



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
1 CONGRESS STREET, BOSTON, MA 02114



SDMS DocID 282618

DATE: December 11, 2007

SUBJ: Nuclear Metals, Incorporated Superfund Site - Approval to perform an Engineering Evaluation/Cost Analysis for a Non-Time Critical Removal Action

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THRU: Larry Brill, Chief
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TO: *JTO* James T. Owens III, Director *JTO*
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I. Subject

Investigations by the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MADEP) have determined that there has been a release of hazardous substances to the environment at the Nuclear Metals, Inc. (NMI) Superfund Site ("the site") in Concord, Massachusetts. The site was listed on the National Priorities List (NPL) on June 14, 2001, with the concurrence of the Governor of Massachusetts.

This memorandum documents the decision to proceed with an Engineering Evaluation/Cost Analyses (EE/CAs) for a non-time critical removal action (NTCRA) at the site. The EE/CA will address contaminated buildings and structures located on site. The main facility consists of five inter-connected buildings known as buildings A-E. Four smaller metal buildings known as the "butler" buildings are located in back of the facility and were used for a number of purposes from shipping and receiving to storage and handling of wastes. A tank house that stores hydrogen peroxide solution in tanks contaminated with depleted uranium and a gas cylinder storage shed are also located on the site property. The location and layout of the site buildings is shown in Figure 1.

In the spring of 2006, MADEP conducted a removal action, with proceeds obtained by the State through a settlement with the U.S. Army, which consisted of the removal of more than 3,800 drums and containers containing depleted uranium from within the facility. In May 2007, the Massachusetts Department of Public Health Radiation Control Program (MADPH-RCP) and

Starmet entered into a Consent Decree under which Starmet has agreed to permanently vacate the Site by October 31, 2007. An EE/CA is necessary to address the deteriorating facility building and its contents due to the threat that the building and its contents pose to public health or welfare or the environment.

EPA is in the process of conducting a Remedial Investigation/Feasibility Study to evaluate the full nature and extent of contamination at the site not addressed by the removal action by MADEP, other prior time-critical removal actions, or by the proposed EE/CA. EPA does not expect to expend federal funds for this EE/CA as this EE/CA will be performed by the PRP group pursuant to the RI/FS Administrative Order by Consent, signed on June 13, 2003. This EE/CA will address on-site contaminated buildings and their contents. Other areas of the site are currently being investigated as part of the ongoing RI/FS and will be addressed under future remedial actions, if necessary. The EE/CA will propose a range of alternatives, from monitoring and access controls (i.e. site security), to complete removal of building contents and building demolition. Removal of sub-slab materials is not part of the scope of this EE/CA but will be addressed via the RI/FS.

The decision to proceed with an EE/CA is consistent with EPA guidance regarding Superfund Accelerated Cleanup Model (SACM) early actions and the long-term remedial strategy for this Site to minimize both the exposure to and migration of contaminants into the underlying aquifer. This memorandum is not a final Agency decision regarding the selection of a response action for the site.

The EE/CA for the proposed NTCRA at the Nuclear Metals Superfund Site will be performed by the PRPs contractor with oversight by EPA. Therefore, federal funds for the performance of an EE/CA are not requested at this time. This is a PRP-lead site. In addition, EPA anticipates that performance of the non-time critical removal action would also be performed as a PRP-lead action.

II. Background

A. Site Description and History

The Nuclear Metals Superfund site is in Concord, Massachusetts. The company was formerly called Nuclear Metals, Inc, until 1997 when the company changed its name to Starmet. The 46-acre site is zoned light industrial and is surrounded by light commercial and residential properties and is part of the watershed drained by the Assabet River, which passes the site about 300 feet from its northern boundary. Bordering the site to the north is Main Street (Route 62), as well as commercial and residential properties, to the east and south is woodland and residential properties, and to the west is woodland and commercial and industrial properties. The site was originally purchased in August 1957, and has been occupied since March 1958.

The NMI site is situated at an elevation some 20 to 30 feet above the Assabet River, and has irregular topography consisting of a number of natural depressions, or "kettles", some of which are occupied by wetlands. Three of these depressions, each of which is located to the east of the five inter-connected NMI facility buildings, have historically been used as disposal areas: the holding basin, the sphagnum bog, and the cooling water recharge pond. The site was used for disposal of wastes, including wastes containing hazardous substances, from approximately 1958 to 1985. The plant was initially used for research and development activities under a succession of owners and operators. Manufacturing of depleted uranium and beryllium products started in the mid-sixties under the regulatory authority of the Nuclear Regulatory Commission (NRC). The production of depleted uranium products resulted in the discharge of by-products from the processes to an on-site unlined holding basin. These by-products include, but are not limited to: depleted uranium, copper, nitric acid, and lime. Volatile organic compounds (VOCs) used as solvents and degreasers were also discharged through floor drains to an on-site cooling water pond, resulting in contamination of an on-site supply well. For a brief time during the start of operations at the NMI plant, contaminated liquids and sludges from the holding basin were piped into the sphagnum bog.

Samples taken from the site indicate the presence of depleted uranium, polychlorinated biphenyls (PCBs), VOCs, extractable petroleum hydrocarbons (EPH), copper, beryllium, lead, and arsenic, and many other hazardous substances. Soil is contaminated with depleted uranium, copper, beryllium, lead, arsenic, and EPHs. Groundwater is contaminated with depleted uranium, nitrate, and VOCs. Surface water contamination exists in the on-site cooling water recharge pond (CWRP) where elevated depleted uranium and copper concentrations have been detected. Sediments in an on-site bog and the CWRP are contaminated with depleted uranium, PCBs and copper.

MADEP involvement in the site began in 1980 when an on-site potable water supply well was found to be contaminated with VOCs during a study of regional groundwater quality. It was determined that the facility floor drains were discharging to the cooling water recharge pond and the supply well was pulling in VOC-contaminated groundwater via the recharge pond. The floor drains were subsequently sealed in 1980. On recent site visits to the facility, EPA has noticed some floor drains that do not appear to be sealed, and appear to be collecting liquids that are spilled on the facility floor.

On February 12, 1988, MADEP issued a Notice of Responsibility (NOR) to NMI concerning the site. The NOR required NMI to provide a compilation, interpretation, and assessment of all environmental data concerning the site to MADEP; report on the status of and closure plan for the holding basin; and evaluate the need for a more extensive evaluation of the site. At the same time MADEP required investigations were underway, the NRC requested that a characterization report for the holding basin be prepared to

support the decommissioning of the holding basin, and a report was subsequently submitted to the NRC in February 1993. The report stated that the sludge in the holding basin contained approximately 400,000 pounds of depleted uranium (DU) and approximately 700,000 pounds of copper. The initial volume of the holding basin sludge and soils requiring removal based on NRC release criteria was estimated to be approximately 9,000 cubic yards. Before the excavation of the holding basin could be initiated, however, the NRC delegated its regulatory authority to the state of Massachusetts, and in 1997, MADPH-RCP assumed regulatory authority over Starmet's radioactive materials license for the radioactive material operations at the facility.

In 1997, Starmet, with MADEP and MADPH-RCP oversight, performed an initial excavation of 8,000 cubic yards of uranium-contaminated soil and sludge from the holding basin, which was disposed of at an off-site disposal facility licensed to accept low-level radioactive waste. The cleanup of the holding basin halted when Starmet determined that the cleanup level set by MADEP could not be met without excavating significantly more material, and funds that the Army provided under an "extraordinary" contractual relief decision in 1996, had been depleted due to increased disposal costs of the uranium and copper contaminated soils and sludges. Starmet's lack of progress and the limited resources of MADEP to handle a cleanup with state funds prompted DEP to request that the Starmet facility be listed on the National Priorities List, making it a Superfund site under federal authority. The NMI site was listed on the NPL in June 2001, with concurrence from the Governor of Massachusetts.

In May 2001, Starmet transferred approximately 1,700 drums of depleted uranium from its South Carolina facility to the Site. An inventory of stored drums revealed that approximately 3,800 drums and other containers of depleted uranium and hazardous materials were stored within the facility. Given Starmet's poor financial condition, in February 2002, EPA, MADPH-RCP, MA DEP, and the Town of Concord Police and Fire Department entered into a Multi-Agency Contingency Plan to address emergency response coordination at the site. Under this plan, the MADPH-RCP agreed to provide site security in the event that Starmet abandoned the site. (The MADPH-RCP has funds available for the provision of site security as a result of accessing Starmet's \$750,000 letter of credit, which was part of the financial assurance required for Starmet's radioactive materials license.) After Starmet indicated that it planned to cease operations or file for bankruptcy, the state obtained a preliminary injunction on January 25, 2002, requiring Starmet to maintain security and necessary utilities to ensure the safe maintenance of the stored drums. On March 15, 2002, Starmet was placed into temporary receivership by court order. On or about March 18, 2002, Starmet abandoned the Site property. The court receiver provided security and necessary utilities, with the assistance of MADPH-RCP, until, in April 2002, Starmet filed for Chapter 11 bankruptcy protection, returned to the facility, and resumed operations on a limited basis. In December 2002, Starmet's bankruptcy petition was dismissed by the Bankruptcy Court.

Starmet and several related entities continue to operate at the site and provide site security. Although Starmet continues to be licensed by MADPH-RCP, it is prohibited from engaging in activities involving manufacturing or production with radioactive materials. As indicated above, in May 2007, MADPH-RCP and Starmet entered into a Consent Decree under which Starmet has agreed to permanently vacate the Site

As part of the Preliminary Investigation/ Site Assessment (PA/SI), interviews of former employees, review of the site files, and geophysical surveys were conducted by EPA. Two discrete buried drum areas were identified from test pitting investigation conducted as part of the PA/SI. An Action Memorandum was signed in April 2002 authorizing the expenditure of federal funds for various removal activities, including: installation of a permanent fence around the buried drum area where local residents and a summer camp had direct access; capping of beryllium-contaminated soils overlying the same buried drum area; and lining of the holding basin with a temporary cover. The other buried drum area was already fenced and did not present an immediate risk to human health and the environment. This time-critical removal action work was completed in April 2003.

EPA signed an Administrative Order by Consent (AOC) on June 13, 2003 with three private parties, Whittaker Corporation, Textron, Inc., and MONY Life Insurance, and two federal parties, U.S. Army and U.S. Department of Energy, for the performance of a Remedial Investigation/Feasibility Study. Areas of concern at the site being addressed under the RI/FS include but are not limited to: a cooling water recharge pond, a sweepings pile, leachate septic systems, a sphagnum bog, and contaminated on-site soils surface water, and sediments.

Information collected from these various studies will be used in developing the EE/CA.

B. Nature and Extent of Contamination

As described above, several investigations have been performed and others are on-going at the site. Levels as high as 87,000 ug/l uranium have been detected in groundwater monitoring wells on site. Groundwater monitoring results to date indicate that uranium-contaminated groundwater is still within site boundaries, which is believed is due in part to the slow movement of uranium once it reaches the groundwater. Groundwater is not being used as drinking water source and all residences are connected to public water supply, however, the on-site aquifer is classified as a potentially productive aquifer. Discharge of contaminated groundwater and contaminated surface water runoff has the potential to reach the Assabet River, which is located approximately 300 feet downgradient from the site boundary.

The fencing and capping of the buried drum area and the lining of the holding basin has limited direct human exposure to contaminated surface soil and slowed the continuing

migration of contamination into the groundwater. Both the holding basin and the other buried drum area have been fenced for many years to limit the direct contact threat from high levels of uranium in the holding basin. As part of the RI/FS investigations, the buried drums next to the holding basin were removed to determine the nature and extent of contamination in this area and the area of the cooling water recharge pond. These buried drums and associated soils were shipped off site for disposal. The contaminated sub-surface soil in the saturated zone directly underneath the holding basin contains up to 650 mg/kg uranium, and as a result of the capping, the source of contamination to the groundwater will be reduced. Surface soils throughout the site contain an average of 50-100 mg/kg uranium, and drainage pipes from the facility to the holding basin have contributed to subsurface soil contamination upwards of 1,000 mg/kg uranium. Total EPH samples collected underneath the foundation of the facility were found to reach levels as high as 100,000 mg/kg. VOC groundwater contamination has decreased from the sealing of certain floor drains to almost non-detect from a high of 9,800 ug/l trichloroethane in 1980; however, a full assessment of VOC migration off-site has not been completed to date.

Due to the historical lack of maintenance of the drain lines from the facility, it is believed that substantial contamination exists under the facility foundation, and with the large amount and size of the equipment and machinery in the facility, sub-slab investigations will be difficult if not impossible without the removal of the equipment and machinery from the facility. Large cracks exist within the facility foundation as well, providing a conduit for contamination within the facility to reach the subsurface. The facility buildings are severely contaminated with depleted uranium and other hazardous substances. Contamination levels on the floors and walls of the facility range from 4,000 dpm/100cm² to over 4,000,000 dpm/100cm². MADPH's unrestricted release criteria of 10 mrem/yr equates to a residual surface contamination level of approximately 40dpm/100cm². High levels of contamination are also found on the roof of the facility building.

The facility buildings are in a state of disrepair, including but not limited to: contaminated roofs that are severely leaking in all of the five interconnected buildings, water from the roofs of the buildings coming into contact with poorly maintained electrical wiring, contaminated floors, and equipment; the presence of contaminated equipment remaining within the facility; and a fire suppression system that has not been fully tested despite the fire department's requests. A small fire occurred at the facility on June 26, 2007. There are also many miscellaneous containers of flammable and hazardous substances present in the building containing hydrofluoric acid, sulfuric acid, hydrochloric acid, acetone, sodium hydroxide and other substances. EPA expects to remove the miscellaneous containers from the site as part of a time-critical removal action, unless the Concord Fire Department is able to ensure that these containers are removed from the site without EPA assistance.

Finally, after Starmet vacates the site, there will be no security guards present at the site as well as no one operating the vital on-going building systems, including the electrical system needed for the fire alarm; the heating system to prevent ice from accumulating on the deteriorating roofs of the buildings; and the sonodyne system which treats contaminated water collected from within the building.

III. Threat to Public Health, Welfare, or the Environment

Section 300.415(b)(2) of the National Contingency Plan (NCP) lists a number of factors for EPA to consider in determining whether a removal action is appropriate, including:

- (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 or the environment.

An evaluation of the conditions at the Nuclear Metals Superfund Site conclude that factors (I), (ii), (iii), (iv), (v), and (vii) are applicable as described below.

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

High levels of uranium and beryllium contamination have been found within deteriorating roof-

top ventilation equipment and on the surfaces of the buildings and their contents. Currently, runoff from the highly contaminated roofs is untreated and drains directly into the cooling water recharge pond, which has levels upwards of 200 mg/kg of uranium in the sediment. Further deterioration of the roofs and other structural components of the buildings or unauthorized or unintentional (e.g. tracking out on clothing or shoes) removal of contaminated materials could potentially expose nearby human populations, animals, or the food chain through contaminant migration. In addition, if access to the buildings and their contents is not sufficiently restricted, this could result in exposure to the human population from hazardous substances including radioactive waste should they come into contact with these materials or if these materials are intentionally or unintentionally removed from the site. Animals (such as mice, rats, raccoons and birds) also may come into contact with hazardous substances, including radiological waste, at the site.

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

There is the potential for releases from within the buildings to an existing network of drain lines or to sub-slab soils through floor cracks could affect groundwater. It is likely that unsealed cracks in the facility floors and sumps in the foundation have been pathways for migration of the contamination into the groundwater. Site groundwater is contaminated at levels exceeding the MCLs. In addition, precipitation runoff from the highly contaminated roof ventilation systems could potentially further contaminate the groundwater. Although the nearby residents are connected to local water supplies, the underlying aquifer is a potentially productive aquifer, and has been contaminated with depleted uranium and other hazardous substances due to the operational practices at the facility.

The sphagnum bog, and on- and off-site wetlands represent a sensitive ecosystem at the site. Numerous media in this ecosystem have been affected by contamination: sediment, surface water, soil, and wetland areas. Although an ecological risk assessment has not yet been conducted at the site, numerous birds and animals have been observed at the site by EPA. These ecological receptors would likely be damaged by exposure to the types of hazardous substances found within the facility buildings.

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

Although the MADEP has removed more than 3800 drums and containers of depleted uranium, there are still numerous containers, tanks, and miscellaneous equipment that are contaminated with depleted uranium, beryllium and other hazardous substances. Two examples of this are as follows: in building C, a concrete pit is located beneath a 1400 ton extrusion press, and contains an estimated 10,000 gallons of liquid, which consists of water collected from the leaking roof, waste oil, and depleted uranium sludge; and, building E contains numerous above ground storage tanks that contain approximately 20,000 gallons of used machine coolant presumed to be

contaminated with depleted uranium. Beryllium waste drums are currently being stored in building E as well, however, it is unknown whether the current operators of the facility intend to dispose of this waste or abandon it in place. Given the deteriorating condition of the buildings, these materials may pose a threat of release. Numerous small containers of flammable liquids are also present throughout the buildings, posing an increased fire risk. The widespread storage of flammable liquids poses an increased fire risk that also may lead to a catastrophic release of some or all of the hazardous substances. Although EPA currently expects to remove these containers from the site as part of a time-critical removal action, the containers are present at the site at this time.¹

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

Initial survey results confirm that certain areas of the concrete floors have high levels of radiological contamination (i.e., two readings of the floor in building D were 1,690,000 dpm/100cm² and 3,326,000 dpm/100cm² compared to MADPH's criteria of 40 dpm/100cm² for unrestricted release). This suggests that there is a high potential for the underlying soil to become impacted. The foundation covers most of the contaminated soils underneath the building. However, there is a potential for mobility of the contamination within the buildings into the sub-slab soils due to rainwater infiltration into many of the buildings through the deteriorating roofs, and the numerous cracks in the foundation promote the migration of these contaminants into the sub-slab soils. Migration of uranium and other hazardous substances is also evidenced by a long-term groundwater monitoring program that shows continued contamination of on-site groundwater.

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

The buildings are in deteriorated condition, with numerous roof leaks and areas of the roof that are decayed to such an extent that they cannot be accessed due to the potential for breakthrough. Highly contaminated ventilation systems are on the roofs, so that collapse or material degradation could lead to release and/or migration through roof drains to wetlands and /or into the underlying soils and groundwater. A roof evaluation that was performed in 2004 determined that a lack of maintenance for a protracted period could lead to sufficient deterioration that collapse or partial collapse of roofs/buildings is possible. In addition, runoff of water that comes into contact with the contaminated roof ventilation systems likely leads to the further spread of contamination to

¹ No action memo has been issued as yet, although EPA has issued notice letters to the PRPs, inviting them to remove the flammable and hazardous materials from the site.

the cooling water recharge pond, where runoff water is discharged.

(vi) Threat of fire or explosion-

There are flammable liquids (numerous small containers located throughout the facility and in the facility's two laboratories), and gas cylinders located throughout the facility. EPA currently expects to remove these containers from the site as part of a time-critical removal action, as stated above. In addition, there are large volumes of combustible material (hundreds of boxes filled with historical documents), and equipment such as the centerless grinder, as well as other equipment, that may contain depleted uranium powders and sludge, which may become pyrophoric if it is divided finely and completely dries out. Therefore, a risk of fire at the site exists, which is further exemplified by the fire that occurred on June 26, 2007.

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

Funding for the RI/FS is available per an Administrative Order by Consent (AOC) with two private parties and the U.S. Army and the U.S. Department of Energy. EPA does not expect to expend federal funds for this EE/CA as this EE/CA will be performed by the PRPs pursuant to the RI/FS AOC, signed on June 13, 2003. EPA also expects to negotiate with the PRPs for the performance of the NTCRA. Due to the potential high costs associated with the NTCRA, there are likely no state response mechanisms available with sufficient funding to perform a non-time critical removal action to respond to the threat posed by the facility buildings. The MADPH-RCP does have some monies recovered from Starmet's letter of credit which was part of the financial assurance required for Starmet's radioactive materials license, however, those funds are less than \$750,000, and will not be sufficient to address any alternatives proposed in the EE/CA. Thus, CERCLA authority appears to be the only appropriate available mechanism to respond to this release.

(viii) Other situations or factors that may pose threats to public health or welfare or the environment -

A large quantity of PCB-containing ballasts and transformers are located within the building. PCBs have been detected in media outside of the buildings in areas where floor drains are known to have discharged. The presence of PCB containing materials within the buildings, and significant concentrations at drain discharges suggests that building drain lines will also contain PCBs. In addition, as mentioned above, the facility buildings also represent a fire and explosion risk, as evidenced by a small fire that occurred at the facility on June 26, 2007. Furthermore, the facility is in a state of disrepair, and severely leaking contaminated roofs coming into contact with poorly maintained electrical wiring, contaminated floors, and equipment as well flammable and combustible hazardous materials remaining within the facility pose a significant threat to public health or welfare or the environment.

Based upon the NCP factors previously listed, a current or potential threat exists to public health or welfare or the environment due to the release or threat of release of hazardous substances into the environment. A NTCRA is therefore appropriate to abate, prevent, minimize, stabilize, mitigate, or eliminate such threats. In particular a NTCRA is necessary to remove, control or contain the risk from the potential exposure to the release of hazardous substances from the Site. The NTCRA will remove, control or contain the risk of potential exposure to contaminated materials within, and releasing from, the facility.

This removal is designated as non-time critical because more than six months planning time is available before on-site activities must be initiated. Prior to the actual performance of a non-time critical removal at this Site, Section 300.415(b)(4) of the NCP requires that an engineering evaluation/cost analysis (EE/CA) be performed in order to weigh different response options.

IV. Endangerment Determination

There may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the site.

V. Scope of the EE/CA(s)

The purpose of the EE/CA(s) will be to evaluate alternatives for response measures to the contaminated soil and buried drums at the site. The EE/CA will consider alternatives which meet the following general removal action objectives:

- * Prevent, to the extent practicable, human exposure to contaminated equipment and materials in the facility, or releasing into the environment from the facility. The greatest threat of release is in the event of a fire or a partial or complete roof collapse;
- * Prevent, to the extent practicable, the risk of fire to existing building structures and their contents;
- * Prevent, to the extent practicable, direct contact with, ingestion of, and inhalation of contaminants present within the buildings by trespassers or other humans that may become exposed to contaminants within the building as a result of a fire or roof collapse.

Pursuant to EPA guidance on EE/CAs, alternatives will be evaluated based upon effectiveness, implementability, cost and compliance with ARARs to the extent practicable. The alternatives that will be proposed in the EE/CA range from monitoring and access controls (i.e., site security) to removal contaminated equipment and hazardous materials from the facility buildings and demolition of the buildings. Demolition of the buildings would not include the removal of concrete slabs and foundations within the buildings --slabs and foundations would remain in

place so as not to disturb potentially-contaminated underlying soil and a temporary cap would be installed over the slabs to inhibit rainwater infiltration while the sub-slab soils are investigated as part of the RI/FS. It is estimated that any alternatives to address contamination within the facility other than no action will exceed \$2 million dollars and therefore they will be evaluated to determine their consistency with future remedial actions to be taken at the Site. It is important to note that the buildings are in a state of disrepair and, in all probability, will require demolition, if not under a NTCRA, then under the final remedial action for the site. Further information regarding the consistency of the NTCRA with future remedial actions at the site is discussed in section VIII, below.

In developing the range of alternatives to be evaluated in the EE/CA, EPA will consider 300.415(d) of the NCP as well as relevant guidance.

VI. Enforcement Strategy

As indicated above, the EE/CA will be performed by the Respondents pursuant to an Administrative Order by Consent for performance of an RI/FS and EE/CA(s), which became effective on June 13, 2003. This is a PRP-lead site. EPA anticipates that performance of the non-time critical removal action would be performed on a PRP-lead basis.

VII. Estimated Costs

Costs associated with the preparation of the EE/CA(s) described above, including community relations activities and development of an Administrative Record, are expected to be approximately \$500,000, and are being paid for by the PRPs under the existing RI/FS agreement. Based upon preliminary PRP estimates, costs associated with the most expensive option for the complete removal of the buildings' contents and demolition of the facility is estimated to be in the range of \$60 to \$65 million. Another option would consider removal of the contaminated equipment from the buildings and stabilization of the facility for later demolition, at a cost of approximately \$39 million. Removal of the concrete slabs and foundations is not part of the scope of the EE/CA. These costs could be significantly impacted positively or negatively by the volume of material and/or equipment that may require disposal as radioactive or mixed waste.

The EE/CA for the proposed NTCRA at the Nuclear Metals Superfund Site will be performed by the PRPs contractor with oversight by EPA. Therefore, federal funds for the performance of an EE/CA are not requested at this time. This is a PRP-lead site. EPA anticipates that performance of the non-time critical removal action would be performed on a PRP-lead basis.

VIII. Other Considerations

The proposed NTCRA is consistent with the anticipated remedial actions to minimize exposure to and migration of contaminants. The data collected to date by the removal and remedial

programs documents that the nature of the threat at the site requires a remedial response consistent with the proposed NTCRA(s).

The proposed NTCRA is one part of a phased approach to address concerns at the Nuclear Metals Superfund Site. The other components are (1) a time-critical removal action conducted in 2002 including: installation of a permanent fence around an area containing buried drums where local residents and a summer camp had direct access; capping of beryllium-contaminated soils overlying the same buried drum area; and lining of the holding basin with a temporary cover; (2) a MADEP removal action that has addressed the 3,800 stored drums and containers of depleted uranium in the facility through an agreement reached with the U.S. Army; and (3) the five-year phased RI/FS which will fully characterize the site, followed by implementation of the selected remedy. In response to the recent fire, EPA currently expects to perform a time-critical removal action for certain flammable and hazardous materials currently being stored within the buildings.

The State of Massachusetts supports an early action at this site.

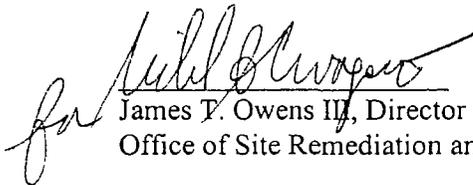
IX. Headquarters Consultation

In accordance with the national guidance document "Use of Non-Time Critical Removal Authority in Superfund Response Actions", dated February 14, 2000, EPA Region 1 has consulted with the Office of Superfund Remediation and Technology Innovation (OSRTI) and the Office of Emergency Management (OEM) based on the anticipated cost of the NTCRA being greater than \$6 million. Furthermore, due to the potential high cost of the NTCRA, the National Remedy Review Board reviewed the preliminary options and costs for performing a NTRCA, and provided recommendations to EPA Region 1 in the spring 2007.

X. Recommendation

Ongoing investigations have determined that there has been a release of hazardous substances to the environment. Additionally, the conditions at the site meet the NCP Section 300.415(b) criteria for a removal. Consistent with Section 104(b) of CERCLA and NCP Section 300.415(b)(4), further investigation is necessary to plan and direct the future removal action. We recommend your approval of this request to perform an EE/CA at the Nuclear Metals Superfund Site. The total estimated cost the PRPs will incur for performing the EE/CA is \$500,000.

12-12-07
Date


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

