial endangerment within the meaning of Section 106 of CERCLA."[17]

In 1984, EPA and Aerovox entered into a Supplemental CERCLA Consent Order pursuant to Section 106 of CERCLA (the "1984 Supplemental Order"), in which EPA specifically acknowledged that it had inspected and approved Aerovox's completed work under the 1982 Order.[18] Pursuant to the 1984 Supplemental Order, Aerovox agreed to implement a Monitoring and Maintenance Program for the cap and to take such maintenance measures as were reasonably necessary to maintain the cap and the cutoff wall to prevent releases of

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considered or relied on in selecting a response action should be included in the administrative record file for that response action." Administrative Record Guidance at 37.

[16] In the New Bedford Harbor PCB litigation, Aerovox was also held to be legally responsible for the operations of its immediate predecessor, Belleville Industries, Inc. sometimes referred to as Aerovox Industries, Inc. ("Belleville"), between 1973 and 1978. *See In re Acushnet River & New Bedford Harbor*, 712 F. Supp. 1010, 1013 (D. Mass. 1989). It is undisputed that Belleville used PCBs in its capacitor manufacturing.

[17] 1982 Order at 2.

[18] 1984 Supplemental Order at 2.

PCBs.[19] In accordance with the Monitoring and Maintenance Program, Aerovox further agreed to perform semi-annual monitoring at the Site from June 1986 until June 2014, which included both the taking and reporting of water level readings and the performance and submission of inspection reports to ensure the integrity of the cap. The Monitoring and Maintenance Program further required that unsatisfactory conditions be promptly remediated.[20]

In May 1997, EPA conducted an inspection of the Site for compliance with the Toxic Substances Control Act ("TSCA"), which revealed the presence of PCBs within the interior of the manufacturing facility and in uncapped soils outside of the building, allegedly caused by the manufacture of electrical capacitors and transformers at the Site.[21] EPA demanded that Aerovox pay for the cleanup of the Site, and in July 1998 an Approval Memorandum (discussed in detail below) was issued for the performance of an EE/CA at the Site. In August 1998, Blasland, Bouck & Lee, Inc. ("BBL"), a consultant hired by Aerovox, completed the 1998 EE/CA (also discussed in detail below), which estimated the then cost of cleanup of the Site, pursuant to the recommended alternative, would be approximately $8.3 million.

With only the July 1998 Approval Memorandum in the AR file to authorize the present consideration of a NTCRA at the Site, meaningful response to EPA's request for comments requires review of more than eight years of documents since publication of the 1998 Approval Memorandum, as well as attention to developments involving Aerovox and the Site, including, in particular, events related to a 1999 Administrative Order on Consent with EPA (the "1999 AOC"), the abandonment of the manufacturing facility, Aerovox's relocation to a new facility in New Bedford, the filing of a petition for bankruptcy shortly thereafter, the settlement of claims against the bankrupt estate by EPA, the Commonwealth and the City of New Bedford (the "City"), and the disposition of the ownership of the Site at the conclusion of the bankruptcy. Comments on the SEE/CA, therefore, require an analysis of certain documents, including the July 1998 Approval Memorandum and the 1998 EE/CA, as well as consideration of the above-enumerated events.

A. July 1998 Approval Memorandum.

The July 1998 Approval Memorandum, prepared on July 7, 1998 and approved on July 15, 1998, authorized the preparation of an EE/CA. The purpose of the EE/CA was to

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[19] Based on monitoring reports submitted by Aerovox for the period September 1993 to March 2000, it appears that Aerovox performed only one repair to the cap during that 6½-year period (between the September 1993 and March 1994 inspections), despite the fact that it routinely noted problems with the asphalt cap in virtually all of the reports. The fact that a subsequent removal action by EPA in 2004 also included cap repair confirms that Aerovox's previous maintenance of the cap was inadequate. Aerovox thus did not meet its obligations under the 1984 Supplemental Order.

[20] EPA Proof of Claim at ¶ 7.

[21] SEE/CA at ii.

"evaluate cleanup alternatives for source control measures at the Site."[22] Using the data obtained in 1997 and 1998 by BBL, the Approval Memorandum determined that PCBs were present in various media.[23] Though the endangerment determination in the Approval Memorandum states that PCBs generally "may pose a potential threat to human health or ecological health,"[24] the only exposure pathways it documents involve ingestion and dermal inhalation of PCBs by on-site workers in the then still-operating manufacturing facility.[25] Despite this, the scope of the EE/CA is defined far more broadly, encompassing risks other than to on-site workers. In particular, the Approval Memorandum states that the EE/CA "will consider alternatives which meet the following removal action objectives:

(i) Prevent, to the extent practicable, direct contact with and ingestion of soil/dust/debris/structures within the building and in the soils beneath the footprint of the buildings and under the paved parking areas;

(ii) Prevent, to the extent practicable, the potential for water to infiltrate through the soils;

(iii) Control, to the extent practicable, surface water run-off to minimize erosion;

(iv) Prevent, to the extent practicable, the release of pollutants or contaminants at levels that would represent an unacceptable human health exposure to a Site worker or trespasser; and

(v) Remove soil/dust/debris/structures at levels that could result in an unacceptable ecological impact."[26]

While the risk assessment and endangerment determination create a foundation for objectives (i) and (iv) from the above list, there is nothing in the Approval Memorandum in support of objectives (ii), (iii) and (v).

In defining the EE/CA's scope, the 1998 Approval Memorandum cites five of the nine representative removal action alternatives enumerated in § 300.415(e) of the NCP for evaluation. These include: fencing and security; drainage controls; capping of contaminated

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[22] Approval Memorandum at 1 and 6.

[23] *Id.* at 3-4.

[24] *Id.* at 5.

[25] "The [ ] conditions for a removal are met at this Site. The building occupants have actual or potential exposure. The potential non-cancer risk for workers exceeds the hazard index of 1 while the cancer risk ranges from 10^{-3} - 10^{-4}." *Id.* The Approval Memorandum also contains a single sentence regarding threats from potential future fires. It notes, "[s]hould the building become vacant with no security measures the threat of fire increases." Not one of the removal action objectives, however, relate to the threat of fire.

[26] *Id.* at 6.

soils; excavation and removal of highly contaminated soils; and containment, treatment or disposal of hazardous materials. None of these five alternatives, however, was developed or evaluated in the 1998 EE/CA. The Approval Memorandum contemplated the following schedule: final Administrative Order on Consent for the Site signed by September 1998; Action Memorandum for the selected removal alternative approved by November 1998; and NTCRA commenced by December 2000, and completed by December 2003. As it turned out, however, the 1999 AOC was not based on CERCLA, so no Action Memorandum was ever prepared and the timetable adopted by the 1999 AOC was dramatically different.

B. 1998 EE/CA.

In August 1998, BBL completed an EE/CA on behalf of Aerovox, the purpose of which was to identify the objectives for a removal action at the Site, and to analyze the effectiveness, implementability, and cost of removal action alternatives that satisfied such objectives. The three alternatives considered in the 1998 EE/CA all involved building demolition and capping of the Site,[27] and provided for a long-term remedy with a stated objective of minimizing potential future impacts to human health and the environment caused by the presence of PCBs in the manufacturing building materials and equipment, as well as in site soil.[28] The 1998 EE/CA concluded on the one hand that any risk from groundwater had been adequately addressed by the activities implemented pursuant to the 1982 Order,[29] and on the other hand that "PCBs in soils represent the only constituents of interest in environmental media at the facility."[30] The 1998 EE/CA explained that a PCB removal action was appropriate to mitigate potential exposure and migration pathways because concentrations of PCBs considerably exceed standards in a number of soil sampling locations "both beneath the building and the parking lot."[31]

Although final closure under M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan ("MCP") was not contemplated at that time, the 1998 EE/CA's evaluation of applicable or relevant and appropriate requirements ("ARARs") explicitly notes that the cap would be an engineered barrier,[32] thereby complying with the more stringent of the

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[27] Aerovox press releases in the AR file document that demolition and relocation was the removal action Aerovox preferred for economic as well as environmental reasons.

[28] 1998 EE/CA at 4-1.

[29] *Id.* at 2-15. The 1998 EE/CA specifically notes that a September 21, 1984 letter from EPA stated that the activities were completed in compliance with the 1982 Order. *Id.* at 2-16.

[30] Risk from building materials was not defined. One is left with the inference that there was a risk because levels exceeded TSCA thresholds. *See* 1998 EE/CA at 2-16.

[31] *Id.*

[32] Section 310 CMR 40.0996(4)(c) of the MCP defines an "engineered barrier" as "a permanent cap with or without a liner that is designed, constructed and maintained in accordance with scientific and engineering

Massachusetts Hazardous Waste Management Closure and Post-Closure Care requirements at 310 CMR 30.633 and the TSCA requirements at 40 CFR 761.61(a)(7), as well as the MCP's requirements for a Class A-4 Response Action Outcome.[33] The recommended alternative included off-site disposal of all building materials with concentrations of PCBs greater than 50 parts per million, burying the remainder of materials inside the manufacturing facility foundation, and capping the entire Site with an engineered barrier.

A public comment period on the 1998 EE/CA, summarized and initiated by publication of a Proposed Plan, began on October 8, 1998 and ended on November 7, 1998. No public comments were received.[34] The Proposed Plan focused attention on the building as the source of all contamination, and indicated that a removal action was necessary to address two major pathways of potential exposure: direct contact with impacted surfaces by workers or site visitors; and migration of PCBs off-site by tracking and weathering.[35] The Proposed Plan made no specific mention of impacts to groundwater or of potential threat posed by fire. Nor did it refer to PCBs in soil, the basis upon which the 1998 EE/CA recommended the appropriateness of a removal action.[36]

The AR file does not include an Action Memorandum authorizing any NTCRA.

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standards to achieve a level of no significant risk for any foreseeable period of time. An engineered barrier: **1.** shall prevent direct contact with contaminated media; **2.** shall control any vapors or dust emanating from contaminated media; **3.** shall prevent erosion and any infiltration of precipitation or run-off that could jeopardize the integrity of the barrier or result in the potential mobilization and migration of contaminants; **4.** shall be comprised of materials that are resistant to degradation; **5.** shall be consistent with the technical standards of RCRA Subpart N, 40 CFR 264.300, 310 CMR 30.600 or equivalent standards; **6.** shall include a defining layer that visually identifies the beginning of the barrier; **7.** shall be appropriately monitored and maintained to ensure the long-term integrity and performance of the barrier. Plans for the monitoring and maintenance of the barrier shall be submitted to the Department and shall document that one or more financial assurance mechanism(s) have been established and adequately provide for future monitoring, maintenance and any necessary replacement of the barrier; and **8.** shall not include an existing building, structure or cover material unless it is designed and constructed to serve as an engineered barrier pursuant to the requirements of 310 CMR 40.0996(4)." *See also Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, Guidance on the Use, Design, Construction, and Monitoring of Engineered Barriers*, Public Comment Draft, November 2002.

[33] *Id.* at 3-2, and Table 14a ("Potential Action-Specific ARARs") at 6. *See also* Section III.E.4., *infra.*

[34] SEE/CA at ii.

[35] Proposed Plan at 1. Ironically, the conditions that created the risks that led in 1998 to the decision to demolish the building – ongoing manufacturing facility with on-site workers and visitors – were no longer present following Aerovox's abandonment of the Site on April 2, 2001. Nonetheless, site security measures since that point do not appear to have eliminated such conditions.

[36] *See* notes 30 and 31, *supra,* and accompanying text.

C. 1999 AOC and Subsequent Aerovox Bankruptcy.

In September 1999, EPA executed the 1999 AOC with Aerovox (which became effective on December 2, 1999) in connection with the cleanup of the Site, pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973.[37] Under the 1999 AOC, Aerovox agreed to pay for and conduct the cleanup of the Site over an extended period of time under EPA supervision. Among other things, the 1999 AOC required that Aerovox: (i) deposit funds, in specified installments, into a trust fund called the Aerovox Facility Fund (the "Fund"); (ii) begin demolition of the manufacturing facility and the installation of an asphalt cap at the Site when the Fund reached $4.8 million, or 60% of the total estimated cost; and (iii) construct, and relocate to, another manufacturing facility located in New Bedford (by 16 months from the effective date of the order, or April 2, 2001). Completion of demolition of the manufacturing facility and cap installation was required by November 1, 2011.[38]

Pursuant to the 1999 AOC, Aerovox relocated to its new manufacturing facility by April 2, 2001 (but left behind a substantial amount of contaminated equipment and machinery, as well as a considerable amount of combustible material),[39] but made just one $750,000

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[37] The 1999 AOC was entered pursuant to RCRA, not CERCLA. The 1999 AOC was to have implemented the preferred alternative as a RCRA action to be completed by November 2011. Apparently, the decision to proceed under RCRA was part of a concerted effort to assist Aerovox, and to help the City keep one of its major employers, by choosing a statutory regime that did not require the payment of government oversight costs. There were additional benefits accruing as a result of the change from CERCLA to RCRA authority. Specifically, the following could be avoided: (1) need for an action memorandum and special regional review procedures because the proposed removal action involved a business relocation (Non-NPL Removal Action Guidance at 7); (2) Headquarters' concurrence because the removal action involved releases from products that are part of a structure (Contamination Inside Building Guidance at 3-4); and (3) Headquarters consultation requirement when a NTCRA could cost in excess of $6 million (NTCRA Removal Authority Memorandum at 2).

[38] In addition, the 1999 AOC included certain monitoring and reporting requirements, and provided for stipulated penalties for violations of the provisions of the 1999 AOC. *See* 1999 AOC. Specifically, paragraph 91 of the 1999 AOC provided per day penalties (subject to the notice requirements of paragraph 92) for: (a) failure to decontaminate any equipment relocated from the Facility to the new facility in compliance with TSCA ($2,000 per day); (b) failure to complete the relocation of all manufacturing and business operations by 16 months after the effective date of the 1999 AOC (various penalties based on length of time in violation); (c) failure to close the Facility, provide security and fire protection, and/or maintain the Facility ($1,000 per day); (d) failure to commence the demolition of the Facility and installation of an asphalt cap on schedule ($1,500 per day); (e) failure to perform the demolition and cap work in accordance with the work plan specified by the 1999 AOC ($1,000 per day); (f) failure to submit timely or complete reports required by the 1999 AOC ($750 per day); (g) failure to submit timely or correct deposits into the Fund ($1,500 per day); (h) failure to reimburse the Fund for inappropriate disbursements ($1,000 per day); and (i) failure to complete the demolition and cap work and submit a notice of completion to EPA on schedule ($1,500 per day).

[39] Apparently, Aerovox had given some indication that it was responsible for the equipment that had been left behind. One of the documents included on a CD containing 53 PDFs which AVX received from EPA on August 11, 2006 is an October 23, 2001 letter from D. Lopes, Aerovox's AOC Project Coordinator, to K. Tisa, EPA's Coordinator under the 1999 AOC, regarding "facility shutdown report." The penultimate paragraph of the two-

payment to the Fund. Aerovox requested an extension with respect to its next payment of $200,000 due on December 31, 2000. On or about February 9, 2001, EPA and Aerovox entered into an amendment, which altered the payment schedule such that Aerovox's payment, adjusted to $225,000, would be due on June 30, 2001. Before the new payment deadline, however, Aerovox filed a voluntary petition for Chapter 11 bankruptcy on June 6, 2001 in the United States Bankruptcy Court for the District of Massachusetts, styled *In re New Bedford Capacitor, Inc. (f/k/a/ Aerovox, Inc.)* (Case No. 01-14680-JNF). As a result, Aerovox never implemented the response actions required by the 1999 AOC. In addition, based on the AR file, it appears that the last time Aerovox complied with its post-closure monitoring obligations was 2002.

On or about November 15, 2001, EPA filed a proof of claim in the Aerovox bankruptcy to protect its rights with respect to the obligations of Aerovox, asserting that Aerovox was required to cleanup and perform operation and maintenance measures with respect to the PCBs and other hazardous substances disposed of in and around the Site, pursuant to CERCLA, the 1984 Supplemental Order[40] and the 1999 AOC. On or about November 30, 2002, EPA filed an *Application of the United States for Reimbursement of Administrative Expenses* (the "Administrative Application") for recovery of response costs EPA expected to incur in cleaning up and performing operation and maintenance measures with respect to PCBs and other hazardous substances disposed of in and around the Site. An administrative expense is entitled to priority payment and must be necessary for the preservation of the bankrupt estate. The Administrative Application enumerated the $8.3 million estimated cost under the 1999 AOC and certain other items EPA considered administrative expenses, including expenses associated with repairing the roof of the Facility (estimated to be $1 million); removal of chemical drums at the Site (estimated to be $48,000); repairing a cracked asphalt cap (estimated to be $3,000); and (4) maintenance of a fire suppression and security system (estimated to be $23,000 per year).[41] In addition, the Administrative Application explained that the cost of decontamination and disposal of machinery and equipment left behind at the Site - Aerovox having agreed to relocate all of its

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page letter states: "It is Aerovox's intention to sell the equipment that is located in the facility at 740 Belleville Ave. Aerovox personnel and others will enter the facility for the purpose of cleaning, testing, crating and rigging that equipment." This statement may also explain why, during a July 10, 2006 conference call between EPA and AVX representatives, EPA counsel Eve Vaudo indicated that she had been "surprised" by the amount of equipment and material Aerovox had left behind. Further, David Dickerson's notes (one of the 53 PDFs referenced immediately above) from a June 30, 2005 meeting reference a "machine RFP" with proceeds possibly going to a City bankruptcy account, and suggest at least some of this equipment was or might ultimately be sold.

[40] Under the 1984 Supplemental Order, Aerovox agreed to implement a monitoring and maintenance program for the cap and to take such maintenance measures as were necessary to maintain the cap and the cutoff wall so as to prevent releases of PCBs.

[41] As it turns out, removal of the chemical drums and repair of the cracked cap were not completed until the 2004 removal action described below. *See* note 49, *infra*, however, for further discussion of cap repair.

manufacturing and business operations to another facility[42] - would cost an additional $2-3 million.[43]

On or about August 11, 2003, Aerovox, EPA, the Commonwealth and the City, among others, entered into a settlement agreement with respect to the costs for the cleanup of the Site. The settlement was approved by the court on September 30, 2003. EPA settled all its claims against Aerovox with respect to the Site in exchange for: (1) payment of the $750,000 placed in the Fund by Aerovox prior to its bankruptcy, plus interest and any appreciation; (2) allowance of EPA's administrative expense claim on a priority basis in the amount of $200,000; and (3) allowance of an unsecured claim in the amount of $8,235,000 (reduced by the amount by which the Fund exceeded $830,000). By the conclusion of the bankruptcy, EPA received $200,000 in agreed administrative expenses, $967,273.52 from the Fund, and $1,556,111.80 from distributions on its unsecured claim, for a total of $2,723,385.32.[44] The settlement provided that funds EPA received from the bankruptcy were to be used solely to conduct or finance response actions at the Site. The settlement gave EPA and the Massachusetts Department of Environmental Protection ("MassDEP") immediate and complete access to the Site for purposes of sampling and conducting response actions.

In addition, the City was designated as first responder to the Site for any problems while Aerovox continued to own the Site. The City received $250,000 on its administrative claim for the purpose of maintaining the fire suppression system at the Site and performing other property maintenance and security measures at the Site. The City was also given unlimited site access.

D. 1999 Administrative Consent Order with Commonwealth.

An Administrative Consent Order between MassDEP and Aerovox in connection with the Site became effective on February 3, 2000 (the "2000 ACO").[45] The 2000 ACO was

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[42] 1999 AOC at ¶ 40.

[43] Administrative Application at ¶¶ 17-18.

[44] Another result of the settlement with Aerovox was that, after a certain holding period, the Site became the property of the City and/or the New Bedford Redevelopment Authority (the "NBRA"). The current owner of 740 Belleville Avenue is 740 Belleville Avenue LLC, which was organized as a limited liability company for the purpose of facilitating the transfer of the property to a brownfields developer. *See* 740 Belleville Avenue LLC Certificate of Organization. The current managers of 740 Belleville Avenue LLC are the City and the NBRA. Under the Settlement Agreement, the proceeds, if any, from a sale of the Site to a developer or other entity will be apportioned among EPA, the Commonwealth and the City in proportion to their unreimbursed expenses incurred in connection with the cleanup of the Site. As a result, the governmental entities stand to obtain additional funds from any cleanup performed at the Site, particularly if it enhances the value of the property. Any such funds would further defray the governments' costs.

[45] The 2000 ACO notes that, in the 1998 EE/CA, Aerovox "concluded that the appropriate response action for source control at the Site was to demolish the [facility] and cap the impacted soil while leaving the building

intended to complement a Consent Order entered into between Aerovox and the Massachusetts Department of Environmental Quality Engineering ("DEQE") (now MassDEP), effective June 3, 1982 (the "1982 DEQE Order").[46] The 2000 ACO required that Aerovox: (i) continue to conduct the post-closure monitoring program put into place by the 1982 DEQE Order, which consisted of twice-yearly monitoring of groundwater levels and the underlying aquifer, as well as periodic inspections of the cap at the Site, until July 2012; (ii) submit post-closure monitoring reports to MassDEP two weeks after the field inspections and water level readings required by the 1982 DEQE Order; (iii) submit the Demolition and Cap Work Plan and Maintenance Work Plan required by the 1999 AOC to the MassDEP, postmarked by no later than December 31, 2009; (iv) notify MassDEP, within the applicable timeframe, after becoming aware of any 2- or 72-hour notification condition arising from releases that occurred prior to February 3, 2000, pursuant to 310 CMR 40.0311, 40.0312, 40.0313 and 40.0314 or other applicable provisions; (v) conduct an Immediate Response Action ("IRA") pursuant to 310 CMR 40.0410 and file an IRA completion statement, after providing the notification required in (iv) above; (vi) notify MassDEP, within the applicable timeframe, of any 2- or 72-hour, or 120-day notification condition, after becoming aware of any releases occurring after February 3, 2000, where the respondent is a person required to notify MassDEP pursuant to 310 CMR 40.0331; and (vii) comply with the applicable requirements of Chapter 21E and the MCP for any releases occurring after February 3, 2000. The 2000 ACO provided for stipulated penalties of $100 per day for violations by Aerovox of any time deadline or requirement set forth therein.

E. 2004 Action Memorandum.

In March 2004, nearly six years after the Approval Memorandum, the 1998 EE/CA and publication of the Proposed Plan, and three years after Aerovox filed for bankruptcy, EPA issued an Action Memorandum to initiate a Time-Critical Removal Action ("TCRA") at the Site. The purpose of the TCRA was to remove drums abandoned at the Site and to repair the asphalt cap installed by Aerovox pursuant to the 1982 Order (which Aerovox was required to

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slab in place. EPA agreed that the actions in the EE/CA, along with a long-term groundwater monitoring program, are an appropriate non-time critical removal action for source control consistent with the NCP." *See* Section V of the 2000 ACO at ¶ 9.

[46] 2000 ACO at ¶ 3 (Section II). The 1982 DEQE Order substantially tracked the requirements of the 1982 Order with EPA. Among other things, the 1982 DEQE Order required Aerovox to: (i) implement a sampling and analysis program at the Site; (ii) submit an evaluation of alternative responses based on the results of such sampling and analysis program (including an engineering analysis of each course of action evaluated; estimated costs and schedule for completion for each course of action evaluated; post-cleanup monitoring and maintenance measures for each course of action evaluated; and measures for provision of recorded notice to subsequent owners and operators of any measures taken for long-term containment of PCBs at the Site, and any related maintenance or monitoring required); (iii) recommend a responsive course of action to MassDEP; and (iv) implement such course of action, subject to MassDEP approval.

monitor and maintain until June 2014). In the Action Memorandum, EPA took the position that cracks in the asphalt cap caused by vegetation had to be repaired and "[h]azardous substances present in drums and containers in the abandoned facility, if not addressed by implementing the response actions selected in this Action Memorandum, [would] continue to pose a threat to human health and the environment."[47] Without implementing the TCRA, EPA found there may be an imminent and substantial endangerment to public health, welfare, or the environment.[48]

F. 2004 Time-Critical Removal Action.

From March to December 2004, EPA implemented the TCRA to remove waste drums and cylinders and to remove vegetation from and seal cracks in the existing asphalt cap.[49] Risks cited as the basis for the TCRA related to the fact that the release of wastes from drums had the potential to enter groundwater and surface water, and the deteriorating cap had the potential to expose the underlying impacted soils, which could then migrate via air or surface runoff. In connection with the 2004 TCRA, EPA expended just under $500,000 in response costs.

III. SUPPLEMENTAL EE/CA.

The SEE/CA was published in April, 2006. Its opening sentence explicitly states that it supplements the 1998 EE/CA. The SEE/CA is alternately modest, referencing the many reasons that it is closely connected with the 1998 EE/CA as well as the Approval Memorandum, the only authorizing document in the multi-stepped process delineated in the introductory section above; and bold, stepping into new terrain, something that might be expected given the passage of time and the number and consequence of the events and developments during the intervening years, many of which are described in Section II of these comments.

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[47] Action Memorandum at 1. The Action Memorandum was prepared on March 29, 2004 and approved on April 4, 2004. Approximately six months later, on September 20, 2004, Action Memorandum Addendum #1, seeking authorization for a $90,000 increase of funds to continue the TCRA, was prepared and four days later approved. The additional funds were to be used "to dispose of the remaining drums, place a pavement cap over the PCB contaminated soil area, restrict access to the property and demobilization." Action Memorandum Addendum #1 at 2.

[48] *Id.* at 8.

[49] The AR file does not document completion of the cap repair activities required under the TCRA. The June 22, 2004 *Pollution Report #2*, written while TCRA activities were in process, states, "The Army Corps is currently utilizing the site as an access point for the New Bedford Harbor dredging project. When their activities are complete, the capped area will be addressed appropriately." More than six months later, however, in the January 4, 2005 *Pollution Report #3*, annotated as the "*Final*" such report, the same account is repeated verbatim.

From its modest aspect, the SEE/CA states among other things that "site risks remain consistent with those presented in the 1998 EE/CA," that "[t]he goals and objectives of the NTCRA remain essentially unchanged," and that its purpose is limited (update cost estimates, evaluate two new removal alternatives, and allow additional public comment).[50] From its bold aspect, the SEE/CA reframes earlier statements regarding site risks so that groundwater, stormwater, air emissions, trespassing and vandalism, and potential fire take priority over previously-identified risks. One of the new removal alternatives places all waste, including TSCA waste, into the building foundation and caps the Site, not with an engineered barrier, but with twelve inches of vegetated soil. In addition, the objectives for the [S]EE/CA have expanded in number from two to five (with modifications to the original two), and include coordinating the NTCRA with site redevelopment, and with the City becoming the lead agency through a cooperative agreement. Further, some additional cost items have been added to the estimates for all the removal alternatives to "reflect the current status of the Aerovox site."[51]

The first question raised by this inherent conflict between the SEE/CA's dual aspects concerns whether the SEE/CA is consistent with the 1998 Approval Memorandum, the only document available to "explain[ ] the basis for the decision to employ a non-time-critical removal action."[52] The other and more complex question that is raised involves discerning if the SEE/CA determines whether "any hazardous substance is released or there is a substantial threat of such a release into the environment . . . which may present an imminent and substantial endangerment to the public health or welfare,"[53] and whether the proposed removal action is appropriate to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of release."[54] The below comments address these questions, among other things.

A. SEE/CA Does Not Satisfy CERCLA § 104(a)(1) Requirement to Define Manner in Which Facility Constitutes a Substantial Threat of Release of a Hazardous Substance Into the Environment.

To implement a removal action, CERCLA § 104(a)(1) requires, first, a determination by the President of a release or threat of release of a hazardous substance into the environment which may present an imminent and substantial endangerment to the public health or welfare, and, second, the actions taken in response to the release or threat of release be consistent with

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[50] SEE/CA at ii.

[51] *Id.* at iii. The SEE/CA, however, makes no mention of the two items deleted from the estimates, specifically "Engineering, Administrative, and Legal Fees (10%)," and the present worth of 30 years of post-removal site control costs.

[52] NTCRA Removal Authority Memorandum at 6.

[53] CERCLA § 104(a)(1).

[54] 40 CFR 300.415(b)(1).

the NCP. Following discovery or notification, and initial assessment, the approval memorandum and the EE/CA have specific roles in determining the appropriateness of a removal action. As the NTCRA Guidance explains, "[t]he EE/CA Approval Memorandum should . . . focus on providing sufficient information that [ ] a threat or potential threat could exist, while the EE/CA will provide the information for EPA to determine that such a threat or potential threat actually exists."[55] In other words, to accomplish its goals of specifying the objectives of a removal action and analyzing the various removal alternatives, an EE/CA must rest on the foundation laid by the prerequisite approval memorandum with respect to the identification of a threat or potential threat.[56]

In the present context, and as previously discussed, the only exposure pathways the Approval Memorandum documented involved ingestion and dermal inhalation of PCBs by on-site workers in the then still-operating manufacturing facility. Also as previously discussed, the 1998 EE/CA identified risks other than to on-site workers; and, after considering the risks identified by the Approval Memorandum, concluded that PCBs in soils represented the only constituents of interest in environmental media at the Facility.[57] In its treatment of risk, the SEE/CA, a supplement to the 1998 EE/CA, begins by referring to Section 2 of the 1998 EE/CA in order to incorporate the earlier document's discussion of the threat of release.[58] It then summarizes the results from the most recent site investigations, which new information, the SEE/CA states, "confirms that site risks remain consistent with those presented in the 1998 EE/CA, with PCBs in soil and groundwater posing a potential threat to human health and the environment."[59]

In claiming consistency with the risks presented in the 1998 EE/CA, the SEE/CA speaks from its modest aspect as a supplement; in stating that risk is present in groundwater, however, the SEE/CA speaks from its bold aspect, and without basis in the 1998 EE/CA. The AR file does not support the present existence of a threat of release to groundwater or surface water from the building. The 1998 EE/CA itself concluded that the groundwater release pathway had already been addressed by activities undertaken under the 1982 Order. ENSR's March 2006 *Conceptual Site Model* (the "2006 CSM") provides mass flux estimates for the contribution of PCBs from the Site to the river through the groundwater and surface water pathways, and indicates relatively low mass flux per year. In addition, the PCB mass fluxes presented in the 2006 CSM for the Site are, in all likelihood, overstated. For the groundwater

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[55] NTCRA Guidance at 6.

[56] *Id.* at 22.

[57] *See* Sections II.A. & II.B., *supra.*

[58] SEE/CA at 2. Section 2 of the 1998 EE/CA summarizes the results and presents a streamlined risk evaluation that "provides justification for the removal action." 1998 EE/CA at 2-14.

[59] *Id.*

flux, the 2006 CSM utilized PCB concentrations an order of magnitude higher than what is typically present, assumed an hydraulic conductivity that is conservative and not site specific, and failed to factor in the groundwater cutoff wall that is effectively reducing the migration of PCBs to the river through the shallow groundwater flow system. The 2006 CSM indicates that groundwater measurements taken between 1993 and 2002 ". . . demonstrated that the shallow system remained isolated from the harbor, even during the high tide periods."[60]

Similarly, the surface water flux presented in the 2006 CSM utilized maximum, not typical, PCB concentrations and assumed storm flow based on visual observations, not on actual measurements. EPA's stormwater monitoring in 2004-05 showed that PCB concentrations released through the Site's drainage system are lower than reported in 1994, which indicates that the migration of contaminants in stormwater is decreasing, rather than presenting an imminent and substantial threat.[61] At the June 14, 2006 public meeting in New Bedford, speakers representing regulating agencies clearly expressed the view that the Site was at one time, but is no longer, a significant source of PCBs to the river. Without adequate characterization of these pathways and an evaluation of the flux based on actual existing conditions and site-specific measured physical parameters, information that ordinarily would be collected as part of a comprehensive site assessment under the MCP, there is no basis for assertions of a substantial threat of release via groundwater or surface water.

The SEE/CA continues to diverge from the 1998 EE/CA (and the Approval Memorandum before it), by focusing on the threat of release in the event of a fire where the only foundation for it is the Approval Memorandum's terse recognition that "[s]hould the building become vacant with no security measures the threat of fire increases."[62] This observation did not merit consideration in the 1998 EE/CA, which made no reference at all to the existence of a threat of release due to fire. The June 2006 public notice, *Making the Vacant Aerovox Site Safe*, amplified the focus on the threat from fire by stating that the proposed NTCRA "is intended to remove the immediate threat of air emissions due to fire and contaminated run-off to the harbor." The threat of a release to air and surface water, however, is predicated on building deterioration and fire, both of which can be prevented and mitigated without demolition.[63]

To be consistent with the NCP, the SEE/CA is required to rest on the foundation of the eight-year old Approval Memorandum. It is cast as a non-time-critical removal action, but its emphasis on the need for more immediate action that would be more typical of an emergency

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[60] 2006 CSM at 5-3.

[61] *Id.* at 4-2, 4-3 and Appendix E.

[62] Approval Memorandum at 5.

[63] *See* Section III.D., *infra*, for further discussion on this subject.

or time-critical removal action. In seeking to be free of the Approval Memorandum's identification of ingestion and dermal inhalation of PCBs by on-site workers in the then still-operating manufacturing facility as the only exposure pathway, the SEE/CA has found its argument in the threat of fire. The SEE/CA, claiming to be modest, yet acting fundamentally from its bold aspect, does not substantiate its assertions with respect to the threat of fire. The fact is that the SEE/CA does not point to, incorporate, acknowledge, or in any way reference, the New Bedford Fire Department Aerovox Preplan, the statement of a qualified expert in the area of fire and the threats it poses, and the only document in the AR file that could potentially provide a credible foundation for defining the manner in which the Facility constitutes a substantial threat of release of a hazardous substance into the environment.

B. SEE/CA Does Not Comply with the NCP.

The NCP at 40 CFR 300.415 sets out specific requirements governing the selection, scope and implementation of removal actions undertaken pursuant to CERCLA. While the Approval Memorandum contemplated and documented implementation of a removal action consistent with the NCP, the SEE/CA has strayed far from what was contemplated in 1998, rendering it questionable whether the requirements can be met. The following subsections review the recommended alternative in light of its compliance with the NCP and the NTCRA Guidance, as well as other guidance.

1. SEE/CA improperly relies on an unsubstantiated risk evaluation based on incomplete site characterization.

Section 300.415(a) of the NCP requires that a removal site evaluation and a review of current site conditions be completed to determine if a removal action is appropriate. The NTCRA Guidance elaborates on the type of information that should be reviewed and/or developed, including site background information, previous removal actions, the source nature and extent of contamination, the quality of the data and a streamlined risk evaluation.[64] Each of these site characterization requirements were discussed originally in the Approval Memorandum, and to some extent in the 1998 EE/CA. Conditions at the Site, however, have changed materially since 1998, and what is known about the nature and extent of contamination and the risks posed by the Site changed incrementally between the Approval Memorandum and the 1998 EE/CA, and changed geometrically between the 1998 EE/CA and the SEE/CA.

By reference to the 2006 CSM, there is an attempt to portray achievement of a complete site characterization. The data, however, relative to the recommended alternative, is limited. The 2006 CSM evaluated only the potential for site-related PCBs to be transported via four different migration pathways - air, groundwater, DNAPL and stormwater - to the harbor.

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[64] NTCRA Guidance at 24-30.

The 2006 CSM did not evaluate trespasser exposure pathways, and the potential for adjacent businesses and residences to be impacted. Yet, these exposures are the very reasons given in the SEE/CA for the appropriateness of the recommended alternative.[65] The only other recent site characterization information in the AR file consists of two brief e-mails of a paragraph each from Jacobs Engineering, dated March 29 and April 5, 2006, information forwarded at a point in time when the SEE/CA was substantially if not completely drafted.

A troubling ramification of the eight-year gap between the Approval Memorandum and the SEE/CA is the changing basis for the risk evaluation. According to the NTCRA Guidance, "[t]he potential for exposure indicates the likelihood of meeting the NCP criteria for taking a removal action, which in turn justifies the need for conducting the EE/CA."[66] The Approval Memorandum justified undertaking preparation of an EE/CA on the basis of the potential for plant worker exposure to PCBs via ingestion and dermal inhalation.[67] The 1998 EE/CA reframed the potential for exposure in terms of contact with impacted soil and building materials.[68] The SEE/CA, however, though it refers back to the 1998 EE/CA's risk evaluation, adds risk components for trespassers and the threat of fire. These risks are neither clearly stated nor discussed qualitatively or quantitatively in the SEE/CA. As such, there is no basis for the SEE/CA's site characterization and risk evaluation to ". . . help EPA decide whether to take a cleanup action at the site, what exposures need to be addressed by the action, and in some cases define appropriate cleanup levels."[69]

2. SEE/CA fails to state clear and appropriate risk-based objectives.

The NTCRA Guidance states that "[i]dentifying the scope, goals, and objectives for a removal action is a critical step in the EE/CA and in the conduct of non-time-critical removal actions."[70] In so stating, this guidance underscores an EE/CA's role in providing the information for EPA to determine that the threat or potential threat identified in the approval memorandum actually exists,[71] and that removal alternatives considered in the EE/CA offer actions that will abate, prevent, minimize, stabilize, mitigate, or eliminate the identified release or threat of release. The appropriateness of the alternatives considered is tied to the appropriateness of an EE/CA's objectives. The SEE/CA, the most recent development in an evolving site characterization, lacking a risk evaluation based on 2006 site conditions rather

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[65] SEE/CA at 2-3.

[66] NTCRA Guidance at 22.

[67] *See* note 25, *supra*, and accompanying text.

[68] *See* notes 28-31, *supra*, and accompanying text.

[69] *Id.* at 29.

[70] NTCRA Guidance at 31.

[71] *See* note 55, *supra*, and accompanying text.

than those in 1998, however, fails to state clear and appropriate risk-based objectives. In developing removal action objectives, 40 CFR 300.415(b)(2) requires consideration of the following eight factors "in determining the appropriateness of a removal action" pursuant to the NCP:

(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

(vi) Threat of fire or explosion;

(vii) The availability of other appropriate federal or state response mechanisms to respond to the release; and

(viii) Other situations or factors that may pose threats to public health or welfare of the United States or the environment."

Between the Approval Memorandum, the 1998 EE/CA, the 2004 TCRA Action Memorandum and the SEE/CA, EPA has variously and inconsistently incorporated or eliminated one or more of the above factors as applicable to the proposed removal action. The Approval Memorandum stated that factors (i), (iv) (vi) and (viii) served as conditions requiring a removal action. Based on present conditions, however, it appears that only factors (i) and (vi) from the above list apply. Accordingly, for the recommended alternative to be appropriate under the NCP, its objectives must be framed in terms of taking action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of release that results in either the actual or potential exposure to nearby human populations, animals, or the food chain *from hazardous substances or the threat of fire or explosion. Removal objectives such as* facilitating site redevelopment or assisting in the implementation of institutional controls are not related to these factors and are included inappropriately in the SEE/CA.

The stated overall goal of the recommended alternative is to minimize impacts to human health and the environment caused by the presence of high levels of PCBs in the building and surrounding soils. The presence of PCBs in building materials and soils, however, does not constitute exposure or threat of fire; there must be a complete exposure pathway and identified receptors. The current human health risk (direct contact exposure pathway) and the threat of

fire can be mitigated or minimized appropriately for the short term (long enough to complete a comprehensive and final remedial action under the Chapter 21E requirements) by building stabilization and adequate security.[72] The recommended alternative does nothing to minimize impacts caused by surrounding soils since there is no complete exposure pathway to directly contact surrounding soils, and there is no longer a substantial contribution of contaminants from surrounding soils to other media (a conclusion made in the 1998 EE/CA and supported in other documents in the AR file). In fact, there is a credible argument that, by placing into the subsurface environment "high levels of PCBs in the building," the recommended alternative will increase, rather than minimize, the potential impacts from the subsurface to the environment. Each of the SEE/CA's five objectives are discussed below.

a. The SEE/CA's first objective, a carryover from the 1998 EE/CA, with some modification, is to safely demolish the building in a cost effective and ARAR-compliant manner before excessive building deterioration. Demolishing the building is a removal action alternative, not a risk-based response objective. Cost effectiveness and ARAR compliance are criteria by which to evaluate removal action alternatives. The introduction of timeliness (conducting the removal before excessive building deterioration) should be part of defining the scope of the response action, not its objective.

b. The second objective, also a carryover from the 1998 EE/CA, is to prevent direct contact with soils greater than 2 ppm of PCBs. The Site is paved and fenced; hence, a complete exposure pathway to soils impacted with PCBs does not exist. All that is required to prevent direct contact is maintenance of these controls. One of the objectives of the 2004 TCRA was to repair and seal cracks in the pavement, and the AR file does not contain any documentation which supports the assertion that the pavement has deteriorated since 2004 to the point where humans could be exposed to PCBs in soil. Furthermore, the MCP Method 1 soil standard for PCBs is not an appropriate risk-based goal for the Site, since a proper Method 3 risk characterization that evaluates site-specific exposure conditions would likely yield a much higher concentration.[73]

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[72] The SEE/CA fails to explain why obvious alternatives were determined not to be feasible. *See* Action Memorandum Guidance at 3-267.

[73] The SEE/CA suggests that direct contact with pavement also should be prevented. Applying MCP Method 1 soil criteria to asphalt is inappropriate, however, as the exposure assumptions applicable to soil are not relevant to asphalt pavement. This appears to have been understood in that this paved area has been utilized for harbor sediment dewatering operations, allowing human exposure to the pavement during such work. A comparable standard in TSCA for the pavement would be the self-implementing provisions in low-occupancy areas. This standard would allow up to 25 ppm of PCBs in place, or up to 50 ppm if the fence is maintained, or up to 100 ppm if the pavement is capped. *See* 40 CFR 761.61(a).

c. The third objective, newly-included, is to minimize future releases to surface water, groundwater and air. The documents in the AR file do not support that the recommended alternative will minimize such releases. To the contrary, burying additional source material and then placing a permeable cap over them would potentially increase the amount of stormwater in contact with the PCB materials, and the amount of PCBs in contact with groundwater. Air emissions are currently only measurable in the vicinity of harbor sediments immediately adjacent to the Site, and the building is not a present source of air emissions. It appears this objective was added to address the concern that a "major incident" fire potentially could cause releases to these media. Yet, minimizing the threat of fire can be accomplished without building demolition.

d. The fourth objective, also added in the SEE/CA, is to coordinate the removal action with future site commercial or industrial redevelopment. This is not an appropriate CERCLA response objective to address a release of hazardous substance or minimize impacts on human health or mitigate a potential imminent and substantial endangerment. Furthermore, the recommended alternative has the potential to constrain future redevelopment by limiting building options on one-half of the property, and providing no mechanism to ensure that the action is coupled with a redevelopment plan. The goals associated with providing significant funding to the City to jumpstart the project would be undermined if the removal action is not coupled with the redevelopment, yet it seems highly unlikely that a development plan, let alone an interested developer, will be on board within the timeframe proposed for the action.[74] Such an objective, viewed independently of the requirements under CERCLA and the NCP, can be met only when a redevelopment plan exists, has funding, and is about to be implemented. The likelihood of such a plan being brought forth is constrained until MCP-based comprehensive response actions are defined. Stabilizing the building, ensuring implementation of existing control and security mechanisms, and proceeding under the Chapter 21E program to achieve the long-term remedial action would be a more effective route to facilitating redevelopment.

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[74] The City's August 11, 2003 settlement with Aerovox required Aerovox to retain title to the Site until the earlier of two years from the date of the Settlement Agreement or entry of a final bankruptcy decree (but in no event earlier than December 31, 2003) (the "Holding Period"). The stated purpose of the Holding Period was to give the City an opportunity to arrange for the orderly transfer of the Site to a developer. In fact, documents recently produced by EPA indicate that the City had hoped that it would never take title to the Site. *See* October 29, 2003 letter from EPA to the New Bedford City Solicitor ("City representatives have stated that the City does not wish to take title or transfer title to a redevelopment authority; however, it recognizes the risk that no third party developer will be secured during the Holding Period and acknowledges that as a practical matter, the City will have no choice but to take title in order to facilitate the ultimate redevelopment of the [Site]."). As it turns out, however, the City took title to the Site through a limited liability company in January 2005. Now, more three years after the settlement, there is no indication that the City is any closer to locating a developer capable of and willing to redevelop the Site.

e. The fifth objective, the last of the new objectives, is to assist the state in establishing institutional controls in the form of deed restrictions. The assistance proposed in the SEE/CA to satisfy this objective is to refer the Site to the Chapter 21E program, under which an activity and use limitation ("AUL") would be required. The recommended alternative, however, would not assist in developing institutional controls. The proposed approach - constructing a cap that does not meet MCP requirements at an inadequately characterized site, both with regard to the nature and extent of impacts and risk characterization - ensures that additional, perhaps extensive, work will be required before the use of an AUL could be considered.

3. Recommended alternative fails to address properly the only 40 CFR 300.415(b)(2) factors that apply.

As stated above, only 40 CFR 300.415(b)(2)(i) and (vi) have any bearing on an evaluation of the removal action alternatives, i.e., (i) the actual or potential exposure to nearby human populations, animals, or food chain from hazardous substances or pollutants or contaminants; and (vi) the threat of fire or explosion.

With respect to 40 CFR 300.415(b)(2)(i), the only complete exposure pathway that exists under current conditions is the potential for trespassers and vandals inside the building to experience direct contact with PCB-impacted building materials. This could be addressed effectively with better security. There is no current complete exposure pathway to hazardous substances via air (monitoring results show only the harbor sediments contribute to detectable levels in air), groundwater (GW-3, not a potable drinking water source) or soil (all impacted soil at the Site is covered by the building or paved). PCBs identified in pavement do not appear to represent a significant direct contact risk-based on EPA's 2004 pavement sampling program.[75] Concentrations of PCBs at all but one sample location were below 25 ppm, the risk-based low-occupancy criterion applicable to self-implementing cleanups conducted in accordance with 40 CFR 761.61(a).[76]

According to the 2006 CSM, which represents the most current assessment of Site conditions and was completed for the purpose of synthesizing all available data, the Site does not contribute, under current conditions, significant quantities of hazardous substances through groundwater or stormwater to surface water or sediment. Furthermore, the 2006 CSM estimates of contaminant flux were calculated using the highly conservative approach of assuming that the highest concentrations of constituents of concern are representative of

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[75] *See* June 25, 2004 memorandum, *Aerovox Pavement Sampling*, from D. Granz to J. Brown.

[76] This appears to have been understood in that the same parking area was used to stage sediment dewatering activities being conducted as part of the New Bedford Harbor sediment cleanup, which included regular worker access through and in the areas where PCBs in pavement have been identified.

conditions site-wide, and as a result appear to be overstated. Prior response actions (HAC cap and sheet pile wall) already addressed these pathways and are still functioning as intended, as affirmed in other documents in the AR file.[77]

While true that potential future exposure is directly linked to the threat of fire, consistent with 40 CFR 300.415(b)(2)(vi), the threat of fire could be addressed by bringing the building into compliance with state fire codes for abandoned or dangerous buildings, 527 CMR 10.13 and 780 CMR 121, rather than demolishing the building.[78] For example, actions consistent with those required under 780 CMR 121.7 might include some combination of the following:

- Removal of all hazardous materials from the building until such time as the building is secured or reoccupied unless storage is lawfully permitted and the building is equipped with an automatic sprinkler system which is maintained and fully functional, in accordance with 780 CMR 121.7(1) & (3);
- Removal of all combustible materials unless the building is equipped with an automatic sprinkler system which is maintained and fully functional, in accordance with 780 CMR 121.7(1) & (3); combustible materials shall include any fixture not permanently attached;
- Removal of all materials determined by the head of the fire department or local building inspector to be hazardous in case of fire, in accordance with 780 CMR 121.7(1);[79] and/or
- All floors accessible from grade should be secured either by securing all window and door openings, providing 24-hour watchman services or providing a monitored intruder alarm system at the perimeter of all floors accessible from grade, in accordance with 780 CMR 121.7(2).

These steps would allow adequate and appropriate control and safeguards until a long-term response action and, if available, concurrent redevelopment, could be implemented.

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[77] *See* discussion in Section III.A., *supra*.

[78] These regulations likely would have been ARARs had the 1998 EE/CA or SEE/CA considered removal action alternatives other than those involving building demolition.

[79] For the most part, this was completed as part of the 2004 TCRA. However, vials of mercury, mercury switches and thermostats were inexplicably left in the building.

4. Recommended alternative does not contribute to efficient performance of any long-term remedial action.

In accordance with 40 CFR 300.415(b)(5), (d) and (g), and Section 2.5 of the NTCRA Guidance, the lead agency must consider how the proposed removal action will contribute to the efficient performance of any anticipated long-term remedial action. The SEE/CA does not define or quantify the scope of future activities that will be required to bridge the post-NTCRA gap, i.e., the activities and associated costs that will be necessary to achieve a "permanent solution" under Chapter 21E and the MCP. The SEE/CA states that a more impermeable cap "will likely be required," and that long-term maintenance of the cap and long-term groundwater monitoring would "also likely be required as part of final site closure."[80] It is reasonably certain that such additional assessment, characterization, and maintenance and monitoring activities will be required, and the associated costs will be significant. Without entering the MCP process, any assertion that the short-term recommended alternative supports a final remedy, i.e., a permanent solution, is at best speculative.

Additionally, the 2006 CSM identifies the potential for DNAPL and groundwater impacts around and beneath the building at depth. These impacts are unknown without further investigation, which will be required for any long-term remedial action. The 2006 CSM concludes, somewhat speculatively, that

> The historical release of separate phase PCB oil within the building and the surrounding area likely resulted in residual contamination of the soils beneath the site (pockets of oil filling in portions of the interstitial pore space between soil grains) as well as the potential for pools of oil residing above zones of lower permeability material. As the density of the PCB mixtures used at the site was greater than that of water (PCBs are classified as a dense non-aqueous phase liquid or DNAPL), PCB oils that historically drained through the soil could have continued a downward migration below the water table, potentially pooling above bedrock or the zone of low permeability peat identified beneath the site (confining layer in Figure 1-4) and moving laterally along the rock or peat layer.[81]

Thus, implementation of the recommended alternative will complicate, and potentially inhibit, addressing such impacts if they are confirmed and require remediation.

The NCP at 300.415(g) states that "If the lead agency determines that the removal action will not fully address the threat posed by the release and the release may require

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[80] SEE/CA at 11.

[81] 2006 CSM at 1-2.

remedial action, the lead agency shall ensure an orderly transition from removal to remedial response activities." The recommended alternative, however, leaves the transition to long-term remedial measures contingent upon the City's identification of a developer and the prospect of site redevelopment. This transition is not defined in terms of the steps to be undertaken to conclude response actions under CERCLA, and immediately thereafter initiate response actions under Chapter 21E.[82]

5. No accounting for costs of post-removal site control ("PRSC").

The NTCRA Guidance states that "If the [On-Scene Coordinator/Remedial Project Manager ("OSC/RPM")] believes that PRSC may be necessary, the OSC/RPM should obtain a commitment from the State or local government or PRP to perform and fund necessary PRSC actions prior to initiating a response. Such commitments could be part of a settlement document with a PRP or take the form of a letter agreement or Memorandum of Understanding with State or local governments."[83] The AR file does not include documentation of an agreement with the Commonwealth or the City with regard to PRSC costs, including quantifiable long-term monitoring and maintenance of the cap and other institutional controls that will be required as part of the long-term MCP remedy. Such costs are likely to be considerable and should be taken into account in considering the recommended alternative, based on both cost and the ability of the short-term action to support the long-term remedy. Though the goal of coordinating the action with site redevelopment is to be affirmed, the absence of a formal agreement or mechanism to address specifically known PRSCs could undermine the ability to achieve a long-term remedy. In addition, the public should not be asked to comment favorably on a proposed NTCRA without in-place assurances of an agreement, whether a cooperative agreement or equivalent, that will ensure the implementation of PRSCs for the entire period they are required.

Finally, the fact that the SEE/CA fails to include PRSC costs in its estimates for the five removal alternatives, a change from the 1998 EE/CA, underscores the reasonableness of the above concerns.

C. Recommended Alternative Is Not Implementable.

The SEE/CA has incorrectly calculated the total volume of the demolition waste that will be generated by implementing the recommended alternative. According to the SEE/CA, the building footprint provides approximately 28,000 cubic yards (cy) of available disposal

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[82] Such a scenario, apparently, is exactly what is envisioned. The sixth enumerated paragraph in the draft TSCA 761.61(c) Determination (SEE/CA Attachment 3) states: "Once the removal is completed, the site shall be transferred to the Massachusetts 21E program and a final closure plan shall be implemented in accordance with chapter 21E and the federal TSCA program."

[83] NTCRA Guidance at 8. *See also* Removal Action Procedures Guidance at 55.

volume below grade. The SEE/CA assumes a 1.5 bulking factor on the demolished structure to account for void spaces within the demolition waste.[84] Given the total building material volume of 14,771 cy presented in the EE/CA and used again in the SEE/CA, the building structure volume with the bulking factor applied is 22,156 cy. The SEE/CA, then, includes an additional 7,140 cy of miscellaneous equipment and appurtenances, presented as a "crushed volume" for which no bulking factor is applied, for a total of 29,296 cy. Assuming all volumes presented in the SEE/CA are appropriate, approximately 1,296 cy of demolition debris will not fit in the foundation hole.

Furthermore, URS believes two assumptions made in the SEE/CA calculation are not appropriate, potentially resulting in a significantly greater volume of material exceeding the available disposal volume:

- Based on comparable projects, URS believes a bulking factor of 1.75 is more appropriate;[85] and
- The manner in which the additional 7,140 cy volume was calculated is flawed. Volume calculation backup information provided by EPA[86] indicates that somewhat arbitrary compaction ratios were applied to the inventory of material in question, e.g., a vanity with sink will have a "crush reduction" of 75% of its original volume, etc. Furthermore, because it is assumed this material will all be compacted, no bulking factor is applied.

URS has calculated a total above-ground demolition volume of 21,416 cy (in-place measurement, including the additional 7,140 cy). Given the arbitrary nature of the assumed "crush reduction" of the additional 7,140 cy of material, URS believes a bulking factor should be applied to that material, as well as to the in-place measured building material volume. The resulting total volume of the demolished building structure and the additional 7,140 cy, with a 1.75 bulking factor applied to both, is 37,478 cy. As a result, approximately 9,478 cy of

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[84] A "bulking factor" is derived by dividing volume after excavation/demolition by volume before excavation/demolition. In preparing an estimate, a bulking factor is used in volume calculations to account for the fact that void spaces within disturbed/processed material result in greater volumes. The primary variable in demolition bulking factors is the type of material being demolished and the overall homogeneity of the material.

[85] Based on ample field experience, Brian Laurin, a principal with URS' subsidiary demolition company, Aman Environmental Construction, Inc., regards a bulking factor of 75% for demolition debris to be a reasonable number. Mr. Laurin has opined that hard demolition debris, such as concrete and brick, is similar in nature to natural rock, and he has referenced mining industry standards with respect to rock bulking factors. These standards indicate expansion percentages of 75% to 90% for hard, solid rock/rock-like materials. Mr. Laurin further states that there is a high degree of void space for soft debris, such as wood and drywall, which is less cohesive than concrete/brick and by its very nature becomes easily separated and splintered.

[86] *See* inventory and volume calculation spreadsheets prepared by the Army Cops of Engineers, April-May 2005; copies of which were forwarded to URS by EPA Region I via e-mails of June 28, 2006.

demolition material will require off-site disposal, significantly increasing the cost of the recommended alternative.

The SEE/CA asserts that the recommended alternative is implementable because demolition of buildings and installation of protective caps or covers over contaminated sites are well-established technologies that have been used at many sites nationwide.[87] Given that the proposed NTCRA cannot be completed as proposed, i.e., the material proposed for on-site landfilling physically will not fit in the proposed disposal location, the removal action cannot be considered implementable.

D. Recommended Alternative Is Not Effective and Implementable Alternative with Lowest Cost.

A building stabilization alternative that includes an appropriate combination of (1) removal of flammable materials, (2) installation and maintenance of an effective sprinkler system, (3) adequate securing of building openings, (4) improvements to site security fencing and alarm systems, and (5) roof repair would address the imminent fire hazard and the potential for human exposure in the short term. This was the approach endorsed by EPA in the 1999 AOC, and it remains a valid approach.

A review of documents in the AR file[88] indicates that as early as 1998 all parties recognized the need to maintain and repair the building, and maintain security and a functioning fire suppression system as significant factors to allow building demolition to be deferred to as late as 2011. This responsibility rested on Aerovox at the time of the 1999 AOC. Following Aerovox's move from the Facility in April 2001, responsibility for the structure remained with Aerovox. In June 2001, Aerovox filed for bankruptcy, after which time the City and EPA continued evaluation and monitoring of the Site. Even when Aerovox was the owner, EPA had authority to enforce Aerovox's obligations in this area and had access to the Site in order to conduct any necessary response actions.[89] In February 2005, the responsibility transferred to the new owner, i.e., an LLC whose two managers are the City and the New Bedford Redevelopment Authority. Further, when the LLC later took title, it had $250,000 available from the bankruptcy to maintain the building.

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[87] SEE/CA at 8.

[88] December 1997 *Preliminary Building Cleanup Alternatives Evaluation* (AR #248132); BBL's April 1998 *Building Demolition Alternative Report* (AR #248156); May 6, 1998 EPA letter (from Regional Administrator John DeVillars) to Aerovox regarding "Remediation Plans for Aerovox Site" (AR #248129); 1998 EPA Community Relations Plan (AR #248126); the 1998 EE/CA (AR #248124); October 1998 EPA notice of comment period on the 1998 EE/CA (AR #248121).

[89] *See* May 20, 2004 letter from EPA counsel to Aerovox counsel, confirming EPA's right of access to the Aerovox Facility.

While some maintenance and repairs were made by EPA and the City since 2001, primarily installation of a new security system and sprinkler repairs, it is apparent that these measures were insufficient to maintain the building condition and minimize the threat of a major fire incident. In fact, the building has never been secured in accordance with the December 19, 2000 State Fire Marshal Advisory on *Abandoned or Dangerous Building Regulations,* 780 CMR 121 and 527 CMR 10.13. In addition to security provisions, this advisory recommends that in the absence of a fully automatic, functional, and maintained sprinkler system, all combustible materials should be removed from the building.

As a result of the above actions not being implemented by EPA or the City, any fire at the Facility is expected to become a "major incident" according to the New Bedford Fire Department Aerovox Preplan, primarily due to the large combustible fire load, inadequate fire suppression system, and the chemical hazards associated with the Facility. As a result, the 2006 CSM, the SEE/CA, the April 2006 Jacobs Engineering building deterioration e-mail, and the June 2006 EPA flyer, *Making the Vacant Aerovox Site Safe*, all refer to a deteriorating building condition, leading to the inclusion of this increased fire and chemical release hazard as an added response action objective to justify implementation of the proposed NTCRA in the near term, rather than waiting until 2011 as originally planned.

In summary, the following conclusions can be drawn about the building and its present condition:

- The building is still structurally stable;
- The roof could have been repaired in 2003; and there is no evidence that such repairs could not be made at the present time;
- Had Aerovox's obligations under the 1999 AOC been enforced during the time Aerovox owned the property, building deterioration would not have reached its present condition;
- During the period from September 30, 2003, the date of court approval of the bankruptcy settlement, to the present, EPA and the City had the legal authority and the funds to take steps necessary to prevent further deterioration of the building, including maintaining security, fire suppression and alarm systems, inspecting and maintaining and/or repairing the building, and disconnecting utilities to a greater extent than was done; and
- The imminent nature of the threat posed by a building fire (and consequently the main reason for the proposed NTCRA) could have been avoided had those responsible for the building from 1998 to the present taken certain readily-available steps.

URS has estimated that to secure and stabilize the building and property in its current state to allow for the building demolition to be planned for no later than 2011, rather than

2007, additional security measures and hazardous and combustible materials removal can be implemented for considerably less than the recommended alternative. The majority of this cost is for the removal and disposal of combustible and hazardous materials inside the building, a step that is necessary in the absence of a fully functioning sprinkler and alarm system. This stabilization will effectively eliminate the imminent nature of the threat of fire and provide sufficient site control, thus restoring a window of time within which to conduct a more comprehensive and concurrent evaluation of options associated with building demolition, site redevelopment, and final site closure under the MCP.

In addition, there are a number of estimating and calculation errors in the SEE/CA which cast doubt on whether a proper evaluation of the alternatives has been made, including: (1) the cost of the recommended alternative is calculated to be $7.9 million; it should be $7.45 million; (2) building demolition costs are underestimated by approximately $600,000, according to an independent cost evaluation conducted by qualified environmental demolition experts; (3) the SEE/CA's recommended alternative assumes no off-site disposal of waste; however, an estimated $1.9 million in off-site disposal costs are probable based on waste volume calculation errors; (4) the TSCA waste disposal cost of $194 per ton for the 7,140 cy of additional debris is low by approximately $1 million, primarily based on the flawed assumption of one ton per cubic yard for this material;[90] and (5) asbestos removal costs are based on an incomplete survey; costs to abate and dispose of asbestos are likely underestimated by 20%, or approximately $200,000.

It is also important to note that the SEE/CA represents a major shift in both the determination of effectiveness and implementability. The recommended alternative is a temporary measure. The SEE/CA states that "EPA has not quantified whether additional hazardous waste are present at the site; however, the measures proposed will protect human health and the environment on the short-term. Long-term protection will be addressed under the state Chapter 21E program."[91] If the proposed action is implemented, extensive work will be required to achieve long-term protection under the MCP, including full characterization of the nature and extent of potential impacts, source control, modifications to the cap, institutional controls and long-term monitoring and maintenance. Because the recommended alternative represents a temporary action, tied to coordination with redevelopment, a stated objective, it is not the lowest cost, effective and implementable option at this time.

In conclusion, the objectives of the 1998 EE/CA did not include threat of imminent and substantial endangerment from fire. They were modified in the SEE/CA to include building

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[90] Based on review of the inventory of this material, the weight per cubic yard is likely half that assumed which will drive transportation costs up significantly and result in a per ton disposal cost of approximately $336 per ton. The result is an underestimate of this cost by approximately $1 million.

[91] SEE/CA at 11.

demolition "which occurs in a timely manner prior to excessive building deterioration or a potential mill fire occurring." It seems clear that, in the short term, the determination that the Site presents a threat to public health, welfare or the environment, including threat of fire, could be mitigated through building stabilization (remove fuel, maintain a fully functional fire suppression system, site security) at a substantially lower cost than the proposed NTCRA.

E. Recommended Alternative - Considering Urgencies of Situation and Scope of Proposed Removal Action - Does Not Attain ARARs.

Both the NCP at 40 CFR 300.415(j), and the corresponding section of the NTCRA Guidance[92] require that removal actions "to the extent practicable considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (ARARs) under federal environmental or state environmental or facility siting laws" and further require that "[i]n determining whether compliance with ARARs is practicable, the lead agency may consider appropriate factors, including: (1) The urgency of the situation; and (2) The scope of the removal action to be conducted."

The reported urgency of the situation and the scope of the action have varied over the eight years between the Approval Memorandum and the SEE/CA, rendering the above-stated factors virtually irrelevant to the determination of what is practicable. The commitment to attain ARARs has changed, and the determination of which ARARs are applicable is inconsistent as between the 1998 EE/CA and the 2006 SEE/CA. Most notable is the inconsistency in the two documents regarding the MCP's requirements with respect to the use of an engineered barrier. The 1998 EE/CA explicitly asserts that such requirements will be met; in contrast, the SEE/CA asserts that since the Site is being addressed under TSCA, a minimal and permeable soil cap under TSCA is adequate, and the MCP is not applicable.[93] This becomes even more puzzling when the recommended alternative specifically indicates that the action is temporary and that the long-term remedial response will be accomplished through the MCP. Although the 1998 EE/CA planned to conduct the action as a risk-based cleanup pursuant to 40 CFR 761.61(c), as the SEE/CA does, the 1998 EE/CA clearly also intended to comply with Massachusetts Hazardous Waste Closure Requirements (310 CMR 30.633, 30.660-30.669), as discussed below in Section III.E.1.

The 1998 EE/CA identified 34 ARARs and the SEE/CA identifies an additional 16 ARARs either not included in the 1998 EE/CA or "that apply to changed site conditions and to conditions that were unknown at the time the original EE/CA was issued."[94] The SEE/CA further states that "[f]or removal actions, EPA's policy is that actions will meet ARARs to the

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[92] *See* § 2.6 at 37, and Exhibit 8.

[93] SEE/CA at 10.

[94] *Id.*

maximum extent practicable, considering the exigencies of the situation. As determined in this document the Aerovox facility presents an imminent and substantial threat to the environment and must be addressed as quickly as possible; therefore, these ARARs will be complied with to the extent practicable given the need to address the risks posed by this site."[95] In a major shift from 1998, the SEE/CA inexplicably determines that the Massachusetts Hazardous Waste regulations identified in the 1998 EE/CA as an ARAR do not apply as the Site is adequately regulated under TSCA, while retaining several other state ARARs from the 1998 EE/CA and adding yet others.[96] The treatment of specific ARARs is discussed further in the following sections.

1. M.G.L. c. 21E and 310 CMR 40.0000 (Massachusetts Contingency Plan).

The recommended alternative as presented in the SEE/CA is a temporary measure, and does not comply with the requirements of Chapter 21E and the MCP for a response action and subsequent Response Action Outcome ("RAO"). Although the 1998 EE/CA planned to conduct the action as a risk-based cleanup pursuant to 40 CFR 761.61(c), as the SEE/CA does, it took a different approach and stated a clear intention to comply with Massachusetts Hazardous Waste Closure Requirements at 310 CMR 30.633 and 30.660-30.669. As stated in the 1998 EE/CA:

> [T]he Commonwealth has noted that the remedy calls for leaving material behind which exceeds the State's upper concentration limit of 100 ppm PCBs in soil. As a result, the Massachusetts Contingency Plan, Class A-4 Response Action Outcome requires an engineered barrier as cover for those soils. An engineered barrier in accordance with the Massachusetts Hazardous Waste Management Closure Requirements, identified in ARARs Table 14a, will be part of the removal action.[97]

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[95] *Id.* The SEE/CA's effort to attach the highest priority to the proposed NTCRA does not harmonize, however, with the fact that in the well-established hierarchy of removal actions, a non-time-critical removal action is situated at the least urgent end of the spectrum. *See* note 3, *supra*, and accompanying text. The Removal Action Procedures Guidance recognizes a correlation between the category into which a removal action fits and the time and consideration given to ARARs' determinations for a removal action: "The extent to which OSCs identify and attain ARARs depends on whether the removal action is an emergency, time-critical, or non-time-critical action." . . . "During non-time-critical removal actions, sufficient time should be available for OSCs to ensure that ARARs determinations are based upon a reasonable understanding of site characteristics. In particular, preparing the EE/CA should allow OSCs to fully consider ARARs in the development of response actions." Removal Action Procedures Guidance at 50.

[96] *See* note 113, *infra*, and accompanying text.

[97] 1998 EE/CA at 3-2.

Given the stated objective of the SEE/CA to address long-term protection under the Chapter 21E program, the recommended alternative cannot be adequately regulated by TSCA when TSCA falls short of the Chapter 21E requirements in the critical area of cap construction. This departure from the 1998 EE/CA will result in the Site being non-compliant with the very regulations governing the long-term solution the moment the recommended alternative's temporary action is completed and jurisdiction is turned over to the Commonwealth's laws and regulations.[98]

Massachusetts regulations consider CERCLA sites "adequately regulated for the purposes of compliance with the MCP," provided that the requirements of 310 CMR 40.0111 are met. The Site, however, would be classified as a disposal site if uncontrolled oil or hazardous material was present at the Site after the implementation of the recommended alternative. This is a possibility given the fact that, as stated in the SEE/CA, "EPA has not quantified whether any additional hazardous waste are present at the site; however, the measures proposed will protect human health and the environment in the short-term. Long-term protection will be addressed under state c. 21E program."[99] Those requirements to determine whether sites are adequately regulated are specifically:

- The Department concurs with the ROD and/or other EPA decisions for remedial actions at such site in accordance with 40 CFR 300.515(e); or
- If the Department requests that EPA change or expand the EPA-selected remedial action, EPA agrees to integrate the Department's proposed changes or expansions into the planned CERCLA remedial action in accordance with 40 CFR 300.515(f); or
- If the Department does not concur with the ROD and/or other EPA decisions for remedial actions at such site, the EPA-selected remedial action is thereafter modified so as to integrate the Department's proposed changes or expansions into the planned CERCLA remedial work in accordance with CERCLA § 121(f)(2); or
- If the Department reviewed the ROD and/or other EPA decision for remedial actions at such site and has no comment with respect thereto.

There is nothing in the AR file indicating that the Commonwealth has been involved in any aspect of the review of state ARARs.[100] There is no documentation in the AR file or in

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[98] *See* note 82, *supra*, and accompanying text.

[99] SEE/CA at 11.

[100] Indeed, other than MassDEP staff names appearing among the names of individuals copied on various correspondence, the only reference in the AR file with respect to the Commonwealth's involvement is the following statement on page 11 of the SEE/CA: "DEP has given its preliminary concurrence to the recommended approach herein, and will review the EE/CA further during the upcoming comment period."

MassDEP's files which provides the basis for the adequately regulated determination. The Aerovox facility is not a CERCLA site, will not be subject to a CERCLA remedial action, and EPA will not prepare a ROD for the Site. There is no provision in the MCP that deems a site adequately regulated based on a TSCA risk-based cleanup response action. Notably, the 1998 EE/CA refers to the fact that the Commonwealth specifically provided input, in contrast to the present situation, on this question:

> [T]he Commonwealth has noted that the remedy calls for leaving material behind which exceeds the State's upper concentration limit of 100 ppm PCBs in soil. As a result, the Massachusetts Contingency Plan, Class A-4 Response Action Outcome requires an engineered barrier as cover for those soils. An engineered barrier in accordance with the Massachusetts Hazardous Waste Management Closure Requirements, identified in ARARs Table 14a, will be part of the removal action.[101]

The recommended alternative allows upper concentration limits of PCBs to remain in the ground and does not provide for an engineered barrier.[102] The cap proposed in the 1998 EE/CA came closer to satisfying the engineered barrier requirements, and, as previously stated, an MCP-compliant cap was a specific requirement of the 1998 EE/CA. The 1998 EE/CA's recommended alternative would have supported a Class A-4 RAO, while the temporary and not well-defined cover system in the current recommended alternative cannot. The MCP requirement for an engineered barrier was and remains applicable to the Site. Further, the failure to provide such a measure as part of the presently-proposed NTCRA is inconsistent with prior response actions at the Site, including 1982-84 activities which placed a HAC pavement cap to minimize infiltration into the subsurface soil where PCBs were present, and the 2004 TCRA, which repaired the HAC cap to prevent potential direct contact with subsurface PCBs.

Additionally, despite the SEE/CA's stated objective to assist with institutional controls,[103] the recommended alternative alone will not facilitate implementation of an AUL. Completion of the MCP process and demonstration of the risk-based need for an AUL are important prerequisites. Assuming an AUL is necessary, the mechanism for recording an AUL lies within the MCP regulations. It appears that the SEE/CA understands this when it states: "To protect the long term integrity of the new cover and prevent the use of site groundwater, institutional controls (e.g., deed restrictions) are part of the post-removal site

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[101] 1998 EE/CA at 3-2.

[102] "Upper Concentration Limits in soil and groundwater," according to the MCP, "are concentrations of oil and/or hazardous material which, if exceeded under [certain conditions], indicate the potential for significant risk of harm to public welfare and the environment under future conditions." 310 CMR 40.0996(1).

[103] SEE/CA at 4.

controls. EPA will assist the state and City to establish these institutional controls through the state's hazardous waste site cleanup program (M.G.L. c.21E)."[104] Yet, the SEE/CA insists that the MCP is not applicable.

Regarding the utilization of the MCP as a chemical-specific ARAR establishing cleanup goals, the 1998 EE/CA referenced the MCP Method 1 standards as chemical specific ARARs, and the SEE/CA utilizes the Method 1 PCB soil standard in planning what areas of the Site should be capped. However, the MCP Method 1 standards are not the most appropriate for the proposed NTCRA. In particular, they cannot be applied to pavement. The Method 1 standard for PCBs of 2 ppm is based on an antiquated and undocumented sludge study dating back to the early 1980s. In response to a request to MassDEP for how the 2 ppm standard was derived, MassDEP responded with the following: "Unfortunately we can't provide you with a reference as to how that value was derived. According to MassDEP's Office of Research and Standards, it was based on a risk analysis performed in the early 1980's. What assumptions were used in arriving at that value are undocumented."[105] More appropriate for the proposed NTCRA would be to complete a site-specific Method III risk characterization based on actual data from the Site and actual potential exposure points and pathways. Alternatively, because the Site is being addressed through the risk-based provisions of TSCA, the standard applied to pavement would allow up to 25 ppm of PCBs in place, or up to 50 ppm if the fence is maintained, or up to 100 ppm if the pavement is capped.

2. Draft TSCA risk-based determination.

The SEE/CA includes as Attachment 3, a proposed (draft) finding by the Regional Administrator, entitled "TSCA 761.61(c) Determination." The comments in this section constitute AVX's response to EPA's specific request for comment on the draft determination under 40 CFR 761.61(c).

The draft risk-based TSCA determination concludes that the recommended alternative does not pose an unreasonable risk of injury to health or the environment as long as the following conditions are met:

1. Engineering controls for dust suppression as described in the SEE/CA shall be used during demolition, processing and covering activities and air quality is monitored to ensure air emission levels meet risk-based air standards.
2. Engineering controls for the collection and management of surface water runoff shall be used during the demolition, processing and covering activities to ensure that

[104] *Id.* at 14-15.

[105] E-mail to URS from "Regulations, BWSC (DEP)," July, 26, 2006 @ 5:32 PM.

the PCB concentration in any such runoff from the Site complies with site-specific standards.

3. To ensure compliance with items #1 and #2 above, demolition waste processing activities shall be performed in an enclosed environment, and any stockpiles of demolition waste shall be securely covered until such stockpiles are disposed.
4. EPA shall assist the state and City to establish institutional controls that prohibit any use or contact with groundwater and which prohibit land use activities that would adversely affect the site cover.
5. The site cover shall function as a barrier to direct contact exposure to contaminated site soils, and the site cover and steel sheet pile cutoff wall shall be monitored and maintained. The site cover shall be as protective as possible within the available funding, but shall at a minimum consist of twelve inches of vegetated soil.
6. Once the removal is completed, the site shall be transferred to the Massachusetts 21E program and a final closure plan shall be implemented in accordance with chapter 21E and the federal TSCA program.
7. Any development or activity on the Site shall be designed, implemented, and maintained in a manner to prevent any release or exposure to any material contaminated with PCBs above identified risk levels, and shall be consistent with the final closure plan referred to in #6.

It is questionable, however, given that a comprehensive site-specific risk assessment has not been performed to date, whether the risk associated with the proposed action can be quantified at this time. The SEE/CA states that "EPA has not quantified whether any additional hazardous waste are present at the Site; however, the measures proposed will protect human health and the environment in the short-term."[106] This conclusion, which relies on the 1998 EE/CA and is the basis for the draft determination, does not appear to consider the fact that the removal action proposed in 1998 is dramatically different from the currently-proposed action. The 1998 EE/CA proposed removal and off-site disposal of all TSCA waste, followed by construction of a low-permeability cap across the entire Site. In contrast, the SEE/CA proposes placing all waste, including a significant volume of TSCA waste, in the subsurface, and then permits placing a high-permeability cap over the Site.

The draft determination is inconsistent with a potential action-specific ARAR included in the 1998 EE/CA, *Guidance on Remedial Action for Superfund Sites with PCB Contamination*.[107] As stated in the executive summary of this guidance document, actions should "utilize permanent solutions" to the maximum extent practicable. The guidance further

[106] SEE/CA at 11.

[107] OSWER Directive No. 9355.4-01.

states "In addition, there is a preference for remedies that employ treatment that permanently and significantly reduces the mobility, toxicity, or volume of hazardous substances as a principal element." The proposed action does not represent a permanent solution, does not reduce the volume of hazardous substances and, with implementation of the high permeability soil cap, may actually increase the potential for mobility of hazardous substances.

Finally, as described below in Section III.G., the draft determination's findings (4 and 6) that institutional controls and final site closure can be readily implemented is mistaken.

3. 310 CMR 16.00, Massachusetts solid waste regulations.

The recommended alternative proposes to demolish the building, and to cover the entire Site with a clean protective cover. All demolition waste is disposed on-site. The proposed demolition materials have a solid waste component regulated under 310 CMR 16.00.[108]

Though the proposed disposal of the building demolition materials meets the requirements of a solid waste disposal landfill under 310 CMR 16.02, for the following reasons, the Site cannot be determined to be suitable for a solid waste management landfill facility:

- The maximum high groundwater table is within four feet of the ground surface in areas where waste deposition is to occur or, where a liner is designed to the satisfaction of the Department, within four feet of the bottom of the lower-most liner.
- The outermost limits of waste deposition of leachate containment structures would be within a resource area protected by the Wetlands Protection Act, M.G.L. c. 131, § 40, including 100-year floodplain.
- Any area of waste deposition or the leachate containment structures would be less than 400 feet to a lake or 200 feet to a River Front Area as defined in 310 CMR 10.00, that is not a drinking water supply.
- Waste deposition on the Site would result in a threat of an adverse impact to groundwater through discharge of leachate, unless it is demonstrated to the satisfaction of the Department that a groundwater protection system will be incorporated to prevent such a threat.[109]

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[108] The demolition materials also have a hazardous waste component regulated under 310 CMR 30.000, and described in the immediately following section of these comments.

[109] *See* 310 CMR 16.40(3)(a)12-14 & 16.

Additionally, the proposed landfilling of all demolition materials is contrary to 310 CMR 19.017, newly-effective as of July 2006, which prohibits the disposal of waste, including asphalt pavement, brick, concrete, metal, and wood, in a solid waste disposal facility.[110] The SEE/CA listed 310 CMR 19.017 as an ARAR "to be considered," stating that "EPA anticipates that the majority if not all of these materials will be contaminated with PCBs. As such, the waste stream will be controlled by TSCA. However, to the extent these materials are separated during demolition activities, those that qualify as solid waste will be recycled to the extent practicable."[111] In fact, the 1998 EE/CA estimated that only 3,889 cy (26%) of the total building material volume of 14,771 cy would require off-site disposal at a TSCA landfill.[112] Furthermore, none of the brick building structure was identified as requiring disposal at a TSCA landfill.

4. 310 CMR 30.000, Massachusetts hazardous waste regulations.

The SEE/CA states that "[b]ecause this removal action is based on the 40 CFR 761.61(c) TSCA risk-based determination, the Massachusetts Hazardous Waste regulations identified in the 1998 EE/CA do not apply. Pursuant to 310 CMR 30.105, because the site is adequately regulated by TSCA, Massachusetts Hazardous Waste regulations do not apply."[113]

In general terms, the Massachusetts hazardous waste regulations do defer to the TSCA regulations as they relate to the management of PCB waste as a hazardous waste, exempting PCB waste from the state hazardous waste regulations, provided they are being actively managed under TSCA and the wastes are solely hazardous because of PCBs.[114] Specifically, the requirements for exempting PCBs from hazardous waste regulation in 310 CMR 30.105(1) are:

> PCB waste, as defined in 40 CFR 761.3, consisting of dielectric fluid or electrical equipment containing dielectric fluid that would be subject to hazardous waste regulation due to the presence of PCBs are exempt from 310 CMR 30.000 provided: (a) the waste is regulated pursuant to 40 CFR 761, as in effect on July 1, 2002; (b) the waste does not meet the description of any

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[110] One document in the AR file, a May 6, 1998 letter from the then EPA - New England Regional Administrator to Aerovox's President and CEO, appears to have acknowledged this. The letter set out five principles to govern preparation of a demolition work plan, one of which was "[w]ood floors that contain PCBs at concentrations above agreed-upon levels will be removed from the building and transported offsite for disposal at a TSCA landfill."

[111] SEE/CA at 13.

[112] 1998 EE/CA, Attachment 11, Tables 11-1 and 11-2.

[113] *Id.* at 11, and Table 2 at 1.

[114] *See* 310 CMR 30.105.

listing (see, *e.g.*, 310 CMR 30.131 describing MA01 and MA02); and (c) the waste is hazardous solely because it exhibits the Toxicity Characteristic (D018 - D043 only).

In the present situation, 310 CMR 30.105(1)(b) is not satisfied because the impacted building materials and the soil beneath the building meet the description of a listed waste, MA02 waste, which contains PCBs in concentrations equal to or greater than 50 parts per million. The documents in the AR file do not include any toxicity characteristic data, so it is not possible to determine whether 310 CMR 30.105(1)(c) would be satisfied. Regardless, the recommended alternative does not qualify for the exemption under 310 CMR 30.105.

The SEE/CA uses the term "adequately regulated" in an effort to render inapplicable the hazardous waste regulations at 310 CMR 30.000. The term "adequately regulated" was nowhere to be found in these regulations until approximately nine months ago, and presently is found only at 310 CMR 30.1100. This new provision is not referenced in the SEE/CA, or in the ARARs tables, and, therefore, is presently not under consideration. In any event, this provision is invoked only where MassDEP has determined that the wastes and activities at issue are "insignificant as a potential hazard to public health, safety, welfare or the environment, or the handling, treatment, storing, use, processing, or disposal of which is *adequately regulated* by another governmental agency, consistent with regulations promulgated under the federal Resource Conservation and Recovery Act as administered by EPA."[115] Thus, rather than providing the government a way to avoid the hazardous waste regulations, 310 CMR 30.1100 simply provides a mechanism for a generator to seek a waiver of certain provisions "that are more stringent than the minimum federal requirements promulgated under RCRA."[116] The SEE/CA, therefore, cannot rule out the applicability of 310 CMR 30.000 to the proposed NTCRA. Nor has it demonstrated that it would not be practicable to meet this ARAR.

5. Proposed cap does not comply with post closure care requirements of 310 CMR 30.633 and 40 CFR 761.61(a)(7).

The SEE/CA states:

> The 1998 EE/CA recommended alternative included a low permeability cap over the entire 11-acre site. For cost estimating, the 1998 EE/CA assumed that a hydraulic asphalt concrete (HAC) cap, similar to that placed in the mid-1980s . . . would be used. This Supplemental EE/CA clarifies that its recommended approach also requires a clean protective cover over the site to

[115] 310 CMR 30.1100 (emphasis added).

[116] 310 CMR 30.1102.

> address PCB contaminated waste. This protective cover would at a minimum meet the conditions of the TSCA determination pursuant to 40 CFR 761.61(c) for the activities within the scope of this NTCRA (see Attachment 3).[117]

The change in the type of cap from an engineered barrier to twelve inches of vegetated soil moves the proposed removal action from unquestioned compliance with the ARAR to direct non-compliance. The 1998 EE/CA was explicitly clear on this subject, stating, "[t]he closure and post-closure care requirements of CMR 30.633 [and the requirements of 40 CFR 761.61(a)(7), whichever are more stringent for the type of cap to be designed/installed] will be implemented to meet these requirements, as appropriate for the type of cap to be constructed."[118] Furthermore, though the SEE/CA anticipates construction of a cap that consists of one foot of vegetated soil, it caries the costs associated with constructing the cap proposed in the 1998 EE/CA.

6. Recommended alternative does not comply with 40 CFR 6.302(b) (Floodplain Management Executive Order 11988 (App. A to Part 6)).

The eastern portion of the Site is located within Zone A-1 of the National Flood Insurance Program (100-year flood plain); the remainder of the property is located within Zone B (between the limits of 100 and 500-year flood plain). Executive Order 11988 requires evaluating alternatives to avoid effects and incompatible development in the flood plains and minimizing the potential harm to flood plains if the only practicable alternative requires siting an action in a flood plain. The SEE/CA states, "[t]he only practical alternative to address this facility, based on available funding and the exigencies of site circumstances is to demolish the building which was built in the flood plains. EPA will dispose of demolition waste offsite to the extent practicable but expects that without an additional source of non-EPA funding, waste will be left onsite in the flood plain."[119] In fact, what the SEE/CA proposes to do is demolish a structurally sound building, bury all demolition waste, including TSCA-regulated waste, in the flood plain and then cover the waste with one foot of vegetated soil. The exigencies of site circumstances are related to building deterioration caused by neglect.

7. Risk-based standards should be used to monitor all air emissions.

Section 7.e. of the SEE/CA proposes a less stringent standard for monitoring potential exposure from air emissions to employees and site workers of two abutting industrial facilities than is proposed for residential abutters. This approach is impractical and likely to cause significant concern to adjacent employers and workers. The application of occupational

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[117] SEE/CA at 11.

[118] 1998 EE/CA, Table 14a at 6.

[119] SEE/CA at 12.

standards to potential hazards that are unrelated to the work place is inappropriate. In accordance with 310 CMR 6.04, and as proposed in Table 14a of the 1998 EE/CA, an air monitoring plan should be developed and a single risk-based standard should be applied.

F. CERCLA § 104(a)(3)(B) Precludes Removal Action In Response to a Release or Threat of Release From Products Which Are Part of, and Result in Exposure Within a Building.

Costs incurred in the removal of any asbestos and mercury from within the structure of the manufacturing facility and/or in equipment at the Site do not constitute proper response costs.[120] Section 104(a)(3) of CERCLA specifically precludes a removal or remedial action "in response to a release or threat of release . . . (B) from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures."[121] Indeed, with respect to asbestos, courts have repeatedly held that its removal is not covered by CERCLA. *See, e.g., G.J. Leasing Co. v. Union Elec. Co.*, 54 F.3d 379, 385 (7th Cir. 1995) ("[T]he release of asbestos inside a building, with no leak outside . . . is not governed by CERCLA."); *Dayton Indep. School District v. U.S. Mineral Prods. Co.*, 906 F.2d 1059, 1066 (5th Cir. 1990) ("Based upon the language of the statute, its legislative history, and the relevant case law, we hold that Congress did not contemplate recovery under this statute of the costs incurred to effect asbestos removal from buildings."); *First United Methodist Church of Hyattsville v. United States Gypsum Co.*, 882 F.2d 862, 869 (4th Cir. 1989) ("To extend CERCLA's strict liability scheme to all past and present owners of buildings containing asbestos . . . would be to shift literally billions of dollars of removal cost liability based on nothing more than an improvident interpretation of a statute that Congress never intended to apply in this context.").

Here, there is no question that any asbestos or mercury at the Site during the period that AVX's predecessor owned the Site was contained in the structure of the manufacturing facility and/or equipment located inside the facility, and did not present a release or threat of release into the environment.[122] As a result, AVX is not liable for any costs incurred in

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[120] For purposes of these technical comments, AVX discusses the application of CERCLA § 104(a)(3)(B) and the useful product doctrine as specifically applied to asbestos and mercury abatement costs, without waiver of further argument as to the overall effect of the 1973 sale of the Site to Aerovox on AVX's liability when it responds to EPA's demand.

[121] The manufacturing facility at the Site was defined in the 1999 AOC as a "manufacturing building." *See* 1999 AOC at ¶ 9. A manufacturing building fits within the definition of a "business structure."

[122] *See* 1998 EE/CA at § 5.3 (Work Activity 3) (explaining that an asbestos survey would be undertaken to determine whether building materials contained asbestos).

connection with the removal of asbestos and/or mercury from the manufacturing facility or equipment in advance of the demolition of the building.[123]

Likewise, the sale of the Site to Aerovox did not render AVX liable, at a minimum, for any release or threatened release of asbestos and/or mercury that occurred at the Site post-sale, including any release or threat of release brought about by the demolition of the manufacturing facility. That is, while the transfer of property for purposes of disposing of hazardous wastes can result in CERCLA liability, the sale of a useful product to a purchaser for its originally intended purpose does not. *See Yellow Freight Sys., Inc. v. ACF Industries, Inc.*, 909 F. Supp. 1290, 1298 (E.D. Mo. 1995). ("[A] sale does not constitute an arrangement for disposal unless the seller is primarily motivated to dispose of hazardous substances through the sale."). Here, any asbestos and mercury at the Site were part of the manufacturing facility and/or working equipment when the Site was transferred to Aerovox. By the sale to Aerovox, AVX intended to and did transfer a useful manufacturing facility, which was used as such for nearly 30 years following transfer, and working equipment, which also was used for years in Aerovox's operations, in exchange for the fair market value of the property. Under these circumstances, the useful product doctrine dictates that AVX cannot be held liable for costs incurred in removing any asbestos or mercury at the Site. *See, e.g., G.J. Leasing*, 54 F.3d at 384 (holding that sale of a building that happened to contain asbestos insulation is not disposal of a hazardous substance); *Florida Power & Light Co. v. Allis Chalmers Corp.*, 893 F.2d 1313, 1319 (11th Cir. 1990) (holding that manufacturers of transformers that contained PCB-contaminated mineral oil were not liable because they sold a useful and valuable product which the buyer used for an extensive length of time); *Dayton*, 906 F.2d at 1065 (holding that "there is no possible reasonable interpretation of the term 'disposal' that could encompass the commercial sale of asbestos-containing useful building products"); *Yellow Freight*, 909 F. Supp. at 1298-99 (sale of property was sale of useful product because the buildings at issue were in suitable condition for continued use).

In sum, costs incurred in the removal of asbestos and/or mercury from the Site are not proper response costs for two reasons: (1) removal of such substances is not authorized by CERCLA because there was no pre-sale release or threat of release into the environment; and (2) transfer of the Site to Aerovox constituted a sale of a useful product, not a disposal of hazardous waste.

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[123] In Action Memorandum Addendum #1, dated September 20, 2004, EPA represented there were *no* "nationally significant or precedent-setting issues associated with this Site." Applicable guidance in this area, however, instructs that the removal of asbestos from within a building may present nationally significant and precedent-setting issues, which require EPA to follow certain protocols that, to date, have not been followed. *See* Non-NPL Removal Action Guidance at 3, 4; Contamination Inside Building Guidance at 3 (responses to indoor releases "have the potential of being nationally significant or precedent-setting because response to indoor contamination is not the primary focus of CERCLA, and because it may be difficult to show that a release or threat of release form indoor contamination poses a threat to public health or welfare or the environment.").

G. EPA Is Not Entitled to Invoke the CERLCA § 104(c)(1) Statutory Exemption.

CERCLA § 104(c)(1) prohibits fund-financed removal action obligations if they cost more than $2,000,000 or take more than 12 months from the date of initial response absent special circumstances. The SEE/CA seeks to justify exceeding both limits by invoking the so-called consistency exemption to the statutory limits on removal actions, which applies when "continued response action is otherwise appropriate and consistent with the remedial action to be taken."[124] CERCLA § 104(a)(2) and 300 CFR 300.415(d) further require that an EE/CA consider how well a proposed removal action will contribute to the efficient performance of any anticipated long-term remedial action. The requirement for a removal action to contribute to the efficient performance of any anticipated long-term remedial action is one of two explicit requirements in 40 CFR 300.415(b)(5) that applies when the lead agency - EPA in the present instance - seeks a waiver of the $2,000,000/12-month NTCRA limits. The recommended alternative is not appropriate and consistent with the remedial action to be taken, i.e., site closure under Chapter 21E and the MCP, including institutional controls implemented under those authorities, and, therefore, is not eligible for a statutory exemption when removal action costs will so far exceed the statutory limit.

Early guidance on implementation of the consistency exemption was provided in 1989 in the Consistency Exemption Guidance:

> The "consistency" exemption in CERCLA 104(c) supports the new provision in CERCLA 104(a)(2) requiring removal actions to "contribute to the efficient performance of any long-term remedial action" (see OSWER Directive 9360.0-13). Together, the new CERCLA 104(a) provision and the "consistency" exemption in 104(c) are intended to promote and enhance efficiency and continuity in the Superfund program as a whole.
>
> The 104(a) provision does this by ensuring that the removal program attempts to anticipate remedial action that will be needed and avoids taking response actions that ***will impede the remedial action or result in wasteful restarts***. The "consistency" exemption promotes efficiency by allowing removals to exceed the statutory limits for time and cost when to do so ***will result in lower overall cleanup cost*** as well as enhanced protection of public health and the environment.[125]

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[124] CERCLA § 104(c)(1).

[125] *Id.* at 2-3 (emphasis added).

Under the Consistency Exemption Guidance, "only reasonable increases will be granted. Generally, this means not more than $1-2 million above the statutory limit."[126] Moreover, the exemption is to be primarily used at NPL sites and only rarely at non-NPL sites and then only after Headquarters involvement which takes into account specific factors.[127]

Further guidance on determining consistency is provided in the Action Memorandum Guidance which lays out the most obvious question: "What is the long-term cleanup plan for the site?"[128] For non-NPL sites at which there is no Record of Decision and where remedial plans are unknown, EPA should "state that the proposed action will not impede future responses based upon available information."[129] Further guidance is that "at a minimum, the removal does not foreclose the remedial action."[130]

The decision to proceed in the face of the statutory limits is so significant that the NTCRA Removal Authority Memorandum requires that when a NTCRA could cost more than $6 million, "the Region must consult with the Director of OERR [Office of Emergency and Remedial Response] prior to signing the EE/CA Approval Memorandum (or its equivalent). This consultation requirement applies both to fund-lead actions and those actions to be performed by PRPs."[131]

The only explicit use of the term "consistent" in the section on consistency occurs when the SEE/CA states that the proposed removal action is consistent with the cleanup of the New Bedford Harbor Superfund Site cleanup.[132] This is not the appropriate question, as the test for consistency is measured by the long-term remedy for the site at issue, which is the Aerovox facility, a non-NPL site. The two sites clearly cannot be considered to be one and the same. Section 8 of the SEE/CA contains a brief reference to the use of institutional controls to be established by the state and the City, with EPA's assistance, under Chapter 21E to protect "the long term integrity of the new cover and prevent the use of site groundwater."[133] Elsewhere in

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[126] *Id.* at 4.

[127] The specific factors are: "(a) the magnitude of the contamination and the threat to human health and the environment; (b) the status of negotiations with potentially responsible parties; (c) the opportunity for widespread technology transfer; and (d) whether the site is likely to be proposed for the NPL." Consistency Exemption Guidance at 4-5. It is hard to see how any of these factors could justify the exemption here.

[128] Action Memorandum Guidance at 3-269.

[129] *Id.*

[130] *Id.* at 3-281.

[131] NTCRA Removal Authority Memorandum at 6-7. There is no evidence in the record that this consultation occurred prior to the execution of the July 1998 Approval Memorandum.

[132] SEE/CA at 15.

[133] *Id.* at 18.

the SEE/CA, EPA acknowledges that site characterization is incomplete and that long-term protection will be addressed under the state Chapter 21E program and will likely require long-term operation and maintenance of the cap and long-term monitoring of groundwater.[134] Finally, the SEE/CA seems to suggest that the City's potential involvement as both the lead agency implementing the removal action and as the coordinator of cleanup and future reuse/redevelopment of the Site is germane to the consistency exemption.[135] But, even if the cleanup did facilitate reuse and redevelopment, that does not equal long-term remedial action consistency.

The SEE/CA's cursory references to the future remedy for the Site underscores the failure to understand what the requirements of the MCP mean for this Site. To the extent one can look ahead, the proposed removal action is not consistent with a long-term MCP-compliant remedy, given the non-compliant nature of the cap among other things, as discussed above, particularly in Section III.E.1. But, in fact, it is difficult to predict what the long-term remedy for the Site would be, given the current data gaps. Although the 2006 CSM attempts to identify sources, release mechanisms, migration pathways and exposure, the documents in the AR file do not adequately define the source, nature and extent of contamination, nor do they provide a risk assessment, i.e., they do not meet the MCP's Phase II Comprehensive Site Assessment requirements. Data gaps include: no evaluation of NAPL condition and NAPL transport; insufficient data points to confirm what is happening at and in bedrock surface (shallow bedrock ridge underlies building, slopes to north and south); no TCLP or bench scale data to evaluate whether soil, building and contents to be placed in building foundation upon implementation of the recommended alternative would be a continuing source to groundwater; no temporal data upon which to discern trends; and insufficient information on sediments and sediment transport in storm sewers and box culverts.

At a minimum, the cap component of the proposed removal action will have to be replaced before institutional controls can be imposed and the answers to the data gaps outlined above may show more fundamental conflicts between MCP requirements and building demolition and burial on-site. Under these circumstances, this is a case where the proposed removal action, far from being consistent with a long-term remedy, "***will impede the remedial action***," "***result in wasteful restarts,***" and will result in higher, not lower, cleanup costs. The legal argument presented merely hints at how disruptive the recommended alternative might be to future site development. Under these circumstances, the consistency exemption cannot be invoked, particularly when the costs will so far exceed the statutory limit. This is not a NPL site like the Harbor, and EPA has manifested no intention of making it one. This is a site that everyone agrees will be remediated under state law, and EPA should not take action that will make it more expensive and difficult to do. The significance of MCP compliance to the stated

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[134] *Id.* at 11.

[135] *Id.* at iii and 3.

goal of facilitating site reuse and the efficient combination of cleanup and redevelopment are factors strongly militating against an extensive and invasive removal action as opposed to site stabilization because, consistent with the NCP at 40 CFR 300.415(b)(2)(vii), the availability of other appropriate state response mechanisms to respond to the release must be considered in deciding whether the proposed NTCRA is appropriate.

IV. CONCLUSION.

In conclusion, AVX urges reconsideration of the recommended alternative, implementation of which raises significant technical and legal issues, as outlined above. On the other hand, a building stabilization alternative would be effective and protective of human health and the environment, would minimize the threat of release, would maintain adequate control of the Site until a long-term solution under Chapter 21E is in place, would be readily implementable in a short period of time, and would be considerably less expensive than the recommended alternative.

Thank you for the opportunity to submit these comments.

Very truly yours,

Gary L. Gill-Austern

Attachments
cc *(by e-mail)*:

Cynthia E. Catri, Esq., EPA - New England
Scott Alfonse, City of New Bedford
Joseph Coyne, MassDEP
Richard Lehan, Esq., MassDEP
Kurt Cummings, AVX
Dennis Oldland, AVX
Larry Blue, AVX
Marilyn Wade, URS
William Humphries, URS
Mary K. Ryan, Esq.
Heidi M. Mitza, Esq.

EXHIBIT A

TO COMMENTS OF AVX CORPORATION ON APRIL 2006 SUPPLEMENTAL EE/CA FORMER AEROVOX FACILITY, NEW BEDFORD, MASSACHUSETTS

DOCUMENTS PROVIDED BY EPA OR INDEPENDENTLY LOCATED AFTER RECEIPT ON JUNE 14, 2006 OF THREE CDs CONTAINING 47 DOCUMENTS & THREE INDICES

#	date	description	date received or located
1	4/12/06	Jacobs Engineering write up re Aerovox volume calculations	6/26/06
2	5/9/06	Special Account Regional Report – summary of Aerovox special site fund	6/26/06
3	6/28/06	D. Dickerson email 3:07 PM providing corrections to SEE/CA, Attachment 2, notes	6/28/06
4	5/26/05	2 pages, "Total Estimated Crushed Volume" (D. Dickerson email @ 4:05 PM)	6/28/06
5	4/14/05	17 pages, "Inventory Calculation, Floor 1" (D. Dickerson email @ 4:07 PM)	6/28/06
6	undated	1 page, 2nd floor inventory calculations (D. Dickerson email @ 4:09 PM)	6/28/06
7	5/11/05	1 page, 3rd floor inventory calculations (D. Dickerson email @ 4:08 PM)	6/28/06
8	5/4/05	5 pages, "Inventory Calculations, Exterior" (D. Dickerson email @ 4:28 PM)	6/28/06
9	6/30/06	D. Dickerson email to W. Humphries 10:04 AM, additional corrections to SEE/CA, Attach 2, notes	6/30/06
10	6/06	Asbestos Survey, Corps, Jacobs & Sevenson [CD]	7/7/06
11	4/22/03	Roof Inspection Report, DCAM	7/11/06
12	~12/05	Preliminary Structural Assessment for Aerovox Building Demolition, prepared by Corps' structural engineer, John Kedzierski. Inspection on 11/21/05; EPA rec'd report 1/9/06.	7/11/06
13	6/27/02	EPA/MADEP site visit photos 00007-00074	7/19/06
14	7/31/02	MADEP site visit photos 0001-0137	7/19/06
15	7/31/02	EPA site visit photos 2509-2684	7/17/06

DOCUMENTS PROVIDED BY EPA OR INDEPENDENTLY LOCATED AFTER RECEIPT ON JUNE 14, 2006 OF THREE CDs CONTAINING 47 DOCUMENTS & THREE INDICES

#	date	description	date received or located
16	1/25/06 & 4/25/06	EPA's cost breakdown for Aerovox payroll costs through 4/25/06 and non-payroll costs through 1/25/06.	7/25/06
17	--	Notice: *Aerovox Site Public Comment Period Extended*	7/27/06
18	4/27/04	Press Release: EPA to Remove Hazardous Waste from Former Aerovox Facility in New Bedford [found on web]	8/3/06
19	9/20/04	Request for a Ceiling Increase of Funds to Continue the Removal Action at the Aerovox Incorporated Site, Action Memorandum Addendum #1 [found on web]	8/3/06
20	5/17/82	Consent Order	8/4/06
21	1984	Supplemental Consent Order [without signature page & without attachment "Long-Term Monitoring and Maintenance Program"]	8/4/06
22	8/2/06	Revised Aerovox [Past] Cost Summary	8/9/06
23	11/29/99	ACO between Commonwealth & Aerovox [partial & pre-execution]	8/9/06
24	1984	2-page "Post Closure Monitoring and Maintenance Program for the Aerovox Property, New Bedford, MA"	8/9/06
25	2/3/00	ACO between Commonwealth & Aerovox [complete & executed]	8/10/06
26	3/3/82	Consent Agreement and Order between Commonwealth & Aerovox	8/10/06
27	various	53 PDFs [on CD], in several instances containing multiple documents, encompassing period 1982 to present, with respect generally to: Aerovox compliance with various administrative orders with EPA and Commonwealth; Aerovox bankruptcy; permits issued to Aerovox by EPA; and Aerovox financial status.	8/11/06

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URS

David P. Ellis

Operations Manager

Overview

As the Operations Manager, Mr. Ellis provides project management services for a broad range of asbestos, lead-based paint and industrial hygiene projects. He is responsible for inspecting work areas, maintaining daily logs, collecting and analyzing air and bulk asbestos samples, and preparing project documentation reports. His experience has encompassed over 200 individual asbestos and lead-based paint inspection and abatement projects ranging from short-term emergency projects to multi-million dollar high-rise building demolitions and abatement projects at complex industrial facilities.

Areas of Expertise

Industrial Hygiene
Asbestos Management Services
Lead Paint Management

Years of Experience

With URS: 2 Years
With Other Firms: 38 Years

Education

A.S. in Human Resources, 1980,
Massasoit Community College

Project Specific Experience

Project Manager

Project Manager for industrial hygiene term contract for Raytheon Company at numerous facilities throughout New England. Responsible for overseeing and staffing all planned industrial hygiene and hazardous materials projects as well as managing an emergency program.

Project Manager

Project Manager for a comprehensive asbestos survey prior to a gut renovation of a one-million-square-foot retail facility in Methuen, Massachusetts. Responsible for designing abatement specifications and overseeing and managing project.

Project Manager

Project Manager for comprehensive asbestos survey and specification development of Bldg. 18 on Massachusetts Institute of Technology's (MIT) campus. Responsible for overseeing the survey and design of abatement specifications prior to renovation of this building.

Project Manager

Project Manager for large-scale asbestos abatement of Macy's Department Store in Boston. Responsible for overseeing a multi-floor, complex asbestos abatement project while ensuring no interruption with regular store hours.

Project Manager

Project Manager for numerous asbestos surveys and abatement projects at Gordon College and Gordon-Cornwell Theological School in Wenham, Massachusetts. Responsible for overseeing numerous projects simultaneously.

Project Manager

Project Manager for a comprehensive asbestos survey for a confidential client. This project involved a property transfer for the Prudential Towers in Boston, three high-rise residential buildings.

Project Manager
Project Inspector for a United States Postal Service term contract for projects in over 300 facilities in the New England region. The term contract included survey, design and compliance monitoring activities involving asbestos, lead, indoor air quality, industrial hygiene services and preliminary site assessments.

Industrial Hygiene Technician
Industrial Hygiene Technician for Lead Paint Management Program for Boston Housing Authority. Responsible for assisting in the development of protocol, advising BHA staff of regulatory compliance issues, training, and overseeing consultant and contractor bidding and selection process for investigations and abatement activities.

Project Monitor
Project Monitor, Resident Engineer/Inspector for a multi-phased abatement project for Massachusetts Port Authority, Logan Airport Central Heating Plant. Provided on-site monitoring during a multi-phased abatement project in a functioning heating plant.

Engineer/Inspector
Responsibilities included acting as the Port Authority's Resident Engineer/Inspector, evaluating on-site conditions, reviewing contractor work plans and change orders, monitoring and documenting the abatement contractor's work, collecting and analyzing air samples on site for abatement and final clearance. Also coordinated activities with plant personnel and other trades to reduce interference with plant operation, evaluated the reinsulation of abated systems, and maintained records of abatement and insulation quantities.

Asbestos Inspector
Asbestos Inspector for ongoing asbestos and lead-based paint management projects at Phillips Exeter Academy. Projects include periodic inspections and construction management and air monitoring services during asbestos and lead abatement.

Asbestos Project Monitor
Asbestos Project Monitor for the State of Maine Asbestos Management Program. Provided monitoring for a state school during the removal of steam room insulation in an occupied building. Performed daily monitoring of the site, maintained documentation of on-site activities, and conducted final air clearance sampling at completion of the abatement.

Asbestos Project Specialist
Asbestos Project Specialist for projects at the F.D.R. Veterans Affairs Medical Center, Montrose, NY. Performed on-site monitoring for this hospital during various abatement projects. Worked closely with the client's engineering department and industrial hygienist in coordinating the contractor's schedule and interfacing with other trades to minimize disruption to the hospital. Responsibilities included air monitoring,

conducting visual inspections, performing final air sampling, and maintaining project documentation.

Asbestos Project Specialist

Asbestos Project Specialist providing on-site monitoring and construction coordination for a four-month asbestos abatement project at International Paper, Jay, Maine. The project involved abatement of a functional pipe bridge containing various steam and chemical lines. The project required unique engineering and industrial hygiene considerations to enable full production at the plant to be maintained. Unusual conditions included high temperature, elevated work area, risk of chemical spills and high-pressure steam leaks. Responsibilities encompassed air monitoring, visual inspections, final clearance air sampling, preparing change orders, and providing overall coordination of the project between International Paper representatives and the abatement contractor.

Asbestos Project Monitor

Asbestos Project Monitor for abatement projects at the Veterans Affairs Medical Center, Bedford, MA. Performed on-site monitoring for this hospital during various phases of abatement. Worked closely with the VA Engineering Department to coordinate contractors' schedules and prevent disruption of facility services. Prepared change orders for the scope of work, performed daily air sampling at the site, maintained project documentation of on-site activities, and performed final clearance air sampling at several locations in this large complex.

Industrial Hygienist

Industrial Hygienist for various projects for New England Telephone, MA, VT, NH, RI. Performed site assessments, surveys, project monitoring, risk assessments and asbestos abatement design for approximately 35 buildings throughout New England. Project oversight included state and federal regulatory compliance, project specifications, and final report preparation.

Industrial Hygiene Technician

Industrial Hygiene Technician for asbestos removal at the Travelers Building, Boston, MA. Participated in the entire asbestos removal phase in preparation for implosion demolition of this 19-story building in downtown Boston. Responsibilities included air monitoring throughout the removal phase, visual inspections, performing final air clearances, preparing daily logs, and assisting with the final report. Also provided on-site emergency response for this project.

Specialized Training

Airborne Asbestos Sampling and Evaluation Techniques, NIOSH 582 Equivalency Course, Balsam Environmental Consultants, Inc., 1991
Asbestos Inspector/Management Planner, Institute for Environmental Education
Supervisors: Annual Refresher Training, Institute for Environmental Education

URS

Certified Asbestos Project Monitor, Inspector, Management Planner, Project Designer and Consultant
Certified Air Sampling Professional based on the State of Connecticut Criteria
Massachusetts Lead Inspector Course
OSHA 40-Hour Supervisor Course

Chronology

1994 – Present; Operations Manager, URS Corporation
1989-1994: Senior Field Technician with Balsam Environmental Consultants, Inc.
1987-1989: Project Monitor, Management Planner, Designer, Inspector with Barnes and Jarnis, Inc.
1980-1987: Production Machinist Technician with Metal Bellows Corporation
1976-1980: Technician with Foxboro Company
1972-1976: Technician with W. T. Grant Company
1970-1971: Technician with Knox Incorporated
1966-1970: Electronic Technician with the United States Coast Guard

Contact Information

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603-893-0616
Fax: 603-893-6240
david_ellis@urscorp.com

URS

John D. Farmer

Director of Remediation Services

Overview

Mr. Farmer, as Director of Remediation Services for Aman Environmental Construction, Inc. has 20 years of experience in the environmental remediation and demolition services. His responsibilities consist of division coordination, proposal development and technical writing, proposal and project estimating, subcontractor coordination, overall project management, contracting, waste characterization, TSDF profiling and related customer service and agency interfacing.

Other project experience includes health and safety development and implementation, chemical evaluation and lab packing, decontamination activities, tank and pipeline cleaning, drum work, underground storage tanks (UST) removals, shoring system design and installation, mass excavation, transportation and disposal, recycling of concrete and asphalt, backfill and compaction and resurfacing.

A selection of projects that Mr. Farmer has participated in various project management and coordination duties for your review:

Areas of Expertise

Project Estimating and Bid Proposal Development
Decontamination Activities (OSHA, RCRA, TSCA, API)
Oilfield Production and Refinery Closure Activities
Industrial and Manufacturing Decontamination and Dismantling Services
Waste evaluation, Classification and Waste stream profiling
Waste Minimization and Alternative Technologies
Permitting, Governmental and Regulatory Agency Interface
Transportation and Disposal Services
Development of Project Related Work Plans (Asbestos, Decon, Demolition, SWPPP, HSP)

Education

Bakersfield College: A.S., Environment & Botany

Registration/Certification

40 Hour Hazardous Waste Operations Training, 1989
8 Hour HAZWOPER Refresher, 2004
4 Hour OSHA Excavation/Trenching Course, 2002
4 Hour OSHA Confined Space Entry Course, 2002
Hazardous Materials Transportation Course, 2003
40 Hour Lead Related Construction Supervisor and Project Monitoring, 1998
8 Hour OSHA Hazardous Site Supervisor, 2003

Project Specific Experience

Boeing PacifiCenter Phase 1B Project, Long Beach, California

In-house environmental manager for the Abatement and Demolition of the former Boeing C1 facility located in Long Beach, California. The site was formerly used in the manufacturing and assembly of the Boeing 717 commercial airliner. The project has consisted of asbestos abatement of several million square feet of asbestos containing siding and other ACM materials, removal of universal waste associated with approximately 50 building locations and over 3 million square feet of space, decontamination of various chemical processing areas, and the complete above grade and below grade demolition of the site structures, slabs and foundations. Underground utilities servicing the former plant will be removed and mass grading of the site will be conducted. An estimated 300,000 tons of concrete will be recycled into a crushed aggregate base material to be used for backfill as well as other future site developments. Supplemental work included the excavation of TPH, Metals, VOC and PCB impacted soils and subsequent backfill and compaction.

Aboveground Tank Cleaning Services, Port of Redwood City

Coordinated the waste classification of tank bottom sediments stored in two aboveground storage tanks at the former Gibson Oil and Refinery facility located in Redwood City, California. The work included the removal of approximately 6,000 barrels of heavy paraffinic oily waste bottoms that had been consolidated from the cleaning of other ASTs located at the facility. The removal activities involved the use of a fluidizing technology that allowed for the liquefaction of the dehydrated tank bottom sediments to be removed via a vacuum system and

transported by vacuum trucks to a State permitted recycling/disposal facility. The work was completed under the auspices of the Department of Toxic Control Substance oversight and approved Work Plan.

Remediation of MGP Site, Southern California Edison, Santa Barbara, California

Project Manager for the excavation SVOC and PNA impacted soils from a former Southern California Edison, Manufactured Gas Plant (MGP) facility located in downtown Santa Barbara, California. Excavation activities were conducted for the installation of a vapor extraction system, including underground conveyance piping and manifolds as well as enhancement of the existing electrical distribution system servicing the Santa Barbara Historical Museum. Trenching activities were conducted during off hours (nights and weekend) due to the high profile area and museum visitors. Impacted soils were excavated mechanically and by-hand depending on the proximately of the excavation to the museum structure. Approximately 1,500 tons were placed in roll-off bins and/or end-dumps for offsite transportation and recycling. Excavation trenches were continually shored to perform the work. Respiratory protection was necessary as well as the implementation of confined-space protocols. Continuous air monitoring was established during the excavation and loading activities.

Demolition/Bioremediation Services, RDB Developers

AECI conducted the DOG permitted abandonment of the five McMillian Oil Wells with an average depth of 8,000 feet, tank cleaning activities, demolition of oil production equipment, including pump jacks, conveyance piping, aboveground storage tank facility and the excavation and onsite bio-remediation of petroleum hydrocarbon impacted soils. AECI then excavated approximately 15,000 tons of petroleum hydrocarbon affected soil that exceeded cleanup screening levels observed by the California Regional Water Quality Control Board. 700 tons of the affected soil was shipped offsite for thermal treatment. Upon completion of the excavation activities, AECI initiated the bio-remediation of impacted soils within a constructed treatment cell. As analytical testing confirmed achieving cleanup goals, the treated soil was stockpiled adjacent to the excavation areas to be used for backfill soil. Backfill and compaction of the areas was performed to allow for future construction.

Decontamination/Demolition Service, Akzo-Nobel, Vernon, California

Contracted to perform the decontamination and decommissioning of the former Akzo-Nobel "Filtrol" processing facility located in Vernon, California. The Filtrol facility was established to manufacture clay absorbents and fluid cracking catalyst for the petroleum refining industry. Other manufacturing processes were established at the facility, which were addressed during the decommissioning and demolition (D&D) of this site. The D&D services included the decontamination of 123 aboveground storage tanks and associated conveyance piping systems; radiological (NORM) decontamination of various building structures and process equipment in addition to containerization and the coordination of

radiological impacted materials for off-site transportation and disposal. Once the facility was free of NORM contamination, AMAN coordinated the complete demolition of all structures at the site. This encompassed demolishing 7.1 acres of process and warehouse building structures, 80' foot high storage silos, massive underground vaults and hardscape surfacing in which 40,000 tons of concrete/asphalt were recycled on-site. Also coordinated the excavation and characterization of petroleum hydrocarbon, heavy metal, and pesticide-impacted soils associated with various other past operations. Waste streams were classified and transported off-site to a State permitted disposal/recycling facilities for proper disposal. AMAN coordinated the packaging and transportation of 222,625 cubic feet of NORM impacted debris as part of the NORM decontamination. Approximately 25,623 cubic yards of TPH impacted soil and 17,700 cubic yards of heavy metals and pesticide soils required off-site disposal. Excavations were backfilled with clean imported soil and the site was completely graded and capped with base for future industrial use. A "No Further Action" letter was recently received from the City of Vernon for this project.

Aboveground Tank Cleaning Services, Pacific Gas and Electric

Coordinated the waste classification of tank bottom sediments stored in ten aboveground storage tanks at the PGE, Hunter's Point facility located in San Francisco, California. The work included the removal of an estimated 8,000 barrels of Bunker C Fuel Oil tank bottom sediments. The removal activities involved the use of a fluidizing technology that allowed for the phase separation of oil and rainwater. The oil was transported offsite to a State permitted recycling facility and the water was reintroduced for continued cleaning. Upon completion of the AST cleaning activities, the water was filtered and discharged under a batch discharge permit, thus minimizing offsite transportation and disposal volumes.

Excavation and Removal/Disposal of UXO and Clean Site Closure, Aerojet Company, Chino Hills, CA:

Project activities included: Sweeping and removal of detected buried exploded and unexploded ordnance. As detections were made, buried objects are exposed, inspected and, if deemed safe, transported for recycling or detonation. Excavation consisted of 225,000 cubic yards of ordnance-contaminated soil with screening operations commencing at an average 3,000 tons per day. Developed HSP protocols and implemented dust control measures and monitoring. Constructed erosion control measures to contain any release to the surrounding environment to include down drains and geomembrane fabrics and surface coverage via hydroseeding. Ferrous and non-ferrous fragments were cleaned, classified, decontaminated and recycled of as scrap metal. Confirmatory sampling was completed that allowed for backfill and grading.

ConocoPhillips, Santa Maria, California
Provide excavation of 33,000 cubic yard and offsite transportation and disposal of crude oil impacted soils from former oilfield sump locations. Work also included mass grading of the existing site to generate the appropriate fill material to reduce import cost and necessary dust control and storm water measures.

TiTech Industries, Pomona, California
Site Manager contracted with the URS Corporation to facilitate the removal of hazardous materials abandoned at the former titanium foundry facility, located in Pomona, California. The previously operators of the facility abandoned the site as well as all process fluids and chemicals used in the titanium foundry processes. Cleanup of the facility of all hazardous materials was mandated by the U.S. Environmental Protection Agency, Emergency Response Section, Region 9. AMAN developed a Waste Removal Work Plan for review by EPA representatives and once approved, AMAN mobilized to the facility to initiate hazardous materials characterization (HazCat) and coordinate waste materials and off-site disposal.

Facility decontamination involved waste profiling, removal and disposal of acidic and caustic solutions from aboveground storage tanks and vessels, handling and disposal of waste foundry sands and other casting media, packaging and disposal of laboratory chemicals and other chemical solutions and containers, hydro-blasting of ASTs and vessels, hydro-blasting of concrete slabs and containment areas and the certified destruction of cleaned process equipment (i.e. tanks, vessels, bins, piping). AMAN coordinated all off-site disposal to EPA approved disposal facilities.

Long Beach Unified School District, Long Beach, California
Initially, URS Corporation was called in by the Long Beach Unified School District to evaluate and oversee issues which arose from the onsite primary contractor unearthing contaminated soils and withholding information, thus halting the modernization project without any notification. URS took control of the project on behalf of LBUSD. AMAN was then asked to be involved in coordinating the removal and transportation of 26 roll-off containers of impacted soils from Avalon High School on Catalina Island to the Waste Management, Kettlemen Hills, California disposal facility.

Waste characterization, Coast Guard and oceanic transport, and mainland coordination were required. With the Prime Contractor now dismissed from the project, AMAN then took over the responsibility of completing the modernization project for LBUSD. This included trenching of 800 lineal feet of lead and SVOC impacted soils, containerization of soils in roll-off bins, off-island barging and delivery of an additional 30 roll-off bins for disposal and subsequent backfilling of trenches with 6,000 psi concrete. AMAN coordinated the installation of electrical conduit banks, transformer vaults, transformers and switchgear. All excavation and

transferring of roll-off containers had to be accomplished during weekend hours, while school was not in session. Necessary health and safety protocols were implemented due to the nature of the contaminates and to ensure the protection of the public and students. Upon completion of the electrical infrastructure, AMAN proceeded to excavate and dispose of off-island of an additional 1,200 tons of impacted soil from the campus. All area were backfilled with clean imported material and resurfaced with concrete and asphalt.

New construction activities included the forming and placement of handicap ramps, replacement of sidewalks and planter areas, emergency exit staircases, resurfacing of playground areas and covering impacted dirt areas with concrete or asphalt until a determination could be made as to future remediation activities at the site.

Professional Societies/Affiliates

Hazardous Waste Association of California
Association of Hazardous Waste Professionals
National Environmental Management Association
Professional Environmental Marketing Association

Contact Information

URS Resources, LLC
Aman Environmental Construction Inc.
614 East Edna Place
Covina, CA 91723
Tel: 626.967.4287
Fax: 626.332.1877
John_farmer@urscorp.com

URS

Jeffrey S. Hansen, P.H.

Monitored Natural Attenuation

Overview

Mr. Hansen is a Professional Hydrologist with more than 15 years of experience in environmental science and engineering, 10 of which have been with URS Corporation. Mr. Hansen has a wide breadth of experience on environmental projects including site characterization, feasibility studies, brownfields redevelopment, remedial design, and litigation support. He has worked on projects throughout North America and is respected by the U.S. Environmental Protection Agency and State Regulatory Agencies for his technical abilities.

Areas of Expertise

Site Characterization
Feasibility Studies
Remedial Strategies
Hydrogeology
Hydrogeochemistry
Brownfields Redevelopment
Indoor Air Quality Assessment

Years of Experience

With URS: 5 Years
With Other Firms: 5 Years

Education

B.S., Hydrology, University of New Hampshire, 1986
Post Graduate – Water Resources Engineering, University of New Hampshire, 1986 – 1988
Continuing Education – National Groundwater Association: Groundwater Modeling using USGS Modular Finite Difference Groundwater Flow Model (MODFLOW), Las Vegas, Nevada, 1990; and Geochemical Modeling of Groundwater, San Jose, California, 1994

Registration/Certification

Professional Hydrologist-Groundwater - (#1126) American Institute of Hydrology

Project Specific Experience

Senior Hydrogeologist

For the former Burlington Manufactured Gas Plant Site located in Burlington, North Carolina. Performed a technical review of an existing site investigation performed by others and developed a conceptual site model in order to identify data gaps needed to bring the site to closure. Developed a work plan to complete site characterization and obtain data to evaluate the feasibility of implementing a permeable reactive barrier at the site to control migration of coal tar and dissolved MGP constituents from the site under an EPRI research grant. Provided technical direction for staff involved in implementing the work scope to ensure a high quality, technically accurate database for remedial decision-making at the site. Phase II investigations have validated URS' conceptual model. Mr. Hansen is currently authoring the Phase II Site Investigation Report for this site.

Senior Hydrogeologist

For the former KeySpan Energy Manufactured Gas Plant in New Hampshire. URS designed the Phase II investigation and has completed a catch basin survey; a geophysical survey of alleged USTs; and soil (surface and subsurface), sediment, and soil gas sampling. An innovative program combining laser-induced fluorescence (to locate MGP residuals in the subsurface) and cone-penetrometry testing (to locate the surface of an impervious layer) is scheduled to begin this spring. URS will then locate and install additional monitoring wells and conduct an extensive groundwater sampling program. The site investigation is complicated by development pressures on the adjacent riverfront property.

Senior Hydrogeologist

For the former Appleton Manufactured Gas Plant Site located in Appleton, Wisconsin. Performed a technical review of an existing remedial investigation performed by others and developed a conceptual site model in order to identify data gaps needed to bring the site to closure. Developed a work plan to complete site characterization and obtain data to evaluate the feasibility of implementing a permeable reactive barrier at the site to control the migration of coal tar and dissolved MGP constituents to the Fox River under an EPRI research

grant. Provided technical direction for staff involved in implementing the work scope to ensure a high quality, technically accurate database for remedial decision-making at the site. Phase II investigations completed at the site have validated URS' conceptual model.

Senior Hydrogeologist

For the characterization of environmental conditions at a former phenol manufacturing plant located in Kentucky. Initially aided the original consulting firm for this project in the interpretation of hydrogeologic data and analytical data for environmental samples to assess the sources, nature and extent of impacts at this 474-acre site. Constituents of concern at this facility include chlorinated benzenes, polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). Based upon results of the site characterization report, primary sources of chlorinated benzenes and PCDD/PCDF were identified at the site. Based upon this information, identified response actions and prepared work plans to address the primary sources of impact. The response actions included installing a soil vapor extraction system to reduce concentrations of chlorinated benzenes in soil located in the primary source areas, removing PCDD/PCDF source material for off-site disposal, and consolidation and capping of impacted soil containing low levels of PCDD/PCDF. The soil vapor extraction system has recovered more than 180,000 pounds of chlorinated benzene and is considered by the State of Kentucky Department of Waste Management to be one of the most successful remediation sites in the state. Assisted the design engineer in developing design parameters and approaches to implement the response actions. Completed an assessment of the biotreatability of chlorobenzene in site groundwater and participated in the design of a biologically enhanced groundwater circulation well to reduce concentrations of chlorinated benzenes in groundwater.

Project Hydrogeologist

For the investigation of a 50-acre paper mill sludge landfill in Jay, Maine. This comprehensive investigation included oversight of the installation of monitoring wells, conducting hydraulic testing and borehole geophysics, and quarterly monitoring of over 75 leachate, surface water, and groundwater monitoring locations. A landfill gas assessment was performed as part of the site investigation which included assessing the composition, migration, and fate of landfill gases from the landfill and identifying potential hazards associated with the migration of landfill gas. A water balance analysis was also conducted as part of the investigation and included measuring water balance parameters (e.g., precipitation, evapotranspiration, runoff and leachate collection rates) to estimate leachate discharge to groundwater. Compiled and interpreted data collected during the site investigation in a comprehensive report. Utilized graphical geochemical tools to differentiate landfill-related impacts to groundwater from other sources (i.e., road deicing salt).

Project Hydrogeologist
For a site stabilization investigation conducted to develop groundwater stabilization measures at a Resource Conservation and Recovery Act (RCRA) hazardous materials Treatment, Storage, and Disposal (TSD) Facility located in Braintree, Massachusetts. The investigation included conducting a 72-hour pumping test in a tidally-influenced bedrock groundwater system. Mr. Hansen was responsible for interpreting the data and using hydraulic parameters calculated from the data to determine the appropriate number of extraction wells and estimate the zone of influence of the proposed extraction system to demonstrate groundwater stabilization. Mr. Hansen developed and implemented a performance monitoring program with EPA approval, to document the performance of the groundwater stabilization measure.

Project Hydrogeologist
For the Bennington, Vermont Superfund Landfill Site, Mr. Hansen worked with the design team for this project to develop a groundwater flow model for the site using the USGS Modular Finite Difference Groundwater Flow Model (MODFLOW). The model was used to identify the optimal length of a groundwater interceptor trench to be installed on the upgradient side of the landfill and to predict the effectiveness of the proposed landfill cap and groundwater interceptor trench in lowering groundwater levels below the base of the landfill. Using the groundwater model, URS was able to save the client approximately $750,000 by reducing the length of the interceptor trench proposed by the original engineering firm by approximately 300 feet.

Project Hydrogeologist
For the Union Chemical Superfund Site located in South Hope, Maine. Mr. Hansen worked with the design team to develop a predictive groundwater flow model to identify a cost effective system for dewatering impacted soils to allow for treatment using a soil vapor extraction system. Mr. Hansen prepared the modeling report for submission to the U.S. EPA.

Professional Societies/Affiliates
American Institute of Hydrology
National Groundwater Association

Specialized Training
OSHA 40 Hour HAZWOPER Training (1986)
8-hour OSHA 29 CFR 1910 Supervisors and Annual Refresher Training (1988)
Red Cross Standard First Aid (2000)
Red Cross CPR (2001)
Red Cross Prevention of Disease Transmission (2001)

Publications
Taylor, K.R., J.S. Hansen, and D.W. Andrews, 1994. "The Potential Use of Pulp and Paper Mill Sludge in Landfill Closure". Proceedings of the

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Conference on Practical Applications of Soil Barrier Technology. Maine Chapter of the American Society of Civil Engineers. February 1994.

Chronology

URS, Project Hydrogeologist, Hallowell, Maine 1991 to present
Roy F. Weston, Inc., Associate Scientist, Concord, New Hampshire, 1986 to 1991

Contact Information

URS Corporation
477 Congress Street
9th Floor
Portland, ME 04101-3432
Tel: 207.879.7686
Fax: 207.879.7685
jeffrey_hansen@urscorp.com

URS

William Humphries

Senior Scientist

Overview

Mr. Humphries is currently employed with URS as a Senior Scientist and project manager. Responsibilities include project management of complex investigation and remediation projects, PCB characterization and cleanup performance of property transfer and underground storage tank closure assessments, environmental permitting, hydrogeologic investigations, and aquifer testing.

Mr. Humphrics has been employed as an Environmental Scientist since 1991. Will has experience in Phase I and Phase II Site Assessments, Site Remediation, PCB characterization and cleanup, Underground Storage Tank Management, Indoor Air Quality Evaluations, Environmental Permitting, and Regulatory Negotiation. Field experience includes test pitting, bedrock and surficial drilling and monitoring well installation, ground water sampling (including low flow), aquifer testing, and ground water data analysis and interpretation. Site investigation and remediation work has been performed at sites contaminated with metals, petroleum hydrocarbons, PCBs, waste oil, and chlorinated compounds.

Areas of Expertise

Project Management
Phase I & Phase II Assessments
PCB Characterization & Cleanup (40 CFR 761)
Environmental Permitting

Years of Experience

With URS: 7 Years
With Other Firms: 8 Years

Education

B.S. - Environmental Studies, University of Vermont, Burlington, Vermont, 1989
Post Graduate - Hazardous and Solid Waste Engineering, University of Maine, 1993.
Post Graduate - Topics in Ground Water Contamination, University of Maine, 1995

Registration/Certification

Senior Scientist and Project Manager

Project Specific Experience

Project Manager

For the investigation and remediation of a 220-acre former paperboard mill in accordance with the Connecticut Property Transfer Act. The site includes an active paperboard mill, remnants of a former paperboard mill and an 11-acre landfill. Site-wide impacts have been identified associated with current and former power production, releases of oil, and the extensive placement of highly variable polluted fill containing elevated concentrations of metals, PAHs, TPH and PCBs. PCB impacted soil and demolition debris meeting the definition of PCB Remediation Waste was identified in the old mill area. Characterization of soil and other porous media was conducted in accordance with Chapter 761 Subpart N. To expedite this time sensitive activity a meeting was held with the EPA Region 1PCB Coordinator. EPA approved the Self-Implementing Disposal and Cleanup plan consisting of a combination of off-site disposal, on-site capping and implementation of management controls for continued use of an electrical sub-station, which was completed in 2003. Other on-going non-PCB corrective actions include calculating site specific dilution attenuation factors, calculating upper 95% confidence intervals to demonstrate compliance in areas of widespread polluted fill, and performing a 7Q10 analysis to avoid groundwater remediation. Use of alternative approaches has saved approximately $800,000.

Task Manager

For demolition and disposal of a PCB impacted building at a Pennsylvania Paper Mill. Numerous porous surfaces throughout the building were impacted with PCBs. PCB concentrations were determined by equating

surface and bulk concentrations in accordance with 1998 amendments and a cost effective Performance Based Cleanup of selected areas was completed concurrent with building demolition.

Task Manager
For developing the approach and estimated cost to conduct additional characterization and cleanup of PCB impacted infrastructure, soil and LNAPL at six bulk marine oil storage terminals located in Connecticut. Existing data were assessed and a strategy for achieving regulatory compliance at these significantly impacted facilities was prepared in support of a liability transfer scheduled to close in June 2006. Remedial activities are expected to begin during the fall of 2006 and will likely include both Self-Implementing Disposal and Cleanup [(761.61(a)] and Risk-Based Disposal [i.e., EPA negotiated per 761.61(c)].

Project Manager
Of a former military research and development (R&D) site located approximately 450 feet from three inactive (but not abandoned) municipal water supply wells. The site was impacted with tetrachloroethene (PCE) when equipment designed to dispense a polyurethane material for use in rapid repair of bomb-damaged runways failed, and unpolymerized material was released to surface soils. Subsequent subsurface investigations indicated that VOCs, primarily PCE, were present in groundwater and soils in two former test areas. Following source soil removal extensive investigation, including groundwater modeling, was conducted. Good site characterization and groundwater modeling were used to support natural attenuation as remedial action, and a Response Action Outcome has been prepared for submittal to the DEP.

Former Project manager
Of an enhanced bioremediation project at a petroleum-impacted site in Farmington, Maine. Indigenous petroleum degrading micro-organisms were augmented through construction of an in-situ bioreactor which optimized delivery of oxygen and nutrients. This innovative and cost-effective remedial approach achieved the DEP required cleanup action goal in less than two years and at a significant savings over other appropriate remediation options considered.

Mr. Humphries has experience on a variety of sites in the selection and implementation of monitoring and remedial technologies including soil/gas surveys, vapor extraction systems, and free-phase petroleum recovery systems. Work on a 1993 project included the implementation of a multi-staged soil and ground water remediation system at a grossly contaminated petroleum distribution facility. Vapor extraction was coupled with a free phase petroleum recovery system consisting of a product recovery trench and recovery well. Will assisted in the installation, operation and maintenance of a two-pump system which established a cone of depression and collected free product using a pneumatic product recovery system. Contaminated ground water was

treated by activated carbon and monitored with a portable gas chromatograph prior to discharge.

Team Member

For a 1998 statewide MTBE study conducted for the Maine DEP. Over 1,000 private water supply wells and 200 public water supplies in Maine were sampled for this comprehensive study.

Work on a 1994 investigation and remediation project included characterization of surficial and bedrock geology, and passive recovery of free phase petroleum at a marine oil terminal in Maine following a catastrophic release of #2 fuel oil. Through good initial site characterization and regulatory negotiation, site cleanup goals were downgraded and active remediation was not required.

Mr. Humphries has experience performing short and long term aquifer tests using vibrating wire pressure transducers and a Geokon Micro-10 datalogger. Work on a 1994 five-day aquifer test at a Maine leaking underground storage tank site included packer testing and a step drawdown test. Comprehensive data analysis following the aquifer test included ground water modeling with AQTESOLV and TWODAN. The ground water modeling indicated particle pathlines and capture zones from the recovery wells at a variety of pumping rates.

Professional Societies/Affiliates

National Ground Water Association
Geological Society of Maine

Specialized Training

40-hour OSHA 20 CFR 1910 Certification Training
8-hour Refresher Training
First Aid (Red Cross)
CPR (Red Cross)
UST Closure, PLM Enterprises
Property Transfer Liabilities - EssTek

Chronology

URS, Senior Scientist/Project Manager, 1999-Present
Dames & Moore, Project Scientist, 1995-1999
J.B. Plunkett Associates, Environmental Scientist, 1991-1995

Contact Information

URS Corporation
477 Congress Street
9th Floor
Portland, ME 04101-3432
Tel: 207.879.7686
Fax: 207.879.7685
william_humphries@urscorp.com

URS

Brian Laurin

Vice President

Overview

Mr. Laurin, as Vice President of Aman Environmental Construction, Inc. has 11 years of experience in the environmental remediation and demolition field. His responsibilities consist of multiple division coordination, proposal development and technical writing, proposal and project estimating, subcontractor coordination, overall division management, contracting, waste characterization, TSDF profiling and related customer service and agency interfacing. He has experience in implementing cost controls, permitting, government and regulatory interface, health and safety plan preparation, critical path scheduling, estimating, and bid proposal development. Mr. Laurin assists in the project management and estimating in both the demolition and environmental fields. He has capabilities to run on-site activities ranging from building demolition, large-scale excavation, disposal and infill projects, and other various aspects of general contracting. A selection of projects and associated responsibilities include:

A selection of projects that Mr. Laurin has participated in various project management and coordination duties for your review:

Areas of Expertise

Project Estimating and Bid Proposal Development
Decontamination Activities (OSHA, RCRA, TSCA, API)
Oilfield Production and Refinery Closure Activities
Industrial and Manufacturing Decontamination and Dismantling Services
Waste evaluation, Classification and Waste stream profiling
Waste Minimization and Alternative Technologies
Permitting, Governmental and Regulatory Agency Interface
Transportation and Disposal Services
Development of Project Related Work Plans (Asbestos, Decon, Demolition, SWPPP, HSP)

Education

University California at Riverside, B.S., Environmental Engineering, 1994

Registration/Certification

40 Hour Hazardous Waste Operations Training, 1994
8 Hour HAZWOPER Refresher, 2004
4 Hour OSHA Excavation/Trenching Course, 2002
4 Hour OSHA Confined Space Entry Course, 2002
Hazardous Materials Transportation Course, 2003
40 Hour Lead Related Construction Supervisor and Project Monitoring, 1998
8 Hour OSHA Hazardous Site Supervisor, 2003

Project Specific Experience

Boeing PacifiCenter Phase 1B Project, Long Beach, California

Project Manager for the Abatement and Demolition of the former Boeing C1 facility located in Long Beach, California. The site was formerly used in the manufacturing and assembly of the Boeing 717 commercial airliner. The project consisted of asbestos abatement of several million square feet of asbestos containing siding and other ACM materials, removal of universal waste associated with approximately 50 building locations and over 3 million square feet of space, decontamination of various chemical processing areas, and the complete above grade and below grade demolition of the structures, slabs and foundations. Underground utilities servicing the former plant will be removed and mass grading of the site will be conducted. An estimated 300,000 tons of concrete will be recycled into a crushed aggregate base material to be used for backfill as well as other future site developments.

Boeing PacifiCenter Phase 2 Project, Long Beach, California

Project Manager for the Abatement and Demolition of the former Boeing C1 facility located in Long Beach, California. The site was formerly used in the manufacturing and assembly of the Boeing 717 commercial airliner. The project consisted of asbestos abatement of 1-million square feet of asbestos containing siding and other ACM materials, removal of universal waste associated with approximately 20 building locations and over 800,000 square feet of space, decontamination of various chemical processing areas, and the complete above grade and below grade demolition of the structures, slabs and foundations. Underground utilities

servicing the former plant will be removed and mass grading of the site will be conducted. An estimated 50,000 tons of concrete will be recycled into a crushed aggregate base material to be used for backfill as well as other future site developments.

Boeing PacifiCenter Phase 3 Project Long Beach, California
Project Manager for the Abatement and Demolition of the former Boeing C1 facility located in Long Beach, California. The site was formerly used in the manufacturing and assembly of the Boeing 717 commercial airliner. The project consisted of asbestos abatement of several million square feet of asbestos containing siding and other ACM materials, removal of universal waste associated with approximately 10 building locations and over 200,000 square feet of space, decontamination of various processing areas, complete above grade and below grade demolition of the structures, slabs and foundations, and the excavation of petroleum impacted soils, Underground utilities servicing the former plant will be removed and mass grading of the site will be conducted. An estimated 10,000 tons of concrete will be recycled into a crushed aggregate base material to be used for backfill as well as other future site developments.

LAC+USC Medical Center Replacement Project, Los Angeles, California
Project Manager for the Site Preparation Package of the future $550-million LAC+USC Medical Center Replacement Hospital. The project consisted of the demolition of four multi-level concrete buildings encompassing over 550,000 square feet, plus the demolition of two multi-level parking structures. In addition, two City of Los Angeles streets around the existing hospital were demolished, and two other streets were demolished, realigned, and replaced to configure with the new hospital construction. All concrete and asphalt, totaling 110,000 tons, was crushed to CalTrans specifications and removed from the site. The 27-acre site was mass graded and approximately 250,000 cubic yards of soil was exported off-site. In order to facilitate grading activities, 340 lineal feet of shoring was installed. New utilities were constructed as part of the project, including several new sanitary sewer, storm drain, water, and gas lines. A new 600 foot mechanical utility corridor, consisting of new chilled water, steam, and condensate lines was also installed to keep the existing hospital operational during the course of demolition and future hospital construction activities. Additionally, an MTA Bus Turnaround area, various retaining walls, and other site improvements were constructed around the site to keep the hospital operational at all times. To complete the project, select areas at the site were irrigated and landscaped, and a full Storm Water Pollution Prevention Plan was implemented.

Akzo Nobel - Filtrol "Poppies" Project Vernon, California
Estimator and Assistant Project Manager for the complete decommissioning and demolition of the former Filtrol FCC Catalyst production facility. The D&D services included the decontamination of 123 aboveground process and storage tanks and all associated conveyance piping systems; radiological (NORM) decontamination of various building

structures and process equipment in addition to containerization and coordination of radiologically impacted materials for off-site transportation and disposal. Once the facility was free of known NORM contamination, the entire site was abated of all asbestos and demolished. This encompassed raising 7.1 acres of process and warehouse building structures, five 90' high reinforced concrete storage silos, massive underground vaults, and all hardscape surfacing. Over 40,000 tons of concrete and asphalt was recycled on-site. Upon removal of all structures and hardscape, the site was excavated to remove all contaminated soil to comply with regulatory clean-up levels. Approximately 3,500 tons of radiologically and chemically impacted mixed waste soil; approximately 20,000 tons of Non-RCRA heavy metal, DDT, PCB, and solvent impacted soil; and over 31,000 tons of Non-Hazardous hydrocarbon impacted soil was excavated, transported, and disposed of off-site. To complete the project, all excavations were backfilled and the entire site was mass graded to comply with the site Storm Water Pollution Prevention Plan.

General Dynamics Kearny Mesa, San Diego, California

On-site Project Manager responsible for the coordination to complete the closure of an existing 234-acre aerospace facility. Demolition encompassed 35 buildings and structures, over 2.1 million square feet of space, consisting of two 6-story concrete buildings and several steel frame and concrete buildings. In addition, all concrete slabs, below grade foundations, basements, underground utilities, asphalt paving, and landscaping were removed from the entire facility. All demolition voids were backfilled with on-site soils and over 60,000 cubic yards of clean soil imported to the site. Over 15,500 tons of ferrous material and 1.1 million pounds of non-ferrous materials were salvaged. Additionally, all concrete and asphalt removals were crushed on-site to create over 185,000 tons of reusable base material. The environmental scope of work and responsibilities included asbestos abatement; heavy metal and hydrocarbon decontamination of various structures; removal, handling, and disposal of all regulated wastes including PCB ballasts, mercury vapor lamps, elemental mercury, and CFCs; removal of five underground storage tanks; and the excavation, handling, and disposal of over 11,200 tons of hydrocarbon impacted soil. To complete the project, the entire site was mass graded to provide storm water control and to the keep the site in compliance with its storm water pollution prevention plan.

San Diego Gas & Electric, Station B San Diego, California

Project Manager responsible for the coordination of the complete decommissioning and interior demolition of a combustible hydrocarbon electric generating power plant which at one time provided electricity to downtown San Diego. The facility consisted of over 175,000 square feet of electric generating equipment, which included four large turbine generators, three boilers, seven superheaters, fuel oil lines and equipment, switchgear, and all other associated equipment and piping. Over 5,200 tons of ferrous metal materials were demolished and recycled through the coordination and use of manual labor alone. Associated demolition

activities included the demolition of approximately 1,000 lineal feet of reinforced concrete interior walls, slurry backfill of pits and tunnels underneath the adjacent city street, and the construction and installation of a safety barrier system around and over voids created by the demolition activities. Additional responsibilities included coordination with the asbestos abatement subcontractor; removal and disposal of all regulated wastes such as PCB containing ballasts, mercury vapor lamps, sodium vapor lamps, and elemental mercury; cleaning of all facility sumps and trenches; removal, handling, profiling, and disposing of hazardous wastes such as PCB containing oil, PCB impacted soils/ sludges, heavy metal impacted soils/sludges, and heavy metal impacted decon water. Further responsibilities included the coordination and on time completion of the removal of loose and flaking lead based paint from all interior surfaces of the facility to meet the project deadline

Staples Center, LA Arena Company, Los Angeles, California
Site Superintendent responsible for the demolition and clearing of over 25 buildings and associated lots. The contract included the removal of all asbestos containing materials, regulated building materials, above grade and below grade demolition of the buildings, clearing and removal of all site improvements, and rough grading each lot. Additionally, the contract included the removal of three City of Los Angeles streets within the project vicinity. Extensive interface and coordination with subcontractors, the City of Los Angeles, local utility companies, and Staples Center building contractors was required to facilitate the demolition of the buildings within a compressed time frame.

International Light Metals, Lockheed Martin Corporation Torrance, California
Assistant Project Manager responsible for the complete demolition and land clearing of over 160,000 tons of concrete foundations, pits, and tunnels associated with this facility. The contract included the demolition and removal of all foundations, utility removal, coordination with the removal and disposal of hazardous soils, backfill and compaction of all voids, import and compaction of over 100,000 cubic yards of import material, mass grading of the site in preparation for a new retail mall development. Site consisted of over 65 acres of demolition and grading.

Carrier IDC Facilities Demo, City of Industry, California
Project Manager responsible for the demolition and removal of four buildings with a combined square footage of over 150,000 square feet. Demolition activities included all below grade concrete and utilities, removal of associated five acre parking lot, and the removal and disposal of all regulated building wastes, such as PCB containing ballasts, mercury vapor lamps, and elemental mercury. Additionally, this contract included the complete demolition of an existing fire sprinkler system within a 250,000 square foot existing warehouse.

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Professional Societies/Affiliates

Hazardous Waste Association of California
Association of Hazardous Waste Professionals
National Environmental Management Association
Professional Environmental Marketing Association

Contact Information

URS Resources, LLC
Aman Environmental Construction Inc.
614 East Edna Place
Covina, CA 91723
Tel: 626.967.4287
Fax: 626.332.1877
brian_laurin@urscorp.com

URS

Douglas R. Lawson, Ph.D., CIH

Associate

Overview

Dr. Lawson has over twenty-five years experience providing occupational health and safety, and environmental management services to industry and government. He has developed and implemented a variety of safety and health programs on such subjects as compliance auditing, hazard communication, respiratory protection, dermatitis and occupational injury and illness issues. Additional experience includes monitoring airborne contaminant exposures; evaluating exposure to physical stresses including noise, radiation, and heat stress; managing health and safety programs and instituting engineering controls for airborne contaminants and noise. In addition to his industrial hygiene experience, Dr. Lawson holds a Master's Degree in Education and previously taught at the high school level for three years. Over his career, Dr. Lawson has conducted nearly 500 OSHA compliance audits in a wide variety of manufacturing facilities throughout the United States.

Areas of Expertise

Industrial Hygiene
Compliance Audits
Indoor Air Quality Surveys
Mold Investigations
Asbestos Management Services
Litigation Support

Years of Experience

With URS: 20 Years
With Other Firms: 13 Years

Education

Ph.D. in Industrial Hygiene, 1973, University of Oklahoma
Master of Science in Industrial Hygiene, 1972, University of Oklahoma
Master of Education, 1971, University of Lowell
Bachelor of Arts in Zoology, 1968, University of Massachusetts

Registration/Certification

Certified Industrial Hygienist, (Comprehensive Practice, 1978), No. 1698

Project Specific Experience

Project Manager

Project Manager for compliance and permitting program at a Textron automotive parts manufacturing facility in New Hampshire. Provided compliance assistance for air emission evaluation and permitting, Hazcom Program preparation, contingency planning, personal protective equipment procedures, NPDES evaluation, and a variety of other OSHA and large quantity generator requirement programs.

Safety Program Development

Developed a written health and safety program manual, operations and maintenance program, indoor air quality program and hazard communication program for UNUM, a Maine-based insurance company of nearly 4,000 employees. This health and safety program was unique in that the employees were primarily office workers exposed to a different array of hazards than those found in manufacturing environments. Programs included a variety of training programs required by various OSHA regulations.

Training Module Development

Developed an eight-hour training module for architects, project managers and real estate managers to evaluate asbestos, lead-based paint and other hazardous materials issues associated with USPS buildings and work through the survey, abatement design and removal process consistent with USPS policy and federal and state regulations. This course was accepted as a standard USPS course for offering throughout the country.

Project Manager

Project Manager for an indoor air quality investigation for Ruggles Center, a new 10-story office building located in downtown Boston. Conducted air and material sampling of sprayed-on fireproofing after workers in the

building complained of upper-respiratory and eye irritation, and determined that the material was releasing fibers into the building air stream. Managed an evaluation of the building to determine both airborne fiber levels and surface dust contaminants. Developed subsequent cleaning protocol for the building and a procedure for determining that it was suitable for occupancy.

Program Manager
Program Manager and lead auditor for health and safety audits of multiple plant sites for Duchossois Industries. Developed an audit protocol which included both program elements as well as specific regulatory items. Baseline audits were conducted at sites throughout the U.S. and Mexico. In the spring of 2002, follow-up audits were conducted to assess the progress being made by site personnel of issues identified during the baseline audit. Reports prepared following the baseline audits discussed both positive program activities as well as regulatory deficiencies. Plants have the ability to call on URS for advice and support on an ongoing basis as they implement program changes.

OSHA Compliance Auditor
Conducted a baseline OSHA compliance audit and subsequent program development for Presstek, Inc. in Hudson, New Hampshire. The audit included a complete facility walk-through, a review of written health and safety programs and assessment of long-term process expansion and development. The audit report included recommendations for long-term management of the OSHA compliance program. Oversaw staff in a day-to-day management role of health and safety programs for this facility. This role included the development of health and safety programs including training for hazard communication, lock-out/tag-out, respirator use, fork truck operation.

Certified Industrial Hygienist
CIH for mold investigation and sampling for a large telecommunications company. After surveying the building, concluded that the facility had a water incursion that caused mold growth. Remediation of the mold was necessary, and upon completion of the project, conducted a complete building survey and additional testing for mold confirm that airborne mold levels were within acceptable ranges.

Litigation Support
Provided litigation support for a large property management company in a lawsuit regarding an abandoned building. The building had a leaking roof resulting in mold growth. Conducted mold sampling using the Anderson N-6 and Zefon Air-O-Cell sampling techniques to collect air and bulk mold samples.

Certified Industrial Hygienist
Certified Industrial Hygienist for an indoor air quality evaluation and remediation program for a large national retailer. Conducted extensive air and bulk material sampling of structural fireproofing in a 500,000 square foot warehouse facility to determine the extent of mold growth on

surfaces and to evaluate airborne levels of spores. This project required rapid response and turnaround so that remediation could be completed and the facility returned to service within four weeks.

Certified Industrial Hygienist
Certified Industrial Hygienist for a General Services Administration (GSA) contract in Bangor, Maine to perform indoor air quality testing to identify an odor observed by personnel in the Social Security office area. Conducted air quality and ventilation measurements in the office area and long term monitoring on the air intake for the air handling unit serving the Social Security area. Sampling was conducted over two one-week periods to evaluate organic vapors and combustion products which might be generated by a boiler in an adjacent building.

Certified Industrial Hygienist
CIH for a law firm negotiating a real estate transaction. Performed a complete investigation and indoor air quality survey and found that mold was growing on a supporting wall on the side of the business next door to the company. Performed both air and surface mold sampling.

Certified Industrial Hygienist
CIH for mold investigation at a large New England resort. Determined background levels of bio-aerosols and surface contamination. Prior to undertaking remediation efforts, collected air samples at representative locations in contaminated and non-contaminated building areas as well as outdoors for comparison purposes. Surface wipe samples were collected to identify the extent of mold growth and material contamination.

Lead Auditor
Lead Auditor for health and safety audits (verification visits) on approximately 40 Invensys manufacturing facilities in the U.S., Mexico and Canada. Invensys implemented an aggressive EH&S program which involved self-audits of all facilities worldwide. Based on the perceived status of their plants, a score was developed for each aspect of program development and implementation. Action plans were developed to address deficiencies. Based on these self audit scores, certain sites were selected for site audits, called verification visits by a senior health and safety professional. During these verification visits, programs were reviewed to validate the sites self-audit and to evaluate the site's programs on a more detailed level. Additional action plans were recommended as required.

Health and Safety Auditor
For two years, Dr. Lawson conducted health and safety audits at packaging plants and paper mills operated by Riverwood International. The audit program included the development of a deficiency report while on site so that a review of action items could take place during the closing conference. Completion dates were also established at that time. Plants submitted the results of their activities for review and a determination as to whether an action item could be closed.

Health and Safety Auditor
As part of a divestiture, Dr. Lawson conducted health and safety audits at four (4) polymer manufacturing plants owned by BP Amoco. Audits were extensive and generally required approximately one week on site for each plant. Programs and records were reviewed in detail as well as an extensive review of manufacturing processes and operations. Reports discussed programs that were functioning well and those where improvement was necessary. Each report included extensive supporting documentation. A review of toxicology data for products was also conducted as part of each audit.

Project Manager
Project Manager for OSHA compliance and air monitoring program at the Sturm Ruger weapons manufacturing plant in New Hampshire. Conducted an OSHA inspection with the in-house compliance officer; managed a local exhaust ventilation survey; evaluated carbon monoxide production, and recommended modifications to the ventilation system.

Project Manager
Project Manager for OSHA compliance audit of two pharmaceutical manufacturing plants in Nebraska. The audit included a physical audit of both properties, review of written programs, review of training documentation, review of air and noise monitoring programs, and recommendations for an appropriate course of action.

Task Manager
Task Manager for occupational safety and health compliance audits of eight manufacturing and office facilities as part of a compliance audit of an Italian company, Nuovo Pignone Corporation, following its acquisition by the General Electric Company. The audited facilities included over seventeen million square feet of building space consisting of a variety of manufacturing processes and office occupancies.

Project Manager
Project Manager for an occupational safety and health compliance audit of GE's Transformer Division facilities in Pittsfield, Massachusetts. Although generally unused for manufacturing functions at the time, a variety of issues had to be addressed with regard to their impact on ongoing maintenance and facility decommissioning activities. The second phase of this project involved rewriting and updating of the facility's occupational health and safety policy and program manual.

Principal-in-Charge
Principal-In-Charge for development of a written health and safety program manual, operations and maintenance program, indoor air quality program and hazard communication program for UNUM, a Maine-based insurance company of nearly 4,000 employees. This health and safety program was unique in that the employees were primarily office workers exposed to a different array of hazards than those found in manufacturing environments.

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Professional Societies/Affiliates

American Industrial Hygiene Association
American Board of Industrial Hygiene
American Society of Safety Engineers
National Asbestos Council (NAC)
New Hampshire Safety Council
Massachusetts Safety Council

Specialized Training

AHERA Inspector
AHERA Management Planner
AHERA Designer

Chronology

URS Corporation, Associate, 2/86 to Present
Normandeau Associates, Manager, Occupational Safety and Health Services, 3/85 to 2/86
General Electric Company, Manager, Environmental Systems, 4/78 to 3/85
U.S. Occupational Safety and Health Administration, Senior Industrial Hygienist, 8/75 to 3/78
Western Electric Company, Manager, Environmental Services, 7/73 to 8/75

Contact Information

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603-893-0616
Fax: 603-893-6240
douglas_lawson@urscorp.com

URS

Katherine H. McDonald

Staff Geologist

Areas of Expertise

Bedrock and shallow overburden boring, soil sampling, and monitoring well installation.

Groundwater sampling using mechanical and air-drive pumps and passive-diffusive bag systems.

Years of Experience

With URS: 5 Years

With Other Firms: 1 Year

Education

B.S./Geology/2000/Bates College/Lewiston, ME

Project Specific Experience

Site Investigation and Remediation

Field Supervisor, Elizabeth Mine Superfund Site, Strafford, VT: Responsibilities include managing onsite subcontractors and field staff, overseeing investigation activities such as bedrock and overburden boring and monitoring well installation, slug testing, soil, sediment, surface water and groundwater sampling. Additional responsibilities include: workplan preparation, laboratory management data evaluation, data analysis, and remedial investigation (RI) report preparation. Extensive experience with soil boring installation, overburden geology field identification, and coordination of subcontractors and other staff.

Field Supervisor, Ely Mine Superfund Site, Vershire, VT: Responsibilities include managing onsite subcontractors and field staff, overseeing investigation activities such as bedrock and overburden boring and monitoring well installation, slug testing, soil, sediment, surface water and groundwater sampling. Additional responsibilities include: workplan preparation, laboratory management data evaluation, data analysis, and remedial investigation (RI) report preparation.

Field Geologist, Parker Landfill Superfund Site, Lyndon, VT: Responsibilities include managing onsite subcontractors and field staff, overseeing investigation activities such as overburden boring and monitoring well installation, slug testing, and groundwater sampling. Extensive experience with soil borings and soil identification.

Field Geologist, Maine Department of Transportation I-295 Connector Project, Portland, Maine: Responsibilities include overseeing field component of geotechnical boring program including vane shear testing, undisturbed tube sample collection, overburden geology logging, and laboratory sample collection for a complex sampling program.

Field Geologist, Environmental Site Assessments and Due Diligence, Various Locations: Performed field evaluation for many (25) due diligence property assessments. These projects typically include evaluation of commercial properties for environmental liabilities pertaining to American Society of Testing Material Standards. Additional responsibilities include report writing, contact with local officials, and follow-up sampling activities.

Previous Experience, W.R. Grace Superfund Sites in Acton and Woburn, MA: Experience with Solinst® well installation and sampling, passive-diffusive bag groundwater and river influent sampling, bedrock coring and in-situ aquifer permeability test analysis, field evaluation of ground water flow regimes in several VOC contaminant site scenarios,

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analysis of packer test data to determine aquifer characteristics. Previously responsible for operation and maintenance of two Massachusetts regulated treatment facilities: an aerator stack for the removal of VOCs, and an oil/water separator for the removal of petroleum hydrocarbons. Additional experience with the Massachusetts Contingency Plan code (MCP) requirements for hazardous waste sites.

Data Management

Experience using GISKey to manage environmental data. Responsibilities include: collection and compilation of data, entry into database, query data to generate project outputs, and provide appropriate information for project management.

Professional Societies/Affiliates

Association of Women Geoscientists
Geological Society of Maine

Specialized Training

40-hour OSHA 20 CFR 1910 Certification Training
8-hour Refresher Training
8-hour Site Supervisor Training
First Aid (Red Cross)
CPR (Red Cross)

Publications

Ongley, Lois K., M.A. Armienta, K. Heggeman, A. Lathrop, H. Mango, W. Miller, and S. Pickelner, 2001. Arsenic Removal from Contaminated Water by the Soyatal Formation, Zimapán Mining District, Mexico-a potential low-cost low-tech remediation system, *Geochemistry: Exploration, Environment, Analysis.*

Contact Information

URS Corporation
477 Congress Street
9th Floor
Portland, ME 04101-3432
Tel: 207.879.7686
Fax: 207.879.7685
kate_mcdonald@urscorp.com

URS

Thomas Plante, P.E.

Senior Environmental Engineer

Overview

Mr. Plante is a Senior Environmental Engineer with experience in civil and environmental engineering projects including solid and hazardous waste landfills, hazardous waste site investigations and remedial design, MGP site investigation and remediation, drainage projects, sewerage facilities, I&I, and CSO abatement projects for government, industrial, utility, and municipal clients. Responsible for engineering and project management including client and regulator interaction, site characterizations, detailed design of remediation and infrastructure projects, construction administration and startup, solid and hazardous waste site services including permitting, site characterization, remedial design engineering and construction. Mr. Plante has developed and implemented closure approaches for former MGP sites in New York, New Jersey, New Hampshire, and Maine. Mr. Plante has been involved in the construction of numerous civil and environmental remediation projects in varying roles from resident inspector, design engineer, field engineer, quality assurance representative, to project manager, and construction manager and is able to apply a detailed understanding of construction means and methods to the initial planning and design of projects.

Areas of Expertise

Civil & Environmental Engineering
Hazardous Waste
MGP Site Investigation

Years of Experience

18 Years

Education

M.S., Environmental Engineering, University of Massachusetts at Amherst, 1990

B.S., Civil Engineering, University of New Hampshire, 1987

Registration/Certification

Registered Professional Engineer: Maine, New Hampshire, and Rhode Island

Certified Title 5 Septic System Inspector - Massachusetts

Project Specific Experience

Project Engineer

Project Engineer for the design and construction oversight of remedial actions for the management of PAH and PCB contaminated soils at a paper mill in Sprague, Connecticut. Design included the onsite management and containment of soils with direct-contact and or groundwater impact risks. Design included engineered controls in several areas as well as the excavation and off-site disposal of PCB-impacted soils.

Project Engineer/Manager

Project Engineer/Manager for the design and preparation of bid documents and a cost estimate for Release Abatement Measures at residential areas with fuel oil contaminated fill. Designed gravity groundwater depression drains, an oil/water separator, and in-situ lining and replacement of storm drains which were allowing fuel oil infiltration. Prepared permit applications and presented design to the Town Conservation Commission and citizens groups. Functioned as Resident Site Engineer during construction and startup of the drains and oil/water separator.

Project Engineer

Project Engineer for the design and preparation of bid documents and a cost estimate for excavation and dredging for salt marsh restoration in an abandoned fill area being conducted as part of the Boston, Massachusetts Central Artery/Third Harbor Tunnel Project.

Project Engineer/Task Manager
Project Engineer/Task Manager for the operation and maintenance of a groundwater recovery and treatment system (filtration and GAC) and separate phase product recovery systems at a former aerospace manufacturing site in Massachusetts. Activities include operation of the system, monthly reporting, periodic well cleanings/maintenance and management of remediation-derived wastes.

Project manager
Project Manager for design of an 80-acre soil cap for remediation of a dioxin-contaminated site in Kentucky. Design challenges included minimizing soil quantities in constructing a soil cap on an extremely flat site, managing stormwater during construction on the site and an adjacent borrow area, and closure of existing impacted sedimentation ponds.

Project Manager
Project Manager for the design of the closure of a 2.5-acre flyash lagoon by portland cement solidification at an active oil-fired electric power generation facility in Maine. Design elements included a detailed grading plan, soil cover and vegetation suitable for a coastal environment and infrequent tidal inundation, and stormwater management.

Project Engineer
Project Engineer for the post closure monitoring of a Superfund Landfill in Winthrop, Maine. Managed the post-closure monitoring activities including slope stability monitoring, methane migration evaluation, landfill cap and roadway condition assessment, maintenance of monitoring well network, and evaluation of wetlands impacts.

Resident Engineer
Resident Engineer for the closure construction of the Berwick Sewer District Sludge Disposal Area. Construction consisted of a sludge regarding, installation of a composite cover system, and installation of various site drainage structures. Performed the contract administration, submittals and testing results review, daily construction observation, preparation of weekly progress reports, and preparation of the construction certification report.

Project Engineer
Project Engineer for development of a database management system for ten years of site monitoring data for a Superfund Landfill in Winthrop, Maine. Prepared feasibility studies, work plans and cost estimates for various remedial investigations, including vapor extraction in a landfill, groundwater seep mitigation, and several source control activities. Provided engineering support in the development of an Alternate Concentration Limit Demonstration for establishing groundwater action/cleanup criteria at the landfill.

Project Engineer
Project Engineer for metal hydroxide sludge storage area at a Connecticut metal plating facility. Responsible for managing and reporting a quarterly

groundwater and surfacewater monitoring program as well as conducting site investigation and design activities for the development of a RCRA facility closure plan for the facility's waste hydroxide sludge by-product storage area. The closure design included on-site solidification/stabilization and development on RCRA-capped on-site landfill.

Project Manager
Project Manager for the design and construction services for the closure of an unlined municipal landfill in Boscawen, New Hampshire. Developed and implemented a unique closure approach combining two separate landfills located across Town into one site. Developed a funding approach including Federal and State grants and local contributions resulting in $1.8 million in savings to the Town. The Town/project received an EPA Environmental Merit Award in 1999 for the unique project approach and timely remediation of an abandoned leather waste dump site.

Project Manager and Lead Design Engineer
Project Manager and Lead Design Engineer for the evaluation of remedial alternatives, remedial design, and construction administration for the remediation of oil and tar impacts to a drainage ravine at a former manufactured gas plant in Manchester, NH. The scope of work included pre-design field investigation to delineate MGP-related impacts, forensic analysis of product samples to verify their probable source and relationship to the MGP processes, evaluation of remedial alternatives including no action, excavation and off-site treatment, in-situ solidification/stabilization, and in-situ chemical oxidation. Based on the feasibility study, a remedial design was prepared for dig-and haul. Significant design considerations include construction adjacent to a major waterway, temporary shoring and bracing for excavation stability and groundwater cutoff, construction water treatment, and a tight schedule due to on-going site re-development construction. This project also involved close coordination with the site developer's design engineer to ensure that the remedial construction was compatible with and coincident with site development construction. Mr. Plante managed the construction oversight and administration for URS. Construction was completed in the Summer of 2005.

Related project at this site resulting from a Phase II Site Investigation include: the evaluation and conceptual design of a coal tar (DNAPL) and gas oil (LNAPL) product migration barrier and product recovery system at the former MGP site; investigation and evaluation of stone box culvert lining alternatives for vapor mitigation, and a DNAPL product recovery pilot test.

Project Manager
Project Manager for the remediation of a former MGP site in New Jersey. The unique hydrogeologic features of the site allowed URS to develop an innovative approach to site closure. The remedy includes a slurry wall

surrounding the site keyed into a low permeability unit. This wall contains the majority of NAPL impacts at the site. With upward vertical gradients through the low permeability unit at the site, the wall also includes passive activated carbon overflow treatment gates for treatment of groundwater leaving the site. Outside the wall, a combination of natural attenuation and residual NAPL treatment is proposed. This project also included NAPL recoverability testing in source areas of the site. Down gradient of the site, and ecological risk assessment, including sediment toxicity evaluations, is being performed to evaluate ecological impacts on a river habitat.

Project Manager/Technical Lead

Project Manager/Technical Lead for bench-scale treatability testing to develop reagent mix designs for in-situ solidification at 5 former MGP sites in New Jersey. This research was sponsored by the Electric Power Research Institute (EPRI). The main objective of the project, in addition to evaluating the specific sites, was to further develop and expand the use of this technology for former MGP sites with varying levels of oil, tar, BTEX, PAH, metals, and cyanide impacts, and to develop an appropriate technical approach to demonstrating the technology's effectiveness. Based on the success of the first phase of the project, URS was contracted by the utility to further develop the approach on one site and evaluate various leaching test protocols and their applicability to solidification.

Project Engineer

Project Engineer responsible for the development of feasibility studies and remedial investigations for former manufactured gas plant sites in New York State. Investigations were completed and remedial action concept plans were developed for former NYSEG plants in Mechanicville and Owego, New York. Chemicals of primary concern at these sites were semi-volatile organic compounds, polychlorinated biphenyls (PCBs), and cyanide.

Project Manager

Project Manager & Field Engineer for a fast-track source removal remedial action of gas holder contents (tar and oil impacted soil and debris) and surrounding impacted soils in Biddeford, Maine. The site is currently used as low income residential apartments. The cleanup was conducted by Central Maine Power Company under the state's Voluntary Remedial Action Program. Mr. Plante managed the site investigation, prepared the remedial action work plan which included a visual cleanup standard, and performed field design services as the remediation progressed. The entire project, from site investigation through completion of the removal of 9,000 tons of contaminated soil, was implemented in 3 months. Unique site features included working in close proximity to granite block building foundations, extremely limited working area, aggressive project schedule to meet site redevelopment financing deadlines, and performing the detailed design as the construction progressed.

Project Manager

Project Manager for development and implementation of closure strategies for two former Central Maine Power Company MGP sites in Maine. One site involved excavation and removal of surficial tar impacts and restoration for future use as a City park. The second site is currently being evaluated for the use of in-situ solidification to address site NAPL impacts and allow for future site development. Mr. Plante is currently managing the treatability study phase of the solidification project.

Project Manager/Design Engineer

Project Manager/Design Engineer for the design of the closure of a 2.5-acre flyash lagoon using in-situ portland cement solidification at an active oil-fired electric power generation facility in Maine. Design elements included developing a solidification design and specification based on bench-scale treatability testing, developing the solidification implementation QA/QC requirements, preparing a detailed grading plan, designing a soil cover and vegetation suitable for a coastal environment and infrequent tidal inundation, and stormwater management. Provided field engineering on behalf of the owner during pilot and full-scale implementation to optimize the mix design and mixing procedures and managing construction dewatering and treatment.

Professional Societies/Affiliates

American Society of Civil Engineers
New England Water Environment Association (1988 -2005)

Publications

Plante, T.R., and Koster, R.A., Fast-Track Gas Holder Remediation: A Case History in Residential Redevelopment", presented at the Gas Technology Institute Natural Gas Technologies II Conference, Phoenix, AZ, February 8-11, 2004.

Switzenbaum, M.S., Plante, T.R., and Woodworth, B.K., "Filamentous Bulking in Massachusetts: Extent of the Problem and Case Studies", Water, Science, and Technology, Vol. 25, No. 4-5 pp. 265-271, 1992.

Switzenbaum, M.S., Plante, T.R., and Woodworth, B.K., "Activated Sludge Bulking Handbook", prepared for the Commonwealth of Massachusetts Department of Environmental Protection Division of Water Pollution Control, May 1990.

"Designing Flexibility into a Sewer Siphon", paper presented at NEWEA Collection Systems Specialty Conference, Westford, Massachusetts, September 2000.

Plante, T.R., "Multi-Source Funded Landfill Closings", Public Works Journal, May 2000.

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Plante, T.R., Coleman, A., Max, W., Veprek, C., and Wittman, W. "Solidification/ Stabilization Bench-Scale Testing of Coal Tar Impacted Soils", presented at the Gas Technology Institute Natural Gas Technologies Conference, Orlando, FL, February 2005.

Contact Information

URS Corporation
477 Congress Street
9th Floor
Portland, ME 04101-3432
Tel: 207.879.7686
Fax: 207.879.7685
thomas_plante@urscorp.com

URS

James P. Sheridan

President

Overview

Mr. Sheridan has over 30 years experience working in the demolition and construction management fields. He has been responsible for the successful completion of over 1,200 projects ranging from simple concrete slab removals to the demolition of complete facilities, bridges and wharfs. Mr. Sheridan joined the newly incorporated Cleveland Wrecking Company as President and Principal-in-Charge in 1997. In this capacity,

Mr. Sheridan is able to direct one of the nation's oldest and largest demolition companies.

Areas of Expertise

Demolition and Construction Management

Education

University of California, Berkeley, B.S. degree (Agriculture/Economics)

Registration/Certification

State of California License No.: 735936
State of Arizona License No.: 154566
State of New Mexico License No.: 84697
State of Oregon License No.: 149506
State of Utah License No.: 5082614-5501

Project Specific Experience

• Generating Station Demolition, Jacksonville, FL: Complete Facility Closure and remediation of contaminated soils.

• Demolition of Plutonium Processing Plant, Miamisburg, OH: Building Decontamination of Low Rad substances and Demolition of Contaminated Structures.

• B-6 Site Demolition, Burbank, CA: Demolition of slabs and foundations.

• Midwest Generation Powerton Plant, Pekin, Ill: Demolition of scrubber unit at the plant.

• Veterans Administration Hospital, Long Beach, CA: Seismic retrofit of structures.

• Naval Weapons Bolsa Chica Bunkers, Bolsa Chica, CA: (R) 18,000 yards of concrete from former ammunition bunkers.

• Port of Long Beach Demolition, Long Beach, CA: Demolition of port buildings and pier removal resulting is over 300,000 tons of material crushed and reused on site.

• Facility Demolition, Northridge, CA: Demolition of a 6-story missile launch facility once operated my Hughes aircraft. Over 14,000 tons of material was crushed and reused onsite.

• High-rise Removal, Los Angeles, CA: Demolition and abatement of a 12-story structure located at the famed Hollywood and Highland intersection in Los Angeles, California.

• Medical Center Demolition, Los Angeles, CA: Demolition and abatement of the LAC-USC medical center.

• Multiple Building Removals, Los Angeles, CA: Demolition of over 40 structures on highly pedestrian populated areas to make way for the new Staples Sports Center located in Los Angeles, CA.

• Tyler Mall Expansion, Riverside, CA: Demolition of entire Mall Roof to allow for the addition of a second floor. Stores remained operational during normal business hours.

• Westminster Mall Expansion, Westminster, CA: Complete demolition of existing Food Court and Mall Commons Area. Stores remained operational during normal business hours.

• Demolition of Terminal, LAX, CA: Demolition of entire ticketing building and satellite building.` Excavation of connecting tunnel.

• Orange Crush 5/57/22 Freeway Interchange, Orange, CA: Demolition of 10 bridges and miscellaneous structures. Approximately 63,000 cy of concrete was handled during this project.

• Anaheim Stadium, Anaheim, CA: Removal of the Jumbo Tron and Scoreboard because of damage which occurred after the 1994 earthquake.

• Kaiser Steel California Speedway, CA: Demolition of all concrete structure to 3-ft below new grade. Approximately 130,000 cy of concrete was handled for this project.

• Port of Los Angeles, CA: Demolition of 2,500 linear feet of concrete and wood wharf and piers. Demolition of 300,000 square ft warehouse buildings.

• Silo Demolition, San Gabriel Mountains, CA: Demolition of 4 Nike Missel Silos for the Army Corps of Engineers.

• LA River Replacement, CA: Removal of a 400-ft long warren truss railroad bridge spanning the LA River.

• Hyperion Treatment Plant, C-117 Project, Playa Del Rey, CA: Demolition of all existing aeration and settling basins. Approximately 67,000 cy of concrete was handled during this project.

• Vernon Tower Project, CA: Demolition of 6-story warehouse and office complex with an overall footprint of 400,000 square feet resulting in 200,000 tons of crushed concrete.

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Chronology

1997 – present, Cleveland Wrecking Company, Covina, California, President
1992 – 1997, Penhall Company, Anaheim, California, Senior Project Manager
1977 – 1992, Power Breaking, Inc., Anaheim, California, Owner / President
1971 – 1977, Penhall Company, Anaheim, California, Estimator / Foreman

Contact Information

URS Resources, LLC
Cleveland Wrecking Company
628 East Edna Place
Covina, CA 91723
Tel: 626.967.9799
Fax: 626.967.1479
jim_sheridan@urscorp.com

URS

Marilyn Wade, P.E., LSP

Senior Project Manager

Overview

Ms. Wade is a registered Professional Engineer and Licensed Site Professional with a degree in Civil and Environmental Engineering. She has an extensive background in management of multi disciplinary projects, including hazardous waste site investigation and remediation, storage tank management, and solid waste management. With more than twenty-two years of experience, including six with the EPA, she has provided both technical expertise and project management for numerous environmental projects in the northeast.

To date, she has conducted or contributed to numerous MCP and federally-dictated response actions at a variety of disposal sites. She has provided comprehensive management of various projects that combine elements of hydrogeologic analysis, sediment, surface water and solid waste analysis, public health and environmental impact analysis, risk based corrective action, wetlands restoration, community relations, and technical enforcement. Ms. Wade provides essential contributions to high profile projects, including, for example:

Areas of Expertise

Waste Site Investigation and Remediation
National and Massachusetts Contingency Plans
Superfund Program and Process
Regulatory Compliance
DOD Installation Restoration and Base Closure
UST Management and Compliance and Leaking UST Response

Years of Experience

With URS: 10 Years
With Other Firms: 15 Years

Education

Bachelor of Science in Civil and Environmental Engineering, 1981, Clarkson University, Potsdam, New York

Registration/Certification

Licensed Professional Engineer, Maine, #5798
Licensed Site Professional, Massachusetts, #4513
U.S. EPA Master Remedial Project Manager Certification

Project Specific Experience

Licensed Site Professional

Licensed Site Professional of Record for PCB impacted industrial site. Project involves comprehensive investigation of soil, sediment and groundwater impacts from co-disposed solvent and PCB wastes, release abatement measures to address impacts, including non-aqueous phase liquids, and reporting and liaison to state and federal regulators to ensure compliance with the MCP, and federal regulations. Responsibilities also include preparation of Phase II through Phase IV submittals and preparation of technical specifications, extensive permitting, and contractor procurement and construction oversight.

Licensed Site Professional

Licensed Site Professional of Record for industrial site with historic petroleum and hazardous waste impacts and multiple Potentially Responsible Parties. Project involves investigation of sediment, soil and groundwater contamination and contaminant impacts on adjacent wetlands and surface water bodies. Responsibilities include coordinating with and reporting to regulators, providing field investigation and data evaluation, negotiating access and ensuring compliance with MCP, and completing Response Action Outcomes.

Licensed Site Professional

Licensed Site Professional of Record for marina property impacted with metals and PAHs. Project involves comprehensive investigation of soil, sediment and groundwater impacts, release abatement measures to address impacts, and reporting, permitting and liaison to state and federal regulators to ensure compliance with the MCP, and federal regulations. Responsibilities also include project management for a concurrent remedial

and maintenance dredging effort involving preparation of technical specifications, extensive permitting, contractor procurement and construction oversight.

Licensed Site Professional
Licensed Site Professional for multiple urban sites undergoing redevelopment. Projects involve real estate transaction assessments, IRA's, RAMS or comprehensive response actions to address surface and subsurface impact from urban fill or undocumented historic releases.

Senior Project Manager
Senior Project Manager for remedial design and remedial action at a Superfund site in New Bedford, Massachusetts. Project involves removal of PCB contamination in wetland soils, soil treatment, disposal, and wetland restoration. Responsibilities include development of design specifications and drawings, preparation of remedial action implementation plan, development of a comprehensive post closure operation and maintenance plan and analysis of compliance with applicable federal and state regulations. Responsibilities include serving as the supervising contractor and engineer of record, obtaining design approval, performing contractor procurement and fulfilling related construction management duties.

Project Manager
Project Manager for a variety of tank removals and replacements, including tank work at a major department store and a large-scale hospital. Projects involve tank removal, product disposal, fuel conversions, environmental sampling, LSP services and reporting.

Project Manager
Project Manager for a programmatic assessment of ASTs and USTs at multiple Massachusetts facilities for the Army National Guard. Project includes inspection tank testing and repair, and tank regulatory compliance assessment.

Environmental Auditor
Environmental auditor for community college in Massachusetts. Project involved comprehensive audit of two community college campuses for compliance with environmental, health and safety requirements. Responsibilities included reviewing client documentation, inspecting facilities including laboratories and physical plant and maintenance areas, advising facility staff on required improvements to their environmental management practices, and reporting.

Project Manager
Project Manager for technical oversight of a military base closure in Maine, providing technical recommendations and document review encompassing the fields of wetland mitigation, risk assessment, geology, hydrogeology, engineering and radioactive and hazardous waste remediation. Project involved the closure of a 9000 acre base, with remediation evaluated for over 30 individual sites grouped into over 13 separate operable units.

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Remedial Project Manager

Remedial Project Manager for high visibility Superfund site in Woburn, Massachusetts. Project involved an area contaminated by over a century of industrial use that was subsequently commercially developed. Contaminants included metals (arsenic, chromium and lead), and petroleum based volatiles (BTEX). Soils and groundwater contamination required implementation of a remediation plan at a cost of over $30 million. Responsibilities included negotiation and implementation of enforcement documents (consent decree and administrative orders), implementation of pre-design studies and remedial designs, and removal actions.

Remedial Project Manager

Remedial Project Manager for many additional Superfund sites in New England, providing both technical direction and enforcement support. Enforcement related duties included negotiating with potentially responsible parties, providing the technical basis of administrative and court actions, and monitoring regulatory compliance.

District Engineer

As district engineer for major oil company managed all retail facilities within district that encompassed New York, Vermont and western Massachusetts. Project involved providing engineering support during market withdrawal, including evaluation of facilities for real estate transfer. Duties included testing of over 500 petroleum underground storage tanks (USTs), tank repair and removal, UST spill response, investigation and remediation, and equipment and structural evaluations.

Professional Societies/Affiliates

Member, LSP Association
Member, Chi Epsilon Civil Engineering Honorary
Recipient, USEPA Bronze Medal for Commendable Service, 1989

Specialized Training

29 CFR 1910.120 OSHA 40-Hour Health & Safety Training, 1984
29 CFR 1910.120 OSHA Annual 8-Hour Refresher, 1985-1996

Chronology

URS Corporation, Senior Project Engineer, 1996 to Present
Brown and Root Environmental, Inc., Project Manager, 1991 to 1996
EPA, Remedial Project Manager, 1984 to 1990
Exxon Corporation, District Engineer and Underground Storage Tank Specialist, 1981 to 1984

Contact Information

URS Corporation
5 Industrial Way
Salem, NH 03079
Tel: 603-893-0616
Fax: 603-893-6240
marilyn_wade@urscorp.com

AEROVOX NTCRA - APPENDIX B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1

COMMUNITY INVOLVEMENT PLAN

Aerovox Non-Time Critical Removal Action
740 Belleville Avenue
New Bedford, MA 02745

December 2009

A. Overview of the Community Involvement Plan

This community involvement plan (CIP) describes and explains EPA's strategies to address the needs and concerns of community stakeholders affected by the Non-Time Critical Removal Action (NTCRA) at the Aerovox Site in New Bedford, Massachusetts. The NTCRA consists of demolition of the existing mill buildings, offsite disposal of the demolition debris and backfilling and capping of the Site. This CIP is designed to involve affected residents, abutters, and local citizen groups regarding the NTCRA activities at the Site. Informed stakeholder involvement is integral to the successful performance of the NTCRA. This CIP will also include participation by the City of New Bedford (the City) which will be performing the transportation and disposal of demolition debris, and AVX Corporation, the potentially responsible party (PRP) that will be performing the demolition and capping work at the Site.

The U.S. EPA New England office has primary responsibility for implementing the CIP; however, participation and involvement by City representatives and citizen groups are essential resources for the success of this CIP because they have the ability to help keep the broader surrounding communities informed. They may have additional knowledge of the Aerovox facility and/or hold visible positions of responsibility in the City, and can be considered other key points of contact.

This CIP briefly outlines the physical description and ownership history of the Aerovox Site, but its main purpose is to provide a description of the activities that are planned, some of which are already underway, to address the specific concerns and issues that apply to the community affected by the Site.

B. Site Description and Recent History

The vacant Aerovox plant located at 740 Belleville Avenue in New Bedford, MA, consists of an approximately 450,000 square foot former manufacturing facility located on approximately 10.3 acres of industrial-zoned land abutting the Acushnet River. From c. 1940 to c. 1978, PCBs were used at the facility in the manufacture of electrical capacitors. As a result of this manufacturing history, soil and groundwater at the Site as well as the mill facility itself are heavily contaminated with PCBs. The soil and groundwater are also contaminated with VOCs, most notably trichloroethylene and chlorobenzene.

In 1997, EPA conducted an inspection of the building and performed building and soil sampling, with Aerovox, Inc. (Aerovox), a prior owner of the Site, performing follow-up sampling. High levels of PCBs were identified throughout the interior of the building and in Site soils. Subsequent sampling found PCBs and VOCs in groundwater and PCBs mixed into the asphalt parking lot. In July 1998, EPA issued an Approval Memorandum to initiate the NTCRA process by having Aerovox perform an Engineering Evaluation/Cost Analysis (EE/CA) for the implementation of a NTCRA for the Site. The EE/CA was prepared by Aerovox's contractor and issued in 1998. The EE/CA and its

administrative record were made available for public comment in 1998, but no comments were received.

Aerovox entered into a RCRA Section 7003 Administrative Order on Consent with EPA in late 1999 in which Aerovox was required to, among other things, demolish the building and cap the entire Site. Interim measures were taken to protect workers in the building. However, the building was vacated in 2001 when operations were relocated to an alternative site in New Bedford. Aerovox subsequently filed for bankruptcy in June 2001 and the primary response actions required by the RCRA consent order were never implemented.

Since 2001, the facility has deteriorated and been subject to flooding, trespassing and vandalism. EPA performed a Time-Critical Removal Action in 2004 to remove drums and containers abandoned at the Site when Aerovox relocated and to perform general repair of the cap installed by Aerovox. From 2004 to 2008, EPA performed further sampling at the Site and found PCBs mixed into the asphalt parking lot, the continued presence of PCBs in groundwater, stormwater runoff and in building materials and elevated levels of airborne PCBs at the eastern end of the Site. A January 2005 Site Information and Preplan prepared by the New Bedford Fire Department describes the fire hazards posed by the manufacturing building, includes a fire plan as to how the Fire Department should respond to a fire at the building, and describes the existing fire suppression equipment in the building.

In April 2006, EPA issued a Supplemental EE/CA (SEE/CA) for public comment to update the costs of the NTCRA and to reflect Site activities and conditions since the 1998 EE/CA was issued, including the continuing deterioration of the facility and the significant potential for a fire. The SEE/CA also identified two new alternatives. Sixteen comments were received. See Aerovox Action Memorandum, Appendix A, Responsiveness Summary, for EPA responses to those comments.

For a comprehensive and detailed description of Site ownership, past Site activities, inspections and removal actions, please see Section II of the Aerovox Action Memorandum.

In the next section, a brief description of the community's concerns are provided and the steps taken thus far to include the community in the cleanup process.

C. Community Concerns and Involvement

When the EE/CA was issued for public comment in 1998, although no written comments were received, the immediate concerns involved protecting the workers at the Aerovox facility through interim safety measures, and the potential loss of business and employment at the Aerovox facility. Interim safety measures were taken to protect workers, and the City worked with Aerovox to relocate the company to the New Bedford Industrial Park.

EPA held a public information meeting in 2006 when the SEE/CA was issued for public comment. The meeting was well attended, including abutting residential and industrial property owners, as well as representatives from local neighborhood associations, the general public and the City. The main concerns raised at that meeting involved onsite disposal of contaminated building debris and air emissions during demolition activities. Industrial abutters also voiced concern regarding the potential for adverse impacts to their business and customers.

D. Community Relations Activities and Timing

Neighborhood Meetings
Every three to four months, or more often as requested, representatives from EPA, MassDEP and the City attend meetings with the two neighborhood associations closest to the Aerovox Site to provide the latest updates. These two groups are the Bullard Street Neighborhood Association and the Brooklawn Neighborhood Association. These neighborhood meetings are typically held once a month, are open to the public and cover a wide range of concerns of the nearby community. The Bullard Street Neighborhood Association meets the third Thursday evening of every month at the St. Anthony's Church on Nye Street in New Bedford. The Brooklawn Neighborhood Association meets the first Tuesday evening each month in the Brooklawn Senior Center in New Bedford. It is the intention that by attending these smaller public forums, information can reach a concerned group of citizens that may not necessarily attend the larger informational sessions hosted by EPA that are now held once a month at the New Bedford Public Library (see immediately below). These periodic neighborhood meetings will continue as needed, with participation from the City and AVX as appropriate.

Monthly EPA-Hosted Informational Sessions
On the last Thursday evening of each month, excluding holidays, EPA will continue to host an informational session at the New Bedford Public Library on Williams Street in New Bedford. These EPA-hosted meetings are used to provide informal or formal updates on the harbor cleanup as well as the Aerovox Site, and allow for public questions to drive the discussion as a way to provide the latest updates and information to the public. These updates include descriptions of activities completed, near and long-term plans, timelines for completion of activities, responses to significant community concerns and questions, next steps, public meeting announcements, and agency contacts with telephone numbers.

These meetings are open to all, handicap accessible, and translation services are provided for both Spanish and Portuguese given the prevalence of both languages in the New Bedford community. Advertisements for these meetings are posted in the *New Bedford Standard Times*, as well as the main Latino and Portuguese newspapers for New Bedford; *OJornal*, *El Latino Expreso* and *OJornal Brasileiro*. An e-mail list has been established for anyone who has ever attended one of these meetings and has requested to be put on our mailing list. Approximately two weeks before these monthly meetings an e-mail reminder is sent to this mailing list. EPA will continue to take the lead at these meetings, with assistance from the City, AVX and MassDEP as appropriate.

Press Releases
As the NTCRA reaches significant milestones (e.g., settlement finalization, start of work) EPA will issue press releases to the southern Massachusetts media outlets, including daily and periodical newspapers, radio and local television stations. EPA has and will continue to respond to questions from and provide information to reporters from the *Standard Times* and other local newspapers writing stories on activities at the Aerovox Site.

Door to Door
To ensure that anyone who is not on an e-mail list but living in close proximity to the Site will have access to all the information, EPA has and, time permitting, will continue to go door to door in the surrounding neighborhoods to pass out informational flyers and meeting notices.

Fact Sheets
In 2006 and 2008, EPA produced fact sheets on activities underway at the Aerovox Site. This frequency will likely be increased as the Site becomes more active through 2010. These updates are posted to EPA's Site-specific website (www.epa.gov/ne/nbh) as well as mailed out to the several hundred residents abutting the Aerovox Site. A mailing list of all affected community members has been developed for the purposes of sending newsletters, notifications, and other information to residents throughout the NTCRA process. This mailing list includes names and addresses of all residents immediately affected by the Aerovox Site, state, federal, and local agency project personnel, media contacts, and environmental and other community groups.

School Outreach
One of the concerns of nearby residents is the close proximity of certain schools to the Aerovox Site. There is concern regarding potential air quality issues, as well as whether or not the schools have a clearly defined evacuation plan should it become necessary. Meetings have occurred between public and private school officials, City officials and EPA to ensure that the school principals are aware of the potential need to evacuate in the event of a fire and take necessary steps to make sure a plan is in place. The City and EPA have identified the location and contact information for the schools and childcare and nursing facilities that are located within 3 miles of the Aerovox Site.

EPA has met more regularly with the Principal of the St Joseph – St Therese Elementary School located on Kearsarge Street in New Bedford which is the school closest to the Aerovox Site. There is a monthly school informational mailing packet that goes home to all parents, which EPA will make use of as a mechanism to distribute Site updates throughout the NTCRA.

Twitter.com
EPA New England will be using the Aerovox NTCRA as one of the first test projects that will be utilizing new social media web tools. Twitter, specifically, will act as one mechanism to report out daily and potentially hourly removal activities. Twitter allows

for short, frequent messages to be sent to anyone who signs up online through twitter.com to receive the updates. These messages can be retrieved online or by mobile phone, and are extremely accessible to anyone wishing to receive that information. Frequent messages will be necessary as concerns may increase once demolition begins. Twitter messages cannot exceed 140 characters in length at one time, but can be sent as often as there is information to report. As one example, the Boston Police Department has been extremely effective in utilizing Twitter to report road closures, safety messages, and any other information that is allowed for public distribution but might not otherwise be very accessible. For the NTCRA, EPA will aim to report items removed, brief sample results, progress day to day, possibly hourly, and all of this information will be reported out as it becomes available to EPA. An Aerovox Twitter ID will be created and EPA will facilitate the messaging to anyone in the public that signs up to receive updates.

Office Hours
During active onsite demolition activities, in collaboration with the City and MassDEP, EPA expects to hold regular "office hours" wherein concerned stakeholders can stop in and talk to EPA staff in person. The location of these office hours will likely be at EPA's nearby Sawyer Street facility. The exact time and place for these office hours will be advertised in advance.

Web
EPA expects to continue to use the New Bedford Harbor Site-specific web site (www.epa.govv/ne/nbh) which has a tab for the Aerovox Site on the front page, to post relevant information about the Aerovox NTCRA. This could include air and stormwater monitoring results, fact sheets, construction updates, etc.

Administrative Record
The Administrative Record for the NTCRA is a legal requirement. It is an indexed collection of pertinent materials including, among others, sampling and analysis reports, engineering evaluations, public comments and EPA's responses, agency decision documents and fact sheets. The Aerovox Administrative Record can be found in three locations: the New Bedford Main Library at 613 Pleasant Street, EPA's regional records center at 5 Post Office Square in Boston, and on the internet at www.epa.gov/ne/nbh.

Public Comment Period and Public Notice
As part of the forthcoming settlement for the Aerovox Site, EPA is required to solicit public comment on one aspect of the settlement: the compromise of "past costs" which was incorporated into the settlement in order to advance the Site cleanup. More specific information on this particular issue will be made available to the public at the appropriate time through public notice(s) and press release(s).

VACANT AEROVOX PLANT
NON-TIME CRITICAL REMOVAL ACTION
FINAL TSCA 40 C.F.R. § 761.61(c) DETERMINATION
ACTION MEMORANDUM - APPENDIX C

Consistent with 40 C.F.R. § 761.61(c) of the Toxic Substances Control Act (TSCA), a draft TSCA determination was issued for public comment as part of the April 2006 Supplemental Engineering Evaluation/Cost Analysis proposal for a Non-Time Critical Removal Action (NTCRA) at the vacant Aerovox plant in New Bedford, Massachusetts (Site). One comment was received specifically on the draft TSCA determination critical of a removal action that was not a final cleanup; and many comments were received that supported building demolition but did not support on-site disposal. As a result, after considering all comments received, EPA has issued an Action Memorandum that includes building demolition and off-site disposal of all demolition debris, including material regulated under 40 C.F.R. § 761. The Action Memorandum incorporates a Responsiveness Summary that responds more fully to these comments.

I have reviewed the Administrative Record for the PCB-contaminated Site and the Action Memorandum for the NTCRA. As required by § 761.61(c) of TSCA, I have determined that the NTCRA, as presented in the Action Memorandum, does not pose an unreasonable risk of injury to health or the environment as long as the following conditions are met:

1. Engineering controls described in the Action Memorandum for dust suppression shall be used during demolition, processing and capping activities, and air quality shall be monitored until backfilling is complete to ensure that air emission levels meet the air quality performance standards in the Action Memorandum.

2. Engineering controls described in the Action Memorandum for the collection and management of surface water runoff, dust suppression water and decontamination water shall be used during demolition, processing and capping activities to ensure that the PCB concentration in any surface water runoff, dust suppression water and decontamination water from the Site complies with the performance standards in the Action Memorandum before discharge.

3. To ensure compliance with items 1 and 2 of this determination, demolition waste processing activities shall be performed either in an enclosed environment or with sufficient engineering controls and air monitoring to ensure that air emission levels do not exceed the performance standards in the Action Memorandum. Further, stockpiles of demolition waste shall be situated on the asphalt parking lot or elsewhere as approved by EPA, and shall be securely covered until such stockpiles are loaded for off-site disposal. Hay bales or other erosion control devices and oil booms, as necessary, shall be placed around all stockpiles.

4. Once the NTCRA has been fully implemented, the Site shall be transferred to the Massachusetts 21E program to achieve a final cleanup. Such cleanup shall maintain at a minimum the conditions of this determination.

5. The cap described in the Action Memorandum, along with the existing hydraulic asphalt cement ("HAC") cap, shall function as a barrier to direct contact exposure to contaminated soils at the Site. During performance of the cleanup under the Massachusetts 21E program, response actions involving on-site sampling, excavations or the construction of remedial components which penetrate any of the capped areas shall be conducted in a manner protective of health, safety, public welfare, and the environment, and in accordance with the health and safety provisions of the Massachusetts Contingency Plan.[1] At the completion of the cleanup under the Massachusetts 21E program, any disturbed areas will be restored to meet, at a minimum, the capping requirements described in the Action Memorandum.

6. Upon the approval by the Massachusetts Department of Environmental Protection (MassDEP) of a Response Action Outcome (RAO) Statement or Remedy Operation Status (ROS) submittal pursuant to the Massachusetts 21E program, the cap described in the Action Memorandum, the HAC cap and any additional area capped pursuant to the Massachusetts 21E program (together, the "site cover") and the containment barrier shall be monitored and maintained as follows:

a. semi-annual site cover and containment barrier inspection (with results recorded concurrently in writing) for the first two years, annually thereafter;
b. annual site cover maintenance, or more frequently as necessary; and
c. seal coating every six years, or more frequently as necessary.

With respect to the portion of the site cover that may be covered with soil and plants as part of a shoreline greenway (the "riparian cover"), once construction of the greenway has been completed, the above maintenance requirements shall be replaced with the following:

(i) semi-annual inspection (with results recorded concurrently in writing) for the first two years, annually thereafter; and
(ii) annual maintenance, or more frequently as necessary, to ensure that damage to the riparian cover is repaired and that lost vegetation is replanted.

7. On an annual basis, an inspection and maintenance report with respect to the activities enumerated in item 6 of this determination will be prepared and submitted to EPA. This obligation may be satisfied by submission of an equivalent report prepared in accordance with the requirements of the Massachusetts 21E program, provided that the frequency of such report is not less than annual.

8. Groundwater shall be monitored annually as described in the Action Memorandum until a Phase II Comprehensive Site Assessment is initiated by the filing of

[1] 310 CMR 40.0018(1) and 310 CMR 40.0810(9).

a Tier Classification submittal under the Massachusetts 21E program and then every 5 years following the approval by MassDEP of a RAO Statement or ROS submittal pursuant to the Massachusetts 21E program, or more frequently as necessary. Following the approval by MassDEP of a RAO Statement or ROS submittal, groundwater monitoring wells shall be located in accordance with the response actions implemented pursuant to the Massachusetts 21E program.

9. Every ten years following completion of the cleanup undertaken pursuant to the Massachusetts 21E program, the groundwater monitoring wells utilized in the monitoring program implemented in accordance with item 8 of this determination shall be redeveloped.

10. Institutional controls shall be implemented to prohibit any use or contact with groundwater and to prohibit land use activities that would adversely affect the site cover or the containment barrier.

11. Every fifth year, the annual inspection and maintenance report submitted to EPA, in addition to summarizing the annual inspection and maintenance activities performed for the site cover and the containment barrier (and, if applicable, the shoreline greenway), shall also summarize the groundwater sampling results.

12. Any change in the use of the Site shall be designed, implemented and maintained, in a manner that maintains the conditions of this determination and the Massachusetts 21E program, to prevent exposure to any soil or groundwater contaminated with PCBs and any release of PCBs to the environment.

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

12/24/09
Date