

Nuclear Metals Site

April 2008



EPA Seeks Public Comment on Proposal to Demolish Site Buildings

Nuclear Metals Buildings Need to be Demolished to Prevent the Release of Hazardous Substances

Introduction

As part of the site-wide investigation of the Nuclear Metals Superfund Site in Concord, MA, EPA has evaluated hazardous substance contamination present on and in the facility buildings located at the Site. This evaluation is presented in a study called an Engineering Evaluation/Cost Analysis ("EE/CA"), which is available for review by the public. As explained below, the EE/CA shows, among other things, that: (1) high levels of contamination are found on the roofs of the facility buildings, and in other locations; (2) the facility buildings are deteriorating and in poor condition; and the (3) the current site owner is expected to permanently vacate the Site in the near future. EPA is proposing to demolish the facility buildings down to their slab foundation, and to leave the slab foundation in place at this time. In potential future cleanup actions, EPA would consider options to address the slab

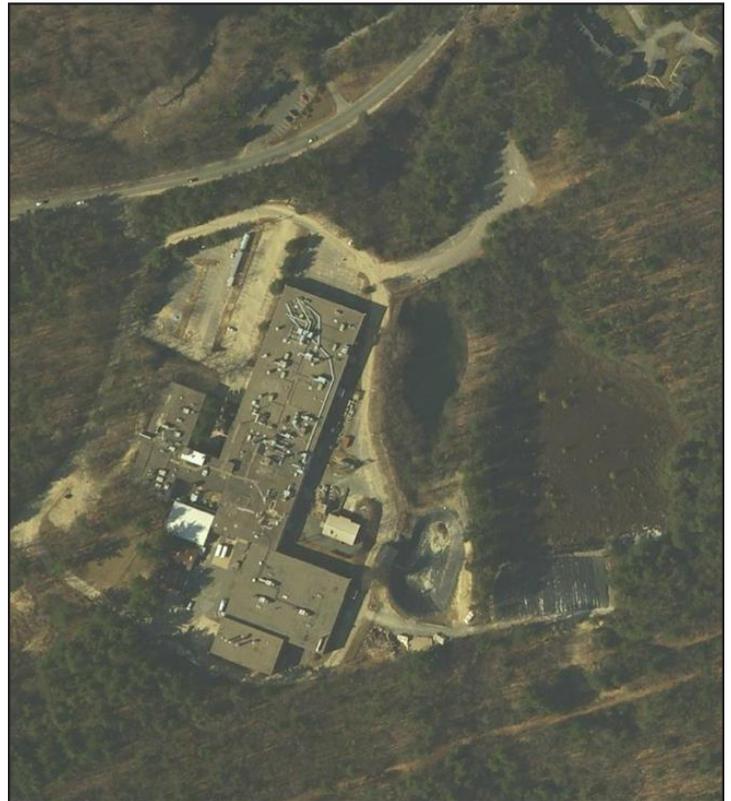
building foundation and the contamination that may be present under the foundation. This Fact Sheet summarizes the cleanup action that EPA is proposing to address the facility buildings. The EE/CA contains a more detailed description of the proposed cleanup,



as well as other options considered to address the facility buildings.

The Problem

The facility buildings are contaminated with depleted uranium and other hazardous substances. Depleted uranium and beryllium contamination is found on the building roof-tops. Rainwater that comes into contact with the roof is currently treated. Inside the buildings, contamination is found on floors, walls, heavy equipment and machinery. Large cracks in the building's foundation likely provide a conduit for contamination within the facility to reach the subsurface soils under the foundation.



The levels of contamination are high. For example, radiological contamination on floors and walls inside the facility buildings exceed the State's unrestricted release criteria by at least a factor of 100. (See map of buildings on last page).

Specifically, the levels found on floors and walls range from 4,000 disintegrations per minute(dpm)/100 centimeters squared (cm^2) to over 4,000,000 dpm/100 cm^2 . The State's unrestricted release criterion of 10 millirem (mrem) per year would require a residual surface contamination level of approximately 40 dpm/100 cm^2 .

The facility buildings are dilapidated, with leaking roofs in many places. There was a small fire at the facility on July 26, 2007. Based on various investigations following the fire,

the Concord Fire Department (CFD) requested assistance from EPA to remove hazardous materials from the facility due to a threat to public health and safety.

EPA is currently conducting a time-critical removal action which will address the hazardous and flammable materials in the building, and is working closely with the CFD on this removal action. Nevertheless, in the event of a large scale fire or building collapse, a release of contamination from the facility buildings might pose a hazard to the community and the environment.

Engineering Evaluation/Cost Analysis

For a “non-time-critical removal action” (NTCRA) (a short-term cleanup where it is determined that a six-month planning period is available before cleanup activities must begin), an EE/CA is performed. This is a study of the site’s contamination and cleanup options. It is available for public comment before EPA issues an Action Memorandum authorizing the cleanup and outlining the cleanup plan.



EPA’s Clean-up Objectives

This EE/CA establishes three objectives:

- Prevent the release of hazardous substances and radiological substances from building contents and contaminated surfaces, including roofs and equipment, that present an unacceptable risk to human health and the environment.
- Prevent external exposure to radiological substances, and/or direct contact with, ingestion and/or inhalation of contaminants present within and on the buildings and their contents that present an unacceptable risk to human health and the environment.
- To the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned.

For the purpose of this EE/CA, unacceptable risk associated with radiological substances will be defined by exceedance of the state’s unrestricted cleanup standard of 10 mrem/year.

Consistent with these objectives, this EE/CA considers five alternatives for the disposition of the buildings and their contents at the Site:

Removal Action Alternatives

Alternative 1: No Action - building and contents remain in place, and no response measures would take place.

cost: \$140,000 (for conducting the EE/CA)

Alternative 2: Limited Action -- Monitoring and Access Controls:

- Monthly site inspections of interior and exterior of buildings to document changes in conditions of buildings and/or potential releases of material from buildings, as well as to monitor evidence of trespassing, if any;
- Terminate existing building utilities and install temporary electrical/heating to support inspections, fire alarm system and fire suppression system;
- Limit site access by fencing property;
- Posting signs and placards around the property, and provision of a 24-hour security guard.

cost: \$3,274,000

Alternative 3: Building Stabilization, Removal of Flammable and Hazardous Substances, Limited Demolition and Off-site Disposal

This alternative includes all of the work under alternative 2 in addition to the following:

- Stabilization of building roofs to provide a safe working environment;
- Remove and dispose of remaining hazardous, flammable and combustible materials within facility buildings;
- Remove and dispose of fluids within equipment, including fuels, oils, hydraulic fluids, and antifreeze/coolant;
- Demolish and dispose off-site of a limited number of significantly contaminated buildings and equipment;
- Sub-slab soil investigation to support the ongoing Remedial Investigation/Feasibility Study

cost: \$14,377,000

Alternative 4: Building Stabilization, Removal of Building Contents and Off-site Disposal

This alternative includes all of the work under alternative 3 in addition to the following:

- Remove and dispose of asbestos throughout the buildings; remove and dispose of computer equipment, transformers, mercury switches, fluorescent light bulbs, etc.;
- Remove and dispose of building contents and debris leaving only building shell intact, including: non-structural support walls, floor covering, interior ductwork, ventilation equipment, process machinery, and conduit and utility piping;
- Interior cleaning to control dusts
- Conduct a comprehensive radiological survey of facility building shell to refine costs associated with future building demolition and off-site disposal.

cost: \$39,700,000

ALTERNATIVE 5 IS EPA'S PREFERRED ALTERNATIVE

Alternative 5: Demolition of Buildings Down to Slab with On-site or Off-site Disposal

This alternative is EPA's preferred alternative; it includes all of the work under alternative 4 in addition to the following:

- Strip off removable radiological contamination from building materials to minimize waste volumes;
- Cap and/or clean existing drain lines, vaults, and sumps;
- Demolish buildings down to their slab foundation;
- Off-site disposal of majority of material at an appropriately-licensed facility;
- Potential on-site disposal of non-contaminated building debris;
- Fill voids and temporarily cap building slabs, pending future remedial actions to address building slabs, sub-soils, and contaminated plumbing and/or drain lines.

cost: \$63,945,000

For more information contact:

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Why Does EPA Recommend This Alternative?

EPA is recommending Alternative 5 because it will remove the threat the facility presents and will allow further remedial action at the Site to move forward. The demolition and removal of the buildings is anticipated as necessary under the long-term remedial action for the Site, and meets the objectives of contributing to the efficient performance of remedial activities. The use of the State's 10 mrem/yr unrestricted release standard relating to decommissioning in this EE/CA does not presuppose the land use assumptions for the future actions at the Site. Human health and ecological risk assessments will be performed as part of the Remedial Investigation/Feasibility Study, and the reasonably anticipated future use for the Site will be determined as part of that process.

Massachusetts Department of Health Radiation Control Program Involvement (MADPH-RCP)

The current site owner/operator, Starmet, is licensed by MADPH-RCP to possess radioactive materials at the Site. Starmet, however, is no longer licensed to manufacture products containing radioactive materials. In May 2007, MADPH-RCP and Starmet entered into a Consent Decree under which Starmet personnel agreed to permanently vacate the Site by October 31, 2007. Starmet has not left the Site to date; however, it is in discussions with MADPH-RCP regarding its departure. Starmet is currently providing site security (including on-site security guards and maintaining heat, electricity, fire alarm and suppression systems, and water treatment systems). MADPH-RCP is inspecting the Site on a weekly basis.

Site History

The Nuclear Metals, Inc. ("NMI") Site is a 46.4-acre parcel located at 2229 Main Street in the Town of Concord, Massachusetts. A specialty metals manufacturing facility, licensed to possess low-level radioactive substances, has operated at the Site from 1958 to the present. From 1958 to October 1972, the Site was owned and operated by a succession of companies that were engaged principally in specialty metals research and development contract work. Since 1972, NMI and related entities have owned and operated the Site. From 1972 to 1999, NMI developed a large scale depleted uranium manufacturing operation, which included, but was not limited to, the manufacturing of penetrators, or bullets, from depleted uranium as a defense contractor for the U.S. Army.

1997 - Nuclear Metals, Inc. renamed Starmet Corporation

1997 - Starmet, with the financial support of the U.S. Army, excavated approximately 8,000 cubic yards of contaminated soils from the on-site holding basin and disposed of these soils at an off-site disposal facility licensed to accept low-level radioactive wastes.

2001 - Nuclear Metals site listed on EPA's National Priorities List.

2002 - EPA initiates removal action for drum disposal area and on-site landfill adjacent to cranberry bog. Impervious liner placed over landfill area and holding basin.

2003 - EPA reaches agreement with Settling Parties to conduct Remedial Investigation/Feasibility Study and EE/CA.

2004 - Settling Parties remove additional buried drums, and contaminated soil adjacent to cooling water pond.

2005 - Removal of depleted uranium barrels and rods stored inside site buildings commences with MassDEP oversight

2008 - EPA begins time-critical removal action to remove flammable and hazardous materials from the factory buildings.

2008 - EPA issues EE/CA for disposition of facility buildings and contents.

Your Opinion is Important

EPA is asking for public comment on the five cleanup options presented in the EE/CA. The public comment period will run until June 4, 2008. Comments can be sent by mail, e-mail, or fax.

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By e-mail: taylor.melissag@epa.gov

By Fax: (617) 918-0310

Attn: Melissa Taylor (HBO)

A public information meeting will be held on May 15, 2008 at 7 PM at the Harvey Wheeler Community Center, 1276 Main Street, Concord, MA

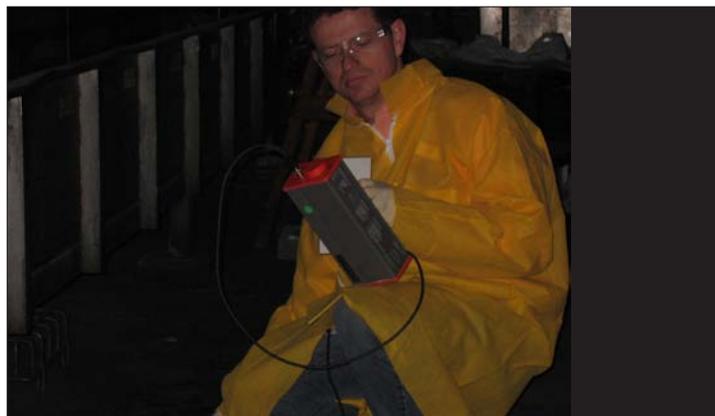
Continued Opportunities for Input Beyond the EE/CA Comment Period

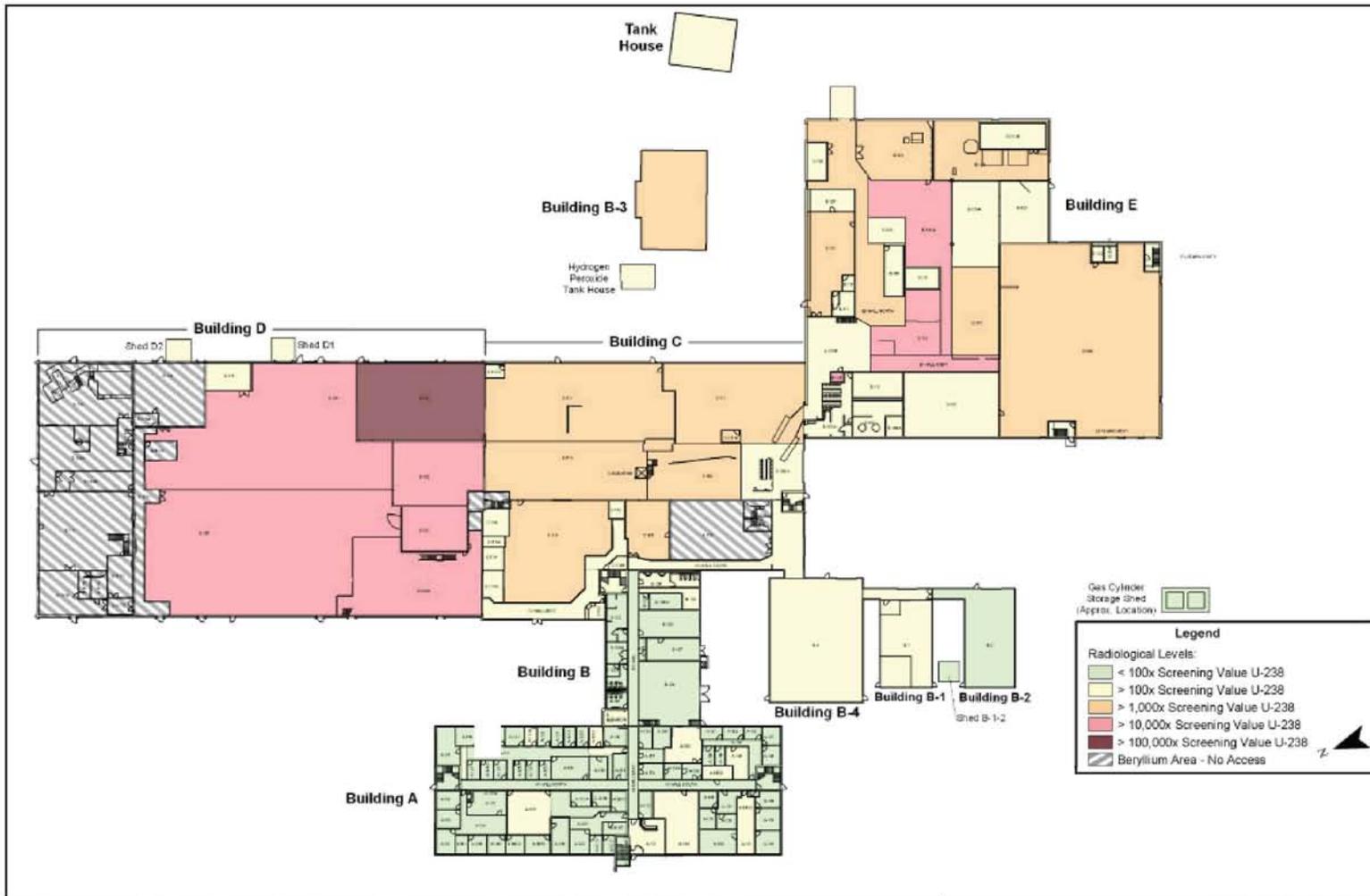
EPA's preferred option, as well as other options presented, will disturb the contaminants, therefore, every precaution will be taken to minimize dust and runoff during the project.

- Air and other emissions will be closely monitored.
- Workers who implement the action will be thoroughly protected by the use of personal protective gear and implementation of strict safety practices.
- EPA will hold public meetings to keep area residents and businesses informed throughout the cleanup. EPA will also use mailings and on-line postings to share information.

An Administrative Record (AR) is Available for Review at:

- Town of Concord Public Library, 129 Main St. (Main Library), 978-318-3300
- EPA-New England's Superfund Records Center, 1 Congress St., Boston 617-918-1413
- An AR Index is available on-line at www.epa.gov/region01/superfund/sites/nmi





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