Engineering Evaluation and Cost Analysis (EE/CA)
Disposition of Structures and Contents

Nuclear Metals, Inc. Superfund Site
2229 Main Street
Concord, Massachusetts

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Executive Summary

The Nuclear Metals, Inc. ("NMI") Site ("Site") is a 46.4-acre parcel located at 2229 Main Street in the western portion of the Town of Concord, Middlesex County, Massachusetts. A specialty metals manufacturing facility has operated at the Site from 1958 to the present. NMI was originally a specialty metal research and development facility that was licensed to possess low-level radioactive substances. From 1957 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. 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 a 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 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. 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 1997, NMI was renamed Starmet Corporation ("Starmet").

Starmet and related entities (the "Starmet Parties") currently perform small scale operations at the Site, including production of beryllium-aluminum materials. The Starmet Parties also currently provide security.

Starmet's license to possess radioactive materials is administered by the Massachusetts Department of Public Health – Radiation Control Program ("MADPH-RCP"). Although Starmet remains a licensed facility, for the past several years it has been prohibited from engaging in activities involving manufacturing or production with radioactive materials. Under its license, Starmet is required to decommission the facility and meet MADPH-RCP regulatory requirements for the cleanup of the Site, including the cleanup of the facility buildings.

In May 2007, MADPH-RCP and Starmet entered into a Consent Decree (Docket No. PH-03-460), under which Starmet personnel will permanently vacate the Site on or before October 31, 2007. Starmet is currently providing security for the Site, including on-site security guards and maintaining heat, electricity, fire alarms, sprinkler, and water treatment systems. Starmet has not left the Site to date; however, it is in discussions with Mass DPH regarding its departure. Starmet's provision of security will terminate after it vacates the Site. Once Starmet personnel have permanently vacated the Site, MADPH-RCP will terminate Starmet's radioactive materials licenses.

Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC § 9601, *et seq*. ("CERCLA"), a removal action may be taken to abate, prevent, minimize, stabilize, mitigate, or reduce the threat of release of hazardous substances. For Non-Time-Critical Removal Actions ("NTCRAs"), preparation of an EE/CA is required by Section 300.415(b)(4)(i) of the National Oil and Hazardous Substance Pollution Contingency Plan ("NCP") when a planning period of at least six months is available. This EE/CA was prepared consistent with the requirements of applicable laws, regulations, and guidance, including CERCLA, the NCP, and applicable EPA guidance, in particular, the *Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA* (EPA, 1993).

This EE/CA was developed while a Remedial Investigation / Feasibility Study ("RI/FS") is in progress for the Site. CERCLA requires that any removal action taken must be consistent with the long term remedial action for the Site. In this case, given the decommissioning requirements that must be met (MADPH-RCP unrestricted release clean up standard of 10 mrem/year Total Effective Dose Equivalent ("TEDE") under 105 CMR 120.245[1]), it is probable that the buildings will eventually have to be demolished, given the high levels of contamination found on and in the buildings, as well as the deteriorating condition of the buildings and the potential for catastrophic collapse of the buildings due to disrepair or fire. The demolition and removal of the buildings is anticipated as necessary under the long-term remedial action for the Site. The use of the MADPH-RCP 10 mrem/yr unrestricted release standard relating to decommissioning in this EE/CA does not presuppose the land use assumptions for future actions at the Site. Human health and ecological risk assessments will be performed as part of the RI/FS, and the reasonably anticipated future use for the Site will be determined as part of that process.

This EE/CA evaluates specific hazards associated with Site buildings and their contents, as well as measures to address these hazards. The RI/FS process will incorporate a comprehensive risk assessment and will lead to the selection of a Site-wide remedy that will address actionable risks in media other than the buildings and their contents. In addition, the Site-wide remedy will address any actionable risks associated with residuals not addressed as part of the NTCRA. While any NTCRA conducted at the Site would be completed under CERCLA, it will comply with decommissioning-related Applicable or Relevant and Appropriate Requirements ("ARARs") promulgated by MADPH RCP and/or the Nuclear Regulatory Commission ("NRC"), as identified by EPA for this removal action. Therefore, the CERCLA process will physically accomplish somewhat similar activities as an NRC / MADPH-RCP decommissioning would, even though this work is being conducted pursuant to a different regulatory framework.

The approach taken in this EE/CA is similar to how the Department of Energy ("DOE") is decommissioning its facilities under CERCLA. Specifically, the joint DOE/EPA *Policy on Decommissioning of Department of Energy Facilities under CERCLA* (May 22, 1995) specifies "that decommissioning activities should be conducted as non-time critical removals, unless circumstances at the facility indicate otherwise." A similar approach is provided in this EE/CA, which focuses exclusively on the contaminated buildings and their contents.

This EE/CA establishes two objectives:

- Prevent the release of hazardous substances and radionuclides from drums, barrels, tanks, other bulk storage containers, or contaminated surfaces, including roofs, equipment or building materials that present an unacceptable risk to human health and the environment.

- Prevent direct contact with, ingestion of, external exposure (radiological) to, 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**.**

For the purpose of this EE/CA, unacceptable risk associated with radionuclides will be defined by exceedance of the MADPH-RCP unrestricted release clean up standard of 10 mrem/year TEDE under 105 CMR 120. Consistent with these objectives, this EE/CA considers five alternatives for the disposition of the buildings and their contents at the Site:

[1] TEDE is calculated by adding the external deep dose equivalent to the internal committed effective dose equivalent.

1) Alternative 1 is to take no action at this time.
2) Alternative 2 will prohibit site access by trespassers and continue monitoring existing contamination. Under this alternative, physical barriers (e.g., entrance gate, chain-link fence) and on-site security would be used to prevent exposure to contaminants by reducing exposure pathways; and long-term monitoring of structures would be used to detect any deterioration that could lead to releases from the buildings into the environment. In addition, existing utilities would be terminated, temporary electrical services would be installed to support ongoing inspections and continued operation of the fire alarm system, and heating systems would be installed and operated in order to keep fire suppression systems from freezing.
3) In addition to those actions required in Alternative 2, Alternative 3 requires building stabilization, demolition of selected structures and equipment, and off-site disposal of remaining hazardous substances and flammable and/or combustible materials. Currently, EPA is conducting a time-critical removal action ("TCRA") to address the hazardous substances and flammable materials that present the greatest risk of fire or explosion at the facility. EPA has consulted extensively with the Concord Fire Department regarding this action and has received a request for assistance in the removal and/or proper storage of these materials. Any remaining hazardous, flammable or combustible materials not removed by EPA under its removal authority for TCRAs would be addressed under this alternative. The additional work required under Alternative 3 includes the following:
    a) Conduct additional radiological, asbestos, and universal waste characterization surveys to determine location, volume and concentration of waste for NTCRA planning, health and safety considerations and disposal characterization;
    b) Segregate and containerize radioactive hotspot material to assist in developing work zones, process areas and for health and safety considerations;
    c) Install temporary electrical services to support work activities. Provide temporary power and lighting to conduct NTCRA activities;
    d) Terminate existing utilities (electrical, pressurized piping and natural gas) and ensure continuity of potable water supply. Disconnection of utilities is necessary due to inadequate building as-built drawings showing locations of site utilities, to eliminate the possibility of encountering an active utility while conducting NTCRA activities. Maintaining the existing potable water supply to the Site is necessary to conduct NTCRA activities and to maintain the existing fire suppression systems;
    e) Stabilize buildings including roofs, as needed. Based on an engineering evaluation of roof structures, roof stabilization may consist of interim shoring for added structural support, removal and/or securing roof top equipment and air filtration systems, and repairing roof leaks to minimize infiltration of rain and releases to the environment;
    f) Remove and dispose of remaining hazardous and combustible materials and debris. Conduct a site-wide building sweep to remove combustible and hazardous materials such as process sludge, hydrogen peroxide, flammable liquids, acids, laboratory chemicals, pressurized cylinders and combustible stockpiles, e.g., wood pallets, combustible non-load bearing interior walls, furniture, and paper records;
    g) Remove and dispose of liquids within equipment. Remove liquids such as diesel fuel, gasoline, hydraulic fluids, oils, and anti-freeze/coolant from equipment in preparation for disposal of associated equipment;

h) Demolish and dispose of a limited number of significantly contaminated buildings and equipment that pose the greatest threat of release or risk of fire or explosion. Work includes demolition and disposal of centerless grinder, hydrofluoric acid area located in Building E, acetone distillation unit and shed, Holding Basin Tank House, Butler Building B3, and Hydrogen Peroxide Tank House;

i) Conduct a sub-slab soil investigation. Conduct a sub-slab soil investigation to assess levels of contamination in soils located below building slabs to support the RI/FS; and

j) Off-site disposal of removed materials as appropriate.[2]

4) Alternative 4 consists of all the work summarized above under Alternative 3. In addition, Alternative 4 requires additional actions to remove and dispose of all remaining materials in the buildings and cleaning and/or taking additional measures to address mobility of contaminants on remaining surfaces. At the completion of this Alternative, only buildings intact with exterior walls, structural supporting interior walls, roof, and floors will remain. The additional work required under Alternative 4 includes the following:

   a) Remove and dispose of asbestos;

   b) Remove and dispose of universal waste. Waste includes computer equipment, industrial batteries, transformers, mercury switches, and fluorescent light bulbs;

   c) Remove and dispose of building contents and debris leaving only the building shell intact. Building contents include non-structural support walls, floor covering, fixtures, interior ductwork, ventilation equipment, process machinery, conduit, and utility piping;

   d) Minimal interior cleaning, consisting of vacuuming and wiping surface areas to control dust;

   e) Conduct a comprehensive radiological survey after building contents are packaged, removed, and disposed off-site, to refine the approach and costs to implement demolition and disposal activities; and

   f) Off-site disposal of removed materials as appropriate[1].

5) Alternative 5 consists of demolition and disposal of all Site buildings down to the slabs, followed by filling of voids and temporary capping of the building slabs. Alternative 5 includes all of the work summarized above under Alternatives 3 and 4 except to the extent those certain activities are inconsistent with and/or not cost effective given the nature and scope of this Alternative. A summary of additional work required under Alternative 5 includes the following:

   a) Strip off removable radiological contamination from select surfaces to minimize waste volumes to be disposed as low-level radioactive waste to the extent practicable and cost-effective;

   b) Cap and/or clean existing drain lines, vaults, and sumps;

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[2] Criteria to determine acceptable off-site disposal alternatives, also termed "release criteria," will be defined by the reference for unrestricted release criteria of materials for NRC-licensed facilities in the Atomic Energy Commission's (now NRC) *Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors*." These criteria allow release of equipment or materials from a NRC-licensed site as non-radiologically contaminated materials that can be removed from a site and reused or disposed without radiological controls. The release criteria in *Regulatory Guide 1.86* have also been incorporated into several other NRC and other federal agencies guidance documents. The NRC issued "Policy and Guidance Directive FC 83-23, Termination of Byproduct, Source and Special Nuclear Material Licenses," permitting the use of *Regulatory Guide 1.86* for other NRC licenses. The Department of Energy has incorporated the *Regulatory Guide 1.86* criteria into "*Order 5400.5*

c) Demolish structures and buildings;

d) Off-site or on-site disposal of removed materials as appropriate; and

e) Fill voids and temporarily cap building slabs, pending a future remedial action to address building slabs, impacted sub-slab soil and contaminated plumbing and/or drain lines.

The Site is currently occupied by the Starmet Parties. The degree to which the Starmet Parties, prior to abandoning the Site, will remediate their presently- and previously-used work areas and equipment in accordance with applicable federal, state and local laws and regulations is unknown. At minimum, it is expected that the current beryllium-aluminum operation will remove equipment and contamination from their work areas prior to abandoning the Site.

This EE/CA will become part of the NMI Superfund Site Administrative Record. It will be made available for public comment. This EE/CA will be made available to the public at the following locations:

Town of Concord Public Library
129 Main Street (Main Library)
Concord, MA 01742
(978) 318-3300

USEPA – Region 1
One Congress Street
Boston, MA 02114
(617) 918–1310

1. Introduction

1.1 Background

The Nuclear Metals, Inc. ("NMI") Site ("Site") is a 46.4-acre parcel located at 2229 Main Street in the western portion of the Town of Concord, Middlesex County, Massachusetts. A specialty metals manufacturing facility has operated at the Site from 1958 to the present. NMI was originally a specialty metal research and development facility that was licensed to possess low-level radioactive substances. From 1957 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. 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. 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 1997, NMI was renamed Starmet Corporation ("Starmet").

Starmet and related entities (the "Starmet Parties") currently perform small scale operations at the Site, including production of beryllium-aluminum materials. The Starmet Parties also currently provide security.

Starmet's license to possess radioactive materials is administered by the Massachusetts Department of Public Health – Radiation Control Program ("MADPH-RCP"). Although Starmet remains a licensed facility, for the past several years it has been prohibited from engaging in activities involving manufacturing or production with radioactive materials. Under its license, Starmet is required to decommission the facility and meet MADPH-RCP regulatory requirements for the cleanup of the Site, including the cleanup of the facility buildings.

In May 2007, MADPH-RCP and Starmet entered into a Consent Decree (Docket No. PH-03-460), under which Starmet personnel will permanently vacate the Site on or before October 31, 2007. Starmet is currently providing security for the Site, including on-site security guards and maintaining heat, electricity, fire alarms, sprinkler, and water treatment systems. Starmet has not left the Site to date; however, it is in discussions with Mass DPH regarding its departure. Starmet's provision of security will terminate after it vacates the Site. Once Starmet personnel have permanently vacated the Site, MADPH-RCP will terminate Starmet's radioactive materials licenses.

High levels of contamination are found on the roof of the facility buildings. In addition to the current releases of contamination on the exterior of the buildings, high levels of contamination are found inside the facility's buildings. Due to the deteriorating condition of the buildings, and the risk of catastrophic collapse or fire, there is a threat of release of contamination from inside the buildings to the environment. The release and threat of release of contamination from the facility buildings presents a significant risk to human health and the environment. These risks are exemplified by a fire that occurred on June 26, 2007. The fire involved metal turning wastes associated with the Starmet Parties that were stored within Building C. While this fire was controlled by sprinklers and response by the Concord Fire Department ("CFD"), there is no

evidence to suggest that another fire might not occur, potentially at larger scale. The cause of the fire remains under investigation by the CFD.

In addition, as a licensed facility requiring decommissioning in accordance with MADPH-RCP criteria for unrestricted release (10 mrem/year Total Effective Dose Equivalent ("TEDE") under 105 CMR 120.245), it is probable that the buildings will eventually have to be demolished.[3] Demolition likely is the only alternative that in the long-term will meet the decommissioning standard. The primary bases for this conclusion are:

- the radioactive material contamination in the facility itself is so extensive that it would require expensive decontamination. After such decontamination, it could still fail to meet the decommissioning standards;
- the floor drains and septic systems outside of the buildings are contaminated with DU and therefore it is likely that the floor drains and plumbing underneath the facility are substantially contaminated and will require further assessment and possible removal as part of a remedial action; and
- the structural integrity of the buildings continues to deteriorate and will eventually require new roofs and other major renovations if not demolished, all unnecessary expenditures. See Section 2.1.3 for a further discussion of the *Structural Roof Evaluation (2004).*

This EE/CA was developed while a Remedial Investigation / Feasibility Study ("RI/FS") is in progress for the Site. Substantial information regarding the Site and the RI/FS process is presented in the RI/FS Work Plans (*de maximis, inc.,* September 2004**)**. Because of the extremely complex nature of this Site, a final remedy is not anticipated for some time. To address the significant risks posed by the buildings and their contents until implementation of the remedial action, the focus of this EE/CA is to address specific hazards associated with the buildings and their contents in a manner consistent with the long-term remedial action. The RI/FS process will incorporate a comprehensive risk assessment and will lead to the selection of a site-wide remedy that will address unacceptable risks in media other than the buildings. In addition, the site-wide remedy will address any unacceptable risks associated with residuals not addressed as part of the NTCRA.

While any NTCRA conducted at the Site will be completed under CERCLA, it also will comply with decommissioning-related Applicable or Relevant and Appropriate Requirements ("ARARs") identified in this EE/CA under the MADPH-RCP and/or the Nuclear Regulatory Commission ("NRC").

1.2 Purpose

On June 6, 2006, EPA gave Notice to Proceed to the Respondents to conduct an EE/CA for the remediation of the facility buildings and contents of those buildings pursuant to Section 1.III.C of the Remedial Investigation / Feasibility Study Statement of Work ("RI/FS SOW"). Under CERCLA (42 USC § 9601, *et seq*.), a removal action may be taken to abate, prevent, minimize, stabilize, mitigate, or reduce the threat of release of hazardous substances.

For NTCRAs, preparation of an EE/CA is required by Section 300.415(b)(4)(i) of the National Oil and Hazardous Substance Pollution Contingency Plan ("NCP") when a planning period of at six months is available. This EE/CA was prepared consistent with the requirements of applicable laws, regulations, and guidance, including CERCLA, the NCP, and applicable EPA guidance, in

[3] TEDE is calculated by adding the external deep dose equivalent to the internal committed effective dose equivalent.

particular, the Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA (EPA, 1993) ("NTCRA Guidance").

This EE/CA was developed based upon the assumption that demolition of the buildings, either as a NTCRA or as a part of the overall remedy for the Site, is likely the sole alternative that will comply with state decommissioning requirements in 105 CMR 120.245.

2. Site Conditions and Background Information

2.1 Site Description

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 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. The current NMI property consists of approximately 46.4 acres.

On October 1, 1997, NMI was renamed Starmet Corporation. At present, the Starmet Parties continue to perform small scale operations at the Site. As detailed below, the Starmet Parties occupy a small portion of the facility buildings. In addition, in accordance with Starmet's Radioactive Materials License requirements, access to a number of areas within the facility buildings (described below) is restricted due to the presence of high levels of radioactive materials. Only a small number of specialty-trained employees of the Starmet Parties are allowed to enter these portions of the facility.

2.1.1 Physical Location/Community Setting

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 2.1.1). As currently configured, the Site includes eight interconnected buildings, several smaller outbuildings, paved parking areas, a 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**.**

2.1.2 Site History

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 reentry studies, with particular emphasis on the use of materials in combination.

Recent 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, and 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°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°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.

Current Operations. At present, the Starmet Parties 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 are 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 are produced by a variety of techniques, including investment and permanent mold casting techniques.

2.1.3 Site Characteristics Relevant to the EE/CA

As currently configured, the Site has five interconnected buildings with several smaller outbuildings, e.g., butler buildings, well houses, storage sheds, etc. See Figure 2.1.3. 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. This scenario is very likely, and is indicated as a potential serious problem in the *Roof Evaluation.* Specifically, the report states:

> "…water penetrations are primarily caused for two reasons: the failure of the existing roofing, which is very old and deteriorated, extensively patched, and has been penetrated numerously over many years; and the lack of a fast and proper water drainage due to inadequate and improper roof drains and slopes. Water penetrations have created various conditions of rust in the roof metal deck from minor – surface only, to major – complete loss of material. These conditions, in general, are not considered likely to cause roof collapse under the snow load at this time, however, if left untreated, they will result in structural conditions that are dangerous and likely to produce collapse or partial collapse of the roof system."

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. This rainwater is currently treated by the Starmet Parties. This is, however, a temporary solution as the facility will soon be abandoned. 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.

2.1.3.1 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). All of Building A is currently accessible and partially occupied by one or more of the Starmet Parties. Current 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. The area of deteriorated decking, where access is restricted, is indicated on Figure 2.3.2.1.c.

2.1.3.2 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). Currently the lunch area, boiler room, and sections of the former lockers rooms (used for Beralcast molding operations) are 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. The area of deteriorated decking, where access is restricted, is indicated on Figure 2.3.2.1.c.

2.1.3.3 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 and discussed in this EE/CA 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 is currently designated a Radiation Work Area based on past production activities and current measurable levels of contamination. In a Radiation Work Area, proper personal protective equipment (“PPE”), i.e., safety glasses, rubber booties, coveralls, is required. The Starmet Parties have 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 is currently being used to store off-specification metal powders. The current operator continues to use the machine shop to support the beryllium operation. The northern end of the second floor

mezzanine is currently being used as a carpentry shop where 4' X 8' feet pieces of plywood are being painted prior to being attached to the outside windows of Building A. The plywood is reportedly being attached to exterior windows of the building to help reduce heat loss from the structures during the winter months**.**

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. The area of deteriorated decking, where access is restricted, is indicated on Figure 2.3.2.1.c.

2.1.3.4 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 further discussed in this EE/CA is a centerless grinder milling machine, which has been reported by Starmet (Starmet 2006) to contain dried DU powder/sludge.

Except for the northern end of Building D, which is currently being used as the beryllium foundry / rotating electroplasma machine area, the building is vacant but accessible. 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.

2.1.3.5 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 two specific items discussed further in the EE/CA, one is the former research and development area known as the Hydrofluoric Acid Area, and the other are the above ground storage tanks that contain used machining coolant presumed to be DU contaminated.

The Starmet Parties currently operate 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 currently must be 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 current operators also use 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.

2.1.3.6 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.

2.1.3.6.1 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. Butler B1 is currently a fabrication/maintenance shop.

2.1.3.6.2 Butler B2

Building B2 is a metal 'Butler' building that was part of the original Site constructed in 1958. It was historically been 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 B2 was used for DU storage. Butler B2 is currently used for shipping and receiving.

2.1.3.6.3 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. It is currently being used to store uranium contaminated equipment received in the middle to late 1980's from American Lead, a former manufacturer of DU penetrators located in Colonie, New York (Starmet, 2006).

2.1.3.6.4 Butler B4

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

2.1.3.7 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 are currently being used to store wash water, prior to it being treated by the sonodyne. Radiologically-contaminated sludge is present in the bottom of each tank. It is estimated that each tank contains 5,000 pounds of sludge.

2.1.3.8 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 houses 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 contains concentrated hydrogen peroxide, a very reactive oxidizer, and is very accessible to a trespasser (wooden structure outside the main buildings complex). This material, if not handled and disposed properly, could be very hazardous if left unattended.

2.1.3.9 Underground Storage Tank Area

Fuel oil for the Site is 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 2.1.3). The fuel oil is used in the facility boilers that are located in Building B. Information regarding the installation date of the current tanks was 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.

Removal of the remaining No. 4 heating oil has been included in Alternatives 3 through 5, as discussed below.

2.1.3.10 Miscellaneous Structures

<u>Gas Cylinder Storage Sheds</u>

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 “sealand” containers with ventilation openings throughout the exterior walls. There are currently 24 inert gas cylinders (nitrogen, argon) stored in the two sheds. In addition, 15-20 one-liter glass containers of laboratory grade acids, e.g., HCL, sulfuric acid, are currently stored in the sheds; however, it is likely that these materials will be addressed under EPA’s time-critical removal action (“TCRA”).

The Gas Cylinder Storage Sheds are unsecured and contain pressurized gas cylinders and miscellaneous acids containers. If not handled and disposed of properly, these hazards could cause severe injury. Further, the sheds are very accessible to trespassers.

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 containing acetone, a highly flammable liquid. The shed is very accessible to trespassers, creating an extremely 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.

2.2 Previous Removal Actions and Investigations

Actions to date involving the buildings and their contents include a Massachusetts Department of Environmental Protection ("MassDEP") drum and bulk material removal action, and a building survey to evaluate levels of contamination and to inventory building contents and structural components.

2.2.1 MassDEP Drum and Bulk Material Removal Action

In a March 15, 2006 presentation to citizen's groups, MassDEP reported that from September 2005 through February 2006, MassDEP along with its removal contractor, Envirocare (now Energy Solutions) of Clive, Utah, removed the following material from the structures during Phase I of the project:

- 1,593 Drums of uranium tetrafluoride (UF4);
- 1,106 Drums of conjoint (monolithic grout/chip/swarf);
- 510 Drums of dry active waste (includes PPE and plastic);
- 121 Bulk Bags (includes filter cake, sonodyne solids, and solidified oils);
- 342 Drums of uranium foundry waste (includes crucibles, uranium oxide, graphite, bricks, and filter cake);
- 8 Drums of scrubber waste from the acid room;

- 50 Drums of asbestos containing building material;
- 56 Drums of non-asbestos building material;
- 61 B12 / B25 Boxes of DU contaminated copper sheeting; and
- 644,600 lbs. of DU metal.

In addition to the completed removal of the above material, MassDEP reported that approximately 395 containers of miscellaneous material had been determined to meet existing disposal waste streams for the Energy Solutions facility. These containers were located throughout Buildings C, D and E, and were gathered and stored in the former DU metal storage area of Building E by Energy Solutions in February 2006. The 395 containers were then consolidated down to 152 containers.

In a January 10, 2007 presentation to the citizen's groups, MassDEP reported that in December 2006, thirteen (13) 30-cubic-yard roll-off containers of low-level radiation waste were removed from the Site. The waste material included the 152 containers described above, loose graphite, crucibles, chairs, mats, tools, tool boxes, metal trays, floor sweepings, metal blades, work benches, crushed drums and an additional 400 pounds of DU metal. Also included were two (2) drums of liquid mixed-waste, twenty-eight (28) drums of solidified non-aqueous mixed waste, i.e., contaminated waste oil, and twenty-five (25) drums of miscellaneous manufactured chemicals.

Finally, MassDEP reported at a March 14, 2007 presentation to citizen's groups that in March 2007, thirty-seven (37) over-packed drums containing aqueous mixed waste, four (4) drums of conjoint, seven (7) drums of filter cake solids, and three (3) drums of dry active waste were removed from the Site. A final report on MassDEP's removal activities is not yet available. However, the quantities and types of materials removed from the Site were confirmed by MassDEP's contractor, Energy Solutions.

2.2.2 Radiological Criteria

The MassDEP removal action discussed above was able to focus on removal of DU metal and grossly contaminated materials. In contrast, any further removal or remedial actions to be conducted at the Site will need to have two types of criteria established: 1) criteria to determine unacceptable risk; and 2) criteria to determine acceptable off-site disposal alternatives, also termed "release criteria."

Unacceptable risk will be determined by establishing an unacceptable level of radioactive contamination in units of radioactivity, then comparing measurements of radioactive contamination within the buildings to that criterion. Exceedance of the risk criteria would then necessitate removal of either the contamination or the materials containing that contamination to reduce the risk to acceptable levels. Release criteria for uranium are available from several sources, many of which provide the same values. The following discussion provides a summary of the relevant criteria and assessment to determine appropriate values for this evaluation.

The reference for unrestricted release criteria of materials for NRC-licensed facilities is the Atomic Energy Commission's (now NRC) *Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors*." These criteria allow release of equipment or materials from a NRC licensed site as non-radiologically contaminated materials that can be removed from a site and reused or disposed without radiological controls. The release criteria in *Regulatory Guide 1.86* have also been incorporated into several other NRC and other federal agencies guidance documents. The NRC issued "Policy and Guidance Directive FC 83-23, Termination of Byproduct, Source and Special Nuclear Material Licenses," permitting the use of *Regulatory*

Guide 1.86 for other NRC licenses. The Department of Energy has incorporated the *Regulatory Guide 1.86* criteria into "*Order 5400.5, Authorized Limits for Unrestricted Release*." In addition, the U.S. Army Corps of Engineers has incorporated the *Regulatory Guide 1.86* criteria into "*Engineer Manual 385-1-80, Radiation Protection Manual*." In essence, the *Regulatory Guide 1.86* release criteria have become the standard and typically are used as the default release criteria at most radioactive sites. The applicable *Regulatory Guide 1.86* criteria for U-238 are 5,000 dpm/100 cm^2 alpha for average total surface contamination and 1,000 dpm/100 cm^2 alpha for removable contamination.

Since the development of *Regulatory Guide 1.86*, the NRC evaluated a comprehensive list of radionuclides for surface contamination levels that would meet its license termination criteria (10 CFR 20 Subpart E). The entire evaluation was presented as NUREG/CR-5512, Residual Radioactive Contamination from Decommissioning. A summary of this process and screening values for the most common radionuclides was published as a Notice in the Federal Register, Volume 63, No. 222. The NRC screening values represent surface contamination levels of radionuclide's that would meet the license termination rule unrestricted used dose criterion of 25 mrem per year. The parameters used for this dose model were very conservative, such that they could be applied to any NRC-licensed facility. The screening value for U-238 is 101 dpm/100 cm^2.

The Commonwealth of Massachusetts is an Agreement State with the NRC and has equivalent regulations for the use of radioactive materials. However, Massachusetts has promulgated more conservative unrestricted release criteria for license termination. In the Massachusetts Regulations for Control of Radiation (105 CMR 120.245), license termination unrestricted release criterion is set at 10 mrem per year instead of 25 mrem per year. At 10 mrem per year, the U-238 screening value is equal to 40 dpm/100 cm^2. The use of the MADPH-RCP 10 mrem/yr unrestricted release standard relating to decommissioning in this EE/CA does not presuppose the land use assumptions for future actions at the Site.

EPA has established a calculation tool for building preliminary remediation goals (PRGs) for radionuclides. This establishes criteria for remediation of buildings that comply with a risk-based standard such as the 10^{-4} to 10^{-6} NCP risk range. Using default parameters, the PRG for U-238 is 14 dpm/100 cm^2 (10^{-6} risk) or 1,400 dpm/100 cm^2 (10^{-4} risk). Comparing this risk range to the Commonwealth's unrestricted release criterion of 40 dpm/100 cm^2 U-238 equates to a 3×10^{-6} excess cancer risk, which is well within EPA's risk range.

Evaluation of the potential radiological release or remediation criteria indicates that a wide range of values can be used. While the *Regulatory Guide 1.86* values may be acceptable during the performance of the removal action, a more conservative value will be utilized for evaluation of this EE/CA.[4] Considering the criteria with default parameters for dose and risk, the screening value for 10 mrem per year to meet the Commonwealth of Massachusetts regulations provides confidence that both dose and risk criteria would be satisfied. Site-specific parameters could be developed and used to derive site-specific values for the buildings; however, such calculations would require knowledge of future use parameters for each area of the buildings. Therefore, for this EE/CA, the criterion of 40 dpm/100 cm^2 (10 mrem/year TEDE) will be the basis to evaluate unacceptable risk associated with radionuclides for future re-use.

[4] The *Regulatory Guide 1.86* release criteria only apply to surface contamination of materials and equipment and are not based upon dose or risk. At the time the criteria were developed, they were partially based upon the ability to detect radioactive surface contamination with field portable real-time instrumentation. Since then, techniques have been developed to assess dose or risk from radioactive surface contamination. These assessments use computer codes that have inputs for the contamination levels and radionuclides and exposure scenario parameters.

This criterion can be readily applied to survey data generated by de maximis and by MADPH-RCP, as discussed below in section 2.2.3.

2.2.3 RI/FS Building Surveys

In January 2006, *de maximis* and MACTEC, Inc. completed, as part of the RI/FS, a building survey. This survey included performing a health and safety survey, and a contamination assessment to evaluate the levels of radiological contamination and exposure rates. The survey also assessed the presence of chemicals within the buildings.

After radiological health and safety requirements were established to allow safe access to the buildings, the next step of the building survey process was to inventory process equipment, furniture, waste, and hazardous materials. The data derived from the building survey was used to assess the distribution of contamination within the buildings and to support the evaluation of removal alternatives outlined in this EE/CA. Such removal alternatives for the buildings include removal and off-site disposal of building contents, fixtures, piping and equipment, interior decontamination, and/or demolition with off-site disposal of buildings.

2.2.3.1 RI/FS Radiological Surveys

The radiological health and safety survey consisted of monitoring every available room, all open areas, and the roof to assess the levels of contamination and radiation exposure rates. The beryllium process areas were “off-limits” as the personnel conducting the health and survey were not among those included in the Starmet Parties’ beryllium worker monitoring program. Although the surveyors were denied access to the beryllium areas, the volumes of equipment and material in these areas were estimated based on observation through windows and discussion with Starmet personnel.

Two types of radiological surveys were performed. The first was a general area dose rate survey using direct reading portable instruments; the second was to measure the fixed and removable contamination levels by taking direct readings and then collecting representative swipe samples of the buildings structures, i.e., floors, walls, equipment, and then analyzing them on-site with a radiation meter. General area dose rate surveys were performed using a microrem survey meter, fixed contamination levels were measured using a 100 cm^2 alpha and beta scintillator detector, and removable contamination was measured on wipes in an alpha and beta scintillator detector specifically designed for their analysis. The instruments were properly calibrated and response checked prior to use to verify that they were operating properly. Calibration, operation and use were in accordance with the procedures presented in the RI/FS Health and Safety Plan.

Uranium emits alpha, beta and gamma radiation, and all three were evaluated as part of the radiological surveys. Dose rates measured gamma radiation levels, while the contamination surveys evaluated alpha and beta levels. General area dose rates provide an indication of how much radiation exposure and individual could receive from being in the building or area. Annual direct radiation exposure to someone working in these building can be estimated by multiplying the exposure rate by 2,000 hours (40 hours a week for 50 weeks). For example, an individual could be exposed to 10 mrem per year from direct exposure only if the general area dose rate is 5 microrem per hour. Conversely, 100 microrem per hour would result in an estimate of 200 mrem per year.

In the following section, survey results are described and evaluated for each building, as well as for materials and equipment. For this evaluation, fixed contamination levels on the buildings were compared to the residual surface contamination criterion of 40 dpm/100 cm^2 (10 mrem per

year). Most results showed levels much greater than this criterion, often by several orders of magnitude The levels shown on the figures range from less than 100 times the criterion (i.e., 4,000 dpm/100 cm^2) to greater than 100,000 times the criterion (i.e., 4,000,000 dpm/100 cm^2). See Figures 2.3.2.1a, 2.3.2.1b, and 2.3.2.1c and Table 2-1 for a summary of building survey results. Documentation of the radiological surveys is provided in Appendix D.

Building A

The majority of Building A falls into the lowest category (< 100 times screening value). There are several areas, however, with more elevated surface contamination levels. On the first floor this includes the lobby (A-133), shop area (A-134), offices (A-103, A-121A, A-130A, A-141, A-141A), hallway (A-118) and laboratories (A-145, A-145A, A-156, A-160). In general, these areas had surface contamination on the floor ranging from 4,000 to 30,000 dpm/100 cm^2 with minimal levels of removable contamination. General area dose rates in the first floor of Building A were in the 10 to 15 microrem per hour range.

Areas with elevated surface contamination levels on the second floor include some office areas (A-233, A-238, A-239,A-241C), former machine shops (A-215B, A-215C, A-216), and laboratories (A-220, A-223, A-224, A-228). The second floor is similar to the first floor in contamination levels. Most elevated levels on the floor are also in the range of 4,000 to 30,000 dpm/100 cm^2, with minimal levels of removable contamination. Laboratory A-220, however, has some areas with contamination levels near 375,000 dpm/100 cm^2, which is more than ten times the levels found anywhere else in the building. General area dose rates on the second floor of Building A were also in the 10 to 15 microrem per hour range.

The roof of Building A has many stacks and filter banks that are potentially contaminated with uranium. Surveys of the roof and ventilation systems found fixed contamination levels up to 30,000 dpm/100 cm^2. Some portions of the roof are not suitable to walk on, and these areas were not investigated.

Building B

Building B is very similar to Building A with respect to generally low levels of surface contamination. Elevated levels were identified in the elevator, a computer network area (B-110), and the men's rooms on both floors (B-109, B-206, B-206A). Elevated levels in Building B were generally less than 30,000 dpm/100 cm^2 with minimal levels of removable contamination. General area dose rates in Building B were in the 10 to 15 microrem per hour range.

There are some areas of elevated contamination on the roof of Building B, mostly in and around an area that formerly had a large filter bank. Most of the south end of the Building B roof was not safe to walk on, and this area was not investigated.

Building C

Building C is the oldest of the manufacturing and production areas. It, therefore, has more significant surface contamination levels than Buildings A and B. There are, though, a few areas in Building C with contamination levels comparable to the general levels in Buildings A and B. These areas include hallways, machine shop office and support areas (C-112, C-114, C-114A, C-115, C-115A) and an area that connects Building C to Building E (C-102A). The rest of Building C has fixed contamination levels in the range of 100,000 to 500,000 dpm/100 cm^2, and removable contamination levels in the 1,000 to 3,000 dpm/100 cm^2 range. General area dose rates in Building C were in the 10 to 30 microrem per hour range.

Part of Building C has a second floor. The contamination levels are similar to those on the first floor. Starmet attempted to decontaminate a portion of the second floor (C-216); therefore, the area has lower surface contamination levels than the rest, approximately 10,000 dpm/100 cm^2. The main portion of this area has surface contamination levels predominately in the 30,000 to 100,000 dpm/100 cm^2 range. Removable contamination in this portion of the building also is limited.

The roof of Building C has numerous ventilation system components that are contaminated in addition to portions of the roof itself. Surveys of the roof found fixed contamination levels up to 30,000 dpm/100 cm^2.

Building D

Building D has comparable contamination levels to Building C. Most of Building D has areas greater than 300,000 dpm/100 cm^2 with numerous hot spots in excess of 1,000,000 dpm/100 cm^2. The foundry area (D-103) has the highest contamination levels identified during these characterization surveys, with fixed contamination levels just shy of 5,000,000 dpm/100 cm^2. Removable contamination levels are similar to Building C in the 1,000 to 3,000 dpm/100 cm^2 range. General area dose rates in Building D were elevated as well, with areas in the 120 to 140 microrem per hour range.

There are several offices in the small second floor of Building D. Contamination levels were in the 10,000 to 20,000 dpm/100 cm^2 range with almost no removable contamination.

The roof of Building D has a significant number of contaminated ventilation system vents and filter housings. There are numerous areas of elevated fixed contamination levels around these ventilation system components, with one having levels greater than 100,000 dpm/100 cm^2.

Building E

Building E has similar contamination levels to Buildings C and D. The quality control holding area (E-110), adjacent hallways (E-131A, E-1-Hall-West) and janitor's closet (E-107) have the highest contamination levels in the 60,000 to 900,000 dpm/100 cm^2 range. Removable contamination levels are similar to those found in Buildings C and D, in the 1,000 to 3,000 dpm/100 cm^2 range. The waste processing area (E-140), hydrofluoric acid area (E-106) and quality control (E-116) and surrounding areas have the next highest degree of contamination, in the 6,000 to 35,000 dpm/100 cm^2 range. The locker rooms (E-102, E-104A, E-105, E-113), change area (E-107A, E-107B) and several other small offices and areas in Building E are generally less than 4,000 dpm/100 cm^2. General area dose rates in Building E were also elevated, with areas in the 80 to 100 microrem per hour range.

Some portions of Building E have a second floor, and these areas range from 4,000 to 30,000 dpm/100 cm^2. A hallway over the Quality Control area has some elevated spots on the floor that range from 60,000 to 90,000 dpm/100 cm^2.

The roof of Building E also has some ventilation system vents where contamination levels were lower than on other portions of the building roof. The levels were generally in the 4,000 to 10,000 dpm/100 cm^2 range.

Miscellaneous Structures

Contamination levels in the remaining buildings and sheds ranged from near background to 300,000 dpm/100 cm^2. Butler Building B-3 has the highest contamination levels of these

miscellaneous structures, with portions of the building at 300,000 dpm/100 cm^2. Butler Buildings B-1 and B-4 have contamination levels up to 30,000 dpm/100 cm^2, mostly on the floor. The Tank House and Hydrogen Peroxide Tank House have contamination levels in the range of 4,000 to 10,000 dpm/100 cm^2. The rest of the miscellaneous structures have limited contamination, generally less than 4,000 dpm/100 cm^2.

Materials and Equipment

Throughout all the buildings there are various tools, equipment and furniture, all of which are contaminated. In Buildings A and B, contaminated equipment was identified in some of the offices, as well as in the laboratories and wax mold production areas. For example, an office chair was identified with 18,000 dpm/100 cm^2. In Buildings C, D and E, equipment and tools associated with the uranium manufacturing and production process have contamination levels at very high levels, many exceeding 1,000,000 dpm/100 cm^2. The Butler Buildings and Tank House also have contaminated equipment, most of it less than 150,000 dpm/100 cm^2.

2.2.3.2 Non-Radiological Contamination Assessment

During the RI/FS surveys, a non-radiological contamination assessment was performed to evaluate the chemical contaminants that may pose a risk within the buildings. This included estimating volumes of suspect asbestos containing material, universal waste (e.g., computers, light ballast, transformers, and fluorescent light bulbs), chemical waste, and process waste. Section 2.3 discusses the material and volumes associated with the non-radiological contamination assessment. Figures 2.3.2.2a and 2.3.2.2b provide general locations of this material.

2.2.3.3 MADPH-RCP Radiological Survey

In November 2006, MADPH-RCP assessed the radiation protection program at the facility, which included a series of radiological characterization surveys. Appendix G contains the MADPH-RCP assessment report. In summary, the results of the assessment are:

- Radioactive material is present throughout the unrestricted areas, as these areas are defined by Starmet. Contaminated chairs, carpeting, floor tile, and equipment are present in numerous locations and are accessible to individuals not trained as radiation workers and not monitored for radiation exposure;
- Radioactive contamination in excess of 6,000 dpm/cm^2 was found in the lobby, which currently is accessible to the general public. A member of the public should not be exposed to this degree of contamination ; and
- Radioactive contamination in excess of 150,000 dpm/cm^2 was discovered on the roof above the unrestricted area, as defined by Starmet.

2.3 Estimated Volumes of Wastes

During the radiological health and safety survey and non-radiological contamination assessment, an inventory was conducted of building contents, building structural material, presumed asbestos containing material, universal waste, laboratory chemicals, and process waste. The estimated volume of radiological waste was determined by using the equivalent of Regulatory Guide 1.86, Table 1 as outlined in DOE Order 5400.5. Disposal options were estimated based on the degree of contamination and the assumed densities of the materials.

2.3.1 Building Contents

Building contents include all office furniture, ceilings, floor coverings, window coverings, non-support interior walls, fixtures, ductwork, process machinery, ventilation equipment, conduit, and utility piping. A room-by-room survey documented all of the above office material and is detailed in Appendix D. There are approximately 276,000 cubic feet of building contents. Table 2-2 summarizes building materials weights and volumes, and Table 2-3 summarizes waste weights by building and disposal classification.

2.3.2 Building Structural Material

Building structural materials include structural steel supports, roof material, interior walls and exterior walls. There are approximately 264,000 cubic feet of structural building material to be demolished and disposed of either on-site or off-site. This volume does not include the concrete floors and foundation. Each alternative considered in this EE/CA assumes the concrete floors and foundations will be left in place for all buildings and that these materials will be addressed as part of the overall Site remedy.

2.3.3 Asbestos Material

A preliminary survey estimated approximately 40 tons of suspect vinyl asbestos tile and 15 tons of suspect pipe insulation. Alternative 3 includes a detailed asbestos survey. Alternative 4 will include removing a majority of the asbestos containing material. In addition, Alternative 5 has included removal and disposal of approximately 5 tons of asbestos material which includes but is not limited to roof material and other structural asbestos containing material.

2.3.4 Universal Waste

The approach for characterizing universal waste was to document all fluorescent light bulbs, PCB-containing light ballasts, mercury/nickel or other types of electrical switches, PCB-containing transformers, and computers. The survey estimated approximately 4,000 8-foot fluorescent light bulbs, 2,500 light ballasts, 20 transformers, 2 tons of electrical switches, and 1.5 tons of computers and accessories.

2.3.5 Laboratory Chemicals and Waste

The chemical waste assessment inventoried chemical/hazardous waste volumes other than the chemicals currently stored in the Metallography Laboratory on the first floor of Building A and the Chemistry Laboratory on the second floor of Building A. The inventory for the two laboratories mentioned above is located in Appendix F, and was provided by representatives of one or more of the Starmet Parties (Starmet, 2006).

Chemical and or hazardous waste volumes include approximately 1,500 gallons of flammable liquids (e.g., acetone, gasoline, alcohols, paints), 1,000 gallons of acid liquid waste, 500 gallons of waste oil, 7,000 pounds of solid chemical reagents (e.g., magnesium zirconate, silica sand, metals powder, boron nitride), and miscellaneous waste (e.g., gas cylinders, pesticides, herbicides, bactericide). As a result of the fire that occurred on June 26, 2007, the CFD requested EPA assistance in removing the chemical and/or hazardous materials and flammable liquids in the facility that could pose a risk of another fire, create a release into the environment or potential risk to human health. Therefore, the volumes of these materials may be reduced as a result of EPA's TCRA, although it is likely that some of these materials will remain because they did not meet the EPA's time-critical removal authority under CERCLA. A further

assessment of the remaining materials in the facility will be performed after the TCRA is completed.

2.3.6 Process Waste

Process waste was inventoried based on knowledge obtained from the current facility manager (Starmet, 2006), and visual observations made during building walk-through. Process waste inventoried included; radiologically-contaminated coolant and sludge; hydrofluoric acid process equipment; and process equipment hydraulic and cutting oils. Process waste included approximately 12,500 pounds of radiologically-contaminated sludge, 20,000 gallons of waste liquid (DU coolant, Trim Sol), 5,000 gallons of machine lubricants, and 2,000 gallons of hydrofluoric acid.

3. Threat to Public Health or Welfare or the Environment

3.1 Threats to Public Health or Welfare

A release of radionuclides and/or other hazardous substances presents a threat to the public health or welfare. Uranium and beryllium contamination has been documented on the building roof-tops, particularly in the ventilation equipment, on the internal surfaces of buildings, and on the surface of the majority of building contents**.** If a fire or partial/whole building collapse occurs, a potentially catastrophic release of contamination would occur that would pose a threat to public health and welfare. Contaminant migration from the facility would potentially expose nearby human populations. In addition, without adequate site security, exposure to and/or removal of contaminated materials or equipment within the buildings by unauthorized people entering and leaving the buildings could present a risk to their health and spread the contamination leaving the Site.

3.2 Threats to the Environment

A release of radionuclides and/or other hazardous substances presents a threat to the environment. Uranium and beryllium contamination as stated above is documented within roof-top ventilation equipment, on the roofs themselves, on the internal surfaces of the buildings, and on the surface of the majority of building contents. Rainwater that comes into contact with the radioactive contamination on the roofs presents a current risk if not treated. A fire or partial/whole building collapse would result in additional releases to the environment that would pose a threat to environmental receptors. As discussed in Section 1.1 above, a fire has recently occurred within Building C. Contaminant migration may also occur through cracks and sumps in the foundations of the buildings. Contaminant migration from the buildings and their contents would potentially expose nearby animals and their habitats including adjacent wetlands or the food chain. In addition, animals (mice, rats, other small mammals and birds) that enter the buildings through small holes in the walls, roofs, and foundation, may come into contact with this contamination. This would not only adversely impact their health, but would contribute to the spread of contamination in the environment.

3.3 Risk Evaluation

The waste materials addressed in this EE/CA are contaminated with radioactive and non-radioactive hazardous substances. Currently, radioactive materials, metals and PCBs are the primary contaminants of concern constituting a potential threat to public health, public welfare, and/or the environment. Though these materials are currently located within a structure, this does not eliminate the potential risk posed to trespassers, nearby residents, site workers and the environment by such substances, should a building collapse or catch on fire. These risks would be expected to increase over time as the structures continue to deteriorate.

3.4 Endangerment Determination

There is a potential release or threat of release of hazardous substances, pollutants or contaminants from this Site that could pose an endangerment to public health or welfare or to the environment. To address this endangerment, EPA determined that an EE/CA was appropriate to study the nature and extent of contamination located on/in the buildings and their contents as well as possible alternatives to address this contamination.

4. Identification of Non-Time Critical Removal Action Objectives and Scope

This section describes the regulatory basis for conducting a NTCRA to address the disposition of buildings and their contents; presents the overall goals and objectives of the proposed NTCRA; and identifies potential federal and state regulations with which the selected removal action must comply.

4.1 Regulatory Basis for a Removal Action

The conditions that provide the regulatory basis for conducting a NTCRA to address removal of facility buildings and the contents of those buildings are summarized below. These conditions correspond to factors cited in 40 CFR 300.415(b)(2) of the NCP that provide a basis for conducting a removal action, and are further discussed below.

- 40 CFR 300.415(b)(2)(i): *Actual or potential exposure to nearby human population, animals, or the food chain from hazardous substances or pollutants or contaminants:* High levels of uranium and beryllium contamination have been found within deteriorating roof-top ventilation equipment and on the surfaces of the buildings and their contents. Contaminant migration during a fire, as a result of further deterioration of the roofs and other structural components of the buildings or through unauthorized or unintentional removal of contaminated materials could potentially expose nearby human populations, animals, or the food chain. In addition, if access to the buildings and their contents is not sufficiently restricted, this could result in exposure to the human population from hazardous substances including radioactive waste should they come into contact with these materials or if these materials are intentionally or unintentionally removed from the Site. Animals (such as mice, rats, raccoons and birds) also may come into contact with hazardous substances, including radiological waste, at the Site.
- 40 CFR 300.415(b)(2)(ii): *Actual or potential contamination of drinking water supplies or* sensitive *ecosystems:* There is potential that releases from within the buildings to an existing network of drain lines or to sub-slab soils could potentially affect groundwater. It is likely that unsealed cracks in the facility floors and sumps have been pathways for migration of the contamination into the groundwater. Site groundwater is contaminated at levels exceeding MCLs. In addition, precipitation runoff from the highly contaminated roof ventilation systems could potentially further contaminates the groundwater.
- 40 CFR 300.415(b)(2)(iii): *Hazardous substance or pollutants or contamination in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release:* Hazardous substances (e.g., radiological contaminated liquid and sludge, flammable and corrosive liquids) exist in the buildings within tanks and other containers. Approximately 20,000 gallons of DU-contaminated coolant are stored in tanks within Building E. Numerous small containers of flammable liquids are present within the buildings. Given the deteriorating condition of the buildings, these materials may pose a threat of release. The widespread storage of flammable liquids poses an increased fire risk that also would lead to a catastrophic release of some or all of the hazardous substances.
- 40 CFR 300.415(b)(2)(iv): *High levels of hazardous substance or pollutants or contamination in* soils *largely at or near the surface, that may migrate:* Initial survey results confirm that certain areas of the concrete floors have high levels of radiological contamination, suggesting the potential for the underlying soil to be or become impacted. However, the existing buildings and slabs act to cap any such contamination and currently minimize the potential for further migration.
- 40 CFR 300.415(b)(2)(v): *Weather conditions that may cause hazardous substances to migrate or be released:* The buildings are in deteriorated condition, with numerous roof leaks

and areas of roofs off limits due to structural decay. Highly contaminated ventilation systems are on the roofs, so that collapse or material degradation could lead to release and/or migration through roof drains to wetlands and/or into the underlying soils and groundwater. As noted in the *Roof Evaluation*, lack of maintenance for a protracted period could lead to sufficient deterioration that collapse or partial collapse of roofs/buildings is possible. In addition, runoff of water that came into contact with the highly-contaminated roof ventilation systems could lead to the further spread of contamination;

- 40 CFR 300.415(b)(2)(vi): *Threat of fire or explosion:* There are large volumes of combustible material (e.g., historical documents, ceiling tiles, wooden wall partitions), flammable liquids (e.g., acetone, alcohols), and gas cylinders throughout the buildings. Some equipment is highly contaminated with DU sludge, which may become pyrophoric (i.e., can spontaneously combust) if it dries out. The dilapidated condition of the buildings where the containers are stored also increases the potential for fire or explosion. The leaks in the roofs of the buildings threaten the buildings' electrical system, potentially compromising the functionality of the fire alarm and suppression systems, as well as potentially causing a fire through contact with live electrical wiring. The failure of the electrical system in the facility would increase the potential for fire. This is a significant risk at the Site, as exemplified by the fire that occurred on June 26, 2007.
- 40 CFR 300.415(b)(2)(vii): *The availability of other appropriate federal or state response mechanisms to respond to the release:* The MADPH-RCP "Trust Fund," is currently available to provide limited funding for site security and other building maintenance measures. There is not sufficient money available to fully support any of the alternatives in the EE/CA in the long term.
- 40 CFR 300.415(b)(2)(viii): *Other situations or factors that may pose threats to public health or* welfare *or the environment:* As discussed above in Section 2.3.4, the building contents inventory identified a large quantity of PCB-containing ballasts and transformers within the building. PCBs have been detected in media outside of the buildings in areas where floor drains are known to have discharged. The presence of PCB-containing materials within the buildings, and significant concentrations at drain discharges suggests that building drain lines will also contain PCB materials.

Based upon these factors, a potential threat exists to public health or welfare and to the environment that justifies conducting an EE/CA to evaluate the disposition of the buildings and their contents.

4.2 Removal Action Objectives

Based on the conditions described in Section 4.1, contamination within and on the buildings and their contents presents a significant risk that should be addressed while long-term remedial options for the Site are evaluated.

The following Removal Action Objectives ("RAOs") have been developed with respect to disposition of the buildings and their contents. The RAOs were developed in consideration of the potential human health and ecological risks associated with exposure to these media. They are designed to meet the MADPH-RCP unrestricted release clean up standard of 10 mrem/year TEDE pursuant to105 CMR 120.245.

4.2.1 Prevent Release to the Environment

Prevent the release of hazardous substances such as beryllium and asbestos, as well as radionuclides from drums, barrels, tanks, other bulk storage containers, or contaminated

surfaces, including roofs, equipment or building materials that present an unacceptable risk to human health and the environment.

4.2.2 Prevent Direct Exposure to Radionuclides and Other Contaminants

Prevent direct contact with, ingestion of, inhalation of, and external exposure (radiological) to contaminants present within and on the buildings and their contents that present an unacceptable risk to human health and the environment.

4.2.3 Contribution to the Efficient Performance of Remedial Activities

Under CERCLA Section 104(a)(2) and 300.415(d) of the NCP, removal activities shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned. This provision was meant to avoid repetitive removal actions that do not take into account their impact on the performance of subsequent remedial actions and to allow for more permanent tasks to be completed under removal authorities. 53 Federal Register 51409-51410 (December 21, 1988).

4.3 ARARs and TBCs

Pursuant to Section 300.415(j) of the NCP, to the extent practicable considering the exigencies of the situation, a removal action must attain applicable or relevant and appropriate requirements (“ARARs”). ARARs are promulgated, enforceable federal and state environmental, or public health requirements, which fit into either of two categories: "applicable requirements” or "relevant and appropriate requirements."

- Applicable Requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, response action, location, or other circumstance at a CERCLA site.
- Relevant and Appropriate Requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not legally applicable to a hazardous substance, pollutant, contaminant, response action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site or actions at the site.

In addition, EPA considers certain identified state and federal guidance documents when conducting a removal action. These are known as “to be considered" criteria (“TBCs”). TBCs are non-promulgated advisories or guidance issued by federal or state governments that are not legally binding and do not have the status of ARARs. Along with ARARs, TBCs may be used to develop the response action parameters necessary to protect human health and the environment.

EPA categorizes ARARs and TBCs into chemical-specific, location-specific, or action-specific. These ARAR categories are described below.

4.3.1 Potential Chemical Specific ARARs

Chemical-specific ARARs and TBCs are health- or risk-based values that may define acceptable exposure levels and, therefore, may be used to establish remediation goals. In general,

chemical-specific ARARs are set for a single chemical or a closely related group of chemicals. Potential chemical-specific ARARs and TBCs are presented in Table 4-1.

4.3.2 Location-Specific ARARs

Location-specific ARARs and TBCs are restrictions placed on the concentrations of hazardous substances or the conduct of activities solely because they are in specific areas. There were no Location-Specific ARARs noted for this removal action.

4.3.3 Potential Action-Specific ARARs

Action-specific ARARs and TBCs are technology- or activity-based requirements or limitations on actions taken on-site. These requirements generally focus on actions taken to remove, handle, treat, or dispose of hazardous wastes. These action-specific requirements do not in themselves determine the response action alternative; rather, they indicate how a selected alternative must be achieved.

Potential action-specific ARARs and TBCs are presented in Table 4-2.

The final ARARs and TBCs will be used in the detailed analysis of the effectiveness of removal alternatives and will be factored into the development of performance standards to be included in the NTCRA Scope of Work.

4.3.4 ARAR Waivers

Under certain circumstances, a removal alternative that does not meet an ARAR may be selected and a waiver of the ARAR may be granted. There are six sets of circumstances described in Section 300.430(f)(1)(ii)(c) of the NCP, for which waivers may be granted:

- if the alternative is an interim measure and will become part of a total remedial action that will attain the ARAR;
- if compliance with the ARAR will result in greater risk to human health and the environment than other alternatives;
- if compliance with the requirement is technically impracticable from an engineering perspective;
- if the alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach;
- if the state has not consistently applied, or demonstrated the intention to consistently apply, the promulgated requirement in similar circumstances at other removal actions within the state; or
- for fund-financed actions (i.e., removal actions financed by the federal Superfund), an alternative that attains the ARAR will not provide a balance between the need for protection of human health and the environment at the Site and the availability of Fund monies to respond to other sites that may present a threat to human health and the environment.

4.4 Rationale for Development of Removal Action Alternatives

A removal action is necessary to address risks to human health and the environment posed by exposure to known contamination and to prevent the release and/or migration of such

contamination. Alternatives must address the significant threats including a fire at the facility, building collapse, uncontrolled removal of contaminated materials, and uncontrolled access to the buildings.

4.4.1 Worker Health and Safety

Each alternative also must be protective of worker health and safety. Accordingly, a Site-specific Health and Safety Plan ("HASP") will be administered throughout performance of the work, and in accordance with the following regulations:

- 29 CFR Part 1910: Occupational Safety and Health Act (OSHA) – General Industry Standards;
- 29 CFR Part 1926: Occupational Safety and Health Act (OSHA) – Safety and Health Standards;
- 29 CFR Part 1904: Occupational Safety and Health Act (OSHA) – Record Keeping, Reporting and Related regulations;
- 10 CFR Part 20: Standards for Protection Against Radiation;
- 10 CFR Part 835: Occupational Radiation Protection; and
- 105 CMR 120.000: Standards for Protection Against Radiation.

4.4.2 Cross-Media Impacts and Potential Adverse Impacts

The potential cross-media impact associated with the removal action is the potential for unintended release of contaminated materials into the atmosphere. Careful monitoring and engineering controls will be implemented to avoid adverse impacts during the removal action.

4.5 Description of Potentially Applicable Technologies

Based on the RAOs and ARARs identified above, specific media and areas of concern to which a removal action might be applied have been identified. In accordance with the *NTCRA Guidance*, only the most qualified technologies that apply to the media or source of contamination are discussed below. In this case, treatment technologies for the building structures and contents are limited, and the applicable technologies are likely to be those that stabilize, clean and/or remove buildings and their contents, along with off-site disposal at appropriate facilities. The following technologies are considered to address the above-identified RAOs:

- No Action;
- Site Monitoring / Access Controls;
- Building Decontamination / Stabilization; and
- Building Demolition.

4.5.1 No Action

Under this approach, buildings and contents would remain in place undisturbed. This alternative entails taking no response measures, and is generally considered as a baseline for comparison to other removal action alternatives. Therefore, the no action alternative will be retained throughout the detailed evaluation of alternatives.

4.5.2 Site Monitoring and Access Controls

Under this approach, increased security would be used to prevent exposure to contaminants by eliminating exposure pathways. Monitoring would be used to detect any releases from the buildings. This approach addresses risks to human health in the short term, and will be retained for further consideration.

4.5.3 Building Decontamination and Stabilization

Under this approach, buildings would be decontaminated and/or stabilized as necessary. During the decontamination process, a reduction in the concentration of radiological contaminants found on building surfaces and contents would be achieved by methods discussed in Section 5, in order to meet disposal criteria and as necessary to prepare for future removal actions. Stabilization would be conducted to secure the buildings from a catastrophic event such as fire or explosion and/or building collapse. Stabilization activities to safely secure buildings include: physical stabilization of structural components of the buildings; removal and proper disposal of hazardous substances including radiological contamination and building contents that are highly combustible or that may pose a threat of fire; and disconnection of existing high pressure pipelines, natural gas lines and electric utilities.

4.5.4 Building Demolition

Under this approach, selected buildings would be demolished to slab/foundation and properly disposed of either on-site or off-site. If cost effective, demolished building materials, if not contaminated, would be evaluated for on-site disposal, either temporarily or permanently. In addition, void spaces would be filled, and a temporary cover placed over the slab to minimize the potential for contaminant migration or exposure during the interim time prior to potential future actions to address the slabs and any actionable sub-slab contamination.

4.5.5 Packaging, Transportation and Off-Site Disposal

As part of any removal of building contents and structural material as well as the disposal process, it is likely that waste first would be segregated and/or processed to meet the disposal facility's waste acceptance criteria. Off-site disposal options are further discussed in Section 5.7.

4.5.5.1 Vendors of Packaging Services

There are multiple specialized professional firms in the areas of engineering and demolition. The NTCRA activities would be performed by electricians, health physics technicians, radiation safety personnel, lab pack chemist, equipment operators, etc. Waste material would be packaged into multiple containers ranging from drums, roll-offs, super sacks, and intermodals.

5. Identification of Removal Action Alternatives

This section describes five removal action alternatives. This section also presents an evaluation of decontamination methods, as there are differences in cost and approach associated with the potential methods that could be used to reduce contamination.

5.1 Alternative 1 – No Action

Under this alternative, buildings and contents would remain in place undisturbed. This alternative entails taking no response measures and it is considered as a baseline for comparison to other removal action alternatives. Therefore, the no action alternative will be retained throughout the detailed evaluation of alternatives.

5.2 Alternative 2 – Limited Action - Monitoring and Access Controls

Under this alternative, security measures would be used to prevent exposure to contaminants by eliminating exposure pathways and monitoring would be conducted to detect any releases from the buildings.

Site monitoring would involve monthly inspections of the interior and exterior of the buildings to evaluate and document any changes to material conditions, e.g., releases of material, further building deterioration, evidence of trespassing. Long-term monitoring would include surveying for removable contamination levels by collecting representative swipe samples of the buildings entrances and walkways. In this way, the monitoring would document any changes to existing conditions, and analyze them on-site with a radiation meter to detect potential releases from the buildings.

Under this alternative, building utilities would be disconnected to minimize the potential for electrical fires and electrocution. Temporary electrical supplies would be connected to supply lighting and the fire alarm system. Heat would be supplied to prevent the fire suppression system from freezing.

5.2.1 Access Controls / Site Security

Security measures would be aimed at limiting access to reduce the potential for human exposure to hazardous materials located at the Site. Access controls include: fencing around the northern and western perimeter of Buildings A, B, C and D (to tie into existing fencing), a gate at the main entrance off Route 62, covering first floor windows with plywood, disconnecting building utilities (electricity and natural gas supplies), providing temporary lighting and heating to the buildings; posting signs and placards that indicate the potential presence of hazardous substances and warn against intruding into the Site. This alternative also includes a round-the-clock contract security guard.

5.3 Alternative 3 – Building Stabilization, Partial Removal of Hazardous Substances / Flammable / Combustible Materials and Limited Demolition with Off-Site Disposal

Under this alternative, the focus would be on stabilizing the buildings and contents including removing the remaining flammable materials to reduce the risk of fire or explosion as well as removing some remaining hazardous substances. In addition, this alternative would require limited demolition of selected buildings and equipment. All materials removed/demolished would be disposed of off-site at an appropriate location given the nature of the material. Work required under Alternative 3 includes all of the work identified in Alternative 2 in addition to the following:

a) Conduct additional radiological, asbestos, and universal waste characterization surveys to determine location, volume and concentration of waste for NTCRA planning, health and safety considerations and disposal characterization;

b) Segregate and containerize radioactive hotspot material to assist in developing work zones, process areas and for health and safety considerations;

c) Install temporary electrical services to support work activities. Provide temporary power and lighting to conduct NTCRA activities;

d) Terminate existing building utilities (electrical, pressurized piping and natural gas) and ensure continuity of potable water supply. Disconnection of utilities is necessary due to inadequate building as-built drawings showing locations of existing utility, to eliminate the possibility of encountering an active utility while conducting NTCRA activities. Maintaining the existing potable water supply to the Site will be necessary to maintain fire suppression systems during NTCRA activities;

e) Stabilize building roofs, as needed, to provide a safe working environment. Based on an engineering evaluation of roof structures, roof stabilization may consist of interim shoring for added structural support, removal and/or securing roof top equipment and air filtration systems, and repairing roof leaks to minimize infiltration of rain during NTCRA activities;

f) Remove and dispose of remaining hazardous and combustible materials and debris. Conduct a site-wide building sweep to remove combustible and hazardous materials such as process sludge, hydrogen peroxide, flammable liquids, acids, laboratory chemicals, pressurized cylinders and combustible stockpiles, e.g., wood pallets, furniture, combustible non-load bearing interior walls, and paper records;

g) Remove and dispose of liquids within equipment. Remove liquids such as diesel fuel, gasoline, hydraulic fluids, oils, and anti-freeze/coolant from equipment in preparation for disposal of associated equipment;

h) Demolish and dispose of a limited number of significantly contaminated buildings and equipment that pose the greatest threat of release or risk of fire or explosion. Work includes demolition and disposal of centerless grinder, hydrofluoric acid area located in Building E, acetone distillation unit and shed, Holding Basin Tank House, Butler Building B3, and Hydrogen Peroxide Tank House;

i) Conduct a sub-slab soil investigation. Conduct a sub-slab soil investigation to assess levels of contamination in soils located below building slabs to support the RI/FS; and

j) Off-site disposal of removed materials as appropriate. Off-site disposal alternatives are discussed below in Section 5.7.

5.4 Alternative 4 – Building Stabilization, Removal of Hazardous Substances / Flammable / Combustible Materials, Limited Demolition and Building Contents Removal with Off-Site Disposal

Alternative 4 activities include interior strip-out and removal of all furniture, cabinetry, drop ceilings, floor coverings, window coverings, partitions, fixtures, ductwork, process machinery, conduit, utility piping, leaving only the enclosed building structure intact with exterior walls, structural supporting interior walls, roof, and floors. Interior cleaning includes vacuuming all surfaces using high efficient particulate air (“HEPA”) vacuum equipment and wiping surfaces to remove residual dust. To further stabilize building and structures, a fixative coating would be applied to select surfaces to mitigate mobility of radiological contamination. Off-site disposal options of accumulated waste and debris are discussed below. After building contents are packaged, removed, and disposed off-site, a comprehensive radiological survey will be conducted

to further evaluate disposal costs for structural material. In addition to the work included in Alternative 3, Alternative 4 - includes the following:

a) Remove and dispose of asbestos;

b) Remove and dispose of universal waste. Waste includes computer equipment, industrial batteries, transformers, mercury switches, and fluorescent light bulbs;

c) Remove and dispose of building contents and debris leaving only the building shell intact. Building contents include non-structural support walls, floor covering, fixtures, interior ductwork, ventilation equipment, process machinery, conduit and utility piping;

d) Minimal interior cleaning consisting of vacuuming and wiping surface areas to control dust;

e) Conduct a comprehensive radiological survey after building contents are packaged, removed, and disposed off-site, to refine the necessary approach and costs to implement demolition and disposal activities; and

f) Off-site disposal of removed materials as appropriate. Off-site disposal alternatives are discussed below in Section 5.7.

5.5 Alternative 5 - Building Demolition with On-Site or Off-Site Disposal

Alternative 5 includes all of the work summarized above under Alternatives 3 and 4 except to the extent that certain activities are inconsistent with and/or not cost effective, e.g., limited structural stabilization activities and cleaning. Under this alternative, selected buildings would be demolished to slab/foundation and properly disposed of on-site or off-site. If cost effective, on-site disposal may be considered for some building materials that are not contaminated with hazardous or radioactive substances. In addition, void spaces would be filled, and a temporary cover placed over the slab to minimize the potential for contaminant migration or exposure during the interim time prior to potential future actions to address the slabs and any actionable sub-slab contamination.

In addition to the work included in Alternatives 3 and 4, work to be completed during Alternative 5 includes the following:

a) Strip off removable radiological contamination from select surfaces to minimize waste volumes to be disposed as LLRW using one or more of the methods discussed below in Section 5.6.1;

b) Cap and/or clean existing drain lines, vaults, and sumps;

c) Demolish structures and buildings;

d) On-site or off-site disposal of removed materials as appropriate. Off-site disposal alternatives are discussed below in Section 5.7; and

e) Fill voids and temporarily cap building slabs, pending a future remedial action to address building slabs, impacted sub-slab soil, and contaminated plumbing and/or drain lines.

5.6 Decontamination, Release and Reuse

A variety of hazardous materials are present in the buildings, thus requiring a process of waste characterization and decision making to dispose of waste most efficiently, including decontamination of materials for re-use and free release as feasible. For most contaminated materials, disposal is the preferred approach. Disposal means, however, that materials will be disposed using different methods and at different facilities, depending upon the degree of contamination. More discussion on this topic follows in Section 5.7.

In some cases, decontamination and reuse might be a viable alternative, particularly for radiological contamination. Hazardous materials that will be collected, abated, and disposed include but are not limited to the following:

- Lead in shielding, and plumbing fixtures;
- Mercury in drain line traps, electric switches, and fluorescent light ballasts;
- Chemicals associated with laboratory hoods / ventilation systems;
- Asbestos in floor tiles, tile mastic, thermal insulation, window caulking, fireproof doors, and roofing materials;
- Beryllium as a powder (dust) residue on surfaces and within ventilation systems; and
- PCBs in painted surfaces, transformers, and light ballasts.

Beryllium production areas also may require decontamination. Beryllium decontamination techniques typically consist of using HEPA vacuums and washing surfaces with water and/or cleaning compounds. Similar to DU, beryllium has a tendency to leach from porous surfaces (concrete) after decontamination, so the production areas may require using a fixative coating in order to mitigate the mobility of beryllium hazard (stabilization).

Since most of the concern at the Site is with radioactive material (DU), the rest of this section will focus on approaches for radiological decontamination. These radiological decontamination techniques can also be used for other hazardous materials if the need arises to remove them from surfaces.

5.6.1 Consideration of Potential Methods to Decontaminate and Reuse Equipment and/or Structures

A variety of radiological decontamination techniques have been developed over the years ranging from hand wiping for tools and small pieces of equipment to large scale dedicated equipment for structural materials (steel beams, concrete). Radiological decontamination is normally performed for equipment and facilities that are going to be re-used or to reduce contamination levels for health and safety purposes. Due to the degree and extent of contamination, the most likely application of these techniques at the Site will be to implement decontamination to lower disposal costs by reducing waste classification, volume of waste or to meet waste acceptance criteria.

There are two basic approaches to radiological decontamination: chemical and physical technologies. Chemical decontamination by and large is used for process piping and systems or spot decontamination on tools and equipment. Physical decontamination is generally used for large equipment and facilities. Factors to consider when evaluating potential methods for radiological decontamination include effectiveness, safety to operator, and subsidiary waste generation. Another approach for radiological decontamination is to store materials and allow for radioactive decay to reduce contamination levels. This approach cannot be used at the Site since the half-life of uranium is very long (4,468,000,000 years).

The majority of items at the Site that could be considered for decontamination consist of large pieces of production equipment, concrete block walls, concrete floors, structural steel, and ventilation ductwork. Decontamination techniques considered as part of the EE/CA for disposition of buildings and their contents include the following:

- Mineral acids;
- Wet wiping;

- HEPA vacuuming;
- Hand scabbling;
- Floor scabbling;
- Pneumatic and electric chippers and jackhammers; and
- Hydroblasting.

Other decontamination techniques exist; however, the techniques listed above utilize well-established technologies that are readily available at reasonable costs. Additional details on these techniques are provided immediately below:

- Chemical decontamination using mineral acids may be a useful technique, since most of the uranium contamination throughout the facilities is uranium metal and oxide dust that has become fixed to surfaces from long-term operations. Metal oxides can be readily dissolved with mineral acids (hydrochloric, nitric, or sulfuric acids), and this technique could be used for metal surfaces. These acids are relatively inexpensive and easy to acquire. Due to health and safety aspects of working with these acids, decontamination by this technique would be limited to small items or localized areas of contamination. Furthermore, the spent acid will require neutralization in order to prevent the generation of mixed-waste (hazardous and radiological). An example of where this technique would be effective is routine decontamination of tools and equipment used in removing the contents of the facilities.
- A similar decontamination technique is wet wiping. This technique entails wiping surfaces with wet wipes (water dampened disposable wipes) or wipes with a commercially available cleaner/detergent to remove surficial dust. This technique is not very aggressive and is only intended for delicate and fragile items. An example of where this technique would be effective is routine decontamination of respiratory protection equipment.
- The next decontamination technique is HEPA vacuuming. HEPA vacuuming can be used to remove large amounts of loose dust/debris from surfaces. This is another technique that is not very aggressive and is only practical in areas containing large amounts of dust and debris. HEPA vacuuming only removes loose contamination, so any fixed contamination on surfaces will remain after vacuuming. Typically, this technique is an initial step for decontamination, and it is followed by more aggressive techniques for fixed contamination. An example of where this technique would be effective is removal of dust and debris in a room once all the contents have been removed.
- Scabbling is a technique that utilizes piston driven carbide tipped heads that impact the surface at a rapid rate pulverizing concrete or coatings. Scabbling is a scarification process used to remove concrete or coating surfaces. Scabbling tools typically incorporate several pneumatically operated piston heads striking (chipping) a concrete or coating surface. Vacuum attachments and shrouding configurations are incorporated so that scabbling may be done while providing for high efficiency control of dust and debris with no detectable increase in airborne concentrations. This technique is a dry decontamination method; no water, chemicals or abrasives are required. The waste stream produced is only the removed debris. Scabblers are best suited for removing thin layers (around 0.5 inch thick) of contaminated concrete (including concrete block) and cement. Hand scabbling equipment can be used for localized spots of contamination or around tight spaces (corners, pipe penetrations, etc.). Floor scabbling equipment is useful for large areas of floor that only have little penetration of contamination into the concrete. An example of where this technique would be effective is localized areas of contamination on concrete and concrete block walls in Buildings A and B.
- Chippers and jackhammers may be used to remove contamination by mechanical impact, referred to as spalling. Small electric versions are available for hand-held use on localized

spots where contamination has deeply penetrated. Pneumatic versions are available for mounting on construction equipment such as a Bobcat for removal of large areas. Similar to scabbling, this process is a dry decontamination technique and can generate large amounts of dust. Vacuum attachments and shrouding configurations will be needed so that chipping may be done with no detectable increase in airborne concentrations. This decontamination technique is best used when contamination has penetrated deeply into concrete, greater than can be effectively decontaminated by scabbling. An example of where this technique would be effective is localized areas of deep contamination in concrete and concrete block walls in Buildings A and B.

- The last decontamination technique, hydroblasting, may be employed to remove contamination from concrete or metal surfaces. This technique utilizes high-pressure water (around 15,000 psi or higher) to remove surface contamination. It can also be used to remove paint and other surface coatings from concrete and metal. Since this is a wet technique, water will need to be collected and treated. In some similar situations, water has been successfully recycled after treatment in order to reduce water demands for this technique. Existing hydroblasting equipment is located in Building E of the Site, and if left on Site, this equipment could be utilized for this purpose; where appropriate, assuming it remains in usable condition. This technique has been used successfully for surface decontamination at the facility. An example of where this technique would be effective is removal of surface contamination in areas throughout the facility once equipment and contents have been removed.

Any systems, equipment, or structures may be decontaminated prior to on-site or off-site disposal if desired. Tools or other equipment used to implement the NTCRA may be decontaminated in order to free release the material, and/or to reduce waste. Additional information regarding these decontamination techniques may be found in the EPA report *Technology Reference Guide for Radiologically Contaminated Surfaces* (EPA, 2006).

5.6.2 Cost / Benefit Analysis Approach to Decontamination

An evaluation of decontamination approaches needs to consider the decontamination techniques available, the salvage value of the item, equipment, or building under consideration, and disposal costs. If the salvage value of the item, equipment or building is high, then spending resources on decontamination may be justified. If the value of the item, equipment, or building is low, then decontamination is only justified when it can be used to lower disposal costs. Key factors to consider in this evaluation are release criteria, waste acceptance criteria, and disposal rates. General assumptions can be made to establish decontamination decision criteria; however, there will be numerous situations that will need to be determined on a case-by-case basis. It is important to note that the buildings themselves are in a state of disrepair and, in all probability, will require demolition, if not under this NTCRA, then under the final remedial action for the Site. Decontamination for re-use purposes, therefore, is not an option for this facility.

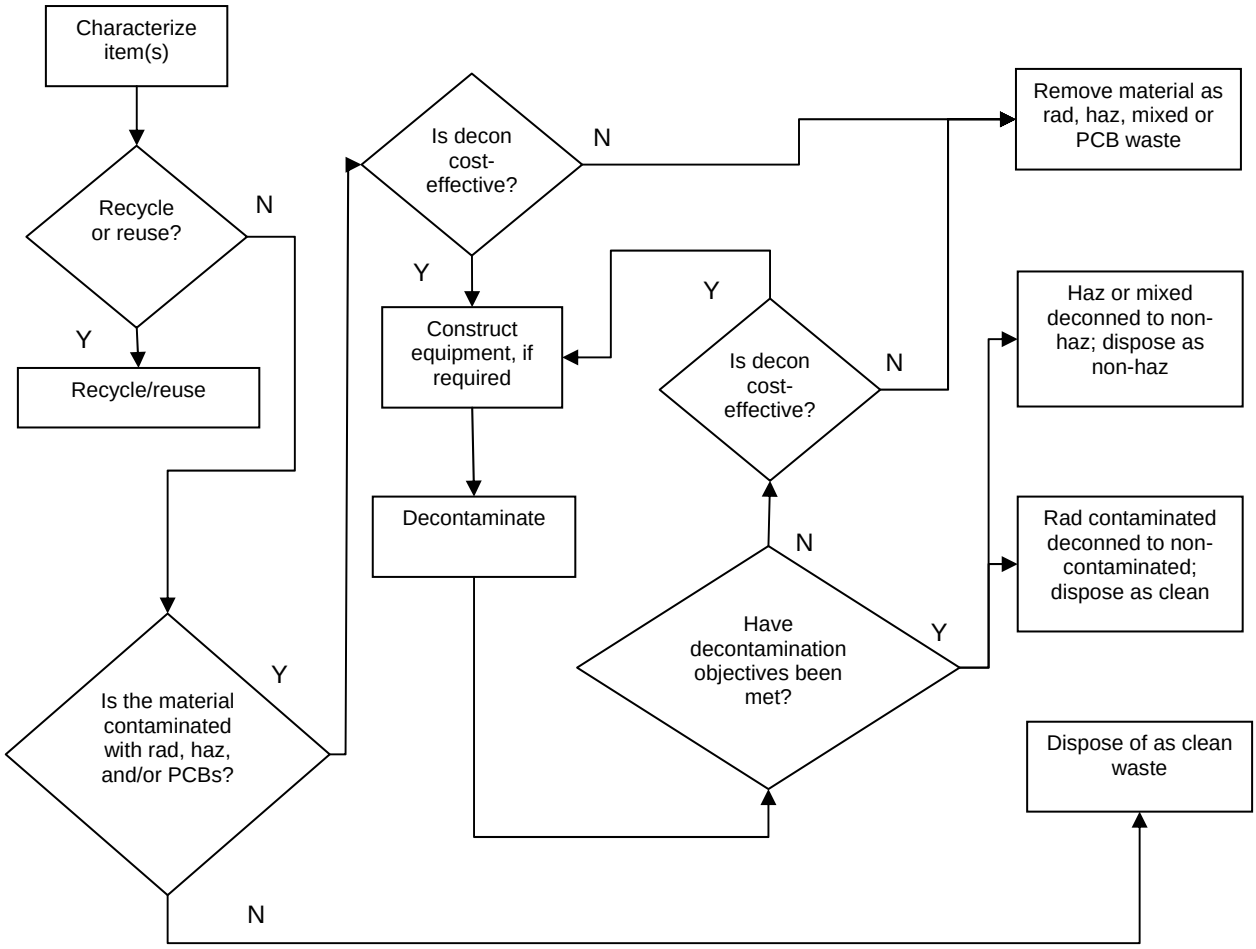
Even with the mechanical equipment available for decontamination, the process is still, in many cases, labor intensive as radiological surveys and monitoring are needed during decontamination in order to verify the effectiveness of the decontamination, and afterwards to establish that decontamination is complete. Sometimes decontamination is not effective in the first pass and it may require several iterations to achieve release criteria. Removable contamination, e.g., dust, can be relatively easily removed from many solid (smooth) surfaces.

For building materials, it is easier to decontaminate steel than concrete. Contamination on steel is normally on the surface and can be removed as long as the surface is easily accessible for decontamination assuming the steel has not been exposed to corrosive conditions. Concrete is a

porous material and contamination levels can vary significantly throughout the thickness of the concrete. Corrosive conditions will also increase the depth of contamination. Small, localized areas of contamination on concrete can usually be decontaminated, while large areas of contamination are problematic to decontaminate to release criteria. Large scale concrete decontamination is usually performed for waste volume reduction or in preparation of re-use.

As an example of the decontamination evaluation process, consider 258 tons of structural steel that would be disposed as LLRW. Disposal costs for this material (including transportation) are estimated to be $342,000. If all of this structural steel could be decontaminated to meet the waste acceptance criteria for exempt radioactive material disposal at a RCRA Subtitle C landfill, then the disposal costs would be approximately $52,000, a reduction of $290,000. However, the costs to decontaminate this material are not certain and it is unclear if the cost to decontaminate would exceed the projected savings on disposal costs. In reality, all of the steel may not be able to be decontaminated in order to meet the exempt waste acceptance criteria. It is important to note that decontamination will generate waste that will need to be disposed as LLRW, so total decontamination costs need to be enough of a savings to justify the effort.

This is just one example of how the decontamination decision-making process would be implemented. The goal would be to determine materials that can be easily decontaminated in order to reduce disposal costs. Decontamination can be very challenging since contamination levels are rarely uniform, so particular areas of an item undergoing decontamination may need to repeat the process multiple times in order to achieve acceptable criteria. If decontamination costs are near the disposal savings, then the risk is that the total costs will be greater than the original disposal estimate since the decontamination costs plus disposal costs exceed the cost to dispose of the material originally. The following flow chart is an example of the process to determine the decontamination needs and/or disposal decision:



5.6.3 Cost/ Benefit Analysis Approach to Recycling Structural Material and Resale of Process Equipment

Demolition contractors routinely account for the value of recycling materials and or salvaging equipment in their cost estimates and bids. For the Site, a preliminary estimate suggests that there could be approximately $400,000 worth of materials for recycling, primarily copper and structural steel. Recycling rates are market driven and currently high, so this estimate could change significantly by the time the removal action is executed. Some of the materials for recycling will require decontamination and all will need radiological surveys. Depending on market rates, some structural materials from Buildings C, D, and E may be heavily contaminated and not cost-effective to decontaminate and recycle (if cost to decontaminate exceeds recycling value). Furthermore, there is liability associated with release of these materials from the Site. Commercial sites undergoing decommissioning evaluate liability associated with recycling of items on a case-by-case basis, some allow for materials to be released while others restrict release. On the other hand, DOE has suspended the unrestricted release of scrap metal, for recycling, from radiological areas of facilities (DOE, 2000).

When the value of recycled materials is compared to the total cost associated with the active alternatives considered in the EE/CA, it is a small percentage. In addition, the release criteria and actual contamination levels on the materials considered for recycling will strongly influence this evaluation. If the release criteria are significantly lower than the proposed values or the actual contamination levels are very high, then recycling will not be cost-effective. The best case scenario for recycling materials is that Buildings A and B are decontaminated and released such

that demolition can occur with no radiological controls. In this situation, the structural materials will be readily available for recycling. An advantage to recycling is that there is no disposal cost for these materials, the materials do not take up landfill space, and they are returned to productive use. The decision as to how much material will be recycled will be made during the early phases of the removal action with consideration of disposal rates and recycled material cost rates. However, considering that DOE has suspended the unrestricted release of scrap metal from radiological areas of facilities, EPA is not likely to utilize this option.

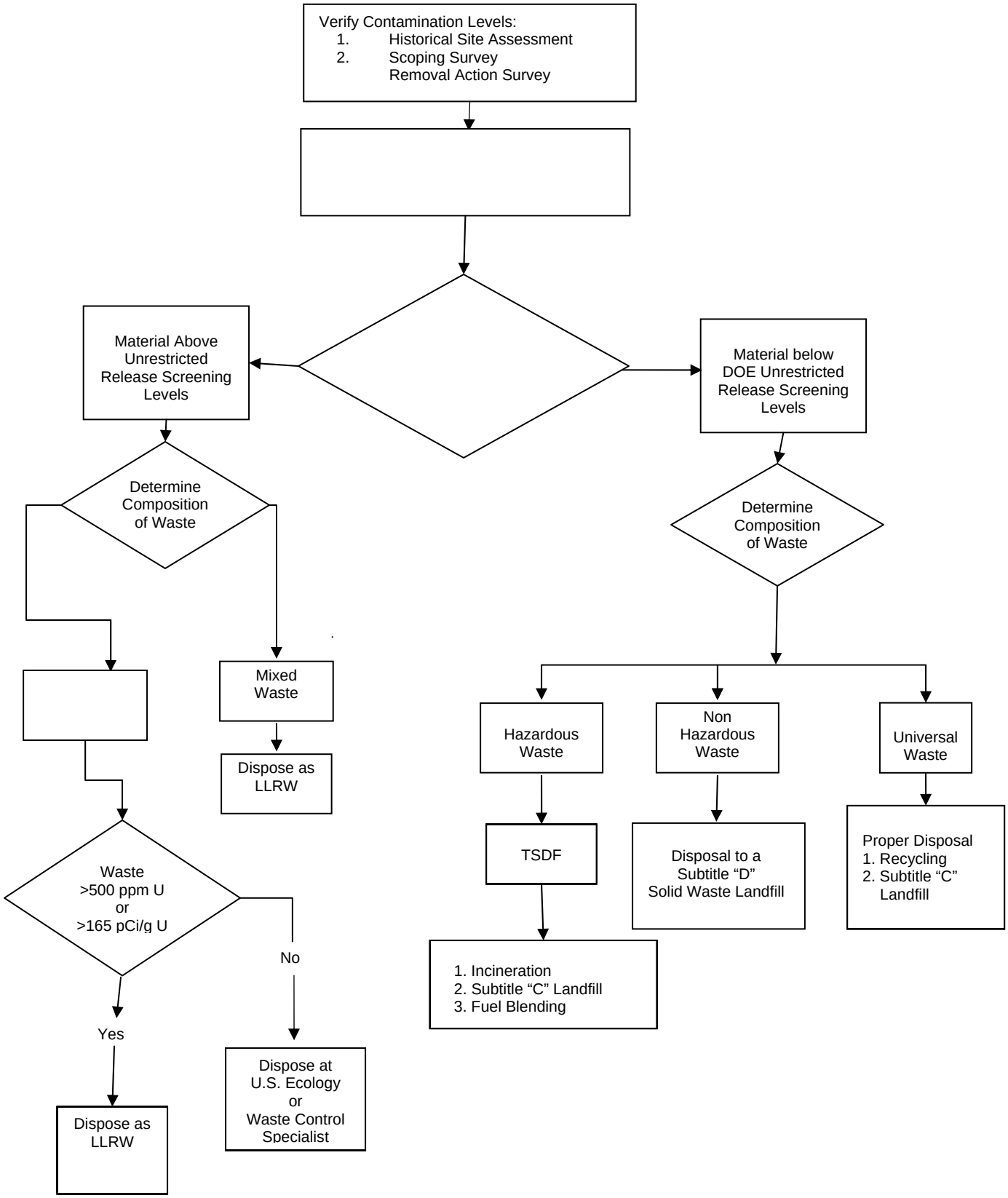
In 2000, liquidation values of uranium processing equipment were estimated in the range of $1,000 to $15,000 for most individual pieces of equipment (*de maximis, inc.*, 2005). Recent radiological surveys of this process equipment have indicated very high levels of contamination. In order to decontaminate this equipment for free-release and resale, a mechanic would need to disassemble each piece for a thorough radiation survey and decontamination of all individual parts. A conservative estimate for decontamination costs of this equipment is $1,000 per day (1 mechanic, 1 decontamination technician, and supplies). It is unlikely that any of this equipment could be completely disassembled, decontaminated, and reassembled in one day and more than likely would take several days or weeks for each piece. In addition, some individual parts may not be able to be completely decontaminated and replacement parts would be needed or the equipment would be non-functional, lowering its liquidation value. Furthermore, this process would add time to the schedule since this equipment decontamination process would prevent areas in the facilities from being completed. Similar to recycling, salvaging equipment also has potential liability associated with resale of contaminated equipment. There have been cases of equipment being free released from nuclear facilities only to find out later that there is still some residual radioactive contamination remaining.

When considering all these factors, costs associated with decontamination and potential liability in resale of the heavily contaminated process equipment is likely to exceed the benefits (value of the equipment). Therefore, it is likely that most or all of the uranium processing equipment will be handled as waste.

5.7 Off-Site Disposal Options & Cost/Benefit Approach to Disposal Choices

Using the volumes of waste discussed in Section 2.3, the EE/CA evaluated disposal costs by comparing the results of the RI/FS radiological surveys with the *Department of Energy Order 5400.5, Authorized Limits for Unrestricted Release and the disposal facilities Waste Acceptance Criteria.* Efficient disposal requires proper material characterization to determine the most cost effective methods and locations for disposal. The cost disposal evaluation used the following disposal breakdown: 57% LLRW waste, 26% acceptable for disposal at a Subtitle “C” facility; and 17% acceptable for disposal at a Subtitle “D” facility.

The following flow chart is an example of the process by which waste will be characterized and disposed of in the most efficient and cost effective manner:


Verify Contamination Levels:
1. Historical Site Assessment
2. Scoping Survey
Removal Action Survey
Material Above Unrestricted Release Screening Levels
Material below DOE Unrestricted Release Screening Levels
Determine Composition of Waste
Determine Composition of Waste
Mixed Waste
Dispose as LLRW
Waste >500 ppm U or >165 pCi/g U
Yes
Dispose as LLRW
No
Dispose at U.S. Ecology or Waste Control Specialist
Hazardous Waste
Non Hazardous Waste
Universal Waste
TSDF
1. Incineration
2. Subtitle "C" Landfill
3. Fuel Blending
Disposal to a Subtitle "D" Solid Waste Landfill
Proper Disposal
1. Recycling
2. Subtitle "C" Landfill

Disposal options are discussed below:

5.7.1 Construction & Demolition Debris Landfill

A construction and demolition ("C&D") debris landfill can accept uncontaminated solid waste resulting from demolition of utilities, structures, and roads. Such waste includes, but is not limited to bricks, concrete, wood, steel, piping roof material, dry wall, etc. The closest C&D landfill to the Site is the Turnkey Recycling and Environmental Enterprise facility in southwestern New Hampshire. The Turnkey facility accepts waste via truck. It was estimated that 16% of the structural material and building contents are uncontaminated and could be disposed of at a Subtitle "D" facility. If cost effective, depending on the type and quantity of this material, some may be re-used or disposed of on-site, either temporarily or permanently, if not contaminated with hazardous or radioactive substances.

5.7.2 Subtitle "C" Landfill Facility

Two disposal facilities were considered for select building and contents disposal. These Subtitle "C" Landfill facilities are permitted to accept both RCRA and TSCA hazardous waste, along with material that meets the acceptance criteria of 10 CFR 40.13(a) – Unimportant Quantities of Source Material (exempt radioactive waste). Material that meets 10 CFR 40.13(a) contains source material to be less than 0.05% of the total weight of the waste material (approximately 500 ppm or less and/or 166.5 pCi/g.

The two facilities are Waste Control Specialists, LLC located in Andrews County, Texas, and US Ecology located in Grand View, Idaho. Each facility accepts waste via rail, truck and containerized shipments.

It was estimated that 27% of the structural material and building contents meet this standard for disposal.

5.7.3 Low-Level Radioactive Facility

Based on levels of contamination within the buildings, a portion of building contents and structural material is considered Class A LLRW and will need to be disposed at an appropriate site.

The first facility considered is the Energy Solutions facility in Clive, Utah. The Energy Solution facility is licensed and permitted to receive Class A LLRW along with NORM, PCB waste, asbestos contaminated waste, mixed waste, e.g., both radioactive and hazardous and 11e(2) byproduct material. The facility accepts waste via rail, truck and containerized shipments.

It was estimated that 57% of the structural material and building contents meet this standard for disposal.

The second Class A LLRW facility is the Nevada Test Site ("NTS") in Beatty, Nevada. This facility is licensed and permitted to accept waste that has a "DOE signature." For this facility to take waste from the Site, evidence would be needed documenting that DOE supplied DU hexafluoride (UF6) to the facility. This evaluation is currently in process. The facility accepts waste via rail and truck. Material will only be accepted in 10- or 20-ton super sacks or intermodal containers. The intermodal containers for disposal at NTS are not returned to the generator. NTS offers a cost-effective solution for disposal of LLRW, but the following circumstances add increased cost to the low disposal price:

- Submittal of the generator's waste profile. The NTS facility requires a third party assist the prospective generator of waste in developing waste acceptance criteria for NTS, at a cost of approximately $50,000;
- Acceptance of waste in only super sacks or intermodals;
- A flat fee in addition to disposal and transportation cost for each individual shipment;
- The radioactive waste acceptance program quality assurance / quality control; and
- Need to provide volume forecast 5 to 6 months in advance.

6. Analysis of Removal Action Alternatives

6.1 Alternative Evaluation Criteria

This section of the EE/CA presents a detailed analysis of the alternatives presented in Section 5. The purpose of this analysis is to assess each alternative relative to the evaluation criteria presented in the *NTCRA Guidance*, so that a comparison of each alternative's performance can be made to support the selection of the preferred alternative for the NTCRA. The alternatives that are subject to detailed analysis are the following.

- Alternative 1: No Action
- Alternative 2: Limited Action - Monitoring and Access Control
- Alternative 3: Building Stabilization, Partial Removal of Hazardous Substances / Flammable/Combustible Materials and Limited Demolition with Off-Site Disposal
- Alternative 4: Building Stabilization, Partial Removal of Hazardous Substance / Flammable/Combustible Materials Limited Demolition, and Building Contents Removal with Off-Site Disposal
- Alternative 5: Building Demolition with On-Site or Off-Site Disposal

As detailed in the *NTCRA Guidance*, removal actions should:

1) be protective of human health and the environment;
2) attain ARARs (or attain through obtaining a waiver);
3) be cost-effective;
4) be implementable;
5) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and
6) satisfy the preference for treatment that reduces toxicity, mobility, or volume as a principal element or provide an explanation as to why it does not.

The detailed analysis consists of a technical description of each alternative, followed by an assessment of each of the removal alternatives against the following evaluation criteria provided in Exhibit 7 of the *NTCRA Guidance*.

Effectiveness

- Protectiveness
  - Protective of public health and community
  - Protective of workers during implementation through administrative and engineering controls, PPE and worker and area air monitoring programs.
  - Protective of the environment
  - Complies with ARARs
- Ability to Achieve Removal Objectives, which include:
  - Prevent Release to the Environment
  - Prevent Direct Exposure to Radionuclides and Other Contaminants

Implementability

- Technical Feasibility
  - Construction and operational considerations
  - Demonstrated performance/useful life
  - Adaptable to environmental conditions
  - Contributes to remedial performance
  - Can be implemented in 1 year
- Availability
  - Equipment
  - Personnel and services
  - Outside laboratory testing capacity
  - Off-site treatment and disposal capacity
  - Post removal site control ("PRSC")
- Administrative Feasibility
  - Permits required
  - Easements or rights-of-way required
  - Impact on adjoining property
  - Likelihood of obtaining an exemption from statutory limits (if needed)

Cost

- Capital Cost
- PRSC Cost
- Present worth cost

6.2 Individual Analysis of Removal Action Alternatives

An analysis of each individual alternative against the evaluation criteria is provided in this section.

6.2.1 Alternative 1: No Action

Technical Description

This alternative was developed as a baseline for comparison with other removal alternatives. Under the no action alternative, no direct actions would be implemented to address the potential human and ecological risks associated with exposure to contamination resulting from contact or migration of contamination associated with buildings and structures at the Site.

Effectiveness

Protectiveness – Unacceptable potential human health and environmental risk related to contamination in buildings and structures may occur under hypothetical future exposure scenarios such as fire, removal of contaminated materials by unauthorized persons, trespassing, and catastrophic building failure. No removal action activities would be initiated under this

alternative. There would be, therefore, no short-term risks posed to the community, the environment or on-site workers during implementation.

Ability to Achieve Removal Objectives – This alternative would not achieve the RAOs. This alternative would not address the potential human health or ecological risks associated with the contaminants present at the Site, and therefore would not mitigate in any way the potential for an unacceptable release. The no action alternative would provide no access controls and, therefore, would not address potential future risks.

Ability to Achieve ARARs: This alternative would not comply with ARARs.

Implementability

Because the no action alternative does not require any actions be taken, technical consideration of feasibility, administrative feasibility and availability of services/materials to implement the alternative are moot questions.

Cost

No capital costs other than the cost to prepare the EE/CA would be associated with the no action alternative. There would not be any PRSC or present worth costs associated with this alternative. The cost estimate for this alternative is $140,000, as detailed in Table 6-1.

6.2.2 Alternative 2: Limited Action – Monitoring and Access Controls

Technical Description

The work to be conducted under Alternative 2 is discussed in Section 5.2. This alternative involves long-term monitoring to detect potential changes in structural condition of the buildings that could lead to releases from them and limiting site access to reduce the potential for human exposure to hazardous materials located in buildings.

Effectiveness

Protectiveness – This alternative would slightly reduce risks to human health and the environment in the short-term by reducing the potential for exposure to trespassers and reducing the potential for removal of contaminated materials by unauthorized personnel. No significant construction activity would take place under this alternative; therefore, there would be no short-term risks posed to the community, the environment or on-site workers during implementation.

Ability to Achieve Removal Objectives – This alternative would not achieve all of the RAOs. The provision of site access controls and security would reduce the potential for direct exposure to contamination. However, the threat of release would not be reduced by this alternative. This alternative would provide a minor reduction in risks up to the time when a permanent reduction of risks related to the Site would occur through implementation of a final remedy. A question may still exist as to whether this action contributes to the efficient performance of the remedial action, as any changes in the structural condition of the buildings could lead to releases from them and further exacerbate the contamination at the Site. As such this alternative may not contribute to the efficient performance of the remedial action.

Ability to Achieve ARARs: This alternative would not comply with ARARs.

Implementability

Alternative 2 would be technically feasible, administratively feasible, and services and materials to implement this alternative are available. This alternative could be implemented within a one-year period.

Cost

Capital costs associated with this alternative include the implementation of the access control measures. Costs also include PRSC, which includes six years of monitoring and site security, presumed to occur until a permanent remedy for disposition of buildings can be determined. Six years assumes that a ROD would be issued in late 2009 or early 2010, followed by two years before remedial action activities began. The cost estimate for this alternative is $3,274,000, as detailed in Table 6-2.

6.2.3 Alternative 3: Building Stabilization, Partial Removal of Hazardous Substances / Flammable Materials and Limited Demolition with Off-Site Disposal

Technical Description

The work to be conducted under Alternative 3 is discussed in detail in Section 5.3. This work would focus on building stabilization, partial removal and off-site disposal of hazardous and flammable materials, and limited demolition and off-site disposal of equipment and buildings that present the greatest risk from a fire. As a result, the facility would be placed in shutdown condition that would be monitored and maintained until a final remedy is selected and implemented.

Effectiveness

Protectiveness – This alternative would reduce the risk of fire by removing some hazardous substances and combustible/flammable materials from the buildings. In addition, measures would be taken to stabilize the building structures. Similar to Alternative 2, this alternative would to some measure reduce risks to human health and the environment in the short-term by reducing the potential for exposure to trespassers and reducing the potential for removal of contaminated materials by unauthorized personnel. This alternative would not result in any unacceptable short-term risks to the community, on-site workers or the environment during implementation. Protectiveness of public health and community would be provided by surveillance and implementation of engineering controls during removal action activities. Protection of workers conducting removal action activities would include the use of PPE and compliance with a site-specific HASP.

Contaminated, non-combustible structures and equipment would remain on-site, as would contaminated building slabs and sub-slab contamination, if any, pending the selection and implementation of a final remedy.

Ability to Achieve Removal Objectives – This alternative would address some of the risk identified in the RAOs. The requirement for site access controls and security coupled with the removal of some hazardous substances would reduce the potential for direct exposure to contaminants, but would not eliminate it. The threat of release would be significantly reduced by this alternative by the removal of some hazardous substances and combustible materials. As a result, this alternative would provide some reduction in risks up to the time that a permanent reduction of risks will occur through implementation of a final remedy. A question may still exist as to whether this action contributes to the efficient performance of the remedial action given the cost associated with stabilizing buildings that will have to be demolished in the future. As such, this alternative may not contribute to the efficient performance of the remedial action.

Ability to Achieve ARARs: This alternative would not comply with ARARs, which require materials to meet the unrestricted release standard of 10 mrem/year TEDE.

Implementability

Technically feasibility – This alternative would be technically feasible and could be implemented within a one-year period.

Availability – Equipment, personnel, services and laboratory testing capacity are available to complete this alternative. Off-site treatment and disposal capacity is available; however, the costs for certain types of disposal are considered variable and are discussed further in the sensitivity analysis below. PRSC has been included in this alternative for the assumed time delay between completion of the alternative and implementation of a final remedy at the Site.

Administrative Feasibility – This alternative is considered administratively feasible, in that no permits will be required for on-site work, no easements or rights-of-way will be required, nor are impacts to adjoining properties considered likely. The cost of this alternative, however, exceeds the statutory limit of $2,000,000 for a removal action. As noted above, the duration of this alternative also exceeds the statutory time limit for a removal action. These two conditions would require a "consistency" exemption from the statutory limits. The technical scope of this removal action would probably be considered to be "appropriate and consistent with the remedial action to be taken," as defined in the Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions, OSWER Directive 9360.0-12A, June 1989. A question may still exist as to whether this action contributes to the efficient performance of the remedial action given the cost associated with stabilizing buildings that will have to be demolished in the future. As such, this alternative may not contribute to the efficient performance of the remedial action.

Cost

The cost estimate for Alternative 3 is $14,377,000, as detailed in the Table 6-3. These costs include PRSC. All costs are treated as "capital" costs, so there are no present worth costs.

6.2.4 Alternative 4: Building Stabilization, Complete Removal of Hazardous Substances / Flammable Materials / Building Contents, Limited Demolition with Off-Site Disposal

Technical Description

The work to be conducted under Alternative 4 is discussed in detail in Section 5.4, and includes all of the activities included in Alternative 3. In addition, this alternative would address the remaining contaminated surfaces and hazardous materials present in Site buildings. Under this alternative, all building contents would be removed and the interiors of the buildings would be cleaned leaving only the enclosed building structures intact with exterior walls, structural interior walls, roofs, and floors. As a result, the facility would be placed in a shutdown condition until a final remedy is selected and implemented.

Effectiveness

Protectiveness – This alternative would reduce the risk of fire by removing some hazardous substances plus combustible/flammable materials from the buildings. In addition, measures would be taken to stabilize the building structures. This alternative would also result in a reduction of risk concerning chemical constituents present in the buildings and their contents. This alternative would reduce risks to human health and the environment in the short-term by reducing the potential for exposure to trespassers, and by reducing the potential for removal of contaminated materials by unauthorized personnel. This alternative would not result in any

unacceptable short-term risks to the community, on-site workers or the environment during implementation. Protectiveness of public health and community would be provided by surveillance and implementation of engineering controls during removal action activities. Protection of workers conducting removal action activities would include the use of PPE and compliance with a site-specific HASP.

Contaminated, non-combustible structures would remain on-site, as would contaminated building slabs and sub-slab contamination, if any, pending a final remedy. Until such time as a final remedy is selected and implemented, this alternative will remove or fix in place contamination within the buildings and on the slabs to minimize the risk of further migration.

Ability to Achieve Removal Objectives – This alternative is expected to address the risks identified in the RAOs. The requirement for site access controls and security coupled with the removal of all hazardous substances and building contents and cleaning remaining building surfaces would greatly reduce the potential for direct exposure to contaminants. The threat of release would also be reduced by this alternative by the removal of hazardous substances, combustible materials, and all building contents. As a result, this alternative would provide some reduction in risks up to the time when a permanent reduction of risks related to the Site would occur through implementation of a final remedy.

Ability to Achieve ARARs: This alternative would not comply with ARARs, which require materials to meet the unrestricted release standard of 10 mrem/year TEDE.

Implementability

Technically feasibility – This alternative would be technically feasible. This work would take approximately two and one-half years to complete, more than the statutory one-year limit for removal actions.

Availability – Equipment, personnel, services and laboratory testing capacity are available to complete this alternative. Off-site treatment and disposal capacity is available; however, the costs for certain types of disposal are considered variable, and are discussed further in the sensitivity analysis below. PRSC has been included in this alternative for the assumed time delay between completion of the alternative and implementation of a final remedy.

Administrative Feasibility – This alternative is considered administratively feasible, in that no permits will be required for on-site work, no easements or rights-of-way will be required, nor are impacts to adjoining properties considered likely. The cost of this alternative, however, exceeds the statutory limit of $2,000,000 for a removal action. As noted above, the duration of this alternative also exceeds the statutory time limit for a removal action. These two conditions would require a “consistency” exemption from the statutory limits. The technical scope of this removal action would probably be “appropriate and consistent with the remedial action to be taken” (as defined in the Final Guidance on Implementation of the “Consistency” Exemption to the Statutory Limits on Removal Actions, OSWER Directive 9360.0-12A, June 1989). A question may still exist as to whether this action contributes to the efficient performance of the remedial action given the very high cost associated with stabilizing and cleaning buildings that will have to be demolished in the future. As such, the components of this alternative may not contribute to the efficient performance of the remedial action.

Cost

The cost estimate for Alternative 4 is $39,700,000, as detailed in Table 6-4. These costs include PRSC. All costs are treated as “capital” costs, so there are no present worth costs.

6.2.5 Alternative 5: Building Demolition with On-Site or Off-Site Disposal

Technical Description

The work to be conducted under Alternative 5 is discussed in detail in Section 5.5. It includes all of the activities part of Alternative 4. This work includes removal of all building contents, followed by demolition and disposal of all buildings and contents. Removal of buildings would not include the removal of concrete slabs. Slabs and foundations would remain in-place so as not to disturb potentially-contaminated underlying soil. After removal of the buildings, sumps and depressions in the slab will be filled, and the concrete slabs will be overlain with a short-term cap or sealed until a decision is made regarding the handling of underlying site soils.

Effectiveness

Protectiveness – This alternative would result in the greatest protection in that the risk from direct contact, a release, or from exposure to the buildings and their contents would be virtually eliminated as all hazardous substances would be removed permanently from the Site. This alternative would not result in short-term risks to the community, on-site workers or the environment during implementation that could not be addressed. Protectiveness of the public health and community would be provided by surveillance and implementation of engineering controls during removal action activities. Protection of workers conducting removal action activities would include the use of engineering controls, PPE, worker and area air monitoring, and compliance with a site-specific HASP.

Contaminated building slabs and sub-slab contamination, if any, would remain in place pending a selection and implementation of a final remedy. Until such time, this alternative will remove or fix in place, then temporarily cap in place contamination on the slabs to minimize the risk of further migration.

Ability to Achieve Removal Objectives – This alternative would most fully meet all of the RAOs. The threats of release and direct exposure would be best eliminated by removing contaminated materials and building materials for off-site disposal. Depending on the type and quantity of this material, if cost effective, some may be disposed on-site, either temporarily or permanently, if not contaminated with hazardous or radioactive substances. Alternative 5 would most effectively contribute to the expected remedial action.

Ability to Achieve ARARs – This alternative would comply with ARARs.

Implementability

Technically feasibility – This alternative would be technically feasible. Implementing this work would constitute a significant step towards the final remedy for the Site. This work would take approximately three years to complete, more than the statutory one-year limit for removal actions.

Availability – Equipment, personnel, services and laboratory testing capacity are available to complete this alternative. Off-site treatment and disposal capacity is available; however, the costs for certain types of disposal are considered variable, and are discussed further in the sensitivity analysis. As stated above, if cost effective, on-site disposal for some building material may be considered if the material is not contaminated and/or other options for off-site disposal are cost prohibitive. PRSC has been included in this alternative for the assumed time delay between completion of the alternative and implementation of a final remedy at the Site.

Administrative Feasibility – This alternative is considered administratively feasible, in that no permits will be required for on-site work, no easements or rights-of-way will be required, nor are

impacts to adjoining properties considered likely. The cost of this alternative, however, exceeds the statutory limit of $2,000,000 for a removal action. As noted above, the duration of this alternative also exceeds the statutory time limit for a removal action. These two conditions would require a "consistency" exemption from the statutory limits. The technical scope of the removal action would be "appropriate and consistent with the remedial action to be taken" (as defined in the *Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions* (OSWER Directive 9360.0-12A, June 1989).

Cost

The cost estimate for Alternative 5 is $63,945,000, as detailed in the Table 6-5. These costs include PRSC. All costs are treated as "capital" costs, so there are no present worth costs.

6.3 Comparative Analysis of Removal Action Alternatives

The comparative analysis of removal action alternatives compares the alternatives based on the following three factors:

1) Effectiveness;
2) Implementability; and
3) Cost.

6.3.1 Effectiveness

Alternative 1 in not effective, as it is not protective; nor does it address risk or meet RAOs, since no action will be implemented.

Alternative 2 is marginally effective, in that it is slightly more protective than "no action." It would not achieve all of the RAOs. The provision of site access controls and security would reduce the potential for exposure to trespassers. However, the threat of release, risk of fire, and potential for further migration of contaminants would not be reduced by this alternative. Alternative 2 would slightly reduce risks to human health and the environment in the short-term, through reduction in the potential for exposure to trespassers and others in contact with the buildings and contents and reduction in the potential for removal of contaminated materials by unauthorized personnel.

Alternatives 3 and 4 each provide additional protection beyond Alternatives 1 and 2. The threat of release due to a fire and/or partial building collapse would be addressed by stabilization and removal of combustible materials during implementation of Alternative 3. Alternative 4 and Alternative 5 would each result in the further reduction of risks and reduction in the need for PRSC, Alternative 5 would eliminate these risks. Alternative 5 also would contribute most effectively to the anticipated remedial action. A final remedy would be required at the Site under all alternatives; however, the scope and cost of the remedy will change depending on which removal action alternative is selected.

Only Alternative 5 meets ARARs.

6.3.2 Implementability

Technical Feasibility – All alternatives are technically feasible. Each of the "active" alternatives, i.e., Alternatives 3, 4, and 5, would contribute to the overall remedial performance, and would be consistent with the anticipated scope of a final remedy for the Site. Alternative 5 would

implement the majority of the actions anticipated for the final Site remedy with respect to buildings and structures, leaving only the slabs and sub-slab soils for the likely final remedy to address. Alternatives 3 and 4 would also address substantive portions of the probable final remedy. Of the active alternatives, only Alternatives 3 could be completed within the one year statutory limit for removal actions, with Alternative 4 taking two and one-half years to complete, and Alternative 5 taking three years to complete.

Availability – Equipment, personnel, services, and outside laboratory capacity are available for all alternatives. The active alternatives will require increasing amounts of off-site disposal capacity, with Alternative 3 needing the least, and Alternative 5 the most. Facilities for off-site disposal are expected to be available. However, there are limited options available for the disposal of LLRW. This issue is discussed further below in the sensitivity analysis. All active alternatives will require PRSC.

Administrative feasibility – All alternatives are administratively feasible with respect to the need for permits, rights-of-way, easements, and lack of anticipated impacts to adjoining property. Alternatives 3, 4, and 5 would require exemptions from statutory limits, with Alternative 3 needing an exemption for cost, and Alternatives 4 and 5 requiring exemptions for both cost and duration.

6.3.3 Costs

The costs for each alternative include administration, engineering, health and safety and construction quality control considerations, removal action contractors, and material disposal costs. Costs do not include EPA oversight, removal of building concrete slabs, foundations, or potentially impacted soils located under the buildings and structures. As discussed above in the effectiveness analysis, performance of Alternatives 2, 3, or 4 each would achieve only part of the overall goals for the Site, leaving the remainder of the work for the final remedy. Alternative 2 would not significantly contribute to the final remedy, in that most of the costs of this alternative are for monitoring and security. Alternatives 3 and 4 would each result in significant removal of Site materials, and would reduce the cost of the final remedy by approximately the cost of the alternative. An analysis of these costs indicates that in the long term, the cost to demolish the buildings and take all contents off-site for disposal will be performed most efficiently by Alternative 5, as this alternative eliminates costs that are either unnecessary or are redundant for the final remedy.

A summary of costs for each alternative is provided below:

ALTERNATIVE	TOTAL COST
Alternative 1 – No Action	$140,000
Alternative 2 – Limited Action – Monitoring and Access Controls	$3,274,000
Alternative 3 – Building Stabilization	$14,377,000
Alternative 4 – Building Stabilization and Building Contents Removal with Off-Site Disposal	$39,700,000
Alternative 5 – Building Stabilization, Building Contents Removal and Building Demolition with On-Site or Off-Site Disposal	$63,945,000

6.4 Sensitivity Analysis

This section provides an analysis of the uncertainties and cost sensitivities regarding material release criteria, contamination levels, quantities, disposal negotiations, schedule and labor force.

As discussed in Section 5.6, the options for off-site disposal of building and contents media range from a worst-case, highest-cost alternative as mixed waste to a best-case, least-cost alternative as non-radiologically or exempt material or as C&D debris. A key assumption with respect to disposal facilities is that Department of Energy Order 5400.5, Authorized Limits for Unrestricted Release will apply to disposal of building contents and structural material, which will minimize the amount of material to be disposed as LLRW. Based on levels of contamination measured and documented during the January 2006 building survey, estimates were made of the percentage of material which could be disposed at the various disposal facilities. The Alternative 5 cost shown above assumes 57% of the waste would be disposed as commercial LLRW, 27% to a Subtitle "C" facility, and 16% to a Subtitle "D" facility. Construction and demolition debris with radiologic contamination below release levels may be considered for reuse, temporary storage, or permanent on-site disposal if cost effective. The percentage of material that could end up at each facility could vary by +/-30%. A worst case variation from the cost estimate basis would absorb all the 25% contingency cost incorporated into the cost estimates. The table below provides a cost range of different disposal options under Alternative 5:

Alternative 5 Cost Summary		
Scenario	**Cost**	**Assumptions**
Cost includes 75% disposal to subtitle "C" and 25% disposal to subtitle "D" facilities	$31,400,000	Subtitle "C" facilities include WCS in Texas and/or US Ecology in Idaho. Subtitle "D" facility is a SWM Landfill
Cost includes 100% disposal to subtitle "C"	$33,000,000	Subtitle "C" facilities include WCS in Texas and/or US Ecology in Idaho
Cost includes 100% disposal to NTS	$39,600,000	Disposal to the DOE Nevada Test Site Facility in Beatty, Nevada
Cost includes 80% disposal to subtitle "C" and 20% disposal to commercial LLRW facility	$41,300,000	Subtitle "C" facilities include WCS in Texas and/or US Ecology in Idaho and Energy Solutions in Clive, UT
Cost includes 60% disposal to subtitle "C" and 40% disposal to commercial LLRW facility	$56,800,000	Subtitle "C" facilities include WCS in Texas and/or US Ecology in Idaho and Energy Solutions in Clive, UT
Cost includes 50% disposal to subtitle "C" and 50% disposal to commercial LLRW facility	$62,800,000	Subtitle "C" facilities include WCS in Texas and/or US Ecology in Idaho and Energy Solutions in Clive, UT

With respect to the cost for off-site disposal, the cost with the least variability is for Subtitle "D" (C&D) disposal. Costs for Subtitle "C" disposal involve greater variability, as there are only two available Subtitle C facilities. The total of transportation and disposal costs to each of the facilities varies by a factor of two. The higher of the two unit disposal costs provided was used in the cost estimates. The disposal cost with the greatest variability is that for LLRW disposal.

While there is one government-associated facility (NTS) that could be utilized, there is only one commercial disposal facility available. Review of disposal costs experienced at other similar sites revealed a wide range of costs for similar material. Disposal costs for LLRW material could vary by as much as +/- 50%. This variation would also be covered within the 25% contingency used in the cost estimate.

The only way to obtain a better commercial cost for this item would be through up-front negotiation or by bidding this item to the LLRW facility. One further option, however, might be available. It is generally understood that the federal government has established disposal costs for LLRW and Subtitle "C" disposal at rates that are believed to be substantially lower than commercial rates. In the event that wastes from the Site could be treated as federal wastes, the overall disposal costs could be reduced by more than 50%. The applicability of this option should be explored as appropriate.

Transportation of the waste via truck or rail to a Subtitle "C" or Subtitle "D" facility has very little impact on the overall cost estimate. Transportation of LLRW was considered to be by truck to rail only; using trucks from gate to gate is not an option. Transportation and disposal costs for all disposal options are expected to increase over time.

With respect to labor force costs, the unit rates for professional staff were based on industry standard rates. For technicians and equipment operators, assumed unit rates were Davis-Bacon Act equivalent for similar projects.

6.5 Possible Changes in Site Situation Should Action Be Delayed or Not Taken

Potential changes should the removal action be delayed or not taken include the following:

- Increase in removal action cost should a catastrophic fire or building collapse occur;
- Increased potential for contaminants to leach from the Site due to a catastrophic building collapse or due to rain water infiltration;
- Increase in cost due to reduction in the number of potential disposal facilities capable of accepting waste steams; and
- Increase in costs due to inflation associated with rising fuel prices, disposal costs, and/or labor costs.

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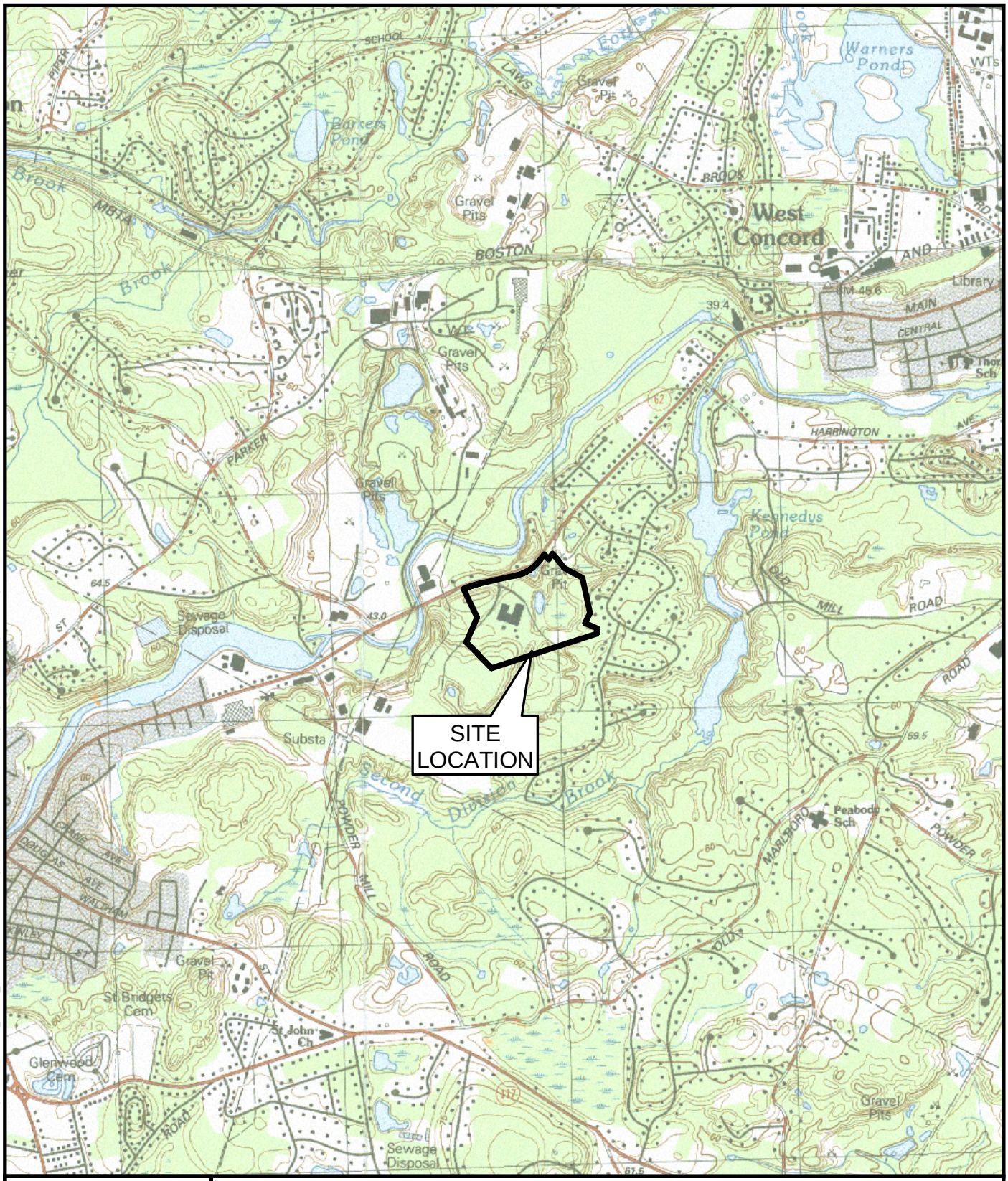
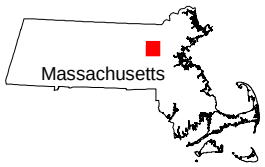
8. List of Acronyms

AOC	Administrative Order by Consent
AOI	area of interest
ALARA	as low as reasonably achievable
ARAR	applicable or relevant and appropriate requirement
AST	aboveground storage tank
AWQC	Ambient Water Quality Criteria
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	Code of Massachusetts Regulations
COC	contaminant of concern
COPC	chemical of potential concern
CWA	Clean Water Act
DOE	United States Department of Energy
DU	depleted uranium
EE/CA	Engineering Evaluation/Cost Analysis
EPA/USEPA	United States Environmental Protection Agency
Ft	feet
ft^2	square feet
g/m^3	grams per cubic meter
HASP	Health and Safety Plan
HSA	Historic Site Assessment
IDW	investigation derived waste
LDRs	RCRA Land Disposal Restrictions
LLRW	Low-Level Radioactive Waste
MassDEP	Massachusetts Department of Environmental Protection
MADPH	Massachusetts Department of Public Health
MCL	RCRA Maximum Contaminant Level
MCLG	RCRA Maximum Contaminant Level Goal
MCP	Massachusetts Contingency Plan
mrem	millirem
NAAQS	National Ambient Air Quality Standards
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NMI	Nuclear Metals, Inc.
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NTCRA	Non-Time Critical Removal Action
O&M	operation and maintenance
ORAU	Oak Ridge Associated Universities
ORNL	Oak Ridge National Laboratories
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PPE	personal protective equipment
ppm	parts per million
PRG	preliminary remediation goal
PRP	potentially responsible party
PRSC	post-removal site control
RAO	removal action objective
RCRA	Resource Conservation and Recovery Act

RI/FS	Remedial Investigation / Feasibility Study
REP	Rotating Electrode Process
SARA	Superfund Amendments and Reauthorization Act
SDG	sample delivery group
SDWA	Safe Drinking Water Act
Site	Nuclear Metals, Inc. Site, 2229 Main Street, Concord, Massachusetts
SOW	Statement of Work
TBC	“to be considered” criteria
TEDE	Total Effective Dose Equivalent
TSCA	Toxic Substances Control Act
TSDF	treatment storage and disposal facility
UST	underground storage tank

FIGURES





Map Source:
Office of Geographic and Environmental Information (MassGIS),Commonwealth of Massachusetts Executive Office of Environmental Affairs. www.state.ma.us/mgis

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Prepared by BRP | Checked by TM

Figure 2.1.1
Site Location

Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts
MACTEC, Inc.

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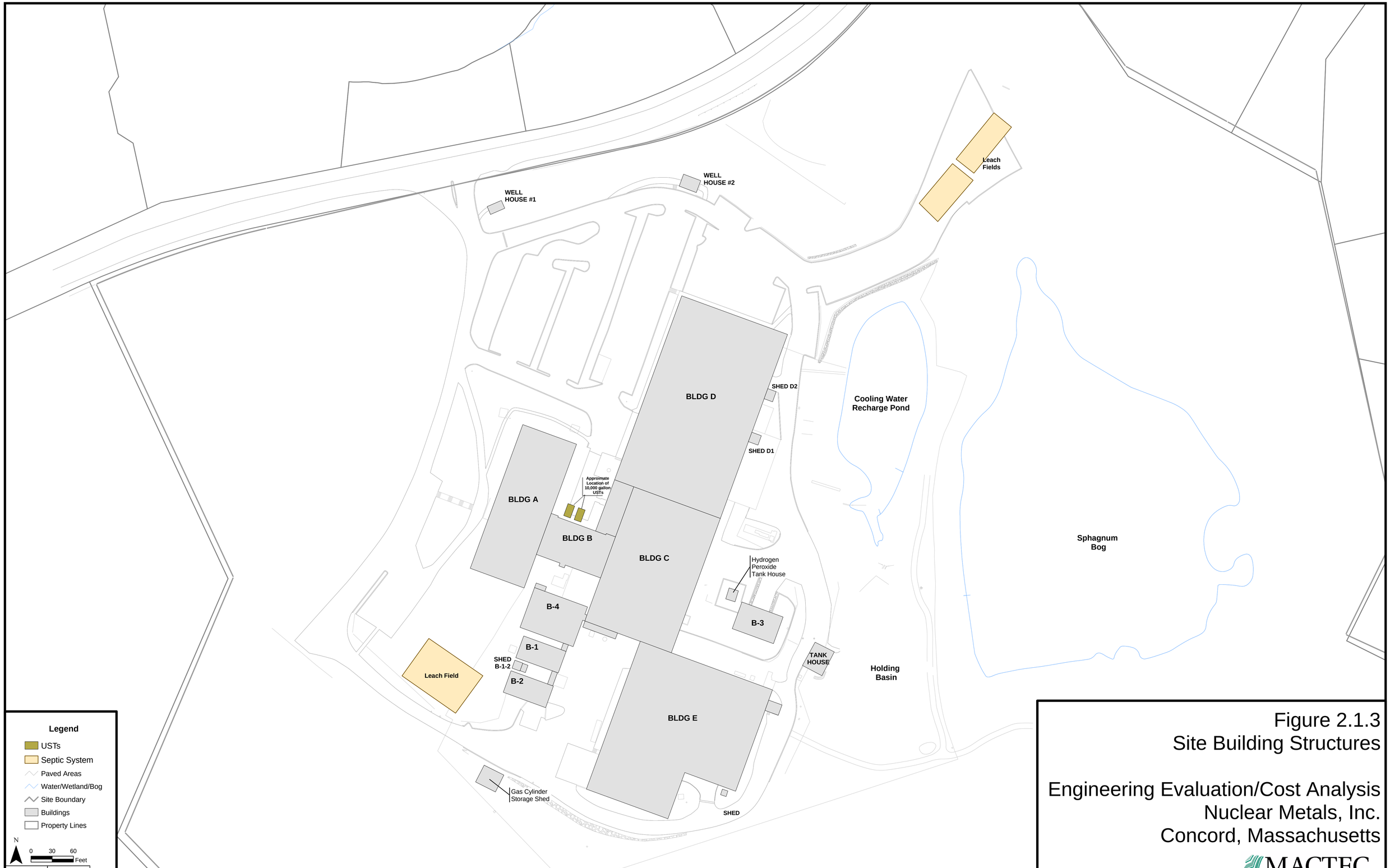

Figure 2.1.3
Site Building Structures

Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts

MACTEC

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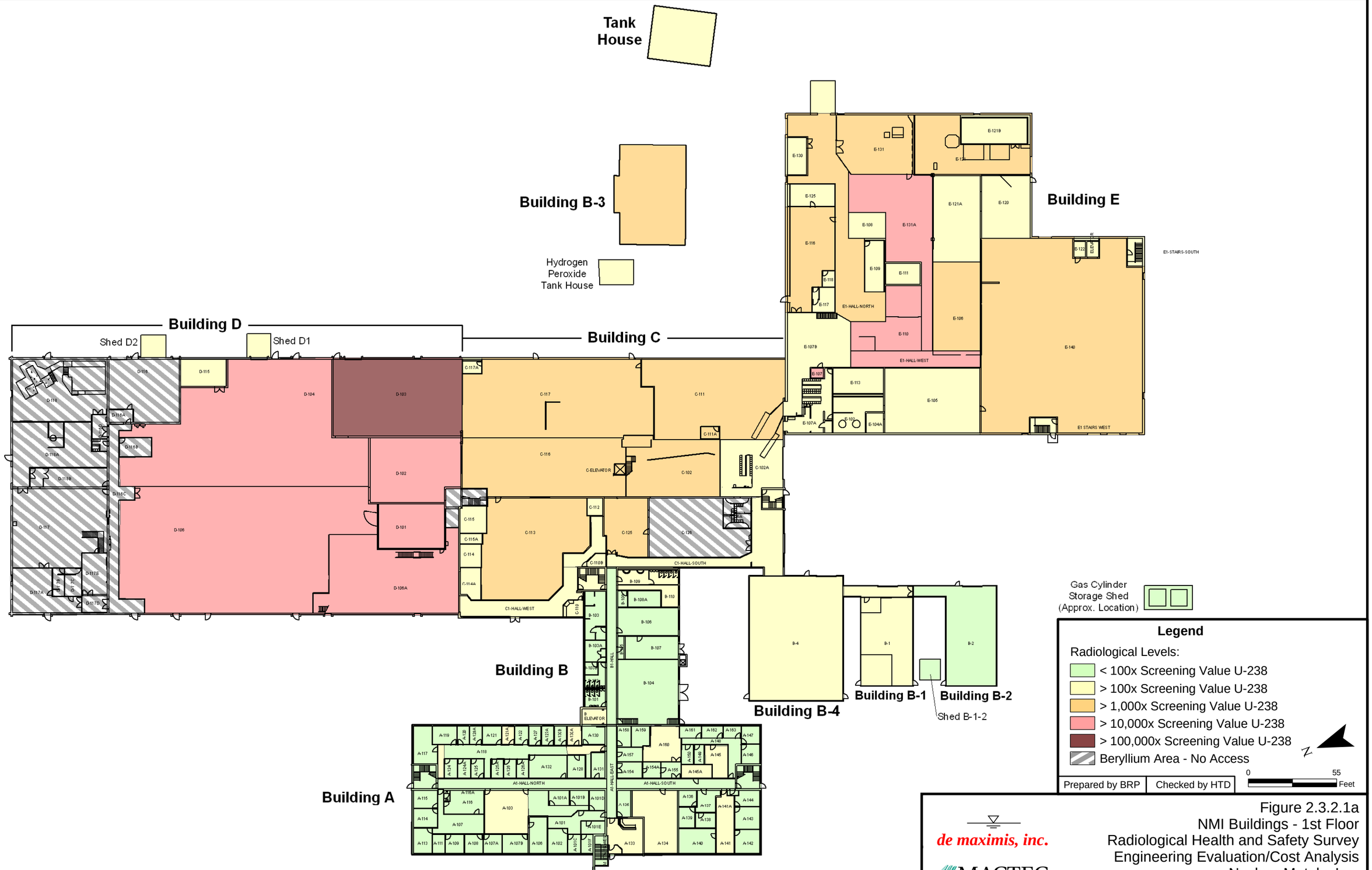

de maximis, inc.

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Figure 2.3.2.1a
NMI Buildings - 1st Floor
Radiological Health and Safety Survey
Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts

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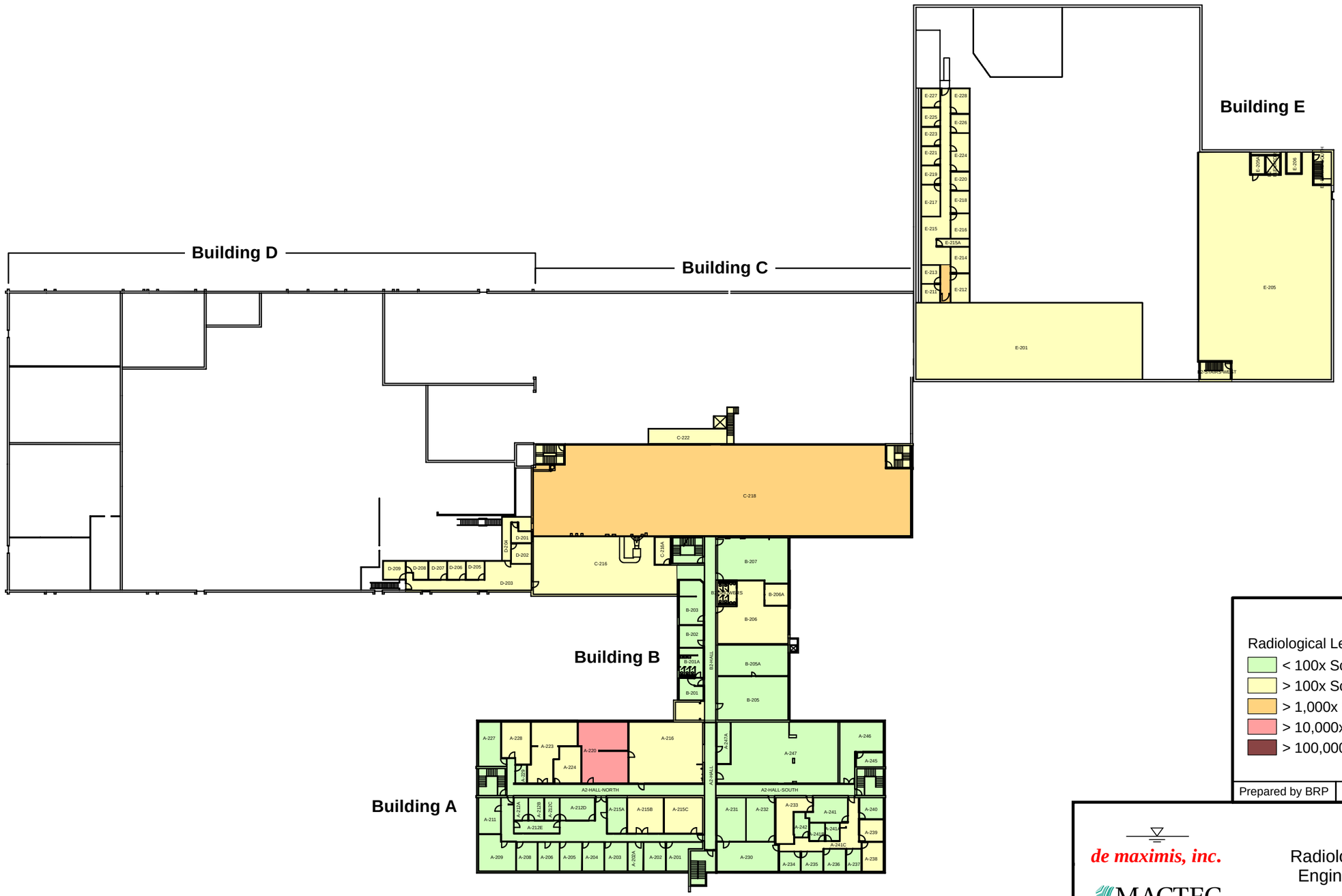

Legend

Radiological Levels:

- < 100x Screening Value U-238
- > 100x Screening Value U-238
- > 1,000x Screening Value U-238
- > 10,000x Screening Value U-238
- > 100,000x Screening Value U-238

N

0 55 Feet

Prepared by BRP | Checked by HTD

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Figure 2.3.2.1b
NMI Buildings - 2nd Floor
Radiological Health and Safety Survey
Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts

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Legend

- BE/DU Contamination
- DU/Hydrofluoric Acid Contamination
- DU Contamination
- Unstable Roof
- > 100x Screening Value U-238
- > 1,000x Screening Value U-238

N

0 55 Feet

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Figure 2.3.2.1c
NMI Buildings - Roof
Radiological Health and Safety Survey
Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts

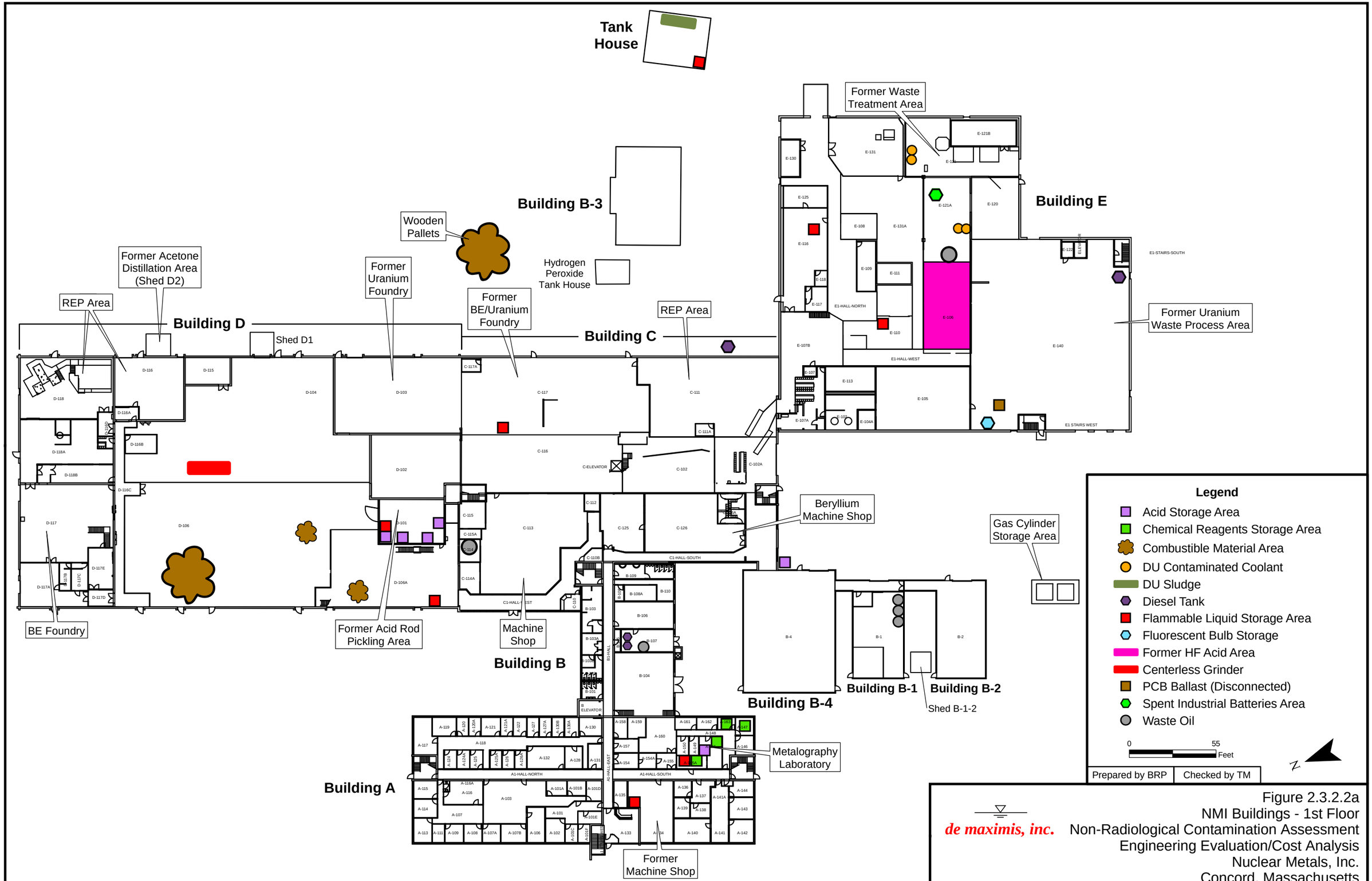

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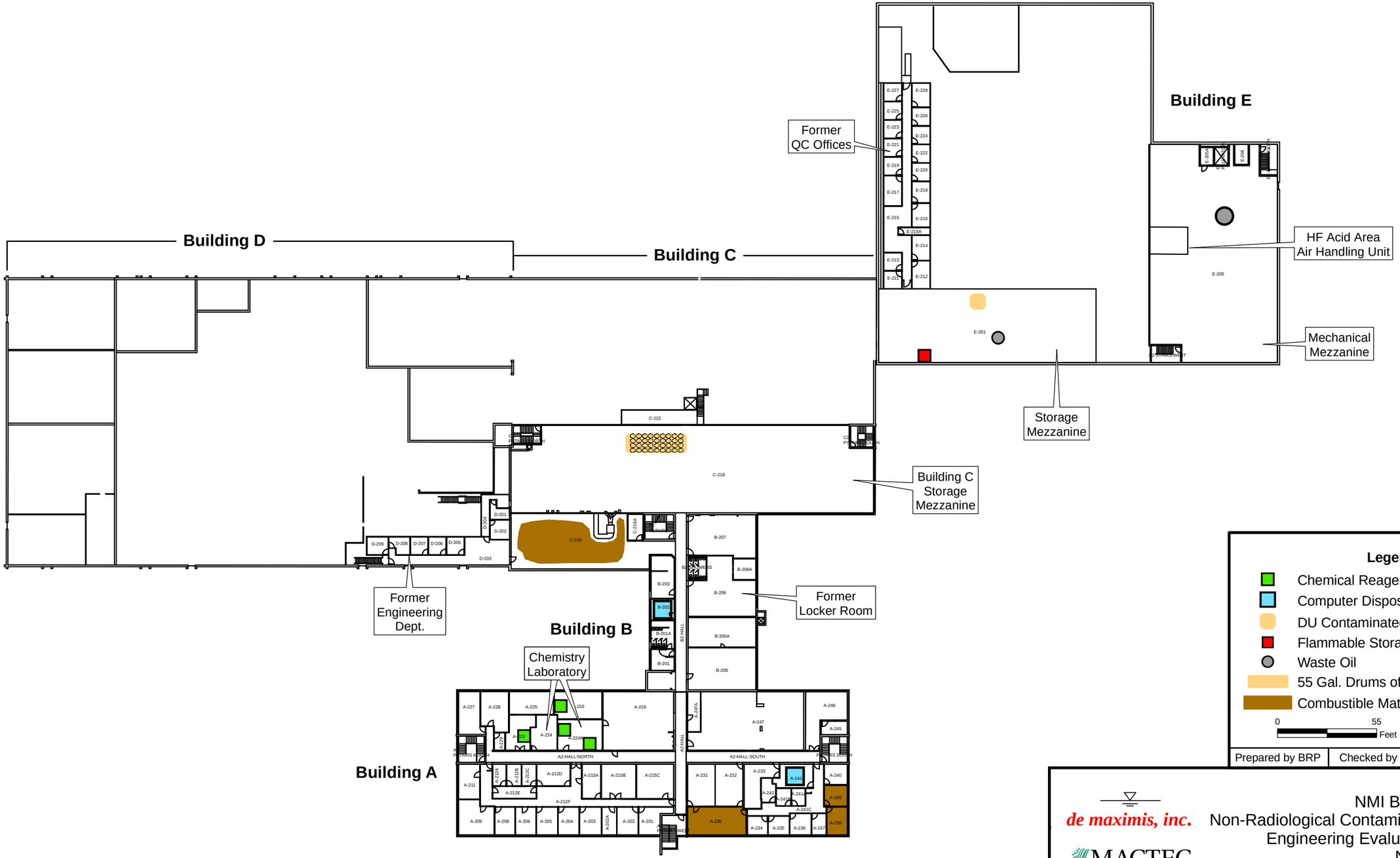
Figure 2.3.2.2a
NMI Buildings - 1st Floor
Non-Radiological Contamination Assessment
Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts



Legend

- Chemical Reagents Storage Area
- Computer Disposal Area
- DU Contaminated Graphite
- Flammable Storage Cabinet
- Waste Oil
- 55 Gal. Drums of Berlcast Liquid Waste
- Combustible Material Area

0 55 Feet

N

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Figure 2.3.2.2b
NMI Buildings - 2nd Floor
Non-Radiological Contamination Assessment
Engineering Evaluation/Cost Analysis
Nuclear Metals, Inc.
Concord, Massachusetts

TABLES

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

NRC Industrial / Commercial Exposure RESRAD Limits	NRC Screening Values	DPH Screening Values
	(25 mrem/yr basis)	(10 mrem/yr basis)
	DPM / 100 cm^2	
Th-232	6	2.4
Th-232+C 2	5	2
U-234	80	32
U-235	87	34.8
U-238	**100**	**40**

Direct Reading Color Coding (highest value in room)

- <= MADPH 10 mrem/yr Screening Value for U-238 (40 dpm / 100 cm2)
- > 1x MADPH Screening Value for U-238
- > 10x MADPH Screening Value for U-238
- > 100x MADPH Screening Value for U-238
- > 1,000x MADPH Screening Value for U-238
- > 10,000x MADPH Screening Value for U-238
- > 100,000x MADPH Screening Value for U-238

Survey Location	Fixed Activity		Removable Activity				Comments
	Gross Alpha/Beta Survey Results (dpm/100 cm^2)	Exceedence Ratio for U-238 (MADPH 10 mrem/yr basis)	Beta (dpm/100 cm^2)	Exceedence Ratio for U-238 (MADPH 10 mrem/yr basis)	Alpha (dpm/100 cm^2)	Exceedence Ratio for U-238 (MADPH 10 mrem/yr basis)	
Radiological Survey Results - January 2006, de maximis, inc							
Building A							
Room A-115 - Floor	1,500	38	117	3	18	None	
Room A-117 - Floor	3,900	98	165	4	9	None	
Room A-118 - Floor	30,000	750	135	3	3	None	Average of four measurements
Room A-128 - Floor	4,500	113	111	3	3	None	
Room A-130 - Floor	3,600	90	117	3	0	None	
Room A-134 - Floor	9,000	225	180	5	9	None	Average of four measurements
Room A-145A Floor	4,350	109	162	4	0	None	
Room A-156 Floor	10,500	263	165	4	0	None	
Room A-160 Floor	2,100	53	75	2	0	None	
Room A-145 Floor	6,000	150	225	6	21	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Room A-215C Floor	12,000	300	111	3	0	None	
Room A-216 Floor	15,000	375	147	4	9	None	
Room A-216 Wall	15,000	375	81	2	0	None	
Room A-220 Floor	30,000	750	162	4	0	None	
Room A-223 Floor	1,425	36	111	3	0	None	
Room A-224 Floor	1,350	34	129	3	3	None	
Room A-224A Wall	375,000	9,375	129	4	3	None	
Room A-234 Floor	2,550	64	117	3	0	None	
Room A-235 Floor	1,800	45	252	6	9	None	
Room A-241C Hall Floor	15,000	375	147	4	9	None	
Room A-225 Floor	3,000	75	117	3	0	None	
Room A-246 Floor	75,000	1875	180	5	0	None	
Room A-233 Floor	27,000	675	63	2	0	None	
Room A2/ General Area-Hall	NR	NR	129	3	0	None	Dose Rate = 13 uR/hr
Room A-2/ General Area-Hall North	NR	NR	147	4	3	None	Dose Rate = 11 uR/hr
Room A2/ General Area-Hall South	NR	NR	99	2	18	None	Dose Rate = 11 uR/hr
Room A-1/ General Area- Hall	NR	NR	144	4	3	None	Dose Rate = 12 uR/hr
Room A-1/ General Area-Hall North	NR	NR	153	4	0	None	Dose Rate = 15 uR/hr
Room A-1 General Area Hall South	NR	NR	144	4	0	None	Dose Rate = 10 uR/hr

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Building B							
Room B-1/ General Area Hall	NR	NR	135	3	18	None	Dose Rate = 15 uR/hr
Room B-2/ General Area Hall	NR	NR	180	5	0	None	Dose Rate = 13 uR/hr
Building C							
Room C-117 Floor	285,000	7,125	1,494	37	228	6	
Room C-113 Floor	240,000	6,000	867	22	162	4	
Room C-111 Floor	54,000	1,350	1,440	36	126	3	
Room C1-Hall South/ Floor	15,000	375	273	7	9	None	
Room C-125/ Floor	270,000	6,750	651	16	75	2	
Room C1-Hall West/ Floor	1,800	45	180	5	3	None	
Building D							
Room D-103 Floor	360,000	9,000	1,362	34	243	6	
Room D-106A Hall	30,000	750	156	4	9	None	
Room D-102 Floor	45,000	1,125	1,146	29	153	4	
Building E							
Room E-1 Hall North/ Floor	18,000	450	2,847	71	414	10	
Room E-107B Floor	15,000	375	1,539	38	144	4	
Room E-1 Hall West/ Floor	750,000	18,750	1,287	32	219	5	

Radiological Survey Results - Oct. - Nov. 2006, MADPH - RCP							
Building A							
N Storage Area (A)	292	7	-33	-1	-6	None	
Room A-132/ Conference Room	28,882	722	-23	-1	-1	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Room A-103/ Office	1,699	42	-11	0	-3	None	
Room A-130/ Office	11,014	275	1	0	-3	None	
Room A-117/ Hallway	15,542	389	35	1	-3	None	
Room A-121	4,783	120	-7	0	2	None	
John Bulk Office	3,336	83	-2	0	-6	None	
Room A-162	8,312	208	NR	NR	NR	None	
Room A-161	8,933	223	NR	NR	NR	None	
Room A-160/ Lab	91,161	2,279	-14	0	-1	None	
Room A-160/ Lab	9,477	237	8	0	-3	None	
2nd Floor Hall (A)	12,843	321	-2	0	-1	None	
2nd Floor Office (A)	18,322	458	NR	NR	NR	None	
Cafeteria	3,115	78	-4	0	-1	None	
Cafeteria	2,393	60	NR	NR	NR	None	
Mold Storage Room (A)	4,960	124	-14	0	-1	None	
Mold Storage Room (A)	14,129	353	-11	0	-6	None	
Wax Room (New)	3,281	82	NR	NR	NR	None	
Wax Room (New)	67,277	1,682	27	1	2	None	
Wax Room (Old)	62,968	1,574	-11	0	-1	None	
Wax Room (Old)	8,330	208	-14	0	2	None	
Wax Injection Room	15,848	396	NR	NR	NR	None	
Wax Injection Room	5,483	137	NR	NR	NR	None	
2nd Floor Men's Room (Old)	24,305	608	NR	NR	NR	None	
2nd Floor Men's Room (Old)	5,426	136	NR	NR	NR	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

2nd Floor Men's Room (Old)	99,663	2,492	NR	NR	NR	None	
2nd Floor Men's Room (Old)	6,176	154	NR	NR	NR	None	
2nd Floor Men's Room (Old)	6,795	170	NR	NR	NR	None	
Roof Over (A)	157,077	3,927	NR	NR	NR	None	
Roof Over (A)	23,593	590	NR	NR	NR	None	
Lobby/ Floor (Carpet)	1,968	49	NR	NR	NR	None	
Lobby/ Floor Drain	5,696	142	-11	0	-1	None	
Lobby/ Stair Step	6,710	168	35	1	-3	None	
Bldg A Hallway/ Floor Drain	6,267	157	-11	0	-1	None	
Bldg A Hallway/ Floor Drain	9,050	226	-11	0	2	None	
Bldg A Hallway/ Floor Drain	1,312	33	1	0	2	None	
Bldg A Hallway/ Elevator Floor	18,135	453	8	0	-3	None	
Bldg A Hallway/ Floor Seam	3,351	84	-11	0	8	None	
Bldg A Hallway/ Floor Drain	12,167	304	-21	-1	-3	None	
Bldg A Hallway/ Wall Ledge	11,844	296	-31	-1	-1	None	
Bldg A Hallway/ Floor	19,689	492	27	1	-3	None	
Bldg A 2nd Floor/ Floor at Stair "Roof"	26,747	669	27	1	-3	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Bldg A 2nd Floor/ Boundary to Bldg C	4,680	117	3	0	-1	None	
Bldg A 2nd Floor/ Elevator Floor	10,003	250	3	0	-1	None	
Bldg A 2nd Floor/ Cinder-Block Wall	3,362	84	3	0	-1	None	
Building B							
Room B-207/ Waxroom Vent	2,025	51	51	1	0	None	
Building C							
Floor	143,067	3,577	104	3	26	None	
Floor (I Beam)	218,277	5,457	253	6	78	2	
Floor (Wall)	318,151	7,954	239	6	49	1	
Floor (Drain)	1,112,048	27,801	678	17	251	6	
Tray	3,627,277	90,682	6,033	151	1,055	26	
Floor Seam	1,785,309	44,633	611	15	95	2	
Floor (Under Platform)	1,974,977	49,374	4,614	115	930	23	
U Foundry (2nd Level)	4,923,959	123,099	4,903	123	1,627	41	
Floor (Wall Seam)	323,921	8,098	157	4	20	None	
Floor	357,914	8,948	282	7	89	2	
Room C-111/ Floor	167,512	4,188	292	7	98	2	
Room C-111/ Floor	76,834	1,921	99	2	0	None	
Room C-128/ Floor	144,860	3,622	391	10	219	5	
Room C-117/ Floor	500,000	12,500	88,942	2,224	385	10	
Room C-116/ CA	NR	NR	442	11	98	2	
Room C-125/ Band Saw	1,078,444	26,961	1,795	45	599	15	
Room C-113/ Floor	108,803	2,720	311	8	66	2	
Room C-117/ Scale	872,960	21,824	6,624	166	1,152	29	
Room C-117/ Stairs	338,937	8,473	598	15	216	5	
Room C-114/ Hallway	108,803	2,720	492	12	101	3	
Room C-114/ Floor	100,878	2,522	311	8	107	3	
Room C-216A/ Respirator Room	442	11	17	0	0	None	
Room C-216/ Storage Area (concrete)	43,341	1,084	10	0	12	None	
Room C-216/ Mezzanine	78,202	1,955	10	0	6	None	
Room C-216/ Mezzanine	102,754	2,569	48	1	20	None	
Room C-216/ Mezzanine	1,260,135	31,503	63	2	6	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Building D							
Room D-102/ Floor	1,424,155	35,604	5,526	138	777	19	
Room D-101/ Floor (against wall)	3,326,307	83,158	1,040	26	590	15	
Room D-101/ Sulfuric Acid Bin	1,025,543	25,639	405	10	167	4	
Room D-106A/ Floor	1,689,762	42,244	1,373	34	582	15	
Room D-104/ Floor	598,418	14,960	729	18	170	4	
Room D-106/ Outside "Be" Airlock	NR	NR	193	5	95	2	
Room D-104/ Catch Pan	2,063,752	51,594	866	22	46	1	
Room D-106/ Floor	608,726	15,218	290	7	225	6	
Room D-106/ Floor Grating	1,532,994	38,325	1,395	35	245	6	
Room D-106/ Floor Grating	993,166	24,829	1,014	25	-12	None	
Room D-205/ Office Floor	14,400	360	-12	0	9	None	
Room D-206/ Office Floor	19,580	490	-2	0	6	None	
Room D-207/ Office Floor	9,380	235	24	1	9	None	
Room D-208/ Office Floor	21,695	542	7	0	0	None	
Room D-203/ Hallway	27,760	694	41	1	3	None	
Room D-208/ Office Floor	NR	NR	10	0	12	None	
Conference Area	72,065	1,802	36	1	9	None	
Room D-115/ Electrical Room	4,524	113	41	1	0	None	

Table 2-1
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Summary of Radiological Survey Results

Building E							
Inside Pump Housing	2,105,933	52,648	8,422	211	1,673	42	
E-131A/ Floor (Roof Drain Base)	483,943	12,099	188	5	66	2	
Table	2,773,458	69,336	4,457	111	553	14	
Floor	209,961	5,249	456	11	144	4	
DU Block Material	3,566,248	89,156	1,819	45	766	19	
E-110/ Pallet Jack Rollers	1,213,089	30,327	287	7	141	4	
E-110/ Hand Cart	1,117,847	27,946	1,081	27	314	8	
Floor Seam	1,360,804	34,020	606	15	202	5	
Floor Seam	656,547	16,414	471	12	173	4	
E-106/ "Erect Vator" Equipment	2,486,809	62,170	4,472	112	1,054	26	
Floor	339,993	8,500	1,279	32	259	6	
Forklift	63,530	1,588	391	10	104	3	
Scale	67,384	1,685	801	20	331	8	
Floor Drain	500,158	12,504	891	22	94	2	
Assembly Line	890	22	533	13	199	5	
Oven	2,333,719	58,343	6,474	162	2,053	51	
Floor Seam	79,859	1,996	666	17	196	5	
Equipment	1,566,419	39,160	17,066	427	2,637	66	
Equipment	236,035	5,901	45,449	1,136	3,838	96	
Floor	478,426	11,961	582	15	173	4	
Equipment	347,535	8,688	13,255	331	939	23	
Floor	164,238	4,106	333	8	84	2	
Wood Block	183,347	4,584	500	13	164	4	
Bench Top	33,550	839	502	13	58	1	
Pump (Equipment)	201,453	5,036	560	14	176	4	
Duct Work	12,349	309	278	7	78	2	
Drywall	12,474	312	97	2	29	None	
Floor	6,119	153	270	7	92	2	
Cutting Table	12,734	318	94	2	12	None	
Tool Cabinet	8,029	201	154	4	66	2	

Table 2-2
Summary of Building Material Volumes

Site Structures	Dimension of Area (L x W)	Total Area (ft^2)	Height of Area (ft)	Est. Volume of Roof Material (ft^3)	Est. Volume of Structural Exterior Wall Material (ft^3)	Est. Volume of Interior Wall (Non-Support) Material (ft^3)	Est. Volume of Structural Steel (ft^3)	Est. Volume of Piping (ft^3)
Building A								
1st Floor	216 x 80	17,280	13	---	5,079	6,936	2,100	13,725
2nd Floor	216 x 80	17,280	13	8,640	5,079	7,033	---	---
Subtotals:		34,560	---	8,640	10,159	13,969	2,100	13,725
Building B								
1st Floor	97 x 60	5,820	13	---	2,694	1,750	900	3,700
2nd Floor	97 x 60	5,820	13	3,060	2,694	2,392	---	---
Subtotals:	---	11,640	---	3,060	5,388	4,142	900	3,700
Building C								
Main Floor	200 x 130	26,000	13/26	13,000	11,326	5,664	2,900	3,950
2nd Floor Mezzanine	200 x 50	10,000	13	---	---	1,417	----	----
Subtotals:	---	36,000	---	13,000	11,326	7,081	2,900	3,950
Building D								
Main Floor	280 x 160	44,800	13/26	22,400	15,101	8,118	3,800	6,400
2nd Floor Mezzanine	51x17,16x40, 12x10	1,630	13	---	---	---	---	---
Subtotals:	---	46,430	---	22,400	15,101	8,118	3,800	6,400
Building E								
Main Section	200 x 150	30,000	26	19,800	10,811	5,720	2,300	5,300
Wing Section (S&R)	120 x 70	8,400	26	5,544	5,322	---	---	---
2nd Fl.Storage Mezz.	125 x 40	5,000	13	---	---	---	---	---
2nd Fl. Office Mezzanine	120 x 30	3,600	13	---	---	---	---	---
2nd Fl. Air Handling Mezz.	120 x 70	8,400	13	---	---	780	0	---
Subtotals:	---	55,400	---	25,344	16,133	6,500	2,300	5,300
Butler Buildings								
Butler 1 (Maint.)	64 x 32	2,048	16	1,024	1,014	0	600	100
Butler 2 (S & R)	64 x 32	2,048	16	1,024	1,014	0	600	100
Butler 3	60 x 40	2,400	16	1,200	1,056	0	600	0
Butler 4	80 x 60	4,800	16	2,400	1,478	0	600	100
Subtotals:	---	11,296	---	5,648	4,562	0	2,400	300
Tank House								
Tank House	30 x 40	1,200	----	600	176	64	0	250
Sheds								
Shed 1 - B1	10 x 10	100	10	50	64	0	0	0
Shed 2 - D1	16 x 15	240	16	120	94	0	0	0
Shed 3 - D2	13 x 15	195	13	98	90	0	0	0
Subtotals:	---	535	---	268	248	0	0	0

Notes/Assumptions:

1. Second floor concrete in all building assumed to be 4-inches thick.
2. Roof material includes stone and tar, roof flashing, and insulation board. Assumed 6-inches thick for all buildings except Building E (8"). Building B also includes the mechanical penthouse.
3. Structural steel estimate includes corrugated metal decking, steel columns and girders, steel framing, and supporting roof trusses.
4. Exterior walls consist of concrete block, brick, windows, plywood, and exterior sheet metal panels.
5. Interior wall volume include non-support concrete block walls only. All other walls (sheetrock, wood, wall partitions, etc.) are included in the individual room volume survey.
6. All material is calculated in cubic feet.

Table 2-3

Summary of Building Waste Volumes

Waste Media	Building A	Building B	Building C	Building D	Building E	Butler Buildings	Tank House	Mics. Structures	Total Waste
	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)	(cu/ft^3)
Volume of Structural Materials	48,593	17,190	38,257	55,819	55,577	12,910	1,090	516	275,941
Volume of Building Contents	30,483	9,502	61,457	44,638	49,511	20,120	1,200	3,000	263,893
Subtotal (includes 20% Ex-Situ Factor):	94,891	32,031	119,656	120,548	126,106	39,636	2,748	4,219	539,834

Table 4-1
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Chemical-Specific ARARs and TBCs

Regulatory Level	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
Federal	The Department of Energy Order 5400.5, Authorized Limits for Unrestricted Release	To Be Considered	Establishes surface contamination levels for building materials.	Radiological decontamination of building surfaces occurs as part of the removal action. This guidance will be considered in design and implementation of the removal action.
Federal	Consolidated Office of Nuclear Material Safety and Safeguards Decommissioning Guidance (NRC Regulation 1757, 2002)	To Be Considered	Provides guidance to licensees, identifies techniques and criteria to be used in evaluating decommissioning plans, and provides acceptable methods for implementing specific parts of the NRC's regulations.	NRC Regulation 1757 is not a regulation, and compliance with the Standard Review Plan described within 1757 is not required.
Federal	Toxic Substances Control Act (TSCA) Polychlorinated Biphenyl (PCB) Remediation waste (40 CFR 761)	Applicable	Provides cleanup and disposal options for PCB remediation waste.	Cleanup of PCB waste occurring during the removal action will be conducted in accordance with these requirements.
Federal	RCRA Manifest System, Recordkeeping, and Reporting (40 CFR 264, subpart E)	Applicable	This regulation outlines the requirements to track hazardous waste activities, including the manifest system, operating records, and reporting.	Removal action activities will be conducted to comply with the requirements of these regulations.
Federal	RCRA Standards Applicable to Transporters of Hazardous Waste (40 CFR 263)	Applicable	This regulation establishes procedures to be followed when transporting manifested hazardous waste within the United States.	Transporters of hazardous waste for off-site treatment and/or disposal will comply with these requirements.
Federal	Radioactive Manifesting Requirements (NRC 10 CFR 20.2006)	Applicable	This regulation establishes procedures to be followed when transporting manifested radioactive waste within the United States.	Transporters of radioactive waste for off-site treatment and/or disposal will comply with these requirements.

Table 4-1
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Chemical-Specific ARARs and TBCs

Regulatory Level	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
Federal	Transportation of Radioactive Material (DOT 49 CFR 173)	Applicable	This regulation establishes procedures to be followed when transporting radioactive waste within the United States.	Transporters of radioactive waste for off-site treatment and/or disposal will comply with these requirements.
Federal	Packaging & Transportation of Radioactive Material (10 CFR 71	Applicable	This regulation establishes procedures to be followed when packaging and transporting radioactive waste within the United States.	Packaging personnel and transporters of radioactive waste for off-site treatment and/or disposal will comply with these requirements.
State	Massachusetts Regulations for the Control of Radiation (105 CMR 120)	Applicable	Establishes standards for radiation-related activities.	Removal activities will be conducted in compliance with these regulations, including the requirement to achieve 10 mrem standard for radiological release. This standard is stricter than the federal standard under 10 CFR. 20 (Subpart E).

Table 4-2
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Action-Specific ARARs and TBCs

Regulatory Level	Action/Trigger	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
Federal	Air Emissions	CAA National Emission Standards for Hazardous Air Pollutants (NESHAP) – Radionuclide Emissions (40 CFR 61, subpart H)	Relevant and Appropriate	40 CFR 61.92 specifies that a member of the general public shall not be exposed to emissions of radionuclides to ambient air in excess of an effective dose equivalent of 10 millirem/year.	Removal action activities will be conducted in accordance with these requirements.
Federal	Air Emissions	CAA National Emission Standards for Hazardous Air Pollutants (NESHAP) - Asbestos (40 CFR 61, subpart M)	Applicable	Subpart M provides emission standards for asbestos and asbestos-containing waste materials.	Removal action activities will be conducted in accordance with these requirements.
Federal	Control of surface water runoff, Direct discharge to surface water	Clean Water Act NPDES Permit Program [40 CFR 122 and 125]	Applicable	The NPDES permit program specifies the permissible concentration or level of contaminants in the discharge from any point source, including surface runoff, to waters of the United States.	To the extent that construction activities result in discharge to waters of the United States measures will be taken to meet substantive requirements of these regulations.
Federal	Identification of hazardous wastes	RCRA Identification and Listing of Hazardous Waste; Toxicity Characteristic (40 CFR 261.24)	Applicable	This requirement defines those wastes that are subject to regulation as hazardous waste.	Analytical results will be evaluated against the criteria and definitions of hazardous waste. The criteria and definition of hazardous waste will be referred to and utilized during removal action activities.
Federal	Storage and disposal of hazardous wastes	RCRA Standards Applicable to Generators of Hazardous Waste (40 CFR 262)	Applicable	These standards govern storage, labeling, accumulation times, and disposal of hazardous waste.	Any hazardous waste generated during removal action activities will be managed in accordance with these standards.

Table 4-2
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Action-Specific ARARs and TBCs

Regulatory Level	Action/Trigger	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
Federal	Use of containers to store hazardous wastes	RCRA Container Storage Requirements (40 CFR 264, Subpart I)	Applicable	These requirements apply to owners and operators of facilities that use container storage to store hazardous waste.	If containers are used to store materials that are hazardous wastes, the containers will be managed according to these rules.
Federal	Radiation Surveys and Investigations	Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) (NRC Regulation 1575)	To Be Considered	Provides a nationally consistent approach to conducting radiation surveys and investigations at potentially radiological contaminated sites.	Interior building surveys, if needed, will be conducted in accordance with MARSSIM.
Federal	Management of PCB-contaminated material	TSCA (40 CFR 761 D)	Applicable	These regulations govern the storage and final disposal of PCBs. The regulations also specify procedures to be followed in decontaminating containers and moveable equipment used in storage areas.	These regulations will be followed if PCB contaminated materials are encountered during the removal action..
Federal	Management of PCB-contaminated material	TSCA (40 CFR 761 subpart G, PCB Spill Cleanup Policy)	To Be Considered	This policy governs the cleanup of PCB spills occurring after May 4, 1987.	Should PCBs be encountered during demolition they will be handled in accordance with these requirements.

Table 4-2
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Action-Specific ARARs and TBCs

Regulatory Level	Action/Trigger	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
State	Receipt, ownership, possession, use, transfer, or disposal of any radiation source	Massachusetts Regulations for the Control of Radiation; (105 CMR 120)	Applicable	Massachusetts is an "Agreement State" and is responsible for regulation of all sources of radiation including naturally occurring radioactive material, byproduct material and special nuclear material. These regulations pertain to source material, byproduct material, and special nuclear materials in quantities not sufficient to form a critical mass and apply to the protection of workers and individuals against radiation, termination of licenses, decommissioning of facilities, and transportation of radioactive material.	The requirements of these regulations will be followed during the removal action / decommissioning activities at the Site.
State	Identification of hazardous Waste	Massachusetts Hazardous Waste Management Rules; (310 CMR 30.000)	Applicable	These regulations outline requirements and procedures for handling, storage, treatment, disposal, and record keeping at hazardous waste facilities.	These regulations will be followed for all on-site activities conducted. Those criteria and definitions more stringent than RCRA take precedence over federal requirements.
State	Discharges to surface water	Massachusetts Surface Water Discharge Permit Program; (314 CMR 3.00)	Applicable	These regulations apply to pollutant discharges to surface waters of the Commonwealth.	To the extent there is a discharge to waters of the Commonwealth during construction activities the requirements of these regulations will be met.

Table 4-2
NMI Superfund Site – Concord, MA
Engineering Evaluation and Cost Analysis
Potential Action-Specific ARARs and TBCs

Regulatory Level	Action/Trigger	Requirement/Citation	Status	Requirement/Synopsis	Action To Be Taken
State	Activities that affect ambient air quality	Massachusetts Air Pollution Control Regulations; (310 CMR 7.00)	Applicable	Particulate emissions from remedial activities must not exceed an annual geometric mean of 50 g/m3 and a maximum 24-hour concentration of 150 mg/m3 (primary standard). Carbon monoxide, nitrogen dioxide, and lead and other contaminants are also regulated. Visible emissions are limited.	Removal action activities will be conducted to meet the standards for Visible Emissions (310 CMR 7.06); Dust, Odor, Construction and Demolition (310 CMR 7.09); and Volatile Organic Compounds (310 CMR 7.18).

Table 6-1
NMI Superfund Site - Concord, MA
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 1 - No Action

Item No.	Description	Quantity	Unit	Unit Cost	Cost
A. Initial Capital Costs					
1	EE/CA Preparation	1	LS	100,000	$100,000
2	Initial Capital Costs	0	0	$0	$0
B. Recurring Capital Costs					
1	Recurring Capital Costs	0	0	$0	$0
C. Annual Operation & Maintenance Costs					
1	Annual Operations & Maintenance Costs	0	0	$0	$0
				Initial Capital Costs (Items A, B, and C) Subtotal:	**$100,000**
D. Initial Capital Costs/Project Administration and Contingency Costs					
1				Initial Capital Costs:	$100,000
2				Project Administration/Management Cost (15%):	$15,000
3				Contingency Cost (25%):	$25,000
				Subtotal All Costs:	$140,000
				TOTAL (Rounded):	**$140,000**

Table 6-2
NMI Superfund Site - Concord, MA
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 2 - Limited Action - Monitoring and Access Control

Item No.	Description	Quantity	Unit	Unit Cost	Cost
A. Initial Capital Costs					
1	EE/CA Preparation	1	LS	$100,000	$100,000
2	Site Security	72	months	12,700	$914,400
3	Site Inspection	1,152	man hours	$250	$288,000
4	Physical Security	1	LS	$50,000	$50,000
5	Install Tem.Lighting Fixtures & Power Panels	1	LS	$210,000	$210,000
6	Site Utilities	72	Months	$10,000	$720,000
7	Radiological Sampling				
7a	Reporting	288	man hours	$125	$36,000
8	Utilities				
9a	Disconnect Gas & Electrical Services	1	LS	$20,000	$20,000
				Initial Capital Cost (Item A) Subtotal:	**$2,338,400**
B. Initial Capital Costs/Project Administration and Contingency Costs					
1				Initial Capital Costs:	$2,338,400
2				Project Administration/Management Cost (15%):	$350,760
3				Contingency Costs (25%):	$584,600
				Subtotal All Costs:	$3,273,760
				TOTAL (Rounded):	**$3,274,000**

Notes:

Item No.

2. Site security cost budget provided by local vendor, assumes full time for six years.
3. Site Inspection includes labor and materials for monthly inspections for a period of six years. Assumes 1 - Health Physicist and 1 - Site Manager
6. Site utilities cost assumes a duration of 72 months to cover the time between RI/FS and the start of RA.

7a. Assumes 4 hrs/month for 72 months.

Comments:

1. All cost are capital cost, inflation was not factored into the cost estimate.

Table 6-3
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 3 - Site Stabilization, Partial Removal of Hazardous Substances/Flammable/Combustible Material, and Limited Demolition, with Off-Site Disposal

Item No.	Description	Quantity	Unit	Unit Cost	Cost
1	**Administration Cost**				
				Administration Cost Subtotal (Rounded):	$450,000
2	**Pre-NTCRA Activities**				
				Pre-NTCRA Activities Cost Subtotal (Rounded):	$900,000
3	**Building Stabilization**				
				Building Stabilization Cost Subtotal (Rounded):	$5,358,000
4	**Transportation & Disposal (T & D)**				
				T & D Cost Subtotal (Rounded):	$3,561,000
				Initial Capital Costs (Items 1 - 4) Subtotal:	**$10,269,000**
5	**Initial Capital Costs/Project Administration and Contingency**				
5a				Initial Capital Costs:	$10,269,000
5b				Project Administration/Management Cost (15%):	$1,540,350
5c				Contingency Cost (25%):	$2,567,250
				Subtotal All Costs:	$14,376,600
				TOTAL (Rounded):	**$14,377,000**

Table 6-3
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 3 - Site Stabilization, Partial Removal of Hazardous Substances/Flammable/Combustible Material, and Limited Demolition, with Off-Site Disposal

Cost Assumptions

1 Work plans include NTCRA Design, Health & Safety, Transportation, Packaging & Handling, Quality Assurance, etc.
2 Based on expenditure of utilities during the RI/FS plus cost estimate from office trailer vendor. Includes office trailers, storage unit, sanitary facilities, dumpster rental, phone, internet, trailer electricity, and supplies.
3 Cost includes installation of Entrance Gate at Route 62, a security fence that ties into the existing site fence to keep trespassers out along the north-northwest perimeter of Bldg, A,B,C, & D, and plywood over windows.
4 Cost estimate from local power and gas company.
5 Cost estimate provided by engineering consultant - includes material, labor, and cost of electricity inside buildings
6 (Assumes $3,000/month for 1 year). Also includes cost to set-up temporary power panels and lighting .
7 NTCRA Pre-Implementation Investigation includes an asbestos and an additional detailed radiological survey.
8 Engineering evaluation to ensure safe working conditions.
9 Cost estimate includes site security for six years through the start of Remedial Design / Remedial Action.
10 Site Inspection includes labor and materials for monthly inspections for a period of five years. Assumes one Health Physicist and one Site Manager.
11 Health and Safety includes full time Radiation Safety Officer and Health and Safety Officer.
Includes radiation monitoring instrumentation, rental equipment, air monitoring, decontamination trailer, and personnel protective equipment.
12
13 Includes equipment and labor to segregate and containerize radioactive "hotspots".
14 Includes equipment and labor to remove and containerize combustible materials.
15 Includes labor, equipment, and inert gas supply for deactivation of the lines.
16 Lab pack cost estimated provided by service contractor.
17 Includes equipment (pumps, drum cart, etc.) and material (drums, tubing, etc.). Also includes removal of UST product.
18 Cost estimate provided by demolition contractor - includes all labor, equipment, demolition of material, and packaging of waste.
19 Includes labor and material to place a HDPE membrane over damaged sections of Buildings A, B, & C.
20 Includes labor and material to solidify sludge in bulk containers.
21 Cost estimated based on previous on-site work. Assumes on-site treatment with discharge to the Cooling Water Recharge Pond.
22 Cost estimated provided by service contractor includes all labor, complete demo, waste stabilization, and packaging. .
23 Assume total demolition of structure. Cost estimate provided by demolition contractor. Includes engineering controls. Butler B3 cost estimate generated from demolition contractor, equals 25% of total Butler Buildings cost estimate. Includes erosion controls.
24 Assume use of a geoprobe for 40 days, concrete cores, and analytical.
25 Existing cost structure with RI Laboratory.
26 Universal waste consist of transformers, fluorescent bulbs, ballast, and computers. Cost estimate includes disposal to Subtitle "C' LF.
27 Cost estimate assume all waste to be disposed of as either non-hazardous or hazardous waste.
28 Cost estimate assumes liquid waste is radiological contamination only.
29 LLRW quantities generated from information collected during the RI/FS preliminary building scoping survey and includes Butler B3, Tank
30 House, HF acid area, and Roof Equipment.
31 Subtitle "C" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible
32 and non-radiological material from the Tank House and Butler B3.
33 Subtitle "D" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible and non-radiological material from the Tank House and Butler B3 that can be "free released".
34 Assumes full time Transportation and Disposal Coordinator
35 Cost includes Project & Construction Management, Contractor Procurement, and Waste Profiles.
36 All cost are capital cost, inflation was not factored into the cost estimate.

Table 6-4
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 4 - Site Stabilization, Complete Removal of Hazardous Substances/Flammable/Combustible Material, Contents Removal, and Limited Demolition, with Off-Site Disposal

Item No.	Description	Quantity	Unit	unit cost	Cost
1	**Administration Cost**				
				Administration Cost Subtotal (Rounded):	$450,000
2	**Pre-NTCRA Activities**				
				Pre-NTCRA Activities Cost Subtotal (Rounded):	$1,020,000
3	**Building Stabilization**				
				Building Stabilization Cost Subtotal (Rounded):	$6,889,000
4	**Building Contents Removal**				
				Bldg. Contents Removal Cost Subtotal (Rounded):	$3,955,000
5	**Interior Cleaning**				
				Interior Cleaning Cost Subtotal (Rounded):	$100,000
6	**Transportation & Disposal (T & D)**				
				T & D Cost Subtotal (Rounded):	$15,943,000
				Initial Capital Costs (Items 1 - 6) Subtotal:	**$28,357,000**
7	**Initial Capital Costs/Project Administration and Contingency Costs**				
7a				Initial Capital Costs:	$28,357,000
7b				Project Administration/Management Cost (15%):	$4,253,550
7c				Contingency Cost (25%):	$7,089,250
				Subtotal All Costs:	$39,699,800
				TOTAL (Rounded):	**$39,700,000**

Table 6-4
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 4 - Site Stabilization, Complete Removal of Hazardous Substances/Flammable/Combustible Material, Contents Removal, and Limited Demolition, with Off-Site Disposal

Cost Assumptions

1 Work plans include NTCRA Design, Health & Safety, Transportation, Packaging & Handling, Quality Assurance, etc.
2 Based on expenditure of utilities during the RI/FS plus cost estimate from office trailer vendor. Includes office trailers, storage unit, sanitary facilities, dumpster rental, phone, internet, trailer electricity, and supplies.
3 Cost includes installation of Entrance Gate at Route 62, a security fence that ties into the existing site fence to keep trespassers out along the north-northwest perimeter of Bldg, A,B,C, & D, and plywood over windows.
4 Cost estimate from local power and gas company.
5 Cost estimate provided by engineering consultant - includes material, labor, and cost of electricity inside buildings (Assumes $3,000/month for 1 year). Also includes cost to set-up temporary power panels and lighting .
6 NTCRA Pre-Implementation Investigation includes an asbestos and an additional detailed radiological survey.
7 Engineering evaluation to ensure safe working conditions.
8 Cost estimate includes site security for six years through the start of Remedial Design / Remedial Action.
9 Site Inspection includes labor and materials for monthly inspections for a period of 4 years. Assumes one Health Physicist and one Site Manager.
10 Health and Safety includes full time Radiation Safety Officer and Health and Safety Officer.
11 Includes radiation monitoring instrumentation, rental equipment, air monitoring, decontamination trailer, and personnel protective equipment.
12 Includes equipment and labor to segregate and containerize radioactive "hotspots".
13 Includes equipment and labor to remove and containerize combustible materials.
14 Includes labor, equipment, and inert gas supply for deactivation of the lines.
15 Lab pack cost estimated provided by service contractor.
16 Includes equipment (pumps, drum cart, etc.) and material (drums, tubing, etc.). Also includes removal of UST product.
17 Cost estimate provided by demolition contractor - includes all labor, equipment, demolition of material, and packaging of waste.
18 Includes labor and material to place a HDPE membrane over damaged sections of Buildings A, B, & C.
19 Includes labor and material to solidify sludge in bulk containers.
20 Cost estimated based on previous on-site work. Assumes on-site treatment with discharge to the Cooling Water Recharge Pond.
21 Cost estimated provided by service contractor includes all labor, complete demolition, waste stabilization, and packaging.
22 Assume total demolition of structures. Cost estimate provided by demolition contractor. Butler B3 cost estimate generated from demolition contractor, equals 25% of Total Butler Bldgs. cost estimate. Includes erosion controls.
23 Assume use of a geoprobe for 40 days, concrete cores, and analytical.
24 Existing cost structure with RI Laboratory.
25 Asbestos abatement includes labor, material, & equipment. Assumes 3,000 LF and 35,000 SF of presumed asbestos material.
26 Includes labor and equipment to remove laboratory hoods.
27 Includes labor and equipment to remove universal waste.
28 Estimated cost for labor during contents removal for all buildings.
29 Estimated cost for demolition equipment during contents removal for all buildings.
30 An additional radiological survey will be conducted after contents removal is completed to refine building material volume estimates.
31 Estimated cost for cleaning equipment during interior cleaning of the buildings.
32 Estimated cost for interior cleaning labor.
33 Universal waste includes transformers, fluorescent bulbs, ballast, and computers. Cost estimate includes disposal to Subtitle "C' LF. Includes transportation.
34 Cost estimate assume all waste to be disposed of as either non-hazardous or hazardous waste.
35 Cost estimate assumes liquid waste is radiological contamination only.
36 Assumes asbestos waste is not mixed waste, disposal to Subtitle "C" Landfill.
37 LLRW quantities generated from information collected during the RI/FS preliminary building scoping survey and includes Butler B3, Tank House, HF acid area, and Roof Equipment.
38 Subtitle "C" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible material and non-radiological material from the Tank House and Butler B3.
39 Subtitle "D" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible material and non-radiological material from the Tank House and Butler B3 that can be "free released".
40 Assumes full time Transportation and Disposal Coordinator
41 Cost includes Project & Construction Management, Contractor Procurement, and Waste Profiles.
42 All cost are capital cost, inflation was not factored into the cost estimate.

Table 6-5
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 5 - Site Stabilization, Complete Removal of Hazardous Substances/Flammable/Combustible Material, Contents Removal, and Building Demolition, with On-Site or Off-Site Disposal

Item No.	Description	Quantity	Unit	unit cost	Cost
1	**Administration Cost**				
				Administration Cost Subtotal (Rounded):	$450,000
2	**Pre-NTCRA Activities**				
				Pre-NTCRA Activities Cost Subtotal (Rounded):	$1,140,000
3	**Building Stabilization**				
				Building Stabilization Cost Subtotal (Rounded):	$8,425,000
4	**Building Contents Removal**				
				Bldg. Contents Removal Cost Subtotal (Rounded):	$3,805,000
5	**Interior Cleaning / Building Demolition**				
				Interior Cleaning / Bldg. Demolition Cost Subtotal (Rounded):	$1,890,000
6	**Transportation & Disposal (T & D)**				
				T & D Cost Subtotal (Rounded):	$29,965,000
				Initial Capital Costs (Items 1 -6) Subtotal:	**$45,675,000**
7	**Initial Capital Costs/Project Administration and Contingency Costs**				
7a				Initial Capital Costs:	$45,675,000
7b				Project Administration/Management Cost (15%):	$6,851,250
7c				Contingency Cost (25%):	$11,418,750
				Subtotal All:	$63,945,000
				TOTAL (Rounded):	**$63,945,000**

Table 6-5
NMI Superfund Site
Engineering Evaluation and Cost Analysis
Cost Estimate
Alternative 5 - Site Stabilization, Complete Removal of Hazardous Substances/Flammable/Combustible Material, Contents Removal, and Building Demolition, with On-Site or Off-Site Disposal

Cost Assumptions

1 Work plans include NTCRA Design, Health & Safety, Transportation, Packaging & Handling, Quality Assurance, etc.
2 Based on expenditure of utilities during the RI/FS plus cost estimate from office trailer vendor. Includes office trailers, storage unit, sanitary facilities, dumpster rental, phone, internet, trailer electricity, and supplies.
3 Cost includes installation of Entrance Gate at Route 62, a security fence that ties into the existing site fence to keep trespassers out along the north-northwest perimeter of Bldg, A,B,C, & D, and plywood over windows.
4 Cost estimate from local power and gas company.
5 Cost estimate provided by engineering consultant - includes material, labor, and cost of electricity inside buildings (Assumes $3,000/month for 1 year). Also includes cost to set-up temporary power panels and lighting .
6 NTCRA Pre-Implementation Investigation includes an asbestos and an additional detailed radiological survey.
7 Engineering evaluation to ensure safe working conditions.
8 Cost estimate includes site security for six years through the start of Remedial Design / Remedial Action.
9 Site Inspection includes labor and materials for monthly inspections for a period of three years. Assumes one Health Physicist and one Site Manager.
10 Health and Safety includes full time Radiation Safety Officer and Health and Safety Officer.
11 Includes radiation monitoring instrumentation, rental equipment, air monitoring, decontamination trailer, and personnel protective equipment.
12 Includes equipment and labor to segregate and containerize radioactive "hotspots".
13 Includes equipment and labor to remove and containerize combustible materials.
14 Includes labor, equipment, and inert gas supply for deactivation of the lines.
15 Lab pack cost estimated provided by service contractor.
16 Includes equipment (pumps, drum cart, etc.) and material (drums, tubing, etc.). Also includes removal of UST product.
17 Cost estimate provided by demolition contractor - includes all labor, equipment, demolition of material, and packaging of waste.
18 Includes labor and material to place a HDPE membrane over damaged sections of Buildings A, B, & C.
19 Includes labor and material to solidify sludge in bulk containers.
20 Cost estimated based on previous on-site work. Assumes on-site treatment with discharge to the Cooling Water Recharge Pond.
21 Cost estimated provided by service contractor includes all labor, complete demolition, waste stabilization, and packaging.
22 Assume total demolition of structures. Cost estimate provided by demolition contractor. Butler B3 cost estimate generated from demolition contractor, equals 25% of Total Butler Bldgs. cost estimate. Includes erosion controls.
23 Assume use of a geoprobe for 40 days, concrete cores, and analytical.
24 Existing cost structure with RI Laboratory.
25 Asbestos abatement includes labor, material, & equipment. Assumes 3,000 LF and 35,000 SF of presumed asbestos material.
26 Includes labor and equipment to remove laboratory hoods.
27 Includes labor and equipment to remove universal waste.
28 Estimated cost for labor during contents removal for all buildings.
29 Estimated cost for demolition equipment during contents removal for all buildings.
30 An additional radiological survey will be conducted after contents removal is completed to refine building material volume estimates.
31 Estimated cost for cleaning equipment during interior cleaning of the buildings.
32 Estimated cost for interior cleaning labor.
33 Cost estimate provided by demolition contractor.
34 Cost estimate provided by demolition contractor.
35 Includes labor and equipment to clean and install cut-off walls to fill drain lines.
36 Cost estimated provided by service contractor.
37 Universal waste consist of transformers, fluorescent bulbs, ballast, and computers. Cost estimate includes disposal to Subtitle "C' LF. Includes transportation.
38 Cost estimate assume all waste to be disposed of as either non-hazardous or hazardous waste.
39 Cost estimate assumes liquid waste is radiological contamination only.
40 Assumes asbestos waste is not mixed waste, disposal to Subtitle "C" Landfill.
41 LLRW quantities generated from information collected during the RI/FS preliminary building scoping survey and includes Butler B3, Tank House, HF acid area, and Roof Equipment.
42 Subtitle "C" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible material and non-radiological material from the Tank House and Butler B3.
43 Subtitle "D" quantities generated from information collected during the RI/FS preliminary building scoping survey includes combustible material and non-radiological material from the Tank House and Butler B3 that can be "free released".
44 Assumes full time Transportation and Disposal Coordinator
45 Cost includes Project & Construction Management, Contractor Procurement, and Waste Profiles.

APPENDICES

Appendix A

Beryllium Wipe Sample Results- MassDEP Drum Removal

SEVERN TRENT STL®

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 9046

Starmet Smears

Lot #: F5L090317

Chris Higgins

Envirocare
143 West Street
New Milford, CT 06776

SEVERN TRENT LABORATORIES, INC.

Terry Romanko
Project Manager

January 3, 2006

Case Narrative
LOT NUMBER: **F5L090317**

This report contains the analytical results for the eight samples received under chain of custody by STL St. Louis on December 8, 2005. These samples are associated with your Starmet Smears project.

The analytical results included in this report meet all applicable quality control procedure requirements.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

There were no observations or nonconformances associated with the analysis of the samples.

METHODS SUMMARY

F5L090317

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F5L090317

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HRTJ3	001	S-BE-1	11/18/05	12:00
HRTJ8	002	S-BE-2	11/18/05	12:00
HRTJ9	003	S-BE-3	11/18/05	12:00
HRTKA	004	S-BE-4	11/18/05	12:00
HRTKD	005	S-BE-5	11/18/05	12:00
HRTKF	006	S-BE-6	11/18/05	12:00
HRTKH	007	S-BE-7	11/18/05	12:00
HRTKJ	008	S-BE-8	11/18/05	12:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Envirocare of Utah, Inc.

Client Sample ID: S-BE-1

TOTAL Metals

Lot-Sample #...: F5L090317-001 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**2.3**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTJ31AA**
		Dilution Factor: 1		Analysis Time..: 13:08		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-2

TOTAL Metals

Lot-Sample #...: F5L090317-002 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**0.36**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTJ81AA**
		Dilution Factor: 1		Analysis Time..: 13:17		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-3

TOTAL Metals

Lot-Sample #...: F5L090317-003 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**3.3**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTJ91AA**
		Dilution Factor: 1		Analysis Time..: 13:30		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-4

TOTAL Metals

Lot-Sample #...: F5L090317-004 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**2.5**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTKA1AA**
		Dilution Factor: 1		Analysis Time..: 13:35		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-5

TOTAL Metals

Lot-Sample #...: F5L090317-005 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**1.2**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTKD1AA**
		Dilution Factor: 1		Analysis Time..: 13:39		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-6

TOTAL Metals

Lot-Sample #...: F5L090317-006 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**1.6**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTKF1AA**
		Dilution Factor: 1		Analysis Time..: 13:43		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-7

TOTAL Metals

Lot-Sample #...: F5L090317-007 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**0.90**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTKH1AA**
		Dilution Factor: 1		Analysis Time..: 13:48		

Envirocare of Utah, Inc.

Client Sample ID: S-BE-8

TOTAL Metals

Lot-Sample #...: F5L090317-008 **Matrix.....:** WIPE
Date Sampled...: 11/18/05 12:00 **Date Received..:** 12/08/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5346454						
Beryllium	**4.8**	**0.25**	**ug/wipe**	**SW846 6010B**	**12/12-12/13/05**	**HRTKJ1AA**
		Dilution Factor: 1		Analysis Time..: 13:52		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F5L090317 **Matrix.....:** WIPE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F5L120000-454 **Prep Batch #...:** 5346454						
Beryllium	ND	0.25	ug/wipe	SW846 6010B	12/12-12/13/05	HRXQ31AA
		Dilution Factor: 1				
		Analysis Time..: 12:55				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: F5L090317 **Matrix.....:** WIPE

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Beryllium	103	(85 - 122)			SW846 6010B	12/12-12/13/05	5346454
	99	(85 - 122)	4.0	(0-20)	SW846 6010B	12/12-12/13/05	5346454

Dilution Factor: 1 Analysis Time..: 13:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

CHAIN OF CUSTODY RECORD
Parameters for Analysis

ENVIROCARE
143 West Street
New Milford, CT 06776
860-210-3000

Sampler's Name: Chris Higgins

Project Number: 9046

Project Name: Starmet

TO: STL- St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566
FAX: 314-298-8757

Attention: John Powell

Sample ID No.	Date Collected	Time Collected	Berillium	Comments
S-Be-1	11/18/2005	1200	x	Please Send Results to: Bag
S-Be-2	11/18/2005	1200	x	Chris Higgins
S-Be-3	11/18/2005	1200	x	143 West St
S-Be-4	11/18/2005	1200	x	New Milford CT 06776
S-Be-5	11/18/2005	1200	x	and e-mail:
S-Be-6	11/18/2005	1200	x	chiggins@envllc.com
S-Be-7	11/18/2005	1200	x	
S-Be-8	11/18/2005	1200	x	
[redacted]	[redacted]	[redacted]	[redacted]	

CW 12.8.05

Date/Time 12-7-05
Relinquished By (Signature) Date/Time

12-7-05
Received By (Signature) Date/Time

Jill Clarke 12-8-05
Received By (Signature) Date/Time

SHIPPING INFORMATION: Fed Ex 12-7-05 ~~11/28/2005~~
Carrier Date Shipped

SCIENTECH CONTACT: C Higgins 203-565-3272
Name Phone No.

SEVERN TRENT **STL**

Lot No(s) F5L090317

(Note all associated lot No's)

Condition Upon Receipt Form
St. Louis Laboratory

Client: Envirocare
Quote No:
COC/RFA No: N/A
Initiated By: [illegible]
Date: 12.8.05
Time: ~~0900~~ 0625 [illegible] 12.8.05

Shipping Information

Shipper Name: Fed Ex
Shipper No(s):*
1. 8528 3268 9523
2.
3.
4.
5.

*Numbered shipping lines correspond to Numbered Sample Temp lines.

Multiple Packages: Y (N) N/A
Sample Temperature(s):**
1. Ambient
2.
3.
4.
5.

**Sample must be received at 4°C ± 2°C-If not, note contents below. Temperature variance does NOT affect the following analysis/matrix: Metals-Liquid Rad tests –Liquids or Solids.

Condition/Variance (Circle "Y for yes, "N" for no and "N/A" for not applicable):

1.	(Y) N	Sample received in undamaged condition?	7.	(Y) N	Sample received with Chain of Custody?
2.	Y N (N/A)	Sample received with proper pH[1]? (N/A for soil samples) If NO: sample ID____ Preservative____ Lot____ Date____ Time____ Sticker applied Y/N	8.	(Y) N	Chain of Custody matches sample IDs on container(s)?
3.	Y N	If N/A-Was pH taken by original STL Lab?	9.	Y N (N/A)	Custody seal received intact?
4.	(Y) N	Sample received in proper containers?	10.	Y N (N/A)	Custody seal tamper evident?
5.	(Y) N	Sample volume sufficient for analysis?	11.	Y N (N/A)	Custody seal on bottles intact?
6.	Y N (N/A)	Headspace in VOA or TOX liquid samples? (If yes, note sample ID's below)	12.	Y N (N/A)	Custody seal tamper evident?
[1] For DOE-AL (Pantex, LANL, Sandia) sites, verify pH of all containers received, EXCEPT VOA, TOX, and soils.			13.	Y N (N/A)	Was Internal COC/CUR rec'd?

Notes:

PM Notified of Short Hold samples: Y N PM Initials:

Corrective Action:

☐ Client's Name: ____ Informed by: ____ By: ____

☐ Sample(s) processed "as is". ____

☐ Sample(s) on hold until: ____ If released, notify: ____

Project Management Review: [illegible] Date: 12-12-05

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 10/06/05
\\Slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev9.doc

Appendix B

Beryllium Air Monitoring Results- Radiological Scoping Survey
January 2006

Ohio Metals
MACTEC (ODMAX)
Work Order 154434
SDG 154434

Method/Analysis Information

Procedure:	**ICP Analysis according to EPA Method 6010B**
Analytical Method:	NIOSH 7300 (ICP)
Prep Method:	NIOSH 7300 Prep
Analytical Batch Number:	498113
Prep Batch Number:	498108

Sample Analysis

The following samples were analyzed using the analytical protocol as established in NIOSH 7300 (ICP):

Sample ID	Client ID
154434001	W1
154434002	W2
154434003	W3
154434004	W4
154434005	T1
154434006	T2
154434007	T3
154434008	T4
154434009	Field Blank
1201021364	Method Blank (MB)
1201021365	Laboratory Control Sample (LCS)
1201021366	Laboratory Control Sample Duplicate (LCSD)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories of Ohio, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with INORG1 REV# 13.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories of Ohio, LLC and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Metals: ICP analysis was performed on a Thermo Jarrell-Ash Enviro I ICAP 61E.

1. Instrument Calibration : Passed

2. ICSA/ICSAB : Passed

Quality Control (QC) Information

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

3. Sample Dilutions : None

Miscellaneous Information

4. Nonconformance Documentation : An NCR was not generated for this SDG.

Review Validation:

Level 1 Initial ___ Date 1/30/06

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: WI
Sample ID: 154434001
Matrix: Air
Collect Date: 18-JAN-06 15:01
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00867	0.0173	ug/m3	1	KT	01/30/06	0905	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U Indicates the target analyte was analyzed for but not detected above the MDL.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with GEL Laboratories of Ohio, LLC standard operating procedures. Please direct any questions to your Project Manager, Erik Corbin.

Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID:	W2	Project:	ODMA00104
Sample ID:	154434002	Client ID:	ODMAX001
Matrix:	Air		
Collect Date:	18-JAN-06 15:06	Client Desc.:	
Receive Date:	23-JAN-06		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00854	0.0171	ug/m3	1	KT	01/30/06	0909	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- H Analytical holding time exceeded.
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
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- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: W3
Sample ID: 154434003
Matrix: Air
Collect Date: 18-JAN-06 15:05
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00861	0.0172	ug/m3	1	KT	01/30/06	0913	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- > Result is greater than amount reported.
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: W4
Sample ID: 154434004
Matrix: Air
Collect Date: 18-JAN-06 15:02
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00877	0.0175	ug/m3	1	KT	01/30/06	0924	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T1
Sample ID: 154434005
Matrix: Air
Collect Date: 19-JAN-06 14:59
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00856	0.0171	ug/m3	1	KT	01/30/06	0928	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U Indicates the target analyte was analyzed for but not detected above the MDL.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T2
Sample ID: 154434006
Matrix: Air
Collect Date: 19-JAN-06 15:06
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00865	0.0173	ug/m3	1	KT	01/30/06	0932	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
The Qualifiers in this report are defined as follows :

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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T3
Sample ID: 154434007
Matrix: Air
Collect Date: 19-JAN-06 15:01
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00857	0.0171	ug/m3	1	KT	01/30/06	0936	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U *Indicates the target analyte was analyzed for but not detected above the MDL.*
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID:	T4	Project:	ODMA00104
Sample ID:	154434008	Client ID:	ODMAX001
Matrix:	Air		
Collect Date:	19-JAN-06 15:07	Client Desc.:	
Receive Date:	23-JAN-06		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00855	0.0171	ug/m3	1	KT	01/30/06	0940	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	*NIOSH 7300 Prep for Filters/Tubes/Swipes m3*	*ASD*	*01/27/06*	*0841*	*498108*

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
The Qualifiers in this report are defined as follows :

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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: Field Blank
Sample ID: 154434009
Matrix: Air
Collect Date: 19-JAN-06 00:00
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.010	0.020	ug/Filter	1	KT	01/30/06	0944	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	*NIOSH 7300 Prep for Filters/Tubes/Swipes*	*ASD*	*01/27/06*	*0841*	*498108*

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
The Qualifiers in this report are defined as follows :

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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U Indicates the target analyte was analyzed for but not detected above the MDL.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h *Sample preparation or preservation holding time exceeded.*

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road, Suite 300 Cincinnati, OH 45242 - Phone (513) 489-2001

QC Summary

Report Date: January 30, 2006

MACTEC (de maximis)
2229 Main Street
Concord, Massachusetts

Contact: Heath Downey

Workorder: 154434

Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals: ICP											
Batch 498113											
QC1201021365	LCS										
Beryllium		5000			4890	ng/Filter		98	(70%-130%)	KT	01/30/06 08:58
QC1201021366	LCSD										
Beryllium		5000			4710	ng/Filter	4	94	(0%-20%)		01/30/06 09:01
QC1201021364	MB										
Beryllium				U	ND	ng/Filter					01/30/06 08:54

Notes:
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Appendix C

Air Monitoring Results – Radiological Scoping Survey
January 2006

Ohio Metals
MACTEC (ODMAX)
Work Order 154434
SDG 154434

Method/Analysis Information

Procedure:	**ICP Analysis according to EPA Method 6010B**
Analytical Method:	NIOSH 7300 (ICP)
Prep Method:	NIOSH 7300 Prep
Analytical Batch Number:	498113
Prep Batch Number:	498108

Sample Analysis

The following samples were analyzed using the analytical protocol as established in NIOSH 7300 (ICP):

Sample ID	Client ID
154434001	W1
154434002	W2
154434003	W3
154434004	W4
154434005	T1
154434006	T2
154434007	T3
154434008	T4
154434009	Field Blank
1201021364	Method Blank (MB)
1201021365	Laboratory Control Sample (LCS)
1201021366	Laboratory Control Sample Duplicate (LCSD)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories of Ohio, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with INORG1 REV# 13.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories of Ohio, LLC and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Metals: ICP analysis was performed on a Thermo Jarrell-Ash Enviro I ICAP 61E.

1. Instrument Calibration : Passed

2. ICSA/ICSAB : Passed

Quality Control (QC) Information

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

3. Sample Dilutions : None

Miscellaneous Information

4. Nonconformance Documentation : An NCR was not generated for this SDG.

Review Validation:

Level 1 Initial ___ Date 1/30/06

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: **Nuclear Metals**

Client Sample ID:	W1	Project:	ODMA00104
Sample ID:	154434001	Client ID:	ODMAX001
Matrix:	Air		
Collect Date:	18-JAN-06 15:01	Client Desc.:	
Receive Date:	23-JAN-06		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00867	0.0173	ug/m3	1	KT	01/30/06	0905	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: **Nuclear Metals**

Client Sample ID: W2
Sample ID: 154434002
Matrix: Air
Collect Date: 18-JAN-06 15:06
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00854	0.0171	ug/m3	1	KT	01/30/06	0909	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (dc maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: **Nuclear Metals**

Client Sample ID:	W3	Project:	ODMA00104
Sample ID:	154434003	Client ID:	ODMAX001
Matrix:	Air		
Collect Date:	18-JAN-06 15:05	Client Desc.:	
Receive Date:	23-JAN-06		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00861	0.0172	ug/m3	1	KT	01/30/06	0913	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: W4
Sample ID: 154434004
Matrix: Air
Collect Date: 18-JAN-06 15:02
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00877	0.0175	ug/m3	1	KT	01/30/06	0924	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T1
Sample ID: 154434005
Matrix: Air
Collect Date: 19-JAN-06 14:59
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00856	0.0171	ug/m3	1	KT	01/30/06	0928	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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- h Sample preparation or preservation holding time exceeded.

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6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T2
Sample ID: 154434006
Matrix: Air
Collect Date: 19-JAN-06 15:06
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00865	0.0173	ug/m3	1	KT	01/30/06	0932	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: T3
Sample ID: 154434007
Matrix: Air
Collect Date: 19-JAN-06 15:01
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	*U*	*ND*	*0.00857*	*0.0171*	*ug/m3*	*1*	*KT*	*01/30/06*	*0936*	*498113*	*1*

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID:	T4	Project:	ODMA00104
Sample ID:	154434008	Client ID:	ODMAX001
Matrix:	Air		
Collect Date:	19-JAN-06 15:07	Client Desc.:	
Receive Date:	23-JAN-06		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.00855	0.0171	ug/m3	1	KT	01/30/06	0940	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes m3	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

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Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road Suite 300 Cincinnati OH 45242 - (513) 489-2001

Certificate of Analysis

Company : MACTEC (de maximis)
Address : 2229 Main Street
Concord, Massachusetts 01742

Report Date: January 30, 2006

Contact: Heath Downey
Project: Nuclear Metals

Client Sample ID: Field Blank
Sample ID: 154434009
Matrix: Air
Collect Date: 19-JAN-06 00:00
Receive Date: 23-JAN-06
Collector: Client

Project: ODMA00104
Client ID: ODMAX001

Client Desc.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
ICP Analysis											
NIOSH 7300 Metals in Air											
Beryllium	U	ND	0.010	0.020	ug/Filter	1	KT	01/30/06	0944	498113	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
NIOSH 7300 Prep	NIOSH 7300 Prep for Filters/Tubes/Swipes	ASD	01/27/06	0841	498108

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	NIOSH 7300 (ICP)	

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U Indicates the target analyte was analyzed for but not detected above the MDL.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with GEL Laboratories of Ohio, LLC standard operating procedures. Please direct any questions to your Project Manager, Erik Corbin.

Reviewed by

GEL LABORATORIES OF OHIO, LLC

6954 Cornell Road, Suite 300 Cincinnati, OH 45242 - Phone (513) 489-2001

QC Summary

Report Date: January 30, 2006
Page 1 of 1

MACTEC (de maximis)
2229 Main Street
Concord, Massachusetts

Contact: Heath Downey

Workorder: 154434

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals: ICP										
Batch 498113										
QC1201021365 LCS										
Beryllium	5000			4890	ng/Filter		98	(70%-130%)	KT	01/30/06 08:58
QC1201021366 LCSD										
Beryllium	5000			4710	ng/Filter	4	94	(0%-20%)		01/30/06 09:01
QC1201021364 MB										
Beryllium			U	ND	ng/Filter					01/30/06 08:54

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J The result was greater than the MDL, but less than the RL and is an estimated value. Values below a CRDL are also flagged.
- U Indicates the target analyte was analyzed for but not detected above the MDL.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your Project Manager for details.
- d the 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Appendix D

Individual Room Results – Radiological Scoping Survey
January 2006

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-01 Page 1 of 1

Smear Results

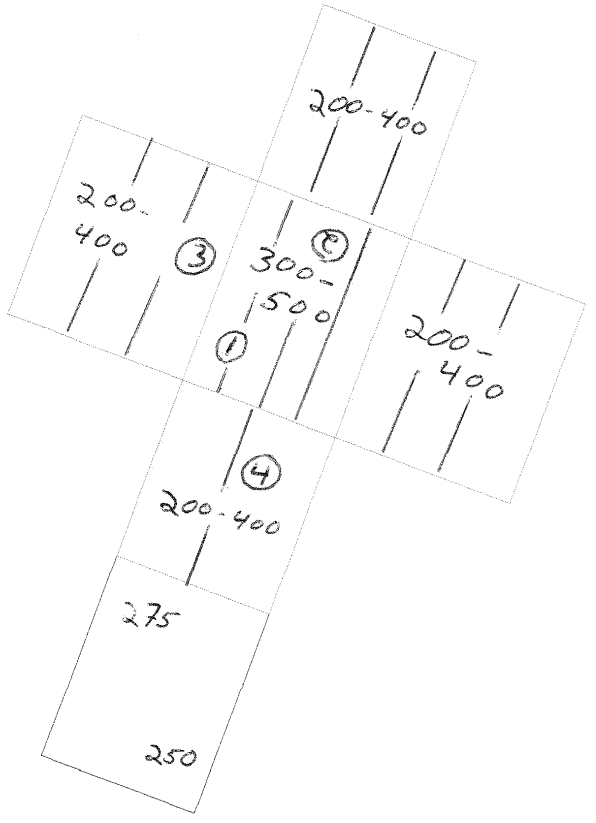
~~DPM/100 cm²~~ CPM

No.	α	β	No.	α	β
1	6	39	26		
2	0	31	27		
3	1	21	28		
4	0	33	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

50% floor Scan
20% Wall Scan
Spot scan of ceiling area
All Readings in Gross CPM

Room A-115



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	**Date**
HD	1/30/06

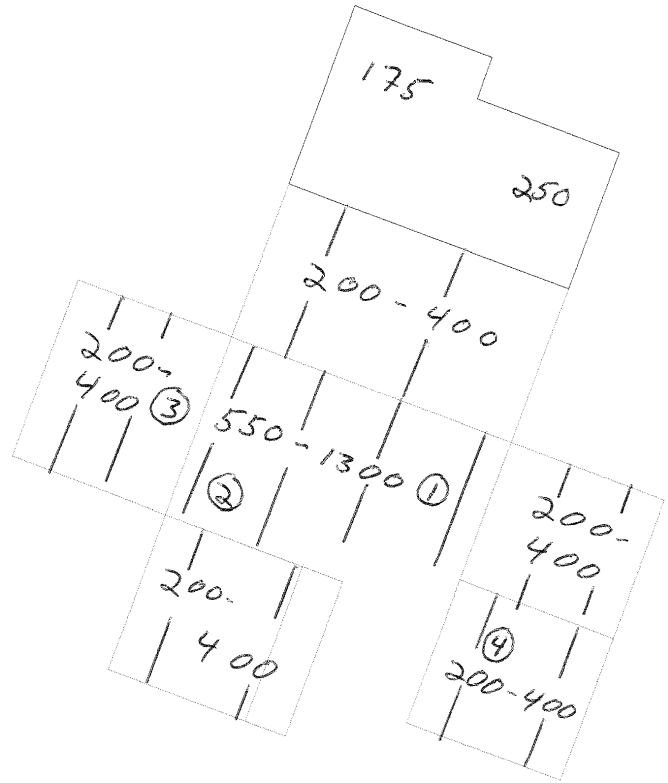
Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-02 Page 1 of 1

Room A-117



Smear Results					
~~DPM/100 cm²~~ CPM					
No.	α	β	No.	α	β
1	3	31	26		
2	3	55	27		
3	0	33	28		
4	0	33	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All reading in Gross CPM
50% Floor Scan
20% Wall Scan
Spot scan of Ceilling area

Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06								Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-03 Page 1 of 1

Smear Results

(JT) ~~DPM/100 cm²~~ CPM

No.	α	β	No.	α	β
1	3	37	26		
2	0	24	27		
3	0	24	28		
4	1	45	29		
5	1	33	30		
6	0	48	31		
7	0	30	32		
8	1	39	33		
9	1	33	34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

N/a

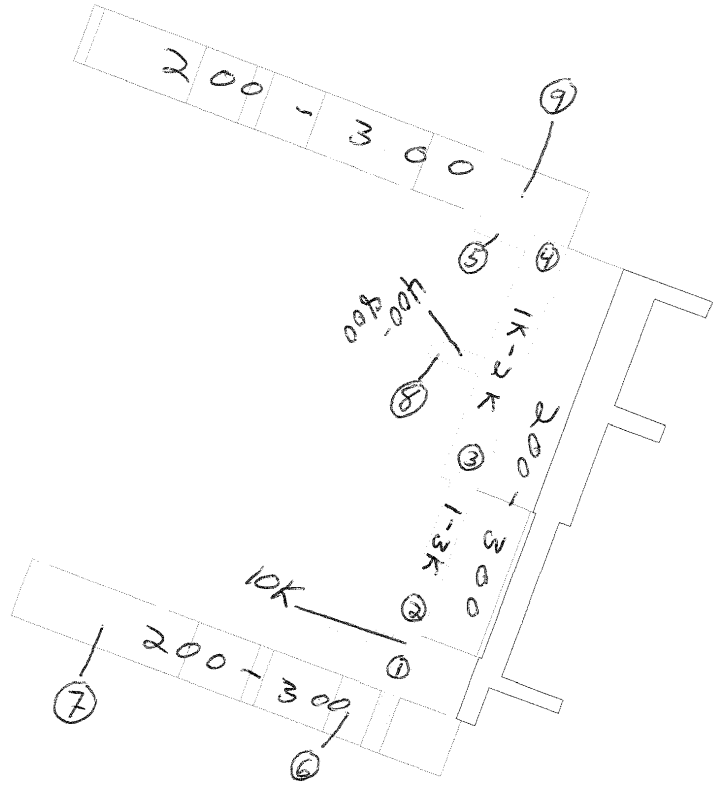
Comments

All readings in Gross CPM

50% Floor Scan

20% Wall Scan

Room A-118



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

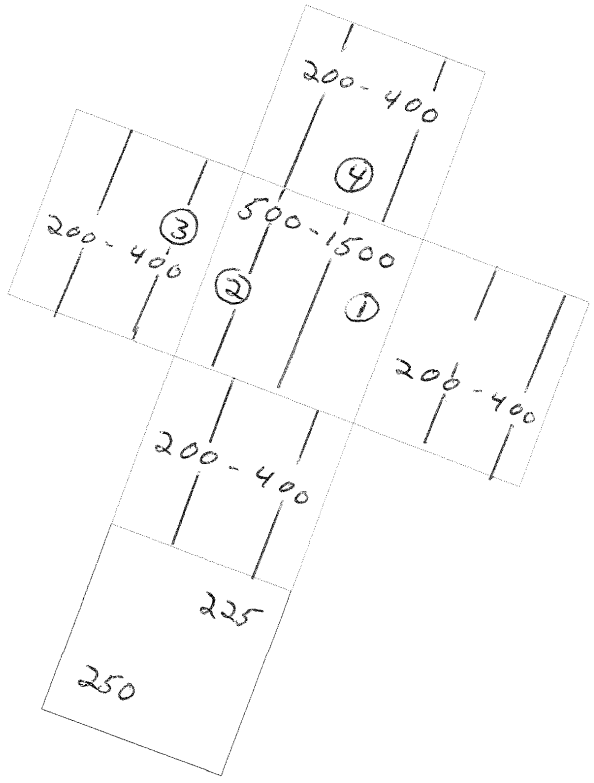
Survey Number: 011806 - 04 Page 1 of 1

Smear Results

(JT) ~~DPM/100 cm²~~ CPM

No.	α	β	No.	α	β
1	1	27	26		
2	1	37	27	N/a	
3	9	24	28		
4	1	48	29		
5			30		
6	N/a		31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A-128



Comments

All readings in Gross CPM

50% Floor Scan

20% Wall Scan

Spot scan of ceilling area

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HID	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

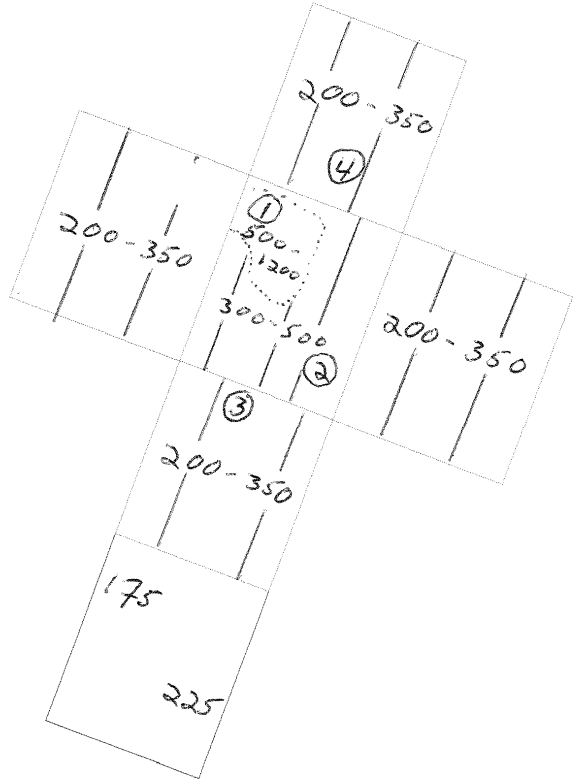
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-05 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (5T)					
No.	α	β	No.	α	β
1	0	39	26		
2	0	33	27		
3	0	45	28		
4	1	43	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A-130



Comments

All readings in Gross CPM

50% Floor Scan
20% Wall Scan
Spot scan of ceilling area

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-06 Page _____ of _____

Smear Results

~~DPM/100 cm²~~ CPM

No.	α	β	No.	α	β
1	1	55	26		
2	3	60	27		
3	1	42	28		
4	7	57	29	Na	
5	3	43	30		
6	0	24	31		
7			32		
8			33		
9	Na		34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

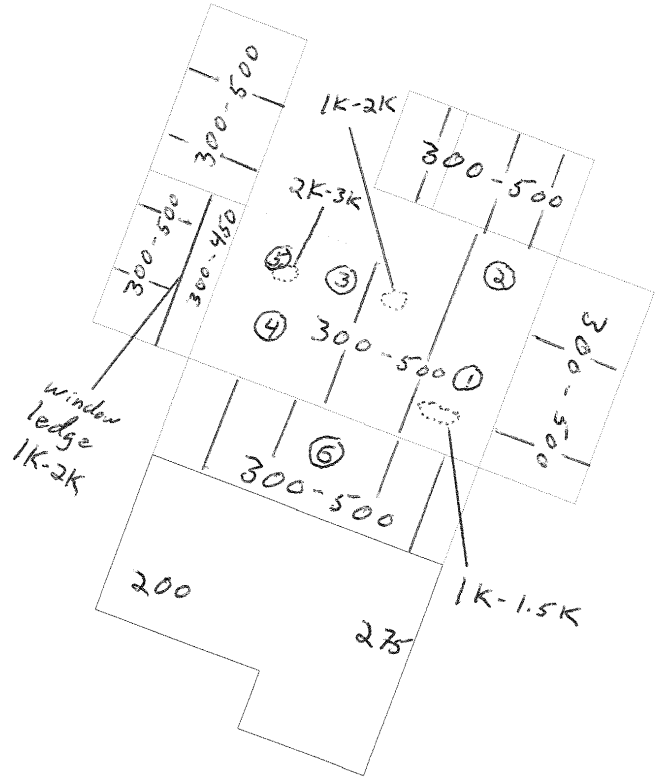
All readings in Gross CPM

60% Floor Scan

20% Wall Scan

Spot scan of ceilling area

Room A-134



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	**Date**
HTD	1/25/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-07 Page 1 of 1

Smear Results					
~~DPM~~ CPM/100 cm²					
No.	α	β	No.	α	β
1	1	39	26	N/a	
2	0	54	27		
3	0	37	28		
4	0	48	29		
5	N/a		30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

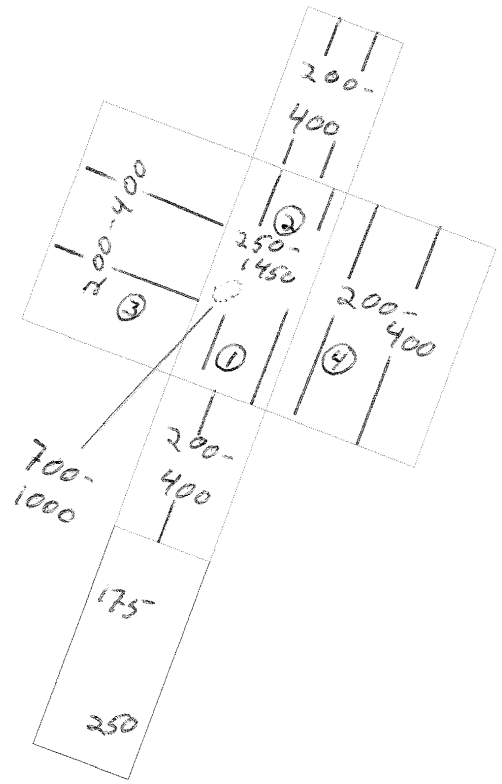
All Reading in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan Ceilling area

Room A-145A



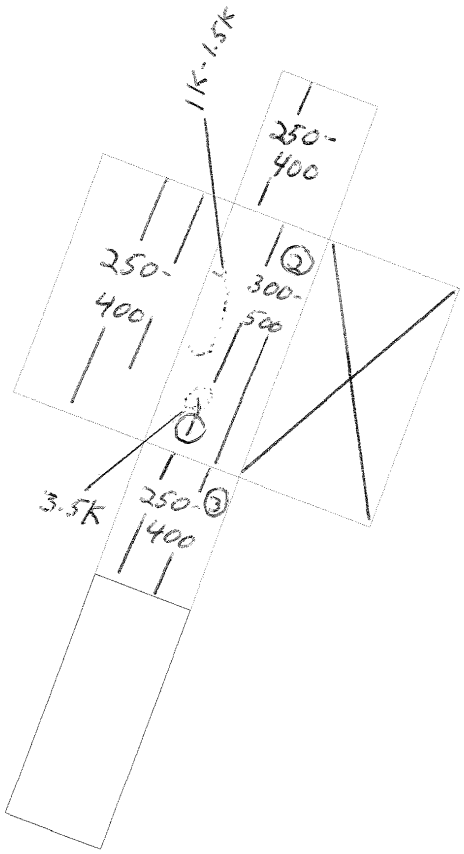
Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06								Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-08 Page 1 of 1

Room A-156



Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	0	55	26		
2	3	49	27	N/a	
3	0	45	28		
4	N/a		29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All Readings in Gross CPM

50% Floor Scan

20% wall Scan

Surveyed By: Jeff Tweeddale Date: 1/18/06

Reviewed By: HTD Date: 1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-09 Page 1 of 1

Smear Results					
CPM	~~DPM/100 cm²~~ JT				
No.	α	β	No.	α	β
1	0	25	26		
2	N/a		27	N/a	
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

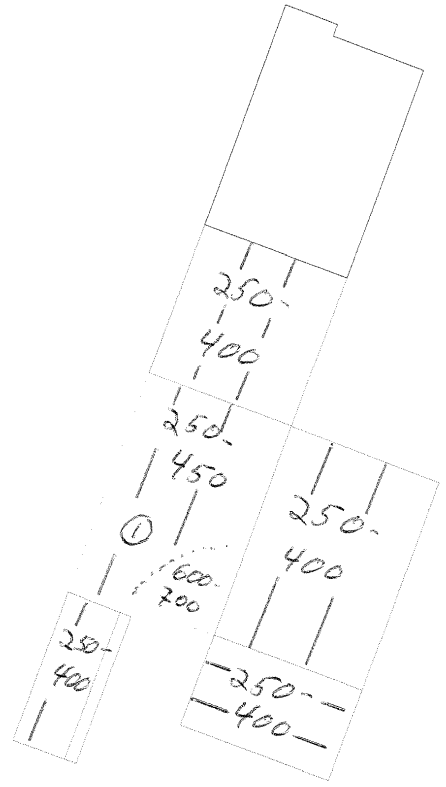
Comments

All Readings in Gross CPM

50% Floor Scan

20% Wall Scan

Room A-160



Surveyed By	Date
Jeff Tweddale	1/18/06
Reviewed By	**Date**
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-10 Page 1 of 1

Room A-145

Smear Results					
CPM ~~DPM/100 cm²~~ (JT)					
No.	α	β	No.	α	β
1	3	54	26		
2	3	61	27	N/a	
3	7	75	28		
4	1	39	29		
5	N/a		30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

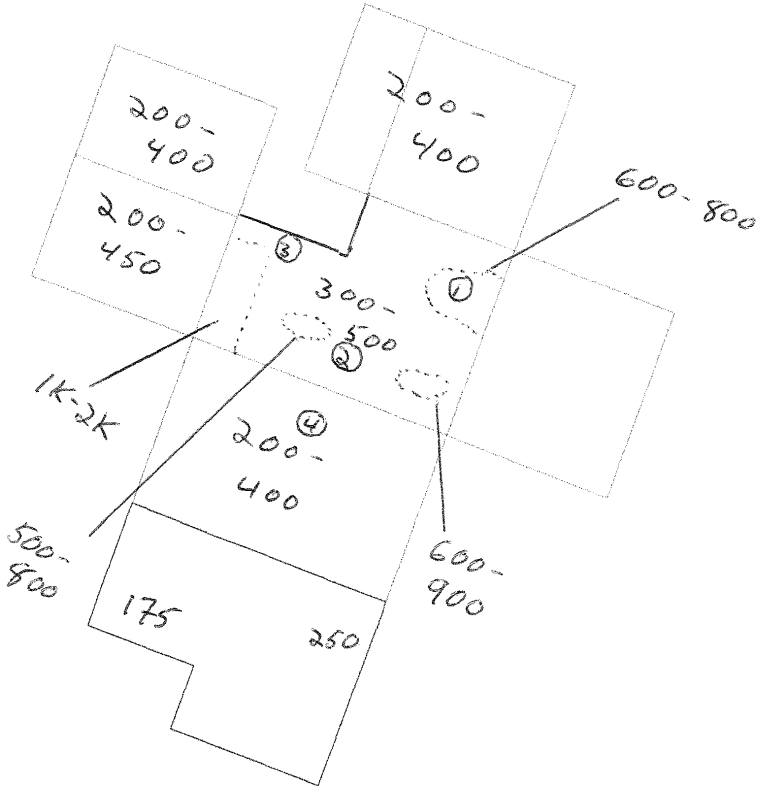
Comments

All Reading in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan of Ceilling Area



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff		E-600	00459					10/05/06	O - Smear # & Location
Tweeddale	1/18/06	SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HMD	1/30/06								Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-11 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	3	36	26		
2	0	37	27		
3	0	43	28		
4	1	27	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

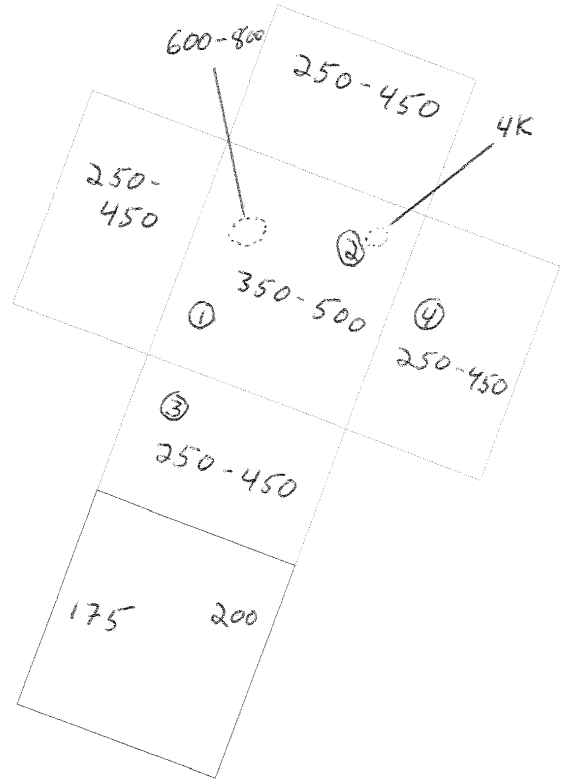
All readings in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan of Ceiling Area

Room A-215C



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

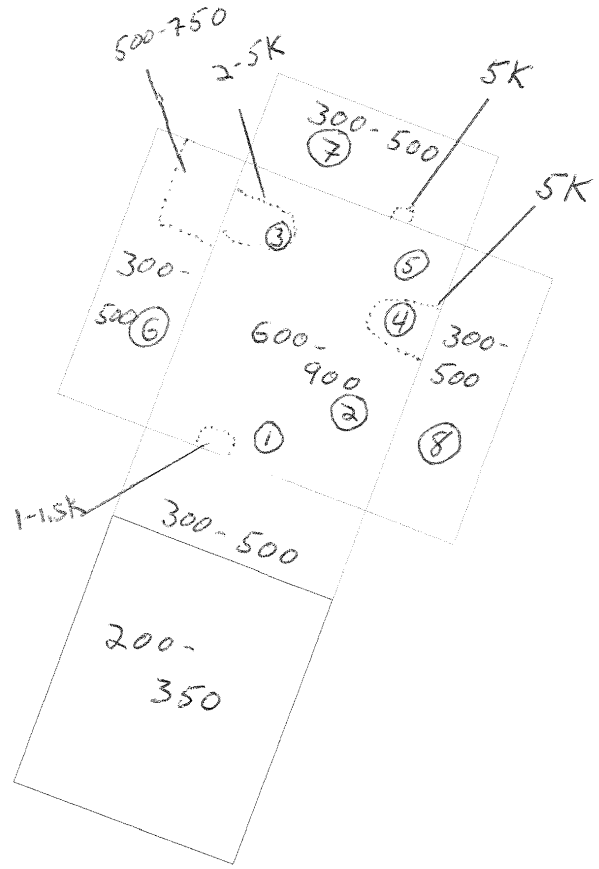
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-12 Page 1 of 1

Room A-216

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	0	42	26		
2	1	39	27		
3	3	49	28		
4	0	30	29		
5	0	45	30		
6	1	43	31		
7	0	27	32		
8	1	43	33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		



Comments

50% Floor Scan
20% Wall Scan
Spot Scan of
Ceilling Area
All readings in Gross CPM

Surveyed By	Date
Jeff Tweddale	1/18/06
Reviewed By	Date
HD	1/20/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

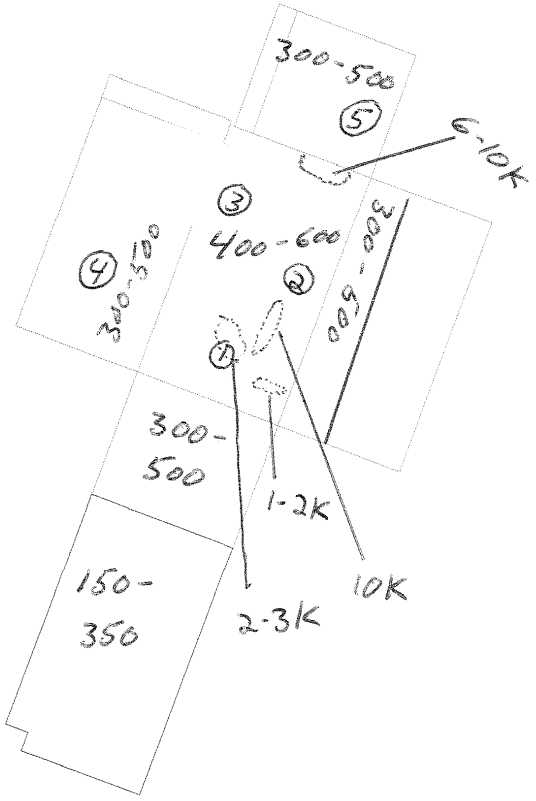
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-13 Page 1 of 1

Room A-220

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	42	26		
2	1	51	27		
3	0	54	28		
4	6	36	29		
5	12	49	30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		



Comments

All readings in Gross CPM

50% Floor Scan
20% Wall Scan
Spot Scan of Ceilling Area

Surveyed By: Jeff Tweeddale Date: 1/18/06

Reviewed By: HD Date: 1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

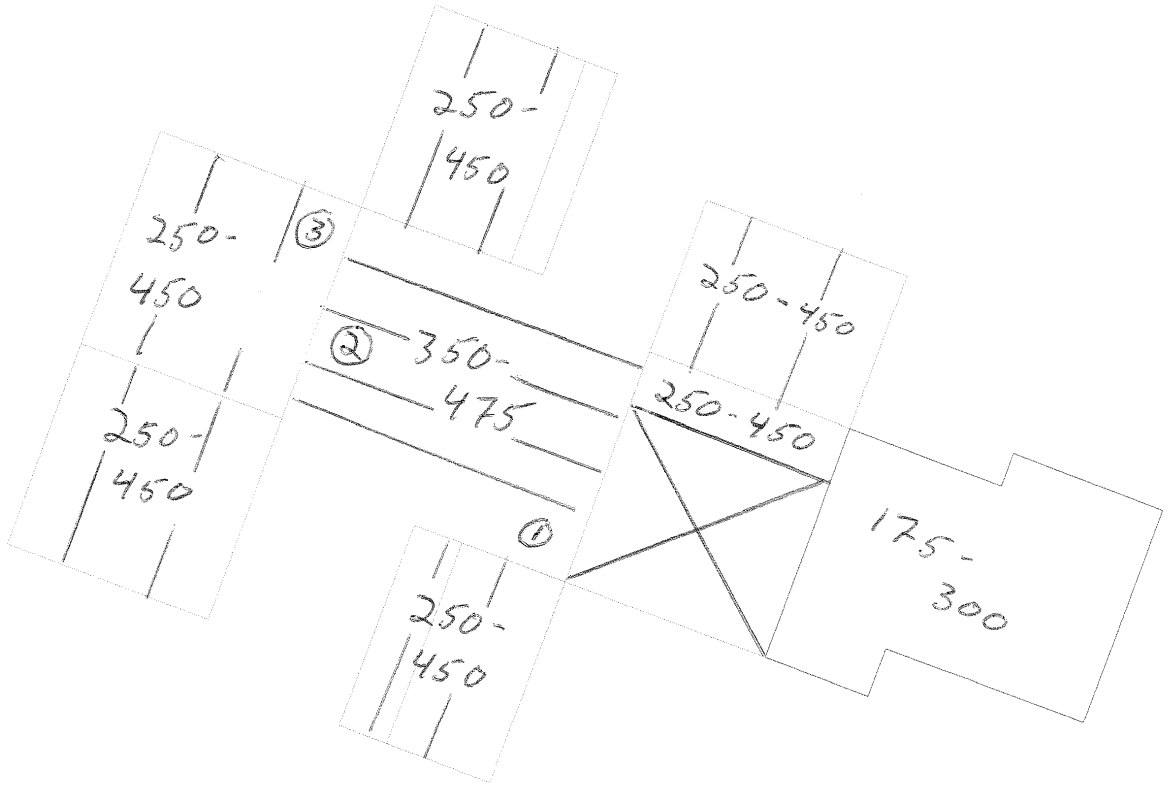
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-14 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	25	26		
2	0	37	27		
3	0	36	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A-223



Comments

All readings in Gross CPM
50% Floor Scan
20% Wall Scan
Spot Scan of Ceiling area

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HTP	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

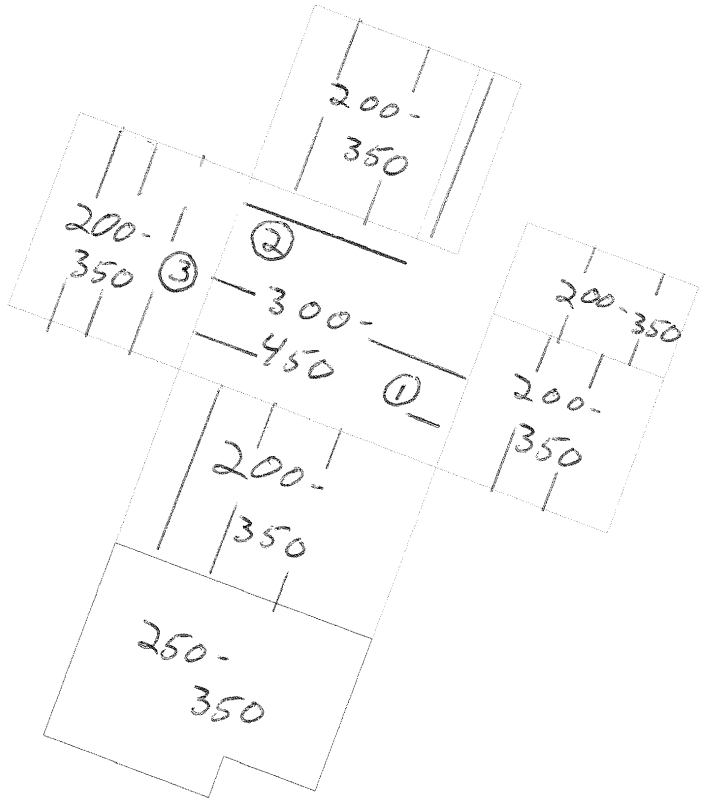
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-15 Page 1 of 1

Smear Results					
CPM	~~DPM/100 cm²~~				
No.	α	β	No.	α	β
1	0	33	26		
2	1	43	27		
3	0	27	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A-224



Comments

All readings in Gross CPM

50% Floor Scan
20% Wall Scan
Spot Scan of Ceilling area

Surveyed By	Date
Jeff Tweedlale	1/18/06
Reviewed By	Date
HTP	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-16 Page 1 of 1

Smear Results

CPM ~~DPM/100 cm²~~ (JT)

No.	α	β	No.	α	β
1	0	31	26		
2	3	57	27		
3	3	60	28		
4	0	30	29		
5	1	43	30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

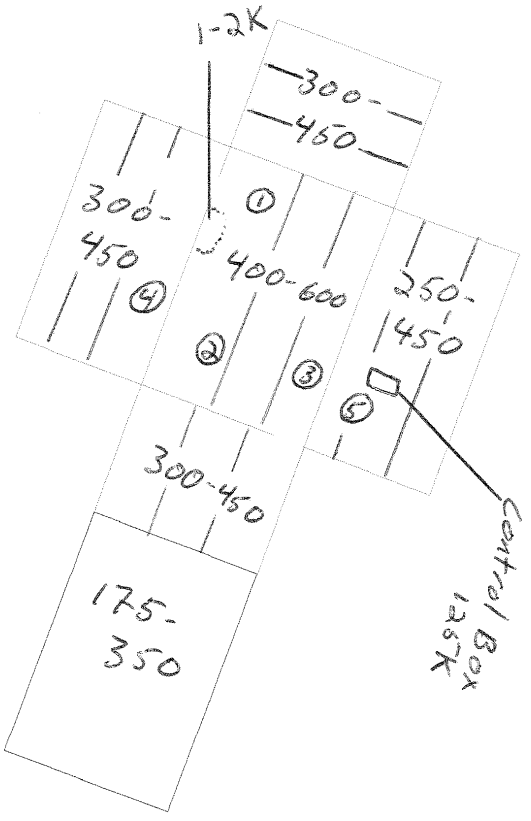
All Readings in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan of Ceilling area

Room A-224A



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-17 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (JT)					
No.	α	β	No.	α	β
1	0	39	26		
2	1	36	27		
3	0	36	28		
4	0	39	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

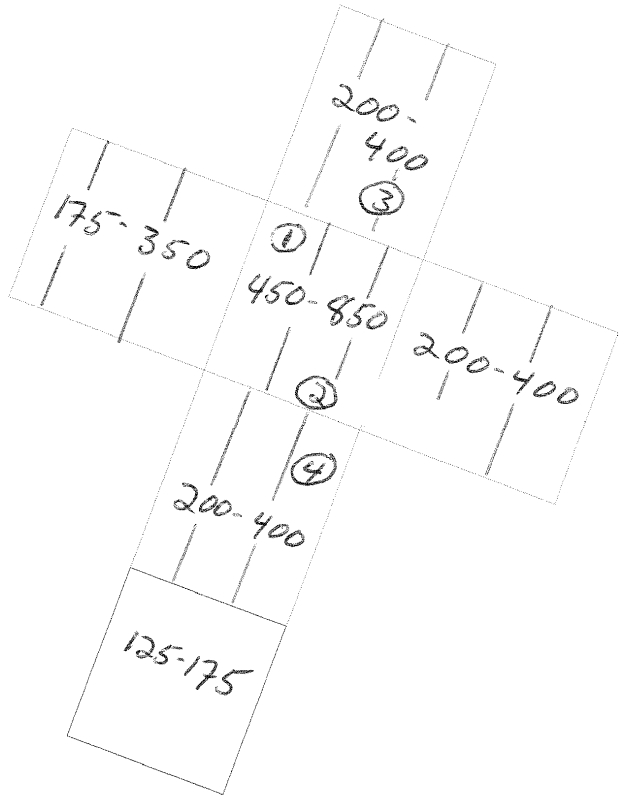
All readings in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan on Ceilling Area

Room A-234



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06								Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-18 Page 1 of 1

Smear Results

CPM ~~DPM/100 cm²~~ (JT)

No.	α	β	No.	α	β
1	3	84	26		
2	0	33	27		
3	3	30	28		
4	1	45	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

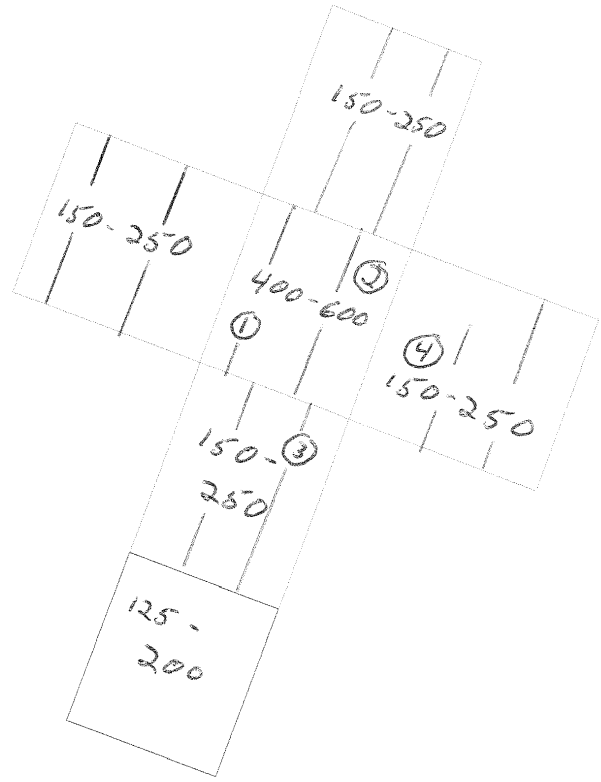
All Readings in Gross CPM

50% Floor Scan

20% Wall Scan

Spot Scan of Ceilling Area

Room A-235



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HD	1/20/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

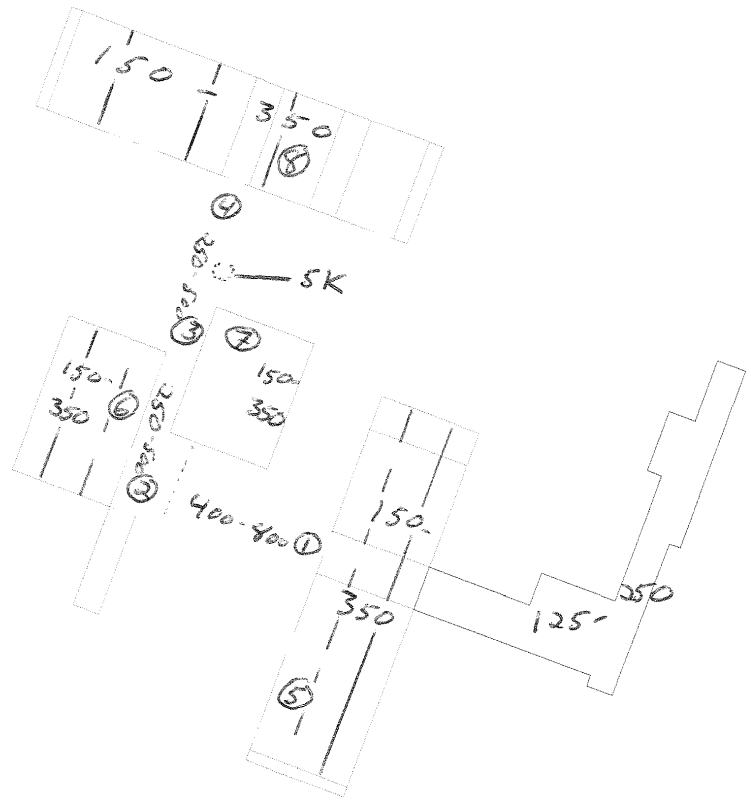
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-19 Page 1 of 1

Room A-241C

Smear Results					
CPM	~~DPM/100 cm²~~ JT				
No.	α	β	No.	α	β
1	0	48	26		
2	3	49	27		
3	1	42	28		
4	1	42	29		
5	1	49	30		
6	1	43	31		
7	1	19	32		
8	1	37	33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		



Comments

All Readings in Gross CPM
50% Floor Scan
20% Wall Scan
Spot Scan of Ceilling area

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	**Date**
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-20 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (5)					
No.	α	β	No.	α	β
1	0	39	26		
2	0	33	27		
3	1	51	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

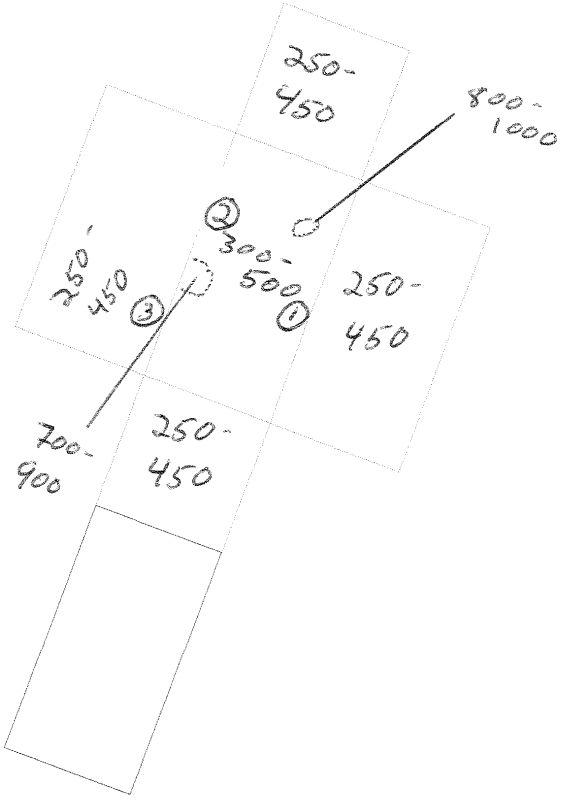
Comments

All readings in Gross CPM

50% Floor Scan

20% Wall Scan

Room A-225



Surveyed By	Date
Jeff Tweddale	1/18/06
Reviewed By	**Date**
HTP	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-21 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (ST)					
No.	α	β	No.	α	β
1	0	60	26		
2	3	49	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

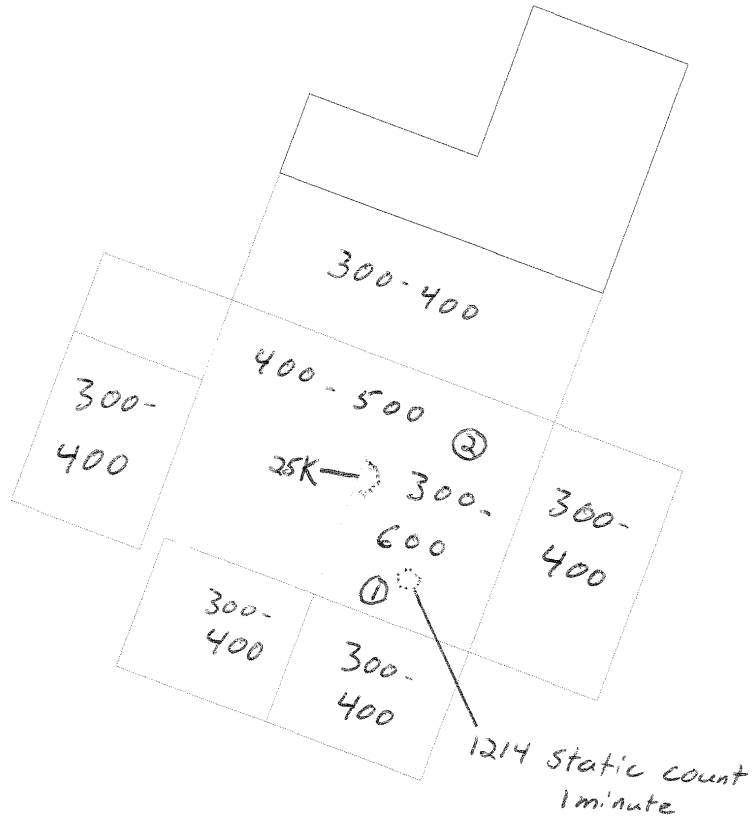
All readings in Gross CPM

~~50% Wall Scan~~ (JT)

20% Wall Scan

50% Floor Scan

Room A-246



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	**Date**
HD	1/20/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-22 Page 1 of 1

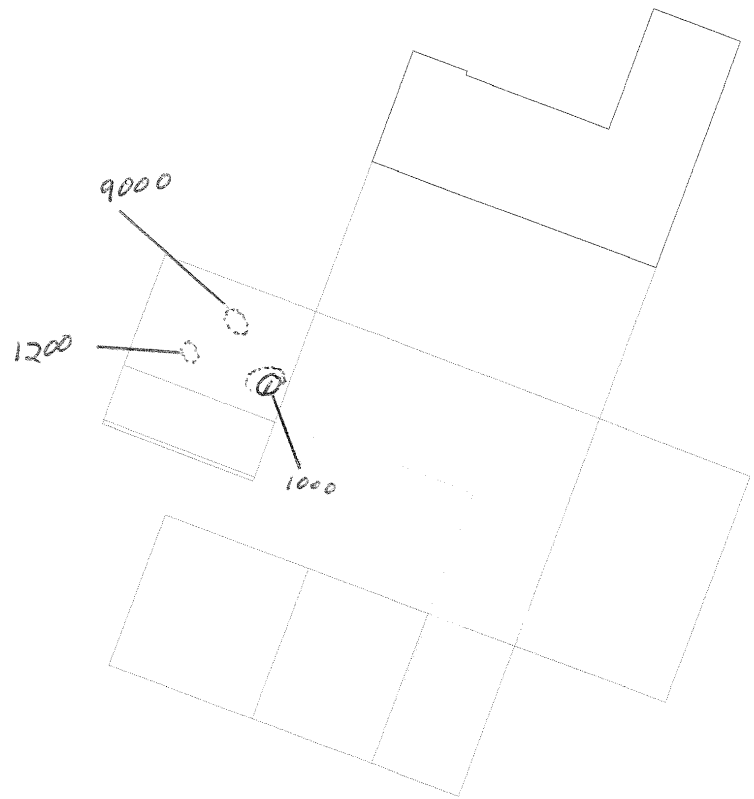
Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	0	21	26		
2			27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All reading in Gross CPM

25% Wall Scan

Room A-233



Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HMD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	7	168	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

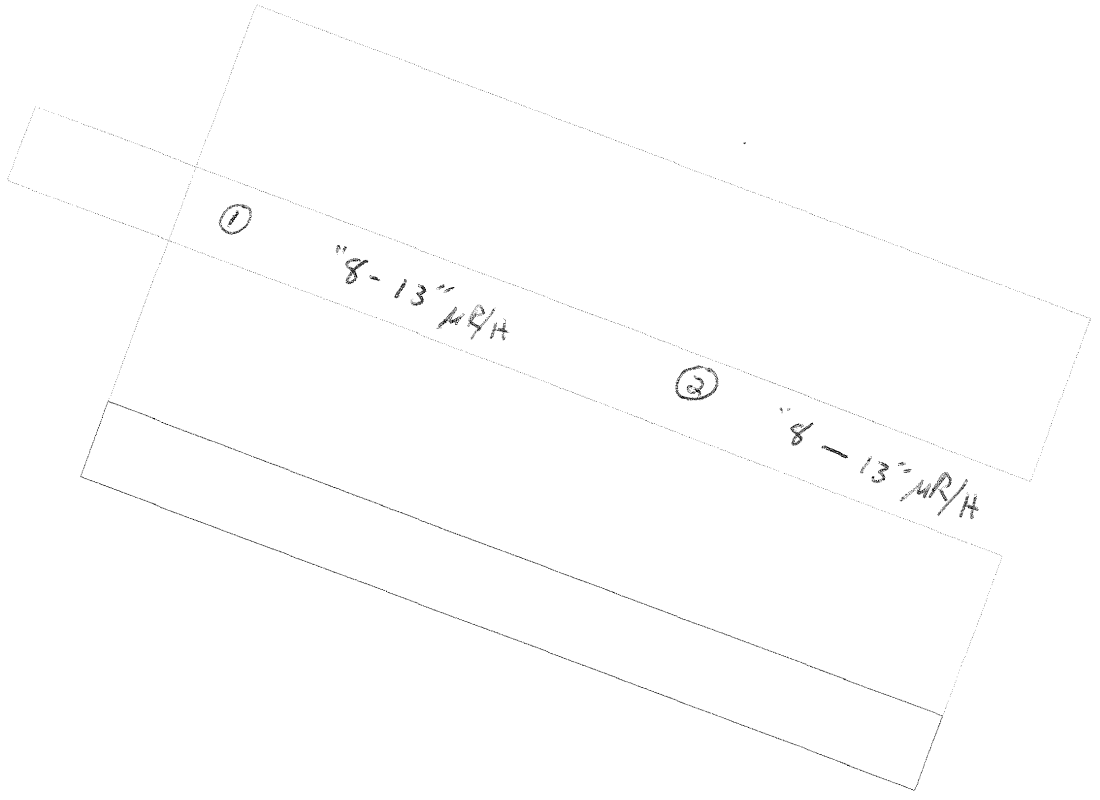
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-23 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	37	26		
2	0	43	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A2-Hall



Comments

Dose rates are in microR/h measured at 1m height.

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	**Date**
HD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
Bicron MicroRem	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

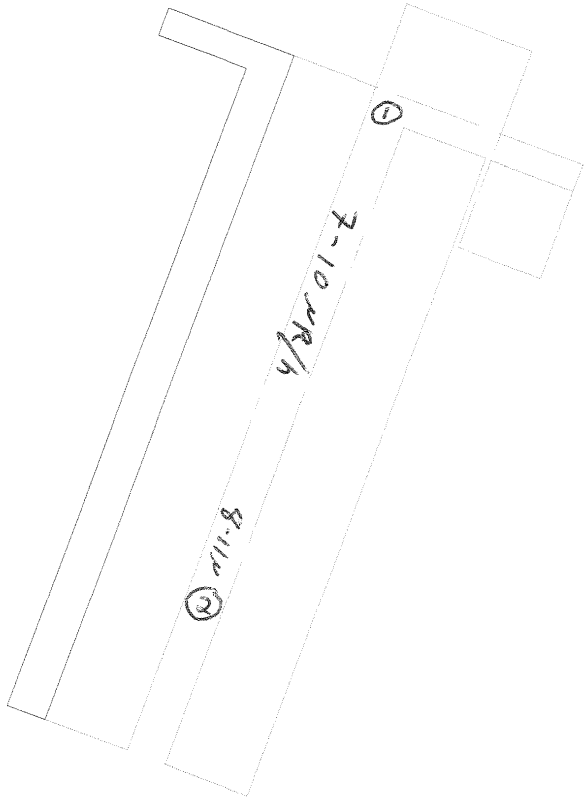
Survey Number: 011806-24 Page 1 of 1

Smear Results					
cpm ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	49	26		
2	1	43	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

Dose rates in μR/h measured at 1m

Room A2-Hall-North



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06	Bicron MICROREM	E019A				~~9~~ JT	9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

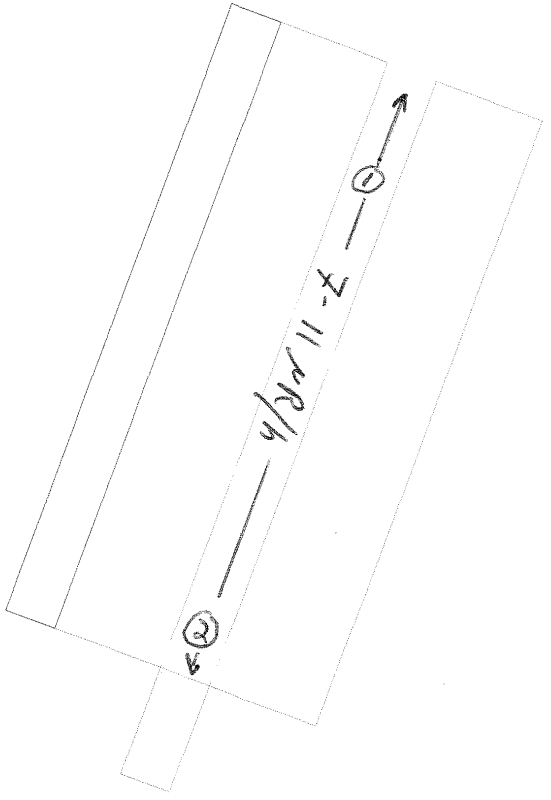
Survey Number: 011806-25 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (JT)					
No.	α	β	No.	α	β
1	6	33	26		
2	1	27	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

Dose rates in μR/h measured at 1m from floor

Room A2-Hall-South



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06	Bicron MUARM	E019A					9/19/06	Δ - Volumetric Sample

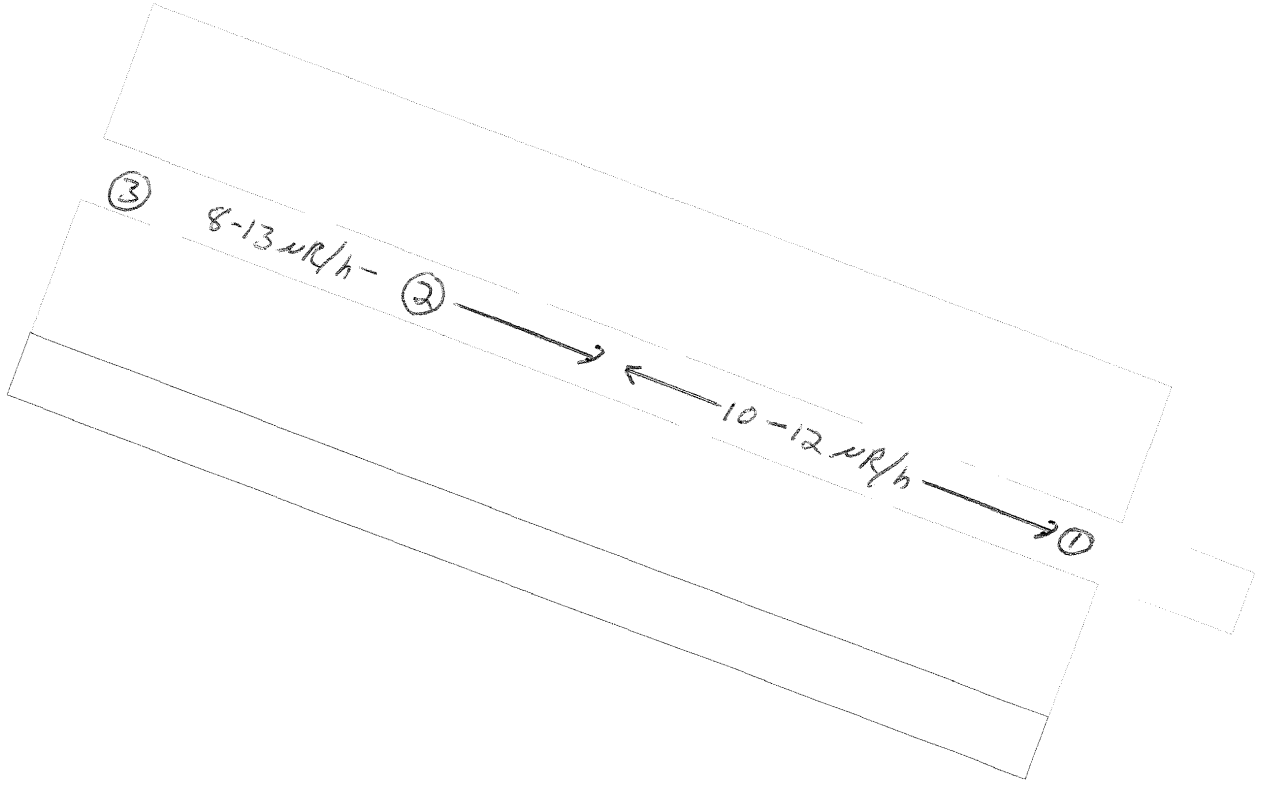
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-26 Page 1 of 1

Smear Results					
CPM	~~DPM/100 cm²~~ JT				
No.	α	β	No.	α	β
1	1	37	26		
2	0	60	27		
3	3	49	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room B2-Hall



Comments

Dose Rates in μR/h measured at 1m from floor

Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff		E-600	00459					10/05/06	O - Smear # & Location
Tweeddale	1/18/06	SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06	Bicron MILLIREM	E019A					9/19/06	Δ - Volumetric Sample

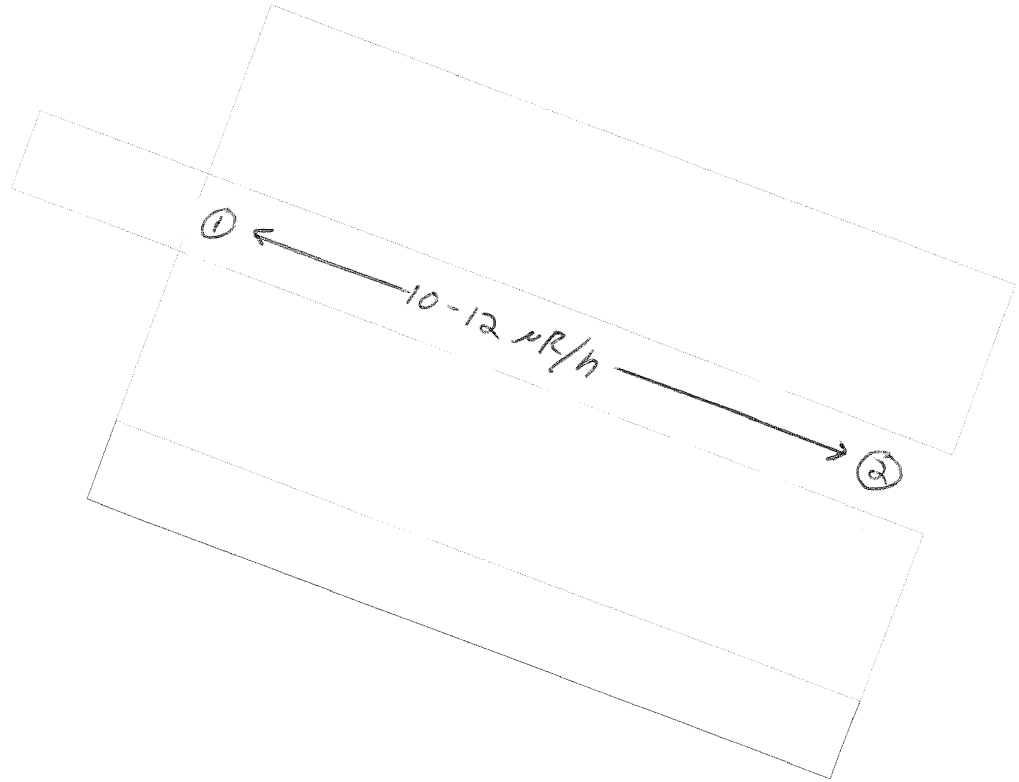
Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-27 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	48	26		
2	0	43	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Room A1-Hall



Comments

Dose rates in μR/h measured at 1m from floor

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HTD	1/3/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
Bicron MicroRem	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-28 Page 1 of 1

Smear Results

CPM ~~DPM/100 cm²~~ JT

No.	α	β	No.	α	β
1	0	51	26		
2	0	43	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
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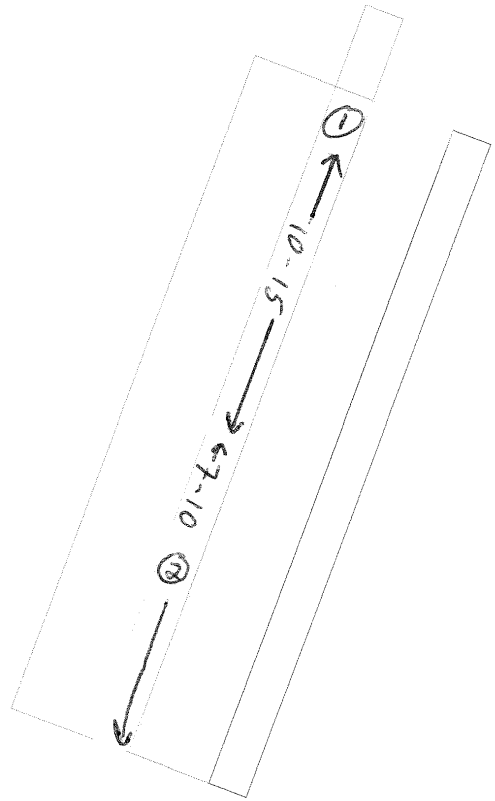
23			48		
24			49		
25			50		

Comments

Dose rates in uR/h measured at 1m from floor

Room A1-Hall-North



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HTD	1/30/06	Bicron Microrem	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806-29 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ (TT)					
No.	α	β	No.	α	β
1	3	27	26		
2	0	48	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
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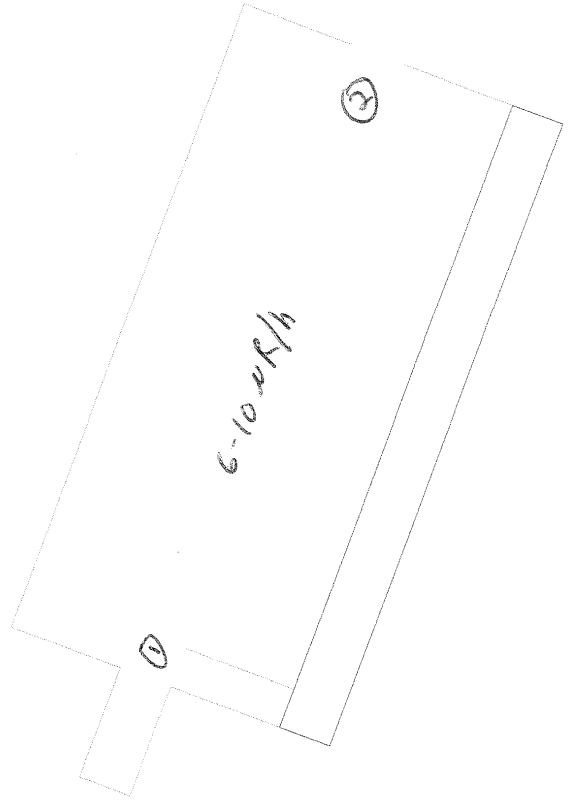
23			48		
24			49		
25			50		

Comments

Dose rate in μR/h measured at 1m from floor

Room A1-Hall-South



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/18/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
HD	1/30/06	Bicron Microrem	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011806 - 30 Page 1 of 1

Smear Results					
cpm ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	0	39	26		
2	6	45	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
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22			47		
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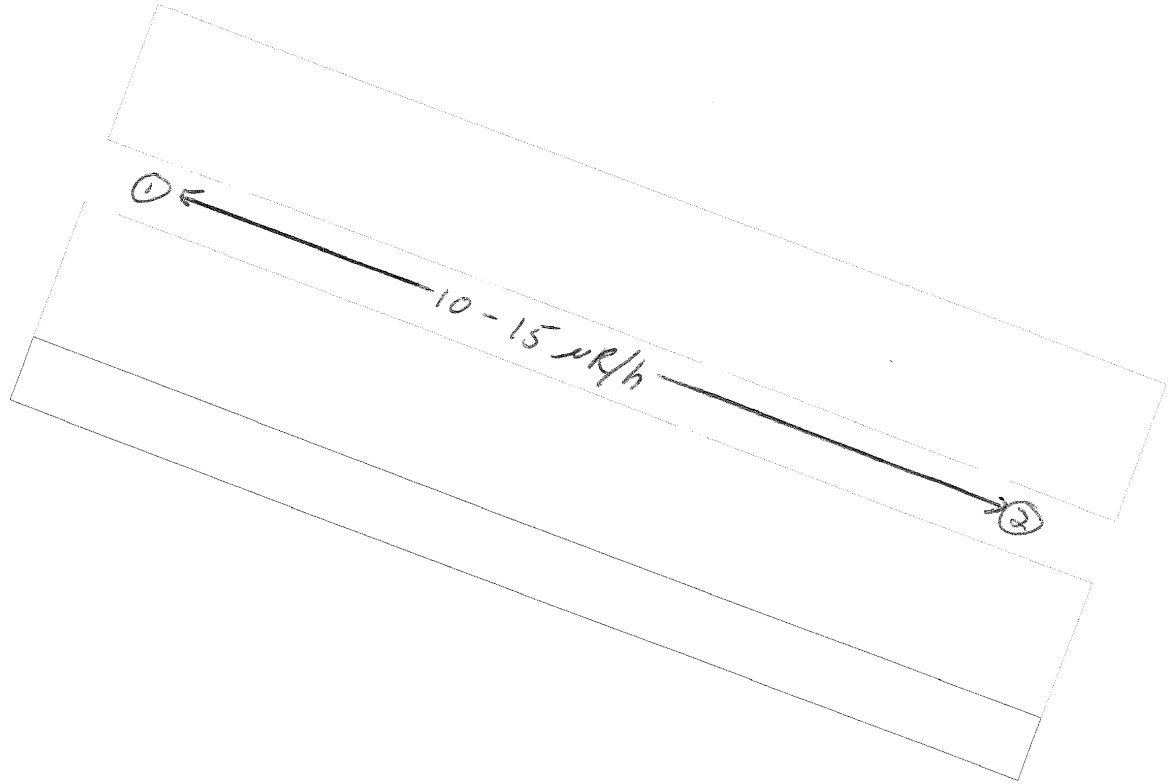
24			49		
25			50		

Room B1-Hall



Comments

Dose rate in μR/h measured at 1m from floor.

Surveyed By	Date
Jeff Tweeddale	1/18/06
Reviewed By	Date
HD	1/31/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970			10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	0	36	09/19/06	Ω - Direct Reading
Bicron MicroRem	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-01 Page 1 of 1

Smear Results

cpm ~~DPM/100 cm²~~ JT

No.	α	β	No.	α	β
1	648	4105	26		
2	40	273	27		
3	57	361	28		
4	81	454	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
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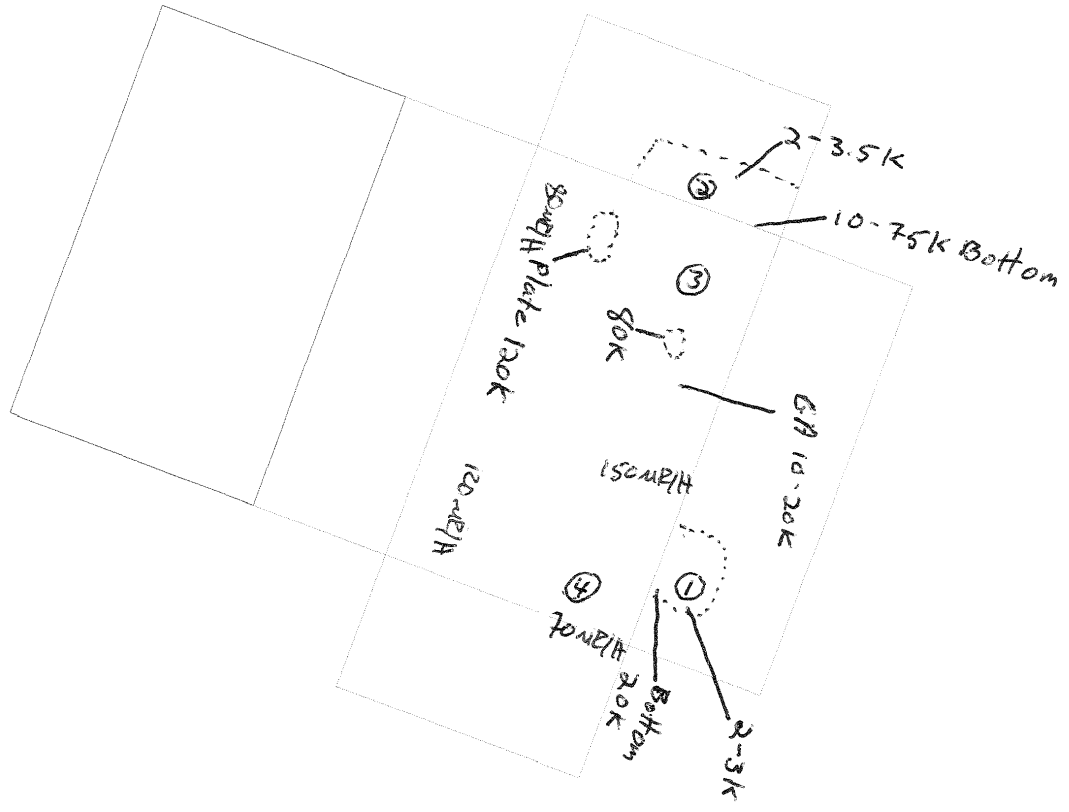
24			49		
25			50		

Comments

All readings in Gross CPM

10% Scan of floor and walls of accessable areas

Room D-103



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	Mirrorm	F019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-02 Page 1 of 1

Smear Results

CPM ~~DPM/100 cm²~~ (JT)

No.	α	β	No.	α	β
1	43	217	26		
2	28	249	27		
3	76	498	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM

10% Scan of floor and walls of accessable areas

Room C-117

Surveyed By	Date
Jeff Tweeddale	1/19/06
Reviewed By	**Date**
HTP	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
Microrem	ECWA					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-03 Page 1 of 1

Smear Results DPM/100 cm²					
No.	α	β	No.	α	β
1	4	39	26		
2	3	52	27		
3	38	44	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
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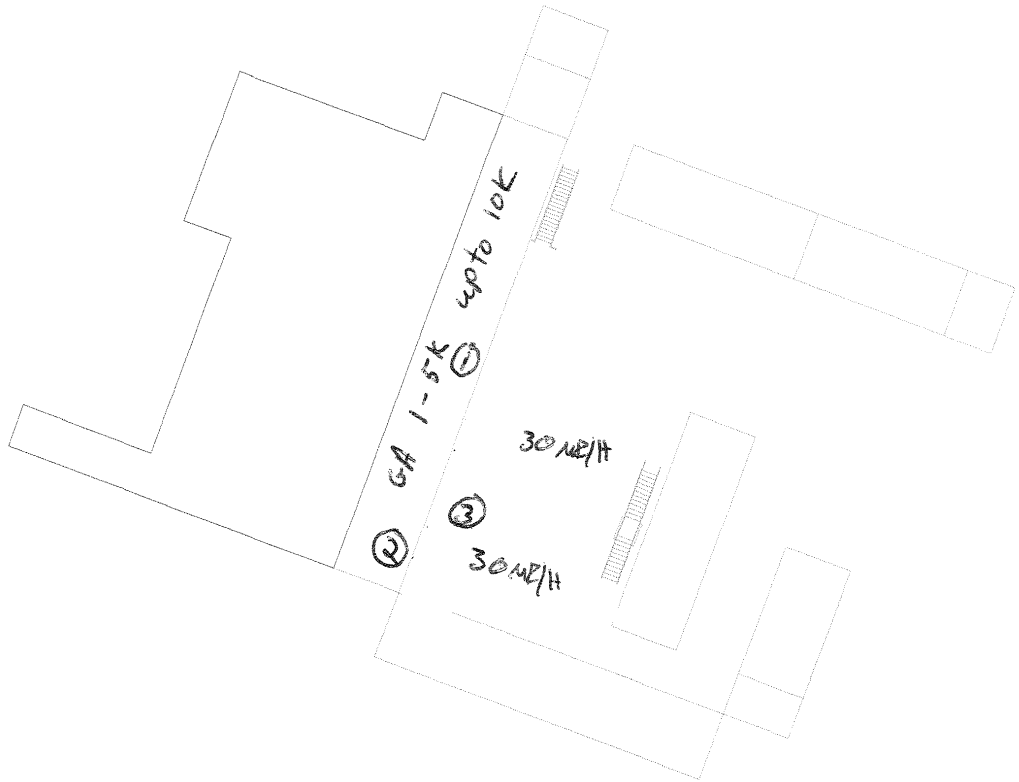
24			49		
25			50		

Comments

All readings in Gross CPM.
10% Scan of floor and walls of accessable area

Room D-106A



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff		E-600	00459					10/05/06	O - Smear # & Location
Tweeddale	1/19/06	SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	MILLIPORE	EC19A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-04 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	18	163	26		
2	15	114	27		
3	16	216	28		
4	54	289	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM
10% Scan of floor and walls of accessable area.

Room C-113

Surveyed By	Date
Jeff Tweddale	1/19/06
Reviewed By	Date
HID	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
Bicron Micro Rem	EC19A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-05 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm~~ JT					
No.	α	β	No.	α	β
1	9	90	26		
2	42	480	27		
3	0	58	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM
10% scan of floor
and wall in accessable
areas

Room C-111

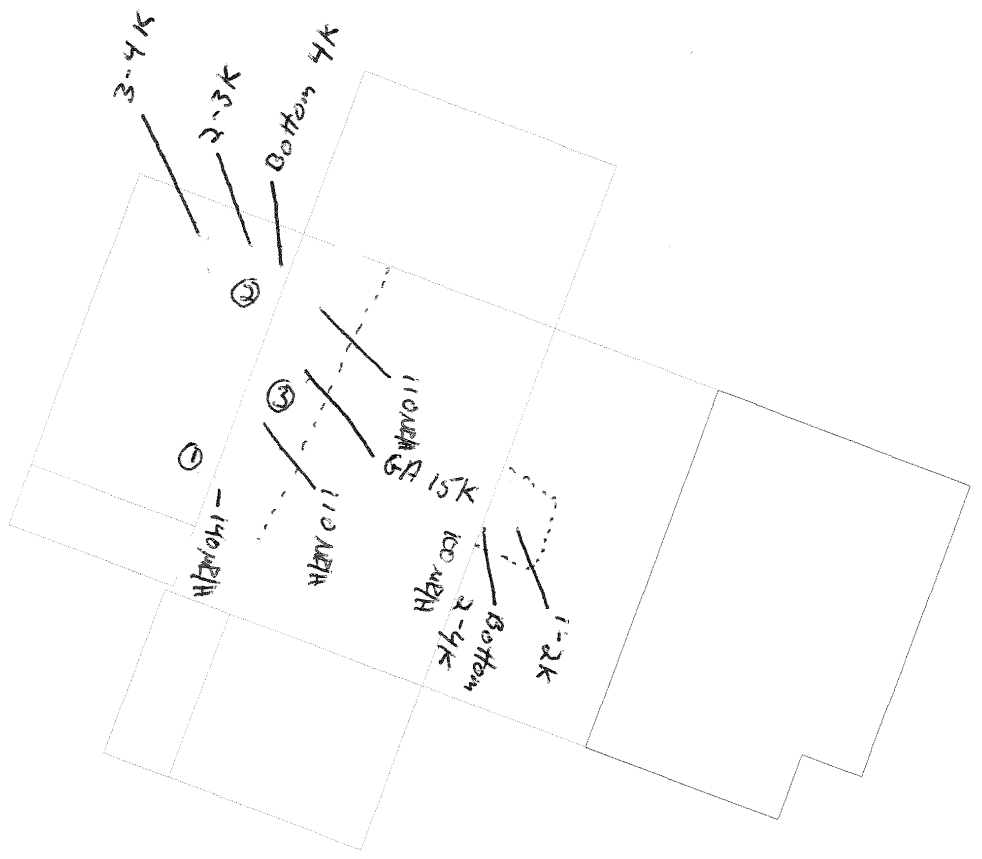
Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweedlale	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	Murray	EC19A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-06 Page 1 of 1

Room D-102



Smear Results

CPM ~~DPM/100 cm²~~ (JT)

No.	α	β	No.	α	β
1	12	75	26		
2	7	72	27		
3	51	382	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM

10% Scan of floor and walls of accessable areas

Surveyed By: Jeff Tweedlale Date: 1/19/06

Reviewed By: Date:

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
							Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-07 Page 1 of 1

Smear Results

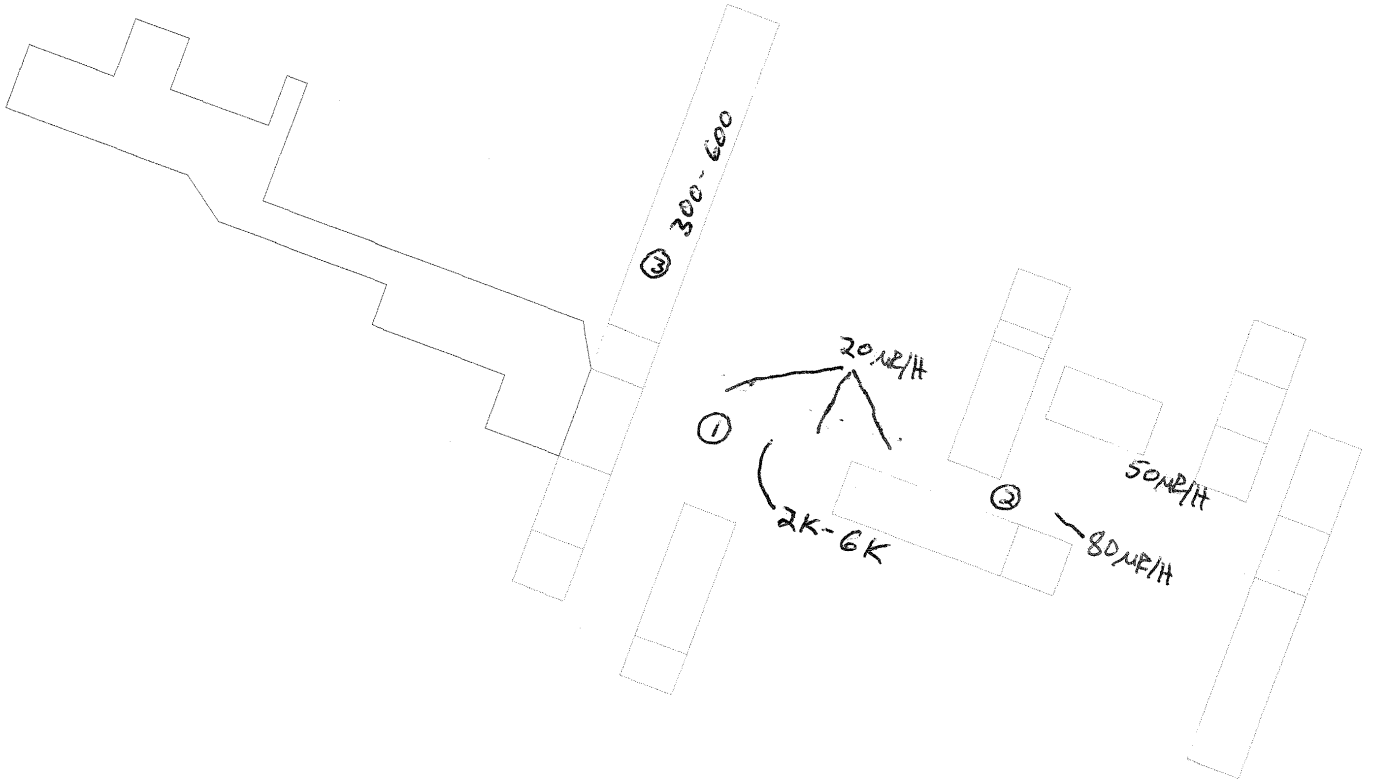
CPM ~~DPM/100 cm²~~ JT

No.	α	β	No.	α	β
1	97	573	26		
2	138	949	27		
3	19	189	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM
10% Scan of floors
and walls of
accessable areas

Room E1-Hall-North



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	MILLBURN	EDIGA					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-08 Page 1 of 1

Smear Results

CPM ~~DPM/100 cm²~~ (JT)

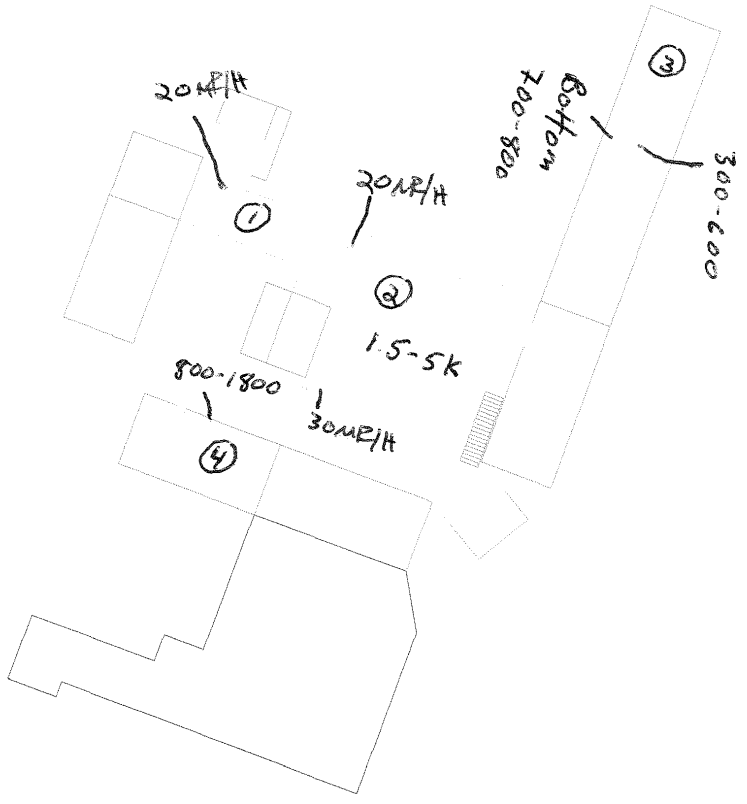
No.	α	β	No.	α	β
1	48	513	26		
2	51	306	27		
3	30	231	28		
4	33	261	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM

10% Scan of Floor and wall of accessable areas

Room E-107B



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	[illegible]	EDIA					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-09 Page 1 of 1

Smear Results					
cpm ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	12	72	26		
2	3	91	27		
3	13	109	28		
4	6	45	29		
5	6	45	30		
6	0	61	31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
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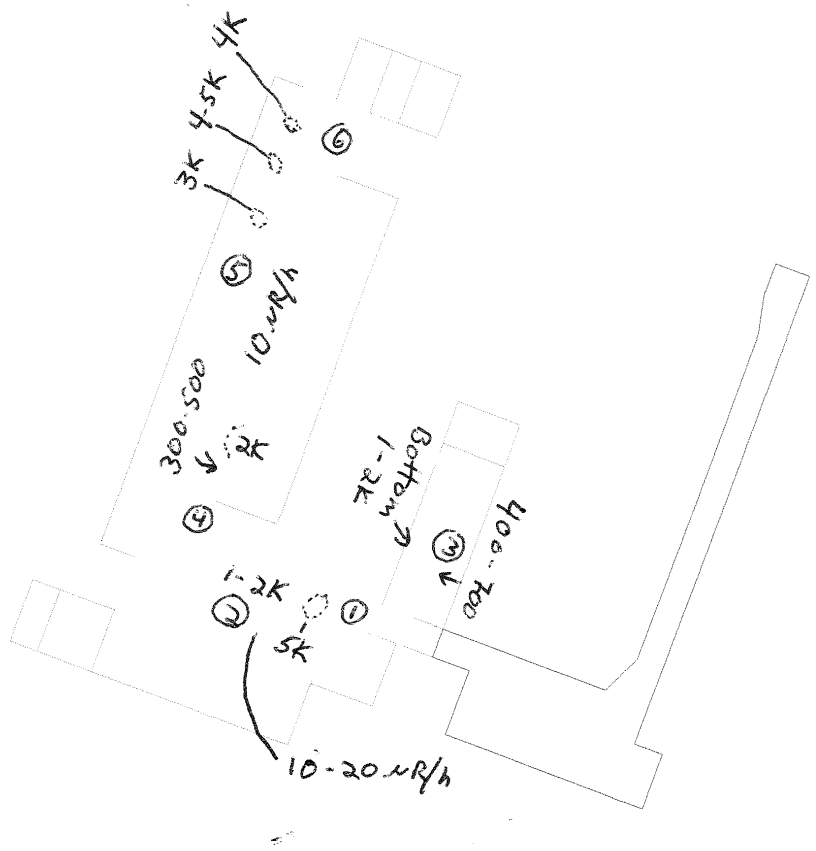
21			46		
22			47		
23			48		
24			49		
25			50		

Room C1-Hall-South



Comments

All reading in Gross CPM
Dose rate measured
1m from floor
10% Scan of floors &
wall of accessable
areas

Surveyed By	Date
Jeff Tweddale	1/19/06
Reviewed By	**Date**
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
Bicron Nuclear	E019A					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-10 Page 1 of 1

Smear Results

cpm ~~DPM/100 cm²~~ JT

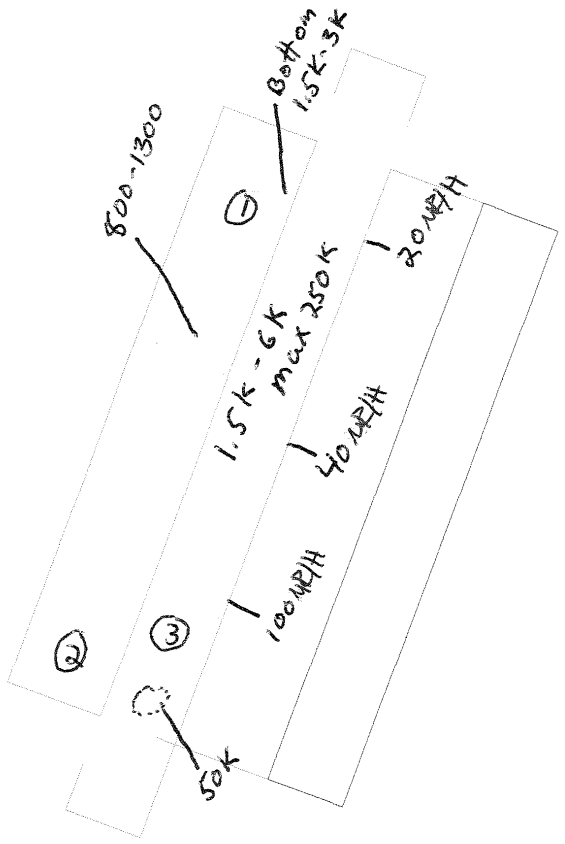
No.	α	β	No.	α	β
1	21	256	26		
2	31	324	27		
3	73	429	28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross cpm

10% Scan of floors and wall of accessable areas

Room E1-Hall-West



Surveyed By	Date
Jeff Tweeddale	1/19/06
Reviewed By	Date
HTD	1/30/06

Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
E-600	00459					10/05/06	O - Smear # & Location
SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
Murray	EC9A					9/16/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

Survey Number: 011906-11 Page 1 of 1

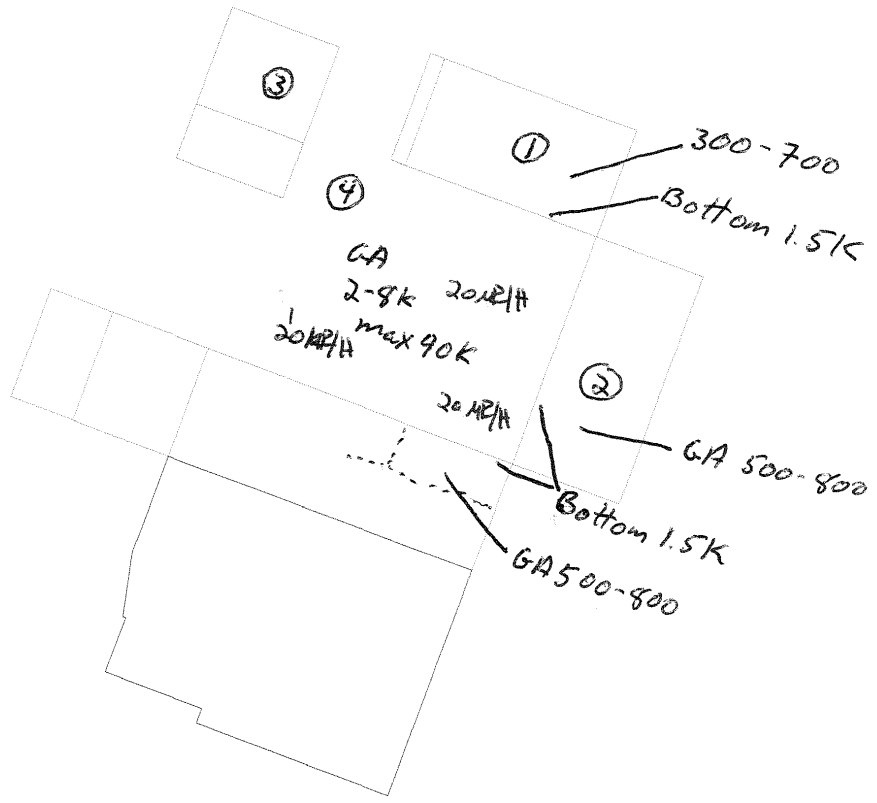
Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	42	26		
2	0	51	27		
3	7	79	28		
4	25	217	29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All readings in Gross CPM

10% Scan of floor and walls of accessable areas

Room C-125



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweedbole	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	Microrem	Eckert					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

RADIOLOGICAL SURVEY MAP

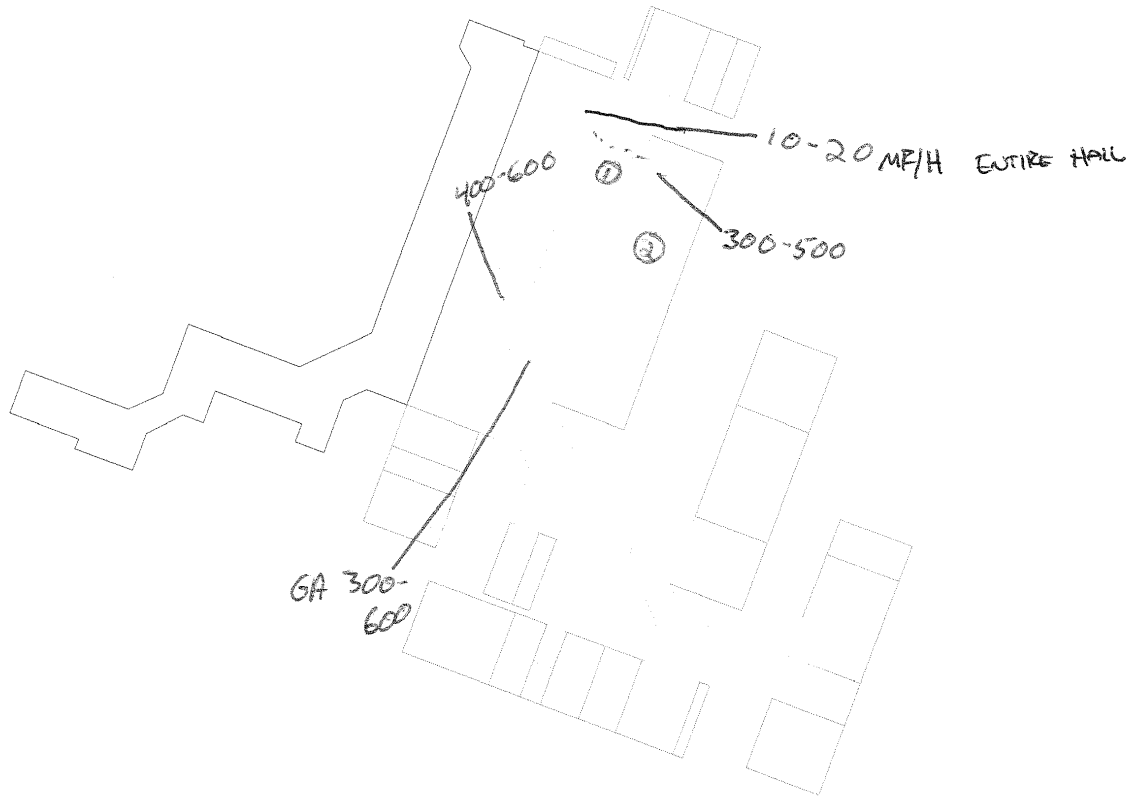
Survey Number: 011906-12 Page 1 of 1

Smear Results					
CPM ~~DPM/100 cm²~~ JT					
No.	α	β	No.	α	β
1	1	60	26		
2	1	31	27		
3			28		
4			29		
5			30		
6			31		
7			32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Comments

All Readings in Gross CPM
10% Scan of floor and walls of

Room C1-Hall-West



Surveyed By	Date	Instrument	Serial #	α Efficiency	β Efficiency	α Bkg (CPM)	β Bkg (CPM)	Cal Due	Key
Jeff Tweeddale	1/19/06	E-600	00459					10/05/06	O - Smear # & Location
		SHP-380	01056	0.1675	0.1970	4	142	10/05/06	" " - Dose rate mrem/hr
Reviewed By	Date	3030	185398	0.3503	0.3525	1	43	09/19/06	Ω - Direct Reading
HTD	1/30/06	Milliorem	EOMA					9/19/06	Δ - Volumetric Sample

Form NMI-RP-301-0-2

Appendix E

Radiological Scoping Survey and Equipment and Furniture Inventory
January 2006

Building Inventory

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Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS NORT	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Intimis 407 Printer	1	10	NM	NM	Clean - Free release
Refrigerator	1	5	NM	NM	Clean - Free release
Tally T6180 Printer	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS NORT	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile - PACM	8	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	7000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	10	NM	NM	DU Contamination

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS WEST	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Heavy water damage - northside of Stairwell.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	10	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1 STAIRS WEST	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	25	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	20	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	2	15	NM	NM	Clean - Free release
file cabinet	5	16	NM	NM	Clean - Free release
shelves	3	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Fax/Copier	1	10	NM	NM	Clean - Free release
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Carpet	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	3	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	25	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	7	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101C	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	DU Contamination
desk	3	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101C	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101D	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
file cabinet	10	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Pressure Guage	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101D	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101E	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	4	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101E	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101F	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-101F	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-102	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Former HR Office

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Wooden Panel	25	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	5	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-102	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-103	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wall Panels	100	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-103	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-106	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	20	cuft	NM	NM	☐
Floor	carpet	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	75	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
table	1	10	NM	NM	Clean - Free release
Wooden Chairs	8	4	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-106	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	25	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	3	15	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	25	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	3	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-107B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-108	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	4	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-108	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-109	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	75	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-109	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-111	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-111	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-113	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	25	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-113	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-114	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Carpet	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-114	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-115	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	4000	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-115	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-116	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Temporary Metal Powder Storage Area.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	30	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	30	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	100	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Toledo Scale	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-116	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-116A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	5	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	5	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Toilets	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-116A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-117	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Carpet	20	cuft	NM	4000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	4	16	NM	NM	Clean - Free release
shelves	3	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-117	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Photocopier	1	15	cu/ft	Clean - Free release
Printer	1	5	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-118	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	100	cuft	NM	NM	☐
Floor	Carpet	100	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	16	16	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release
Photocopier	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-118	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-119	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	4000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-119	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-120	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc.Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-120	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-120A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-120A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-121	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-121	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-121A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	3	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-121A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-122	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-122	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-124	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	3	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-124	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-124A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: trtr

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
shelves	4	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-124A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-125	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
shelves	4	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-125	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-125A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc.Office Eq.	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-125A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-126	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: A-126 also contains A-126A information - Actually 1 room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	4	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-126	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-126A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-126A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-127	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	2000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	50	NM	NM	

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-127	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-127A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	2000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-127A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer Eq.	5	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-128	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	75	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	3	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-128	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	3	15	NM	NM	Clean - Free release
file cabinet	5	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	10	cuft	NM	2000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-130B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	4	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-131	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Eq.	1	30	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-131	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-132	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Carpet	20	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	75	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	12	6	NM	NM	Clean - Free release
shelves	6	20	NM	NM	Clean - Free release
table	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
TV/VCR Stand	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-132	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-133	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Carpet	NM		NM	12000	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	25	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	6	3	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
table	3	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-133	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-134	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Machine/Maintenance Shop

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Drains	Metal	10	cuft	NM	5000	☐
Floor	Concrete	NM		NM	7000	☐
Floor	Tile	25	cuft	NM	NM	☑
Piping	Glass	25	cuft	NM	NM	☐
Piping	Metal	500	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	15	20	NM	NM	Surface DU, Clean - Release
table	9	10	NM	NM	Surface DU, Clean - Release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Chicago Drill Press	1	5	NM	NM	Surface DU, Clean - Release
Drum Dolley	1	5	NM	NM	DU Contamination
Misc. Eq.	1	100	NM	NM	Surface DU, Clean - Release
Southbend Gear Lathe	1	10	NM	NM	DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-134	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
2-propanol	500	mL	Flammable Liquid
Acetone	4	gal	Flammable Liquid
Aerosol Cans	1	lb	Flammable Liquid
Boron Nitride	5	lbs	Reactive Solid
Delta Cast 1170	1	gal	Flammable Liquid
Desicite	5	gal	unknown
Ethyl Alcohol	2	gal	Flammable Liquid
Gasoline	1	gal	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-135	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	10	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
Misc. Office Eq.	1	10	NM	NM	Clean - Free release
table	3	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-135	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-136	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile - PACM	8	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	5	2.5	NM	NM	DU Contamination
shelves	7	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-136	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-137	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile - pacm	8	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	DU Contamination
desk	3	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-137	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	
Printer	1	2	cu/ft	

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-138	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	tile - PACM	8	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-138	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Cannon Printer	1	2	cu/ft	Clean - Free release
Epsom Printer	1	2	cu/ft	Clean - Free release
HP Printer	1	2	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-139	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile - PACM	8	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	3	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-139	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-140	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Carpet	15	cuft	NM	7000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	10	5	NM	NM	DU Contamination
table	4	100	NM	NM	Clean - Free release
Vinyl Chair	15	7.5	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-140	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-141	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Carpet	16	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Possible DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-141	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-142	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Carpet	15	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Sheetrock	100	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	5	2.5	NM	NM	Possible DU Contamination
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-142	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-143	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Carpet	15	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Sheetrock	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	4	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-143	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-144	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	15	cuft	NM	NM	☐
Floor	Carpet	15	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Sheetrock	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	1	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-144	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-145	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	20	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bueller Polishing Instrument	1	50	NM	NM	Possible DU Contamination
Lindberg Tube Furnance	1	100	NM	NM	DU Contamination
MET-1 Lab Hood	1	400	NM	NM	DU Contamination
MET-2 Lab Hood	1	200	NM	NM	DU/BE Contamination
MET-3 Lab Hood	1	400	NM	NM	DU Contamination
Nicolet Spectrometer	1	100	NM	NM	Possible DU Contamination
Supply Cabinet	1	200	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-145	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Powders	NM		See January 30, 2006 Inventory Records
Toluene	1	L	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-145A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Buehler Abrasive Cutting Unit	1	50	NM	NM	DU Contamination
Supermet Grinder	1	50	NM	NM	DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-145A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	2	L	Flammable Liquid
Denatured Alcohol	2	L	Flammable Liquid
Glycerin	4	L	Flammable Liquid
Methanol	2	L	Flammable Liquid
n-propyl Alcohol	2	L	Flammable Liquid
Powders	NM		See Jan. 30, 2006 Inventory Records
Sodium Silicate	3	L	Corrosive Liquid
Trichlorotriflouroethane	4	L	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-146	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	7	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-146	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-147	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Metals Powder storage area.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Safety Booth	3	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-147	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-148	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Piping volumes include entire area.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑
Piping	Metal	3000	cuft	NM	100000	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-148	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-149	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: X-Ray Room

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Affinity Water Cooler	1	10	NM	NM	Clean - Free release
LabX (X-Ray Machine)	1	100	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-149	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release
Printer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-150	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Dry Ice Chest	1	10	NM	NM	Clean - Free release
Theromatrix Analyzer	1	100	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-150	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	2	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-154	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-154	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-154A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	4000	DU Contamination
desk	4	15	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-154A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
2-propanol	0.5	L	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-155	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Metal/Glass Cabinet containing Zn, Vanadium, Cu, Niobium,Strontium Flouride, Pb,CuAl,

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-155	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-157	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
desk	1	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
High Germanium System	1	20	NM	NM	Possible DU Contamination
Misc. Eq.	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-157	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-158	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Possible DU Contamination
file cabinet	1	20	NM	NM	Clean - Free release
table	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Safety Eq.	1	10	NM	NM	Clean - Free release
Safety Booth	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-158	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-159	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
file cabinet	3	16	NM	NM	Clean - Free release
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Tennelec Smear Counter	1	20	NM	NM	Surface DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-159	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Aeresol Lubricant	2	cans	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-160	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: A-160 & A-156 Combined as one room - A-160

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	25	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	3	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lab Hood - FR-1	1	75	NM	NM	DU Contamination
Lindberg Hydrogen Furnance	1	100	NM	NM	DU Contamination
Lindberg Power Controller	1	25	NM	NM	Clean - Free release
Melting Power Breeze Unit	1	10	NM	NM	Possible DU Contamination
Misc. Eq.	1	100	NM	NM	Possible DU Contamination
Misc. Pumps	1	50	NM	NM	Possible DU Contamination
Opti-Miser Transformer	1	25	NM	NM	Clean - Free release
VIP Power Trak	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-160	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Vaccum Pump Oil	4	L	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-161	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Microscope	1	5	NM	NM	Clean - Free release
Photocopier	1	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-161	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-162	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
shelves	3	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Eq.	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-162	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-163	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Petrographic Microscope	1	5	NM	NM	Clean - Free release
Photographic Stand	1	30	NM	NM	Clean - Free release
Wilson Hardness Tester	1	10	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-163	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-EAST	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Carpet	NM		NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-EAST	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	75	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-SOUTH	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	75	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	75	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A1-HALL-SOUTH	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS NORT	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS NORT	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Severe leak, paint peeling off concrete cinder block walls.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS WEST	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Severe roof leak.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2 STAIRS WEST	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-201	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	0.5	NM	NM	DU Contamination
desk	4	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-201	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-202	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	0.5	NM	NM	DU Contamination
desk	2	15	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Supplies	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-202	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	2	5	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-202A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
desk	3	15	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-202A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-203	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	0.5	NM	NM	DU Contamination
file cabinet	1	15	NM	NM	Clean - Free release
table	4	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Office Debris	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-203	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-204	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	0.5	NM	NM	DU Contamination
file cabinet	2	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	3	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-204	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-205	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	NM	3 - DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Office Debris	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-205	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-206	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	2 clean - 1 DU
desk	2	15	NM	NM	Clean - Free release
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Office Debris	1	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-206	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-208	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	DU Contamination
desk	3	15	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Office Debris	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-208	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-209	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	8	4	NM	NM	Clean - Free release, 1 DU Contamination
desk	1	15	NM	NM	Clean - Free release
file cabinet	4	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-209	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-211	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	NM	DU Contamination
desk	3	15	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-211	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
shelves	2	NM	NM	NM	Clean - Free release
table	4	NM	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Office Debris	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
desk	2	15	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Typewriter	1	2	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
computer	1	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212C	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	10	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212C	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212D	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
SS Refrigerator	2	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212D	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Printers/Copiers	5	10	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212E	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	8	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-212E	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	16	cuft	NM	NM	☑
Walls	Wall Panels	100	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	12	16	NM	NM	Clean - Free release
shelves	4	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Lg. Plotter	1	10	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Confernece Room

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Floor Drain	Steel	NM		NM	5000	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	6	0.5	NM	NM	DU Contamination
table	3	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215C	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Major leak.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Mastic	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	4	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-215C	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-216	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Eq. & Debris	1	100	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-216	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Isopropanol	500	mL	Flammable Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-220	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Fume Hood	1	200	NM	NM	DU Contamination
Lab Bench	1	500	NM	NM	Possible DU Contamination
storage cabinets	1	1000	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-220	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-223	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: A223 also includes A225

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Blue M Furnace	1	50	NM	NM	DU Contamination
Conserve Airlab Fume Hood	1	200	NM	NM	DU Contamination
Lab Bench	2	50	NM	NM	DU Contamination, Asbestos transiet tops
Lab Frabrication Fume Hood	1	200	NM	NM	DU Contamination
Laboratory press	1	25	NM	NM	Possible DU Contamination
Metal Powder Strogae Unit	1	50	NM	NM	Possible DU Contamination
Mini-Injector	1	25	NM	NM	Possible DU Contamination
Misc. Lab Stuff	1	100	NM	NM	Possible DU Contamination
Neel Transformer	1	25	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-223	Instruments:	Geiger & Scintallation Counter

Varian 936-705P Leak Detector Instrument	1	50	NM	NM	Possible DU Contamination
Veeco Furnace	1	50	NM	NM	DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
2-Propanol	200	mL	Flammable Liquid
Acetone	2	L	Flammable Liquid
Ethyl Alcohol	1	L	Flammable Liquid
HCL	2	L	Corrosive Liquid
Misc Metal Powders	200	lb	Reactive Solid
Nitric Acid	2	L	Corrosive Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-224	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	8	15	NM	NM	Possible DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Allen Bradley Breaker Box	1	10	NM	NM	DU Contamination
Laboratory Hoods	3	200	NM	NM	DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-224	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-227	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	2	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	5	2.5	NM	4000	DU Contamination
file cabinet	2	16	NM	NM	Clean - Free release
shelves	2	40	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Electrical Parts	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-227	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Denatured Alcohol	1	Qt.	Flammable Liquid
Lubricant Oil	1	lb	Flammable Liquid, Aerosol Cans

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	5	cu/ft	

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-228	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	10	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	2	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	7	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Fume Hood	1	200	NM	10000	DU Contamination
Ladder	1	5	NM	5000	DU Contamination
Misc Maint. Eq.	1	250	NM	NM	Clean - Free release
Tool Box	1	25	NM	NM	Tools DU Contamination, clean, release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-228	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	1	L	Flammable Liquid
Aerosol Cans	10	cans	Flammable
PVC Glue & Primer	3	lb	Flammable Solid
Vaccum Pump Oil	1	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-229	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	5	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Electrical Parts	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-229	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-230	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	25	cuft	NM	NM	☑
Walls	Sheetrock	15	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	36	16	NM	NM	
table	1	10	NM	NM	
Window Sill	0	10	NM	1500	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Records	1	200	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-230	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-231	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Office Panels	15	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	200	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-231	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers/Printers	5	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-232	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Office Partition	15	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	6	16	NM	NM	Clean - Free release
table	5	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-232	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-233	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Carpet	10	cuft	NM	10000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	5	cuft	NM	7000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	3	15	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-233	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers/Printers	4	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-234	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	sheetrock/wood	50		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Records	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-234	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-235	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Sheetrock.Wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Records	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-235	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-236	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	sheetrock/wood	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Records	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-236	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-237	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-237	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers &accessories	25	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-238	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Carpet	15	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Sheetrock/Wood	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	8	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Office Records	1	300	NM	NM	Clean - Free release, Combustibles

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-238	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-239	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Carpet	10	cuft	NM	5000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Wood	25	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Office Debris	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-239	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-240	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Sheetrock	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	5	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-240	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Piping	Metal	200	cuft	NM	NM	☐
Walls	Sheetrock	100	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Heat Exchange Unit	1	50	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Comptuers & Accessories	100	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	sheetrock/Wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	sheetrock/wood	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241C	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	30	cuft	NM	NM	☑
Piping	Metal	800	cuft	NM	NM	☑

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-241C	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-242	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM			NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Wood Partitions	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-242	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-245	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Roof leak, NW wall

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	7000	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wood Partition	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-245	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-246	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Roof Leaks

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	25	cuft	NM	NM	☑
Piping	Metal	200	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Metal Debris	1	10	NM	NM	

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-246	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-247	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Several leaks within the area as evidence by 5-gallon buckets. All ceiling tiles have been removed.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑
Piping	Metal/Duct Work	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Kitchen Debris	1	100	NM	NM	Clean - Free release
table	17	10	NM	NM	Chairs attached to the tables

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Cafeteria Things	1	200	NM	NM	Clean - Free release
SS Refrigerator	1	40	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-247	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-247A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Sheetrock	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	2	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Kitchen Eq.	1	300	NM	NM	Clean - Free release

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A-247A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Tile	75	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Tile	75	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL-SOUTH	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	75	cuft	NM	NM	☑
Piping	Metal	1500	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/9/2006
BuildingID:	A	LoggedBy:	TDM
RoomID:	A2-HALL-SOUTH	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B ELEVATOR	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Plywood	5		NM	NM	☐
Floor	Plywood	5		NM	1000	☐
Walls	Plywood	15		NM	3000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Hydraulics	200		NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B ELEVATOR	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	B-1	LoggedBy:	TDM
RoomID:	B-1	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Machine & Maintenance Shop

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	12000	☐
Walls	Steel Frame/Insulatio	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	0.5	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Advance Floor Scrubber	1	10	NM	NM	DU Contamination
Ariens Snow Plower	1	50	NM	NM	Clean - Free release
Bobcat Machine	1	250	NM	NM	Clean - Free release
Circ-O-Therm Dryer	1	100	NM	NM	Surface DU Contamination
Clausing-Colchester Lathe	1	50	NM	NM	Surface DU Contamination
Dayton Wheel Grinder	1	15	NM	NM	Surface DU Contamination
DOALL Ban Saw	1	50	NM	NM	Surface DU Contamination
Industrial Leaf Blower	1	5	NM	NM	Clean - Free release
Kysor Ban Saw	1	50	NM	NM	Surface DU Contamination

Project:	NMI	Date:	1/17/2006
BuildingID:	B-1	LoggedBy:	TDM
RoomID:	B-1	Instruments:	Geiger & Scintallation Counter

Lincoln Welder	1	25	NM	NM	Clean - Free release
Lista Storage Box	1	15	NM	NM	Surface DU Contamination - Handles
Lockers	1	20	NM	NM	Surface DU Contamination
Marena Power Drill	1	25	NM	NM	Surface DU Contamination
Miller Welder	3	15	NM	NM	Clean - Free release
Multiton Hand Pallet Jacks	1	10	NM	NM	DU Contamination
Pope Machine Drill	1	25	NM	NM	Surface DU Contamination
Power Boss Floor Scrubber	1	5	NM	NM	DU Contamination
Scotchman Ind. Drill Press	1	100	NM	NM	Surface DU Contamination
Sheet Metal	1	25	NM	NM	Clean - Free release
Snap-On Tool Box	3	15	NM	NM	Surface DU Contamination
Steel Storage bin	1	50	NM	NM	DU Contamination
Storage Cart	1	5	NM	NM	Surface DU Contamination
Thermal Dynamics Welder	1	25	NM	NM	Clean - Free release
Tranter Drill Press	1	15	NM	NM	Surface DU Contamination
Trash Can	1	2	NM	NM	DU Contamination
Wesco Power Jack	1	10	NM	NM	DU Contamination
Wesstinghouse Refrigerator	1	50	NM	NM	DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
Oil/Gas Mixture	4	gal	Flammable Liquid
Waste Oil	50	gal	DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Batteries	2	20	lb	
Computers	5	2	cu/ft	

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B1 STAIRS	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	2000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Stairwell	1	100	NM	NM	Slight DU Contamination

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B1 STAIRS	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-101	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Mens Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bathroom Sink	3	5	NM	NM	Clean - Free release
Bathroom Toilets	3	20	NM	NM	Clean - Free release
Urinals	2	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-101	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-102	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Ladies Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wall Panels	20	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Vanity	1	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bathroom Sink	2	5	NM	NM	Clean - Free release
Bathroom Stalls	3	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-102	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-103	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Former Infirmatory

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	32	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wall Panels	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	5	2.5	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Beds	1	25	NM	NM	Clean - Free release
Medical Supplies	1	800	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-103	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDm
RoomID:	B-103A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wall Panels	25	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Supplies	1	25	NM	NM	Clean - Free release
Toilets	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDm
RoomID:	B-103A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-103B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	8	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Wall Panels	25	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Banker Boxes	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-103B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-104	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	5	16	NM	NM	Clean - Free release, some tools cont.

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
1000 gal vessels	2	200	NM	NM	Clean - Free release
Boilers	2	12000	NM	NM	PACM - 1600 cubic feet
Ruud Multi-coil Furnance	2	200	NM	NM	Clean - Free release
Steel Piping	1	800	NM	NM	Clean - Free release, ACM - Pipe Insulation

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-104	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Misc Glues/Lubricdants	5	gal	
Sulfuric Acid	105	gal	Corrosive Liquid
Waste Oil	25	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Mercury Switch	20	2	lb	Hazardous Waste
PCB Capacitor	5	5	lb	Hazardous Waste

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-105	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Backflow Preventer	1	20	NM	NM	Clean - Free release, steel valves & Piping
Cleaning Equipment	1	20	NM	NM	DU Contamination

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-105	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Cleaning Supplies	25	gal	Clean supplies

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-106	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☑ Yes ☐ No

If answer is yes to any of the above, Explain: Leak is occuring over Switch Station and/or Transformers

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	15	cuft	NM	NM	☑
Floor Drain	Steel	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Electrical Panels	15	3	NM	NM	Clean - Free release
Swirchbox Panels	2	300	NM	NM	Clean - Free release
Tool Box	2	5	NM	NM	Clean - Free release
Transformer	4	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-106	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
PCB Transformer	4	5	gal	Possible PCB Oil

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-107	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☑ Yes ☐ No

If answer is yes to any of the above, Explain: Leak in the area of backup generator.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Generator	1	400	NM	NM	Clean - Free release
Storage tanks	2	50	NM	NM	2-275 gal diesel tanks
Tool Box	1	5	NM	NM	Tools inside bos are DU contaminated.

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-107	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Diesel	550	gal	Flammable Liquid
Waste Oil	5	gal	Possible DU Contamination

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-108	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	8	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	2	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-108	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers & Accessories	25	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-108A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	5000	DU Contamination
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Postage Meter	1	20	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-108A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers & Accessories	10	5	cu/ft	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-109	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Mens Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor Drains	Steel	NM		NM	2000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lockers	1	50	NM	NM	Clean - Free release
Sink	2	5	NM	NM	Surface DU Contamination
Toilets	4	5	NM	NM	Clean - Free release
Urinals	3	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-109	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-110	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	16	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-110	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	2	4	cu/ft	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B1-HALL	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Piping	Metal	1600	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Piping	1	1600	NM	NM	15" pipe w/ ACM - Insulation

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B1-HALL	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/17/2006
BuildingID:	B-2	LoggedBy:	TDM
RoomID:	B-2	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Shipping & Receiving Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	10000	☐
Floor	Tile	15	cuft	NM	NM	☑
Walls	Steel Frame/Insulatio	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	0.5	NM	NM	DU Contamination, Yellow Chairs
desk	8	15	NM	NM	Clean - Free release
file cabinet	10	16	NM	NM	Clean - Free release
table	4	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Debris Steel/Wood	1	2500	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	B-2	LoggedBy:	TDM
RoomID:	B-2	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B2 SHOWERS	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Actually the 2nd floor bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Drains	Steel	NM		NM	2000	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Toilets	4	10	NM	NM	Clean - Free release
Urinals	4	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B2 SHOWERS	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-201	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	3	15	NM	NM	Clean - Free release
Misc Office Debris	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-201	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	1	100	cu/ft	Computer junkyard, clean, release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-201A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Women Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Drains	Metal	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release
Vanity	1	5	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Toilets	4	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-201A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-202	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Office Debris	1	5	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-202	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-203	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	NM	1 DU, 3 clean and release
desk	2	15	NM	NM	Clean - Free release
file cabinet	5	16	NM	NM	Clean - Free release
shelves	3	20	NM	NM	Clean - Free release
Wall Partition	1	5	NM	NM	Clean - Free release, Wood

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-203	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	2	3		Computer accessories included

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-205	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: West wall staining - leaks from the roof.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	NM		NM	NM	☑
Wall Partition	Wood	25	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	5	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Toledo Scale	1	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-205	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-205A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	10	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-205A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-206	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Former Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Linoleum	20		NM	NM	☑
Floor Drains	Steel	NM		NM	10000	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
Sink	1	5	NM	NM	DU Contamination, clean, release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-206	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-206A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Actual Shower Room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Ceramic Tile	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor Drains	Steel	NM		NM	7000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/10/2006
BuildingID:	B	LoggedBy:	TDM
RoomID:	B-206A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	B	LoggedBy:	
RoomID:	B-207	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Wax Room. All Ewquipment will be going to new location.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	NM		NM	NM	☑
Walls (West)	Concrete Block	NM		NM	1000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	4	2	NM	4000	Yellow Chairs

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	B	LoggedBy:	
RoomID:	B-207	Instruments:	

Chemical Waste

Chemical Name	Volume	Units	Comment
Electroless Copper	55	gal	Corrosive Liquid
Mobile 3338C Cleaner	55	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	B	LoggedBy:	
RoomID:	B2-HALL	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Piping	Metal	1600	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	B	LoggedBy:	
RoomID:	B2-HALL	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/12/2006
BuildingID:	B-3	LoggedBy:	TDM
RoomID:	B-3	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Butler Building. Storage foe misc. eq that came from National Lead in Colony, NY

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	100	cuft	NM	7000	☐
Walls	Wood/Insulation	5000	cuft	NM	700000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Boxed Eq.	1	8000	NM	NM	DU Contamination
Poly Overpacks	12	1	NM	NM	Clean - Free release

Project:	NMI	Date:	1/12/2006
BuildingID:	B-3	LoggedBy:	TDM
RoomID:	B-3	Instruments:	Geiger Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Transmission Fluid	55	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/17/2006
BuildingID:	B-4	LoggedBy:	TDM
RoomID:	B-4	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Wax Mold Production & Uniform Storage Area.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	20000	☐
Walls	Plywood	250	cuft	NM	NM	☐
Walls	Steel Frame/Insulatio	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	5	0.5	NM	4000	1 yellow chair - Hot
desk	2	15	NM	NM	Clean - Free release
shelves	10	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Laundry	1	50	NM	NM	Clean - Free release
Misc. Staging Eq.	1	50	NM	NM	Clean - Free release
Misc. Steel Debris	1	250	NM	NM	Clean - Free release
Silica molding Machine	1	500	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	B-4	LoggedBy:	TDM
RoomID:	B-4	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Lubricating Oil	20	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C ELEVATOR	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Elevator	500	NM	NM	NM	DU Contamination

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C ELEVATOR	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 HALL SOUTH	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Piping	Metal	1600	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 HALL SOUTH	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 HALL WEST	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Piping	Metal	1600	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 HALL WEST	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 STAIRS NORT	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	200	cuft	NM	NM	☐
Piping	Metal	250	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C1 STAIRS NORT	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C1 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	200	cuft	NM	NM	☐
Floor	Tile	15	cuft	NM	NM	☑
Piping	Metal	500	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	5	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Class B/C Fire Extinguishers	48	2	NM	NM	Clean - Free release
SCBA Tanks	13	2	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C1 STAIRS SOUT	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-102	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	7000	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Furnace Insulation	Insulation	10	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	4000	DU Contamination
table	1	25	NM	NM	Clean - Free release includes 15 cu/ft of debris

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
American Electrical Furnacnes	2	200	NM	NM	Surface DU Contamination
Birdsboro Hydraulic Press	1	400	NM	NM	Surface DU Contamination, clean, release
Electra Furnace	1	200	NM	NM	Surface DU Contamination
Fiberglass Ladder	1	5	NM	7000	DU Contamination
GE Transformer	1	20	NM	NM	Surface DU Contamination
Misc. Aluminium Conduit	1	20	NM	NM	Clean - Free release
Misc. Debris	1	500	NM	4000	DU Contamination, next to Power panel #5
Steel Debris	1	500	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-102	Instruments:	Geiger & Scintallation Counter

Sutton Press	1	250	NM	NM	Slight Surface DU Contamination. Clean, release
Sutton Press Pumps/Motors	1	250	NM	NM	Slight Surface DU Contamination. Clean, release

Chemical Waste

Chemical Name	Volume	Units	Comment
Mech. Vaccum Pump Oil	5	gal	DU Contamination
Mobile Heavy Oil	55	gal	
Waste Oil	5	gal	DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
PCB Transformer	1	5	gal	Possible PCB Oil, estimate?

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-102A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Half this area is the "clean" Laundry Room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	12000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	1	10	NM	NM	Cleann - Free release, SS table

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Greenerd Press	1	800	NM	2000	Control Buttons DU Cont., remove, release
Hydraulic Jack	0	24	NM	NM	Clean - Free release
Misc Debris	1	15	NM	2000	Rags, DU Contamination
SCR Machine	1	250	NM	NM	DU Contamination
Steel Sieve	1	5	NM	3000	DU Contamination
Trash Bin	1	5	NM	6000	Wheels DU Contamination, remove, release
Whirlpool Dryer	1	10	NM	NM	Clean - Free release
Whirlpool Washer	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-102A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Argon Cylinders	2	Cyl.	Inert Compresses Gas

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-110	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Includes C-110A, Current Security Booth

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	7.5	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☐
Walls	Wood	15	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
table	4	10	NM	NM	Clean - Free release
Wooden Foot Rest	1	1	NM	2000	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Electronic Camera & Eq.	1	25	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-110	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-111	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☑ Yes ☐ No

If answer is yes to any of the above, Explain: Leak occuring over Light Fixtures.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	8000	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	4	10	NM	NM	Clean - Free release,
Table Misc. Debris	1	15	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Blue Swing Cradles	2	144	NM	NM	Slight Surface DU Contamination
Boston Gear Fluid Power	1	10	NM	NM	Possible Heavy Metal/DU Contamination
Harnischferger DC Welder	4	48	NM	NM	Possible Heavy Metal/DU Contamination
Heat Exchange Units	2	250	NM	NM	Possible Heavy Metal/DU Contamination
Kinney Blower	1	15	NM	NM	Possible Heavy Metal/DU Contamination
Kinney Vaccum & Electric Motor	1	25	NM	NM	Possible Heavy Metal/DU Contamination
Linde Welder	2	24	NM	NM	Possible Heavy Metal/DU Contamination
Miller Welder	2	30	NM	NM	Possible Heavy Metal/DU Contamination
Monarch Lathe	1	30	NM	NM	Possible Heavy Metal/DU Contamination

Project:	NMI	Date:	1/11/2006
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RoomID:	C-111	Instruments:	Geiger & Scintallation Counter

Raw Metal Cart	1	10	NM	NM	DU Contamination, Wheels, Remove, Clean
REP Machine	3	4500	NM	NM	Slight Surface DU Contamination
REP Vessel	1	450	NM	NM	Possible Heavy Metal/DU Contamination
Steel Blue Bins	4	15	NM	NM	Possible Heavy Metal/DU Contamination
Steel Hopper	3	20	NM	NM	Possible Heavy Metal/DU Contamination
Steel Racks	1	15	NM	NM	Possible Heavy Metal/DU Contamination
Sweco Vibra Separator	6	1500	NM	NM	Possible Heavy Metal/DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	1	L	Flammable Liquid
Argon Cylinder	10	Cyl.	Inert Compressed Gas
Mobile Waste Oil	60	gal	Possible Heavy Metal/DU Contamination
Pump Fusion Oil	3	gal	Possible Heavy Metal/DU Contamination

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-111A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	32	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Metal Debris	1	8	NM	NM	DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-111A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-112	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Control Room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	4	cuft	NM	NM	☐
Floor	Tile	4	cuft	NM	NM	☑
Walls	Concrete Block	100	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	2	15	NM	NM	Clean - Free release
file cabinet	4	16	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-112	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	2	5	cu/ft	

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-113	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Current Machine Shop

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Drains	Steel	NM		NM	NM	☐
Floor	Concrete	NM		NM	40000	☐
Walls	Concrete Block	NM		NM	4000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	10	5	NM	5000	DU Contamination
Sink	1	5	NM	30000	DU Contamination
Step Stool	1	1	NM	50000	DU Contamination
table	6	10	NM	8000	DU Contamination
trash can	1	2	NM	12000	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bridgeport Drill Press	1	100	NM	130000	DU Contamination
Bridgeport Drill Press Series II	1	100	NM	130000	DU Contamination
Brown&Sharp Grinder	1	100	NM	230000	DU Contamination, Green Maint. Bucket, very ho
Clausing Drill Press	1	25	NM	6000	DU Contamination
Darex Ultra Drill	1	3	NM	NM	Clean - Free release
Deckel Milling Machine	1	100	NM	20000	DU Contamination
Deltatronics Mag. Glass	1	25	NM	NM	Slight DU Contamination
DOALL Ban Saw	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-113	Instruments:	Geiger & Scintallation Counter

Electra Arc Welder	1	25	NM	NM	Surface DU Contamination
Friedrich Boring Machine	1	100	NM	500000	DU Contamination
Hardinge Lathe	1	50	NM	NM	DU Contamination
Hardinge Milling Machine	1	150	NM	12000	DU Contamination
Hoses & Shovel	1	5	NM	NM	DU Contamination
Kalamazoo Ban Saw	1	50	NM	NM	Clean - Free release
Kolee Lathe	1	50	NM	NM	Slight DU Contamination
Lista Storage Box	10	25	NM	20000	DU Contamination
Lodge&Shipley Lathe	1	150	NM	10000	DU Contamination
Manley Drill Press	1	50	NM	13000	DU Contamination
Marvel Ban Saw	1	100	NM	25000	DU Contamination, Venting & Sluge Hot
Mega Gondrilling Eq.	1	150	NM	NM	DU Contamination
Mori-Seiki Lathe #1	1	100	NM	NM	DU Contamination
Mori-Seiki Lathe #2	1	100	NM	NM	DU Contamination, Near North Wall, Vent hot
Mori-Seiki Lathe #3&4	2	200	NM	35000	DU Contamination
Mori-Seiki SL-4	1	200	NM	30000	DU Contamination
Okuma Lathe #1	1	100	NM	60000	DU Contamination, Bottom of Lathe 60K
Okuma LB15 Lathe	1	200	NM	38000	DU Contamination
SL-1A Mori Seiki	1	150	NM	50000	DU/BE Contamination
Sunnen Hone Milling Machine	1	50	NM	2000	DU Contamination
Sunnen Precision Honing	1	100	NM	NM	Clean - Free release
Whacheon Lathe	1	100	NM	9000	DU Contamination, venting cont.

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	4	L	Flammable Liquid
Waste Oil	750	gal	From Machines, DU Contamination

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-113	Instruments:	Geiger & Scintallation Counter

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-114	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	25000	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Metal Scrap	1	10	NM	NM	Clean - Free release
Miller Welder	1	25	NM	NM	Clean - Free release
Misc. Steel Debris	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-114	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Waste Oil	5	gal	Possible DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-114A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	10000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recordedc	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Drum Dolley	1	5	NM	10000	Wheels DU Contamination
Jones&Lamson Decimetric Machine	1	100	NM	NM	Clean - Free release
Lista Storage Box	2	25	NM	NM	Clean - Free release
Transport Cart	1	5	NM	10000	Wheels DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-114A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
2-propanol	1000	mL	Flammable Liquid
Bacteriacide	1	gal	Reactive Liquid
Fungicide	1	gal	Reactive Liquid
Grotan	1	gal	Flammable Liquid
Lubricant Oil	425	gal	Possible DU Contamination, includes 7-55 drums & 8-5 gal cont.
TL 220	1	gal	Corrosive Liquid, pH Adjuster
unknown	55	gal	Poly 55-gal drum

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-115	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Tool Shop - Adjacent ot Machine Shop.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	8000	☐
Walls	Concrete Block	NM		NM	1000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lista Storage Box	8	25	NM	NM	Clean - Free release
Metal Debris	1	25	NM	60000	DU Contamination
Power Tools	1	25	NM	NM	Clean - Free release
Wooden Ladder	1	5	NM	70000	DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-115	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Aerosol Cans	10	cans	Flammable Liquid
Lubricating Oil	1	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-115A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	6000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Baldor Grinder	1	15	NM	NM	DU Contamination
Cincinnati Grinder	2	15	NM	NM	DU Contamination
Misc. steel clamps, parts, hoses	1	15	NM	NM	DU Contamination
Sm. Grinder	1	5	NM	NM	DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-115A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-116	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: 14 Ton Press Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	80000	☐
Walls	Concrete Block	NM		NM	40000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	3	16	NM	NM	DU Contamination
table	10	10	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
14 Ton Conveyor	1	2000	NM	NM	DU Contamination
14Ton Loewy Press	1	10000	NM	NM	DU Contamination
Aboveground Storage Tanks	4	500	NM	NM	Possible DU Contamination
Aldrich Hydraulic Compressor	1	150	NM	NM	Surface /DU Contamination
Graphite Cylinders	10	5	NM	NM	DU Contamination
Lg. Lindberg Furnance -	1	600	NM	NM	DU Contamination
Misc Graphite	1	500	NM	NM	DU Contamination
Norwalk Hydraulic Compressor	1	300	NM	NM	Surface /DU Contamination
Sm. Lindberg Furnace	2	300	NM	NM	DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-116	Instruments:	Geiger & Scintallation Counter

Steel extruders/hammers	1	500	NM	NM	Possible DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
Soluble Oil/Coolant	5000	gal	Possible DU Contamination
Waste Oil	55	gal	Possible DU Contamination

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-117	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: All Floor Drains have elevated CPM (20-40K).

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	120000	☐
Piping	Metal	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Set of Lockers	1	180	NM	NM	Clean - Free release
table	5	10	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
1 HP Grinder	1	5	NM	NM	DU Contamination
Acecor Sump Portable pump	1	20	NM	NM	DU Contamination, possible liquid in tank
Armstrong Ban Saw	1	50	NM	50000	DU Contamination
Clark Forklift	1	50	NM	NM	DU Contamination
Craftmen Tool Box	2	36	NM	NM	Surface DU Contamination, Clean, Release
Floor Scrubbersander HEPA Filters	2	4	NM	NM	DU Contamination, wheels elevated
Hallway Ventilation System	1	100	NM	NM	DU Contamination
Hobart Charger	1	5	NM	NM	Surface DU Contamination
Induction Furnances	3	7000	NM	NM	DU/BE Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-117	Instruments:	Geiger & Scintallation Counter

Kalamazoo Hydraulic Press	1	16	NM	NM	DU Contamination
Kennedy Tool Box	1	50	NM	NM	DU Contamination
Miller Welder	1	12	NM	NM	Surface DU Contamination, Clean, Release
Misc Grafite Crucibles	1	800	NM	NM	DU Contamination
Misc Metal Debris	1	100	NM	NM	DU Contamination
Mojave Steel Rod Handler	2	5	NM	NM	DU Contamination
Pallet Jack	1	10	NM	NM	DU Contamination, Tires Elevated
Plastic Wrapped Rad. Debris	1	20	NM	10000	DU Contamination, located on wooden pallet
Portable table carts	5	5	NM	NM	DU Contamination
Precision Ovens	2	15	NM	NM	DU Contamination
Pressure Blast Machine	1	50	NM	30000	DU Contamination
Siml Hot Water Heater	1	50	NM	NM	DU Contamination
VIP PowerTrak Transformer	1	30	NM	NM	Surface DU Contamination
Whirlpool Dryer	1	29	NM	NM	Possible DU Contamination
Whirlpool Washer	1	20	NM	NM	Possible DU Contamination
Wooden Bench	1	15	NM	140000	DU Contamination
Yale Forklift	1	50	NM	NM	DU Contamination
Yellow Steel Bin	1	50	NM	NM	DU Contamination, Misc. garbage

Chemical Waste

Chemical Name	Volume	Units	Comment
DU Coolant	25	gal	1/2 Drum - DU Coolant
Acetone	8	L	Flammable Liquid
Coolant	3	gal	Former Machine location - 400K - DU Chips
Industrial Enamel Paint	15	gal	Flammable Liquid
Lubricant Oil	0.5	gal	Waste Oil
Misc. Liquid Drum	55	gal	Unknown, No Label
unknown	NM		2 - 85-gal yellow overpack drums, green salt?
Waste Oil	340	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Fork Lift Batteries	12	20	lb	Leaking on floor - East side
Mercury Switch	10	5	lb	Estimate
PCB Capacitor	5	5	lb	Estimate

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-117	Instruments:	Geiger & Scintallation Counter

Project:	NMI	Date:	1/16/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-117A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Office Space next to Foundry

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	4	cuft	NM	2000	☐
Floor	Concrete	NM		NM	10000	☐
Walls	Wood	50	cuft	NM	2000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	20000	DU Contamination
file cabinet	3	16	NM	NM	Clean - Free release
table	1	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-117A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-125	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	25000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
table	2	NM	NM	NM	DU Contamination

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Cincinnati Grinder	1	5	NM	NM	Clean - Free release
Cutting Shield	1	10	NM	NM	Clean - Free release
Delta Grinder	1	5	NM	NM	Clean - Free release
HEM Ban Saw	1	100	NM	30000	DU Contamination
Hercules Lift	2	50	NM	NM	Clean - Free release
Lista Storage Box	1	25	NM	NM	Clean - Free release
Okuma Lathe	1	200	NM	NM	Oil pan 32K, DU Contamination
Parts Cleaning Station	1	5	NM	2000	DU Contamination
Storage Cart	1	5	NM	NM	DU Shaving on cart - 600K

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-125	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-216	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: File Storage (Banker Boxes)

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	15	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	13	6.5	NM	10000	DU Contamination
shelves	4	20	NM	NM	DU Contamination
table	3	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Wooden Pallet	38	96	NM	NM	Banker boxes full of files, Clean, Combustibles

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-216	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Latrix 6200	5	gal	Flammable Liquid, Wax Cleaner

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-216A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Respirator Cleaning and Repair Area - Do BE wipes!

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	Clean - Free release
file cabinet	2	16	NM	NM	Clean - Free release
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Eq.	1	50	NM	NM	Clean - Free release
Washing Machine	1	15	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-216A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-218	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☑ Yes ☐ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Major leaks southern end of room. Roof decking very rusted.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Windows	Metal Framed	10	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	120	0.5	NM	NM	DU Contamination
file cabinet	100	16	NM	NM	Clean - Free release
Misc Office Debris	1	5000	NM	NM	Clean - Free release, SCBA's, metal frame, wall partitions
table	100	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Used Wax Molds	1	250	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	C	LoggedBy:	TDM
RoomID:	C-218	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Latrix 6001	700	gal	Corrosive Liquid - estimated
Latrix 6305	500	gal	Polymer - estimated
Nacco 6005	500	gal	Collodial Silica - estimated
Waste Oil	2	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	25	2	cu/ft	

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-101	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Former Acid Pickling Area.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	7000	☐
Floor Drains	Concrete/Steel	NM		NM	4000	☐
Walls	Concrete Block	NM		NM	7000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Flammable cabinet	1	10	NM	NM	See Chemical Waste for Inventory
Misc Pumping Apparatuses	1	800	NM	NM	DU Contamination
Stainless Steel Baths	1	3000	NM	NM	DU Contamination

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-101	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	1	L	Flammable Liquid
Ammonia Hyroxide	1000	mL	???
Bonned Film Lubricant	10	lb	Flammable Solid
HCL	3	L	Corrosive Liquid
Hydroflouric Acid	500	mL	Corrosive Liquid, VERY Dangerous
Industrial Paint	4	gal	Flammable Liquid
NAO2CCH2	1	L	Disodium - Corrosive Liquid?
Nitric Acid	12	L	Corrosive Liquid
Rinse Water	55	gal	Assumed to be corrosive liquid & DU contaminated

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/11/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-103	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Main Foundry Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	60000	☑
Walls	Concrete Block	NM		NM	60000	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
AJAX Magnthemic Power	2	125	NM	NM	DU Contamination
Electra Baf Filter	1	1000	NM	NM	Highly DU Contamination
Grieve Furnace	2	250	NM	NM	DU Contamination
Main Foundry Furnance	1	18000	NM		Highly DU Contamination
Melt & Cast Crucible Coating Machine	1	7500	NM	NM	Highly DU Contamination
Mojave Graphite Rod Prep. Machine	1	50	NM	NM	DU Contamination

Project:	NMI	Date:	1/11/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-103	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Furnace Blow Down	2	Drums	Reactive Solid, Highly Contaminated DU
Graphite Powder	4	Drums	Reactive Solid, Not part of MADEP Removal?
Waste Oil	30	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
PCB Capacitor	2	5	lb	Estimate

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-104	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	140000	☐
Piping	Metal	3200	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bag House	1	300	NM	NM	DU Contamination
Cincinnati Milacron Milling Machine	1	800	NM	NM	Highly DU Contamination
Craftsmen Tool Box	2	10	NM	NM	Surface & Tool DU Contamination
Dayton Grinder	1	5		NM	DU Contamination
Flanders Filter House	1	20	NM	NM	DU Contamination
GE Transformer	1	10	NM	NM	Surface DU Contamination
Kenendy Tool Box	10	5	NM	NM	Surface & Tool DU Contamination
Lista Storage Box	6	10	NM	NM	Surface & Tool DU Contamination
MEECO Centrifuge	1	100	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-104	Instruments:	Geiger & Scintallation Counter

Misc Metal Debris	1	3500	NM	NM	Possible DU Contamination
Mori-Seiki Lathe #6	1	100	NM	NM	DU Contamination
Okuma Lathe LC30	3	400	NM	20000	DU Contamination
Okuma Lathe LC40	1	400	NM	20000	DU Contamination
Power Trak Electrical Units	2	50	NM	NM	Clean - Free release
Select-A-Torque Welder	1	5	NM	NM	Clean - Free release
Vaccum Pumps	2	15	NM	NM	DU Contamination
Wallace Gantry Lift	1	20	NM	NM	Clean - Free release
Whacheon Lathe # 5	1	100	NM	NM	DU Contamination
Whacheon Lathe #7	0	NM	NM	NM	DU Contamination
Yale Fork Lift	2	30	NM	NM	DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
DU Sludge	250	lb	Estimate, DU Contamination, Cincinnati Milacron Machine
DU Sludge Buckets	50	lb	Estimate, DU Contamination, Cincinnati Milacron Machine
Ethylene Glycol	55	gal	Flammable Liquid
Silica Sand	200	lb	Used to cool Pentrators - DU Contamination
Unknown #1	30	gal	Unknown closed top drum
Waste Oil	550	gal	Possible DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Batteries	4	20	lb	Corrosive
PCB Transformer	1	5	gal	PCB Oil, estimate

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-106	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	20000	☐
Floor	Conrete Cracks	NM		NM	100000	☐
Piping	Metal	3200	cuft	NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Cincinnati Milling Machine	1	800	NM	NM	DU Contamination
Jones&Lamson Decimetric Machine	2	100	NM	NM	Clean - Free release
Knaack Tool Box	1	100	NM	NM	Surface DU Contamination, Tools Cont.
Lockers	1	250	NM	NM	Clean - Free release
Misc . Steel Bins	1	1600	NM	NM	DU Contamination
Misc Steel Rack	1	2500	NM	NM	DU Contamination
Misc. Debris	1	4000	NM	NM	Possible DU Contamination, Unable to Access
Multiton Hand Pallet Jacks	1	10	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-106	Instruments:	Geiger & Scintallation Counter

Portable Filtration Bag House	1	100	NM	NM	DU Contamination
Precision Ovens	1	50	NM	NM	DU Contamination
SS tank	1	100	NM	NM	Possible DU Contamination
Tinius Olsen Testing Machine	1	100	NM	NM	Clean - Free release
Wooden Boxes	1	1600	NM	NM	DU Contamination

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Battery Sleeve Cells	1	1	Drum	?????
BE Waste Oil	1	1	Drum	55-gals.

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-106A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: This area also contains a BE bag house and a BE grinding containment area (made of poly and two-by-fours.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	7000	☐
Walls	Concrete Block	NM		NM	8000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Baldor Sump Suction Unit	1	50	NM	NM	DU Contamination, may contain DU liquids
Black Ultrasonic	1	100	NM	NM	DU Contamination
Degrease Unit	1	100	NM	NM	DU Contamination
Floor Scrubbersander HEPA Filters	1	10	NM	NM	Pads & Wheels DU Contamination
Hand Pallet Jack	1	10	NM	NM	DU Contamination
Parts Cleaning Unit	1	300	NM	NM	DU Contamination, possible residual sludge or li
SS Racks	1	250	NM	NM	DU Contamination
Steel Racks	1	2400	NM	20000	DU Contamination
Yale Forklift	1	20	NM	NM	DU Contamination, seat & forks

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-106A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Lubricating Oil	10	gal	Possible DU Contamination
Unknown Liquids	165	gal	3-55 gal drums not labelled.
Waste Oil	235	gal	Possible DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Car Batteries	8	15	lb	Leaking on floor

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-115	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Electrical Room

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	5000	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-115	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumed 500 cubic feet of DU/BE contaminated debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	500	NM	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116A	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumed 500 cubic feet of DU contaminated debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	500	NM	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116A	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116B	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Assumed 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	500	NM	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116B	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116C	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Aassumed 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	500	NM	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-116C	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 2500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	2500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117A	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117A	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117D	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117D	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117E	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-117E	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 5000 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination
REP Machine	1	4500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118A	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118A	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118B	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: NO ACCESS - BE PRODUCTION AREA. Assumes 500 cubic feet of contaminated DU/BE debris.

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	500	NM	NM	DU/BE Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-118B	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-201	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Womens Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Sink & Vanity	1	10	NM	NM	Clean - Free release
Toilets	2	15	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-201	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-202	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Mens Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Sink	1	5	NM	NM	Clean - Free release
Toilets	2	15	NM	NM	Clean - Free release
Urinals	2	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-202	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-203	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	32	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	25	cuft	NM	NM	☑
Walls	Sheetrock	125	cuft	NM	NM	☐
Windows	Metal Framed	5	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	2	16	NM	NM	Clean - Free release
Misc. Office Supplies	1	50	NM	NM	Clean - Free release
table	6	10	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/12/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-203	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-204	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Hallway from 2nd floor D Building Offices to bathrooms.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Stairs	Steel/Concrete	50	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-204	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-205	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	4	16	NM	NM	Clean - Free release
Misc. Office Debris	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-205	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-206	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Supplies	1	30	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-206	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-207	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-207	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-208	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-208	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-209	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	32	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	D	LoggedBy:	TDM
RoomID:	D-209	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E ELEVATOR	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Elevator	1	1000	NM	NM	DU Contamination

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E ELEVATOR	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E1 STAIRS SOUT	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	200	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E1 STAIRS SOUT	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E1 STAIRS WEST	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	200	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E1 STAIRS WEST	Instruments:	

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-102	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Mens Bathroom

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor Drains	Elevated DU	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Sink	2	5	NM	NM	Slight DU Contamination
Toilets	5	10	NM	NM	Clean - Free release
Urinals	3	2	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-102	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-104	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Combined E-105 + E104.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Linoleum	NM		NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lockers	23	20	NM	NM	Clean - Free release
Wooden Benches	20	5	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Adspray Power Washer	1	10	NM	NM	Clean - Free release
Dirt Devil Vaccum	1	2	NM	NM	DU Contamination
Mop Bucket & Broom	1	3	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-104	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-104A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Mens Shower Room

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Shower Area	1	5	NM	NM	Clean - Free release, drains slight DU Contamin

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-104A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-106	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	5000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Calliner Dryer	1	1000	NM	NM	DU/HF Contamination - Level B
Scrubber Unit	1	2500	NM	NM	DU/HF Contamination - Level B
V002 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Sludge wash ta
V601A Tank	1	250	NM	NM	DU/HF Contamination - Level B, U dissolution Ta
V601B Tank	1	250	NM	NM	DU/HF Contamination - Level B, U dissolution ta
V602 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Inert Reaction T
V603 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Buffer Tank
V604 Tank	1	250	NM	NM	DU/HF Contamination - Level B, U precip. Tank
V605 Tank	1	250	NM	NM	DU/HF Contamination - Level B, HF day tank

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-106	Instruments:	Geiger & Scintallation Counter

V606 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Recycle tank
V607 Tank	1	250	NM	NM	DU/HF Contamination - Level B,UF4 reslurry tan
V608 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Reslurry water t
V609 Tank	1	250	NM	NM	DU/HF Contamination - Level B, Water storage t
V610 Tank	1	250	NM	NM	DU/HF Contamination - Level B, emergency tank

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	300000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Battery Charger	1	2	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Industrial Cleaner	4	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Janitorial Storage.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Bathroom Supplies	1	10	NM	NM	Clean - Free release, Combustible
Lockers	4	20	NM	NM	DU Contamination
Mop Bucket	1	5	NM	NM	DU Contamination
Sink	1	5	NM	NM	Slight DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Argon Cylinder	1	Cyl.	Inert Compressed Gas

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107B	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Hallway Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	3000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Buehler Abrasive Cutting Wheels	2	15	NM	12000	DU Contamination
Clark Forklift	1	50	NM	NM	DU Contamination
GE Transformer	1	5	NM	NM	Surface DU Contamination, Clean, Release
Hertner Battery Charger	1	5	NM	NM	Surface DU Contamination, Clean, Release
Hobart Battery Charger	1	5	NM	NM	Surface DU Contamination
Industrial Sink	1	10	NM	NM	DU Contamination
Sound Enclosure Unit	1	10	NM	NM	Possible DU Contamination, Clean, Release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-107B	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-108	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
desk	1	15	NM	NM	Clean - Free release
file cabinet	2	32	NM	NM	Clean - Free release
push cart	1	5	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-108	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-109	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Tile	15	cuft	NM	35000	☑
Walls	Sheetrock	48	cuft	NM	NM	☐
Windows	Metal Framed	2	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Office Debris	1	50	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	3	30	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lista Storage Box	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-109	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Lubricant Oil	1	gal	Possible DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-110	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Shield Area as of 1/17/06.
DU rods in the SW corner of the cage. MADEP will be taking these.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Sheetrock	8	cuft	NM	NM	☐
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	7000	☐
Walls	Sheetrock	32	cuft	NM	NM	☐
Walls	Steel Grate	20	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	DU Contamination
desk	2	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Lockers	1	50	NM	NM	Clean - Free release
Mecco Safety Marking Eq.	1	25	NM	NM	Clean - Free release
Pallet Jack	1	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-110	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Aerosol Cans	10	cans	Flammable Liquid
Lubricating Oil	5	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Printers	2	2		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-111	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Sheetrock	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	8000	☐
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Eq. & Debris	1	800	NM	12000	DU Contamination
Titan Pallet Jack	1	10	NM	10000	DU Contamination

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-111	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-113	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Ladies Room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐
Walls	Tile	NM		NM	NM	☑

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Vanity	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Chairs	3	1.5	NM	NM	DU Contamination
Lockers	1	20	NM	NM	Clean - Free release
Shower Stall	4	20	NM	NM	Drains slight DU Cont.
Sink	1	5	NM	NM	Clean - Free release
Toilets	3	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-113	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-116	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	24	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Floor Drains	NM		NM	20000	☐
Floor	Tile	32	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Sheetrock	50	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	7	0.5	NM	4000	5 DU Contamination, 2 - clean
file cabinet	4	16	NM	NM	Clean - Free release
table	13	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Jones&Lamson Optical Measuring Machine	1	50	NM	NM	Clean - Free release
LecoVari-POL Centrifuge	1	20	NM	NM	DU Contamination
Misc. Debris	1	250	NM	NM	Clean - Free release
Misc. Wood	1	10	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-116	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Isopropyl Alcohol	4	L	Flammable Liquid

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	2	3	cu/ft	
Copier Machine	1	5	cu/ft	
Printer	2	3	cu/ft	

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-117	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	4000	☐
Floor	Concrete	7.5	cuft	NM	NM	☑
Walls	Sheetrock	32	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	0.5	NM	4000	DU Contamination
file cabinet	1	16	NM	NM	Clean - Free release
table	3	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
NSTRON Tensile Strenght Tester	1	20	NM	NM	Clean - Free release
Tank Cart	1	5	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-117	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Argon Cylinder	1	1	Cyl.	
Computer	1	2	cu/ft	

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-118	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: QA/QC room

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	1	15	NM	NM	Clean - Free release
file cabinet	3	16	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-118	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer & Printer	1	5	cu/ft	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-120	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Despatch Unit	1	200	NM	NM	DU Contamination
DI Unit	1	500	NM	NM	Clean - Free release
Greenbery Dryer	1	800	NM	NM	DU Contamination
Lg. Grey Despatch Machine	1	800	NM	NM	DU Contamination
Locker Room Eq.	1	200	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-120	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
2-propanol	8	L	Flammable Liquid
Acetone	8	L	Flammable Liquid
Ammonium Hydroxide	2000	mL	Corrosive Liquid
Ethyl Alcohol	8	L	Flammable Liquid
NAOH	2000	mL	Corrosive Liquid
Waste Oil	5	gal	

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-121	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	4000	☐
Floor Drains	Steel	NM		NM	12000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	4000	DU Contamination yellow chair

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
JWI Filter Press	2	100	NM	NM	DU Contamination
Sonodyne Feed Tanks - Epoxy	4	100	NM	NM	DU Contamination
Sonodyne Industries Control Panel	1	1000	NM	NM	Possible DU Surface Contamination
SS tank	4	250	NM	NM	Interior DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-121	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Coolant	4200	gal	DU Contamination. Coolant
Sulfuric Acid	55	gal	Corrosive Liquid

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-121A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	10000	☐
Floor Drains	Steel	NM		NM	12000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Brown Epoxy AGTs	1	100	NM	NM	DU Contamination, May contain DU Sludge
Coolant Pump Apparatus	1	200	NM	40000	DU Contamination
Grey Steel AGT	2	400	NM	NM	DU Contamination
Poly Tanks	2	15	NM	NM	DU Contamination
SS Acis Bath & Press	1	500	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-121A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Caustic Soda Liquid	55	gal	Corrosive Liquid
Coolant	6400	gal	DU Contamination
Lubricating Oil	15	gal	
Powder	700	lb	DU Contamination. fine powder from Sonodyne process
Sodium Hydrdroxide	165	gal	Corrosive Liquid
Unknown Drum	385	gal	Possible DU Contamination. 1 steel & 6 blue poly drums
Waste Oil	350	gal	DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Batteries	8	20	lb	Leaking/Corrosive

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-122	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Walls	Sheetrock	32	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	4000	DU Contamination yellow chair
desk	1	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-122	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer & Printer	1	2		

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-125	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Concrete Block	NM		NM	NM	☐
Walls	Sheetrock	16	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	0.5	NM	NM	Clean - Free release
desk	1	15	NM	NM	Clean - Free release
file cabinet	4	16	NM	NM	Clean - Free release
table	4	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Faxitron X-Ray Machine	1	50	NM	NM	Clean - Free release
Magnaflux Developing Area	1	200	NM	NM	Clean - Free release
SS Bath & Sink	1	200	NM	NM	Clean - Free release
Varian 936-705P Leak Detector Instrument	1	50	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-125	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	2	L	Flammable Liquid
Developer Waste	5	lb	Hazardous Waste
Pump Fluid Oil	0.5	L	
Zyglo	17	gal	Aqueous Developer

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-130	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Concrete	NM		NM	NM	☐
Floor	Concrete	NM		NM	3000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Fire Extinguisher	50	1	NM	NM	Clean - Free release, For Combustible Metal
GE Switchbox Panel	1	400	NM	NM	Clean - Free release
Heat Exchange Units	1	250	NM	NM	Clean - Free release

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-130	Instruments:	Geiger & Scintallation Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-131	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	10000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Cinncinati Milling Machine	1	300	NM	NM	Heavy DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-131	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-131A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: This area contains 28 wooden crated of BE contaminated HEPA filter and 40+ drums of BE waste, including the 2 grey drums.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	4000	☐
Floor Cracks	Concrete	NM		NM	130000	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
DU Shield Container	9	5	NM	20000	DU Contamination
Filter Press	0	100	NM	20000	DU Contamination
Hertner Battery Charger	1	5	NM	NM	Clean - Free release
Laundry	1	20	NM	NM	Clean - Free release
Locker Room Eq.	1	25	NM	NM	Clean - Free release
Pentrator Rack	1	5	NM	20000	DU Contamination
Steel Racks	1	5	NM	20000	DU Contamination
Tinus Olsen Press w/ Controls	1	200	NM	NM	Clean - Free release
Tool Box	2	10	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-131A	Instruments:	Geiger & Scintallation Counter

Wooden Pentrator Boxes	1	25	NM	30000	DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
Waste Oil	495	gal	DU Contamination from 14T press pit 20-30K CPM

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-140	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	3000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Chairs	3	1.5	NM	4000	DU Contamination, Yellow chairs

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
275 Gal. Diesel Tank	1	50	NM	NM	Clean - Free release
ABB Raymond Blast System	1	200	NM	40000	DU Contamination
CECO Mixer	1	2400	NM	NM	
Clark Forklift	1	50	NM	NM	DU Contamination
DOALL Ban Saw	1	50	NM	NM	DU Contamination
Drum Washing Area	1	500	NM	80000	DU Contamination
Lg. Blue Press	1	300	NM	NM	DU Contamination, behind machines North
Metal Shredder	1	250	NM	20000	DU Contamination
Misc. Debris	1	200	NM	NM	Possible DU Contamination

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-140	Instruments:	Geiger & Scintallation Counter

Nepture Mixer	1	2400	NM	NM	DU Contamination
Old Machine	1	1000	NM	500000	DU Contamination, center of E-140
Partek Pumping Station	0	NM	NM	NM	
Polyclon Metal Mixer	1	800	NM	40000	DU Contamination
Squish Drum Compactor	1	100	NM	NM	Surface DU Contamination
Ventilation Hood	1	100	NM	20000	DU Contamination
Yale Pallet Jack	1	50	NM	NM	DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
2-propanol	750	mL	Flammable Liquid
Diesel	275	gal	Flammable Liquid
Metal Turnings	500	lb	Roughly 40-5 gal buckets
Waste Oil	1125	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Batteries	2	20	lb	
PCB Ballast	50	2	lb	Estimate

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E1-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Hallway Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	5000	☐
Piping	Metal	4500	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Catepillar Fork Lift	1	50	NM	NM	DU Contamination
Clark Forklift	1	50	NM	NM	DU Contamination
Crown Pallet Jack	1	10	NM	NM	Surface DU Contamination, Clean, Release
GE Transformer	1	10	NM	NM	DU Contamination
Misc Steel debris	1	20	NM	NM	DU Contamination
Wooden Crates	3	15	NM	NM	DU Contamination, stored penetrators
Yale Forklift	1	50	NM	NM	DU Contamination

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E1-HALL-NORTH	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Hydraulic Oil	110	gal	Possible DU Contamination
Waste Oil & H2O	220	gal	From sump under 14T press - DU Contamination

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Metal-by-Products	30	350	lb	Starmet has stated they will be taking this product

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E1-HALL-WEST	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Hallway Area

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Drains	Metal	4500	cuft	NM	NM	☐
Floor	Concrete	NM		NM	360000	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/16/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E1-HALL-WEST	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E-201	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Room Structure - Concrete floors, Exterior/Interior walls, roof, & steel support structures are part of the overall structural quantities - See EE/CA Cost Spreadsheet.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Piping	Metal	800	cuft	NM	NM	☐
Walls	Steel Mesh	400	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	9	144	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Flander HEPA Filters	1	200	NM	NM	Clean - Free release
Landmark Power Panel	1	50	NM	NM	Surface DU Contamination
Laundry	1	100	NM	NM	Boxes of Starmet Laundry, clean, release
Misc Plastic Piping	1	100	NM	NM	Surface DU Contamination, Clean, Release
Misc Plumbing Parts	1	100	NM	NM	Clean - Free release
Misc Steel Piping	1	100	NM	NM	Surface DU Contamination
Misc. Graphite Pieces	1	250	NM	NM	Elevated DU Contamination
Multiton Hand Pallet Jacks	2	5	NM	NM	
Pumps	2	5	NM	120000	DU Contamination

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E-201	Instruments:	

Wooden Boxes	1	400	NM	NM	Stored Penetrators - DU Contamination

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	12	L	Flammable Liquid
Binder Solution	4	gal	Flammable Liquid
Diffusion Pump Oil	10	gal	
Heavy Duty Epoxy	5	gal	Flammable Liquid
Lubricating Oil	30	gal	Mobile Containers
Magnesium Zirconate	3600	lb	Reactive Solid?
Mastic Remover	5	gal	Flammable Liquid
Paint Cans	15	gal	Flammable Liquid
Paint Remover	5	gal	Flammable Liquid
Sol Trim	55	gal	Waxy thin light oil

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-205	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Steel Structure	NM		NM	NM	☐
Floor	Concrete	NM		NM	7000	☐
Walls	Concrete Block	NM		NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Conneticut Binding Brake	1	10	NM	NM	Clean - Free release
Crown Hi/Lo Lift	1	25	NM	NM	Clean - Free release
Dreis & Krump Sheet Metal Bender	1	10	NM	NM	Clean - Free release
Filtration Houses	4	200	NM	NM	Likely DU Contamination
General Exhaust Filtration Units	2	1000	NM	NM	Likely DU Contamination, E76 + E77
Hand Pallet Jack	1	10	NM	20000	DU Contamination
Katolight Generator	1	250	NM	NM	Clean - Free release
Misc Filter Boxes/Trash	1	250	NM	NM	Clean - Free release, Combustible
Misc Wire Spool	5	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-205	Instruments:	Geiger & Scintallation Counter

Misc. Spare Elec. Parts	1	3000	NM	NM	Clean - Free release
Old Motor Pumps	4	5	NM	40000	DU Contamination
Power Washer	1	10	NM	NM	Clean - Free release
Quincy Air Compressor	1	100	NM	NM	Clean - Free release
Rapid Electric Transformer	1	100	NM	NM	Clean - Free release
Spence Vaccum Pumps	3	200	NM	NM	Clean - Free release
Steel Container	1	100	NM	2000	slight DU Contamination
Tool Crib	1	2500	NM	NM	Slight DU Contamination
Walker-Tirner Drill Press	1	10	NM	NM	Clean - Free release
Wysong Sheet Metal Cutter	1	10	NM	NM	Clean - Free release

Chemical Waste

Chemical Name	Volume	Units	Comment
Peel Stop Paint	22	gal	Flammable Liquid
Waste Oil	110	gal	

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Flourescent Light Bulbs	50	10	cu/ft	
PCB Ballast	10	2	cu/ft	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-211	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
desk	1	15	NM	NM	Clean - Free release
file cabinet	2	32	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-211	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-212	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, Nitrile gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	3	1.5	NM	4000	Yellow Cloth Chairs
file cabinet	2	32	NM	NM	Clean - Free release
Misc. Debris	1	10	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Fre Release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-212	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-213	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
file cabinet	2	32	NM	NM	Clean - Free release
Misc. Office Debris	1	10	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-213	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-214	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	Yellow Cloth Chairs
desk	3	45	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-214	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-215	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	50	cuft	NM	NM	☐
Floor	Tile	50	cuft	NM	NM	☑
Walls	Sheetrock	150	cuft	NM	NM	☐
Windows	Metal Framed	7.5	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc Office Debris	1	10	NM	NM	Clean - Free release
shelves	2	40	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-215	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2005
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-215A	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile Gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Stairwell	Steel/Concrete	50	cuft	NM	4000	☑

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2005
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-215A	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-216	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile Gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
Misc. Debris	1	10	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-216	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Printers	2	1	cu/ft	Total 2 cu/ft, Clean - Free Release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-217	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft			☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	10	5	NM	NM	DU Contamination
Misc. Office Debris	1	20	NM	NM	Clean - Free release
table	2	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-217	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-218	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile Gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	10	NM	NM	Clean - Free release - Combustible
shelves	2	40	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-218	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-219	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	6	3	NM	NM	DU Contamination
file cabinet	1	16	NM	NM	Clean - Free release
Misc. Office Debris	1	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-219	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Fluorescent Light Bulbs	100	10	cu/ft	May contain mercury

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-220	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Booties, Tyvek, Safety Glasses & Nitrile gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
file cabinet	1	16	NM	NM	Clean - Free release
Misc. office debris	1	10	NM	NM	Clean - Free release
shelves	1	20	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-220	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-221	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1		4000	DU Contamination
desk	2	30	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-221	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computer	1	2	cu/ft	Clean - Free release

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-223	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Removable contamination is the floor dust and associated dust pan and broom.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1		NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
desk	1	15	NM	NM	Clean - Free release
Misc Paper Debris	1	15	NM	NM	Clean - Free , Combustible Material

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-223	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-224	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses & Nitrile gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: Room E-224 includes Room E-222 - One big room.

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	16	cuft	NM	NM	☐
Floor	Tile	15	cuft	NM	2000	☑
Walls	Sheetrock	40	cuft	NM	NM	☐
Windows	Metal Framed	2	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	20	NM	NM	Clean - Free release
shelves	4	80	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-224	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Computers	2	7.5	cu/ft	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-225	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	CT	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	NM	DU Contamination
file cabinet	1	16	NM	NM	Clean - Free release
table	2	20	NM	NM	Clean - Free release, (drafting & easel table)

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-225	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-226	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile Gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	24	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	DU Contamination; Yellow Cloth Chairs
desk	1	15	NM	NM	Clean - Free release
file cabinet	1	16	NM	NM	Clean - Free release
Misc. bags of rags	1	1	NM	3000	DU Contamination
shelves	2	40	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-226	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-227	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM		☑
Walls	Sheetrock	32	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	1	0.5	NM	NM	DU Contamination
Misc. Office Debris	1	10	NM	NM	Clean - Free release - Combustible

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2006
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-227	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/17/2005
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-228	Instruments:	Geiger & Scintallation Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Safety Glasses, & Nitrile Gloves

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Ceiling	Ceiling Tiles	8	cuft	NM	NM	☐
Floor	Tile	7.5	cuft	NM	NM	☑
Walls	Sheetrock	32	cuft	NM	NM	☐
Windows	Metal Framed	1	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
chair	2	1	NM	4000	Cloth Yellow Chairs
file cabinet	1	16		NM	Clean - Free release
Misc. Debris	1	10	NM	NM	Clean - Free release

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Project:	NMI	Date:	1/17/2005
BuildingID:	E	LoggedBy:	TDM
RoomID:	E-228	Instruments:	Geiger & Scintallation Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
None Recorded	NM		

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
Fluorescent Light Bulbs	250			Includes the entire Bldg E Offices & Mezzanines

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_B1-2	LoggedBy:	TDM
RoomID:	Shed_B1-2	Instruments:	Geiger Meter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

There were no structures documented in this room

Furniture

There was no furniture documented in this room

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Equipment	1	1000	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_B1-2	LoggedBy:	TDM
RoomID:	Shed_B1-2	Instruments:	Geiger Meter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D1	LoggedBy:	TDM
RoomID:	Shed_D1	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Walls	Wood	250	cuft	NM	NM	☐

Furniture

There was no furniture documented in this room

Equipment

There was no equipment documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D1	LoggedBy:	TDM
RoomID:	Shed_D1	Instruments:	Geiger Counter

Chemical Waste

There was no chemical waste documented in this room

Universal Waste

There was no universal waste documented in this room

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D2	LoggedBy:	TDM
RoomID:	Shed_D2	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	2000	☐
Walls	Wood	200	cuft	NM	NM	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Distillation Unit	1	100	NM	NM	Clean - Free release

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D2	LoggedBy:	TDM
RoomID:	Shed_D2	Instruments:	Geiger Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Acetone	15	gal	Flammable Liquid

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Project:	NMI	Date:	1/11/2006
BuildingID:	Tank_House	LoggedBy:	TDM
RoomID:	Tank_House	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☑ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☑ Yes ☐ No

If yes, PPE Requirements: Tyvek, Yellow Booties, Nitrile Gloves, Safety Glasses

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Room Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Floor	Concrete	NM		NM	2000	☐
Walls	Wood	NM		NM	500	☐

Furniture

Type of Material	Quantity of Item	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
None Recorded	0	NM	NM	NM	

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Misc. Debris	1	250	NM	NM	Clean - Free release
Pumps	1	100	NM	NM	DU Contamination
USTs	2	200	NM	12000	Possibly contain 2-3' of DU Sludge

Project:	NMI	Date:	1/11/2006
BuildingID:	Tank_House	LoggedBy:	TDM
RoomID:	Tank_House	Instruments:	Geiger Counter

Chemical Waste

Chemical Name	Volume	Units	Comment
Hydraulic Oil	5	gal	
MEK	55	gal	According to label, Flammable Liquid

Universal Waste

Waste Name	# of Items	Volume per Item	Units	Comment
None Recorded	0	NM		

Building Inventory

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Project:	NMI	Date:	
BuildingID:	A	LoggedBy:	
RoomID:	A-Roof	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
22 Gauge Metal Decking	Steel	NM		NM	NM	☐
Roof	Tar & Stone	8800	cuft			☑

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
AC Unit	1	18	NM	NM	No Known Contamination
Exhaust Fan	1	25	NM	NM	DU/BE Contamination
Exhaust Fan	2	18	NM	NM	Caferteria Exhaust Fans
Exhaust Fan	1	25	NM	NM	ChemLab, DU/BE Contamination
Exhaust Fan	1	25	NM	NM	DU/BE Contamination
Exhaust Fan	1	25	NM	NM	Possible DU Contamination
Exhaust Fan	1	25	NM	NM	Possible DU Contamination
Exhaust Fan	1	25	NM	NM	DU Contamination, Exhaust Capped Off
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination

Project:	NMI	Date:	
BuildingID:	A	LoggedBy:	
RoomID:	A-Roof	Instruments:	

Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
Heated Fan Unit	1	25	NM	NM	Possible DU Contamination
HEPA Filtration System	1	25	NM	NM	DU/BE Contamination
Ventilation Unit	1	18	NM	NM	No Known Contamination
Ventilation Unit	1	18	NM	NM	No Known Contamination
York HVAC Unit	1	25	NM	NM	Cafeteria HVAC

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C-Roof	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
0	0	NM		NM	NM	☐

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Air Exhaust Unit	1	280	NM	NM	DU/BE Contamination - Big Wooden Sheds
Air Exhaust Unit	1	140	NM	NM	DU Contamination
Condenser AC Unit	1	70	NM	NM	No Known Contamination
Exhaust Fan Unit	1	140	NM	NM	DU Contamination, Above 1400 Ton Press
Exhaust Fan Unit	1	280	NM	NM	DU,Zir,BE Contamination, 36" vent line to BE pro
Exhaust Fan Unit	1	140	NM	NM	DU Contamination, Steel Powder,Oil Aeresol.
Exhaust Fan Unit	1	140	NM	NM	DU Contamination, Steel Powder,Oil Aeresol.
Exhaust Fan Unit	1	140	NM	NM	DU Contamination, Ban-Saw
Foundry Ventilation Exhaust Fan	1	140	NM	NM	DU Contamination
Heated Fan Unit	1	140	NM	NM	DU Contamination
Hood Ventilation	1	140	NM	NM	DU Contamination/Unfiltered
Intake Air Unit	1	140	NM	NM	No Known Contamination
Intake Air Unit	1	140	NM	NM	No Known Contamination
Intake Air Unit	1	140	NM	NM	No Known Contamination

Project:	NMI	Date:	
BuildingID:	C	LoggedBy:	
RoomID:	C-Roof	Instruments:	

Pulse Bag Exhaust Fan	1	140	NM	NM	DU/BE Contamination
Recirculating Heat Unit	1	140	NM	NM	DU Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-Roof	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☑ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain: rtrtrt trtr

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
0	0	NM		NM	NM	☐

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Heated Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	Possible DU Contamination
Heated Fan Unit	1	96	NM	NM	BE Contamination
Heated Fan Unit	1	96	NM	NM	No Known Contamination
HVAC	1	48	NM	NM	No Known Contamination
Intake Air Unit	1	96	NM	NM	No Known Contamination
Intake Air Unit	1	96	NM	NM	No Known Contamination
Intake Air Unit	1	96	NM	NM	No Known Contamination
Roof Top Heating Unit	1	96	NM	NM	DU Contamination
Supply Ait Intake Vent	1	48	NM	NM	No Known DU Contamination
AC Unit	1	96	NM	NM	No Known Contamination
AC Unit	1	96	NM	NM	No Known Contamination

Project:	NMI	Date:	
BuildingID:	D	LoggedBy:	
RoomID:	D-Roof	Instruments:	

Acid Vent	1	96	NM	NM	Possible DU Contamination; Sulfuric & Hydrogen
Acid Vent	1	96	NM	NM	Possible DU Contamination; Sulfuric & Hydrogen
Acid Vent	1	96	NM	NM	No Known DU Contamination
Exhaust Fan Unit	1	96	NM	NM	BE Contamination - Active
Exhaust Fan Unit	1	96	NM	NM	Possible DU Contamination
Exhaust Fan Unit	1	96	NM	NM	Possible DU Contamination
Exhaust Fan Unit	1	96	NM	NM	Possible DU Contamination
Exhaust Fan Unit	1	96	NM	NM	REP #9; Cad,Chromium, Titanium Contaminatio
Exhaust Fan Unit	1	96	NM	NM	REP #9 Area, Cad, Chromium, Titanium Contam
Exhaust Fan Unit	1	96	NM	NM	DU Contamination; Foundry Area
Exhaust Fan Unit	1	96	NM	NM	DU Contamination; Foundry Area
Exhaust Fan Unit	1	96	NM	NM	DU Contamination; Former Reduction Area
Exhaust Fan Unit	1	96	NM	NM	DU Contamination; DU Grinders/Machining
Exhaust Fan Unit	1	96	NM	NM	DU Contamination; Machine Area
Exhaust Fan Unit	1	96	NM	NM	DU Contamination
Exhaust Fan Unit	1	96	NM	NM	DU Contamination
Exhaust Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	DU Contamination
Heated Fan Unit	1	96	NM	NM	DU Contamination

Project:	NMI	Date:	
BuildingID:	E	LoggedBy:	
RoomID:	E-Roof	Instruments:	

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☐ < 1,000 dpm / Gross Reading	☐ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
0	0	NM				☑

Equipment

Equipment Type	Quantity	Volume (cu/ft)	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Comment
Exhaust Fan Unit	0	NM			
Exhaust Fan Unit	1	96	NM	NM	Bathroom Exhaust
Exhaust Fan Unit	1	96	NM	NM	Bathroom Exhaust

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D1	LoggedBy:	TDM
RoomID:	Shed_D1-Roof	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Roof	Wood	250		NM	NM	☐

Equipment

There was no equipment documented in this location

Project:	NMI	Date:	1/11/2006
BuildingID:	Shed_D2	LoggedBy:	TDM
RoomID:	Shed_D2-Roof	Instruments:	Geiger Counter

Health and Safety Survey

Removable Contamination Levels	General Area Dose Rate
☐ > 1,000 dpm / Gross Reading	☐ > 1 mrem/hr
☑ < 1,000 dpm / Gross Reading	☑ < 1 mrem/hr

Does room need a radiological work permit? ☐ Yes ☑ No

If yes, PPE Requirements

Beryllium Wipe Result: Not Collected

PID Survey Result: 0.0 PPM

General Observations

Current Leaks ☐ Yes ☑ No

Electrical Safety Issues ☐ Yes ☑ No

If answer is yes to any of the above, Explain:

Roof Survey

Structure

Structure	Type of Material	Vol/Area of Material	Units	Removable Contamination (dpm/ Gross Reading)	Fixed Contamination (cpm/ Gross Reading)	Presence of ACM
Roof	Wood	250	cuft	NM	NM	☐

Equipment

There was no equipment documented in this location

Appendix F

Chemical List from Chemistry and Metallography Labs

Chemical Inventory	Chem Lab (2nd flr)									
Name	Chemical Formula	Supplier	Quantit	Ca	Te	Mut	P	Ox	Rac	Comments
(1,2-cyclohexylenedinitrilo)	C14H22N2O8	J.T Baker	50 g							
tetraacetic acid										
(2,9-Dimethyl-1,10-	(CH3)2C12H6N2	GFS	25 g							
Phenanthialine)										
(2,9-Dimethyl-1,10-	(CH3)2C12H6N2	GFS	25 g							
Phenanthialine)										
(2,9-Dimethyl-1,10-	(CH3)2C12H6N2	GFS	75 g							
Phenanthialine)										
(2,9-Dimethyl-1,10-	(CH3)2C12H6N2	GFS	15 g							
Phenanthialine)										
1,10-Phenonthraline Monohy	C12H6N2*H2O	GFS	15 g							
Acetonitrile	CH3CN	Aldrich	1 ltr							
Aluminum Hydroxide	Al(OH)3	Alfa Aesar	500 g	-	-	-	-	-	-	
Aluminum Sulfate	Al2(SO4)3*18H2)	Fisher	2 Kg				X			
Ammonium Acetate	CH3COONH4	Fisher	100 g	-	-	-	-	-	-	
Ammonium Acetate	CH3COONH4	Fisher	500 g	-	-	-	-	-	-	
Ammonium Acetate	CH3COONH4	Fisher	500 g	-	-	-	-	-	-	
Ammonium Acetate	CH3COONH4	Fisher	500 g	-	-	-	-	-	-	
Ammonium Acetate	CH3COONH4	Fisher	500 g	-	-	-	-	-	-	
Ammonium Acetate	CH3COONH4	Fisher	500 g	-	-	-	-	-	-	
Ammonium BiFluoride	NH4HF2	E.M Science	500 g				X			
Ammonium BiFluoride	NH4HF2	E.M Science	500 g				X			
Ammonium BiFluoride	NH4HF2	Fisher	200 g				X			
Ammonium Carbonate	(NH4)2CO3	J.T Baker	0.5 lb				X			
Ammonium Carbonate	(NH4)2CO3	Fisher	200 g				X			
Ammonium Chloride	NH4Cl	J.T Baker	500 g				X			
Ammonium Citrate (Di Basic)	(NH4)HC6H5O7	Fisher	1 lb	-	-	-	-	-	-	
Ammonium Citrate (Di Basic)	(NH4)HC6H5O7	J.T Baker	0.5 lb	-	-	-	-	-	-	
Ammonium Diuranate	(NH4)2U2O7	Cerac	5 kg							99.50%
Ammonium Fluoride	(NH4)F	Allied Chem					X			
Ammonium Molybdate	(NH4)6Mo7O24*4H2	J.T Baker	0.5 lb				X			
Ammonium Sulfite	NH4SO3	Mallinkrodt	1 lb				X			
Ammonium Tartrate	(NH4)2C4H4O6	Fisher	300 g	-	-	-	-	-	-	
Analytical grade anion	200-400 mesh chloride fo	Biorad	0.25 lb	-	-	-	-	-	-	
Analytical grade anion	20-50 mesh chloride fo	Biorad	0.5 lb	-	-	-	-	-	-	
Analytical grade cation	100-200 mesh H form	J.T Baker	1 lb	-	-	-	-	-	-	
Antimony Trifluoride	SbF3	Aldrich	100 g							
Ascarlite		Lece	500 g				X			
Barium Chloride	BaCl2	Fisher	500 g				X			
Barium Sulfate	BaSO4	Fisher	500 g	-	-	-	-	-	-	
Boric Acid	H3BO3	J.T Baker	200 g				X			
Boric Acid	H3BO3	Fisher	200 g				X			
Boric Acid	H3BO3	ChemPure	500 g				X			
Boric Acid	H3BO3	ChemPure	100 g				X			
Boric Acid	H3BO3	Fisher	10 Kg				X			
Bromoform	CHBr3	Aldrich	50 g							

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad	Comments
Bromothymol Blue		Fisher	0.5 pt	-	-	-	-	-	-	
Bromothymol Blue		Fisher	500 ml	-	-	-	-	-	-	
Cadmium Nitrate	Cd(NO3)2*4H2)	Fisher	500 g	X			X	X		
Calcium Chloride Dihydrate	CaCl2*2H2O	J.T Baker	300 g				X			
Carbon Black Acetylene		Alfa Aesar	250 g	-	-	-	-	-	-	
Ceric Ammonium Nitrate	(NH4)2Ce(NO3)6	GFS						X		
Ceric Ammonium Sulfate	(NH4)4Ce(SO4)4*2H	GFS		-	-	-	-	-	-	
Chloroform	CHCl3	Fisher	1 ltr							
Citric Acid Monohydrate	HOC(COOH)(CH2COOH	J.T Baker	0.75 lb	-	-	-	-	-	-	
Citric Acid Monohydrate	HOC(COOH)(CH2COOH	J.T Baker	0.25 lb	-	-	-	-	-	-	
Copper Sulfate	CuSO4	NMI	3 lb	-	-	-	-	-	-	
Cupric Acetate	Cu(CH3COO)2*H2O	Fisher	500 g				X			
Cupric Acetate	Cu(CH3COO)2*H2)	Fisher	500 g				X			
Cupric Chloride Dihydrate	CuCl2*2H2O	J.T Baker	400 g				X			
Cupric Nitrate	Cu(NO3)2*2.5H2O	Fisher	500 g				X	X		
Cupric Sulfate	CuSO4	J.T Baker	0.5 lb				X			
d-Tartaric Acid	HOOC(CHO2H)2CO	J.T Baker	1 lb	-	-	-	-	-	-	
Dowex-1 Chloride Form IER		Sigma	50 g	-	-	-	-	-	-	
Dowex-21K-Cl anion ER		Aldrich	1 Kg	-	-	-	-	-	-	
Dowex-CCR3-IER		Aldrich	1 Kg	-	-	-	-	-	-	
EDTA Disodium Salt	Na2C10H14O8N2*2H	Fisher		-	-	-	-	-	-	
EDTA Disodium Salt	Na2C10H14O8N2*2H	Fisher		-	-	-	-	-	-	
EDTA Disodium Salt	Na2C10H14O8N2*2H	Fisher	200 g	-	-	-	-	-	-	
EDTA Disodium Salt	Na2C10H14O8N2*2H	J.T Baker	0.5 lb	-	-	-	-	-	-	
Exchange resin (AG1-X8)										
Exchange resin (AG3-X4A)										
Exchange resin (AG50W-X8)										
Ferric Nitrate	Fe2(NO3)3*NH2O	J.T Baker	1 lb	-	-	-	-	-	-	
Ferric Sulfate	Fe2(SO4)3*NH2O	J.T Baker	1 lb							
Ferrous Sulfate	FeSO4*7H2O	Mallinkrodt	1 lb	-	-	-	-	-	-	
Germanium Chloride	GeCl4	Aldrich	1 g							99.999%
~~Germanium Dioxide~~	GeO2	GFI	1000 g		SOLD TO I[3]					100.00%
Hydrazine Dihydrochloride	HClNH2NH2HCl	Fisher	500 g	X			X			
Hydrazine Sulfate		Alfa Products	150 g	X			X			
Hydrogen Peroxide	H2O2	Denison	8 oz				X	X		
Hydroxylamine Hydrochloride	NH2OH*HCl	J.T Baker	200 g				X			
Hydroxylamine Hydrochloride	NH2OH*HCl	J.T Baker	500 g				X			
Hydroxylamine Hydrochloride	NH2OH*HCl	J.T Baker	300 g				X			
Ilmenite	FeTiO3	USPigCorp	2 lb							
Ion exchange resin (ANGA-316)		J.T Baker	0.5 lb	-	-	-	-	-	-	
Ion exchange resin C-267		J.T Baker	0.75 lb	-	-	-	-	-	-	
Ion exchange resin CGC-270	100-200 mesh ionic form	J.T Baker	1 lb	-	-	-	-	-	-	
Ionic ion exchange resin C-249		Sybron		-	-	-	-	-	-	
Lead (II) Oxide, powder	PbO	Aldrich	100 g		X	X	X			99.9%;<10micrn
Lithium Hydroxide	LiOH	Alfa Aesar	100 g				X			
Lithium Metaborate	LiBO2	GFS	0.5 lb	-	-	-	-	-	-	
Magnesium Oxide	MgO	Mallinkrodt	0.5 lb				X			

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad	Comments
Magnesuim Nitrate	Mg(NO3)2*6H2O	Fisher	500 g				X	X		
Mandelic Acid	C6H5CHOOHCOOH	J.T Baker	100 g				X			
Mercuric Acetate	Hg(CH3COO)2	Fisher	100 g				X			
Mineral Oil		Baker	500 ml							USP grade
Molecular Sieves		Fisher	500 g							
NF Thymol	C10H14O	Fisher	25 g	-	-	-	-	-	-	
Nickel Chloride	NiCl2	Alfa Aesar	100 g	X			X			
Nickelous Nitrate Hexohydrat	Ni(NO3)2*^H2O	Kodak	500 g	X			X	X		
Niobium Oxide	Nb2O5*H2O		15 g				X			
Oxalic Acid Dihydrate	H2C2O4*2H2O	E.M Science	1 Kg				X			
Oxalic Acid Dihydrate	H2C2O4*2H2O	J.T Baker	1 lb				X			
Oxalic Acid Dihydrate	H2C2O4*2H2O	J.T Baker	1 lb				X			
Phenolphtalein	C4H4COOC(C6H4-4	J.T Baker	200 g							
Phosphorus Pentoxide	P2O5	Fisher	500 g	-	-	-	-	-	-	
Phosphorus Pentoxide	P2O5	Fisher	500 g	-	-	-	-	-	-	
Phosphorus Pentoxide	P2O5	Fisher	500 g	-	-	-	-	-	-	
Phosphorus Pentoxide	P2O5	Fisher	500 g	-	-	-	-	-	-	
Phosphorus Pentoxide	P2O5	Fisher	500 g	-	-	-	-	-	-	
Potash, sulfarated	K2Sn	Alfa Aesar	500 g				X			
Potassium Fluoride	KF	J.T Baker	1 L				X			
Potassium Fluoride	KF	J.T Baker	25 g				X			
Potassium Metaphosphate	KPO3	Alfa Products	500 g							
Potassium Permanganate	KMnO4	Fisher	500 g				X	X		
Potassium Permanganate	KMnO4	Fisher	500 g				X	X		
Potassium Permanganate	KMnO4	Fisher	500 g				X	X		
Potassium Permanganate	KMnO4	Fisher	500 g				X	X		
Potassium Phosphate	K3PO4*H20	Alfa Products	500 g				X			
Potassium Phosphate	K3PO4	Fisher	500 g				X			
Potassium Phosphate Monob	KH2PO4	J.T Baker	1 lb	-	-	-	-	-	-	
Potassium Tetraborate	K2B4O7*4H2O	Alfa Products	500 g							
Potassium Thiocyanate	KSCN	Fisher	100 g				X			
Rexyn-102 (H)		Fisher	1 lb	-	-	-	-	-	-	
Silicon Oxide	SiO2	Alfa Aesar	2 Kg							
Silver Acetate	CH3COOAg	Fisher	25 g				X			
Silver Nitrate	AgNO3	Fisher	100 g				X	X		
Silver Nitrate	AgNO3	Fisher	100 g				X	X		
Silver Nitrate	AgNO3	J.T Baker	1 lb				X	X		
Silver Nitrate	AgNO3	Alfa Produc	1 lb				X	X		
Silver Nitrate	AgNO3	Mallinkrodt	0.5 lb				X	X		
Silver Nitrate (empty bottle)	AgNO3									
Silver Nitrate (empty bottle)	AgNO3									
Silver Nitrate (empty bottle)	AgNO3									
Sodium Acetate	NaC2H3O2*3H2O	Mallinkrodt	1 lb	-	-	-	-	-	-	
Sodium Bicarbonate	NaHCO3	unknown	50 g							
Sodium BiSulfite	NaHSO3	Merck	100 g				X			
Sodium Borate	Na2B4O7*10H2O	Fisher	500 g				X			
Sodium Borate	Na2B4O7*10H2O	Alfa Produc	1 Kg				X			
Sodium Carbonate	Na2CO3	J.T Baker	1 lb				X			

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad	Comments
Sodium Carbonate	Na2CO3	J.T Baker	1 lb				X			
Sodium Carbonate	Na2CO3	Mallinkrodt	1 lb				X			
Sodium Citrate	Na3C6H5O7*2H2O	J.T Baker	1 lb	-	-	-	-	-	-	
Sodium Diethyldithiocarbom	(CH3CH2)2*3H2ONC	Fisher	100 g	-	-	-	-	-	-	
Sodium Diethyldithiocarbom	(CH3CH2)2*3H2ONC	Baker	100 g	-	-	-	-	-	-	
Sodium Dimethylglyoximate	(CH3)2C2(NONa)2*	J.T Baker	0.25 lb				X			
Sodium Dimethylglyoxine Octohydr	(CH3CNONO)2*8H2	GFS	1 lb				X			
Sodium Hexametaphosphate	(NaPO3)6	J.T Baker	3 Kg				X			
Sodium Hydrosulfite	Na2S2O4	Fisher	500 g							
Sodium Hydroxide Anhydrous	NaOH	Alfa Aesar	0.25 Kg				X			
Sodium Hydroxide solution	NaOH	Fisher	1 L				X			
Sodium Hypochloride	NaOCl5	Fisher	1 L							
Sodium Hypophosphite	NaH2PO2*H20	MCB	1 lb	-	-	-	-	-	-	
Sodium Hypophosphite	NaH2PO2*H2O	Allied	1 lb	-	-	-	-	-	-	
Sodium Molybdate	Na2MoO4*2H2O	Spectrum	100 g				X			
Sodium Silicate Solution	Na2O(SiO2)X(H2O)Y	Fisher	1 L	-	-	-	-	-	-	
Sodium Sulfate Anhydrous	Na2SO4	Fisher	200 g				X			
Sodium Sulfate Anhydrous	Na2SO4	Fisher	500 g				X			
Sodium Sulfate Anhydrous	Na2SO4	Fisher	500 g				X			
Sodium Sulfate Anhydrous	Na2SO4	Fisher	500 g				X			
Sodium Sulfate Anhydrous	Na2SO4	Fisher	500 g				X			
Sodium Sulfate Anhydrous	Na2SO4	Fisher	500 g				X			
Sodium Tartrate	Na2C4H4O6*@H2O	Fisher	1 lb	-	-	-	-	-	-	
Sodium Tartrate	Na2C4H4O6*@H2O	Fisher	1 lb	-	-	-	-	-	-	
Sodium Tetrahydridoborate	NaBH4	Alfa Aesar	25 g							
Sodium Thiosulfate	Na2S2O3*5H2O	J.T Baker	1 lb				X			
Sodium Tungstate	Na2WO4*2H2O	J.T Baker	1 lb	-	-	-	-	-	-	
Sodium Vanadate	NaVO3*NH2O	Fisher	100 g							
Stannous Chloride	SnCl2*2H2O	Fisher	500 g				X			
Sulfur powder sublimed	S	Alfa Aesar	500 g	-	-	-	-	-	-	
Synthetic ion exchange resin		Rohm Haas		-	-	-	-	-	-	
Synthetic ion exchange resin		Rohm Haas		-	-	-	-	-	-	
Tannic Acid	C76H52O46	Aldrich	100 g				X			
Titanium Dioxide	TiO2	USPigCorp	2 lb							
Titanium Hydroxide	Ti(OH)4	USPigCorp	2 lb							
Titanium Oxide - Rutile	TiO2	USPigCorp	2 lb							
Titanium Oxide - Rutile-Granular	TiO2	USPigCorp	2 lb							
Titanium Tetrafluoride	TIF4	ARC	100 g							
1,1,1 Trichloroethane	CCl3CH3	Aldrich	100 ml							99.5%, anhyd
Trioctylphosphine Oxide	(CH3(CH2)7)3PO	J.T Baker	5 g				X			
Uranyl Acetate	(CH3COO)2UO2*2H	J.T Baker	0.5 lb							
Uranyl Peroxide	UO4*2H2O	Starmet	1 lb							
	(NH4)2SO4	Starmet	15 g							
WERF ash surrogate	SiO2+ZnO+K2O+Na2O	in house mix	480 g	X	X	X	X			19 metal oxides
	includes As,Pb,Cd, ++									

Chemical Inventory Metallography Lab

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad	Comments	
2-Propanol	CH3COHCH3	J.T Baker	500 ml				X				
2-Propanol	CH3COHCH3	J.T Baker	500 ml				X				
2-Propanol	CH3COHCH3	J.T Baker	500 ml				X				
2-Propanol	CH3COHCH3	J.T Baker	500 ml				X				
Acid Tannic		Mallinkrodt	75 g				X				
Aluminum Chloride (anhydrou	AlCl3	Alfa Aesar	50 g								
Aluminum Fluoride	AlF3	Alfa Aesar	25 g				X				
Aluminum Fluoride	AlF3	Alfa Aesar	250 g				X				
Aluminum Lithium Silicate	LiAl(SO3)2	Alfa Aesar		-	-	-	-	-	-		
Aluminum Oxide Powder	Al2O3	Buehler	.5 lb				X				
Aluminum, Granules	Al	Johnson-Matthey	520 g							99.9%,2-10mm;2 bottles	
Aluminum Powder	Al	Alcan Metal	5 lbs	-	-	-	-	-	-		
Aluminum Wool	Al										
Ammonium BiFluoride	NH4HF2	E.M Science	450 g				X				
Ammonium BiFluoride	NH4HF2	E.M Science	400 g				X				
Ammonium BiFluoride	NH4HF2	E.M Science	300 g				X				
Ammonium BiFluoride	NH4HF2	Aldrich	500 g				X				
Ammonium Chloride	NH4Cl	J.T Baker	450 g				X				
Ammonium Chloride	NH4Cl	J.T Baker	400 g				X				
Ammonium Chloride	NH4Cl	J.T Baker	350 g				X				
Ammonium Diuranate	(NH4)U2O7	Cerac	5kg				X		X		
Ammonium Hydroxide	NH4OH	Lab Chem	475 ml				X				
Ammonium Oxalate	(COONH4)2*H2O	Alfa Aesar	400 g				X				
Ammonium Peroxydisulfate	(NH4)2S2O8	Fisher	500 g					X			
Ammonium Perrhenate	NH4ReO4	Chase	10 g								
Ammonium Persulfate	(NH4)2S2O8	J.T Baker	375 g					X			
Ammonium Persulfate	(NH4)2S2O8	J.T Baker	425 g					X			
Ammonium Phosphate	NH4H2PO4	J.T Baker	400 g	-	-	-	-	-	-		
Ammonium Phosphate	NH4H2PO4	J.T Baker	450 g	-	-	-	-	-	-		
Ammonium Phosphate	NH4H2PO4	J.T Baker	500 g	-	-	-	-	-	-		
Ammonium Tartrate	(NH4)2C4H4O6	J.T Baker	250 g	-	-	-	-	-	-		
Antimony (III) Chloride	SbCl3	Alfa Aesar	500 g	-	-	-	-	-	-		
Barium Chloride	BaCl2	Alfa Aesar	500 g								
Barium Fluoride	BaF2	Alfa Aesar	100 g								
Barium fluoride	BaF2	Aldrich	100 g								

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad		
Bentonite	(Al,Fe1.67Mg.33)SIO10(OH)2	Whittaker	4 lb	X			X				
Benzoic Acid	C6H5COOH	Mallinkrodt	100 g	-	-	-	-	-	-		
Beryllium Fluoride	BeF2										
Bismuth (III) Oxide	Bi2O3	Alfa Aesar	250 g							99% purity	
Boric Acid	H3BO3	E.M Science	300 g				X				
Boron Oxide	B2O3	Johnson-Mathey	250 g	-	-	-	-	-	-		
Boron Oxide	B2O3	Alfa Aesar	100 g	-	-	-	-	-	-		
Boron Oxide	B2O3	Alfa Aesar	500 g	-	-	-	-	-	-		
Cadmium Chloride	CdCl2	J.T Baker	50 g	X							
Cadmium Chloride	CdCl2	Alfa Aesar	100 g	X							
Cadmium Chloride	CdCl2	Alfa Aesar	100 g	X							
Calcium Carbide	CaC2	Johnson-Mathey	1 kg				X				
Calcium Chloride	CaCl2	J.T Baker	200 g	-	-	-	-	-	-		
Calcium Chloride	CaCl2	J.T Baker	400 g	-	-	-	-	-	-		
Calcium Fluoride	CaF2	Fisher	200 g		X	X	X				
Calcium Hydrogen Phosphate	CaHPO4	Alfa Aesar	1000 g								
Calcium Silicate, ortho	2CaO*SiO2	Alfa Aesar	50 g								
Calcium Silicide	CaSi2	Alfa Aesar	100 g								
Castoglas Hardner			10 ml								
Castoglas Hardner		Buehler	25 ml								
Castoglas Resin		Buehler									
Chromium Oxide	CrO3	E.M Science	500 g	X	X	X	X	X			
Citric Acid, monohydrate, AC	H3C6H5O7	Alfa Aesar	500 g	-	-	-	-	-	-	99.0-102.0% assay	
Copper, powder	Cu	Alfa Aesar	250 g/btl							10 micron; 2 bottles	
Copper Aluminum	Cu-Al	no vendor								plastic bottle	
Copper (I) Sulfide	Cu2S	Alfa Aesar	250 g				X				
Copper (II) Chloride	CuCl2	Alfa Aesar	200 g				X				
Cooper Powder	Cu						X				
Copper Powder	Cu	Alfa Aesar	500 g				X				
Cu Electromount											
Cuprous Chloride	CuCl	E.M Science	225 g				X				
Diethyl ether	(C2H5)2O	Alfa Aesar	500 g								
Ethylene Glycol							X				
Ferric Chloride	FeCl3*6H2O	J.T Baker	10 g				X				
Ferric Chloride	FeCl3*6H2O	Fisher	250 g				X				
Ferric Nitrate	Fe(NO3)3*9H2O	J.T Baker	1 lb					X			

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad		
Fisher Super Friendly Air-It		Fisher	11 oz								
Fisher Super Friendly Air-It		Fisher	11 oz								
Fluorodichloromethane	CHFCl2	Aldrich	50 g							nonflammable	
Freon 113	CCl3CF3	E.M Science								SEM prep room	
Germanium Oxide	GeO2	Puratronic					X				
Hafnium Oxide	HfO2	Western Zirconium	100 g							radioactive material	
Household Oil (3 In 1)		Boyle Midway	3 fl oz								
Iodized Salt		JP Foodservice	100 g								
Iron, lump	Fe	Johnson-Mathey	1 kg							12x12x12 mm and down	
Iron (III) Oxide	Fe2O3	Alfa Aesar					X				
Iron Silicide	FeSi2	Alfa Aesar	25 g								
Iron (II) Titanium Oxide, 99.8+%	FeTiO3	Alfa Aesar	50 g								
Iron (III) Titanium Oxide, 99.9%	Fe2TiO5	Alfa Aesar	10 g								
Jewelers Rouge Powder		Buehler	350 g								
Lead (II) Chloride	PbCl2	Alfa Aesar	500 g		X	X	X				
Lithium Fluoride	LiF	Fisher	250 g				X				
Lithium Phosphate	Li3PO4	Alfa Aesar	1000 g								
Magnesium, chips	Mg	Johnson-Mathey	420 g							99.98%; -4+11 mesh	
Magnesium Chloride	MgCl2	Alfa Aesar	500 g				X				
Magnesium Fluoride	MgF2	Alfa Aesar	25 g				X				
Magnesium Fluoride	MgF2	Alfa Aesar	300 g				X				
Magnesium Fluoride	MgF2	Alfa Aesar	100 g				X				
Magnesium Fluoride	MgF2	Starmet					X				
Magnesium Fluoride	MgF2	no vendor	250 g				X				
Molybdenum (IV) Oxide 99%	MoO2	Alfa Aesar	25 g								
Molybdenum (VI) Oxide 99.95	MoO3	Alfa Aesar	100 g								
Molybdic Acid	MoO3	Mallinkrodt	350 g				X				
Nickel (powder)	Ni	Alfa Aesar	100 g							99.9% , -100 to 200 mesh	
Nickel Chloride Hexahydrate	NiCl2*6H2O	E.M Science	900 g	X			X				
Nickel Sulfate	NiSO4	E.M Science	900 g	X			X				
Oakite 61A											
Oxalic Acid	H2C2O4*2H2O	E.M Science	2 kg				X				
Polyvinyl Alcohol		J.T Baker	500 g	X			X				
Potassium Bifluoride	KHF2	Aldrich	500 g								
Potassium Bromide	KBr	Merck	250 g				X				
Potassium Carbonate	K2CO2	Alfa Aesar	500 g				X				

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad		
Potassium Chloride 99-100.5%	KCl	Alfa Aesar	1000 g								
Potassium Chloride	KCL	Fisher	50 g	-	-	-	-	-	-		
Potassium DiChromate	K2Cr2O7	E.M Science	75 g					X			
Potassium Ferri Cyanide	K5Fe(CN)6	J.T Baker	200 g					X			
Potassium Ferro Cyanide	K4Fe(CN)6	Mallinkrodt	110 g					X			
Potassium Fluoride	KF	Alfa Aesar	250 g				X	X			
Potassium Hexafluorotitanate	K2TiF6	Aldrich	500 g								
Potassium Hydrogen Phosphate		Alfa Aesar	250 g								
Potassium Hydroxide	KOH	Aldrich	300 g					X			
Potassium m-BiSulfite	K2S2O5	J.T Baker	20 g					X	X		
Potassium Permanganate	KMnO4	Mallinkrodt	250 g					X	X		
Potassium Persulfate	K2S2O8	Alfa Aesar	250 g						X		
Potassium Sodium Tartrate	KOCO(CHOH)2COONa•4H2O	J.T Baker		-	-	-	-	-	-		
Potassium tetrafluoroborate	KBF4	Aldrich	500 g								
Pumice		Hess	2 lb	X			X				
Resin Two (Cu & Cu alloys)											
Sampl-Kwick Liquid		Buehler	12 fl oz								
Sampl-Kwick Powder		Buehler	1 lb								
Selenium (IV) Oxide	SeO2	Alfa Aesar	100 g				X			99.4% metals basis	
Silica Gel Dessicate		J.T Baker									
Silica Gel Dessicant (3-8 mesh)		Fisher									
Silicon, chunks	Si	no vendor	800 g								
Silicon Carbide 99.8%	SiC	Alfe Aesar	100 g								
Silicon Carbide Powder (1000 Grit)		Buehler		-	-	-	-	-	-		
Silicon Carbide Powder (120 Grit)		Buehler		-	-	-	-	-	-		
Silicon Carbide Powder (240 Grit)		Buehler		-	-	-	-	-	-		
Silicon Carbide Powder (400 Grit)		Buehler		-	-	-	-	-	-		
Silicon Carbide Powder (600 Grit)		Buehler		-	-	-	-	-	-		
Silicon disulfide	SiS2	Alfe Aesar	25 g								
Silicone Fluid		GE Silicones	1 pint								
Sil-O-Spar	(Na,K,Ca)AlSi3O8	Feldspar Corp	1 lb	X			X				
Silver(I) Fluoride	AgF	Alfa Aesar	5 g							98% assay	
Silver, pellets	Ag	no vendor	75 g								
Sodium Aluminium Oxide	Al2O3Na2O	Alfa Aesar		-	-	-	-	-	-		
Sodium BiCarbonate	NaHCO3	Mallinkrodt	50 g								
Sodium Bifluoride	NaHF2	Aldrich	1000 g								

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad		
Sodium BiSulfate	NaHSO4	J.T Baker	350 g				X				
Sodium BiSulfite		J.T Baker	1 lb								
Sodium Cobalt Nitrite		Fisher	50 g								
Sodium DiChromate	Na2Cr2O7*2H2O	Fisher	250 g								
Sodium Fluoride	NaF	Merck	.5 lb				X				
Sodium Fluoride	NaF	Fisher	300 g				X				
Sodium Fluoride	NaF	Alfa Aesar	250 g				X				
Sodium Hexafluoroaluminate	Na3AlF6	Alfa Aesar	500 g								
Sodium Hexafluorosilicate	Na2SiF6	Alfa Aesar					X				
Sodium Hydroxide	NaOH	Alfa Aesar	2000 g				X				
Sodium Hydroxide	NaOH	VWR	350 g				X				
Sodium Metasilicate	Na2SiO3	Alfa Aesar									
Sodium Molybdate	Na2MoO4*2H2O	E.M Science	250 g								
Sodium Nitrate	NaNO3	J.T Baker	300 g								
Sodium Phosphate	Na3PO4	Alfa Aesar	500 g								
Sodium PyroPhosphate	Na4P2O7*10H2O	Mallinkrodt	300 g								
Sodium Sulfate 99%	Na2SO4	Alfa Aesar	500 g								
Sodium Sulfite	Na2SO3	Kodak									
Sodium Sulfite	Na2SO3	Kodak									
Sodium tetrafluoroborate	NaBF4	Aldrich	500 g								
Sodium Tetraborate	Na2B4O8	Alfa Aesar	1000 g								
Sodium Thiosulfate	Na2S2O3	E.M Science	400 g								
Stearic Acid	C18H36O2	Fisher	450 g	-	-	-	-	-	-		
Talc		Mallinkrodt									
Talc		CMI	1 lb								
Tantalum (V) Oxide	Ta2O5	Alfa Aesar	50 g							99% metals basis	
Tellurium (IV) Oxide	TeO2	Alfa Aesar	50 g							Technical grade	
Titanium (IV) Oxide	TiO2	Johnson-Mathey	240 g	-	-	-	-	-	-		
Titanium (IV)Oxide, anatase99	TiO2	Alfa Aesar	25 g							metals basis	
Titanium Carbide	TiC	Johnson-Mathey	50 g	-	-	-	-	-	-		
Titanium Nitride	TiN	Johnson-Mathey	50 g	-	-	-	-	-	-		
Trifluoromethane (fluoroform)	CHF3	Aldrich	229 g							nonflammable	
Tris(hydroxymethyl)aminomethane		Alfa Aesar	250 g								
Tungsten powder	W	Johnson-Mathey	4.7 kg							99.9%; 12 micron; 3 bottles	
Tungsten (IV) Oxide	WO2	Alfa Aesar	25 g	-	-	-	-	-	-		
Tungsten (VI) Oxide, 99.8%	WO3	Alfa Aesar	100 g							metals basis	

Name	Chemical Formula	Supplier	Quantity	Ca	Te	Mut	P	Ox	Rad		
Tungsten Oxide, 99.99%	WO2.9	Alfa Aesar	50 g							metals basis	
Uranium Tetrafluoride	UF4	Starmet / CMI	14.5kg				X		X	green salt from Uf6 conv.	
Urea	(NH2)2CO	Mallinkrodt	400 g								
Zinc shot	Zn	Johnson-Matthey	250 g							99.9%; 2-14 mesh	
Zinc Chloride	ZnCl2	Alfa Aesar	1000 g		X	X					
Zinc Stearate		Fisher	400 g				X				
Zirconium Carbide	ZrC	Johnson-Mathey	50 g	-	-	-	-	-	-		
Zirconium Nitride	ZrN	Johnson-Mathey	25 g	-	-	-	-	-	-		
Zirconium Oxide	ZrO2	Johnson-Mathey	200 g	-	-	-	-	-	-		
Zirconium Oxide	ZrO2	Western Zirconium	50 g								
L											

Powder Lab Chemical Inventory

Name	Strength or Purity	Mass or Volume	Size	Dimensions
Benzoyl Peroxide	97%	50g	-	-
Poly(methyl methacrylate)	-	100g	-	-
Stearic Acid	99+%	5g	-	-
Agar	-	100g	-	-
Poly(ethylene glycol)	-	250g	-	-
Acrysol WS-24	-	3.63kg	-	-
Polypropylene	-	250g	-	-
Methacrylamide	98%	250g	-	-
Poly(ethylene-co-vinyl acetate)	-	250g	-	-
Hydroxypropyl methylcellulose	-	-	-	-
1-Dodecanethiol	98+%	100mL	-	-
Methylcellulose	-	-	-	-
Poly(methyl methacrylate)	-	500g	-	-
Poly(butyl methacrylate)	-	250g	-	-
Poly(ethylene-co-acrylic acid)	-	100g	-	-
Paraffin Wax	-	1kg	-	-
Polyvinyl Alcohol	99-99.8%	1kg	-	-
Boron Nitride Coating Type V	-	-	-	-
Boron Nitride Coating Type S	-	-	-	-
Boron Nitride Coating Type S	-	-	-	-
Boron Nitride Coating Type E	-	-	-	-
4-Methoxyphenol	99%	5g	-	-
Aluminum Shot	99.9%	500g	-	-
Niobium Powder	99.8%	500g	-60 mesh	-
Tungsten Powder	99.9%	2kg	12 micron	-
Titanium Powder	99.9%	500g	-100 mesh	-
Copper-2%Boron	-	-	-	-
Copper-2%Boron	-	-	-	-
Niobium Powder	99.8%	500g	-325 mesh	-
Tin Powder	-	-	-325 mesh	-
Antimony Powder	99.999%	250g	-200 mesh	-
Antimony Powder	99.999%	5g	-200 mesh	-
Antimony Powder	99.999%	5g	-200 mesh	-
Antimony Powder	99.999%	5g	-200 mesh	-
Antimony Powder	99.999%	5g	-200 mesh	-
Tungsten Powder	-	10g	1-5 micron	-

Titanium Powder	99.9%	500g	-100 mesh	-
Niobium Powder	99.8%	500g	-325 mesh	-
Tantalum Powder	99.98%	100g	-60 mesh	-
Tantalum Powder	99.98%	100g	-60 mesh	-
Tantalum Powder	99.98%	100g	-60 mesh	-
Titanium Boride	99.5%	50g	-325 mesh	-
Titanium Boride	99.5%	50g	-325 mesh	-
Titanium Boride	99.5%	50g	-325 mesh	-
Titanium Boride	99.5%	50g	-325 mesh	-
Titanium Boride	99.5%	50g	-325 mesh	-
Vanadium Slugs	99.9%	250g	-	-
Tungsten Powder	99.95%	100g	-200/+325 mesh	-
Copper Powder	-	-	-	-
Aluminum Powder	-	2 lbs.	-	-
Aluminum Powder	-	2 lbs.	-	-
Aluminum Powder	-	2 lbs.	-	-
Zirc	-	-	-	-
MG Granules	-	-	-	-
Aluminum Powder	-	-	-20/+65 mesh	-
Molybdenium Powder	-	3 lbs.	-	-
Magnesium Rod	99.9%	1kg	-100 mesh	-
Magnesium Rod	99.8%	-	-	3.3cm diameter x 30cm length
Magnesium Rod	99.8%	-	-	3.3cm diameter x 30cm length
Silicon Rod	99.8%	-	-	3.3cm diameter x 30cm length
	-	-	-	-

Powders Lab / Matt Stephens	Chemicals list								
Name	**Supplier**	**Quantity**	**Ca**	**Te**	**Mut**	**P**	**Ox**	**Rad**	
Agar		250 g	-	-	-	-	-	-	
Benzoyl peroxide		5 g				X	X		
Butyl methacrylate		100 ml				X			
Dibutyl phthalate		100 g				X			
Dodecanethiol		5 ml				X			
Gallium Indium Tin Eutectic		5 Kg	-	-	-	-	-	-	
Glycerine		250 ml	-	-	-	-	-	-	
Heptane		1 L				X			
High MW Poly(methyl methacrylate)		250 g	-	-	-	-	-	-	
Hydroquinone monomethyl ether		5 g	-	-	-	-	-	-	
Inhibitor removal column		N/A	-	-	-	-	-	-	
Low MW Poly(methyl methacrylate)		100 g	-	-	-	-	-	-	
Methyl methacrylate		500 ml		X	X	X			
Paraffin wax		1 Kg	-	-	-	-	-	-	
PbO, <10 micron		100 g				X			
Poly(butyl methacrylate)		250 g	-	-	-	-	-	-	
Poly(ethylene glycol) Mn~1500		250 g				X			
Poly(ethylene-co-vinyl acetate) 25 wt% VA		500 g	-	-	-	-	-	-	
Polyethylene/Acrylic Acid		100 g				X			
Polypropylene		250 g	-	-	-	-	-	-	
Stearic acid		5 g	-	-	-	-	-	-	
TiAl(6%)V(4%)		1 Kg	-	-	-	-	-	-	
Titanium powder (-44 um)		500 g	-	-	-	-	-	-	
WERF Ash surrogate		100 g	-	-	-	-	-	-	

Appendix G

MADPH Radiation Protection Program Assessment
October/ November 2006

Starmet NMI

Radiation Protection Program Assessment

October 30 – November 2, 2006

I. Introduction

The Starmet (formerly Nuclear Metals, Inc.) site, located at 2229 Main Street, Concord, Massachusetts (the Site), has been on the U.S. Environmental Protection Agency's (EPA) list of priority sites (the Superfund list) since 2001. While in operation, the facility manufactured depleted uranium (DU) projectiles and armor plates for the U.S. military. Production activities have ceased at the site, and only a skeleton crew remains while remediation progresses. Portions of the unrestricted area are used to manufacture artificial joints and other devices for implantation in human patients. The Commonwealth of Massachusetts asked Philotechnics to assess current activities at the site for compliance with the requirements of 105 CMR 120, Standards for Protection Against Radiation, in particular the radiation exposure limits to workers and members of the public. The specific rules are summarized below, followed by references to the appropriate section of the regulations.

- Workers who are monitored for radiation exposure and trained to handle radioactive materials are limited to a total effective dose equivalent (TEDE) of 5 rem in a calendar year (105 CMR 120.211).

- The licensee shall monitor any individual who is likely to receive, in a calendar year, a radiation dose from internal or external sources in excess of 10% of the limits for occupational dose (105 CMR 120.226).

- Individual members of the public are limited to no more than 100 mrem in a calendar year from licensed activities and storage of licensed material (105 CMR 120.221). When demonstrating compliance with this limit, licensees are required to consider all sources (internal and external) except for planned releases to sanitary sewerage (105 CMR 120.222).

This document describes the conduct of the assessment, findings of non-compliance with regulatory requirements or License conditions, and annual dose predictions to workers and members of the public from licensed activities.

Findings are listed in the appropriate sections below.

Radiological Characterization

Numerous hazardous materials may exist at the site. For purposes of this assessment, only radiological hazards were considered. Radiological characterization data obtained to date

indicate the site is contaminated with depleted uranium, approximately 0.2% by weight ^{235}U. The isotopes ^{234}U, ^{235}U, and ^{238}U are assumed to be present in the following proportions:

	^{238}U	^{235}U	^{234}U
uCi/gram of each U isotope	3.3E-01	2.1E+00	6.2E+03
Fraction of Total Uranium Atoms	9.98E-01	2.00E-03	7.00E-06
Fraction of Total Activity	8.7E-01	1.1E-02	1.2E-01

Daughter products are removed during the refining process and are assumed to be absent at the time the U metal is first manufactured. The following short-lived daughters grow in rapidly, however, and are considered to be present in secular equilibrium:

From ^{238}U: ^{234}Th and ^{234m}Pa

From ^{235}U: ^{231}Th

From ^{234}U: None

All other daughters in the decay chains would take hundreds of years to build up to appreciable levels, and are therefore ignored.

II. Documents Reviewed

Massachusetts License No. SM-0179, Amendment 17
Radiation Protection Program, originally submitted as a license application supplement September 6, 1996
Radiological Work Permits
Radiation Safety Committee minutes
Instrument calibration records for all instruments on site
Thermoluminescent dosimeter (TLD) results
Results of routine contamination surveys
Results of unconditional release surveys
Environmental air sample results
Stack sample results
Individual breathing zone air sample results
MACTEC technical memorandum from Heath Downey dated September 26, 2005

III. Individuals Interviewed

David Schlier
Cary Williams

IV. Assessment Process

The assessment included interviews with the individuals directly responsible for program implementation and oversight. Evaluation of regulatory compliance and radiation protection program implementation included presence of required instrumentation, use of personal protective equipment, completion of required surveys, posting, and labeling.

Results of soil samples taken in 2004 were reviewed, and dose was calculated for the sample showing the highest concentration of depleted uranium.

Survey records were reviewed for both routine performance and response to "off-normal" conditions (e.g., elevated contamination levels). Instruments were evaluated for proper selection for radiation to be measured and compliance with program requirements.

Radiological posting and observance of boundaries were observed.

Surveys were performed to evaluate proper posting, adequacy of radiological controls, and radioactive material control. Assessment team members spent one or two minutes scanning random surfaces in each room or office in the unrestricted area; restricted areas were screened by walking through and randomly selecting surfaces to scan. Locations having elevated readings were evaluated further with static counts and/or smears.

Waste containers in unrestricted areas were monitored using a Bicron MicroRem meter. The assessment team found no evidence of licensed material in those containers.

V. Results

1. MANAGEMENT OVERSIGHT:

The facility possesses several thousand pounds of source material, work areas are contaminated to several hundred thousand dpm/100 cm^2, radiological postings do not adequately warn personnel of conditions, and radioactive material is present throughout unrestricted areas. Despite these conditions, the RSO is contracted to work eight hours per week.

FINDING A: The RSO is not named on the License.

2. AMENDMENTS AND PROGRAM CHANGES:

The license was last amended in 2001 (Amendment 17).

The Radiation Protection Program was last updated in 1996. It was included as a supplement to the original license application to the Commonwealth when Massachusetts became an Agreement State.

3. FACILITIES:

The following radioactive material is authorized under the License:

Byproduct, source, and/or special nuclear material	Chemical and/or physical form	Maximum amount that the licensee may possess at any one time under this license
Uranium	Depleted uranium metal	675,000 kg
Americium 241	Analytical samples	12 nCi
Curium 242	Analytical samples	12 nCi
Curium 244	Analytical samples	12 nCi
Plutonium 239	Analytical samples	12 nCi
Uranium	Uranium tetrafloride	2,236,380 kg
Uranium	Contaminated solids and process wastes	660,000 kg
Transuranics and technecium-99 contaminants in depleted uranium	Contained in DU metal	Not to exceed a total of 100 pCi/g of each transuranic, and not to exceed 500 pCi/g total for all transuranics. Not to exceed 500 pCi/g of Tc-99.

FINDING B: The facilities are contaminated with process wastes consisting of various uranium compounds. The License specifies all contaminated solids, UF_4, and process waste must be contained in approved shipping containers.

The License authorizes storage and use of radioactive material at 2229 Main Street, Concord, MA.

Site security is provided by keyed access. There is no security force. Access to areas where licensed material is used or stored (restricted areas) is controlled administratively. Only authorized individuals are granted unescorted access.

4. EQUIPMENT AND INSTRUMENTATION:

FINDING C: At least one survey (8/28/2006) for unconditional release was performed using an instrument that was not calibrated to measure beta-gamma contamination (44-9 probe #10565).

FINDING D: Pancake G-M detectors are not properly calibrated or used. NUREG 1556, Volume 12, instructs licensees to carefully evaluate radiation detection instrumentation prior to using it for a specific purpose. Furthermore, 105 CMR 120.225 requires licensees to select instruments that are calibrated for the radiation being measured. Thin window Geiger-Mueller (G-M) detectors are calibrated with ^{137}Cs to measure dose rate; they are then used in the field to

measure beta dose rate from depleted uranium. This practice fails to meet the requirement of 105 CMR 120.223 and NRC Information Notice 93-030.

- ^{137}Cs emits a 662 keV photon and a 511 keV (Max) beta. Depleted uranium emits 4 MeV alphas, a 2.2 MeV (Max) beta, and several low-energy betas and photons.
- Because nearly half the effective surface area of a pancake detector is covered by a thin window, it is highly dependent upon geometry
- Beta dose rates are typically recorded in units of mrad/hour and are understood to be beta only in order to measure and report the potential hazard to the skin or lens of the eye from external sources. For this reason industry practice is to use an "open-window minus closed window" method, then applying a beta correction factor that is specific to the instrument and the beta emitter of concern.

Because of improper calibration and use of instruments, the validity of personnel contamination monitoring and unconditional release surveys performed over the life of the license is questionable.

5. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL:

Radiological surveys are performed weekly by radiation protection personnel. Weekly lab survey records were reviewed with discrepancies noted.

FINDING E: Stack samples have not been demonstrated to be representative of the radioactivity in the air stream being introduced to the environment as required by NRC Regulatory Guide 4.15. To meet this requirement, samples should be collected under isokinetic conditions.

FINDING F: Total contamination levels are recorded in units of mR/hour using an instrument that is improperly calibrated for such purpose. 105 CMR 120.015 requires activity to be expressed in Bequerels or Curies (or their multiples) or disintegrations per minute.

FINDING G: Total (fixed plus removable) contamination levels are incorrectly measured as "fixed" only, contrary to NRC Regulatory Guide 1.86.

FINDING H: Radioactive material is present throughout the unrestricted areas. Contaminated chairs, carpeting, floor tile, and equipment are present in numerous locations and are accessible to individuals not trained as radiation workers and not monitored for radiation exposure. Artificial human joints are manufactured in those areas. During a walkthrough of office areas, the assessment team found a chair in a second floor office, in an unrestricted area, that was contaminated to 18,000 dpm/100 cm^2. Individuals not trained to work with radioactive materials could remove this radioactive material from the site.

FINDING I: Radioactive contamination over 6000 dpm/100 cm^2 was found in the lobby, which is accessible to the general public. A member of the public could remove contaminated carpet or tile from the site.

FINDING J: Radioactive contamination over 150,000 dpm/100 cm^2 was discovered on the roof above the unrestricted area.

FINDING K: A 15-lb. container of a Ni-Cr-Th compound was discovered on a shelf in Room A-146, outside the restricted area. Dose rate on contact is 1.6 mrem/hour.

6. TRAINING AND INSTRUCTIONS TO WORKERS:

Workers who routinely enter restricted areas are trained as radiation workers. Workers who do not enter restricted areas receive awareness-level training.

FINDING L: Radioactive material – in the form of contaminated areas, equipment and furniture – is present in unrestricted areas and is used by individuals not fully trained to work safely with radioactive material.

7. RADIATION PROTECTION:

FINDING M: The Radiation Protection Program (page S-5-1) states, "All employees are issued film badges." Many employees are not monitored for radiation exposure; those who are monitored are issued Landauer OSL dosimetry.

8. POSTING AND LABELING:

FINDING N: 105 CMR 120.240 requires each container of radioactive material to be labeled "Caution – Radioactive Material." Many containers were observed in the restricted areas with no visible labels.

FINDING O: Radiological postings are not in accordance with 105 CMR 120.237, 120.238, and NUREG 1736:

- **The exit from building C to the clean area hallway is posted as a Radiation Area.**
- **Buildings C and E are posted as airborne radioactivity areas. A review of air sampling data for the current year indicates those areas do not meet the requirements for such posting. NUREG 1736 instructs licensees to not post areas that do not exist or, through process knowledge, are not expected to exist.**
- **The beryllium area entry airlock in Building D is posted as an airborne radioactivity area and a radiation area. Neither of those areas exist in**

Building D, although the assessment team did not enter the beryllium area.

- **Buildings C and E are posted as radiation areas. The requirement for posting a radiation area is 5 mrem/hour at 30 cm from the source, deep dose (NRC Q&A number 85). No such area exists in those buildings. Rather than posting an entire building, discrete radiation areas should be posted if they exist, in accordance with NUREG 1736.**
- **Most outdoor entrances to contaminated areas are not posted at all.**

9. DOSE CALCULATIONS

Shallow Dose Equivalent

Shallow dose to the skin of the whole body from office chairs was evaluated using VARSKIN Mod 2. Because ^{234m}Pm is not supported by VARSKIN, ^{90}Y was used as a surrogate. The measured contamination level was assumed to be on contact with the surface of the chair. Because an individual sitting in the chair would be in direct contact, no air gap was used. It is assumed the individual wears clothing of 1 mm thickness having a density of 1. Using this assumption, a contamination level of 1 uCi/100 cm2 (2,220,000 dpm/100 cm2) produces a skin dose to an individual of 26 mrad/hour.

Most yellow or orange chairs in the office areas had detectable contamination, averaging approximately 5000 dpm/100 cm2. One chair in a second floor office was specifically pointed out to the ES&H manager. That chair, in daily use, had fixed contamination as high as 18,328 dpm/100 cm2 beta. Using the assumptions stated above, that could result in an individual receiving a dose of 0.2 mrad/hour to the skin. A full-time worker using that chair for an entire working year (2080 hours) would receive an annual dose to the skin of approximately 0.4 rem.

Total Effective Dose Equivalent

Dosimetric Considerations and Models

External photon radiation from all uranium isotopes is quite low regardless of enrichment. Maximum expected deep dose rate is about 3 mrem/hour at 30 cm from the surface. Pure natural uranium metal reads approximately 230 mrad/hour on contact, mostly from the decay of ^{234m}Pa (maximum 2.28 MeV beta).

Previous analyses performed at Starmet indicate the material at the site is approximately 56% Class D and 44% Class Y. Those fractions are incorporated into the Radiation Protection Program and are used in this assessment. Airborne radioactivity is evaluated using the assumption that exposure to 1 DAC over a working year (2000 hours) results in a committed effective dose equivalent (CEDE) of 5 rem.

Surface contamination is assumed to be present in the isotopic ratios discussed above. For evaluating potential dose from external radiation and resuspension of radioactive material, 1% of the total radioactivity present as surface contamination is assumed to be removable; that is consistent with the survey results of the assessment team. Surface contamination was evaluated using RESRAD Build 3.3. While all three uranium isotopes present are alpha emitters, it is usually easier and more accurate to measure beta activity in the field. Beta contamination monitoring, using ^{90}Sr efficiency (the 2.28 MeV (E_{max}) beta from ^{90}Y is very similar to that emitted from ^{234m}Pa) is the most reliable method of detecting and measuring surface contamination from DU.

	Branch %	Emax	%	Eave	AVG energy per decay
^{234}Th	100	0.103	21	0.034	0.007
	100	0.193	79	0.064	0.051
^{234m}Pa	99.87	2.29	98	0.763	0.747
^{231}Pa	9.13	0.53	66	0.177	0.011
	9.13	1.13	13	0.377	0.004
Total average beta energy per each ^{238}U decay:					0.820

Soil Contamination was evaluated using the industrial template of RESRAD Version 6.3. This template uses most of the RESRAD default parameters but eliminates exposure pathways normally associated with use of the property as farmland. Soil samples were collected by MACTEC in the fall of 2004. The lead assessor reviewed the tabulated results of the report and evaluated the potential dose using the highest concentration of ^{238}U present in the soil. The highest concentration, from sample number SSRI01006019 was 24.9 pCi/g ^{234}U, 3.35 pCi/g ^{235}U, and 189 pCi/g ^{238}U. Using RESRAD, the annual dose to an individual would be approximately 5 mrem.

Ambient dose rates were measured in the unrestricted areas. The lower level of Buildings A/B averaged 10 μrem/hour; the upper level averaged 8 μrem/hour. Outdoor areas averaged approximately 6 μrem/hour.

Airborne radioactivity was not measured outside the restricted area, because Starmet's sampling program includes a number of environmental samples. The ambient airborne radioactivity concentration averages less than $1x10^{-15}$ uCi/ml – equivalent to an annual dose of less than one mrem.

Annual Dose Worksheet

The Annual Dose Worksheet was developed in Excel using the models and assumptions discussed in this document. It will work only for DU, and as configured, will work only for the Starmet site. It is not intended for use as a dosimetry method. Its intended use is to evaluate the potential dose to individuals present in a given area where no dosimetry records, or incomplete records, exist. At each monitoring point, the user should record (as applicable) ambient dose rate, soil contamination levels,

airborne radioactivity levels, and total surface contamination levels. Working the equations provided will give the approximate annual TEDE to a full-time employee at that monitoring point.

The worksheet is attached to this document for reference and is ready for field use. An electronic version, developed using Microsoft Excel, was used for the assessment.

Annual dose calculations for "worst-case" areas are included with this report. The specific calculations used in the worksheet are included as Attachment 2

10. ATTACHMENTS

1. Annual Dose Worksheet example
2. Calculations embedded in Annual Dose Worksheet
3. Resume of assessment team leader
4. Radiological survey results
5. Air sample results
6. Massachusetts Radioactive Materials license No. SM-0179, Amendment No. 17

Annual Dose Worksheet

Date:_____

Site:_____ Location:_____

Surface Contamination (Record in units of dpm/100 cm^2)						
TOTAL (If measured)	Alpha	x	1.34E-5	=	Enter in the space below the larger of the values in the four shaded boxes to the left:	
	Beta	x	7.63E-6	=		
REMOVABLE (If measured)	Alpha	x	0.962	=		
	Beta	x	0.394	=		mrem/year

Soil Contamination (Record in units of pCi/g)					
	^{234}U	x	5.33×10^{-3}	=	mrem/year
	^{235}U	x	1.11×10^{-1}	=	mrem/year
	^{238}U	x	2.67×10^{-2}	=	mrem/year

Airborne Radioactivity (Record in units of µCi/ml)							
ISOTOPIC (If available)	^{234}U	x	1.16×10^{14}	=		Enter sum of values in boxes to the left in the box below:	
	^{235}U	x	1.15×10^{14}	=			
	^{238}U	x	1.15×10^{14}	=			
					TOTAL		Enter in the space below the largest of the values in the three shaded boxes to the left:
GROSS ALPHA-BETA (If available)	Alpha	x	1.15×10^{14}	=			
	Beta	x	1.98×10^{14}	=			mrem/year

Ambient Dose Rate (Record in units of mrem/hour)						
	mrem/hour	x	2080	=		mrem/year

TOTAL ANNUAL TEDE (sum of all values in heavy boxes)		**mrem/year**

Annual Dose Worksheet Embedded Equations and Assumptions

Surface Contamination

Resrad-Build uses the assumption that 10% of the total activity is removable. Nearly 100% of the expected dose would be due to removable contamination; therefore, if 100% of the contamination was removable, the dose would increase by a factor of 10. Conversely, if all of the contamination is fixed, then the dose decreases significantly. Resrad-Build was run using ^{238}U, ^{235}U, and ^{234}U in the proportions shown above, along with short-lived daughter products. Dose from fixed contamination was determined in Resrad assuming 0.1% of the contamination is removable. Only the largest value (alpha or beta, fixed or removable) is entered. Default occupancy fraction is used.

half-tris L10 dap → 100 dap

Airborne radioactivity

Using the assumptions that radioactive material at Starmet is 56% Class D and 44% Class Y, and that breathing air at 1 DAC for an entire working year, the dose per μCi/ml is calculated based on an effective DAC.

$$mrem_{U238} = 5000 \div \frac{1}{\frac{.56}{Class\ D\ DAC} + \frac{.44}{Class\ Y\ DAC}} \quad \text{for } ^{238}U.$$

The calculation is repeated for ^{235}U and ^{234}U. All three values are then summed.

Soil Contamination

The dose from soil contamination is determined directly from ResRad using the industrial template.

Ambient Dose Rate

The dose from ambient dose rate is calculated by multiplying the general area dose rate by the number of hours an individual is expected to be present in the area. A full time employee is expected to be present 2080 hours per year.

GLENN RICHARD MARSHALL, CHP, RRPT

EDUCATION

Thomas Edison State College; Trenton, NJ: BS, Radiation Protection, 2002
Navy Nuclear Power School; Orlando, FL, 1980

CERTIFICATIONS

American Board of Health Physics
National Registry of Radiation Protection Technologists (NRRPT)

SUMMARY OF EXPERIENCE

- Internal and external dosimetry
- Wide range: Navy nuclear power, DOE, radwaste, D&D
- Procedure/program development
- Supervisory and management in applied health physics, ALARA, and dosimetry
- Containment design, ventilation design, process engineering
- Licensing
- Radioactive material transportation
- Technical writing
- Production management
- MS Office software, Microshield, HIS-20

PROFESSIONAL WORK HISTORY

PHILOTECHNICS (1/05 - present) Health Physicist, Radiation Safety Officer

- Radiation Safety Officer for five (5) radioactive materials licenses
- Perform independent Radiation Protection Program audits for customers
- Conduct radiation protection training
- Consulting health physicist for projects and clients throughout the country
- Radiological engineering

SAFETY AND ECOLOGY CORP (8/03-1/05) Health Physicist; (6/01-2/02) RCT

- Radiological Engineering
- Radiological Control Technician
- Procedure development, review, and approval

DURATEK (2/02-8/03) RADCON Supervisor; (2/98-6/01) Radiological Engineer, Dose Tracking System Administrator, Dosimetry Supervisor

- Developed radiological controls program for operations at DOE mixed waste burial site
- Dosimetry and dose tracking for 1000 monitored workers
- Containment design
- Wrote procedures and work plans
- Designed containment and developed work plan for dismantling Pu-contaminated gloveboxes
- Assisted with design of facility to sort Rocky Flats Pu-contaminated waste
- Preliminary ALARA engineering for steam generator abrasive decontamination project

MOLTEN METAL TECHNOLOGY (12/96-11/97) RADCON Supervisor, ALARA Engineer, Count Room Supervisor, Dosimetry Supervisor

- Supervised a staff of 12 technicians
- Wrote and approved work packages and RWP's
- Wrote all radiological control procedures
- Designed containment around resin dewatering centrifuge

SCIENTIFIC ECOLOGY GROUP (SEG) (3/93-12/96) Lead Health Physics Technician

- Acted as HP shift supervisor with responsibility for 6 technicians
- Supervised RADCON for incineration, supercompaction, waste sorting, shredder, resin drying, source encapsulation, decontamination, and secondary waste handling

INTERSTATE NUCLEAR SERVICES (currently UNITECH) (3/88-3/93) Asst. Plant Manager

- Maintained Licenses
- Supervised up to 100 employees including RCTs
- Prepared all hazardous material shipping manifests.
- Trained drivers and other HAZMAT personnel.
- Maintained motor vehicle licenses and permits.
- Wrote all operating procedures.
- Handled dosimetry for up to 100 monitored workers.
- Calibrated and repaired instruments.

US NAVY (1979-1987) Engineering Laboratory Technician, RADCON Shift Supervisor

- Nuclear propulsion plant operation
- Quality Assurance
- Reactor plant chemistry and radiological controls
- Performed and supervised maintenance of nuclear submarines

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building: Starmet	Survey Unit C Building		Page 1 of 1
Survey Unit Description First and Second Floors			
Survey Completed by: Glenn Marshall		Date: 10/31/06	
Survey Completed by: Steve Kapetan		Date: 10/31/06	

Inst. #1	Inst Type: Selectra	Inst. S/N 466	Cal Due Date: 07/29/07	MDC: 93 α; 369 β	BKG (cpm) 7 α, 425 β
	Probe Type: DP6DD	Probe S/N K164	TOTAL Eff: 15.6%α, 33.0%β	Count Time: 1 min.	

Inst. #2	Inst Type: 2929	Inst. S/N 182591	Cal Due Date: 10/05/06	MDC: 35 α; 80 β	BKG (cpm) 4 α, 42 β
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 34.73%α, 41.44%β	Count Time: 1 min.	

Inst. #3	Inst Type: Electra	Inst. S/N 5872	Cal Due Date: 07/29/07	MDC: 84 α; 881 β	BKG (cpm) 7 α, 3,793 β
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 18.15%α, 32.87%β	Count Time: 1 min.	

Comments:
Locations 1-10 surveyed with Instrument #3. Location 14 smear was field counted with Instrument #1.

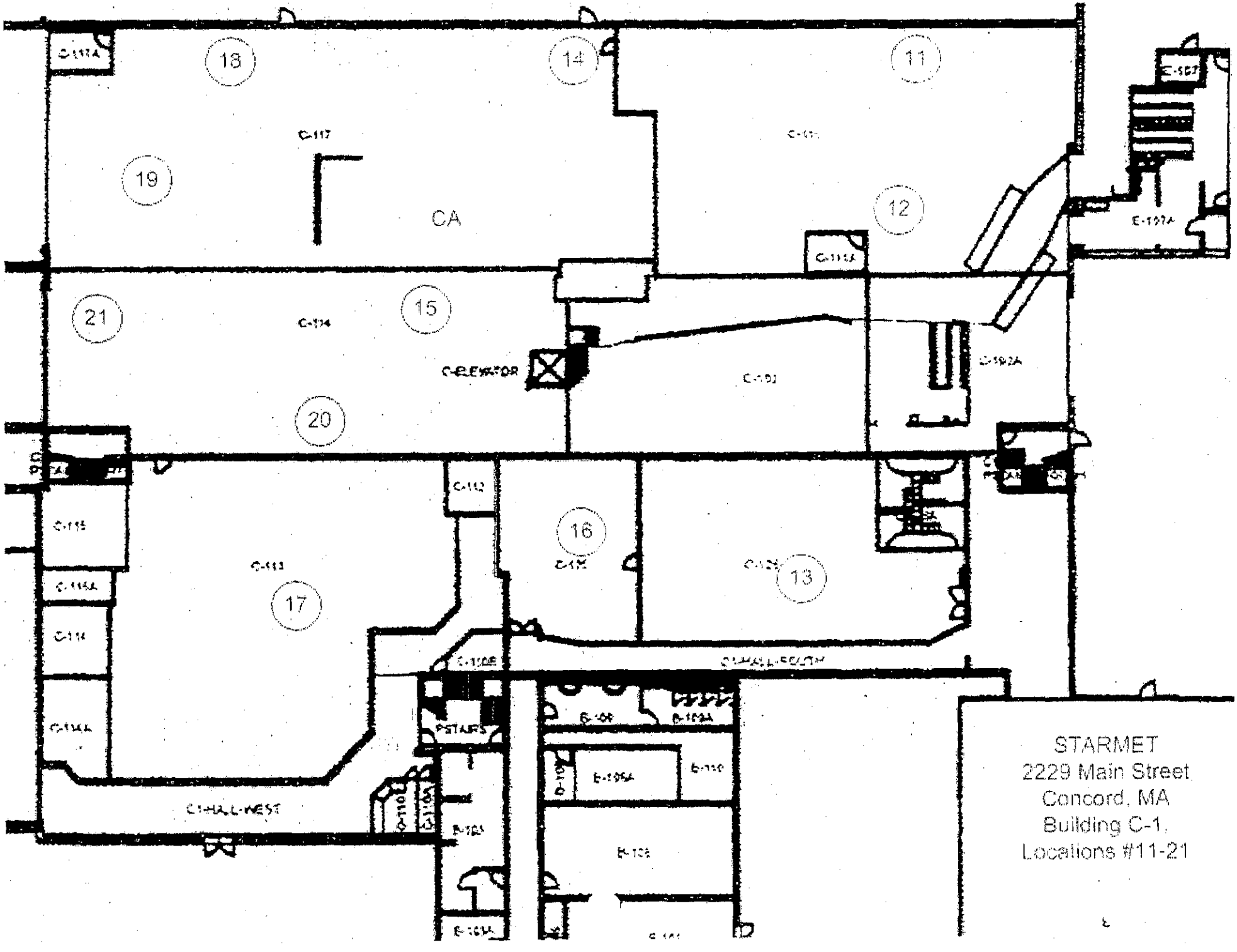
Reviewed By: Glenn R Marshall Date 11/9/06

Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit:	C	Page	of
Survey Unit Description:	1st Floor				
Survey Type (Check One):	☑ Characterization	☐ Remediation		☐ Final Status	
Survey Completed By:	Steve Kapetan			Date:	10/31/2006
Survey Completed By:	Glenn Marshall			Date:	10/31/2006

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate (Contact/30 cm)
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	
1 Floor	50,700	87	142,632	435	104	26	N/A
2 Floor (I Beam)	75,400	99	217,776	501	253	78	N/A
3 Floor (Wall)	108,000	225	316,955	1,196	239	49	N/A
4 Floor (Drain)	368,000	752	1,107,949	4,099	678	251	N/A
5 Tray	1,189,000	3,930	3,605,668	21,609	6,033	1,005	N/A
6 Floor Seam	589,000	918	1,780,295	5,014	611	95	N/A
7 Floor (Under platform)	650,000	1,660	1,965,875	9,102	4,614	930	N/A
8 U Foundry (2nd Level)	1,611,000	6,260	4,889,513	34,446	4,903	1,627	N/A
9 Floor (Wall seam)	110,000	168	323,039	882	157	20	N/A
10 Floor	121,000	264	356,504	1,410	282	89	N/A
11 Floor	50,000	N/A	167,512	N/A	292	98	N/A
12 Floor	25,000	N/A	76,834	N/A	99	0	N/A
13 Floor	43,755	N/A	144,860	N/A	391	219	N/A
14* Floor	>500,000	N/A	>500,000	N/A	88,942	385	N/A
15 CA	N/A	N/A	N/A	N/A	442	98	N/A
16 Band Saw	301,144	N/A	1,078,444	N/A	1,795	599	N/A
17 Floor (Under rollers)	33,814	N/A	108,803	N/A	311	66	N/A
18 Scale	244,492	N/A	872,960	N/A	6,624	1,152	N/A
19 Stairs	97,262	N/A	338,937	N/A	598	216	N/A
20 Unrestricted Area	33,814	N/A	108,803	N/A	492	101	N/A
21 Floor	31,629	N/A	100,878	N/A	311	107	N/A

Reviewed By: Glenn R. Marshall Date: 11/9/06


18
14
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CA
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STARMET
2229 Main Street
Concord, MA
Building C-1,
Locations #11-21

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building: Starmet	Survey Unit D Building		Page 1 of 1
Survey Unit Description	First and Second Floors		
Survey Completed by: Cheryl Walker		Date: 11/01/06	
Survey Completed by: N/A		Date: N/A	

Inst. #1	Inst Type: Selectra	Inst. S/N 466	Cal Due Date: 07/29/07	MDC: 84 α; 881 β	BKG (cpm) 7 α, 3,793 β
	Probe Type: DP6DD	Probe S/N K164	TOTAL Eff: 15.6%α, 33.0%β	Count Time: 1 min.	

Inst. #2	Inst Type: 2929	Inst. S/N 182591	Cal Due Date: 10/05/06	MDC: 35 α; 80 β	BKG (cpm) 4 α, 42 β
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 34.73%α, 41.44%β	Count Time: 1 min.	

Inst. #3	Inst Type: N/A	Inst. S/N N/A	Cal Due Date: N/A	MDC: N/A	BKG (cpm) N/A
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A	

Comments:

Location 3 survey data obtained from inside sulfuric acid wash basin. All gamma dose rates measured <0.5 mR/h at 30cm.

Reviewed By: [signature] Date 11/9/06

Philotechnics Characterization and Final Survey Form

Building: Starmet	Survey Unit: D	Page 1 of 2
vey Unit Description: 1st Floor		
Survey Type (Check One): ☑ Characterization ☐ Remediation ☐ Final Status		
Survey Completed By: Cheryl Walker	Date: 10/31/2006	
Survey Completed By:	Date:	

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate (Contact-30 cm) Beta+Gamma
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	
1 Floor	472,000	841	1,418,809	5,346	5526	777	14/1.8
2 Floor (against wall)	1,100,000	704	3,321,839	4,468	1040	590	25/9
3 Sulfuric Acid Bin	342,000	112	1,024,870	673	405	167	N/A
4 Floor	561,000	203	1,688,506	1,256	1373	582	N/A
5 Floor	201,000	135	597,597	821	729	170	N/A
6 Outside Be Airlock	N/A	N/A	N/A	N/A	193	95	N/A
7 Catch Pan	684,000	400	2,061,233	2,519	866	46	N/A
8 Floor	204,000	325	606,688	2,038	290	225	N/A
9 Floor Grating	509,000	329	1,530,930	2,064	1395	245	N/A
10 Floor Grating	330,000	734	988,506	4,660	1014	-12	N/A

Reviewed By: [illegible] Date: 11/9/06

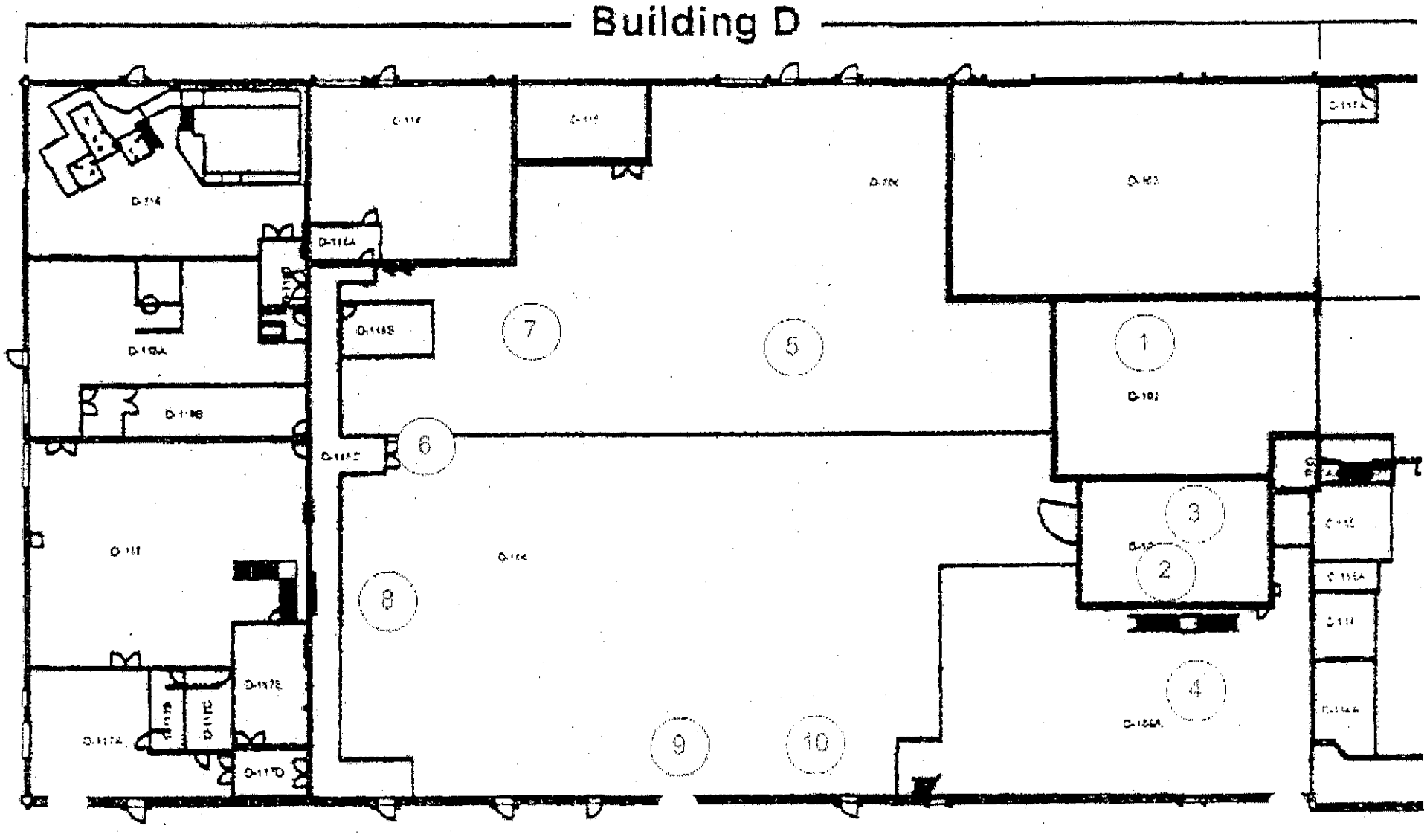
Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit:	D	Page	2 of 2
vey Unit Description:	2nd Floor				
Survey Type (Check One):	☑ Characterization	☐ Remediation	☐ Final Status		
Survey Completed By:	Cheryl Walker	Date:	11/1/2006		
Survey Completed By:		Date:			

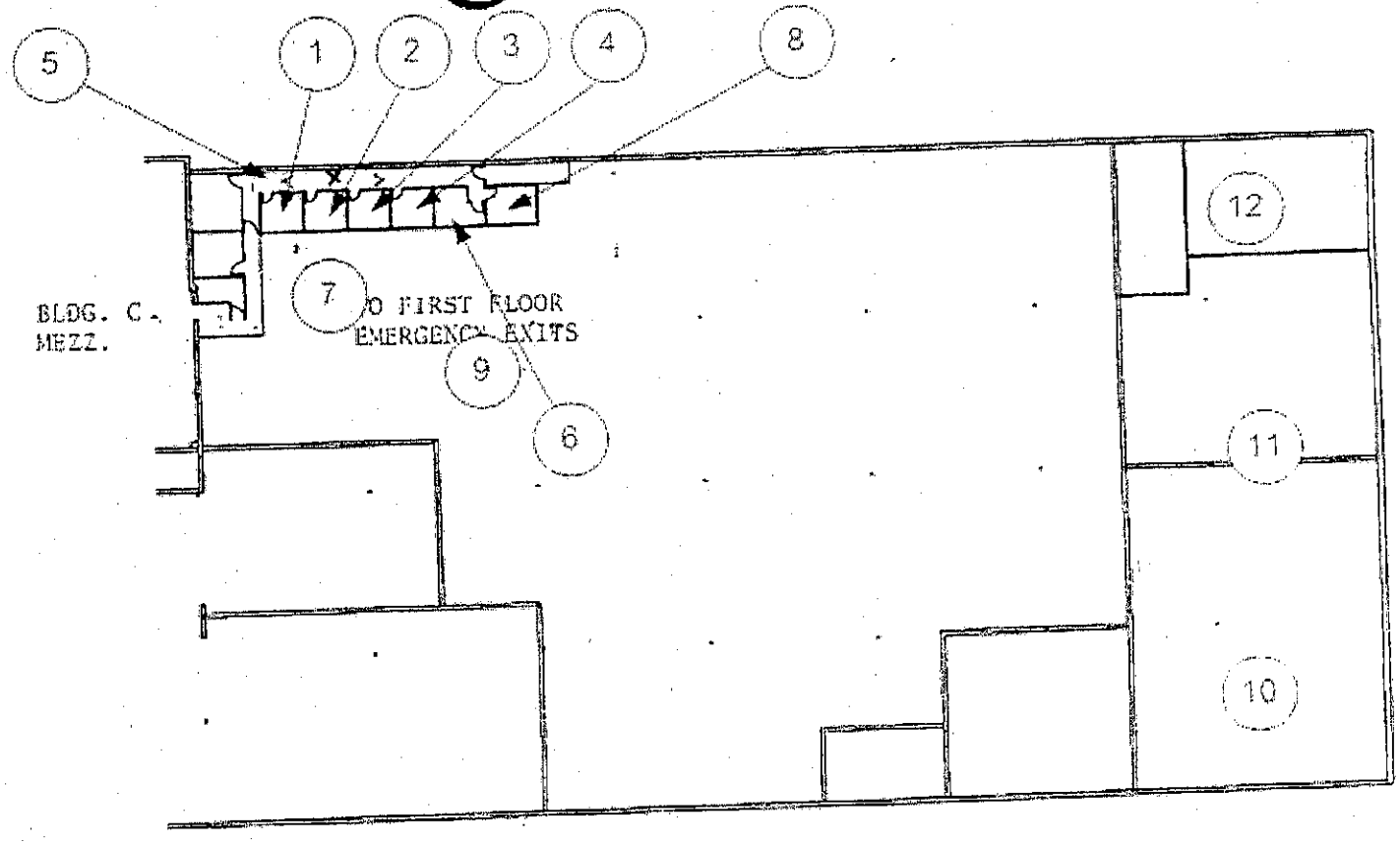
Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate (Contact/30 cm) Beta+Gamma
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	
1 Office floor	5,075	16	14,342	58	-12	9	14/1.8
2 Office floor	6,797	10	19,561	19	-2	6	25/9
3 Office floor	3,427	12	9,348	32	24	9	N/A
4 Office floor	7,478	18	21,624	71	7	0	N/A
5 Hallway	9,473	21	27,670	90	41	3	N/A
6 Office floor	4,359	13	N/A	N/A	10	12	N/A
7 Conference Area	24,100	18	71,994	71	36	9	N/A
8 Respirator Rm	458	21	352	90	17	0	N/A
9 Storage Area (concrete)	14,600	28	43,206	135	10	12	N/A
10 Mezzanine	26,100	30	78,055	147	10	6	N/A
11 Mezzanine	33,100	551	99,267	3,487	48	20	N/A
12 Mezzanine	415,000	568	1,256,539	3,596	63	6	N/A
13 Waxroom vent	1,006	9	2,012	13	51	0	N/A
14 Elecrical Rm (floor)	1,797	25	4,409	115	41	0	N/A

Reviewed By: [illegible] Date: 11/9/06

STARMET
2229 Main Street
Concord, MA
Building D-1,
Locations #1-10



Building D – Mezzanine



13 Not Pictured

14 Not Pictured

STARMET
2229 Main Street
Concord, MA
Building D-2.
Locations #1-15

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building:	Starmet	Survey Unit	E Building	Page 1 of 1
Survey Unit Description	First and Second Floors			
Survey Completed by:	Tracie Clemons		Date:	10/31/06
Survey Completed by:	Steve Kapetan, Cheryl Walker		Date:	10/30/06

Inst. #1	Inst Type: 2224-1	Inst. S/N 187286	Cal Due Date: 04/19/07	MDC: 93 α; 369 β	BKG (cpm) 7 α, 425 β
	Probe Type: 43-89	Probe S/N PR-140000	TOTAL Eff: 16.41%α, 26.79%β	Count Time: 1 min.	
Inst. #2	Inst Type: Electra	Inst. S/N 5872	Cal Due Date: 05/16/07	MDC: 89 α; 895 β	BKG (cpm) 8 α, 3,817 β**
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 18.15%α, 32.87%β	Count Time: 1 min.	
Inst. #3	Inst Type: 2929	Inst. S/N 182591	Cal Due Date: 10/05/07	MDC: 35 α; 80 β	BKG (cpm) 4 α, 42 β
	Probe Type: 43-10-1	Probe S/N 188842	TOTAL Eff: 34.73%α, 41.44%β	Count Time: 1 min.	

Inst. #4	Inst Type: RO-20	Inst. S/N 5875	Cal Due Date: 01/13/07	MDC: N/A
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A

Comments:

Locations 1-10 surveyed with Instruments #1, 3, and 4. Locations 11-30 surveyed with instruments #2 and 4. Survey locations 1-10 were taken on the 1st level and locations 21-30 were taken on the 2nd level.

** Beta background counts taken in "E" building area measured from 1,006 cpm to 3,817 cpm. Background counts near area E117 measured significantly higher, ranging from 3,180 cpm to 38,976 cpm.

Alpha background remained consistent throughout the facility.

Bottled UO_4 and related salts were found on a work bench top. Maximum dose rates measured 22 mRad/h on contact and 3 mRad/h at 30 cm

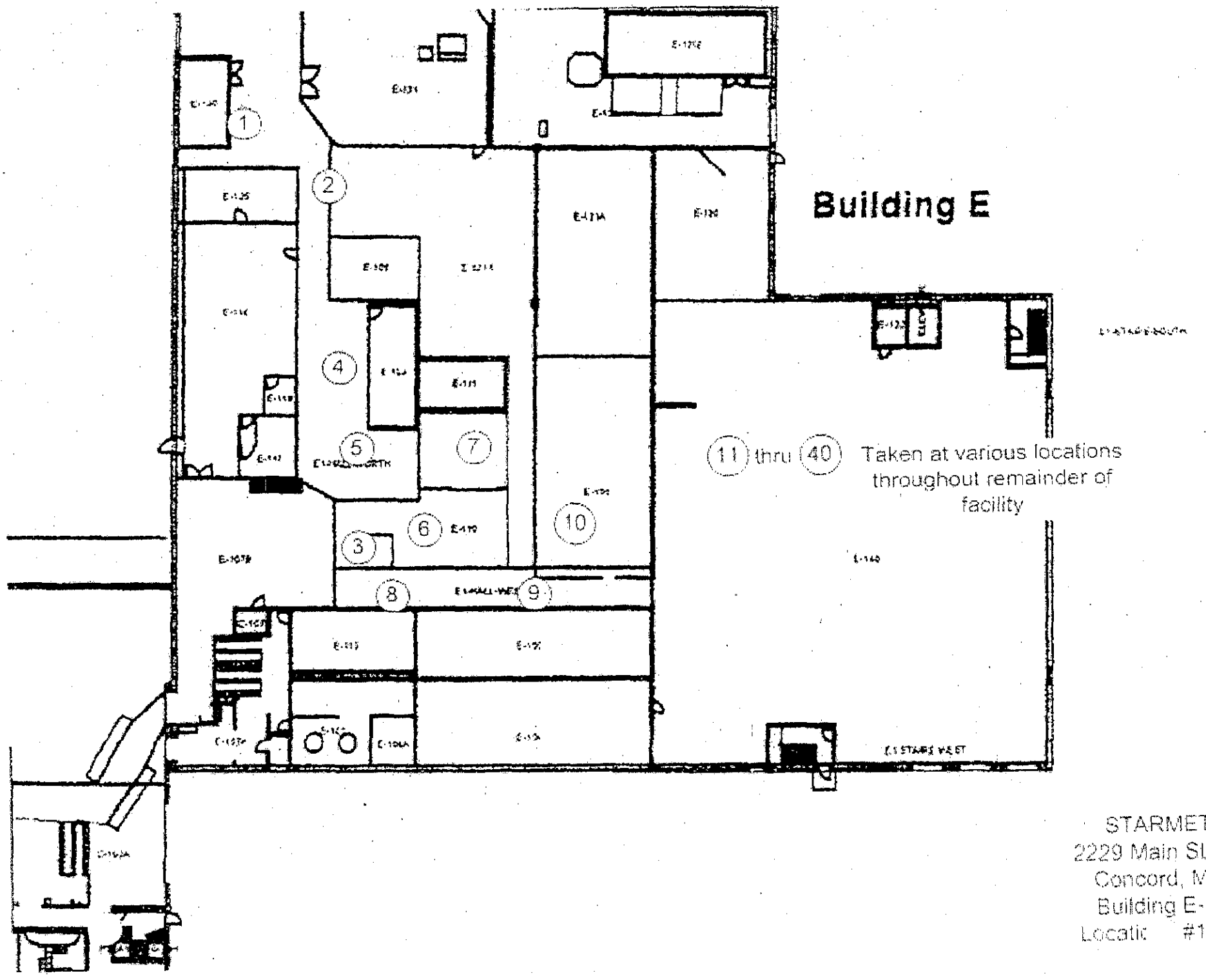
Reviewed By: [signature] Date 11/9/06

Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit: E	Page 1 of 2
vey Unit Description:	1st and 2nd Floors		
Survey Type (Check One):	☑ Characterization	☐ Remediation	☐ Final Status
Survey Completed By:	Tracie Clemons	Date:	10/31/2006
Survey Completed By:	Steve Kapetan, Cheryl Walker	Date:	10/30/2006

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate (Contact/30 cm) Beta+Gamma mRad/hr
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	
1 Inside pump housing	693,000	1,685	2,096,693	9,240	8,422	1,673	26.5/8.5
2 Floor (Roof drain base)	162,000	499	481,238	2,705	188	66	N/A
3 Table	909,000	3,571	2,753,827	19,631	4,457	553	N/A
4 Floor	72,500	191	208,953	1,008	456	144	N/A
5 DU Block Mat'l	1,163,000	7,210	3,526,568	39,680	1,819	766	75/17
6 Pallet jack rollers	401,000	869	1,208,345	4,744	287	141	N/A
7 Hand cart	370,000	700	1,114,034	3,813	1,081	314	N/A
8 Floor seam	446,000	732	1,356,815	3,989	606	202	N/A
9 Floor seam	215,000	462	654,046	2,501	471	173	N/A
10 "Erect Vator" equip	819,000	1,240	2,480,021	6,788	4,472	1,054	N/A
11 Floor	94,441	290	338,275	1,718	1,279	259	N/A
12 Forklift	20,791	36	63,359	171	391	104	N/A
13 Scale	21,647	144	66,555	829	801	331	N/A
14 Floor drain	19,100	34	>500,000	158	891	94	N/A
15 Assembly Line	17,649	154	N/A	890	533	199	N/A
16 Oven	629,022	7	2,333,725	-6	6,474	2,053	N/A
17 Flor seam	25,004	135	79,085	774	666	196	N/A
18 Equipment	423,467	4	1,566,443	-24	17,066	2,637	N/A
19 Equipment	63,087	2,436	221,239	14,796	45,449	3,838	N/A
20 Floor	129,731	1,390	470,004	8,422	582	173	N/A
21 Equipment	96,711	137	346,749	786	13,255	939	N/A
22 Floor	47098	448	161,557	2,681	333	84	N/A
23 Wood block	51597	828	178,350	4,997	500	164	N/A
24 Bench top	12663	95	33,020	530	502	58	N/A
25 Pump (Equip)	57450	214	200,198	1,255	560	176	N/A
26 Duct work	6433	432	9,765	2,584	278	78	N/A
27 Drywall	472	10	-12,486	12	97	29	N/A
28 Floor	1918	167	-7,088	969	270	92	N/A
29 Cutting table	377	24	-12,841	98	94	12	N/A
30 Tool cabinet	1493	114	-8,675	646	154	66	N/A

Reviewed By: [illegible] Date: 11/6/06



STARMET
2229 Main Street
Concord, MA
Building E-1,
Locatic #1-40

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building:	Starmet	Survey Unit	Unrestricted	Page 1 of 1
Survey Unit Description	Office and Non-restricted (A, B, C, D)			
Survey Completed by:	Tracie Clemons, Glenn Marshall		Date:	11/01/06
Survey Completed by:	Steve Kapetan, Cheryl Walker		Date:	11/01/06

Inst. #1	Inst Type: 2224-1	Inst. S/N 187286	Cal Due Date: 04/19/07	MDC: 53 α; 317 β	BKG (cpm) 2 α, 473 β
	Probe Type: 43-89	Probe S/N PR-140000	TOTAL Eff: 16.41%α, 26.79%β	Count Time: 1 min.	
Inst. #2	Inst Type: Electra	Inst. S/N 5872	Cal Due Date: 05/16/07	MDC: 135 α; 328 β	BKG (cpm) 17 α, 332β**
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 18.15%α, 32.87%β	Count Time: 1 min.	
Inst. #3	Inst Type: 2929	Inst. S/N 182591	Cal Due Date: 10/05/07	MDC: 29 α; 95 β	BKG (cpm) 2.2 α, 60.7 β
	Probe Type: 43-10-1	Probe S/N 188842	TOTAL Eff: 34.73%α, 41.44%β	Count Time: 1 min.	

Inst. #4	Inst Type: Bicron µRem	Inst. S/N 1861	Cal Due Date: 09/13/07	MDC: N/A
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A

Comments:

18 of the 30 locations have corresponding smear data. No transferable contamination above the action limits was detected outside of the restricted areas.

Some radioactive material was detected in unrestricted areas. It was suggested that the material be placed in another area so it does not get used (chairs, stepladder, hand truck, etc.)

Exterior building areas were surveyed separately.

General area dose rates through out the non-restricted areas ranged from 7 µRem/hr to 11 µRem/hr.

Reviewed By: [signature] Date 11/9/06

Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit:	Unrestricted Page of
Survey Unit Description:	Office and Non-Restricted (A, B, C, D)		
Survey Type (Check One):	☑ Characterization ☐ Remediation ☐ Final Status		
Survey Completed By:	Steve Kapetan	Date:	10/31/2006
Survey Completed By:	Glenn Marshall	Date:	10/31/2006

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	μRem/hr Gamma (tissue equivalent - 30 cm-1)
1 N Storage Area (A)	569	2	292	0	-33	-6	N/A
2 A-132 Conf Rm	8,639	9	24,843	39	-23	-1	N/A
3 A-103 Office	1,028	4	1,688	11	-11	-3	N/A
4 A-130 Office	4,086	6	10,992	22	1	-3	N/A
5 A-117 Hallway	4,612	20	15,524	18	35	-3	N/A
6 A-121	1,659	12	4,813	-30	-7	2	N/A
7 John Bulk Office	1,250	18	3,330	6	-2	-6	N/A
8 A-162	2,627	15	8,324	-12	N/A	N/A	N/A
9 A-161	3,400	7	8,905	28	N/A	N/A	N/A
10 A-160 Lab	30,300	78	90,742	419	-14	-1	N/A
11 A-160 Lab	2,955	11	9,514	-37	8	-3	N/A
12 2nd Floor Hall (A)	4,000	11	12,793	50	-2	-1	N/A
13 2nd Floor Office (A)	5,385	16	18,328	-6	N/A	N/A	N/A
14 Cafeteria	1,177	11	3,065	50	-4	-1	N/A
15 Cafeteria	1,000	12	2,423	-30	N/A	N/A	N/A
16 Mold Storage Rm (A)	1,706	13	4,984	-24	-14	-1	N/A
17 Mold Storage Rm (A)	4,335	24	14,008	121	-11	-6	N/A
18 Wax Room (New)	1,240	15	3,293	-12	N/A	N/A	N/A
19 Waxroom (New)	19,000	16	67,200	77	27	2	N/A
20 Waxroom (Old)	17,800	24	62,847	121	-11	-1	N/A
21 Waxroom (Old)	2,632	15	8,342	-12	-14	2	N/A
22 Wax Injection Rm	4780	43	15,622	226	N/A		N/A
23 Wax Injection Rm	1854	11	5,520	-37	N/A		N/A
24 2nd Fl Mens Rm (Old)	7160	11	24,255	50	N/A		N/A
25 2nd Fl Mens Rm (Old)	1949	15	5,354	72	N/A		N/A
26 2nd Fl Mens Rm (Old)	27900	35	99,481	182	N/A		N/A
27 2nd Fl Mens Rm (Old)	2006	34	6,072	104	N/A		N/A
28 2nd Fl Mens Rm (Old)	2106	76	6,435	360	N/A		N/A
29 Roof Over A	43600	120	156,427	650	N/A		N/A
30 Roof Over A	6920	40	23,384	209	N/A		N/A

Reviewed By: Glenn Marshall Date: 11/9/06

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building:	Starmet	Survey Unit	Unrestricted	Page 1 of 1
Survey Unit Description	Lobby and Non-restricted Hallway Areas(B)			
Survey Completed by:	Tracie Clemons		Date:	11/01/06
Survey Completed by:	Steve Kapetan		Date:	11/01/06

Inst. #1	Inst Type: 2224-1	Inst. S/N 187286	Cal Due Date: 04/19/07	MDC: 135 α; 328 β	BKG (cpm) 17 α, 332 β
	Probe Type: 43-89	Probe S/N PR-140000	TOTAL Eff: 16.41%α, 26.79%β	Count Time: 1 min.	
Inst. #2	Inst Type: Electra	Inst. S/N 5872	Cal Due Date: 05/16/07	MDC: 53 α; 317 β	BKG (cpm) 2 α, 473 β**
	Probe Type: DP6DD	Probe S/N 318	TOTAL Eff: 18.15%α, 32.87%β	Count Time: 1 min.	
Inst. #3	Inst Type: 2929	Inst. S/N 182591	Cal Due Date: 10/05/07	MDC: 29 α; 95 β	BKG (cpm) 2.2 α, 60.7 β
	Probe Type: 43-10-1	Probe S/N 188842	TOTAL Eff: 34.73%α, 41.44%β	Count Time: 1 min.	

Comments:

14 of the 15 locations have corresponding smear data. No transferable contamination above the action limits was detected outside of the restricted areas.

Some radioactive material was detected in the lobby and non-restricted hallway areas.

Reviewed By: [signature] Date 11/9/06

Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit:	Unrestricted Page of
rvey Unit Description:	Office and Non-Restricted (A, B, C, D)		
Survey Type (Check One):	☑ Characterization ☐ Remediation ☐ Final Status		
Survey Completed By:	Tracie Clemons	Date:	10/31/2006
Survey Completed By:	Steve Kapetan	Date:	10/31/2006

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	μRem/hr Gamma (tissue equivalent - 30 cm+)
LOBBY:							
1 Floor (Carpet)	1,133	6	1,962	6	N/A	N/A	N/A
2 Floor drain	1,896	11	5,666	30	-11	-1	N/A
3 Stair step	2,659	24	6,605	105	35	-3	N/A
HALLWAY:							
4 Floor drain	2,537	11	6,234	33	-11	-1	N/A
5 Floor drain	3,452	11	9,017	33	-11	2	N/A
6 Floor drain	694	7	1,306	6	1	2	N/A
7 Elevator Floor	6,438	11	18,102	33	8	-3	N/A
8 Floor seam	1,253	9	3,333	18	-11	8	N/A
9 Floor drain	4,478	10	12,139	28	-21	-3	N/A
10 Wall ledge	4,361	16	11,783	61	-31	-1	N/A
11 Floor	5,752	12	19,652	37	27	-3	N/A
2nd FLOOR:							
12 Floor at stair "roof"	7,850	13	26,703	44	27	-3	N/A
13 Boundary to Bldg. C	1,780	4	4,686	-6	3	-1	N/A
14 Elevator Floor	3,087	9	9,985	18	3	-1	N/A
15 Cinder block wall	1,247	14	3,312	50	3	-1	N/A

Reviewed By:	[illegible]	Date:	11/9/06

Philotechnics Ltd.
Characterization Survey Data Sheet
Survey Results

Building: Starmet	Survey Unit Exterior		Page 1 of 1
Survey Unit Description	Building Exteriors, Waste Containers, Pump House		
Survey Completed by: Cheryl Walker		Date: 10/31/06	
Survey Completed by: N/A		Date: N/A	

Inst. #1	Inst Type: Bicron µRem	Inst. S/N 1861	Cal Due Date: 09/13/07	MDC: N/A	BKG (cpm) 7 µRem/hr
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A	

Inst. #2	Inst Type: N/A	Inst. S/N N/A	Cal Due Date: N/A	MDC: N/A	BKG (cpm) N/A
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A	

Inst. #3	Inst Type: N/A	Inst. S/N N/A	Cal Due Date: N/A	MDC: N/A	BKG (cpm) N/A
	Probe Type: N/A	Probe S/N N/A	TOTAL Eff: N/A	Count Time: N/A	

Comments:

General area background taken at waist height measured 7 µRem/hr (tissue equivalent gamma dose).

The pump house is posted RA/RM. Maximum interior dose rates measured 10 µRem/hr (tissue equivalent gamma dose) and 6 µRem/hr (tissue equivalent gamma dose) at the window sill planes (North and south respectively) to the sump areas below.

The exterior sump cover to the pump house measured 8 µRem/hr (tissue equivalent gamma dose) on contact.

Radioactive material postings to Building B3 were faded and illegible. Other exterior doors are posted "STOP – No Admittance. Authorized personnel only".

Reviewed By: Ellen R Malott Date 11/9/06

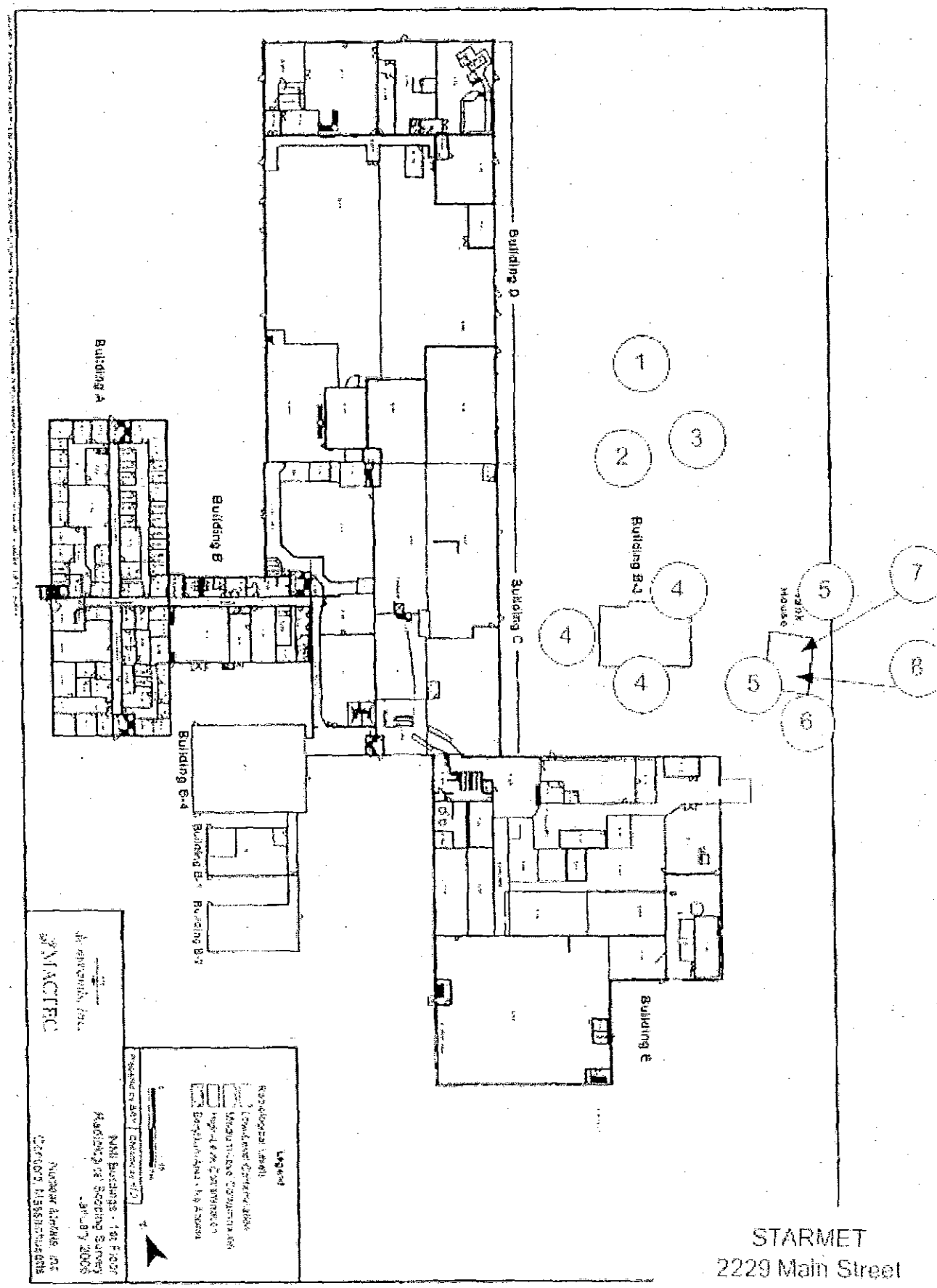
Philotechnics Characterization and Final Survey Form

Building:	Starmet	Survey Unit:	Exterior	Page	of
vey Unit Description:	Building Exteriors, Waste Containers, and Pumphouse				
Survey Type (Check One):	☑ Characterization	☐ Remediation	☐ Final Status		
Survey Completed By:	Cheryl Walker	Date:	10/31/2006		
Survey Completed By:		Date:			

Survey Location Code	Static Measurement Survey Results*				Removable Activity		Exposure Rate µRem/hr (Tissue equivalent) Gamma
	Gross β Counts cpm/100cm²	Gross α Counts cpm/100cm²	Net β Activity dpm/100cm²	Net α Activity dpm/100cm²	Beta dpm/100cm²	Alpha dpm/100cm²	
1 Sealand U55571	N/A	N/A	N/A	N/A	N/A	N/A	5-8
2 Sealand U55572	N/A	N/A	N/A	N/A	N/A	N/A	3-7
3 Sanitary Dumpster	N/A	N/A	N/A	N/A	N/A	N/A	5-10
3 Bldg B3 Exterior	N/A	N/A	N/A	N/A	N/A	N/A	5-12
5 Pump House Exterior	N/A	N/A	N/A	N/A	N/A	N/A	5-15
6 Sump Cover (PH)	N/A	N/A	N/A	N/A	N/A	N/A	8
7 PH North widow	N/A	N/A	N/A	N/A	N/A	N/A	10
8 PH South window	N/A	N/A	N/A	N/A	N/A	N/A	6

Reviewed By: [illegible] Date: 11/9/06

FACILITY EXTERIOR



STARMET
2229 Main Street
Concord, MA
Building D-2,
Locations #1-15

Attachment 3
Air Sample Data Sheet

Page 1 of 1

STARMET

Location:	F - 110 Area	RWP #	06-001	Date Sample Collection Ended:	10/31/06
Sample Type (circle one):	(GA) BZ. Boundary Perimeter	Reason for Sample, or Client Processed:	Assessment		
Sampler Model #	Staplex TFIA	Serial #	17221 N	Cal. Due Date:	6/23/07
Start Date/Time:	10/31/06 1315	Start Flow Rate:	728 lpm	26 cfm 4" sample-reduced	
End Date/Time:	10/31/06 1317	End Flow Rate:	728 lpm.		
Run Time:	2.0 min.	Ave. Flow Rate:	728 lpm	RCT Signature	
Volume (V) Run Time x Ave Flow Rate x 1000:	1.458 E6 ml			[signature]	

Counting Instrument(s)

ALPHA	Inst. Model #	2929	Serial#	182591	Cal Due:	10/5/07	4 π Efficiency (E)	.3473
BKG cpm (B_r)	2.2	BKB Count time, min (t_b)	10	Sample count time, min (t_s)	30			
BETA	Inst. Model #	2929	Serial#	182591	Cal Due:	10/5/07	4 π Efficiency (E)	.4144
BKG cpm (B_r)	60.7	BKB Count time, min (t_b)	10	Sample count time, min (t_s)	30			

$$MDA = \frac{3 + 3.29\sqrt{B_r \cdot t_s \cdot (1 + \frac{t_s}{t_b})}}{t_s \cdot E \cdot V}$$

		Count Results (Date/Time):		**MDA**
Alpha DAC:	2 E-11 (µCi/ml)	Alpha Air Sample Results:	-1.90 E-12 (µCi/ml)	3.78 E-13 (µCi/ml)
Beta DAC:	2 E-11 (µCi/ml)	Beta Air Sample Results:	-4.57 E-12 (µCi/ml)	7.05 E-12 (µCi/ml)
		Total DAC Fraction	Ø	

Respiratory Protection Worn?	Y (N)	Type	NA	Assigned Protection Factor	N/A

Remarks:

RCT Signature:	[signature]	Review/Date:	[signature] 11/2/06

Attachment 3
Air Sample Data Sheet

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STARMET

Location:	C Bldg Foundry	RWP #	06-007	Date Sample Collection Ended:	10/31/06
Sample Type (circle one):	(GA) BZ Boundary Perimeter	Reason for Sample, or Client Processed:	Assessment		
Sampler Model #	Staplex TF1A	Serial #	17221N	Cal. Due Date:	6/23/07
Start Date/Time:	10/31/06 1303	Start Flow Rate:	728 lpm	26 cfm 4" sample reduced.	
End Date/Time:	10/31/06 1305	End Flow Rate:	728 lpm		
Run Time:	2.0 min.	Ave. Flow Rate:	728 lpm	RCT Signature	
Volume (V) Run Time x Ave Flow Rate x 1000:	1.458 E6 ml			[signature]	

Counting Instrument(s)

ALPHA	Inst. Model #	2929	Serial#	182591	Cal Due:	10/5/07	4 π Efficiency (E)	.3473
BKG cpm (B_r)	2.2	BKB Count time, min (t_b)	10	Sample count time, min (t_s)	30			
BETA	Inst. Model #	2929	Serial#	182591	Cal Due:	10/5/07	4 π Efficiency (E)	.4144
BKG cpm (B_r)	60.7	BKB Count time, min (t_b)	10	Sample count time, min (t_s)	30			

$$MDA = \frac{3 + 3.29\sqrt{B_r \cdot t_s \cdot (1 + \frac{t_s}{t_b})}}{t_s \cdot E \cdot V}$$

		Count Results (Date/Time):		MDA
Alpha DAC:	2 E-11 (µCi/ml)	Alpha Air Sample Results:	-1.42 E-12 (µCi/ml)	3.78 E-13 (µCi/ml)
Beta DAC:	2 E-11 (µCi/ml)	Beta Air Sample Results:	1.19 E-12 (µCi/ml)	7.05 E-12 (µCi/ml)
		Total DAC Fraction	0.06	

Respiratory Protection Worn?	Y (N)	Type	N/A	Assigned Protection Factor	N/A

Remarks:

RCT Signature:	[signature]	Review/Date:	[signature] 11/2/06