Nuclear Metals, Inc. Superfund Site

Non-Time Critical Removal Action

Interim Emergency Response Plan

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EMERGENCY RESPONSE PLAN

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REFERENCES

1 PURPOSE

The objective of the Emergency Response Plan (ERP) is to minimize hazards to human health or the environment from fires, releases of hazardous constituents or other emergency conditions. This plan describes the actions personnel must take in response to emergencies or unplanned releases at the Site, arrangements with local, state and federal emergency responders to coordinate emergency services, identification of the roles and responsibilities of the emergency coordinator and alternates, supply and maintenance of onsite emergency equipment, and stop work and emergency evacuation planning. The ERP includes a hazard communications plan and names and contact information for planned notifications in the event of an emergency.

2 FACILITY INFORMATION

2.1 Site Location and Description

The Site is located on a 46.4-acre parcel at 2229 Main Street in the western portion of the Town of Concord, Middlesex County, Massachusetts (Figure 2.1). As currently configured, the Site includes eight interconnected buildings, several smaller outbuildings, paved parking areas, cooling water recharge pond, a former waste holding basin, and areas of fill and/or waste materials. The current footprint of all buildings at the Site is approximately 185,000 square feet. The Site is bordered by Main Street (Route 62) and several commercial and residential properties to the north, residential properties to the east, and woodland and commercial/industrial properties to the west. The Assabet River is situated approximately 300 feet (ft) north of the Site.

In addition to the above features, there are two wetlands at the Site, the sphagnum bog and the northeast wetland located north of the cooling water recharge pond. The sphagnum bog is a palustrine, broad-leafed evergreen, scrub-shrub, saturated, acidic wetland. The bog is located approximately 75 ft east of the cooling water pond and the holding basin. The bog covers an area of approximately 3.5 acres. The bog is composed primarily of sphagnum peat. The substrate of the bog varies from growing sphagnum at the surface, to decomposed peat below the surface. The sphagnum bog has no inlets or outlets and receives the bulk of its moisture from precipitation and run-off.

The northeast wetland is located approximately 200 ft north of the cooling water recharge pond, and just south of Route 62. This wetland possibly was formed by the construction of Main Street to prevent further runoff to the north. It is a palustrine, forested, broad-leafed, deciduous wetland, subject to seasonal flooding. The low-lying area associated with this wetland covers approximately 0.8 acres.

2.2 Site History

Nuclear Metals, Inc. (NMI) purchased approximately 30 acres of undeveloped property on August 29, 1957, and constructed and occupied the original facility buildings in March 1958. The original facility consisted of three principal buildings, designated Buildings A, B, and C. Building A was used as office space and research laboratories, Building B for services, e.g., cafeteria, laboratories, and Building C as the main production facility, including foundry equipment for melting metals, extrusion presses and metal working equipment, pickling and etching tanks, and electroplating equipment. In September 1972, NMI employees purchased the operation. Since 1972, NMI and related entities have owned and operated the Site. After the 1972 purchase, NMI developed a large scale depleted uranium (DU) manufacturing operation, which included, but was not limited to, the manufacturing of penetrators, or bullets, from DU as a defense contractor for the U.S. Army. Building D was constructed in 1978 to expand the production capabilities of the facility. Building E was constructed in 1983 and was used to house the radioactive waste processing operations.

In 1990, NMI acquired adjacent properties designated as Parcels A and B from the Memorial Drive Trust (MDT), which owned land to the west and south of the NMI property. At the same time, MDT acquired Lots C and D from NMI. Currently, the Site consists of approximately 46.4 acres.

On October 1, 1997, NMI was renamed Starmet Corporation. Starmet and several additional businesses continued to perform small scale operations at the Site through October 2011. As detailed below, Starmet and the additional businesses occupied a small portion of the facility buildings. In addition, in accordance with Starmet's Radioactive Materials License requirements under the Massachusetts Department of Public Health (MADPH) Radiation Control Program (RCP), access to a number of areas within the facility buildings (described below) was restricted due to the presence of radioactive materials. Only a small number of specialty-trained Starmet employees were allowed to enter these portions of the facility.

2.3 Past Operations

Past operations at the Site involved research and development in fundamental research, physical metallurgy, chemical metallurgy, engineering and product development, fuel element development and manufacture, and high temperature materials (NMI, 1961). Most of the operations at the Site were conducted under contracts with the United States Atomic Energy Commission and the United States Department of Defense, along with some private industry. These operations included the investigation and development of materials for missiles, airframes, and other components. Examples of the activities and operations at the Site during this period are (NMI, 1961):

- Studies of the causes of brittleness in beryllium;

- Determination of the original phase diagrams for alloys of uranium, beryllium, zirconium, hafnium, tungsten, and other special metals;
- Alloying of uranium for specific properties, including corrosion resistance and high stress/rupture characteristics. Similar studies to achieve higher strength in beryllium;
- Development of unique techniques for testing and evaluating fuel elements and fuel element materials;
- Development of high-strength zirconium alloys for use as cladding on fuel elements;
- Electroplating studies;
- Basic studies of corrosion in zirconium and uranium alloys. Oxidation mechanism for zirconium;
- Effects of liquid metal environments on zirconium and uranium alloys;
- Development of cermets (ceramic-metallic compounds), including beryllium-beryllium oxide and stainless steel-uranium oxide;
- Development of original methods of chemical analysis for various constituents in beryllium, uranium, and zirconium alloys;
- Oxidation studies of graphite, platinum, and refractory metals;
- Development and fabrication of inter-metallic compounds of uranium;
- Development of melting and casting techniques for beryllium and uranium alloys;
- Development of machining methods for uranium, thorium, beryllium, yttrium, and other metals;
- Technical and economic evaluation of proposed reactor fuel types and fabrication procedures;
- Production of fuel elements for use in submarine reactors;
- Production of fuel elements for several different reactors at National Laboratories;
- Development of methods of extrusion and drawing of seamless molybdenum tubing and molybdenum tubing clad inside and out with other metals such as stainless steel;
- Development of extrusion methods for niobium and tantalum; and
- Investigation of materials and design problems in nose cone re-entry studies, with particular emphasis on the use of materials in combination.

2.4 Post Research & Development Operations

The focus of site operations shifted from research and development to large-scale production in the mid-1970s. This included manufacture of DU shields, counter weights, and armor penetrators, manufacture of metal powders, beryllium and beryllium alloy parts production, and manufacture of specialty titanium parts. On May 12, 2003, the MADPH-RCP modified

Starmet's radioactive materials license for manufacturing or operations, to allowing only their possession on-site. The following summary of the DU and powder manufacturing process presents an overview of the types of activities that occurred within the buildings:

General DU Operations - Raw DU material was received at the Site as derbies or as cut pieces and was cast and/or machined into products in the facilities. The casting process was conducted under vacuum. The melt was poured into one or more molds and allowed to solidify, possibly assisted by an inert gas back fill. At that point, the casting may have been considered a completed object as is, or may have been further processed, such as by heat treating, machining using coolant and vented equipment, enhancing the surface finish by hand operations such as filing or grinding within vented enclosures, and/or by painting or electroplating.

Penetrator Production - DU penetrator production was a multi-step process. It began with a DU melt consisting of DU and titanium. The metal was melted under vacuum in a zirconium coated graphite crucible. The coating prevents reaction between the molten uranium and graphite. Following a hold at 1400^{o} C to uniformly distribute the titanium in the alloy, the melt was poured into yttrium-coated molds to form ingots.

Billets Production - The ingots were slipped into lengths of copper tube blocked at one end. A copper end plate, equipped with an evacuation tube, was welded onto the open end. The evacuation tube was then connected to a vacuum system and each billet assembly was evacuated. The evacuation tube was then crimp-sealed to form a leak-tight assembly (billet). Billets were then extruded. Extrusions were performed in a 1400-ton extrusion press. Billets were loaded into ovens and maintained at 600^{o} C for one-hour minimum prior to extrusion. The die was lubricated and the billets were pushed through the die at a constant ram speed. Immediately upon exiting the extrusion press, each rod was automatically transferred to a forced air/water mist cooling bed. Rod stock exiting this system was cool to the touch. The copper sheath on the extruded bars was then removed by acid digestion (pickling). After removal of the copper sheath, extruded rods were straightened using a Sutton two roll straightener to facilitate subsequent cutting operations. The rod stock was cut into blanks of appropriate length by sawing.

Finish machining required a precision pre-machined blank with a uniform diameter and flat ends perpendicular to the bar axis. These requirements were met by centerless grinding to the desired finished diameter. The ends were faced flat and perpendicular to the bar axis. DU penetrator blanks were turned to their final configuration on computer numerical control (CNC) lathes.

At present, Starmet and the businesses occupying the facility conduct small-scale operations within a portion of the buildings as follows:

Powder Manufacture - Metals are converted to powder by the rotating electrode process (REP) equipment. A bar of metal is rotated in a helium-filled chamber where it is melted by an electric arc. As the metal is liquefied, it spins off and solidifies into a powder. Metals used include aluminum, steel, titanium, and nickel base super alloys.

These powders were used in the photocopier industry, electronic component cleaning mediums, and in the manufacture of surgical implants.

Beralcast ® Manufacture - Advanced metal products for government, aerospace and commercial applications are made using Starmet's patented Beralcast ® alloy and related patented and proprietary technology. Starmet's Beralcast ® is a beryllium-aluminum alloy that can be produced in near net and net shape cast forms. These products were produced by a variety of techniques, including investment and permanent mold casting techniques.

2.5 Site Configuration and Contamination

As currently configured, the Site has five interconnected buildings with several smaller outbuildings, e.g., butler buildings, well houses, storage sheds, etc. Each of these buildings is described below in more detail. Most buildings have been vacant for some time, and are in disrepair.

An evaluation of the structural condition of the roofs of all buildings was conducted by a consultant under contract with MADPH-RCP (Emanuel Engineering, Inc., March 2004) (the Roof Evaluation). In many areas, the roofs are approaching 50 years old. This evaluation found that water penetration due to roofing failure has and continues to occur in most buildings, most notably in Buildings A, B and C. The evaluation also noted that

> [a]t this time, the rusting in the roof joists, girders, and columns are only on the surface and of cosmetic nature. The extent of rusting in the metal deck ranges from surface stains to complete loss of materials as noted in the individual building reports. It will be a matter of time before the loss of materials leads to structurally unsafe conditions which are a potential for partial roof collapse.

In addition, given their current condition, continued deterioration of the roofs, if not addressed, could lead in the future to significant structural problems for the buildings. For example, snow and ice accumulation could further strain critical structural roof joists which could lead to partial roof collapse.

Unsealed cracks in the production facility floors and sumps likely have been pathways for migration of contamination into the environment. EPA has reported witnessing several plastic tarps strapped to the ceiling of many of the buildings to catch rainwater leaking through the roof. In addition, EPA has reported witnessing many puddles on the floors throughout the facility, which is an indication that the current tarp collection system is not effectively containing rainwater infiltration.

2.5.1 Building A

Building A was constructed in 1958, and is one of the original three facility buildings. The building is 216-ft by 80-ft with two floors. The building consists of office space, as well as production and research space. The building was designed with laboratories for metallography, applied physics, analytical chemistry, physical metallurgy, and chemical metallurgy, as well as shops for glass production and machine work. According to Starmet personnel, during the period of high-volume production of DU-penetrators, office spaces within Building A were converted to use for quality inspection and other industrial uses. Later, these areas were converted back to office spaces (Starmet, 2006). Recent uses include office space, final product quality control, and research and development. The Roof Evaluation found a variety of leaks in the Building A roof, and one area of deteriorated roof decking.

2.5.2 Building B

Building B was constructed in 1958 and is one of the original three facility buildings. It is a 97-ft by 60- ft two-story building that houses the boilers and services for the plant. Other portions of the building were used for a medical clinic, lunch / conference room, and locker rooms. The boiler room reportedly contained a sump that periodically discharged into the Cooling Water Recharge Pond. In 1990, approximately 5 gallons of No. 6 fuel oil were released to this sump (Tetra Tech, 2000; references GZA, 1998). Recently the lunch area, boiler room, and sections of the former lockers rooms (used for Beralcast molding operations) were occupied by one or more of the Starmet Parties. The Roof Evaluation found a variety of leaks in the Building B roof, and one area of deteriorated roof decking.

2.5.3 Building C

Building C was constructed in 1958 as a production building and is one of the original three facility buildings. The building is 200-ft by 130-ft and two stories high. The majority of the building is production space that is open from floor slab to roof. A small portion contains a second floor mezzanine. This area was also used for storage of DU penetrators. Building C was the main production center for the facility from 1958 until construction of Building D in 1978. Building C contained the foundry, fabrication shop, machine shop, carpentry shop, and welding area, as well as the shipping and receiving area. DU extrusion activities also took place in Building C. The fabrication shop also originally included a pickling tank and a caustic tank.

One specific item located in Building C is the concrete pit located beneath the 1,400-ton extrusion press. This pit contains an estimated 10,000 gallons of liquid, assumed to be contaminated water resulting from infiltration through roof leaks. It is not known whether this pit is leaking into the sub slab and potentially the groundwater. Since it is made of a porous substance, however, there is a risk that some contamination is or could be released from the pit to the environment.

Most of Building C was designated a Radiation Work Area based on past production activities and current measurable levels of contamination. In a Radiation Work Area, proper PPE, i.e., safety glasses, rubber booties, coveralls, is required. The Starmet Parties had access to all areas, but currently utilize only three areas of the building. The three areas are the rotating electroplasma machine area, the machine shop, and the northern end of the second floor mezzanine. The rotating electroplasma machine area was recently used to store off-specification metal powders. The recent operator used the machine shop to support the beryllium operation.

The Roof Evaluation found a variety of leaks in the Building C roof, and one area of deteriorated roof decking. When water leaks through the roof, it comes into contact with lighting and other electrical equipment within Building C.

2.5.4 Building D

Building D, constructed in 1978, is a 280-ft by 160-ft two-story production building. A small portion of Building D also contains office space. Building D was constructed to augment the production capacity of Building C. It consisted of a fabrication area (including uranium fabrication), computerized milling machines, a quality control section and an acid pickling area (NRC, 1997). Buildings C and D are separated by fire walls.

One specific item in Building D is a centerless grinder milling machine, which has been reported by Starmet (Starmet 2006) to contain dried DU powder/sludge. The northern end of Building D was recently used as the beryllium foundry / rotating electroplasma machine area. The rest of the building is considered to be a Radiation Work Area.

As reported by EPA, minor roof leaks have been observed outside the pickling area (Room D-101) and in the northwest corner of Room D-106.

2.5.5 Building E

Building E was constructed in 1983 and occupied in January 1984 for the purpose of housing the radioactive waste processing operations, including a concrete plant, and an emergency generator and associated 250-gallon fuel tank (NRC, 1997). Building E contained two 2,000-gallon tanks for holding sulfuric acid (5% solution), as well as two 55-gallon sulfuric acid (93% solution) day tanks (Oak Ridge, 1997). The building also contained locker rooms and bathroom facilities. The footprint of the building has a main section of 200-ft by 150-ft, with a smaller 120-ft by 70-ft section on the south side. When sludge discharge to the Holding Basin was discontinued in 1985, wastewater was routed back to an evaporator (called the “sonodyne”) in Building E from the Holding Basin Tank House. Building E was constructed over an area originally used for materials and waste storage. The former Site storage area was originally fenced in and was used for storing DU, copper, beryllium, machine oils, coolants, and solvents (GZA, 1998). The area also contained contaminated asphalt, concrete, soil, trees, and underground piping that had to be removed, decontaminated, or stored for later use. A storage building (Building B3), used for DU waste processing, and a flammable liquids shed were also moved before Building E was constructed. During the clearing of the area for Building E, underground pipes, manholes, and catch basins, some up to 20-feet deep, were removed.

Building E contains the former research and development area known as the Hydrofluoric Acid Area, and the above ground storage tanks that contain used machining coolant presumed to be DU contaminated. The Starmet Parties operated the sonodyne machine located in Building E to treat wash water as well as rain water that enters the buildings. Runoff from the roofs and rainwater that enters the building was treated by the sonodyne machine because rainwater comes into contact with radioactive contamination on the roofs and other surfaces. In addition to the sonodyne area, the operators used the loading/receiving area to store beryllium waste prior to off-site shipment. Aside from the sonodyne and beryllium storage area, all other areas of the building, while vacant, are accessible and considered Radiation Work Areas. EPA has reported observing minor roof leaks in and around the loading dock area.

2.5.6 Butler Buildings

There are four pre-engineered insulated metal buildings used for various support purposes on the Site. Referenced as the "Butler Buildings," numbered B1, B2, B3, and B4, occupy footprints of 2,048, 2,048, 2,400, and 4,800 square feet, respectively. These structures are all slab on grade.

Butler B1

Building B1 is a metal 'Butler' building that was part of the original Site constructed in 1958. Building B1 was historically used for storage, as well as shipping and receiving. An environmental assessment completed in 1997 by Oak Ridge National Laboratory, under contract to the NRC, indicated that Building B1 was used for DU storage. Most recently, Butler B1 was a fabrication/maintenance shop.

Butler B2

Building B2 is a metal 'Butler' building that was part of the original Site constructed in 1958. It was historically used for storage, as well as shipping and receiving. The environmental assessment completed in 1997 indicated that Building B2 was used for DU storage. Most recently, Butler B2 was used for shipping and receiving.

Butler B3

Building B3 is a metal 'Butler' building originally built in 1976. It was constructed as a separate waste handling facility. DU wastes were processed for disposal both inside and outside of the building. It was removed from its original location in 1983 for the construction of Building E. The metal walls were washed and painted and the building was relocated to its present position just east of Building C. Most recently, it was used to store uranium-contaminated equipment received in the middle to late 1980s from American Lead, a former manufacturer of DU penetrators located in Colonie, New York (Starmet, 2006).

Butler B4

Building B4 was constructed in 1977 as a loading dock area. Most of Building B4 has been used as a stock room. The environmental assessment completed in 1997 stated that approximately 200-gallons of 93% sulfuric acid (4 drums) had been staged in Building B4. Butler B4 was recently used to store Site personnel lab coats and Beralcast molds, and where the Beralcast molds were produced. The area where the Beralcast molds were produced was a respiratory protection area due to the silica products used during production.

2.5.7 Tank House

The tank house was constructed in 1958 to serve as the collection, distribution, and treatment point for radioactive liquid acid wastes generated during the handling and production of DU stock and other specialty metals. The tank house is a 1,200 square foot, two level wooden framed structure built on a concrete slab located adjacent to the Holding Basin. Liquid wastes flowed to the tank house, were neutralized though the addition of lime, and then discharged to the Holding Basin. The structure is comprised of an upper (ground surface) level and lower (below ground surface) level. The upper level was used for storage of the neutralized material, e.g., lime, soda ash, with the lower level occupied by two 4,000-gallon above ground storage tanks. The storage tanks were recently used to store wash water, prior to it being treated by the sonodyne. Radiological contaminated sludge is present in the bottom of each tank. It is estimated that each tank contains 5,000 pounds of sludge.

2.5.8 Hydrogen Peroxide Tank House

Located northeast of Butler Building B3, the Hydrogen Peroxide Tank House is a 15-ft X 12-ft wooden framed structure constructed within a 6-inck thick, six-foot high, concrete secondary containment structure. This building contains a 5,000-gallon lined above ground storage tank that was used to store 49% hydrogen peroxide (H_2O_2) (stabilized). The hydrogen peroxide was used in two processes: as an oxidizer in water treatment prior to neutralization/ evaporation; and as an oxidizer for the closed loop pickling (where copper clad DU bars were pickled chemically to remove the copper from the uranium). The volume of hydrogen peroxide currently stored at this time is unknown. This structure was reported to have been built around the time Building E (1983) was constructed (Starmet, 2006).

The Hydrogen Peroxide Tank House may contain concentrated hydrogen peroxide, a very reactive oxidizer, and is very accessible to a trespasser (wooden structure outside the main buildings complex). This material, if present, if not handled and disposed properly, could be very hazardous if left unattended.

2.5.9 Underground Storage Tank Area

Fuel oil for the Site was stored and dispensed from two 10,000-gallon USTs located in the courtyard area between Buildings A and C, to the north of Building B (Figure 2.3.1). The fuel oil was used in the facility boilers that are located in Building B. Information regarding the installation date of the current tanks were not discovered during the RI scoping process. According to Starmet, the only fuel used currently and historically at the Site is No. 4 Heating Oil. A tank tightness test provided in a previous environmental study from the late 1990s identifies the product as No. 4 fuel oil. A review of on-site records, conducted by de maximis in March 2004, did not indicate the presence of other USTs on the Site.

2.5.10 Miscellaneous Structures

Gas Cylinder Storage Sheds

Located directly west of Butler Building B2 are two gas cylinder storage sheds installed in 1983-1984 (Starmet, 2006). A six-foot high chain-link fence surrounds the sheds. The sheds measure 8-ft x 20-ft and appear to be constructed of fabricated steel "sea land" containers with ventilation openings throughout the exterior walls. The Gas Cylinder Storage Sheds are currently empty.

Acetone Distillation Shed (Shed D2)

Located outside of Building D (adjacent to Room D-116) is a 10-ft x 10-ft wooden framed structure constructed around 1978, which houses an acetone distillation unit. The slab on grade is 6-inch thick concrete. The roof is constructed of a wooden frame covered by asphalt shingles. The Acetone Distillation Shed is an old wooden structure potentially containing acetone, a highly flammable liquid. The shed is accessible to trespassers, creating a hazardous condition.

B-1-2 Shed

This structure is located between the B1 and B2 buildings. At the time of the January 2006 building walkthrough, the then current facility manager stated that the shed contained leaf blowers, lawn mowers, weed trimmers, and other lawn maintenance equipment. It is assumed that the shed also contains a small volume of gasoline and oils. If left unattended, the contents of this wooden shed, flammable liquids and oils, could be released and/or cause a fire.

In addition to three shed structures mentioned above, there are also two small wooden shed structures, one located outside Building C (~125' northeast of the hydrogen peroxide tank), and the other (shed D1) just outside the southern side of Building D, which house fire suppression equipment, e.g., hoses, nozzles, and fire hydrant, that are constructed of wooden walls and roof supports with an asphalt shingled roof. The slab on grade is 6-inch thick concrete. Shed D1 is a 15-ft x 12-ft wooden structure with an asphalt shingle roof, which was originally used to protect the overhead exterior door at this location.

3 EMERGENCY PERSONNEL – NAMES, PHONE NUMBERS AND DUTIES

All site personnel will be familiarized with the location of the nearest working telephone or radio communication device, and the nearest emergency exit in the event of an emergency. A list of emergency telephone numbers (Figure 3-1) as well as a copy of a map with the route to the nearest exit will be posted in each subcontractor's office. A list of national and state agency contacts is provided in Figure 3-2.

3.1 Site Communication Line of Command

In accordance with the HASP procedures, all members of each subcontractor will report to their company's Project Supervisor. All subcontractor Project Supervisors will report to the Site Operations Manager. The Site Operations Manager will communicate with the Project Manager, Site Health and Safety Officer (HSO), Safety and Health Manager, Site Radiation Safety Officer (RSO) and Project Coordinator. They will coordinate emergency activities and contact local emergency response authorities if needed. In case of evacuation, see Section 11 for further information on Evacuation Procedures and communication requirements.

3.2 Safety and Health Manger

The Safety and Health Manager has final authority to resolve health and safety issues that are not resolved at the Site or through the HSO. The Safety and Health Manager has overall responsibility for ensuring that the policies and procedures of this ERP and the Health and Safety Plan (HASP) are implemented by the HSO.

3.3 Site Health and Safety Officer

The HSO will: implement the ERP and HASP; conduct safety inspections and investigate all accidents, illnesses, and incidents occurring while at the Site; develop and issue Incident Reports and submit them to the Site Operations Manager, Project Manager, Project Coordinator and the Safety and Health Manager, conduct safety briefings and site-specific training for site personnel; and in consultation with the Safety and Health Manager update and modify this HASP as Site or environmental conditions change.

The HSO, like all site personnel, is vested with the authority to stop site operations (STOP WORK AUTHORITY) if the HSO determines that an imminent health or safety hazard or other potentially dangerous situation exists. The HSO is to immediately notify the Safety and Health Manager, Site Operations Manager and Project Manager of any Stop Work Orders issued. The Project Manager will then notify the Project Coordinator of the situation.

The HSO ensures that all personnel entering the work areas at the Site are qualified in accordance with the requirements of 29 CFR 1910.120, this HASP's applicable site safety procedures.

The HSO has overall responsibility for adherence to the designated safety precautions in an emergency response situation. The Site Operations Manager is responsible for accounting for site personnel during an evacuation and reporting to the HSO if personnel are missing. All subcontractor Project Supervisors are responsible for accounting for their personnel at the assigned assembly area, and reporting to the Site Operations Manager. In case of evacuation, see Section 11 for further information on Evacuation Procedures and communication requirements.

Emergency communication by the HSO may require the following:

- Coordinate with outside emergency services and emergency response personnel;
- Establish two-way radio communication and a site alarm capable of warning site personnel and summoning assistance (i.e., air horn);
- If an accident occurs, a copy of an Incident Report will be completed by the HSO and filed with the subcontractor's Site Supervisor, the Project Manager, and Safety and Health Manager.

Additional responsibilities required of the HSO at project startup are included in Section 16, Plan Implementation Information.

3.4 Site Radiation Safety Officer

The responsibilities of the Site Radiation Safety Officer (RSO) are detailed in the Radiation Protection Program (RPP). All routine operations in restricted areas on site will be governed by Radiation Work Permits (RWP). Only authorized staff that have been trained to the site RPP, medically/biologically monitored, and equipped with appropriate dosimetry and PPE may perform invasive activities in radiological-restricted areas. Portable radiological field instruments will be used to assess work area conditions and ensure radioactive materials are appropriately controlled. All samples collected or waste generated during these investigations will be screened per U.S. Department of Transportation guidelines before leaving the Site. Task-specific RWPs will be generated for specific site activities in known radiological-contaminated areas. All personnel on site will either be escorted visitors or working under a RWP when working in radiological-restricted areas.

4 UTILITY CONTACTS

4.1 Electric Service

The existing electric service will be terminated and a temporary electric service will be installed for use during the NTCRA. The temporary electrical service is being designed to provide lighting, heating, and power drops for the operations. Service will also be provided to a fire panel.

4.2 Water Service

The existing potable water service will be modified for use during the NTCRA. Water service will be designed to provide for personnel decontamination facilities as well as for water service for fire protection.

4.3 Natural Gas Service

The existing natural gas service will be modified for use during the NTCRAs. Natural gas service will be designed to provide for heating units. The existing high pressure gas service will be decommissioned.

Utility Service	Utility Provider	Phone #
Electric	Concord Municipal Light	(978) 318-3101
Water	Concord Public Works/Sewer	(978) 318-3250
Natural Gas	National Grid	(800) 548-8000

5 TYPES OF EMERGENCIES

5.1 Medical

Medical emergencies may occur from physical or chemical hazards. Emergency medical services are provided by the Concord Fire Department. The closest hospital is:

Emerson Hospital (approximately 3 miles away)
133 Old Road to Nine Acre
Concord, MA 01742
(978) 369-1400

Figure 4-1 provides a map to the hospital.

5.2 Fire / Explosion

5.2.1 Metal Chips and Dusts

The facility has a few areas where contaminated titanium metal chips, fines and powders are stored. Building D has 55-gallon drums containing titanium metal chips in storage. The first floor of Building A contains buckets and barrels with titanium powders. Titanium in this form represents a pyrophoric fire hazard due to its affinity for oxygen. Fire sprinklers may also create a larger hazard if discharged; i.e., water comes in contact with the titanium. As such, the titanium chip storage should be kept away from possibilities of inadvertent contact with water; i.e., relocated to other areas where roof continuity is not compromised or stored in covered containers.

5.2.2 Building Materials

Generally, the buildings are constructed with non-combustible materials. However, there are specific examples of the use of building materials that present a hazardous condition. As an example, combustible polystyrene insulation is used in Building A along the south exterior wall on the second floor. This type of insulation is not permitted to be installed in this manner without being encapsulated in a 15 minute thermal barrier. Although this material typically has a flame spread rating of 25 or less, the poly insulation could ultimately liquefy and create a pool fire.

5.3 Chemical Spill

Sorbent material will be maintained on Site. Incidental spills will be contained with sorbent and disposed properly.

When working around containers of bulk chemicals, i.e., drums or tanks, every effort will be made to avoid damaging the container, which would discharge the contents and further contaminate the area. Personnel will be trained and have adequate equipment to be able to contain or control a spill, plus be able to decontaminate previously uncontaminated structures, equipment, or material. In addition, spilled materials and contaminated soils and/or water will be collected, containerized, and disposed of properly.

Some equipment that may be needed in addition to personal protective equipment include: sand, absorbent material; sandbags; containers: shovels; leak repair kit; chemicals to neutralize acids or bases; and/or decontamination equipment. The choice of equipment needed for the Site is based on the amount and type of contaminants known or suspected to be at the Site, as well as the work to be conducted. These will be detailed in the Job Hazard Analysis (Section 3 of HASP).

5.3.1 Personal Protective Equipment

In the event of a spill or leak, the work crew will back off until adequate personal protective equipment can be donned. In most cases, Level B personal protective equipment will be required; however, there may be incidences where Level C or D is acceptable. The HSO will determine the level of protection based on the contaminant, amount spilled, and levels monitored in the air.

5.3.2 Control Measures

Once the work crew is adequately protected, immediate measures will be taken to control and contain the spill within site boundaries. The hazardous area will be isolated and all unnecessary personnel kept away and upwind of the spill. Flares, smoking, or open flames will not be allowed into the area and, if possible, combustible materials will not be allowed to come in contact with the spill.

Small Spills: If the spilled material is a solid, contaminated material will be shoveled directly into a container, then it will be covered, labeled, and disposed of properly. If the spilled material is a liquid, it will be absorbed with noncombustible absorbent material first, then shoveled into a container, covered, labeled and disposed of properly.

Large Spills: For large liquid spills, a dike will be installed using sandbags, absorbent pillows, soil, or any other available, noncombustible material. The dike will be large enough to contain the spill. Standing liquid will be pumped off and containerized. If possible, the liquid will be recycled or solidified with an absorbent material, then covered, labeled, and disposed properly. All contaminated materials will be collected and containerized, then covered, labeled, and disposed properly.

5.4 Electrical / Power

There are several areas throughout the facility where the roof leaks in close proximity to live electrical equipment. This presents a significant ignition source in those areas. The power to equipment and lighting circuits in those areas will be removed. Only temporary power and lighting circuits will be provided to those areas as necessary during the NTCRA.

5.5 Severe Weather / Natural Disaster

The Site Operations Manager and HSO will monitor the local weather reports for indications of approaching severe weather and will direct operations appropriately to protect personnel from dangerous conditions.

Blizzard conditions are the most likely severe weather condition for the Site. Snow will be cleared expeditiously, with emergency access routes being the first priority. Snow accumulation on the roof of the buildings will also be monitored and cleared as quickly as possible to prevent further roof deterioration.

All emergency exits discharge to the exterior at grade level. The path of travel from the point of exit discharge to the public way will be well lit and maintained free of ice, snow, water, or accumulation of other debris so that it is passable year round.

6 EVACUATION ROUTES

Life safety considerations for the facility include means of egress consisting of exit access, exits and exit discharge, exit signage, and emergency lighting. In accordance with National Fire Protection Association (NFPA) 801, facilities undertaking NTCRA activities should maintain egress features consistent with that of a facility under construction. However, locked and abandoned facilities where there is no human occupancy need not maintain emergency egress features consisting of exit access, exits and exit discharge, exit signage, and emergency lighting.

6.1 Means of Egress

Each building is served by at least two (2) remotely located independent exits from the building that does not require travel through another building, except for Building B. Occupants of Building B do have access to a minimum of two (2) exits, one exit requires travel through Building A, the second requires exit stairs serving Building B which discharges into Building C. All remote buildings have a minimum of two (2) independent exits.

6.2 Travel Distance

In accordance with NFPA 101 the maximum travel distance from a work area to an exterior exit should be limited to 300 feet to the extent practicable. Throughout the remainder of the facility, the maximum travel distance to an exit should be limited to 400 feet to the extent practicable. As exits are taken out of service and building areas are shut down during the demolition process; the travel distance to available exits from areas that are to be occupied must be reviewed to verify that the maximum travel distance to those exits is not exceeded.

6.3 Exit Signs and Emergency / Means of Egress Lighting

In accordance with NFPA 101 access to exits should be provided and continually maintained throughout the building demolition process. Exit signs and emergency lights with battery packs must be posted to identify available exits and the path of travel to exits. Signs should be posted along exit access indicating the direction of travel to nearest exit and exit discharge if that direction is not immediately apparent. The line of sight to an exit must be clearly visible at all times.

6.4 Egress through Adjacent Building Areas

Currently there is access to and through Buildings A, B, C, D (Shed D1 only), E, B1,B2, and B4 as they are all interconnected. However, due to specific areas being designated as radiological-controlled areas, the paths of travel to and through these areas are limited. The path of travel through the non-contaminated portions of the facility will be maintained as such and considered as if they were corridors separated from the remainder of the floor by full height partitions. Barriers will be provided and maintained designating these non-contaminated corridors. A review of the means of egress during the demolition process should consider these corridors such that the shutdown of an area does not render an area that is still operational / occupiable without sufficient means of egress through paths of travel that do not require protective gear. Occupants in radiological-controlled areas should exit the work area without dressing down. Conversely, sufficient means of egress should be maintained serving radiological-controlled areas. For emergency exit situations, egress will be the closest route to safety. In all cases, safety trumps contamination. Potential spread of contamination during emergency egress will be addressed after clearance is given to re-enter the building.

6.5 Exit Discharge

In accordance with NFPA 101 all emergency exits should discharge to the exterior at grade level. The path of travel from that point of exit discharge to the public way should be well lit and maintained free of ice, snow, water or accumulation of other debris so that the path of travel is passable year round.

7 MEDICAL TREATMENT / FIRST AID

At least one person qualified to perform first aid shall be present on the Site at all times during work activity. Persons trained in first aid will have earned a certificate (or equivalent) in first-aid training from the American Red Cross. Annual review training from the American Red Cross or equivalent will be provided to maintain certifications.

First aid will be rendered to any person injured while on the Site as appropriate. The injured person will then be transported to medical personnel for further examination and/or treatment. The preferred transport method is a professional emergency transportation service. When professional emergency transportation is not readily available or would result in excessive delay, other transport may be warranted. Under no circumstances will injured persons transport themselves to a medical facility for emergency treatment.

When an injury occurs in a work area, provisions for decontamination of the victim will be made. Life-threatening conditions may preclude normal decontamination procedures. An individual knowledgeable about the hazards of the Site shall accompany the injured party to the medical facility to provide detail to medical personnel.

All accidents will be reported initially to the HSO, the Site Operations Manager, the Safety and Health Manager, Project Manager and to the Project Coordinator. Accidents involving first-aid only will require entry into a first-aid log only. Injuries involving hospitalization or treatment beyond first-aid will be reported to the Safety and Health Manager by telephone followed up with a written Incident Report to the Project Coordinator and the Safety and Health Manager. All OSHA recordable accidents will be recorded by the Safety and Health Manager on the appropriate OSHA 300 Form. If applicable, the OSHA 300A Forms will be posted in a conspicuous location by the Safety and Health Manager as required by 29 CFR 1904.

8 EMERGENCY RESPONSE INFORMATION AND PERSONNEL

Before NTCRA activities begin, the Site Operations Manager, HSO, and RSO will meet with the Concord Fire Department (CFD) and a representative from the Emerson Hospital to inform them of the planned activities at the Site and discuss ambulance access points and entry procedures.

The HSO and Site Operations Manager will maintain a current inventory of chemicals at the Site, including location and estimated volume. Copies of the associated MSDSs also will be maintained for reference when writing Job Safety Analyses, or in case of an emergency. In the case of an emergency in which the CFD is called, a copy of the inventory will be provided to them for their reference in dealing with the emergency. A preliminary list of chemicals present in the Chemistry and Metallurgical Laboratories on site is provided in Appendix I.

8.1 Site Access During Emergencies

The main field trailer will serve as the incident control center (ICC) for all emergency response actions. Location of the ICC and key boxes is provided in Figure 5-1. Within the ICC the following information will be posted:

- Emergency contact numbers,
- Site maps indicating work areas,
- Radiological-restricted areas,
- Locations of chemical hazards,
- Locations of physical hazards,
- Security system layout and zones, and
- Temporary electric service locations.

During working hours a site representative will be present to brief responders and to escort responders around the Site.

First Responders to after-hours site emergencies will have access to a key box located at the main gate containing keys to open secured gates. A second key box, attached to the main field office trailer, will contain keys to enter the field trailer and buildings. The main field office will serve as the ICC for all site emergencies.

8.2 Local Fire Department – Concord Fire Department

Fire detection and emergency response will be on an automatic basis, whereby the CFD is notified automatically, and/or on-site personnel will notify and direct the CFD to the emergency. The CFD is a full time, paid department. The CFD is expected to respond to all fire alarms that are generated from the facility. The CFD response time to the Site is approximately 5 minutes. Hazardous Materials Response / EPA response is provided by District 3 Haz-Mat Response. MassDEP and USEPA provide support.

Town of Concord Fire Department	911 or (978) 318-3488
MassDEP Emergency Response	(888) 304-1133

Mutual Aid is provided from the following neighboring communities as follows:

1. Maynard – Maynard Engine 2

2. Acton – Acton Ladder 28
3. Lincoln – Lincoln Quint

8.3 Emergency Medical Treatment

Emergency medical services are provided by the Concord Fire Department.

Emerson Hospital (approximately 3 miles away)
133 Old Road to Nine Acre
Concord, MA 01742
(978) 369-1400

Figure 4-1 provides a map to the hospital.

8.4 Town of Concord Emergency Planning

The Town of Concord has a Hazardous Materials Emergency Plan (HMEP) for the sole purpose of responding to a hazardous materials incident. In the plan, the Site is listed as a potential location for a hazardous incident. The HMEP is authorized and regulated under the Emergency Planning and Community Right to Know Act of 1986 and the Massachusetts Comprehensive Emergency Management Plan. Through this plan, the community has a Community Emergency Response Team (CERT). The Concord CERT Point of Contact is:

Dorothy Bernard; 978-369-3048.

Additionally, the Concord Local Emergency Planning Committee (LEPC) meets every two months and is chaired by the Chief of the CFD. The mission of the LEPC is:

> *To provide a comprehensive resource management committee to include the areas of operations, planning, logistics and finance to the Town of Concord in the event of a hazardous materials incident as dictated by the Superfund Amendment and Reauthorization Act.*

Members of the LEPC include representatives from the CFD, Concord Public Health Department, Emerson Hospital, local businesses and citizens, and Dorothy Bernard of the CERT.

If public notifications or evacuations are necessary, those must be performed through the CERT and/or the LEPC. These organizations and the Town of Concord have developed procedures in their HMEP for responding to emergencies that involve the community.

9 EMERGENCY RESPONSE EQUIPMENT

Emergency supplies include the following:

1. Fire extinguishers as required by the *Fire Hazards Analysis and Fire Protection & Life Safety Assessment in Support of NTCRA Operations*, Hughes Associates, 2009;

2. First aid kits;
3. Emergency eye wash stations;
4. Emergency showers;
5. Stretcher; and
6. Blankets and towels.

The CFD HAZMAT equipment is stored in the main field trailer.

10 SPILL RESPONSE NOTIFICATION

Spills that are not completely contained or recovered and result in the discharge of a hazardous substance to the environment will be reported immediately to the HSO, who will report directly to the Project Coordinator. The Project Coordinator will determine if a reportable quantity was released and will report to the regulatory authorities.

All spills (including diesel fuel) will be reported to the HSO, who will report to the Site Operations Manager, who will in turn report to the Project Coordinator as needed.

11 EVACUATION PROCEDURES

Due to the industrial character of the Site, provisions must be made to protect the public in the event that an evacuation is required for whatever reason. Evacuation of the Site will be required when:

1. ambient air conditions contain explosive and persistent levels of combustible gas or dust, or excessive levels of toxic gases;
2. a fire or major accident occurs; or
3. explosion is imminent or has occurred.

All emergency response at the Site will be coordinated according to site communication line of command defined in Section 3.1. Site evacuation procedures will be followed by all personnel if evacuation is required. No site operations will be required to continue in the case of an evacuation.

If public notifications or evacuations are necessary, those must be performed through the CERT and/or the LEPC. These organizations and the Town of Concord have developed procedures in their HMEP for responding to emergencies that involve the community.

11.1 Emergency Signals

In most cases, field personnel will carry cellular telephones or two-way radios for non-line-of-site communications. Where radio communication is not available, the following air-horn signals will be used:

HELP	three short blasts	(. . .)

EVACUATION	three long blasts	(_ _ _)
ALL CLEAR	alternating long and short blasts	(_._.)

11.2 Work Area Evacuation

When conditions warrant work area evacuation, personnel will proceed out of the work area and notify the Site Operations Manager and all on-site personnel following the site communication line of command outlined in Section 3.1. The HSO will then continue to monitor the situation at a safe distance. Personnel will pass quickly through decontamination to remove contaminated outer suits. If the hazard is airborne, respirators will be retained. Personnel will proceed to the field office to assess the situation. If instrumentation indicates an acceptable condition, respirators may be removed. The advisability and type of further response action will be coordinated and carried out by the HSO. In the event that work area evacuation becomes necessary, personnel will immediately monitor the work area perimeter to ensure that personnel will not be adversely affected.

11.3 Full Site Evacuation

When the HSO determines that conditions warrant full site evacuation, he or she will notify the Site Operations Manager, subcontractor Site Supervisors, Radiation Safety Officer, and all site personnel. All personnel will proceed to their pre-assigned assembly area.

For personnel in Exclusion Zones when Evacuation Alarm is sounded: Individuals should evacuate the work area through the Contamination Changeout Area when practical. Once evacuated from the building(s). all individuals shall meet at the assembly area. If exiting other than through the Contamination Changeout Area, individuals will notify the Site Operations Manager, HSO, or the RSO at the assembly area that they have not performed contamination monitoring.

During an emergency the following precautionary measures should be followed:

- Keep upwind of smoke, vapors or spill location;
- Exit through the Contamination Changeout Area if possible;
- If evacuation is not via the Contamination Changeout Area, site personnel should remove contaminated clothing once they are in a location of safety and leave it near the exclusion zone or in a safe place. The Project RSO and the HSO will predetermine safe places. These will be marked with signs and will have appropriate containers for PPE.

All subcontractor Site Supervisors are responsible for accounting for their personnel at the assigned assembly area, and reporting to the Site Operations Manager. The Site Operations Manager will conduct a head count to ensure all personnel have been evacuated safely. The use of a daily attendance sheet, crew assignment sheet, and visitor sign in sheet will be used to verify evacuation of all who are working on, or visiting, the work site at the time the evacuation becomes necessary.

12 HAZARD IDENTIFICATION, EVALUATION, AND VULNERABILITY ANALYSIS

Prior to beginning a specific task, the HSO (and RSO if applicable) will develop a Job Hazard Analysis and review safety considerations and potential vulnerabilities with the field crew. The Job Hazard Analysis procedure is defined in detail in the HASP.

13 ANALYSIS OF SPILL POTENTIAL

Prior to beginning a specific task, the HSO (and RSO if applicable) will develop a Job Hazard Analysis and review safety considerations with the field crew. This will include an analysis of spill potential.

14 FACILITY REPORTABLE SPILL HISTORY

The facility is entering a demolition phase. Reportable spills by the previous tenants are unknown.

15 PLAN IMPLEMENTATION INFORMATION

Before Interim NTCRA Activities begin, the Project Coordinator, Project Manager, Site Operations Manager, HSO and RSO will meet with the Concord Fire Department (CFD) and a representative from the Emerson Hospital to inform them of the planned activities at the site and discuss ambulance access points and entry procedures.

The HSO will perform the following tasks before starting field operations:

- Review the facility emergency assembly locations for each major operational area with the Site Operations Manager, subcontractor Site Supervisor and site workers.
- Determine what on-site communication equipment will be used, e.g., two-way radios, cell phones.
- Determine what off-site communication equipment will be used, e.g., nearest telephone, cell phone.
- Confirm and post emergency telephone numbers, evacuation routes, assembly areas, and route to hospital. Confirm evacuation routes from buildings before each task, as these are subject to change. Communicate the information to site personnel.
- Post appropriate “exit” signs and “Fire Extinguisher” signs. Keep areas near exits and extinguishers clear.
- Establish a clear and simple protocol to communicate when there is an emergency using sirens, speaker horns, or radios.
- Inform hospital and fire department that site work has resumed.
- Check site emergency equipment, supplies, and potable water are present and functional.

- Communicate emergency procedures to personnel for personal injury, exposures, fires, explosions and releases.
- Supervisors are to rehearse the emergency response plan procedures before activities begin, including a "practice run" driving the mapped route to the hospital.
- Stay informed of road construction on route to hospital and post changes to map and inform employees of the change if necessary.
- Brief new workers on the Emergency Response Plan.

16 STORAGE AND DISPOSAL PLANS

Refer to the ARARs Implementation Plan for disposal requirements. No long-term storage is planned.

17 MEASURES TO PROVIDE FOR CONTAINMENT AND DRAINAGE

Measures to provide for containment and drainage are provided in the HASP.

18 FACILITY SELF-INSPECTION CHECKLISTS, TRAINING INFORMATION AND MEETING LOGS

All site documentation of inspections, training information and meeting logs will be maintained at the *de maximis* Connecticut office.

19 DIAGRAMS FOR THE SITE UTILITY PLAN AND THE DRAINAGE PLAN

Figures 6-1 and 6-2 provide the approximate location of all known site utility and drainage structures.

20 SECURITY SYSTEMS DESCRIPTION

A more detailed description of the site security systems is provided in the Site Management and Security Plan.

20.1 Site Security and Control

Site security and control during the Interim NTCRA Activities will be provided by existing fencing and gates, access controls, physical barriers, preventing unauthorized access to the site buildings, installation of a security system and implementation of safe work practices.

20.2 Fencing

Chain-link fencing fully encompasses the perimeter of the buildings. Access into this area is via a swing gate along the driveway entrance on Main Street and via several man-gates along portions of the perimeter fence. These features will be locked at all times except when access is necessary for equipment and personnel to perform interim activities in these areas.

20.3 Access Controls

During the Interim NTCRA Activities, fenced portions of the Site will only be accessible to authorized personnel. This includes representatives of the Agencies, the Respondents, and their respective contractors engaged to perform such activities. Personnel requiring access to the Site should contact *de maximis* to make arrangements, e.g., to obtain a key or request an escort.

A sign-in/sign-out sheet will be used to monitor personnel access to the Site. Visiting personnel will be required to record the date and time of entry and exit on a designated sign-in/sign-out sheet. This sheet will be maintained inside the field office during normal operations.

20.4 Physical Barriers

Physical barriers such as bollards and swing gates will be installed in access points to direct traffic to the Site work trailers.

REFERENCES

Emanuel Engineering, Inc. "Structural Roof Investigation: Buildings A, B, C, D, E, B1, B2, B3, B4," March 2004.

Hughes Associates, 2009. "Fire Hazard Analysis and Fire Protection & Life Safety Assessment in Support of NTCRA Operations," August 2009

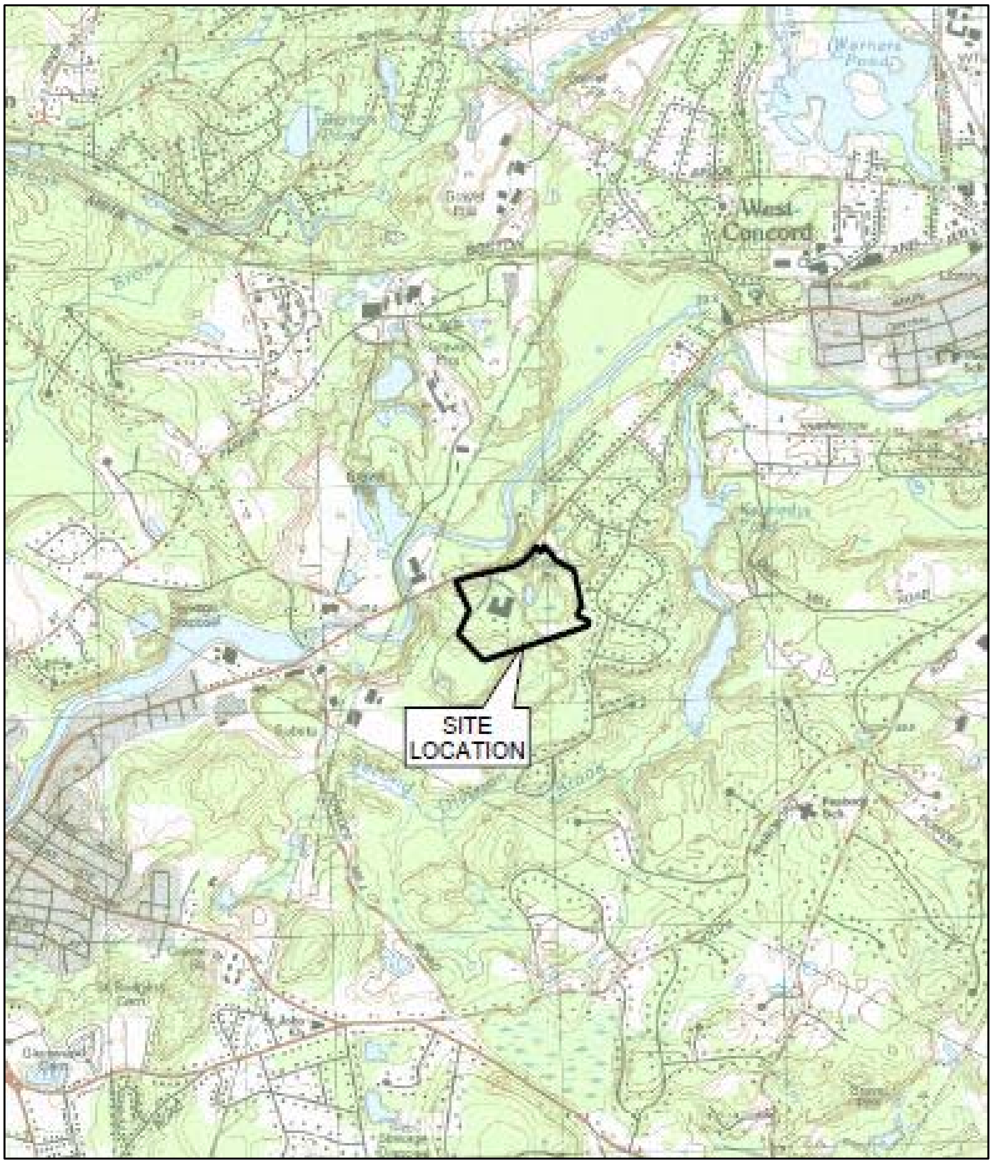
Nuclear Metals, Inc., 1961. Application for Renewal Source Material License C-3429, Concord, MA.

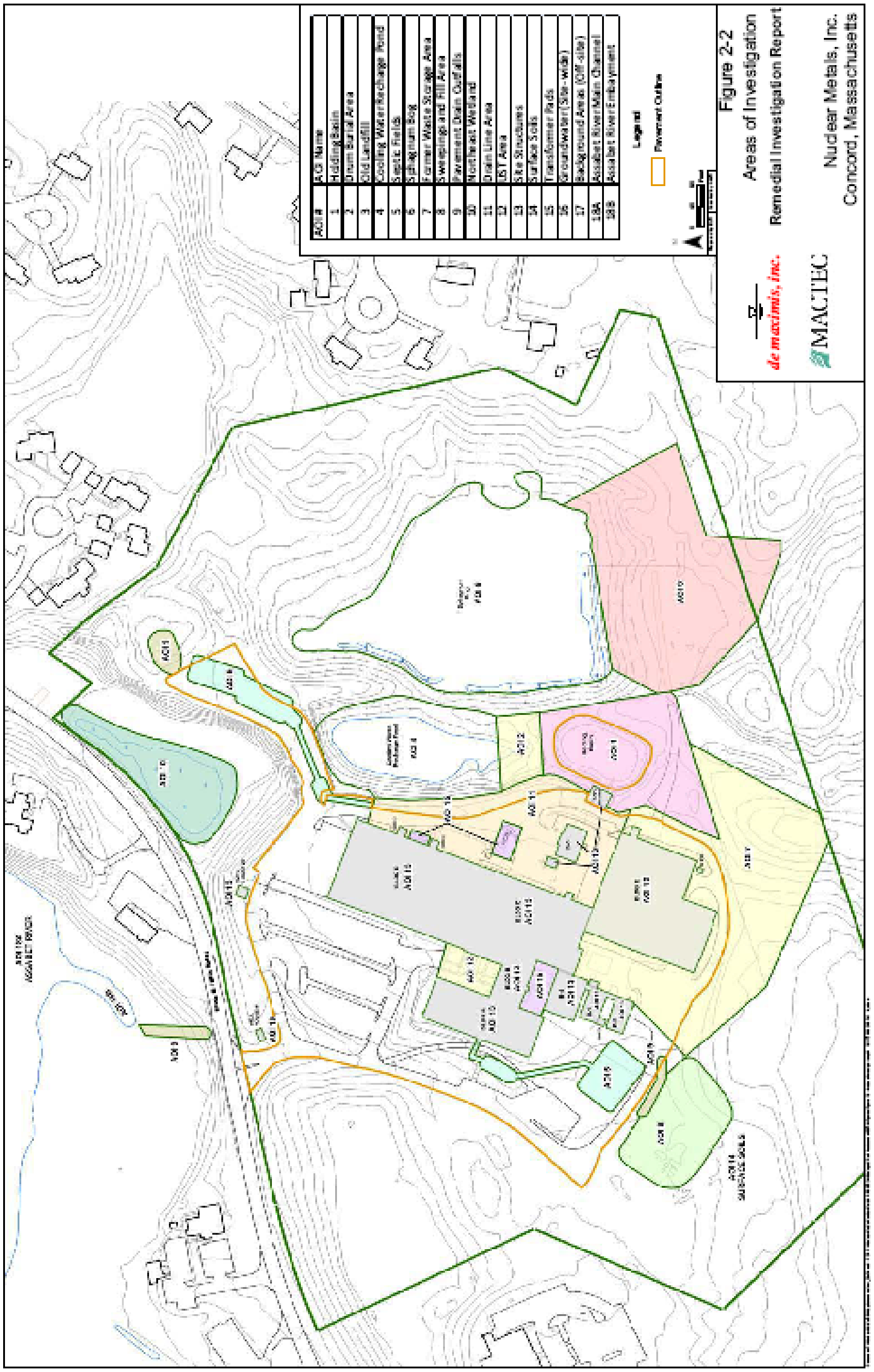
Starmet, 2006. Information provided by former Starmet and current Starmet Parties employees to de maximis, inc. during building survey.

USEPA, 2011. *Administrative Settlement Agreement and Order on Consent for Non-Time Critical Removal Action*, Docket No. CERCLA-01-2011-004, January 2011.

FIGURES

Figure 2-1 NMI Site Location





AOI # | AOI Name
1 Holding Basin
2 Drum Burial Area
3 Old Landfill
4 Cooling Water Recharge Pond
5 Septic Fields
6 Sphagnum Bog
7 Former Waste Storage Area
8 Sweepings and Fill Area
9 Pavement Drain Outfalls
10 Northeast Wetland
11 Drain Line Area
12 UST Area
13 Site Structures
14 Surface Soils
15 Transformer Pads
16 Groundwater (Site-wide)
17 Background Areas (Off-site)
18A Assabet River Main Channel
18B Assabet River Embayment
Legend
Pavement Outline
Figure 2-2
Areas of Investigation
Remedial Investigation Report
Nuclear Metals, Inc.
Concord, Massachusetts
de maximis, inc.
MACTEC

Figure 3-1

LOCAL

EMERGENCY TELEPHONE NUMBERS

EMERGENCY TELEPHONE NUMBERS

Chemical Manufacturers Association Chemical Referral Center	(800) 262-8200
Emerson Hospital	911 or (978) 369-1400
Massachusetts Nuclear Incident Advisory Team (NIAT)	(617) 242-3453
MassDEP Emergency Response	(888) 304-1133
National Response Center	(800) 424-8802
Poison Control Center	911
Project Coordinator: Bruce Thompson	(860) 651-1196
	(860) 662-0526 (cell)
Project Manager: John Hunt	(781) 842-0085 (Home)
	(617) 957-5961(cell)
Radiation Safety Officer: Matt Norton, DDES	(978) 844-0565 (cell)
Safety and Health Manager: Valerie Rule	(865) 691-5052 (office)
	(865) 388-5425 (cell)
Site Health and Safety Officer: Jim Leonard	(860) 614-4715
Site Operations Manager: Stan Baker	(248) 202-7078 (cell)
Town of Concord Fire Department	911 or (978) 318-3488
Town of Concord Police Department	911 or (978) 318-3400

Figure 3-2
NATIONAL AND STATE
EMERGENCY TELEPHONE NUMBERS

EMERGENCY ASSISTANCE TELEPHONE ROSTERS

FEDERAL AGENCIES	TELEPHONE	LOCATION
Department Of Transportation	202-366-4000	Washington, D.C.
Environment Protection Agency	617-223-7265	Boston, MA
Federal Emergency Management Agency	617-223-9540	Boston, MA
National Response Center	800-424-8802	Washington, D.C.
Occupational Safety and Health	617-565-1161	Boston, MA
Regional Response Team	617-565-3424	Boston, MA
U.S. Coast Guard	617-223-3000	Boston, MA
National Weather Service	508-823-1900	Taunton, MA
Agency for Toxic Substances & Disease Control	404-639-0615	Atlanta, GA
Center for Disease Control	404-633-5313	Atlanta, GA
U.S. Army Operations Center	703-697-0218	Washington, D.C.
Defense Logistics Agency	800-851-8061	Washington, D.C.
Department of Energy	202-586-5000	Washington, D.C.
U.S. Bureau of Explosives	202-835-9500	Washington, D.C.

STATE AGENCIES	TELEPHONE	LOCATION
Department of Environmental Protection	888-304-1133	Boston, MA
Nuclear Incident Advisory Team	617-727-9710	Boston, MA
Massachusetts Highway Department	617-913-7500	Boston, MA
Department of Food and Agriculture	617-727-3000	Boston, MA
Massachusetts Emergency Management	800-982-6846	Framingham, MA
Department of Industrial Accidents	617-724-4900	Boston, MA
Department of Public Health	617-522-3700	Boston, MA
Massachusetts State Police	508-820-2121	Framingham, MA
Emergency Response Commission	800-982-6846	Framingham, MA

NATIONAL ORGANIZATIONS	TELEPHONE
CHEMTREC/CHLOREP	800-424-9300
American Association of Railroads (AAR)	202-639-2222
National Agricultural Chemical Association	513-961-4300

HOSPITALS	TELEPHONE

Figure 4-1

ROUTES TO EMERGENCY MEDICAL FACILITIES

POST IN FIELD OFFICE

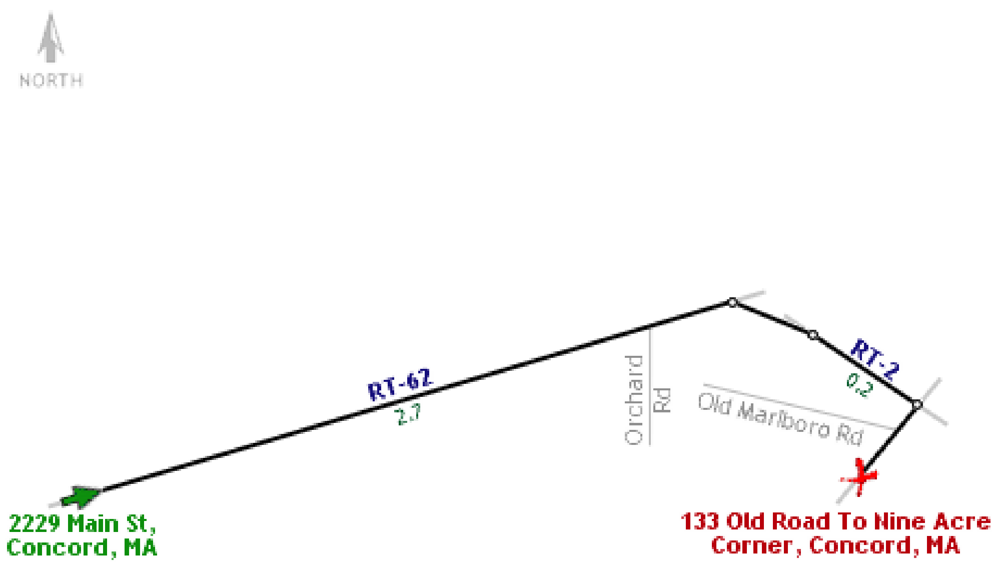
Emerson Hospital

(approximately 3 miles away)

133 Old Road to Nine Acre

Concord, MA 01742

(978) 369-1400



Primary source of medical assistance for the NMI Site RI/FS is the local authorities.

Emergency response can be initiated by calling 911 at the site.