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

DATE: September 26, 2002

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

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I. Subject

Investigations by the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) 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 June14 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 soils in the holding basin which is located on site. A voluntary action under the DEP 21E program conducted by Nuclear Metals, (now known as Starmet Corporation), resulted in the excavation, transportation, and disposal of approximately 8,000 cubic yards of radioactively-contaminated soil from the holding basin. The DEP soil cleanup level of 20 mg/kg has not been attained to date due to Starmet's inability to further fund the cleanup.

EPA has also conducted a Preliminary Assessment/Site Investigation (PA/SI) which determined that two distinct areas within site boundaries contain buried materials that warrant a non-time critical removal action. Therefore, an EE/CA for the buried drums may be prepared separately or as a component of the holding basin EE/CA.

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.

II. Background

A. Site Description and History

The Nuclear Metals Superfund site is in Concord, Massachusetts. The current owner/operator 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 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 Atomic Energy Commission (AEC), and later under the 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 included, but were 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 period of 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, VOCs, extractable

petroleum hydrocarbons (EPH), copper, beryllium, lead, arsenic, titanium, thorium, molybdenum, and zirconium. Soil is contaminated with depleted uranium, copper, beryllium, lead, arsenic, and EPHs. Groundwater is contaminated with depleted uranium, nitrate, and VOCs. Surface water contamination is not well characterized at this time; however, elevated depleted uranium and copper concentrations have been detected. Sediments in an on-site bog are contaminated with depleted uranium, EPH, and copper.

DEP 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. A groundwater monitoring program was then instituted to: identify the source(s) of contamination to the supply well; estimate the physical characteristics of the aquifer system from which the supply well draws water; and determine methods for removal of the contamination source. 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.

In 1981, the Concord Board of Health (BOH) required NMI to implement a formal groundwater monitoring program to evaluate groundwater quality at the site on an ongoing basis. Semi-annual groundwater monitoring was conducted by an NMI contractor, Goldberg, Zoino, and Associates, Inc. (GZA), from 1981 until 1999. Since that time, a number of studies have been conducted at the site for various media of concern and for numerous regulatory authorities. In 1983, as a condition of a groundwater discharge permit issued to NMI for the cooling water recharge pond, DEP required the monitoring of groundwater upgradient and downgradient of the pond. In 1984, the Concord BOH required NMI to study the extent of metals migration in the soils around the holding basin. Results of the study indicated that concentrations of uranium, beryllium, and copper were significantly higher around the holding basin than in background locations. In 1985, NMI began a closed-loop recycling process for the depleted uranium by-product which eliminated the need for the holding basin; the basin was then capped with a hypalon cover in 1986.

On February 12, 1988, DEP issued a Notice of Responsibility (NOR) to NMI concerning groundwater quality at the site. The NOR required NMI to provide a compilation, interpretation, and assessment of all environmental data concerning the site to DEP; report on the status of and closure plan for the holding basin; and evaluate the need for a more extensive evaluation of the site. In April 1988, GZA issued a report entitled "Assessment of Water Quality, Nuclear Metals, Inc." to address the requirements of the NOR. In 1989, the NMI site was classified as a "priority" disposal site under the original MCP. Further revisions to the MCP would classify NMI as a Tier 1A site. Under the provisions of the MCP, a Phase II Comprehensive Site assessment was initiated in 1992 with the DEP approval of the scope of work. Three separate reports were developed in support of the Phase II Comprehensive Site Assessment: the Phase II Comprehensive Site Assessment Report, October 1994; the Supplemental Phase II Field Investigation Report, December 1996; and the Additional Phase II Field Investigation Report,

August 1998. At the same time the Phase II 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.

In 1997, Massachusetts became an NRC-Agreement State, and the Massachusetts Department of Public Health Radiation Control Program (DPH-RCP) assumed regulatory authority over Starmet's radioactive materials license for the radioactive material operations at the facility.

Shortly thereafter, in 1997, Starmet, with DEP and DPH-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. Pursuant to a 1996 Army Contract Adjustment Board decision granting "extraordinary"contractual relief to Starmet, the Army agreed to contribute about $6.5 million for the excavation of the holding basin. The cleanup of the holding basin halted when Starmet determined that the cleanup level set by DEP could not be met without excavating significantly more material. Given Starmet's poor financial condition and the state's limited resources, DEP requested that the Starmet facility be listed on the National Priorities list. The NMI site was listed on the NPL in June 2001, with concurrence from the Governor of Massachusetts.

In May 2001, to facilitate the sale of its South Carolina facility, Starmet transferred approximately 1,700 drums of depleted uranium from its South Carolina facility to the Site. EPA later found out that Starmet had been storing drums of depleted uranium or other hazardous waste at the facility for some time. An inventory of stored drums revealed that approximately 3,800 drums and other containers of depleted uranium and hazardous materials (including the 1,700 drums shipped from South Carolina to the site) were stored within the facility. Given Starmet's poor financial condition, in February 2002, EPA, MA DPH, 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 DPH-RCP agreed to provide site security in the event that Starmet abandoned the site. (The DPH-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 DPH-RCP, until, in April 2002, Starmet filed for Chapter 11 bankruptcy protection, returned to the facility, and resumed operations on a limited basis.

As part of the potentially responsible party (PRP) search and a 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 initially identified: Area 1 which is located near the cooling water recharge pond, and Area 2, which is located above the sphagnum bog in the "old landfill" area (see Figure 1). A test pitting investigation conducted as part of the PA/SI in the two buried drum areas confirmed that buried drums were present in both areas, and found that Area 2 also contains laboratory equipment and building materials. Additional sampling of the holding basin soils was performed by EPA in September 2001, and lysimeter sampling for pore-water concentrations to determine the leachabilty of uranium from the soil to the groundwater was conducted in May 2002. EPA also performed a round of groundwater sampling on all on-site wells in June 2002. Other areas of concern at the site, including a cooling water recharge pond, a sweepings pile, leachate septic systems, a sphagnum bog, and contaminated on-site soils, will be investigated as part of a Remedial Investigation and Feasibility Study. EPA is currently negotiating with the U.S. Army, U.S. Department of Energy, Whittaker Corporation, Textron, Inc., and MONY Life Insurance, for the performance of a Remedial Investigation/Feasibility Study (RI/FS). In conjunction with the RI/FS, EPA is anticipating that one or more Engineering Evaluation and Cost Analysis (EE/CA) will be developed to determine the best method to remediate the holding basin and the buried drums. EPA is also actively negotiating with the Army for the removal of the 3,800 stored drums inside the facility.

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 buried drum Area 2 where local residents and a summer camp had direct access; capping of beryllium-contaminated soils overlying the same buried drum area; lining of the holding basin with a temporary cover; and a provision for site security in the event Starmet abandons the facility. The planned completion date of this work, except for the provision of site security, is December 2002.

Information collected through these various studies will be used in developing the EE/CA(s).

C. Nature and Extent of Contamination

As described above, several investigations have been performed and others are on-going at the site. Continued release of radioactive and hazardous substances from the holding basin soils to on-site groundwater has been documented through these various studies. The most recent holding basin soil study conducted in September 2001 revealed that the depleted uranium is moving through the soil into the groundwater, and levels as high at 1,100 mg/kg still exist in the holding basin soils. Levels as high as 87,000 ug/l uranium have been detected in groundwater monitoring wells directly downgradient of the holding basin. Historical groundwater monitoring results 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.

Extensive study of the buried drum areas has not been performed to date. Notwithstanding, preliminary investigations have found that high levels of heavy metals such as beryllium and lead are present within and around the drums. Through interviews with former employees and review of the site files, information on the buried drums was obtained by EPA. Former employees provided pictures showing the 1968 disposal of approximately 70 drums between the holding basin and the cooling water recharge pond (Area 1 (see Figure 2). Drum burial Area 2, historically called the "old landfill", is located to the south of the sphagnum bog. During removal test-pit investigations, laboratory equipment and building material was observed to be buried in Area 2 along with numerous drums; however, the number of drums disposed of in this area is still unknown. Sampling and analysis of the contents of a few drums in these areas revealed one of the drums in Area 1 contained 49,600 mg/kg beryllium, and drum debris in Area 2 had gamma readings of 800 uR/h, which is over 40 times background. Soils surrounding the drums contain up to 670 pCi/g, 45.8 pCi/g, and 780 pCi/g U234, U235, and U238, respectively; and up to 5,100 mg/kg beryllium, 2,580 mg/kg arsenic, and 3,440 mg/kg lead. DEP soil industrial category standards for these compounds are: beryllium, 3mg/kg; lead, 600 mg/kg; and arsenic, 30 mg/kg. DEP residential soil standards for these compounds are: beryllium, 0.4 mg/kg; lead, 300 mg/kg; and arsenic, 30 mg/kg. There are no state soil standards for uranium; however, EPA's soil screening level for uranium in soil is 0.12 pCi/g, (0.36 mg/kg), based on the leaching of contaminated soil to groundwater at the MCL of 30 ug/l for uranium.

Recent fencing and upcoming capping of buried drum Area 2 and the lining of the holding basin will limit direct human exposure to contaminated surface soil and slow the continuing migration of contamination into the groundwater. Both the holding basin and buried drum Area 1 have been fenced for many years to limit the direct contact threat from high levels of uranium in the holding basin. Nevertheless, contaminated sub-surface soil in the saturated zone directly underneath the holding basin contains up to 650 mg/kg uranium, and as a result, is continuing to provide a source of contamination to the groundwater. The buried drums and surrounding soils, albeit not well characterized, do contain radioactive and hazardous substances, and therefore can be a contributing source to site contamination. Sediments in the sphagnum bog contain up to 498 mg/kg uranium, and the cooling water recharge pond sediments contain upwards of 200 mg/kg uranium. 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 the floor drains to almost non-

detect from a high of 9,800 ug/l trichloroethane in 1980; however, an assessment of VOC migration off-site has not been conducted to date.

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 -

With regard to actual or potential exposure to nearby human populations, EPA has documented elevated levels of contaminants including depleted uranium and beryllium in numerous areas at the Site which could result in human exposure. Elevated levels of beryllium have been found in surface soils in areas that were not, until recently, prohibited from public access. Elevated levels of beryllium in surface soil include concentrations above the state industrial soil standard of 3

mg/kg, and residential soil standard of 0.4 mg/kg. The soil screening level for uranium in soil is 0.12 pCi/g, (0.36 mg/kg), based on the leaching of contaminated soil to groundwater at the MCL of 30 ug/l for uranium. EPA's time critical removal activities include: the installation of a fence where known areas of beryllium and uranium soil contamination (Area 2) were directly accessible to nearby residences and a children's day camp; the placement of temporary cap over the contaminated soil in Area 2 to reduce infiltration and surface water runoff; and the lining of the holding basin to lessen the contribution of uranium-contaminated soil to the source of groundwater contamination, and to reduce contaminated fugitive dust from the holding basin. These are all temporary measures, however, and will ultimately fail if no further action is taken. The buried drum areas could also be significant contributors to the groundwater contamination based on preliminary findings. If necessary, a further extent of contamination study as part of an EE/CA will be performed on the buried drums to determine the impacts to groundwater.

With regard to actual or potential exposure to animals or the food chain, there are documented elevated levels of uranium in the sphagnum bog, an ecologically sensitive area on site. Wetlands adjacent to the Assabet River were not tested for uranium, but historical data indicates contamination was reaching a wetland tributary to the Assabet, because copper concentrations have been as high as 198 mg/kg in sediments, and surface water runoff outfall pipes that discharge near the wetland have shown levels of uranium concentrations in sediments as high as 45 mg/kg. Although animal/food chain studies have not been conducted, there is potential for exposure of animals or the food chain to hazardous substances or pollutants or contaminants. As explained above, elevated levels of hazardous and radioactive substances have been found in surface and subsurface soils, sediment, and surface water. All of these areas are natural habitat for numerous species of plants and animals (ecological receptors). Although interim caps may temporarily prevent access to certain surface soils at the site, fences do not restrict animal access to contaminants.

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

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 at the site.

(iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release - There is evidence in historical records, interviews of former employees, and geophysical surveys that buried drums and other waste material are present in two locations on the site property (see Figure 1 for buried drum locations and Figure 2 for 1968 photo of drum burial Area 1). Several drum carcasses were unearthed by EPA during the removal assessment in both drum burial areas. Buried drums and waste material

may be leaching contaminants into the on-site groundwater, sphagnum bog, and cooling water recharge pond.

(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate - High levels of hazardous substances have been found in soils largely at or near the surface of the site. These soils are in areas subject to erosion by storm water runoff, as evidenced by sediment contamination in the sphagnum bog and the wetlands adjacent to the surface water outfall pipes. Migration of uranium and other hazardous substances from the holding basin is 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 site surface soils are subject to the elements. The contaminants in the soil have migrated to the groundwater, and may migrate to areas off site via wind or erosion. The site is part of the watershed drained by the Assabet River, which passes the site about 300 feet from its northern boundary, and historical sampling indicates that some contaminants may have migrated off site via storm water runoff. These weather conditions have caused and will continue to cause the migration of contaminated soil at the site into the Assabet River, and particularly from those areas which are not covered by an interim cap into the bog.

(vii) The availability of other appropriate federal or state response mechanisms to respond to the release - EPA is currently actively involved in negotiations with the U.S. Army and the U.S. Department of Energey, as well as three other private PRPs, for the performance of an RI/FS which includes the performance of one or more EE/CA(s) at the site. There are no state response mechanisms available with sufficient funding to respond to the release.

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, NTCRAs are necessary to remove, control or contain the risk from the potential exposure to the release of hazardous substances from the Site. The NTCRA(s) will remove, control or contain the risk of potential exposure to contaminated soils in the holding basin, and any drums and associated contaminated soils in drum burial Areas1 and 2.

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 soils in the holding basin via fugitive dust or migration of contaminants to the groundwater; and

* Prevent, to the extent practicable, continued environmental impacts and human exposure to contaminated soils and buried drums in two discrete areas on site.

Pursuant to EPA guidance on EE/CAs, alternatives will be evaluated based upon effectiveness, implementability, cost and compliance with ARARs to the extent practicable. Further, alternatives which exceed $2 million dollars will be evaluated to determine their consistency with future remedial actions to be taken at the Site.

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.

EPA may decide to do one or two EE/CA(s) based upon the above objectives. The first EE/CA will evaluate options to address the contaminated soils in the holding basin, since most of the data necessary to conduct an EE/CA has already been obtained. If the preliminary assessment of the buried drum areas indicates that the data collection necessary to perform an EE/CA on the buried drums is limited to an extent that a delay of the EE/CA would not be incurred, these areas may be included in the EE/CA for the holding basin. If, conversely, it is determined that a full extent of contamination will be necessary for the buried drum areas prior to the performance of an EE/CA, a separate EE/CA may be performed for the buried drums so as not to delay the holding basin EE/CA.

VI. Enforcement Strategy

On or about February 20, 2002, EPA mailed Special Notice of Potential Liability letters to six Potentially Liable Parties (PRPs): Starmet Corporation, U.S. Army, U.S. Department of Energy, Whittaker Corporation, Textron, Inc., and MONY Life Insurance Company. EPA is currently actively negotiating the performance of an RI/FS and EE/CA(s) with all parties except Starmet Corporation, the owner of the site, which has filed for bankruptcy under Chapter 11. EPA has

perfected a lien on the Starmet property at 2229 Main street (the site) for the purposes of securing payment of costs and damages for which Starmet would be liable to EPA. EPA is also actively negotiating with the U.S. Army for the removal of the 3,800 drums and other containers of depleted uranium and other hazardous substances stored within the facility buildings.

VII. Estimated Costs

The EE/CA(s) for the proposed NTCRA(s) at the Nuclear Metals Superfund Site will either be performed by one or more PRPs with oversight by EPA or will be performed by EPA. If EPA performs the EE/CAs, they will likely be developed by an EPA contractor under the Response Action Contracts (RACs) program.

Extramural costs associated with the preparation of the EE/CA(s) described above, including community relations activities and development of an Administrative Record, is expected to be approximately $500,000. Based upon preliminary EPA estimates, costs associated with the removal action for the soil in the holding basin may be in $1 to $4 million range. An additional $2 - $4 million may be required to address the buried drums, contaminated laboratory and building material, and contaminated soil in drum burial Areas 1 and 2. The costs could be significantly impacted by the volume of soil that may require disposal as radioactive or mixed waste.

VIII. Other Considerations

The proposed EE/CA(s) will support NTCRA(s) that are congruent 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 NTCRA response consistent with the proposed EE/CA(s).

EPA is also actively negotiating with the U.S. Army and the Department of Justice for the timely removal of the stored drums and other containers of depleted uranium and other hazardous substances. In addition, EPA is also currently engaged in negotiations with several PRPs, including federal parties, for a four-year phased RI/FS which will fully characterize the site, followed by implementation of the selected remedy.

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

IX. 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 actions. We recommend your approval of this request to perform one or more EE/CA(s) at the Nuclear Metals Superfund Site. The

total estimated extramural cost of performing the EE/CA(s) is $500,000.

Sept 26, 2002
Date

Richard Cavagnero, Acting Director
Office of Site Remediation and
Restoration

NUCLEAR METALS, INC.
SUPERFUND SITE
Concord, Massachusetts

Figure 1: Map of NMI site, including drum burial areas, holding basin, cooling water recharge pond, sphagnum bog

FIGURE 2: Buried Drum Area 1 between cooling water recharge pond and holding basin.