104-11 F-1/c
SEAD 44
UXO Removal

AMSOS-SF (DDESB-KO/12 Jul 00) (385-10b) 2d End
SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

Operations Support Command (PROV), 1 Rock Island Arsenal, ATTN: AMSOS-SF, Rock Island, IL 61299-6000 25 JUL 100

FOR Department of Army, Huntsville Center, Corps of Engineers, ATTN: CEHNC-OE-CX, P.O. Box 1600, Huntsville, AL 35807-4301

1. The Department of Defense Explosives Safety Board approved the subject OE removal plan 12 July 2000. Upon completion of the OE removal from the Test Range, please prepare a final removal report and forward three copies to this office for distribution.

2. The POC is Mrs. Deb Westervelt, AMSOS-SF, (309) 782-2986 or DSN 793-2986, E-mail amsos-sf@osc.army.mil or westerveltd@osc.army.mil .

for ROSALENE E. GRAHAM
Chief, Safety/Rad Waste Team

CF:
Commander, Seneca Army Depot Activity, ATTN: SMASE-BEC, 5786 State Route 96, Romulus, NY 14541-5001

SMAAC-ESL (DDESB-KO/12 Jul 00) (385[A]) 1st End
SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

Defense Ammunition Center, ATTN: SMAAC-ESL, 1 C Tree Road, Building 35, McAlester, OK 74501-9053

13 JUL 2000

FOR Commander, Operations Support Command (OSC)(PROV), ATTN: AMSOS-SF, Rock Island, IL 61299-6000

1. Reference: Memorandum, Defense Ammunition Center, SOSAC-ESL, 26 May 2000, SAB (enclosure 1).

2. Basic correspondence provides Department of Defense Explosives Safety Board (DDESB) approval for subject submission, and is provided for your information and use.

3. Request two copies of the final removal report be sent to this office; we will forward one to DDESB.

4. The POC is Ms. Jean Gallagher, SMAAC-ESL, (918) 420-8876, DSN 956-8876; email gallagher@dac-emh2.army.mil.

FOR THE DIRECTOR:

Melvin L Colberg

Encls
as

MELVIN L. COLBERG
Chief, Ordnance Explosives
Environmental Division

CF:
Office of the Chief of Staff, ATTN: DACS-SF, 2211 S. Clark St., Room 980, Arlington, VA 22202
Commander, U.S. Army Engineering and Support Center, Huntsville, ATTN: CEHNC-PM, P.O. Box 1600, Huntsville, AL 35807-4301

DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD
2461 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22331-0600

12 JUL 2000

DDESB-KO

MEMORANDUM FOR DIRECTOR, ARMY SAFETY OFFICE
(ATTN: DACS-SF)

SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

References: (a) USADAC Memorandum SOSAC-ESL of May 26, 2000, Same subject

(b) DoD 6055.9-STD, DoD Ammunition and Explosives Safety Standards

The subject safety submission submitted by reference (a) to remove ordnance and explosives from the former function test range on Seneca Army Depot, Seneca, New York has been reviewed with respect to reference (b). Based on the information furnished, the safety submission is approved, provided the work is performed as identified in the package of the reference (a).

After completion of the clearance effort, request this office be furnished a copy of the final closure plan report.

Point of contact is Mr. Larry D. Webster at Commercial (703) 325-1378, DSN 221-1378 or E-mail Larry.Webster@hqda.army.mil.

Daniel T Tompkins

DANIEL T. TOMPKINS
Colonel, USAF
Chairman

cc:
USADAC (Attn: SOSAC-ESL)

DEPARTMENT OF THE ARMY
US ARMY DEFENSE AMMUNITION CENTER
1 C TREE ROAD
MCALESTER, OK 74501-9053

REPLY TO ATTENTION OF

SOSAC-ESL (385[A])

26 MAY 2000

MEMORANDUM FOR Chairman, Department of Defense Explosives Safety Board, ATTN: DDESB-KO, 2461 Eisenhower Avenue, Alexandria, VA 22331-0600

SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

1. References:

a. DOD 6055.9-STD, Ammunition and Explosives Safety Standards, July 1999.

b. AR 385-64, U.S. Army Explosives Safety Program, 28 November 1997.

c. Memorandum w/ enclosures, HQ, Army Operations Support Command (PROV), AMSOS-SF, 23 May 2000, Subject: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-4A), Seneca Army Depot Activity, April 2000 (Enclosure 1).

d. Memorandum, Department of Defense Explosives Safety Board (DDESB), DDESB-KO, 14 July 1999, Subject: Explosives Safety Submission, Ordnance and Explosives (OE) Removal at the Open Burning Grounds, Seneca Army Depot Activity, July 1998.

2. We have reviewed this submission in accordance with the criteria of DOD 6055.9-STD as implemented by AR 385-64, and have granted Army approval. It is provided for Department of Defense Explosives Safety Board (DDESB) review with our recommendation for approval to allow OE removal and transfer of property.

3. Seneca is expecting a DDESB site visit 14 August 2000. We would appreciate approval by 30 June so this operation can be up and running for your visit. Request you fax us any correspondence dealing with this submission to expedite the process.

4. The following information is provided to assist in your review.

a. This submission requests approval for a removal action at the former function test range. This is the second area at Seneca to undergo an OE removal operation. Reference 1d provided final approval by your office of a prior submission addressing the burning grounds. There will be additional submissions for other areas in the future.

b. The function test range is a 14-acre parcel on the periphery of an overall 720-acre area that is to be transferred to the New York State Department of Corrections for construction of a prison. This parcel will be part of a buffer zone inside a fenced area of the prison; no construction is planned there.

c. The exact extent of function testing performed in this area is unknown. According to the Archives Search Report, fuzes may have been tested there. During sampling only 40mm grenades (practice and CS) were found at depths ranging from 1 to 5 inches.

d. The site will be cleared to at least a 3-foot depth.

(1) The existing berms will be removed and then the entire parcel will be excavated to a depth of 1 foot. All the OE should be within this excavated layer.

(2) After the first foot of soil is removed, the site will be geophysically mapped.

(3) All anomalies to a depth of 2-feet will be investigated and removed. A 2-ft clearance is used because that is the maximum depth the detector can reliably locate a 40mm practice grenade. If deeper anomalies are noted they will also be removed.

(4) The excavated soil will be sifted (See Appendix B of the submission) and replaced upon completion of the removal action.

e. It is reasonable to assume all OE will be within the first 12 inches because of the nature of function test activities and the sampling results. The data obtained from this clearance will either prove or disprove this theory.

(1) A 3-ft clearance will be done and if that removes all the OE the property will be released for unrestricted use.

(2) If OE potentially exists below the clearance depth, an addendum to this submission will be prepared requesting approval for property release.

f. The same two magazines that were approved for storage of demolition explosives and recovered OE for the burning grounds operation will be used for this operation too. (See Figure 1-2 and Site Map 4 of the submission.)

SOSAC-ESL (385[A])
SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

5. The POC is Ms. Jean Gallagher, SIOAC-ESL, DSN 956-8876, Facsimile 8503; email gallagher@dac-emh2.army.mil.

FOR THE DIRECTOR:

Melvin L Colberg

Encl
as

MELVIN L. COLBERG
Chief, Ordnance Explosives
Environmental Division

CF (wo/encl)):
Office of the Chief of Staff, ATTN: DACS-SF, 2211 S. Clark St., Room 980, Arlington, VA 22202

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY OPERATIONS SUPPORT COMMAND (PROV)
1 ROCK ISLAND ARSENAL
ROCK ISLAND, IL 61299-6000

REPLY TO
ATTENTION OF:

AMSOS-SF (385-10d)

23 MAY 2000

MEMORANDUM FOR Director, Defense Ammunition Center, ATTN: SIOAC-ESL, 1C Tree Road, Building 35, McAlester, OK 74501-9053

SUBJECT: Explosives Safety Submission for Ordnance and Explosives (OE) Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, April 2000

1. The Operations Support Command Safety Team recommends approval of the enclosed U.S. Army Corps of Engineers (COE) prepared explosives safety submission (ESS) (encl 1). The COE proposes to remove OE from the 14 acre SEAD-44A site. The remediation contractor will excavate the entire 14 acres to a one-foot depth. The COE expects to find fuzes and grenades at the site. The Army will release the site for unrestricted use following remediation.

2. The most probable munition is the M406 40MM Grenade. Site map 1 shows the relationship from SEAD-44A to the Loran "C" Station tower and the prison construction site. Site Map 2 shows the topography of SEAD-44A. There are no buildings within the SEAD-44A site.

3. The ESS incorporates OSC Safety Team comments. The COE requests an expeditious review. Their proposed start date for excavation is 15 June 1999.

4. The POC is Mrs. Deb Westervelt, AMSOS-SF, DSN 793-2986, E-mail amsos-sf@osc.army.mil or westerveltd@osc.army.mil.

Encl

Kristine T. Gueton
for ROSALENE E. GRAHAM
Chief, Safety/Rad Waste Team

Cc: AMSOS-MAI-O
Department of Army, Huntsville Center, Corps of Engineers, P.O. Box 1600, Huntsville, AL 35807-4301
Commander, Seneca Army Depot Activity, ATTN: SIOSE-BEC, 5786 State Route 96, Romulus, NY 14541-5001

DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
P.O. BOX 1600
HUNTSVILLE, ALABAMA 35807-4301

REPLY TO
ATTENTION OF:

CEHNC-OE-CX (200-1c)

15 MAY 2003

MEMORANDUM FOR

Commander, Headquarters, U.S. Army Operations Support Command,
1 Rock Island Arsenal, ATTN: AMSOS-SF, Bldg 350 4SE,
Rock Island, IL 61299-6000
Director, Defense Ammunition Center, ATTN: SIOAC-ESL
(Mr. Cliff Doyle), Building 35, 1C Tree Road,
McAlester, OK 74501-9053

SUBJECT: Explosive Safety Submission for Ordnance and Explosives Removal at the Former Quality Assurance Test Range (SEAD-44A) Seneca Army Depot Activity, Romulus, NY

1. The enclosed safety submission was prepared by our organization for the installation and outlines the safety criteria for the protection of site personnel and the public during the explosives operations scheduled at the subject range.

2. The explosives safety submission is being forwarded for your concurrent review. Members of the USACE OE-CX have reviewed the document and concur with safety criteria presented. The installation point of contact has been furnished an electronic copy of the document and should forward the installation's endorsement shortly.

3. Should you have any questions, you may contact me at 256-895-1300 or Mr. Kevin Healy at 256-895-1627.

Encl

HARRY J. SPEAR
COL, EN
Commanding

CF: (wo/encl)
Commander, Seneca Army Depot Activity, ATTN; SIOSE-BEC
(Mr. Absolom) 5786 State Route 96, Romulus, NY 14541-5001

Explosive Safety Submission

Ordnance And Explosives Removal
at the Former QA Function Test Range (SEAD-44A),
Seneca Army Depot Activity,
Romulus, New York

April 2000

Prepared by
US ARMY CORPS OF ENGINEERS
Engineering and Support Center, Huntsville

CONTENTS

APPENDICES

INTRODUCTION

This Explosive Safety Submission is for the removal of Ordnance and Explosives (OE) from the Former QA Function Test Range (SEAD-44A), Seneca Army Depot Activity (SEDA), New York. It outlines the safety aspects of the plan for cleanup of Unexploded Ordnance (UXO) and OE on property that is owned by the Department Of Defense (DoD) and is soon to be transferred.

SEDA is a US Army facility located in Seneca County, New York. SEDA occupies approximately 10,600 acres (Appendix A, Figure 1). It is bounded on the west by State Route 96A and on the east by State Route 96. The cities of Geneva and Rochester are located to the northwest (14 and 50 miles, respectively); Syracuse is 53 miles to the northeast and Ithaca is 31 miles to the south. The surrounding area is generally used for farming.

SEDA was included on the Federal Facilities National Priorities List on 13 July 1989. Consequently, all work to be performed under this contract will be performed according to Comprehensive Environmental Response Compensation and Liability Act (CERCLA) guidance and the "Federal Facility Agreement under CERCLA Section 120 in the matter of Seneca Army Depot, Romulus, New York,".

SEDA was included on the 1995 Base Realignment and Closure List and is due to be closed. The Seneca County Industrial Development Agency (IDA) has prepared a reuse report entitled "Seneca Army Depot Reuse Plan and Implementation Strategy". The majority of the installation will be used for housing developments, industrial development, institutional and conservation/recreation uses upon transfer. The current SEAD-44A site is a roughly 14-acre parcel on the periphery of an overall 720-acre area that is to be transferred to the New York State Department of Corrections for the construction of a prison.

1.0 REASON FOR OE.

Aerial photos show that activities at the site began around 1963. There were five structures at the end of the main road and the entire area appeared to be surrounded by fire breaks. Later photos (1978) indicated two structures and the fire breaks were very faint. Photos from 1991 indicate that activities were apparently complete by that time since no structures or fire breaks were at all visible.

The exact extent of function testing performed in this area is unknown. However, it is expected that fuzes were tested and the remains of 40mm grenades have been seen.

2.0 MAPS.

Maps detailing the location and extent of the area of concern and presenting the relevant Public Withdrawal Distances, Q-D Distances, etc., are presented in Appendix A to this submission.

3.0 AMOUNT AND TYPE OF OE.

Characterization sampling done in April/May 1999 showed large numbers of 40mm practice grenades, at depths ranging from 1-5 inches, over the approximately 5-acre area that was sampled. Noted were numerous M407A1, 40mm practice grenades. At least one still contained the RDX pellet used to expel the marking dye. Additionally, the remains of one M651, 40mm Grenade (CS) were located.

For conservatism, the Most Probable Munition (MPM) chosen for this site is the M406 40mm Grenade (HE). The Net Explosive Weight (NEW) is 0.085 lbs. TNT equivalent. The Public Withdrawal Distance (PWD) for this MPM is 345 feet, which was computed using HNC-ED-CS-S-98-1 (approved by DDESB on 6 April 1998) by Dr. Michelle Crull, USAESC, Huntsville, Engineering Division, Structures Branch, 4-10-98. If an OE item having a greater fragment distance is found, its withdrawal distances will be determined in accordance with the procedures defined in ***HNC-ED-CS-S-98-1***. Until the appropriate distances are determined by ***HNC-ED-CS-S-98-1***, the default distances in DoD 6055.9-STD (Chapter 5, Paragraph C 5.5.4.1 (July 1999)) will be used.

4.0 START DATE.

Work is anticipated to start in late late May/early June 2000, beginning with survey work and progressing to intrusive work. Intrusive work should begin by 15 June.

5.0 FROST LINE DEPTH.

The design frost depth for this site is 40 inches.

6.0 CLEARANCE TECHNIQUES.

This section presents information concerning the techniques to be used during the removal of OE at this site. ***As a special note, strong electromagnetic radiation (EMR) was detected at the SEAD-44A site during characterization efforts with the EM-61. The Contractor will determine, with appropriate instruments, whether the US Coast Guard Loran C Station is emitting HERO unsafe amounts of radiation with respect to the activities to be performed as part of this project. Determination will be made IAW TM 9-1375-213-12, Tables 2-02 and 2-03.***

General Progression. OE remediation at the SEAD-44A site will take place in the following phases:

o Phase I. Surface OE Clearance and Vegetation Removal.

a. During previous characterization activities at the site, approximately 8 acres were visually swept and bush-hogged prior to the performance of any geophysical activities. This acreage will not require any additional OE clearance prior to additional brush clearance being conducted.

b. As for the remaining acreage of the site, a surface clearance for OE will be conducted prior to vegetation removal. With search personnel spaced at 5 foot intervals, advance will be made and the surface

searched for visible signs of OE. Any OE located will be investigated to determine if it can be safely moved or if it will have to be blown in place. Following the surface clearance, all vegetated areas will be bush-hogged. This will be likely be performed by Depot personnel using depot equipment. However, one UXO Specialist will provide avoidance support by proceeding ahead of the brush clearing equipment and checking for the presence of OE. Any OE encountered will be marked and avoided.

o Phase II. A Geophysical Test Grid will be performed to verify that the detection equipment is capable of detecting the target munition to the required depth. This is two feet for the M407A1, 40mm Practice Grenade. The practice version is being used as the target munition since it is predominantly aluminum and is more difficult to find than the largely ferrous, HE version.

o Phase III. The existing berms will be bulldozed and construction debris removed. Following removal of all obvious debris, the soils will be re-stockpiled for future sifting operations.

o Phase IV. The entire 14 acres will be excavated/stripped to a depth of 1 foot. Soils removed will be sifted for OE.

o Phase V. Subsequently, the site will be geophysically mapped. Following the mapping effort, all anomalies to a depth of two feet will be investigated and removed, as may be allowed by the absence of bedrock. Anomalies that are deeper will be chased and removed, as well, as allowed by the absence of bedrock.

o Phase VI. All of the sampling data gathered from the mapping/anomaly investigation data and the sifting data collected in the phases above will be compiled to draw conclusions on the existence or non-existence of OE contamination at depth. A conclusion will be drawn regarding the existence of OE-contamination below the two-foot depth at this site:

a. If OE-contamination does not exist within the top 1 foot of depth (beneath the stripped surface), release of the site for unrestricted use from an explosives safety standpoint (even though the end use is currently planned to be highly restricted) will be sought. This request will be based upon the following:

(1) The 1-foot clearance (excavation and sifting) over the site is expected to show that all OE is located at less than that depth. For example, if OE is only found in the top six inches, it is reasonable to assume a 1-foot removal was adequate.

(2) Mapping and anomaly sampling of areas deeper than 1-foot is expected to show that no OE is present at a depth greater than the 1-foot horizon. At such a point, it will be concluded that no additional OE clearance will be required over the site. This conclusion will be presented in the Final Report for this project, which will be distributed for review.

b. If OE-contamination does exist below the 1-foot depth (one foot excavated and sifted), it will be removed to the depths of the instrument capabilities. If OE potentially exists below the clearance depths, an addendum to this ESS will be submitted for approval prior to seeking transfer of the land. However, it should be noted that the presence of burial pits, alone, will not trigger the additional ESS requirement. Pits will be removed.

o Phase VII. The Final Report detailing the actual outcome of this project will be provided for information to those who have reviewed and approved this ESS.

Discussion of Project-Specific Procedures.

All surveying activities will be completed with the accompaniment of a UXO escort. Surveying activities will consist of the location of site grids.

For subsurface mapping and clearance, each grid will be divided into 5 foot transects or lanes. Operators will walk each lane with the chosen geophysical instrument. The chosen instrument(s) will be capable of detecting the Most Probable Munition to the proposed depths. All anomalies will be marked with pin flags for retrieval by another team. Anomalies will be dug to a depth of two feet to determine the identity thereof. If anomalies are found to exist below the 3-foot clearance depth (1 foot stripped and 2 foot mapped and investigated) , they will be pursued.

Following completion of the removal, the one foot of stripped soil will be re-placed on the surface from where it came.

A Standard Operating Procedure for sifting operations is included in Appendix ***B*** of this ESS. All soil excavation and movement (to the sifter and away from the sifter) will be performed by an excavation contractor ***with proper barricading of equipment.*** All sifting and separation activities will be performed by UXO-qualified personnel. During all OE operations, earthmoving equipment operators and the sifter equipment operators will be protected by plexiglass shields. Shield thickness has been calculated to be a minimum of 0.88 inches of plexiglass (by Dr. Crull, Structures Branch, USAESC, Huntsville, using THOR equations for fragment penetration from TM 5-1300) using the Q-D MPM, the M406 40mm Grenade (HE).

Regarding OE destruction, of specific concern are the locations of explosives storage facilities and detonation operations with respect to facilities and people and any effects thereon. Explosives for destruction operations will be provided by the contractor. It is anticipated that demolition materials and shaped charges, as appropriate, will be used. These are considered flammable liquids and oxidizers and Class 1.4B explosives. Due to the location of the USCG Loran C station within a mile of the site, the Contractor shall not use anything other than non-electric material.

Explosives will be stored in the SEDA OB/OD area double igloo type, earthen-covered magazine. The existing magazine is constructed to DDESB and Army standards and is complete with the required lightning protection. The contractor will store det cord, perforators and time fuzes in one half of one of the magazines. In the other half of the first magazine, the contractor will store initiators. The two halves of this magazine will be separated by a sandbag wall (minimum two feet wide and at least as high as materials

stacked on either side). In the second of the magazines, UXO (which was located and is awaiting the weekly demolition operation) will be stored. The flammable liquid and oxidizers are received in separate packages and are not required to be stored as explosives. These materials will be stored in a nearby building to keep them away from personnel and the elements. Each of the two magazines is designed for a maximum NEW of 450 pounds. At no time will the contractor be storing more than 100 pounds NEW in either magazine. As for security, access into the SEDA ammunition area is, itself, extremely restricted. The magazines are remotely located within the ammunition area. Additionally, the contractor will establish and enforce strict area and site access at the SEAD-44A area. Access into a work site exclusion zone will be limited to contractor personnel specifically authorized to work on site and Corps of Engineers' safety personnel. All other personnel will be restricted from entering the exclusion zone or be escorted by contractor or Corps' safety personnel.

Disposal operations will be carried out weekly for items that can be moved and consolidated. Items which can be moved will be consolidated in accordance with "Procedures for Demolition of Multiple Rounds (Consolidated Shots) on Ordnance and Explosives (OE) Sites", dated August 1998 and approved by DDESB on 27 October 1998. Disposal will be carried out at the OD Grounds which is adjacent to the OB site. UXO will be stored in the second magazine while awaiting demo operations. Items which can not be moved will be blown-in-place, individually, on a daily basis. BIP operations that require the use of sandbags shall be organized as follows:

Required Sandbag Thickness = 12" with a 6" standoff between the round and the sandbags.

Sandbag throw distance = 25 feet

Minimum exclusion Zone = 200 feet

The required sandbag thickness and the sandbag throw distance were calculated IAW CEHNC-ED-CS-S-98-7 ***(approved by DDESB, 2 March 1999).*** The minimum exclusion zone is based upon the largest of the sandbag throw distance or 200 feet or the k328 distance for the total NEW (munition plus donor charge). *Note: A copy of HNC-ED-CS-S-98-7, "Use of Sandbags for Mitigation oFragmentation and Blast Effects Due to Intentional Detonation of Munitions" must be available on site. This report may be downloaded from the USAESCH homepage at* **http://www.hnd.usace.army.mil**. Select **"Product lines"**, **"Ordnance and Explosives"**, **"Technology"**, then **"Analytical Tools"**. A login and password are required.

QA/QC requirements are as follows:

o Due to the planned nature of the project, a QC audit will be conducted by the EODT QCM. This audit will include a surface and subsurface check of an area representing an additional 10% of the work completed. The EODT QCM, assisted by the QCS, will proceed on a predetermined pattern starting on the opposite side from the QCS's check, which will provide a total combined QC audit of approximately 20%. As with the QCS's check, if the site fails, it will be scheduled for re-work. In addition, an inspection of all

logs and a check of contractor and subcontractor personnel will be conducted to ensure that they are complying with the Work Plan.

o The pass/fail criteria for the final clearance is set by the CEHNC. This criteria specifies that a grid will be failed if, during a QC or QA audit conducted by either EODT or CEHNC personnel:

- a live item is found
- more than three OE scrap items are found in a grid
- an inert OE item, which resembles a live UXO, is found.
- any piece of scrap with dimensions greater than 2" by 2" is found.

If any of these conditions occurs, the entire grid will be failed and reswept and cleared. Upon completion of the grid re-work, an additional QC or QA audit will be conducted again by the responsible parties. Any failure will be reported to the CEHNC KO and the EODT QCM, PM and SUXOS.

Scrap that is collected from this action will be handled as follows:

o A temporary collection point will be established by the SUXOS or team leader within or adjacent to each operating grid. During operations, the UXO technicians who uncover an item will inspect it for the presence of explosives hazards. OE items that are free of explosive contamination and do not require venting will be placed in the grid collection point. OE that does require venting shall be collected and segregated from the other OE items. Upon completion of operations in the grid, the material in the collection point will be collected and loaded into containers, weighed and the weight entered into the team logbook. Further inspection by the QCS and the SUXOS will be conducted IAW the QC requirements outlined in Chapter 8 of the Work Plan.

o Upon completion of the project, all stockpiled, inert ordnance and Ordnance-Related Scrap (ORS) will be turned into a local scrap dealer. The procedures outlined in DoD 4160.21.M will be followed and the shipment certified as being free of explosive hazards. A DD Form 1348-1 will be utilized as turn-in documentation and will include the statement "I certify that the property listed hereon has been inspected by me and, to the best of my knowledge and belief, contains no items of a dangerous nature.". The DD1348-1 will be signed by the SUXOS and all turn-in documentation included in the removal report.

o When ORS is located on site, it will be inspected by at least two UXO technicians prior to being removed from the grid or sifter area. Whenever ORS is to be placed in a scrap storage container, the QCS and SUXOS will conduct a third and fourth inspection for the presence of explosive components or hazardous residues. In the event that any are discovered, the item will be removed and destroyed and the incident will be recorded and thoroughly discussed at the next daily tailgate safety meeting. The incident will be reviewed by the SUXOS and QCS and a recommended course of action will be presented to the PM, e.g., reprimand or dismissal of the two previous inspectors.

7.0 ALTERNATE TECHNIQUES. NA.

8.0 QUANTITY-DISTANCES.

The appropriate Quantity-Distances are shown on the site maps enclosed in Appendix A of this submission. For ease of review, the distances are repeated here. The rationale for the MPM and citation for the calculation method are presented in Section 3.0 of this submission. In general, team separation distances will be determined by the greater of 200 feet or the K50 (0.9 psi overpressure) distance. The separation distance for all unrelated personnel for an accidental detonation from an OE area will be determined by the greater of 200 feet, the K50 distance or the maximum fragment throw distance. The separation distance for all personnel (related and unrelated) for intentional detonations will be determined by the maximum of 200 feet, the K328 distance or the maximum fragment throw distance. Applying the above principles, the following distances apply:

OE Areas: Minimum of 345 feet (this is the maximum fragment range for the M406 40mm Grenade (HE).

Magazines: Minimum of 500 feet (Front) and 250 feet (Rear and Sides), IAW C9.T1 of DoD 6055.9-STD. Note that these distances are for 1.1 explosives; therefore, they exceed the distance requirements for the 1.4 demolition materials to be stored in one of the magazines. UXO (Class 1.1) will be stored in the second magazine.

Intentional Detonations: Minimum of 345 feet (via approved calculation).

Sifting Operations: During operation, no non-essential personnel will be allowed within a 400 foot radius of the sifter. This is due to the fact that the M406, 40mm Grenade (HE) is a Joint Hazard Classification (04)1.2 item. Therefore, the 400-foot distance will be used. Reference should be made to Site Map No. 4 in Appendix A.

9.0 OFF-SITE DISPOSAL. NA.

10.0 TECHNICAL SUPPORT.

No Chemical Warfare Materials (CWM) are suspected at this site. The contractor will positively identify all OE uncovered before items are removed or destroyed. If a suspect CWM is encountered, the Site Safety Officer will stop all operations on site and notify the on site CEHNC representative. The CEHNC Safety Specialist will notify the appropriate Explosive Ordnance Disposal (EOD) Detachment (725th Ordnance Company (EOD) out of Fort Drum) and/or Technical Escort Unit.

11.0 LAND USE RESTRICTIONS.

There will be no reuse restrictions required following this action. The site will be transferred (sometime during the closure process) for use as discussed in the INTRODUCTION, above.

12.0 PUBLIC INVOLVEMENT.

This removal is being performed under the CERCLA umbrella since Seneca is a BRAC federal facility on the National Priorities List. Consequently, the required public involvement process is already in place (BCT, RAB, general public involvement) with the SEDA PAO taking the lead.

13.0 AFTER ACTION REPORT.

Following the OE Removal Project at the Former QA Function Test Area, a copy of the Final Removal Report will be provided, to all who reviewed this ESS, for information purposes.

14.0 AMENDMENTS AND CORRECTIONS.

An amendment or correction discussing any changes in the procedures to be used or the conditions encountered during this removal will be provided for review and approval as warranted in the guidance.

15.0 REFERENCES

General

a. DA PAM 385-64, Ammunition and Explosives Safety Standards, dtd 28 November 1997.

b. AR 385-64, US Army Explosives Safety Program, 28 November 1997.

c. DoD 6055.9-STD, Department of Defense Ammunition and Explosives Safety Standards, July 1999.

d. DDESB, Guidance for Clearance Plans, 27 January 1998.

e. Interim Final, "Guidance for Conducting Remedial Investigations/Feasibility Studies Under CERCLA", U.S. EPA, Office of Solid Waste and Emergency Response, October 1988.

f. "U.S. Corps of Engineers Safety and Health Requirements Manual," U.S. Army Engineering Manual No. EM-385-1-1, April 1981.

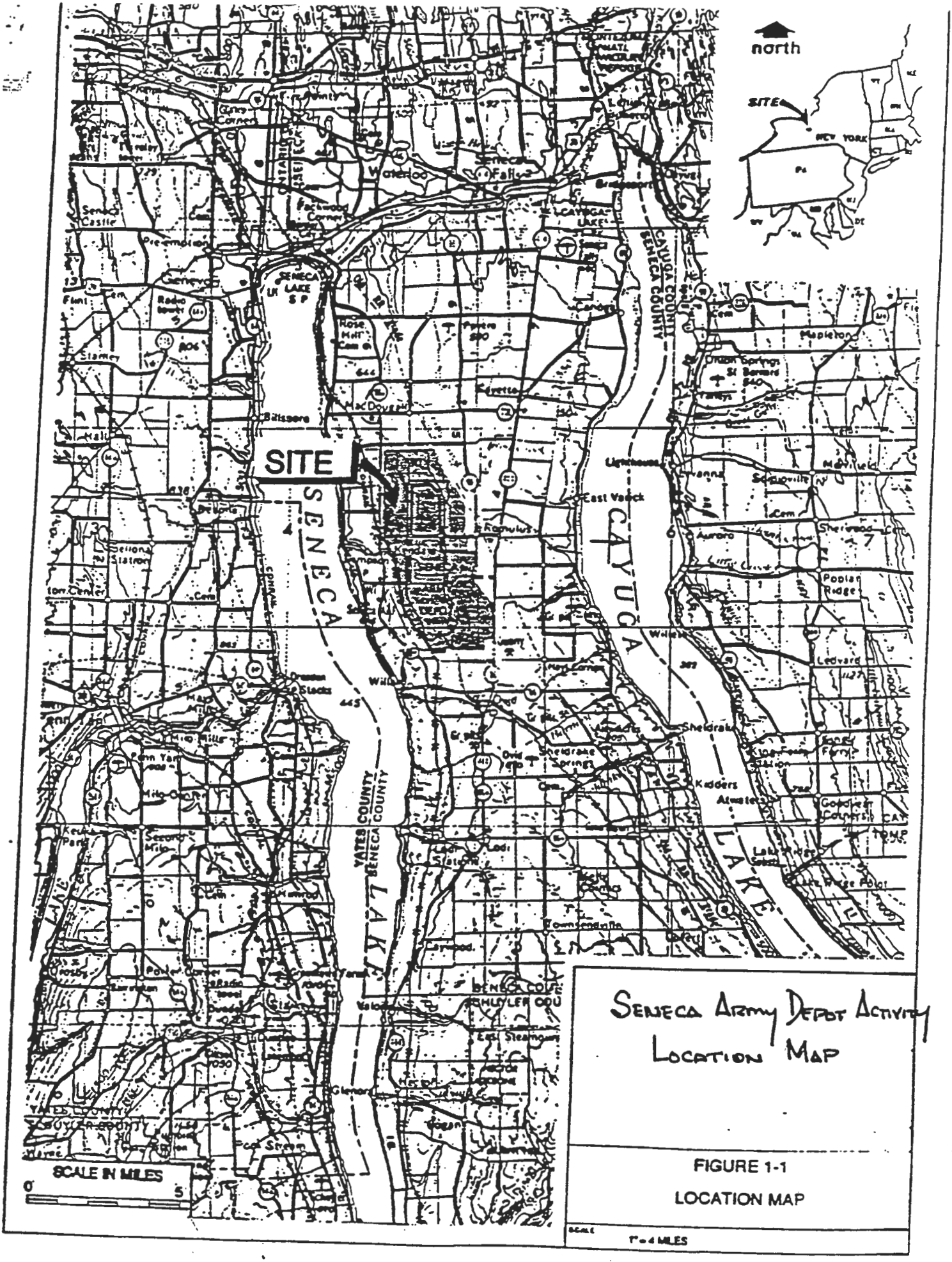
g. "Safety Concepts and Basic Considerations for Unexploded Ordnance (UXO) Operations", U. S. Army Engineering and Support Center, Huntsville, Revised 16 February 1996.

Specific

h. "Federal Facility Agreement under CERCLA Section 120 in the matter of Seneca Army Depot, Romulus, New York," Docket No. II-CERCLA-FFA-00202, USEPA, U.S. Department of the Army, and the New York State Department of Environmental Conservation, November 1990.

APPENDIX A

MAPS

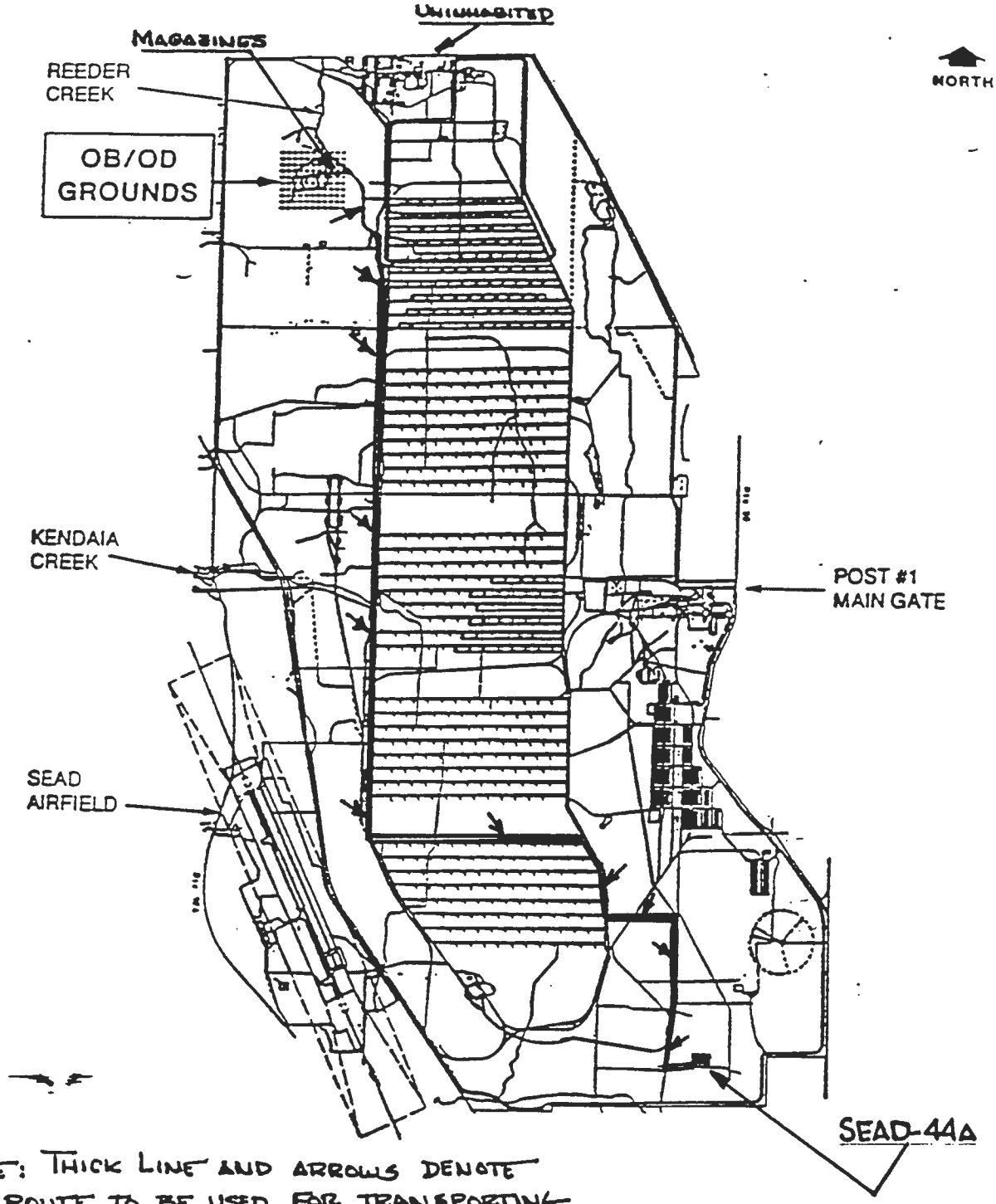


Seneca Army Depot Activity
Location Map

FIGURE 1-1

LOCATION MAP

SCALE 1"=4 MILES



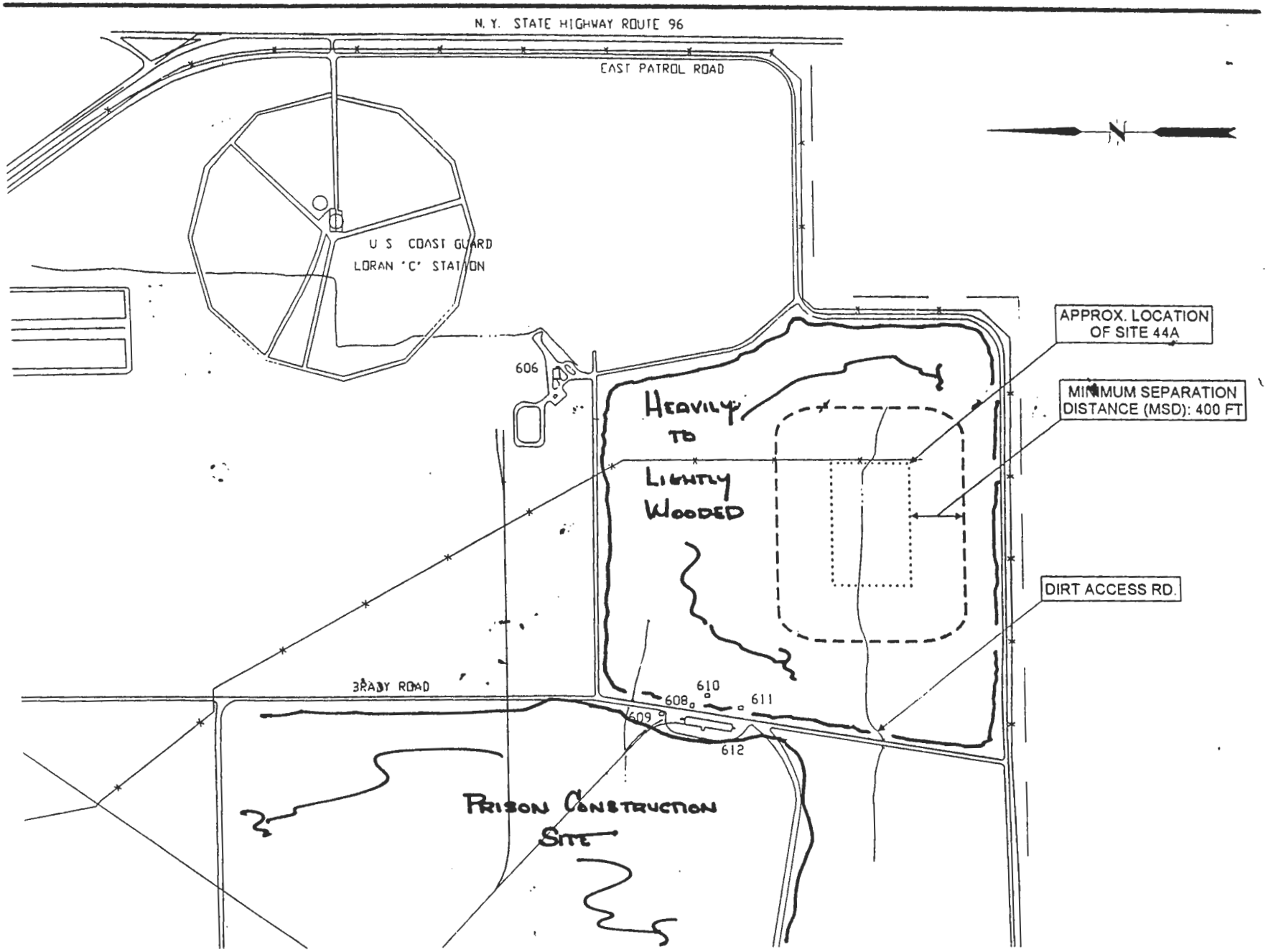
NOTE: THICK LINE AND ARROWS DENOTE THE ROUTE TO BE USED FOR TRANSPORTING EXPLOSIVES TO SEAD-44A AND BE TO THE OB GROUNDS. KEY WILL BE TO AVOID THE WAREHOUSE AND OFFICE AREAS.

SOURCE: Seneca Army Depot

FIGURE 1-2

SENECA ARMY DEPOT MAP

SCALE 1" = 2000' (APPROXIMATE)



NEAREST POINT WITH GENERAL PUBLIC PRESENCE:

- STRAIGHT-LINE DISTANCE ≈ 1200 FEET TO PRISON CONSTRUCTION FROM NW CORNER OF THE SITE.
- DISTANCE BY AVAILABLE ROAD ≈ 1500 FEET FROM SITE GATE TO PRISON CONSTRUCTION.

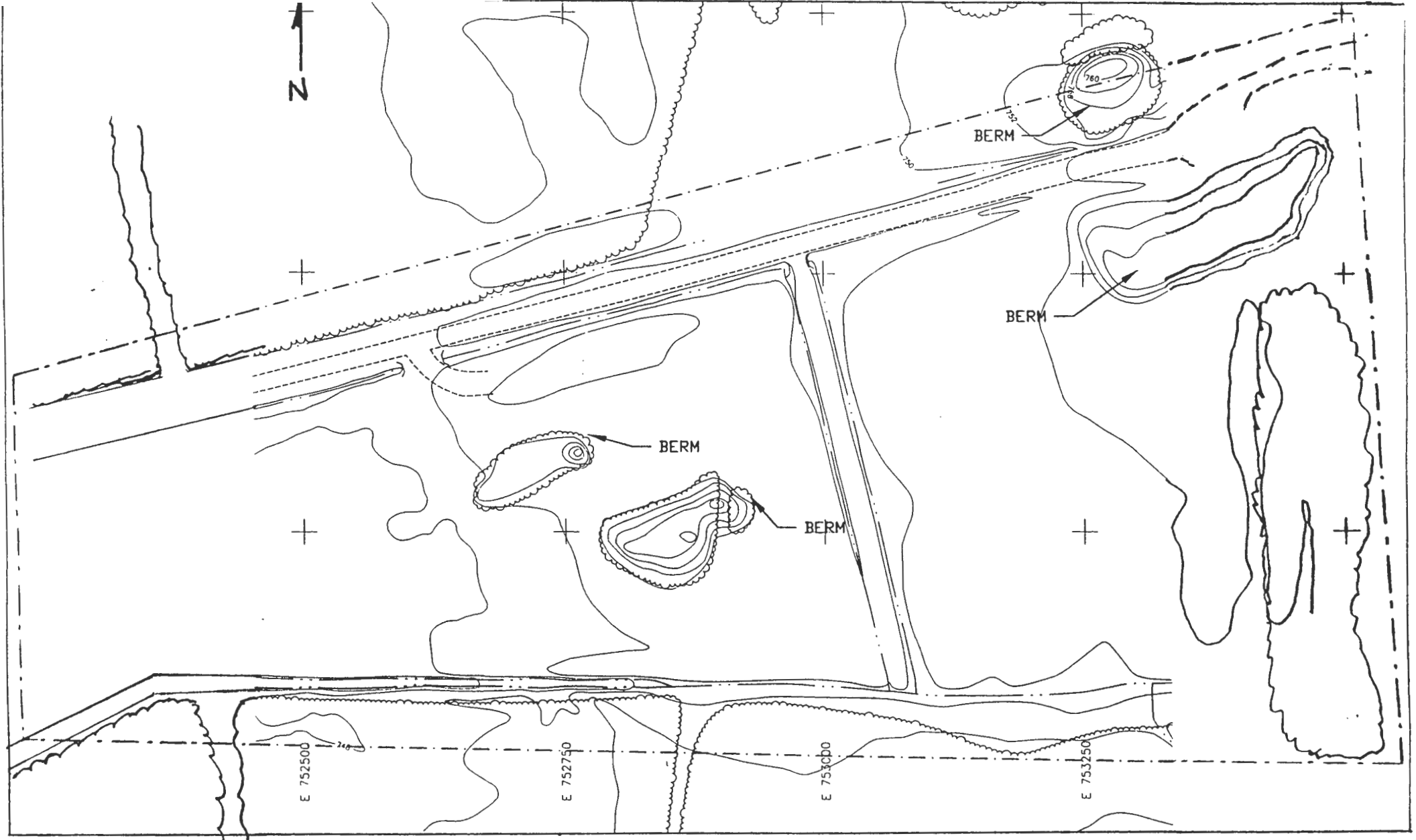
SITE MAP 1
GENERAL SITE LAYOUT

Seneca Army Depot Activity

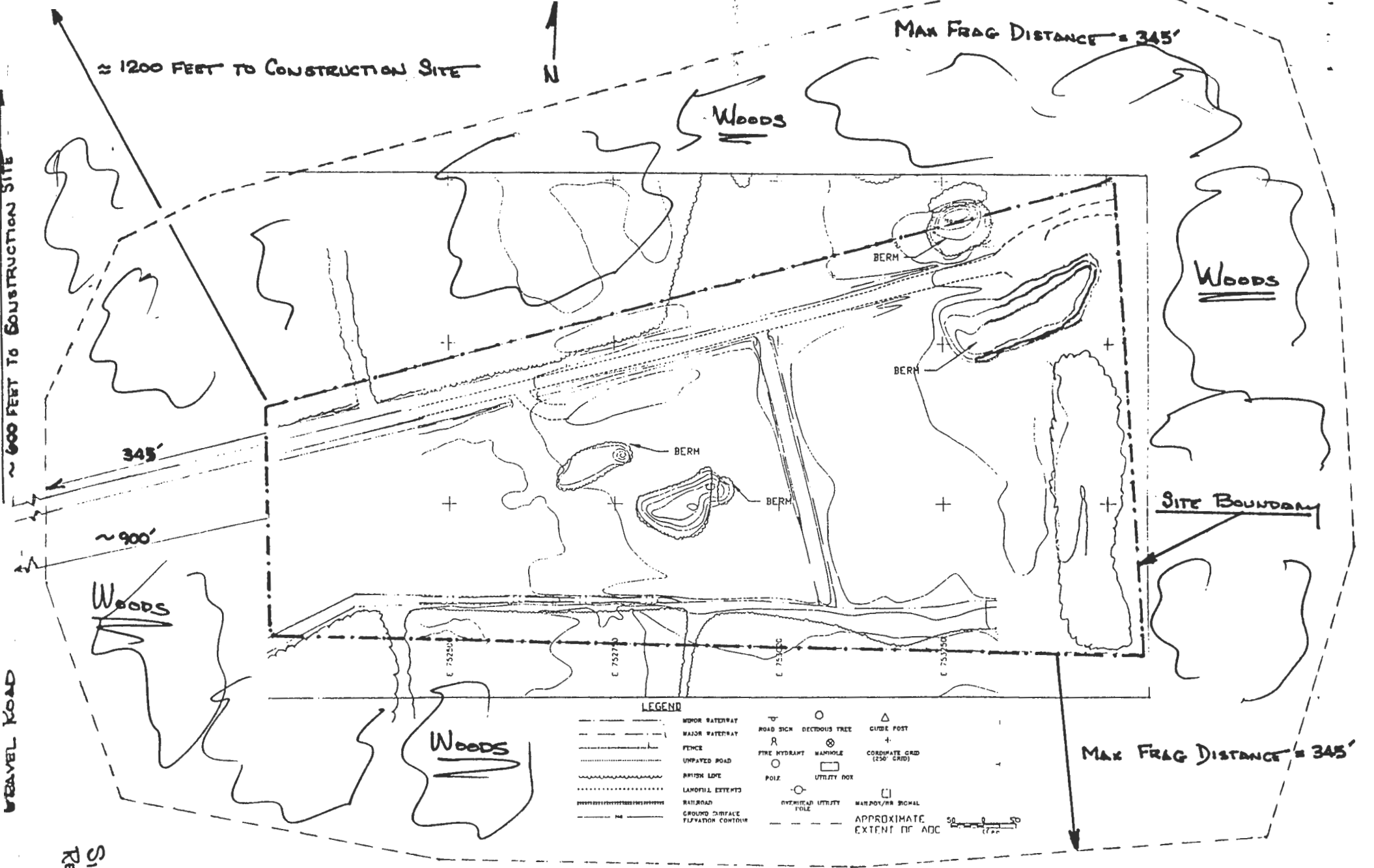
Romulus, New York

Site 44A, Quality Assurance Function Test Range

Drawing Version No.: 1 Rev. 0	Drawn by: JKD	Contract Number: DACA87-97-D-0005	Figure No. C-1
Date: 02/21/00	Checked by: DB/SM	Task Order Number: 0015	

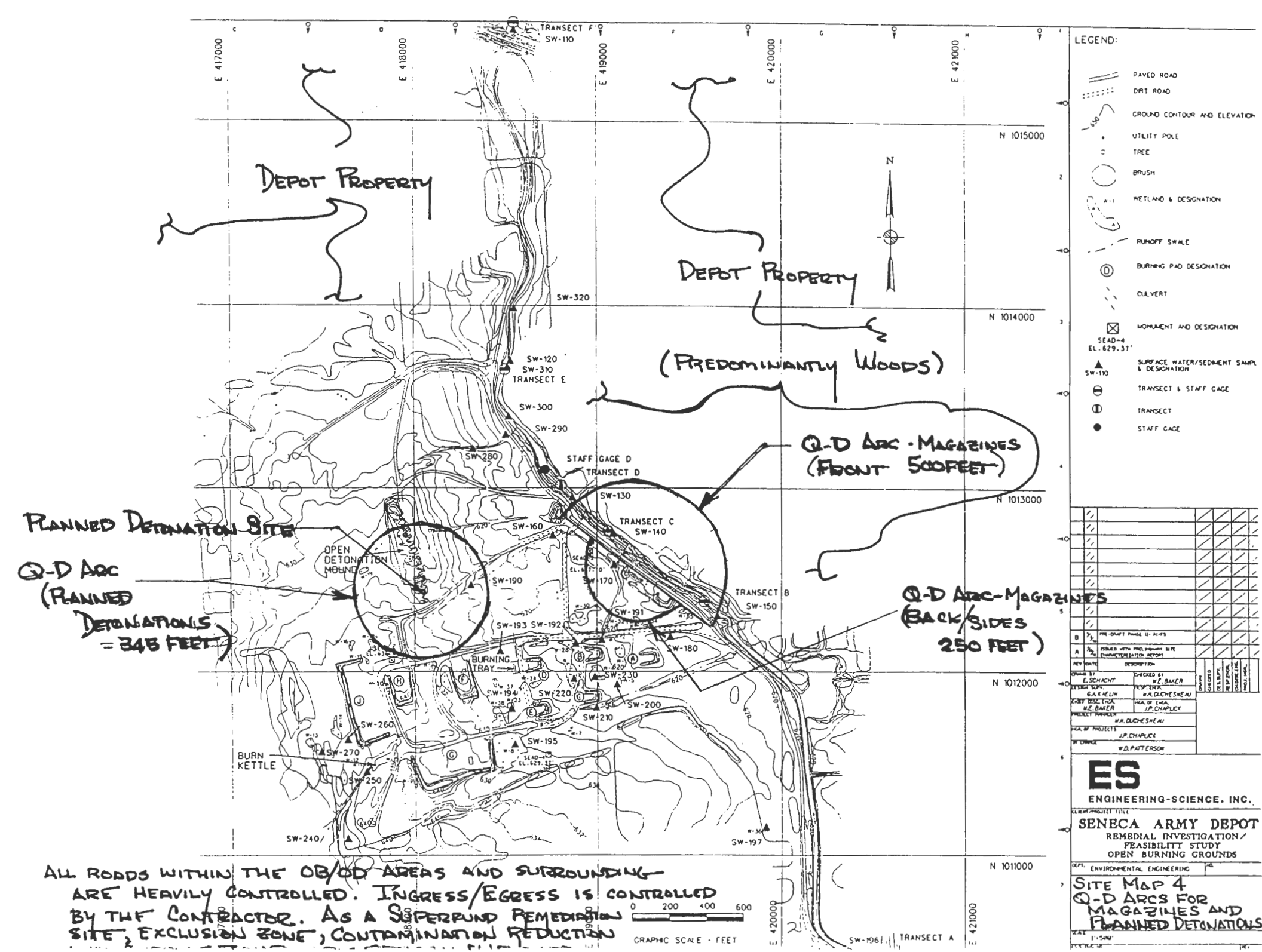


Site Map 2
Detailed Site Layout



SITE MAP 3
RELATIONAL DISTANCES

NOTE: SIFTER WILL BE KEPT A MINIMUM OF 55' WITHIN THE SITE BOUNDARY SO AS TO KEEP THE 400' SIFTER C-P ADC WITHIN THE SITE "MAX FRAG DISTANCE" BOUNDARY AT ALL TIMES.



ALL ROADS WITHIN THE OB/OD AREAS AND SURROUNDING ARE HEAVILY CONTROLLED. INGRESS/EGRESS IS CONTROLLED BY THE CONTRACTOR. AS A SUPERFUND REMEDIATION SITE, EXCLUSION ZONE, CONTAMINATION REDUCTION

ENGINEERING-SCIENCE, INC.

SENECA ARMY DEPOT
REMEDIAL INVESTIGATION/ FEASIBILITY STUDY
OPEN BURNING GROUNDS

ENVIRONMENTAL ENGINEERING

SITE MAP 4
Q-D ARCS FOR MAGAZINES AND PLANNED DETONATIONS

APPENDIX B

Soil Sifting Standard Operating Procedure

STANDARD OPERATING PROCEDURE 120-B
UXO/OEW OPERATIONS - MECHANICAL SCREENING

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to outline the minimum safety and health requirements and procedures applicable to the conduct of material separation operations involving the use of mechanical screening equipment.

2.0 SCOPE

This SOP applies to all site personnel, to include EODT, contractor, and subcontractor personnel, and operations involving the separation of material through the use of mechanical screening equipment. This SOP is not intended to contain all requirements needed to ensure regulatory compliance and is generic in nature. Site-specific requirements for blast shields, plexiglass and safety arcs are presented in the figures attached to this SOP when it is added to a Site Safety and Health Plan. Additionally, consult the documents listed in section 3.0 of this SOP for additional compliance issues.

3.0 REGULATORY REFERENCES

The following Occupational Safety and Health Administration (OSHA) standards and U.S. Army Corps of Engineers (USACE) requirements directly apply to the conduct of operations associated with the SOP. In the event other hazards are associated with the conduct of this SOP, consultation of other SOPs and regulatory references may be needed.

- OSHA Construction Industry Standard 29 CFR Part 1926, Subpart O;
- OSHA General Industry Standard 29 CFR Part 1910, Subparts N and O; and
- USACE EM 385-1-1, Sections 16 A and B and Section 17 A.

4.0 RESPONSIBILITIES

4.1 PROJECT MANAGER

The Project Manager shall be responsible for ensuring the availability of the EODT resources needed to implement this SOP, and shall ensure that this SOP is incorporated in the plans, procedures and training for sites where mechanical screening is to be implemented.

4.2 SENIOR UXO SUPERVISOR

The Senior UXO Supervisor (SUXOS) will ensure that this SOP is implemented for screening operations, and that relevant sections of this SOP are discussed in the tailgate safety briefings. Information related to the daily implementation of the SOP is to be is documented in the Site Operational Log maintained by the SUXOS.

4.3 UXO SUPERVISOR

The UXO Supervisor (UXOS) shall be responsible for ensuring the field implementation of this SOP and for implementing the safety and health requirements outlined in section 5.0 of this SOP. In the absence of a SUXOS, the UXOS shall be responsible for implementing the SUXOS responsibilities outlined in para 4.2.

4.4 SITE SAFETY AND HEALTH OFFICER

The Site Safety and Health Officer (SSHO) will be responsible for ensuring that the safety and health hazards and control techniques associated with this SOP are discussed during the initial site hazard training and the daily tailgate safety briefings. The SSHO will also be responsible for daily inspection of site operations and conditions to ensure their initial and continued compliance with this SOP and other regulatory guidelines.

5.0 PROCEDURE

All EODT, contractor, and subcontractor personnel involved in screening operations shall be familiar with the potential safety and health hazards associated with this operation. Additionally, all effected personnel shall also be familiar with the control techniques that will used to reduce or eliminate these hazards.

5.1 SAFETY HAZARDS

The safety and health hazards potentially associated with mechanical screening operations on an ordnance and explosives (OE) site are listed below. For each of the hazards listed, at least one hazard control measure is listed in paragraph 5.2 for the reduction of the operational hazard. At no time will mechanical screening operations be conducted on site without the use and implementation of the appropriate controls measures.

1. Unexploded ordnance (UXO), possibly resulting in heat, fire, fragmentation, and over pressurization hazards;
2. Vehicle traffic and movement
3. Trips and falls (excavations and man lift)
4. Noise;
5. Heavy equipment operations;
6. Dust, with potential for exposure to toxic metals;
7. Stored energy and pinch points; and
8. Engine exhaust.

5.2 OPERATIONAL CONTROL MEASURES

For the safety hazards listed in paragraph 5.1, the operational control measures presented below shall be used to the greatest extent feasible, to protect site personnel from the hazards associated and identified with mechanical screening operations. The degree and type of hazard, as outlined in the site Work Plan (WP) and Site Safety and Health Plan (SSHP) will determine the extent of control to be used, however, all of the safety measures listed below will be implemented.

1. Daily tailgate safety meetings will be conducted, and noted in the Safety Log, as to the safety and health concerns pertaining to overall operations and the use of screening equipment.
2. Screening equipment and support vehicles shall be equipped with fire extinguishers.
3. The excavation operations will not require barricading, however, the excavator equipment operator will be protected behind a plexiglass window of the thickness specified in Figure 120B-1. For the loader/excavator operator, the plexiglass will be mounted over the existing windshield and windows.
4. The mechanical screening assembly will not require barricading; however, the UXO personnel controlling and monitoring the screening will be protected behind plexiglass windows mounted on a separate blast shield. The blast shield used shall be constructed similar to the blast shield depicted in Figure 2-3. At a minimum, the blast shield shall provide front, side and overhead protection and be constructed to the material thickness specifications depicted. General design characteristics and dimensions of the plexiglass and steel sides required have been specified by Dr. Crull, Structures Branch, Engineering Directorate, US Army Engineering and Support Center, Huntsville (CEHNC). The dimensions were selected based upon the accidental detonation of the most probable munitions (MPM) for the specific site. The UXO personnel controlling the screen will do so by means of a remotely-wired "kill switch." This kill switch will be capable of shutting down the screening operations should the UXOSP monitoring the operation detect an OE item within the screen or screen reject. The location of the UXOSP monitoring the screening process will be such that the UXOSP will be able to see the screening area. This may require the use of a man lift to allow for visual observation of the operation. If needed, the blast shield will be mounted on the man lift platform. According to the manufacturer, the thickness of the steel man lift platform is 0.125" which is less than the thickness of steel required for the observer's shield. Consequently, the Contractor will be required to add a steel plate to the man-lift floor so that the minimum thickness of the platform is 0.15 inches.
5. Any operational observer will be located outside the K24 distance arc of 11.0 feet for the MPM specified for this site. To fill the sifter hopper, the loader operator will be passing temporarily into and out of the K24 distance arc, and as such will be required to wear hearing protection at all times. This will be in addition to the plexiglass shielding that will be installed on all excavation and loading equipment.

6. The UXOSP controlling the screening operation will watch for any materials that may be UXO items and any items that may become lodged/jammed in the screens. If any potential UXO is seen in the hopper, on the conveyors, in the screens, or in the reject material, the screening process will be shut down immediately. Once the process has been halted and secured, the potential UXO item will be inspected by the UXOSPs. If the item is confirmed as being a UXO, the item will be identified and a determination made as to whether the item can be moved. Those items that are unfuzed or safe to move will be removed from the screening equipment and stored for later disposal according to the approved Work Plan (WP). Those items determined to be unsafe to move will be left in place, the CEHNC on-site Safety Specialist will be notified, and the screening operations halted until such time as a resolution can be obtained using the procedures in the approved WP. Those items identified as being OE-related but not UXO will be removed and stored accordingly.
7. Segregation of the oversize materials will be performed according to the following:
   a Debris identified as rocks, roots, shale, etc., will be collected and combined with the screened soil from which they came.
   b. The debris is identified as non-OE scrap that will be disposed of as scrap.
   c. The debris is identified as OE-related scrap or inert OE and must be verified as being free of OE hazards prior to scrap disposal.
   d. The debris is identified as UXO that is unfuzed and safe to move, in which case the item will be removed from the area and destroyed at the existing OD area.
   d. Hazardous UXO identified that cannot be moved, will be brought to the attention of the SUXOS who will immediately notify the USAESCH OSS. The OSS will direct EODT as to the next course of action to be taken.
8. When maintenance/servicing is performed on the sifter or conveyor system, all sources of immediate power or stored energy shall be controlled (refer to lockout/tagout SOP).
9. Screening operations shall be restricted to daylight hours, and once operations begin, only UXO-qualified personnel may enter the safety zone around the sifter operation.
10. All personnel involved in the screening operations shall be informed of the "Kill Switch" location, as well as the procedures for summoning emergency support.

5.2 SAFETY AND PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

The following safety measures and personal protective equipment (PPE) shall be used in preventing or reducing exposures associated with screening operations. These requirements will be implemented unless superseded by site specific requirements stated in the SSHP.

1. Hard hats, steel-toe safety boots and protective gloves shall be worn when ever maintenance, adjustment or clearing of the sifter is being performed.

2. Safety glasses shall be worn around screening equipment unless full face respirators are required; and
3. Any of the PPE that will be worn when investigating OE items in the sifter will be secured to the wearer to ensure that it does not fall off and strike suspect UXO items;
4. Hearing protection shall be worn when screening equipment is in operation unless the SSHO has measured and determined the noise levels to be less than 85 decibels on the "A" scale over an 8-hour time-weighted average.

6.0 AUDIT CRITERIA

The following items related to screening operations will be audited to ensure compliance with this SOP:

1. The Daily Operational and Safety Logs;
2. The Documentation of Training form for the initial site hazard training;
3. The Documentation of Training form for the Daily Tailgate Safety Briefings; and
4. The Daily Safety Inspection Checklist.

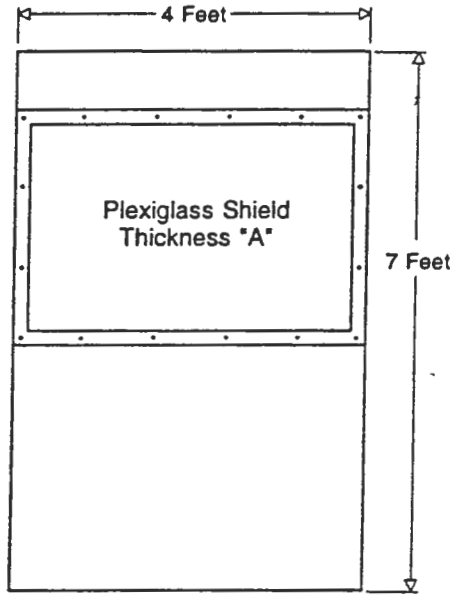
7.0 ATTACHMENTS

No attachments associated with this SOP.

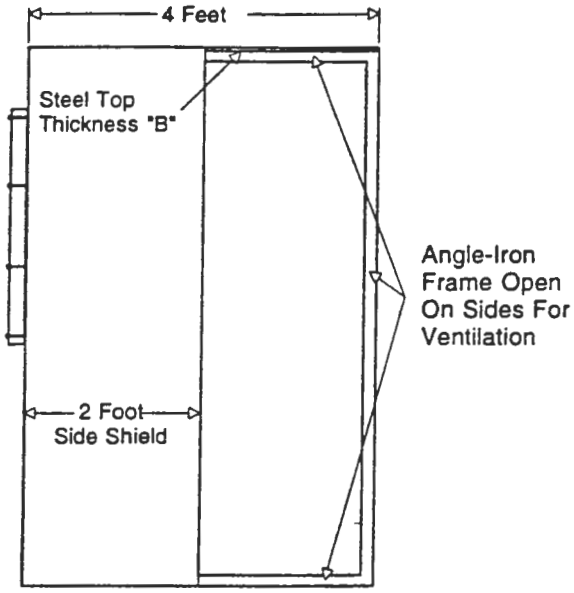
FIGURE 2-3: PROTECTIVE DISTANCES AND BLAST SHIELD DIAGRAM

Site Name: Former QA Function Test Range	Site Location: Seneca Army Depot Activity	
MPM: M406 40mm HE Grenade	Hazard Class/Division: 04 (400 feet)	
Maximum Fragmentation Distance: 345 feet	Range to 0.9 Overpressure: 23 feet	
K328 Overpressure Distance: 153 feet	K24 Distance: 11 feet	MSD: 400 feet
Thickness A for the Plexiglass: 0.88 inches	Thickness B for mild steel: 0.15 inches	

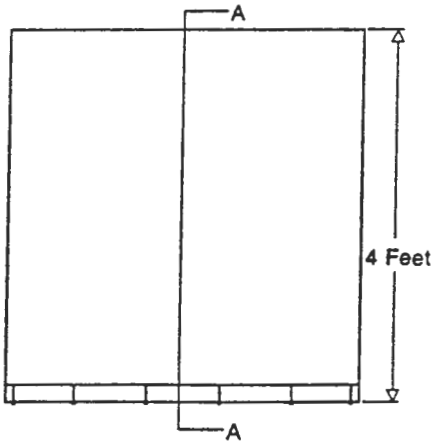
all O.K checked by MC



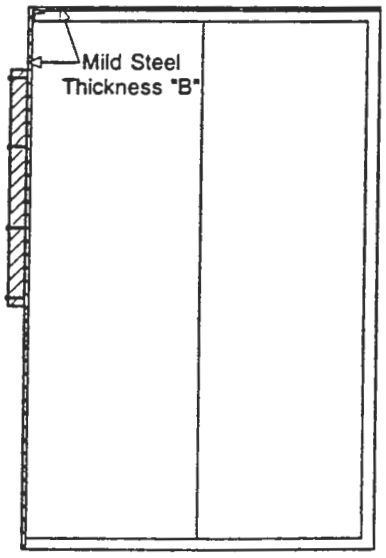
Front View



Right Side View



Top View



Cross Section A - A

Note:
Sizes are approximate, and different configurations may be used upon approval of CEHNC. Additionally, plexiglass window may cover entire front of blast shield.

APPENDIX C

Public Withdrawal Distance Computation SHeets

Public Withdrawal Distance (PWD)
Seneca Army Depot (SEAD-44)
5 October 1999

SANDBAG ENCLOSURE FOR INTENTIONAL DETONATIONS

Required Sandbag Thickness = 12 in. with 6" standoff between munition and sandbags
Sandbag Throw Distance = 25 ft
Minimum Exclusion Zone = 200 ft

The required sandbag thickness and the sandbag throw distance were calculated IAW CEHNC-ED-CS-S-98-7. The minimum exclusion zone is based on the largest of the sandbag throw distance or 200 ft or the K328 distance for the total NEW (munition plus donor charge). A copy of HNC-ED-CS-S-98-7, "Use of Sandbags for Mitigation of Fragmentation and Blast Effects Due to Intentional Detonation of Munitions" must be available on site. This report may be downloaded from the USAESCH homepage at http://www.hnd.usace.army.mil Select "Product Lines", "Ordnance and Explosives", "Technology", then "Analytical Tools". The first time you access the site you will have to register. You will be notified by e-mail when your login and password have been activated. You must have a login and password to download the report.

THICKNESS OF MATERIAL REQUIRED TO DEFEAT DESIGN FRAGMENT

Required Thickness of LEXAN = 1.80 in
Required Thickness of Plexiglass = 0.88 in
Required Thickness of steel = 0.15 in

The required thickness is calculated using the THOR equations and the preformed fragment weight and the initial fragment velocity. Fragment weight and velocity are calculated IAW HNC-ED-CS-S-98-1

SIGNATURES:

Michelle Auld 10/5/99
Subject Matter Expert

William H. Rehder Jr. 5 Oct 99
CEHNC-ED-CS-S Branch Chief

Public Withdrawal Distance (PWD)
Seneca Army Depot (SEAD-44)
5 October 1999

MUNITION: 40 mm M406
REQUESTED BY: Kevin Healy
PREPARED BY: Michelle Crull, PhD, PE
NET EXPLOSIVE WEIGHT: 32 g Comp B (38.4 g TNT Equivalent)

This form shows calculated distances only. It does not constitute approval. Concurrence of CEHNC-OE-S is required to determine the applicable distance for a specific site.

In accordance with (IAW) OE Center of Expertise Interim Guidance Document 98-08, use of the range to no more than 1 hazardous fragment/600 sq ft as the PWD for accidental detonations requires written justification, a risk analysis, calculation of this distance by CEHNC-ED-CS-S, and concurrence of CEHNC-OE-S.

ACCIDENTAL DETONATIONS

Maximum Fragment Range = 345 ft
Range to No More Than 1 Hazardous Fragment/600 sq ft = NA ft
Hazard Class/Division = 04 (400 ft)
Range to 0.9 psi Overpressure = 23 ft
K24 Distance (for sifting operation) = 11 ft

IAW OE Center of Expertise Interim Guidance Document 98-08, the PWD for intentional detonations may not be less than the default distance provided in DoD 6055.9-STD or the maximum fragment range or the K328 overpressure distance.

INTENTIONAL DETONATIONS

Maximum Fragment Range = 345 ft
K328 Overpressure Range = 153 ft

The primary fragmentation characteristics used in the calculation of the values listed above were computed IAW CEHNC-ED-CS-S-98-1. The maximum fragment range was calculated using the maximum weight fragment and the initial velocity from these characteristics in the computer software TRAJ. The range to no more than 1 hazardous fragment/600 sq ft was calculated IAW CEHNC-ED-CS-S-98-2.

U. S. NUCLEAR REGULATORY COMMISSION
FY 1998 Annual Materials Fee Invoice
Period 10/1/1997 - 9/30/1998
10 CFR 171.16

Invoice Date	License Anniversary Month	Invoice Number
09/21/1998	September	AM5355-98

ARMY, DEPARTMENT OF THE
ATTENTION: RADIATION SAFETY OFFICER
SENECA ARMY DEPOT ACTIVITY
ATTN: SDSSE-CO
ROMULUS NY 145415001

***** Mark PAYMENT COPY with any billing address changes *****

License/Approval/ Registration/ Certificate Number	Code AA905	Annual Fee Category(s)	Fee Amount
SUC-1275	ANN	2C	$ 8,700.00
		TOTAL:	$ 8,700.00
		TOTAL INVOICE:	$ 8,700.00

If paid by Fedwire see attached Terms and Conditions. If paid by check, make check payable to the NRC (reference Invoice no.) and mail to:

U.S. Nuclear Regulatory Commission <=== This PO Box address is
License Fee & Accounts Receivable Branch <=== for receipt of payments
P.O. Box 954514 <=== only.
St. Louis, MO 63195-4514

For terms and conditions see attached.
Payment must be received within 30 days of the
date of this invoice to avoid late charges.
Questions: call 301/415-7554

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* L I C E N S E E C O P Y *
* *
****

MAR 24 1997

U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 9649
(FOURTH REVISION)

1. U.S. Department of Defense, Washington, DC, is hereby granted an exemption from certain provisions of this Department's Hazardous Materials Regulations to offer for transport in commerce packages prescribed herein of munitions of any class 1 (explosive) hazard containing components manufactured of depleted uranium metal subject to the limitations and special requirements specified herein. This exemption authorizes radiation levels slightly higher than normally allowed for limited quantity radioactive materials and relief from certain marking requirements for the depleted uranium component of the packages, and provides no relief from any regulation other than as specifically stated.

2. BASIS. This exemption is based on an application from the U.S. Department of Defense dated July 22, 1996, submitted in accordance with 49 CFR 107.109.

3. HAZARDOUS MATERIALS (Descriptor and class). Packages and overpacks containing munition products that have depleted uranium components; classification determined by the explosive component of the munition product.

4. PROPER SHIPPING NAME (49 CFR 172.101). Specific or generic descriptions, as appropriate, for the explosive properties of the munition.

5. REGULATIONS AFFECTED. 49 CFR 173.421(a)(2) and (4), and 173.422(a)(3), as referred to from 173.426(c) and (d).

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle, rail freight, cargo vessel.

7. SAFETY CONTROL MEASURES.

a. Maximum radiation levels on any external surface of the package, overpack or unitized palletized group of packages shall not exceed 2.5 millirem per hour (25 microsieverts per hour).

b. Packaging and safety controls during transportation shall be appropriate to the explosive hazard of the product.

c. Safety procedures for the less significant radiological hazards and for the more significant explosive hazards, shall be described in the operation and transportation instructions for the products and must satisfy the requirements of 49 CFR 172.602. Both normal and accident conditions shall be addressed in these documents.

8. SPECIAL PROVISIONS.

a. Packages are not required to bear a marking with the word "radioactive" inside or on the package as specified in §173.421(a)(4), and the shippers notice referred to by §173.422(a)(3) is not required.

b. The product description on shipping documents for each consignment transported under this exemption shall include: a statement that the consignment contains depleted uranium metal, the exemption number DOT-E 9649, and the identity and phone number of a Department of Defense authority familiar with both the explosive and radiological hazards of the product.

c. Each package, overpack or unitized/palletized group of packages must be conspicuously marked "DOT-E 9649" with figures at least 1" (2.5 cm) high.

d. Only those military services and contractors designated by the Department of Defense are authorized to operate under this exemption. Before a service within the Department of Defense offers or transports munition products under this exemption, that service shall have on file with the Military Traffic Management Command (MTMC) a complete set of instructions and procedures that have been approved by MTMC as satisfying the documentation requirements of paragraphs 7(b) and 7(c) of this exemption. The MTMC shall have on file the names of the contractors that the service has designated as authorized to make shipments under their instructions and procedures for the products under this exemption.

e. This exemption provides no relief from the applicable rules and regulations of any foreign country into or through which the consignments are to be transported.

9. MODAL REQUIREMENTS.

a. A copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.

b. Each person offering shipments under this exemption shall provide a copy of the exemption to the carried as part of any required shipping documents.

10. Compliance. Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. Section 5101 et seq:

o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

o Registration required by 49 CFR 107.601 et seq., when applicable.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

11. REPORTING REQUIREMENTS. The carrier is required to report any incident involving fire, explosion or loss of package contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents invelving the package and shipments made under the terms of this exemption.

12. EXPIRATION DATE. December 31, 1998.

Issued at Washington, D.C.:

MAR 24 1997

J. Suzanne Hedgepeth

(DATE)

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590. Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemptions is prohibited.

Dist: FHWA, FRA, USCG.

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333 - 0001

REPLY TO ATTENTION OF

AMCSF-P (385-11m)

14 AUG 1998

MEMORANDUM THRU Commander, U.S. Army Industrial Operations Command, ATTN: AMSIO-DMS, Rock Island, IL 61299-6000

FOR Commander, Seneca Army Depot Activity, ATTN: SIOSE-S (Jones), Romulus, NY 14541-5001

SUBJECT: Amendment to Department of the Army Radiation Authorization (DARA) No. A31-60-02

1. Subject DARA amendment has been approved and is provided at the enclosure. It will expire on 31 December 1999.

2. Please read all conditions carefully and ensure compliance.

3. The Point of Contact for this office is Mr. John Manfre, DSN 767-9340, Commercial (703) 617-9340; Facsimile on DSN 767-9469, or e-mail jmanfre@hqamc.army.mil.

4. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER:

Encl

DONALD PITTENGER
Chief, Safety Office

CF (w/encl):
Commander, U.S. Army CECOM, ATTN: AMSEL-SF-RE, Fort Monmouth, NJ 07703-5024
Commander, Seneca Army Depot Activity, ATTN: SIOSE-S (Jones), Romulus, NY 14541-5001

003223

DEPARTMENT OF THE ARMY
AUTHORITY FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS

In reliance on statement and representation made by the applicant, authority is hereby granted to receive, produce, transfer, possess, use, and store the material(s) designated in item 5. This authority is subject to conditions specified below.

1. ACTIVITY GRANTED AUTHORITY Commander 2. Seneca Army Depot Activity Rad Assistance Team ATTN: SIOSE-MR 5786 State Route 96 Romulus, New York 14541-5001	3a. AUTHORITY/PERMIT NUMBER A31-60-02 amendment 01 3b. DOCKET NUMBER 0029 4. EXPIRATION DATE 31 December 1999

5. MATERIAL	6. CHEMICAL AND/OR PHYSICAL FORM	7. QUANTITY LIMITATION NOT TO EXCEED PER ITEM TOTAL
a. Cesium 137	a. Sealed Source (Model CS7B)	a. Eleven Sources, each source is 1.0 micro-curie (uCi).
b. Cesium 137	b. Sealed Source (Model CS10)	b. One source, total activity is 1.0 uCi.
c. Cesium 137	c. Sealed Source (Model DNS-9, SN: 1844-94)	c. One source, total activity is 0.829 uCi.
d. Cesium 137	d. Sealed Source (Model DNS-9, SN: 1845-94)	d. One source, total activity is 0.906 uCi.
e. Americium 241	e. Sealed Source (Model DNS-5)	e. Nine sources, each source is 5.0 uCi.
f. Uranium 235	f. Check Sources (Isotope Products)	f. Four sources, each source is 1.5 uCi.

8. AUTHORIZED USE:

a through f. Used for instrument calibration and as check sources.

DEPARTMENT OF THE ARMY
AUTHORITY FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS
SUPPLMENTARY SHEET

Authorization/Permit No. A31-60-02	Docket Number: 0029

5. MATERIAL	6. CHEMICAL AND/OR PHYSICAL FORM	7. QUANTITY LIMITATION NOT TO EXCEED PER ITEM TOTAL
g. Uranium 238	g. Sealed Source (Model UAR.04012, SN: DZ 617)	g. One source, total activity is 1.5E-4 uCi.
h. Technitium 99	h. Sealed Source (Model TCR.03012, SN: DZ 395)	h. One source, total activity is 4.53E-3 uCi.
i. Technitium 99	i. Sealed Source (Model DNS-9, SN: 1843-94)	i. One source, total activity is 5.41E-3 uCi.
j. Technitium 99	j. Sealed Source (Model DNS-9, SN: 1039/92)	j. One source, total activity is 4.89E-3 uCi.
k. Thorium 230	k. Sealed Source (Model DNS-9, SN: 1842-94)	k. One source, total activity is 4.54E-3 uCi.
l. Thorium 230	l. Sealed Source (Model DNS-9, SN: 1841-94)	l. One source, total activity is 4.31E-3 uCi.

8. AUTHORIZED USE:

g through l. Used for instrument calibration and as check sources.

DEPARTMENT OF THE ARMY
AUTHORITY FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS
SUPPLMENTARY SHEET

Authorization/Permit No. A31-60-02	Docket Number: 0029

5. MATERIAL	6. CHEMICAL AND/OR PHYSICAL FORM	7. QUANTITY LIMITATION NOT TO EXCEED PER ITEM TOTAL
m. Cobalt 57	m. Sealed Source (Amersham Model CTC.D1 or Model CTC.D2)	m. One source, total activity not to exceed 40 mCi.

8. AUTHORIZED USE:

m. Used in a Scitec MAP-3 XRF Spectrum Analyzer to test for lead in paint and soils.

DEPARTMENT OF THE ARMY
AUTHORITY FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS
SUPPLMENTARY SHEET

Authorization/Permit No. A31-60-02	Docket Number: 0029

CONDITIONS

9. The Radiation Safety Officer for this authorization is Mr. John Cleary, Seneca Army Depot Activity, DSN 489-5261, or U.S. Army IOC, ATTN: AMSIO-DMS, DSN 793-2113.

10. The authorized place of use is Buildings 106, 116, 321, 815, 816 and various temporary job sites at Seneca Army Depot Activity and other Army installations worldwide.

11. Authorized material will be utilized under the supervision of the individuals identified in Item 9 above. Additional users may be approved locally. The individual's training and education must be commensurate with the radioactive material being used as stated in Items 5, 6, and 7. The individuals identified in Item 9 above will be responsible for ensuring all user personnel meet minimum training and education requirements. All users' training qualifications will be made available upon request by this office.

12. Through the appropriate command channels, notify CECOM, ATTN: AMSEL-SF-RE, Fort Monmouth, NJ 07703-5024, DSN 987-3112, Commercial 732-427-3112, or Facsimile 732-542-7161, within 60 days of a change in:

a. The Radiation Safety Officer identified in Item 9 above.

b. Ownership and/or the location/address of your organization, as identified in Item 2.

13. Requests for termination, disposal or transfer of any radioactive material authorized under this document will include the following information, as applicable:

a. A description of the material being transferred, the pending date of the transfer, the name of the authorized recipient and the recipient's authorization/permit number.

b. A description of the radioactive material authorized and/or requiring disposal actions, the specific disposal procedures, and the results of the closeout radiation survey. The purpose of the closeout survey is to determine whether any contamination remains on the premises.

14. If there is radiological contamination as a result of authorized operations, Army facilities will be decontaminated by the organization identified in Items 1 and 9 above.

15. Army property will be restored to pre-operational conditions that meet NRC and/or state/local release criteria for unrestricted use.

16. The user will be responsible for ensuring funds are available to conduct all necessary decontamination requirements.

17. Copies of this document and any amendments will be retained by the organizations identified in Items 1 and 9.

DEPARTMENT OF THE ARMY
AUTHORITY FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS
SUPPLMENTARY SHEET

Authorization/Permit No. A31-60-02	Docket Number: 0029

CONDITIONS (CONTINUED)

18. All authorized material will only be disposed of IAW Army Regulation (AR) 385-11 and AMCCOM Pamphlet 385-1.

19. The Scitec MAP-3 x-ray fluorescence spectrum analyzer must be used in accordance with the vendor's manual for use.

20. The MAP-3 must be secured from loss, theft or damage while in use, storage or transit.

21. Unless specifically provided otherwise, the materials described in Items 5, 6, and 7 shall be possessed and used in accordance with statements, representations, and procedures contained in the DA Form 3337 applications dated 30 July 1993 and 5 April 1995, signed by Mr. Michael R. Lewis, Radiation Protection Officer, Seneca Army Depot Activity; memorandum, AMSIO-SF, dated 9 July 98; Army Materiel Command Regulation (AMC-R) 385-25 and Army Regulation (AR) 385-11.

DATE: 980814

APPROVED

John G. Manfre

JOHN G. MANFRE
Health Physicist, DARA/DARP Manager

NRC FORM 314 (7-1998)
10 CFR 30.36(c)(1)(iv)
10 CFR 40.42(c)(1)(iv)
10 CFR 70.38(c)(1)(iv)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0028 EXPIRES: 07/31/2001

Estimated burden per response to comply with this mandatory information collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility has been cleared of radioactive material before the facility is released for unrestricted use. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0028), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

LICENSEE NAME AND ADDRESS	LICENSE NUMBER
	LICENSE EXPIRATION DATE

A. MATERIALS DATA *(Check one and complete as necessary)*

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:
(Check and/or complete the appropriate item(s) below.)

☐ 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.

OR

☐ 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. *(If additional space is needed, use the reverse side or provide attachments.)*

Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.

For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures *(e.g., decay in storage).*

B. OTHER DATA

☐ 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.

2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE.

- ☐ NO *(Attach explanation)*
- ☐ YES, THE RESULTS *(Check one)*
  - ☐ ARE ATTACHED, or
  - ☐ WERE FORWARDED TO NRC ON *(Date)*

3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM	NAME	TELEPHONE NUMBER *(Include Area Code)*

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO

CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.

NRC FORM 314 (7-1998)
10 CFR 30.36(c)(1)(iv)
10 CFR 40.42(c)(1)(iv)
10 CFR 70.38(c)(1)(iv)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0028 EXPIRES: 07/31/2001

Estimated burden per response to comply with this mandatory information collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility has been cleared of radioactive material before the facility is released for unrestricted use. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0028), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

LICENSEE NAME AND ADDRESS	LICENSE NUMBER
	LICENSE EXPIRATION DATE

A. MATERIALS DATA *(Check one and complete as necessary)*

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:
(Check and/or complete the appropriate item(s) below.)

☐ 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.

OR

☐ 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. *(If additional space is needed, use the reverse side or provide attachments.)*

Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.

For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures *(e.g., decay in storage)*.

B. OTHER DATA

☐ 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.

2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE.

☐ NO *(Attach explanation)*
☐ YES, THE RESULTS *(Check one)*
☐ ARE ATTACHED, or
☐ WERE FORWARDED TO NRC ON *(Date)*

3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM	NAME	TELEPHONE NUMBER *(Include Area Code)*

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO

CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NOVEMBER 08, 2004

ARMY, DEPARTMENT OF THE
SENECA ARMY DEPOT ACTIVITY
ATTN: SDSSE-CO
ROMULUS, NY 14541-5001

License No. SUC-1275
Expiration Date: 02/28/2005
Program Code: 11300

Gentlemen:

SUBJECT: NOTICE OF EXPIRATION

Your NRC license specified above will expire on the date shown. If you wish to continue your program, you must submit an application for license renewal in accordance with the enclosed instructions. Please pay particular attention to the enclosed instruction because due to major regulation changes or several major amendments to your license, you may be required to submit a complete renewal application that is complete in all respects and does not need to refer to any previous license documentation. You are also reminded that you are required to comply with the applicable provisions of the revised 10 CFR Part 20 which became effective January 1, 1994.

If your application for license renewal is filed at least 30 days before the expiration date of your license, your license will remain in effect until final action is taken on your application. However, if your application is filed less than 30 days before the expiration date and it cannot be processed before that date, you would be without a valid license when the license expires. You would have to place the material in locked storage pending a decision on your application and could not use the material until a new license is issued. Use of the material after the expiration date may subject you to enforcement action as described below.

If you do not wish to renew your license, you must dispose of or transfer all licensed radioactive material in your possession in an authorized manner (see 10 CFR 30.36), complete the enclosed Form NRC-314, "Certificate of Disposition of Materials," and return it before the expiration date of your license with a request that your license be terminated. If you cannot dispose of or transfer all licensed radioactive material in your possession before the expiration date, you must request a license renewal for storage only of the radioactive material to avoid enforcement action for violations involving possession of licensable material without a valid license. Enforcement action may include a substantial civil monetary penalty as well as daily civil penalties of $500 per day until you achieve compliance.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of license renewal remains with the licensee. If you have any questions regarding this notice or license expiration/renewal, please contact our Regional Office that handles your license.

Medical, Academic and Commercial
Use Safety Branch
Division of Industrial and
Medical Nuclear Safety

Enclosures:
1. Renewal Instructions
2. Form 313
3. Form 314
4. 10 CFR Part 40
5. Reg. Guide 10.4

INSTRUCTIONS FOR PREPARATION OF APPLICATION
FOR LICENSE RENEWAL

In the past, we have requested that renewal applications be submitted in their entirety, with no references to previous submittals. This ensured that complete, up-to-date information on licensee programs was submitted at least every 5 years. If you so choose, you may submit a complete, up-to-date renewal application in duplicate, as has been done in the past.

However, in order to simplify the license renewal procedures and save paperwork, you may wish to consider an alternative which would allow submittal of only the essential information which is necessary for us to assess your current program and any changes you may request. If you chose this alternative, you should do the following:

1. Review your current license to determine that the information concerning the radionuclides, chemical and/or physical forms of the radionuclides, quantities you wish to possess, and uses for the radionuclides accurately represents your current and anticipated program. Identify any additions, deletions, or other changes. For additions or other changes, you must prepare information concerning personnel, facilities, equipment, and radiation safety procedures appropriate for the requested additions and changes.

2. Review the documents you have submitted in the past to determine that the information in them is up-to-date and accurately represents your management control program, facilities, equipment, personnel, radiation safety procedures, waste disposal procedures, location(s) of use, and any other information pertinent to your program. The documents which you consider to be those which represent your current program MUST BE IDENTIFIED BY DATE. Any out-of-date and superseded documents should also be identified for removal. (Those documents which you have submitted in the past which are part of your license are referenced usually in the last condition of your current license.) Changes should be made in the documents, as necessary, to reflect your current program.

3. Review NRC regulations to assure that any changes in the regulations are appropriately covered in your program description.

4. After you have completed your review as specified in Items 1, 2, and 3, submit a letter requesting renewal of your license and SUBMIT A COPY of those documents which reflect your current program. The letter and documents must be submitted in duplicate.

NRC FORM 313 (8-2000) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 08/31/2002

Estimated burden per response to comply with this mandatory collection request: 7.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0000), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

SAM NUNN ATLANTA FEDERAL CENTER
U. S. NUCLEAR REGULATORY COMMISSION, REGION II
61 FORSYTH STREET, S.W., SUITE 23T85
ATLANTA, GEORGIA 30303-8931

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*
   - ☐ A. NEW LICENSE
   - ☐ B. AMENDMENT TO LICENSE NUMBER _____
   - ☐ C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include ZIP code)*

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

   TELEPHONE NUMBER

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
   a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AEAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES *(See 10 CFR 170 and Section 170.31)*

FEE CATEGORY	AMOUNT ENCLOSED $

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTANED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED $	CHECK NUMBER	COMMENTS
APPROVED BY				DATE	

Amendment No. 13

CORRECTED COPY

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO 2. Romulus, New York 14541-5001	In accordance with the letter dated February 11, 2003, 3. License number SUC-1275 is amended in its entirety to read as follows: 4. Expiration date February 28, 2005 5. Docket No. 040-08526 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 10,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the decommissioning of the facilities.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

    B. The Radiation Safety Officer for this license is John Cleary.

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 13

MATERIALS LICENSE
SUPPLEMENTARY SHEET

CORRECTED COPY

14. The licensee may use the Derived Concentration Guideline Level (DCGL) values described in the Seneca Army Depot Activity License Termination and License Release Plan for decommissioning of the facilities at the Seneca Army Depot Activity, Romulus, New York, with the intention of release of the facilities for unrestricted use.

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Letter dated January 17, 1992
B. Letter dated March 31, 1992
C. Application dated October 30, 1992
D. Letter dated November 2, 1992
E. Letter dated December 21, 1992
F. Letter dated September 2, 1993
G. Letter dated September 27, 1993
H. Letter dated December 15, 1993
I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997
L. Letter dated February 11, 2003 with the Seneca Army Depot Activity License Termination and License Release Plan
M. Letter dated April 3, 2003

For the U.S. Nuclear Regulatory Commission

Date September 17, 2003

By Judith A. Joustra

Judith A. Joustra
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

47445988

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 13

CORRECTED COPY

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the letter dated February 11, 2003,
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO	3. License number SUC-1275 is amended in its entirety to read as follows:
2. Romulus, New York 14541-5001	4. Expiration date February 28, 2005
	5. Docket No. 040-08526 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 10,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the decommissioning of the facilities.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

    B. The Radiation Safety Officer for this license is John Cleary.

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

CORRECTED COPY

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 13

14. The licensee may use the Derived Concentration Guideline Level (DCGL) values described in the Seneca Army Depot Activity License Termination and License Release Plan for decommissioning of the facilities at the Seneca Army Depot Activity, Romulus, New York, with the intention of release of the facilities for unrestricted use.

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Letter dated January 17, 1992
B. Letter dated March 31, 1992
C. Application dated October 30, 1992
D. Letter dated November 2, 1992
E. Letter dated December 21, 1992
F. Letter dated September 2, 1993
G. Letter dated September 27, 1993
H. Letter dated December 15, 1993
I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997
L. Letter dated February 11, 2003 with the Seneca Army Depot Activity License Termination and License Release Plan
M. Letter dated April 3, 2003

For the U.S. Nuclear Regulatory Commission

Date September 17, 2003

By ***Original signed by Judith A. Joustra***

Judith A. Joustra
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

47445988

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the letter dated February 11, 2003,
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO	3. License number SUC-1275 is amended in its entirety to read as follows:
2. Romulus, New York 14541-5001	4. Expiration date February 28, 2005
	5. Docket No. 040-08526 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.
B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

B. The Radiation Safety Officer for this license is John Cleary.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 13

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

14. The licensee may use the Derived Concentration Guideline Level (DCGL) values described in the Seneca Army Depot Activity License Termination and License Release Plan for decommissioning of the facilities at the Seneca Army Depot Activity, Romulus, New York, with the intention of release of the facilities for unrestricted use.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 13

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

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I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997
L. Letter dated February 11, 2003 with the Seneca Army Depot Activity License Termination and License Release Plan
M. Letter dated April 3, 2003

For the U.S. Nuclear Regulatory Commission

Date June 11, 2003

By _____

Elizabeth Ullrich
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region 1
King of Prussia, Pennsylvania 19406

37641770

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

June 11, 2003

Docket No. 04008526 License No. SUC-1275
Control No. 132746

Stephen M. Absolom
Commander's Representative
Department of the Army
Seneca Army Depot Activity
5786 State Route 96
P. O. Box 9
Romulus, NY 14541-009

SUBJECT: DEPARTMENT OF THE ARMY, ISSUANCE OF LICENSE AMENDMENT, CONTROL NO. 132746

Dear Mr. Absolom:

This refers to your license amendment request. Enclosed with this letter is the Amendment 13 of the license.

Please note that Condition 14 of Amendment 12 of this license was removed. That condition was added to Amendment 10 of the license, after you notified us of the planned closure of the facility in August 1996. Because you did not begin decommissioning immediately at that time, you were required to submit a decommissioning plan within 12 months of the notification. Amendments 11 and 12 extended the date for submission of the plan. A plan was submitted by the date as required and the condition is no longer applicable. Several revisions of the plan have been reviewed because of the site-specific derived concentration guideline levels (DCGL) used as criteria for release. The approved criteria is listed in Condition 14 of Amendment 13 (enclosed).

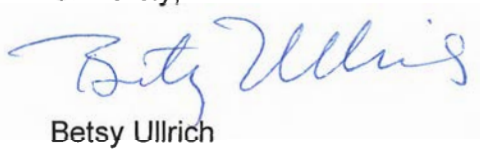
Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5239, so that we can provide appropriate corrections and answers.

An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14).

In accordance with 10 CFR 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html.

Thank you for your cooperation.

Sincerely,



Betsy Ullrich
Senior Health Physicist
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

Enclosure:
Amendment No. 13

cc:
John F. Cleary, Radiation Safety Officer

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

September 17, 2003

Docket No. 04008526 License No. SUC-1275
Control No. 132746

Stephen M. Absolom
Commander's Representative
Department of the Army
Seneca Army Depot Activity
5786 State Route 96
P. O. Box 9
Romulus, NY 14541-009

SUBJECT: DEPARTMENT OF THE ARMY, ISSUANCE OF CORRECTED COPY OF LICENSE, CONTROL NO. 132746

Dear Mr. Absolom:

Enclosed is the Corrected Copy of Amendment No. 13 for License No. SUC-1275. In accordance with the information provided by telephone on August 18 and September 15, 2003, and the facsimile dated September 15, 2003, Condition No. 9 has been changed to show that the authorized use is decommissioning. This change in authorized use should have been made with Amendment 12 of the license, issued February 7, 2000, based on your October 19, 1999, letter that requested approval of a termination survey plan and stated that all licensed materials had been shipped from your facilities. Since that time, several amendment requests were submitted and subsequently voided, because of technical issues related to the release criteria; therefore, no changes were made to the license. At this time, we are issuing the Corrected Copy only of the most recent amendment issued.

We apologize for any inconvenience this error may have caused.

Sincerely,

Judith A. Joustra

for John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

Enclosure:
Corrected Copy of Amendment No. 13

cc:
John Cleary, Radiation Safety Officer

Amendment No. 12

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the letter dated October 19, 1999,
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO	3. License number SUC-1275 is amended in its entirety to read as follows:
2. Romulus, New York 14541-5001	4. Expiration date February 28, 2005
	5. Docket No. 040-08526 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.

B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

B. The Radiation Safety Officer for this license is John Cleary.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 12

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

14. In accordance with 10 CFR 40.42(g)(2) and the licensee's letters dated December 5, 1996 and August 13, 1997, a decommissioning plan for the licensee's facilities at the Seneca Army Depot, Romulus, New York, must be submitted to the NRC by June 30, 2000.

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Letter dated January 17, 1992
    B. Letter dated March 31, 1992
    C. Application dated October 30, 1992
    D. Letter dated November 2, 1992
    E. Letter dated December 21, 1992
    F. Letter dated September 2, 1993
    G. Letter dated September 27, 1993
    H. Letter dated December 15, 1993
    I. Letter dated January 27, 1995
    J. Letter dated December 5, 1996
    K. Letter dated August 13, 1997

For the U.S. Nuclear Regulatory Commission

Date February 7, 2000

By _____

John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

15650944

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

OCT 14 1997

License No. SUC-1275
Docket No. 040-08526
Control No. 125011

LTC Donald C. Olson
Commanding Officer
SDSSE-CO
Department of the Army
Seneca Army Depot Activity
Romulus, NY 14541-5001

Dear LTC Olson:

This refers to your license amendment request. Enclosed with this letter is the amended license. Please note that as part of this amendment, in accordance with 10 CFR 40.42, effective February 15, 1996, the expiration date of your license has been extended by a period of five years. Your new expiration date is stated in Item 4 of the license.

Consistent with statements in the letter dated August 13, 1997 to include the north end of the Depot in the decommissioning plan, pending the approval of the Environmental Protection Agency (EPA) and the State of New York, and in accordance with the statement that decommissioning will begin upon approval of the plan with the entire decommissioning operation to be completed within 24 months, we hereby grant a further extension of time from August 1997 to August 1998 for you to complete and submit your decommissioning plan.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

for John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

License No. SUC-1275
Docket No. 040-08526
Control No. 125011

Enclosure:
Amendment No. 10

cc:
Commander
U.S. Army Materiel Command
AMCSF-P
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

Michael R. Lewis
Radiation Safety Officer
Seneca Army Depot Activity
SDSSE-CO
Romulus, NY 14541-5001

Amendment No. 11

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO	In accordance with the application dated June 18, 1998, 3. License number SUC-1275 is amended in its entirety to read as follows:
2. Romulus, New York 14541-5001	4. Expiration date February 28, 2005 5. Docket No. 040-08526 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.

B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

B. The Radiation Safety Officer for this license is John Cleary.

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 11

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

14. In accordance with 10 CFR 40.42(g)(2) and the licensee's letters dated December 5, 1996 and August 13, 1997, a decommissioning plan for the licensee's facilities at the Seneca Army Depot, Romulus, New York, must be submitted to the NRC by January 4, 1999.

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

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C. Application dated October 30, 1992
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E. Letter dated December 21, 1992
F. Letter dated September 2, 1993
G. Letter dated September 27, 1993
H. Letter dated December 15, 1993
I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997

For the U.S. Nuclear Regulatory Commission

Date August 31, 1998

By ***Original signed by Sattar Lodhi, Ph.D.***

Sattar Lodhi, Ph.D.
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

22821504

NRC FORM 374 U.S. NUCLEAR REGULATORY COMMISSION PAGE 1 OF 2 PAGES

Amendment No. 11

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

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6. Byproduct, source, and/or special nuclear material	Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use:

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.

B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

B. The Radiation Safety Officer for this license is John Cleary.

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUC-1275

Docket or Reference Number
040-08526

Amendment No. 11

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F. Letter dated September 2, 1993
G. Letter dated September 27, 1993
H. Letter dated December 15, 1993
I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997

For the U.S. Nuclear Regulatory Commission

Date August 31, 1998

By *Original signed by Sattar Lodhi, Ph.D.*

Sattar Lodhi, Ph.D.
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

MATERIALS LICENSE

Amendment No. 10

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the application dated August 13, 1997,
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO 2. Romulus, New York 14541-5001	3. License Number SUC-1275 is amended in its entirety to read as follows:
	4. Expiration Date February 28, 2005
	5. Docket or Reference No. 040-08526

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.

B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of, John F. Cleary, Michael R. Lewis, or Thomas E. Reynolds.

B. The Radiation Safety Officer for this license is Michael R. Lewis.

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: SUC-1275
Docket or Reference number: 040-08526
Amendment No. 10

14. In accordance with 10 CFR 40.42(g)(2) and the licensee's letters dated December 5, 1996 and August 13, 1997, a decommissioning plan for the licensee's facilities at the Seneca Army Depot, Romulus, New York, must be submitted to the NRC by August 1, 1998.

15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

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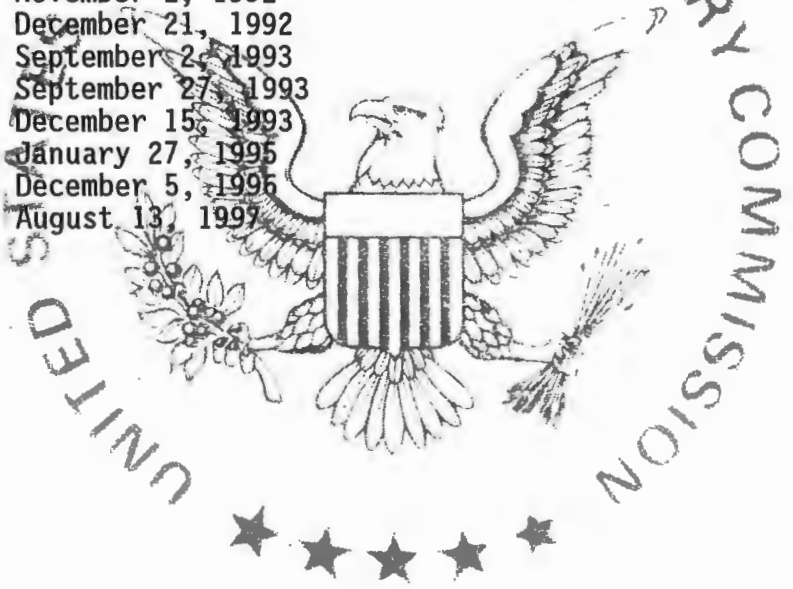
I. Letter dated January 27, 1995
J. Letter dated December 5, 1996
K. Letter dated August 13, 1997



For the U.S. Nuclear Regulatory Commission

Date OCT 14 1997

By _____
Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 8, 1996

ARMY, DEPARTMENT OF THE
ATTN: Mr. MICHAEL R. LEWIS
Radiation Safety Officer
SENECA ARMY DEPOT ACTIVITY / ATTN: SDSSE-CO

ROMULUS, NY 14541-5001

SUBJECT: ONE-TIME EXTENSION OF LICENSE EXPIRATION DATE
LICENSE NUMBER SUC-1275, DOCKET NUMBER 4008526

Dear Mr. MICHAEL R. LEWIS

On January 16, 1996, the Nuclear Regulatory Commission (NRC) amended its regulations in 10 CFR 30, 40, and 70 to extend the expiration date of certain byproduct, source, and special nuclear material licenses by five years (61 FR 1109). The above referenced license was extended by this rulemaking and will now expire on February 28, 2005. Your license will not be amended to show this extended date until the next routine licensing action. Until then, you may provide copies of this letter to vendors and other interested parties as evidence that the license has been extended as a result of the rule.

The extended license authorizes the same activities and contains the same limitations as it previously did. There will be no change in the frequency that the NRC inspects activities authorized by this license.

The amended rules state that in the case of licensees who are granted extensions and who have a currently pending renewal application for that extended license, the application will be considered withdrawn by the licensee and any renewal fees paid by the licensee for that application will be refunded. This will apply to licenses with expiration dates after July 1, 1995, for which renewal applications and the appropriate fees have been submitted and the renewal is still pending. Refunds will be mailed to licensees under separate cover.

All licensees, including those whose renewal applications were withdrawn by this rulemaking, who wish to change their radiation safety programs must request amendment of their licenses to reflect these changes. Amendment requests must include the correct amendment fee since the NRC cannot apply pending renewal refund balances toward amendment fees.

If you have any questions regarding this letter, please contact the individual below.

John D. Kinneman, Chief Branch 2 - (610) 337-5252

Thank you for your cooperation in this matter.

Sincerely,

Donald A. Cool, Director
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Materials Safety and Safeguards

Thank you for your cooperation.

Sincerely,

for John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

License No. SUC-1275
Docket No. 040-08526
Control No. 125011

Enclosure:
Amendment No. 10

cc:
Commander
U.S. Army Materiel Command
AMCSF-P
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

Michael R. Lewis
Radiation Safety Officer
Seneca Army Depot Activity
SDSSE-CO
Romulus, NY 14541-5001

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

November 2,1992

Safety Office

SUBJECT: License Renewal SUC-1275

U.S. Nuclear Regulatory Commission
Region I
Nuclear Materials Section B (Licensing Section)
475 Allendale Road
King of Prussia, PA 19406

Dear Sir or Madam:

Enclosed are three copies of the renewal application for NRC License Number SUC-1275 issued to Seneca Army Depot to replace in its entirety the license renewal submitted on Mar. 31, 1992 with a control number of 116420. Amendment to SUC-1275 submitted Sept. 30, 1992 with a control number of 117236 is still outstanding.

This license has been staffed through appropriate Army channels.

Please process in accordance with NRC regulations.

Point of contact is Michael R. Lewis at 607-869-1432.

Sincerely,

Thomas J. Stincic
Safety Manager

Enclosures

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

APR 8 1992

Docket No. 040-08526

License No. SUC-1275

Control No. 116420

Commander
Seneca Army Depot
ATTN: SDSSE-CO
Romulus, New York 14541-5001

Dear Commander:

SUBJECT: LICENSE RENEWAL APPLICATION

This is to acknowledge receipt of your application for renewal of material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

Any correspondence regarding the renewal application should reference the control number specified above.

Sincerely,

Sheryl Villar

Sheryl Villar, Chief
Licensing Assistance Section
Division of Radiation Safety
and Safeguards

NRC FORM 313
(9-85)
10 CFR 30, 32, 33, 34, 35 and 40

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires: 5-31-87

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIAL SECTION B
631 PARK AVENUE
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
MATERIAL RADIATION PROTECTION SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
MATERIAL RADIATION PROTECTION SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*

- [ ] A. NEW LICENSE
- [ ] B. AMENDMENT TO LICENSE NUMBER _____
- [X] C. RENEWAL OF LICENSE NUMBER SUC-1275

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include Zip Code)*

Commander
Seneca Army Depot
Attn: SDSSE-CO
Romulus, NY 14541-5001

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED.

Seneca Army Depot
Romulus, NY 14541-5001

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Michael R. Lewis

TELEPHONE NUMBER: 607-869-1432

SUBMIT ITEMS 5 THROUGH 11 ON 8½ x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.
SUPPLEMENT 1

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.
SUPPLEMENT 2

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.
SUPPLEMENT 3

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.
SUPPLEMENT 4

9. FACILITIES AND EQUIPMENT.
SUPPLEMENT 5

10. RADIATION SAFETY PROGRAM.
SUPPLEMENT 6

11. WASTE MANAGEMENT.
SUPPLEMENT 7

12. LICENSEE FEES *(See 10 CFR 170 and Section 170.31)*
FEE CATEGORY 2C
AMOUNT ENCLOSED $ 750.00

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

SIGNATURE—CERTIFYING OFFICER	TYPED/PRINTED NAME	TITLE	DATE
James B. Cross	JAMES B. CROSS Colonel, Ordnance Corps	Commander	3 Dec 92

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS
- [ ] <$250K
- [ ] $250K–500K
- [ ] $500K–750K
- [ ] $750K–1M
- [ ] $1M–3.5M
- [ ] $3.5M–7M
- [ ] $7M–10M
- [ ] >$10M

b. NUMBER OF EMPLOYEES *(Total for entire facility excluding outside contractors)*

c. NUMBER OF BEDS

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION *(Dollar and/or staff hours)* ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? *(NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)*
- [ ] YES
- [ ] NO

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY

AMOUNT RECEIVED	CHECK NUMBER		DATE

MATERIALS LICENSE

Amendment No. 09

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the application dated January 17, 1992,
1. Department of the Army Commander, Seneca Army Depot Activity ATTN: SDSSE-CO 2. Romulus, New York 14541-5001	3. License Number SUC-1275 is amended in its entirety to read as follows:
	4. Expiration Date February 29, 2000
	5. Docket or Reference No. 040-08526

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. Uranium (depleted in the isotope uranium 235)	A. Solid metal alloy	A. 5,000,000 kilograms
B. Uranium (depleted in the isotope uranium 235)	B. Solid metal alloy	B. 5,000,000 kilograms

9. Authorized use

A. For receipt, possession, storage, transportation, inspection and disposal incident to the demilitarization of munitions.

B. For receipt, possession, storage, transportation, inspection, and disposal incident to demilitarization of munitions from other licensed U.S. Army and U.S. Navy installations.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the Seneca Army Depot, Romulus, New York.

11. A. Licensed material shall be used by, or under the supervision of, John F. Cleary, Michael R. Lewis, Thomas E. Reynolds, or Thomas J. Stincic.

B. The Radiation Safety Officer for this license is Michael R. Lewis.

12. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

13. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated January 27, 1995.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
SUC-1275

Docket or Reference number
040-08526

Amendment No. 09

14. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Letter dated March 31, 1992
B. Application dated October 30, 1992
C. Letter dated November 2, 1992
D. Letter dated December 21, 1992
E. Letter dated September 2, 1993
F. Letter dated September 27, 1993
G. Letter dated December 15, 1993
H. Letter dated January 27, 1995

For the U.S. Nuclear Regulatory Commission

Date FEB 28 1995

By M. S. Kowaky
Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406

INDEX LICENSE SUC-1275

SUPPLEMENT 1
Reference NRC Form 313, Block 5

RADIOACTIVE MATERIAL:

a. Element and Mass	b. Chemical and Physical Form	c. Maximum to be possessed at any one time
U238 (Depleted Uranium)	Solid metallic alloy not less than 95% U238 as 30mm cartridges under this License SUC 1275.	5 million kg
U238 (Depleted Uranium)	Solid metallic alloy not less than 95% U238 as 20mm and 25mm cartridges also controlled under NRC License 45-16023-01NA issued to US Navy; 25mm, and 105mm cartridges also controlled under NRC License SUC 1380 issued to U.S. Army, Armament,Munitions and Chemical Command (AMCCOM). Held as obsolete, unserviceable, non-repairable material for demilitarization under this license.	5 million kg
U238 (Depleted Uranium)	Solid metallic alloy not less than 95% U238 as contamination on industrial machinery and equipment.	100,000 kg

SUPPLEMENT 2
Reference NRC Form 313, Block 6

PGU-13 Series should be included here too

PURPOSES FOR WHICH THE LICENSED MATERIAL WILL BE USED

SECTION I. SUMMARY OF ACTIVIES

1. The 30mm PGU14 series Armor Piercing Incendiary (API) ammunition contains approximately 0.66 pounds (298 grams) of extruded DU alloy with 0.75% by weight of titanium in the form of a cylindrical penetrator 4.5 inches long and having a maximum diameter of 0.633 inch. See enclosure 1 to supplement 2 for a description of PGU-14 production lots by AEROJET and HONEYWELL. The penetrator is seated in an aluminum base and is completely contained within an aluminum windscreen or jacket. See enclosure 2 to supplement 2 for a drawing of the penetrator with aluminum body and windscreen/jacket. The PGU-14 series cartridges controlled under this license will be used in the following activities:

a. Transportation-Receipt and shipment of individual containers and pallets of Depleted Uranium (DU) ammunition. See enclosures 3,4,5,and 6 to supplement 2 for 30mm DU containers.

b. Inspection of DU cartridges during receipt, surveillance, storage and transportation activities. During these inspections, cartridges will be inspected for serviceability according to Air Force guidelines.

c. Storage of bulk quantities of DU cartridges.

d. Inventory of DU cartridges.

e. Maintenance of DU cartridges.

f. Demilitarization of 30mm PGU14 series cartridges when directed by U.S. Army Armament, Munitions and Chemical Command (AMCCOM).

g. Safety in storage.

2. The following interservice munitions: cartridges 20mm (MK 149, MK 149 Mod2) and 25mm (PGU-20 Series) controlled under NRC license 45-16023-01NA, cartridges 25mm (M919) and 105mm cartridges (M774 and M833) controlled under NRC license SUC-1380, may be demilitarized under this license. See Table 2-1 for DU weights. See enclosures 18 and 19 to Supplement 2 for cutaway drawings of 20mm (MK149), 25mm (PGU-20), and 25mm (M919).

a. Demilitarization is the process to render military items unfit for military use, no DU component will be physically altered but removed and stored for for transfer to another license holder or disposed of by burial in a licensed facility.

3. The DU ammunition controlled under this license and the licenses listed in paragraph 2 will not be chemically, physically, or metallurgically altered. The ammunition will not be fired. The ammunition will not be made commercially available.

4. Due to aging, retrograde, and demilitarization of DU munitions, component parts may be held by this license prior to disposal or transfer to another license holder.

5. Storage of government owned industrial machinery and equipment contaminated with depleted uranium may be held by this license. Storage time will be held to a minimum consistent with funding and logistic management prior to decontamination. See enclosure 7 to supplement 2 for building layout and enclosure 8, to supplement 2 for site location. No maintenance, disassembly, or unpackaging will be performed in the storage location.

6. Decontamination of government owned industrial machinery and equipment contaminated with depleted uranium may be performed by this license when directed by higher authority. See enclosures 9 and 8, to supplement 2 for building layout and site location. See Supplement 5, Facilities and Equipment for detailed description.

SECTION II. OPERATIONAL PROCEDURES-DU CARTRIDGES.

1. Transportation of DU will comply with applicable Department of Transportation (DOT) and Department of Defense (DOD) regulations at the time of shipment. The ammunition is shipped under a U.S. Department of Transportation (DOT) Exemption.

2. Standing operating procedures (SOPs) will be written for operations involving DU having the elements as necessary as contained in NRC Regulatory Guide 10.4 Exhibit 2 Steps for Preparing an SOP. Additionally due to the explosive components detailed SOPs are required by Army regulations for the known explosive hazards.

3. Receipt-Ammunition received at Seneca Army Depot will be monitored by trained personnel properly equipped as designated by the Radiation Protection Officer (RPO). A Standing operating procedure (SOP) will be followed.

4. Shipping-Ammunition shipped by Seneca Army Depot will be swiped as required by the RPO or designated individuals. A standing operating procedure (SOP) will be followed.

5. Storage. The following general requirements have been established for the storage of 30mm DU ammunition and other explosive items.

a. Packing materials, empty boxes, tools, handling equipment or any miscellaneous material will not be stored in igloos containing explosives.

b. Containers of different lots will be stacked separately and the separation between lots shall be clearly defined.

c. Sealed containers shall not be opened except for inspection.

d. Incomplete packages will be securely closed and properly marked to identify contents and quantity.

e. Only earth covered igloos will be used for storage of 30mm DU ammunition.

f. Igloos containing DU ammunition will be kept locked at all times except when authorized operations are in progress. Keys to the igloos will be under positive control at all times.

g. Component parts of DU cartridges will be segregated from complete cartridges.

6. Inventory.

a. The Army has developed specific procedures to provide for accountability of ammunition at storage locations, by using units, and in transit between installations. The Army has developed a centralized reporting system to provide worldwide stockpile visibility. The centralized reporting system is used to assist in stockpile, production, and logistics planning. The inventory records kept by each installation and each unit that has been issued ammunition items are used for accountability purposes. Additionally, the inventory records associated with ammunition shipments are used for accountability purposes.

b. A 100 percent inventory/location survey will be conducted at least annually. The inventory will be based on container count; individual containers will not be opened. All ammunition containers are sealed with lead wire seals.

7. Inspection.

a. Quality Assurance Specialist (Ammunition Surveillance) (QASAS) personnel of the Directorate of Product Assurance will perform surveillance inspections as required to assess serviceability/acceptability of end items for retention in stockpile. No inspections involve the disassembly of the cartridge.

b. Magazine (Igloo) Inspection. This inspection is conducted as required per current regulation but not less than annually to assure proper storage conditions are maintained. In addition to the visual inspection of the structure, the lightning protection system is tested for grounding adequacy as required per current regulations; presently every 24 months.

c. Safety in storage. This inspection will be conducted on unserviceable, uneconomically repairable stock to assure continued safe storage. This inspection will be performed yearly. This inspection is required by Ammunition Surveillance procedures.

8. Maintenance.

a. Maintenance will be performed by Directorate of Mission Operations personnel only on non-DU components. The cartridge shall not be disassembled. Typical operations are: removal of external corrosion, touch-up painting and stenciling, preservation and packaging, and disassembly of non DU components for replacement. Monitoring for excessive radiation levels will be conducted during maintenance operations. Wipe tests may be conducted, at the direction of the Radiation Protection Officer (RPO), to detect presence of contamination.

SECTION III. OPERATIONAL PROCEDURES-DEMILITARIZATION OF 20mm,25mm and 30mm DU CARTRIDGES.

1. Demilitarization will be performed using Depot Maintenance Work Requirements (DMWRs) or Letters of Instruction (LOIs) written specifically for each cartridge. Standard Operating Procedures (SOPs) will be written at this depot for each specific demiltarization operation to be reviewed by the Radiation Protection Officer. SOPs are further reviewed by U.S. Army Defense Ammunition Center and School (USADACS) personnel. Demilitarization will be performed only when directed by AMCCOM. Licensed material will be transfered to another license holder or disposed of by burial. The disposition of any unsafe material will be generated by demilitarization will be coordinated through the AMCCOM Radioactive Waste Disposal Division. Demilitarization will be by mechanical separation; no cutting, grinding, or metallurgical processes will be performed on the DU. Volume of demilitarization will depend on the deterioration rate of munitions, work load of other Depots authorized demilitarization, and work load assigned to this Depot by higher Headquarters.

2. Demilitarization of the 30mm DU cartridges will be performed by the Ammunition Peculiar Equipment 2214 Breakdown Machine (APE 2214). The APE 2214 is designed to break down and segregate parts of 30mm ammunition to include the PGU14 series DU cartridges. The APE 2214 with kits can be used for 20mm and 25mm DU cartridges. The major physical objective of the breakdown process is to do so without damage to the projectile and without human involvement. The products of the process are the cartridge propellant, cartridge case (in two pieces), a primer, flashtube and an undamaged projectile (penetrator). The APE 2214 was tested extensively using inert material and one is presently in operation at Savanna Army Depot Activity (NRC License SUC-1394).

a. The major functional components of the APE 2214 are:

(1) The controller, which is the programmed and governs the application of the power systems inputs to the other major functional components.

(2) The power systems, which include pneumatic, electrical and hydraulic systems.

(3) The breakdown center where the cartridge is processed. The indexing table assembly which is rotated by an hydraulically driven top plate drive index table and which supports and delivers projectiles as they are broken by the five processing stations.

(4) Station I-Cartridge Load which consist of a pneumatic cylinder that powers a pushrod which pushes a cartridge down from the cartridge delivery system into the a cartridge cup mounted on the index table.

(5) Station II-Projectile Breakout which consist of a hydraulically driven projectile breakout station slide on which are mounted two rollers that crimp the cartridge when the slide advances. Also mounted on the projectile breakout station slide is the projectile pusher assembly which frees the the projectile from the cartridge case. These actions break and disengage the cartridge case forcing out the projectile and allowing the propellant to drain. Station II is serviced by the first of three removal conveyor belts and the first of two vacuum systems connections that service the APE 2214. The conveyor belt removes the projectiles from this station and the vacuum removes the propellant.

(6) Station III-Cartridge Case Shear Station which consist of a hydraulically driven shear station slide on which is mounted a shear station cutter which cuts off the deformed portion of the cartridge case when the slide advances so the remainder of the cartridge case can be removed from the cartridge cup later. A conveyor removes the cutoff portion of the case from this station and a vacuum systems removes any remaining propellant.

(7) Station IV-Primer Removal which consist of a hydraulic cylinder that powers a pushrod which pushes the primer from the cartridge case. The station also has a solenoid operated air jet system which blows the primer into a primer removal chute.

(8) Station V-Cartridge Case Unload which consist of a hydraulically powered cylinder that powers a pushrod which pushes the remainder of the cartridge case from the cartridge case cup. Station V also has a pneumatically operated arm and robotic gripper hand which grasps the cartridge case and drops it on to a conveyor belt for removal. See Enclosure 10 to Supplement 2 for a picture of the APE 2214 at the design facility.

(9) Associated equipment consist of conveyors for transportation of materials. Closed circuit TV for monitoring of the breakdown. Powder draw-off vacuum system. APE 2226 for removal of the cartridge from the linked tube. The APE 2226 is entirely operated by air.

(10) The demilitarization of 30mm DU cartridges will be performed in building 612. See facilities and equipment for a description of building 612. Enclosure 11 to supplement 2 shows the line layout for 30mm demilitarization in building 612.

a. Tracers if present will be removed prior to packaging.

b. Surveys, personnel monitoring, and air monitoring will be as described in Supplement 10, Radiation Safety Program.

SECTION IV. OPERATIONAL PROCEDURES-DEMILITARIZATION OF 105mm CARTRIDGE

1. Demilitarization of M774 and M833 will be performed using Depot Maintenance Work Requirements (DMWRs) or Letters of Instruction (LOIs) written specifically for each cartridge. See enclosures 12 and 13 to supplement 2 for technical description of M774 and M833. Enclosure 14 to supplement 2 shows an exploded view of a 105mm cartridge. Standard Operating Procedures (SOPs) will be written at this depot for each specific demilitarization operation to be reviewed by the Radiation Protection Officer. SOPs are further by U.S. Army Defense Ammunition Center and School (USADACS) personnel. Licensed material will be transfered to another license holder or disposed of by burial. The disposition of any unsafe material generated by demilitarization will be coordinated through AMCCOM Radioactive Waste Disposal Division. Demilitarization will be by mechanical separation; no cutting, grinding, or metallurgical processes will be performed on the DU. See Enclosure 15 to Supplement 2 for the line layout for 105mm DU demilitarization.

2. Demilitarization of the 105mm DU cartridge will be performed by the Ammmunition Peculiar Equipment 1001 Vertical Pull Apart Machine (APE 1001). See enclosure 16 and 17 to supplement 2 for a description of the APE 1001. The pull apart process will be done by remote control to protect the worker. The APE 1001 works as follows:

a. By remote control the safety door is closed. The probe, actuates a bleed valve, which automatically closes the shield door and locks the safety door in a closed position.

b. When the shield closes, a bleed valve raises the fulcrum arm into the pull position.

c. Another bleed valve closes the vice arms on the projectile when the the fulcrum arms completes its upward motion.

d. As the vise arm closes, a bumper sensor, actuates the pull apart motion.

e. When the fulcrum arm returns to the down position, the arm presses a bleed valve which opens the shield door, releases the locking cylinder and allowing the operator to open the safety door.

f. After the doors are open the operator removes the cartridge case, grasps the projectile with both hands and releases the projectile by pressing one of two bleed valves. The projectile is bagged and cartridge is swiped to check for contamination. Contaminated cases are bagged and set aside for disposition. Clean cases are placed on endless conveyor for further processing.

g. Prior to final packaging, the M13 tracers are removed.

h. Packaging will be with the windshield, bourrelet, sabot, base seal, obturator, and fin assembly installed.

i. Powder is packaged and labeled as contaminated waste until proven otherwise.

SECTION V. OPERATIONAL PROCEDURES-STORAGE OF CONTAMINATED MACHINERY AND EQUIPMENT.

1. Contaminated machinery and equipment will be stored in building 825. See Facilities and Equipment Supplement 5 for description and site location. They will be placed on plastic to prevent contamination of the floor. Access to the machines will be strictly controlled. Surveys will be as specified in Supplement 6, Radiation Safety Program. No unpackaging or work will be performed in this building. The building will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations.

SECTION VI. OPERATIONAL PROCEDURES-DECONTAMINATION OF MACHINERY AND EQUIPMENT.

1. A portion of the government's inventory of machinery and equipment is contaminated with DU. To reclaim this machinery and equipment for reuse or disposal, decontamination must be performed.

2. The machinery and equipment will be received from licensed facilities shipped in accordance with current Department of Transportation and NRC regulations.

3. Decontamination will be performed in building 819 a dedicated building which will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations. Controls will be instituted to minimize the release of radionuclides into the environment and minimize the exposure of personnel. See Facilities and Equipment for a description and site location.

a. Air sampling, bioassays, and TLDs are covered in Supplement 10, Radiation Protection Program.

4. Consideration will be given to the expense of complete decontamination versus replacing or removal of components. Generation of radioactive waste will be kept to a minimum. Generation of mixed waste will be avoided when possible.

5. Action levels for removable surface contamination for inanimate objects will be in accordance with Table 2-2, from NRC Guidelines for Decontamination of Facilities and Equipment Prior-to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material.

6. Care will be taken to avoid further spread of contamination. The following general steps will apply.

a. Contamination will be contained by the use of monitoring and protective clothing.

b. Work will be from the area of least contamination toward area of maximum contamination.

c. The minimum amount of decontamination liquids will be used when possible.

d. The mildest decontamination method or mildest decontamination agent will be used whenever possible.

7. The following methods of decontamination may be used with consideration given at all times to the protection of personnel, radiation levels, minimization of radioactive waste, minimization of mixed waste and protection of the environment.

a. Dry vacuuming with an approved vacuum cleaner equipped with HEPA filters The use of brooms or other dry sweeping methods will be forbidden.

b. Damp mopping with the minimum amount of solution with frequent changing of rags to minimize spread of contamination.

c. Wet vacuuming with an approved cleaner with absolute filters.

d. Cleaning with biodegradable decontaminant fluids.

e. Alternate methods may be developed if the above general methods are not effective. Different base materials may require different methods.

f. Carbon Dioxide blasting. See paragraph 11 this section.

8. Protective clothing and equipment requirements will vary with the degree of contamination and the extent of engineering controls applied. Protective clothing and equipment will be determined by the Safety Manager and Radiation Protection Officer and may include some of the following:

a. National Institute for Occupational Safety and Health/Mine Safety and Health Administration approved respirators with appropriate cartridges or airline respirators. Fullface respirators will be used.

b. Full protective clothing.

c. Safety shoes and covers.

d. Gloves.

e. Safety glasses.

f. Air monitoring devices

g. Personnel monitoring devices (extremity and whole body).

h. Hearing protection.

9. Standing Operating Procedures (SOPs) will be written at this depot for decontamination, having the necessary elements of NRC Regulatory Guide 10.4 Exhibit 2, Steps for Preparing an SOP and necessary elements for type, size and level of contamination. Review will be as in Supplement 2, Section III paragraph 1.

10. Only NRC licensed firms specializing in laundry of radioactive contaminated clothing will be used in the cleaning of protective clothing.

11. Decontamination of machinery and equipment may be performed using carbon dioxide blasting technology.

a. Cleaning with carbon dioxide is a patented techno-industrial cleaning system that harnesses the impact-flushing power of high-velocity dry ice. The system uses small, uniform pellets of carbon dioxide as a cleaning agent. When the pellets strike the surface to be cleaned, the contaminant or coating is removed without altering or damaging the surface. Upon impact the pellets sublime. The expansion of the carbon dioxide from a solid to a gas adds a lifting force to speed removal of the contaminant.

b. Carbon dioxide does not become radioactive and just disappears harmlessly into the air. The contaminated piece is then dry wiped and passed to a cleaner area for contamination analysis or further cleaning if needed.

c. The only portion of the carbon dioxide blasting equipment that will be in the contamination control area will be through the wall blast hose with a trigger operated blasting gun.

d. Due to the nature of this operation, a plastic disposable room will be built inside building 819. See Enclosure 9 to Supplement 2, page 1 of 2 for picture and process layout.
layout.

e. Prior to start up of the decontamination process the air flow patterns will be determined using inert machines as targets. Predominant airflow patterns and likely radioactive material transport routes will be noted. The locations of ventilation air inlets and exhausts will be ajusted to maximize worker protection.

f. Personnel dress out procedure:

(1) Dress out in full bodysuit, to include booties, coveralls, hood and gloves.

(2) Full face, supplied air respirator.

(3) Tape all joints and exposed areas.

g. Operating procedures:

(1) Turn on air filtration/ventilation units and monitoring staplexes. Air filtration/ventilation units sized to maintain a negative air pressure in Plastic Rooms. Plastic Structure will be posted in accordance with 10 CFR 20.203 and subsequent regulations.

(2) Lay two sheets of plastic on floor of Area 1.

(3) Move in packaged, contaminated machine/equipment and place under 4' x 4' makeup air hole in plastic ceiling of Area 1.

(4) Close both sets of plastic doors to Area 1.

(5) Dress out in protective clothing in Area 4. Hookup to supplied air prior to entering area 1 or area 2.

(6) Form curtain around machine with third sheet of plastic.

(7) Remove wrapping around machine, monitoring for contamination, and dispose of accordingly.

(8) Begin to disassemble and clean machine.

(9) Blasting will be toward the Air Filtration/Ventilation Units.

(10) Parts that have been removed and have had the gross contamination removed will be moved into Area 2.

(11) Do final cleaning of parts in this Area 2.

(12) Take swipes and direct instrument readings to determine if any removable or fixed contamination exists.

(13) Parts determined clean will be removed through Area 3.

(14) When main body of machine has had gross contamination removed, the curtain will be lowered and folded in such a manner that all contamination will remain inside and will be disposed of in the appropriate manner.

(15) Machine will be raised and set on blocks.

(16) Underside of machine will be cleaned.

(17) Do final cleaning of machine body.

(18) Wrap and dispose of second sheet of plastic under machine.

(19) Clean plastic floor.

(20) Take swipes and direct instrument readings to determine if any removable or fixed contamination remains.

(21) When machine and floor are determined clean, remove machine to outside.

h. Decontamination/outprocessing of personnel:

(1) Remove booties, coveralls, gloves, in that order rolling inside out to capture contamination inside.

(2) Monitor person thoroughly.

(3) Remove or wash any contamination found.

(4) Remove supplied air mask and hood.

(5) Monitor neck and face.

(6) Wash.

i. Self contained breathing appratus for emergency use will be stored in the building.

DU CARTRIDGES

CARTRIDGE	DODIC	DU per Round
20mm MK149	A675	70 gm - 0.15 lbs
25mm PGU-20	A979	148 gm - 0.32 lbs
25mm M919	----	97 gm - 0.21 lbs
30mm PGU-14	B103,BB103	298 gm - 0.66 lbs
105mm M774	C523	3364 gm - 7.41 lbs
105mm M833	C524	3668 gm - 8.08 lbs

TABLE 2-1

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES[a]	AVERAGE[b c f]	MAXIMUM[b d f]	REMOVABLE[b e f]
U-nat, U-235, U-238, and associated decay products	5,000 dpm α/100 cm^2	15,000 dpm α/100 cm^2	1,000 dpm α/100 cm^2
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm^2	300 dpm/100 cm^2	20 dpm/100 cm^2
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm^2	3000 dpm/100 cm^2	200 dpm/100 cm^2
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5000 dpm $\beta\gamma$/100 cm^2	15,000 dpm $\beta\gamma$/100 cm^2	1000 dpm $\beta\gamma$/100 cm^2

[a] Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

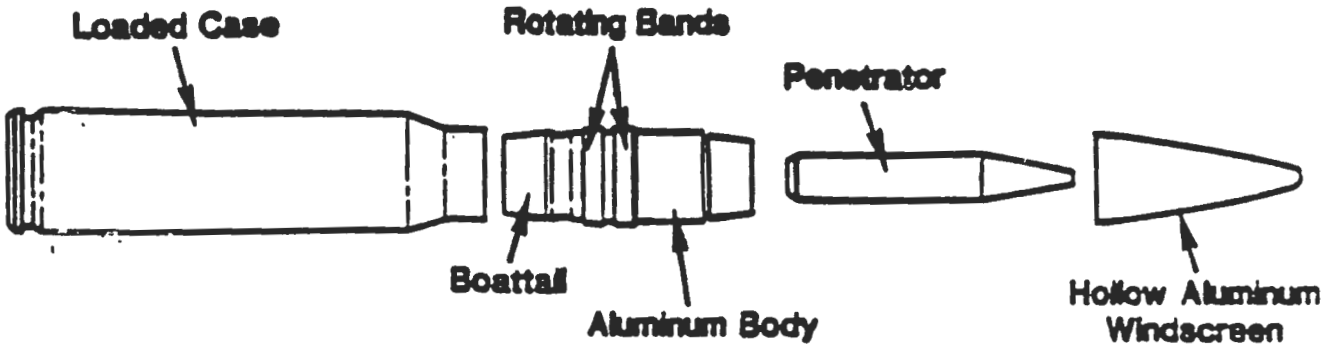
[b] As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

[c] Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

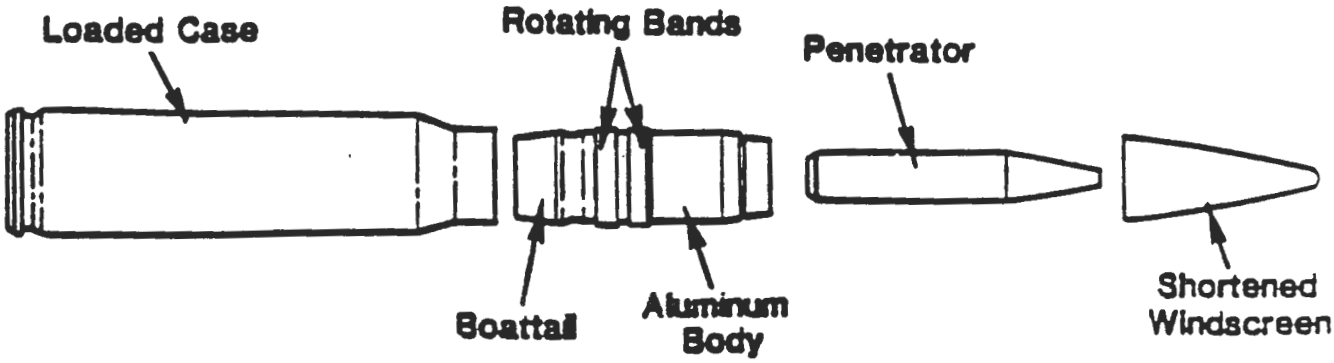
[d] The maximum contamination level applies to an area of not more than 100 cm^2.

[e] The amount of removable radioactive material per 100 cm^2 of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

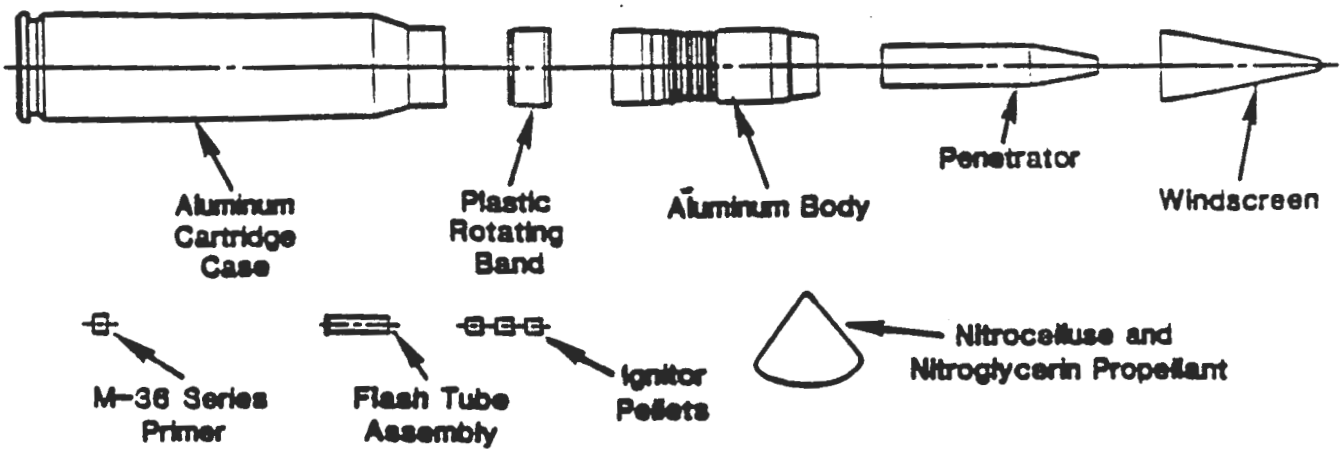
The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.



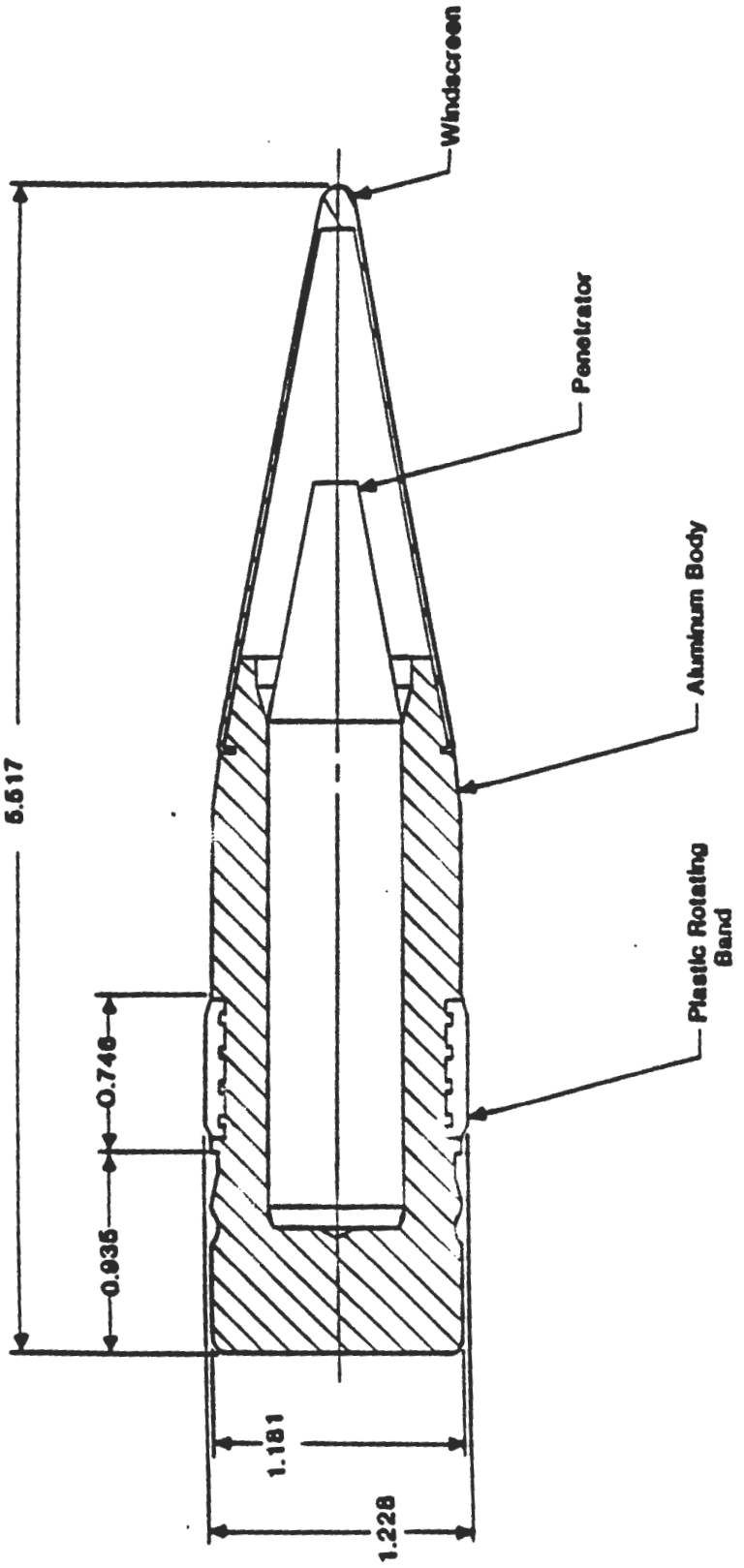
Cartridge, 30MM, PGU-14A/B (API) Early Production Lots (Aerojet)



Cartridge, 30MM, PGU-14B/B (API) Current Production Lots (Aerojet)

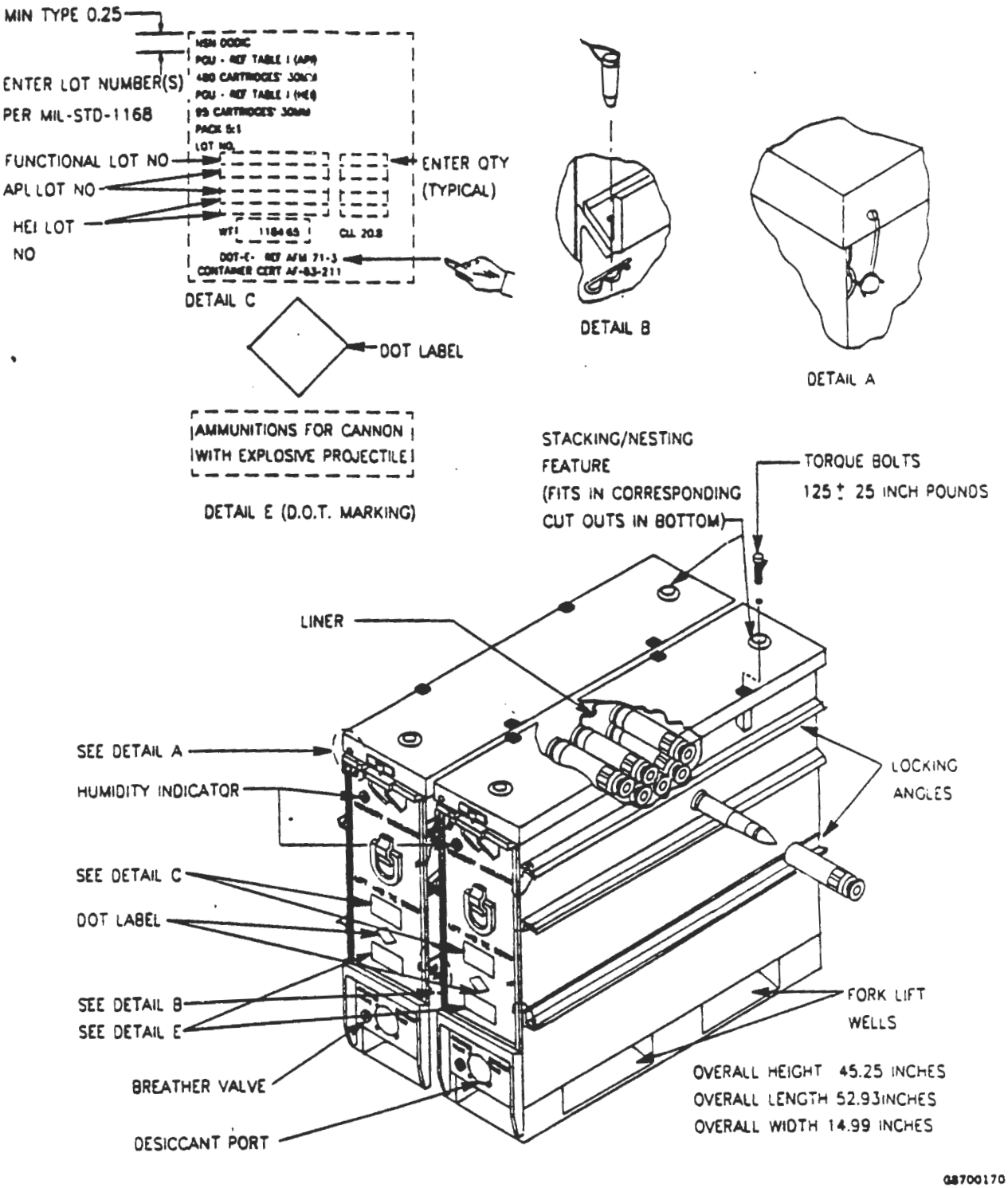


Components of 30MM Armor Piercing Incendiary Cartridge, PGU-14A/B (Honeywell)



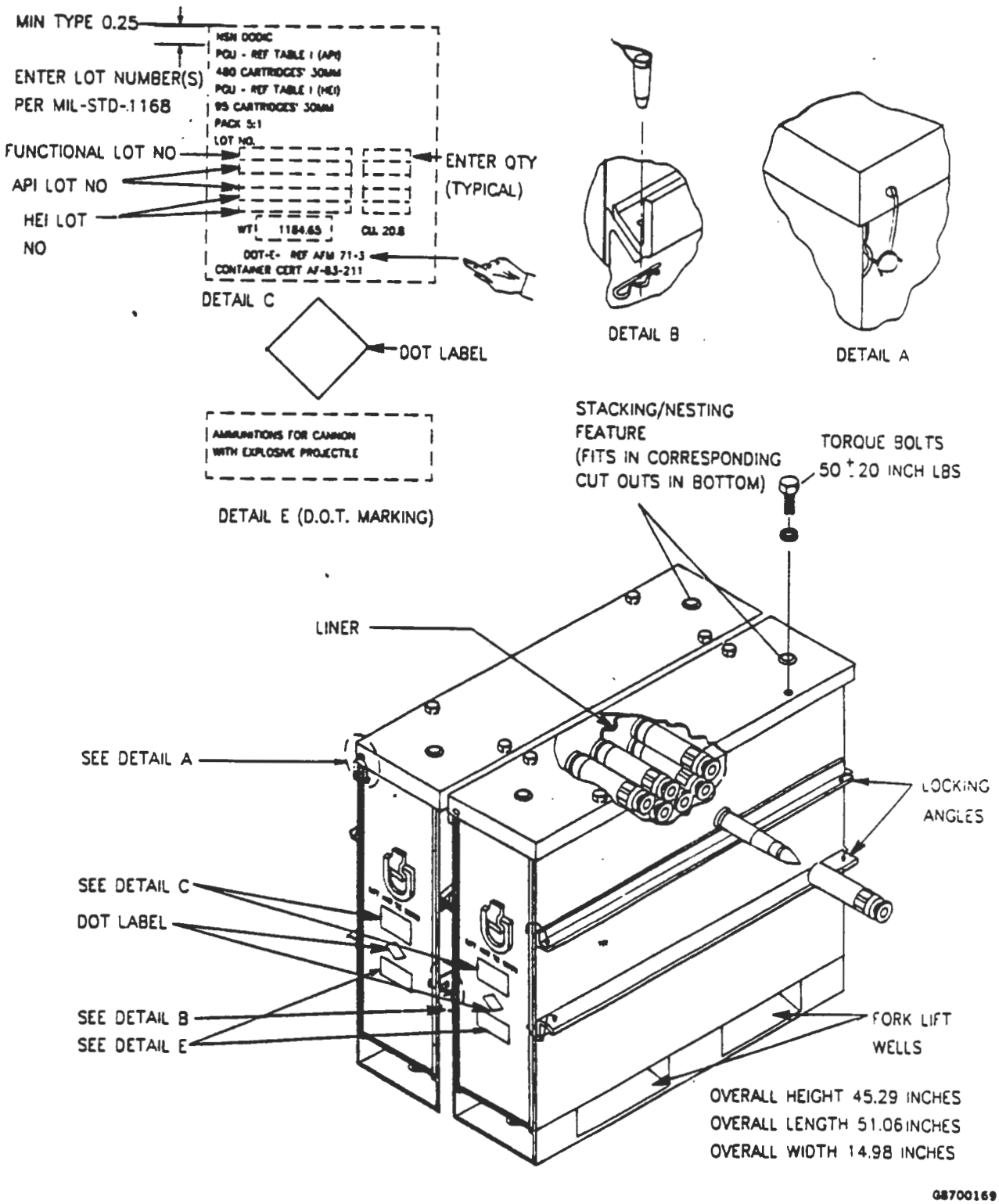
Projectile, 30MM PGU-14A/B (API)

Enclosure 2 to Supplement 2



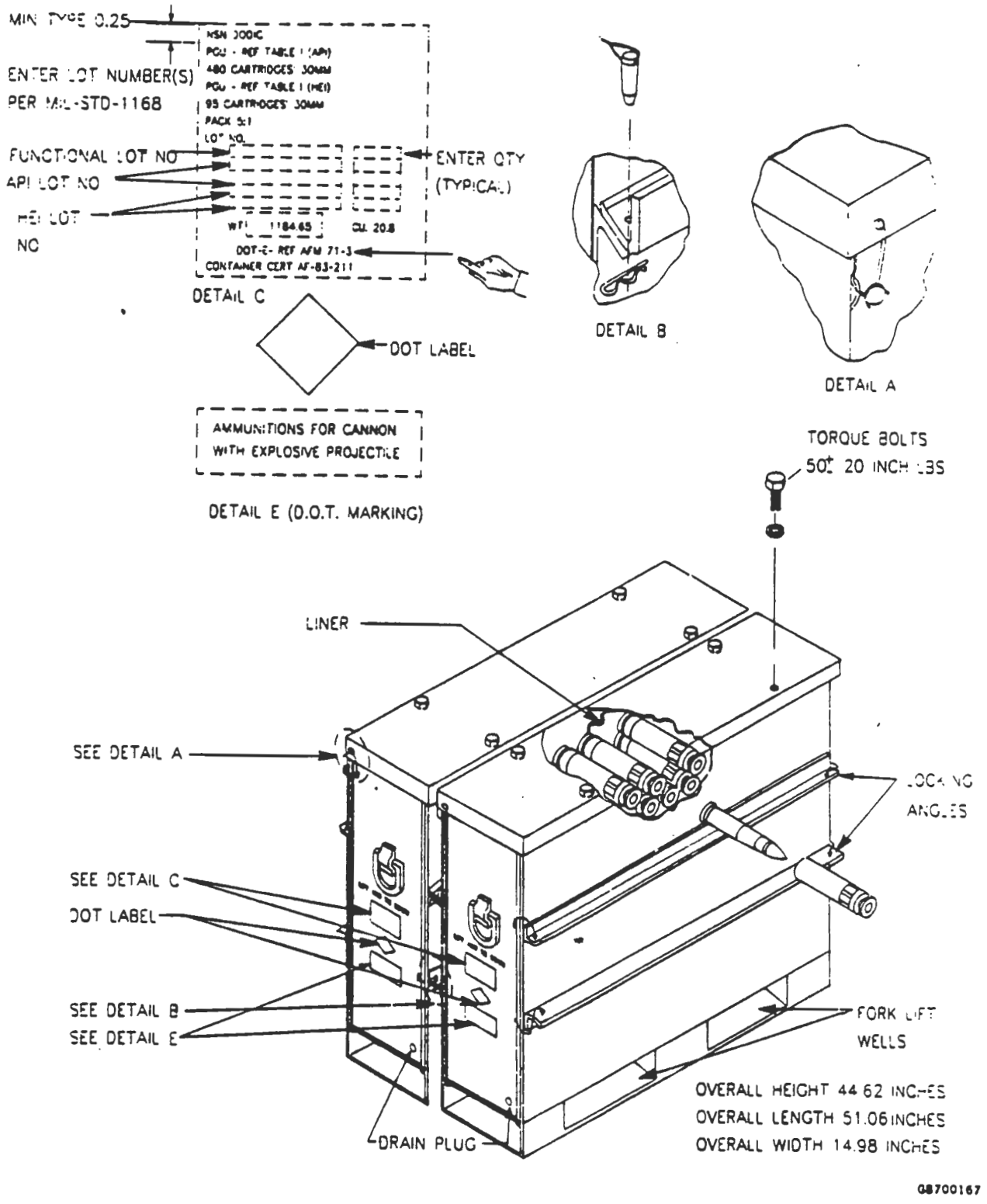
CNU-383/E Shipping and Storage Container (Typical)

Enclosure 3 to Supplement 2



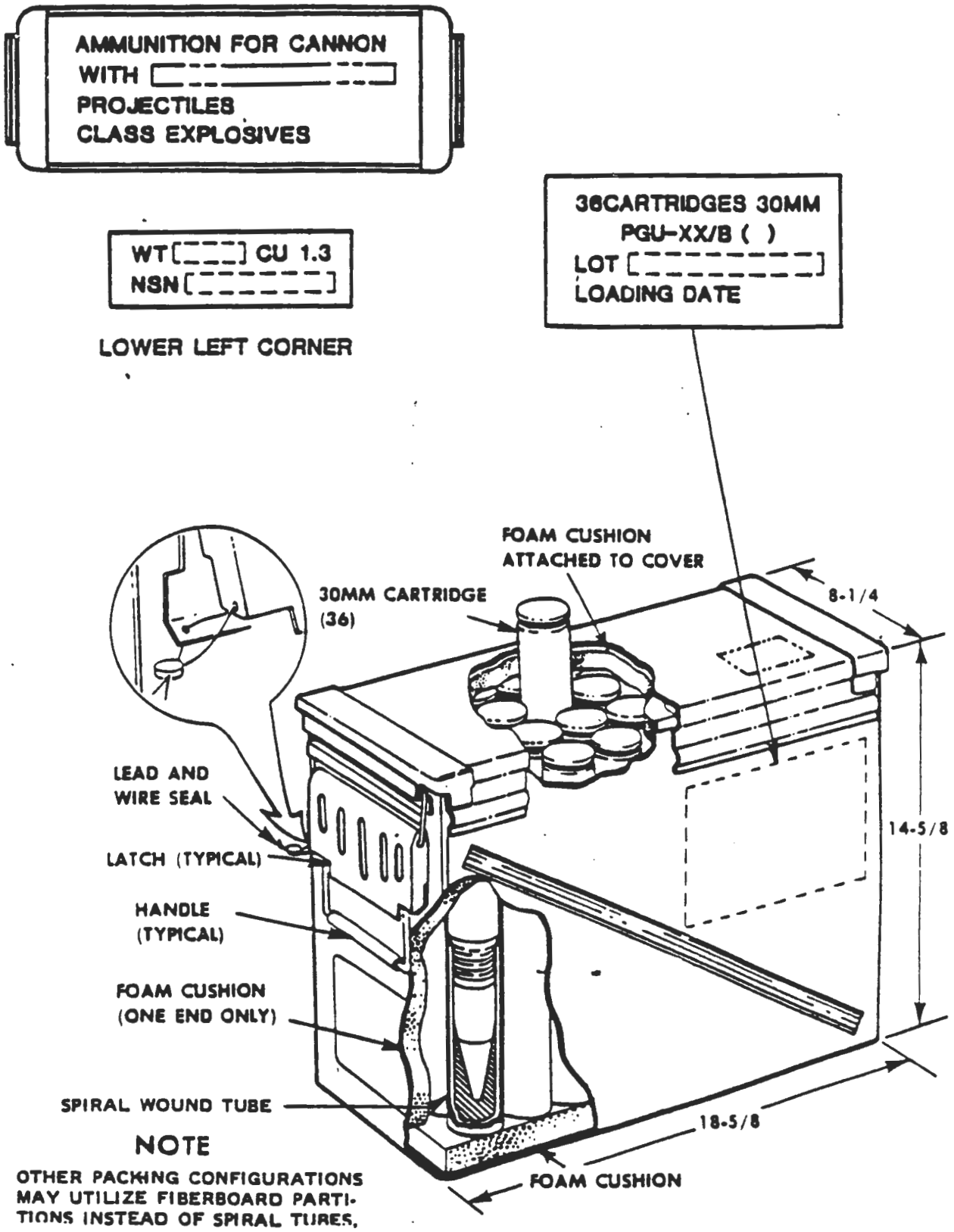
CNU-332A/E Shipping and Storage Container (Typical)

Enclosure 4 to Supplement 2



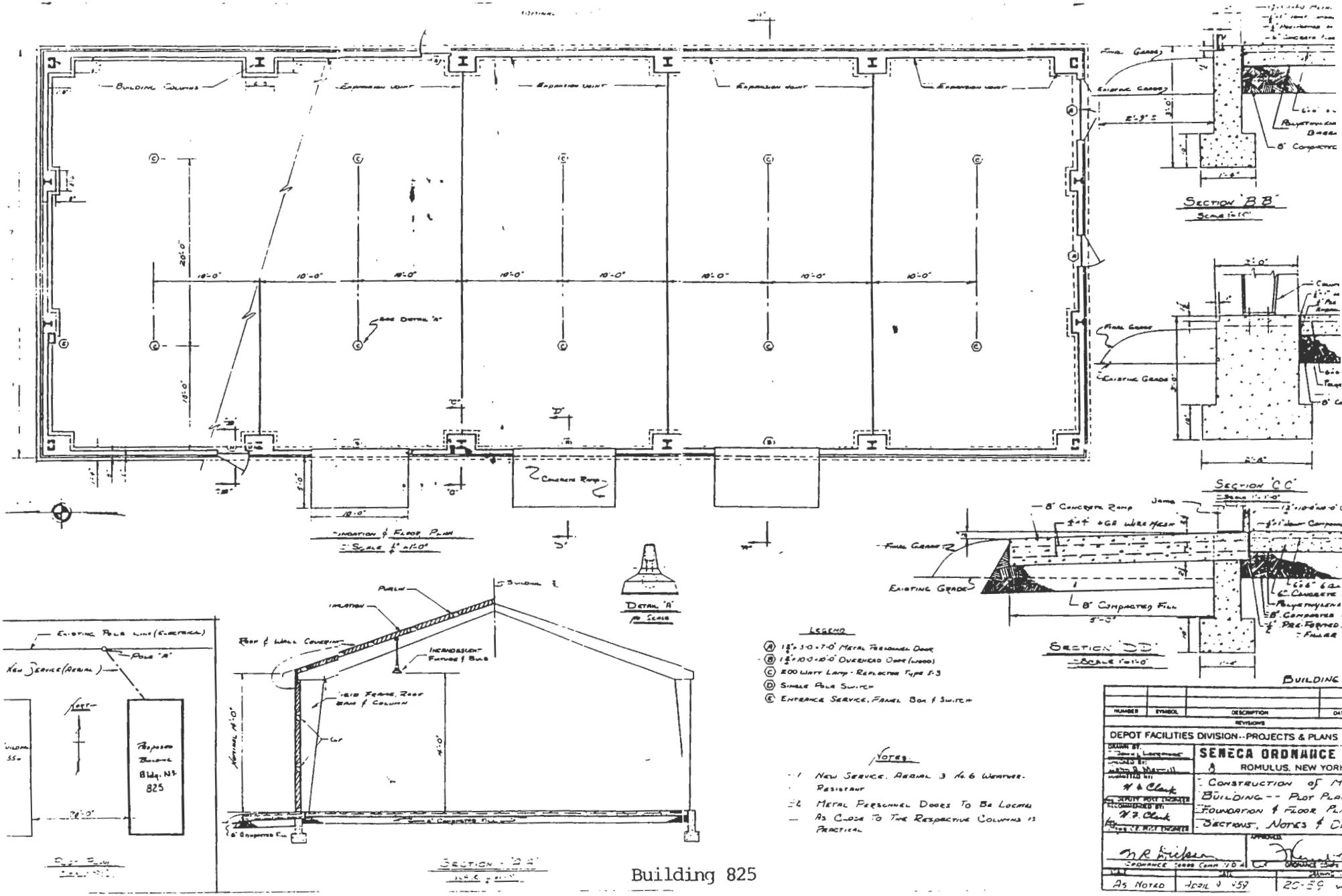
CNU-309A/E Shipping and Storage Container (Typical)

Enclosure 5 to Supplement 2



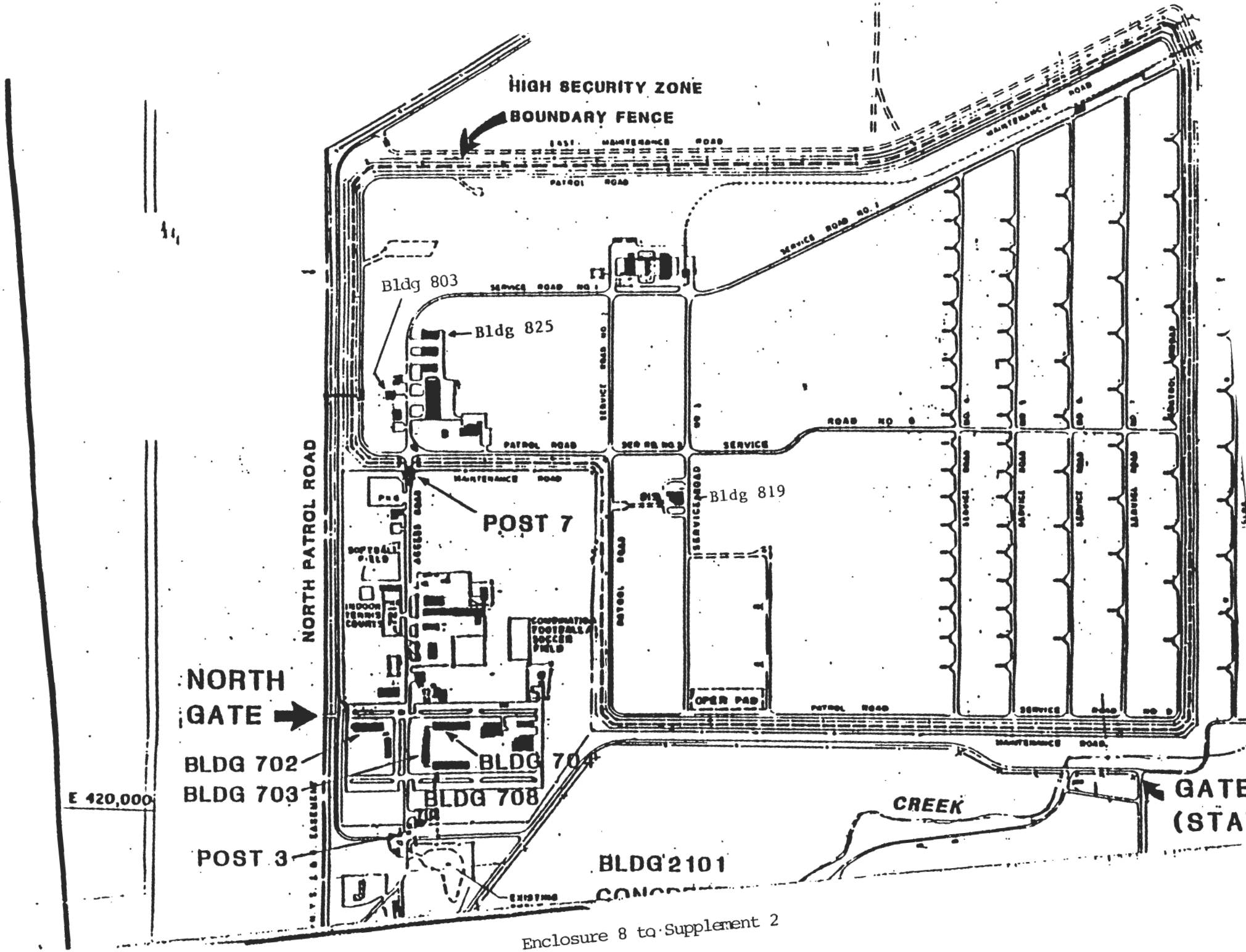
M548 Shipping Container Outer Package/Markings

Enclosure 6 to Supplement 2

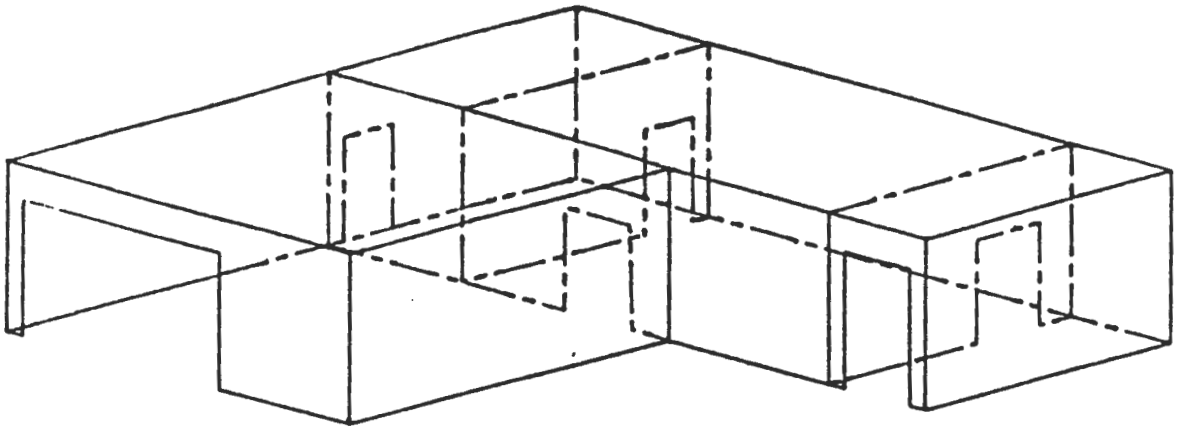


Building 825

Enclosure 7 to Supplement 2

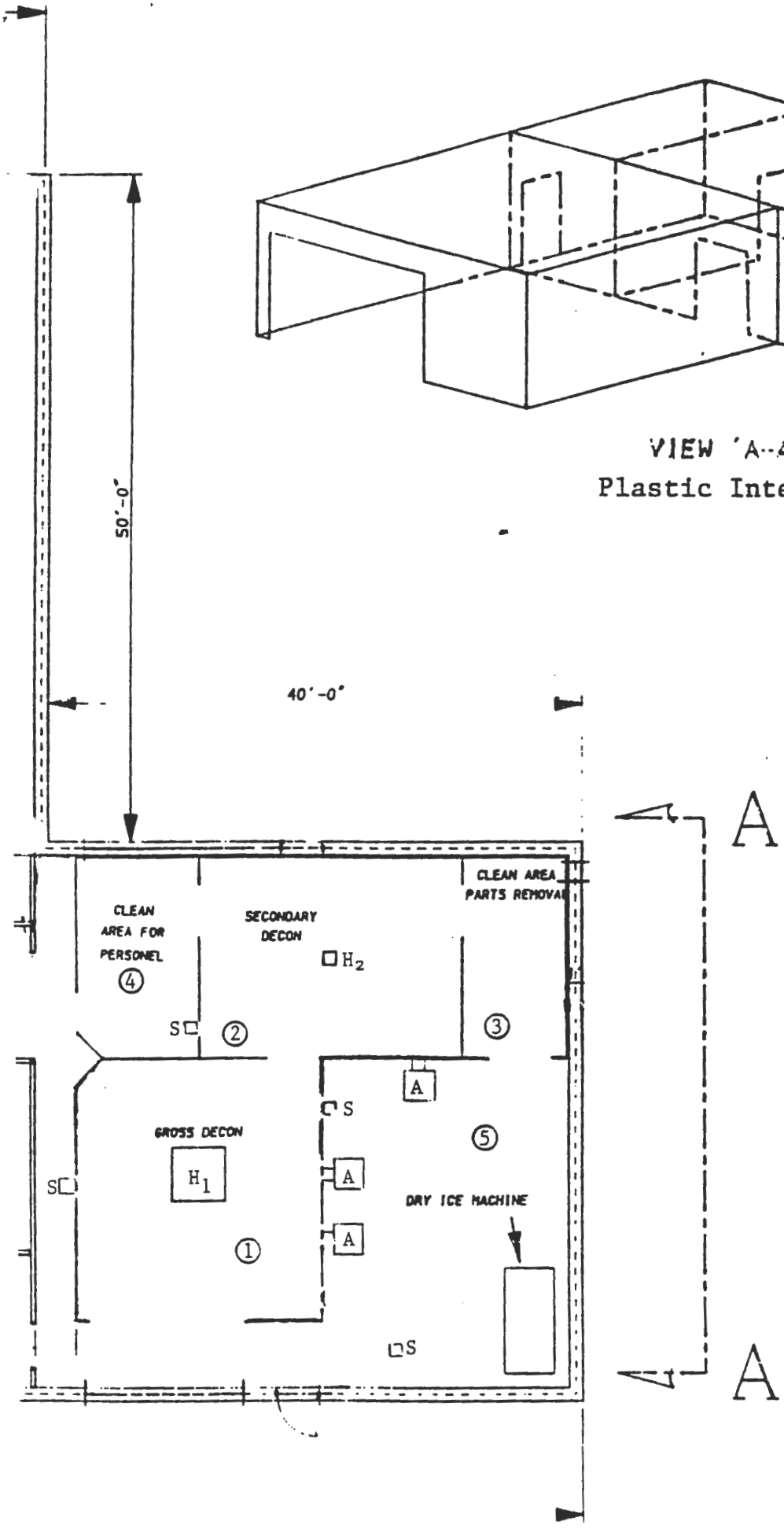


Enclosure 8 to Supplement 2



VIEW 'A-A'

Plastic Interior Rooms



FACILITY/EQUIPMENT LAYOUT
EAST SIDE -- BUILDING 819

AREA ① - Gross Decontamination Roo:

AREA ② - Secondary Decontamination Room

AREA ③ - Clean Area for Parts Removal

AREA ④ - Clean Area for Personnel In/Out Processing

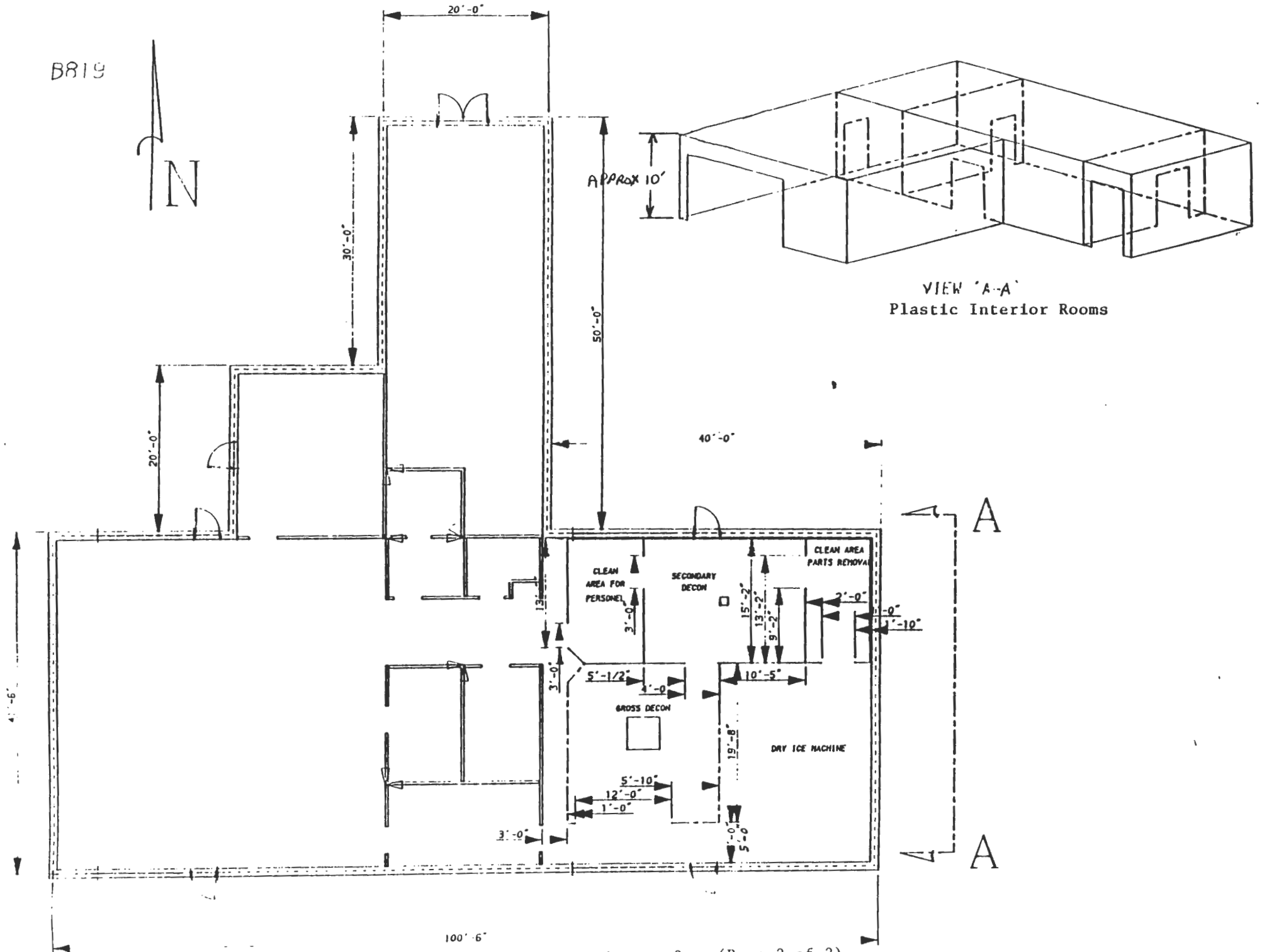
AREA ⑤ - Clean Area

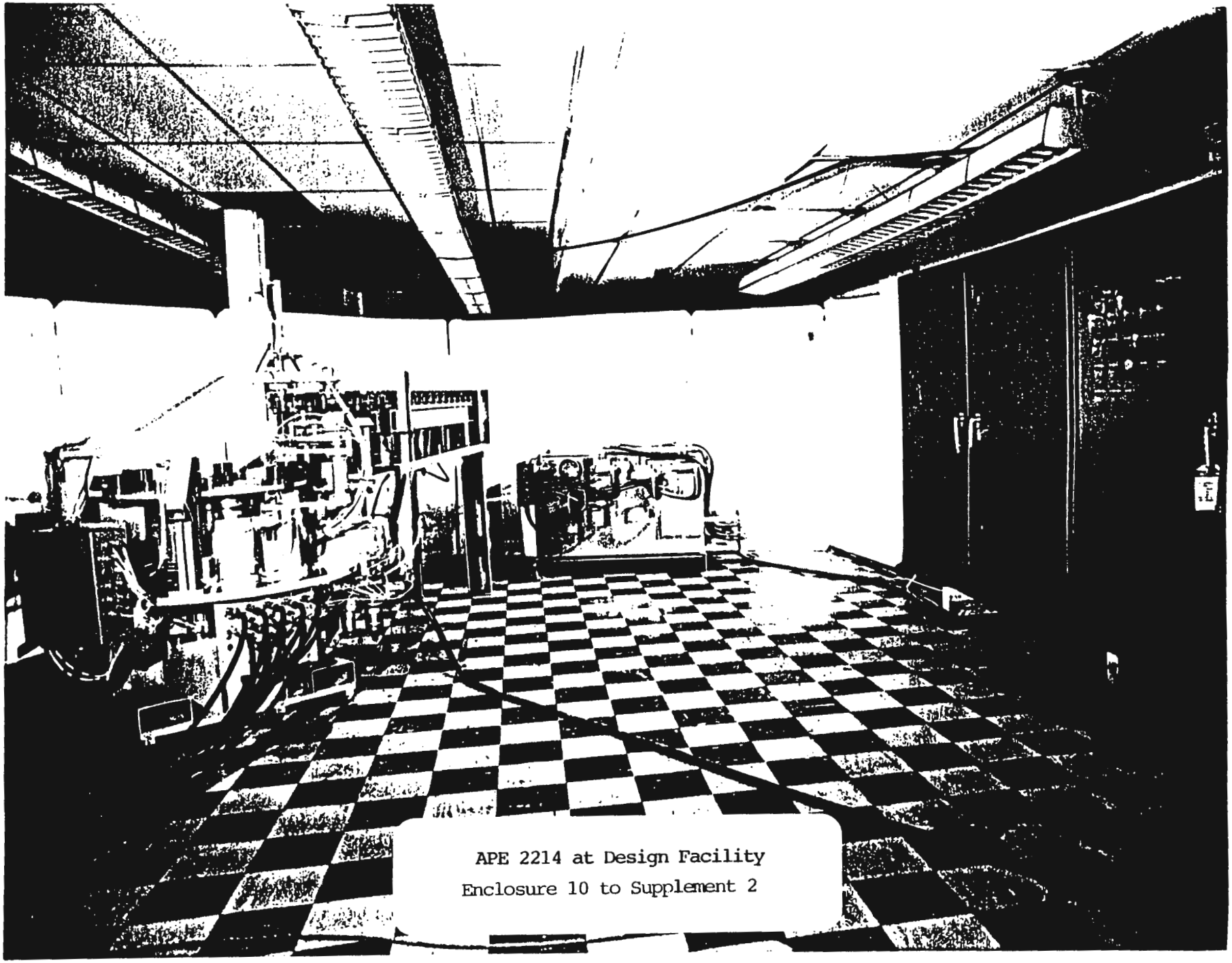
A - Air Filtration/Ventilation Unit with HEPA Filters

S - Staplex Air Samplers

H_1 - Hole in Plastic Ceiling for Air Makeup and Hoist Attachment

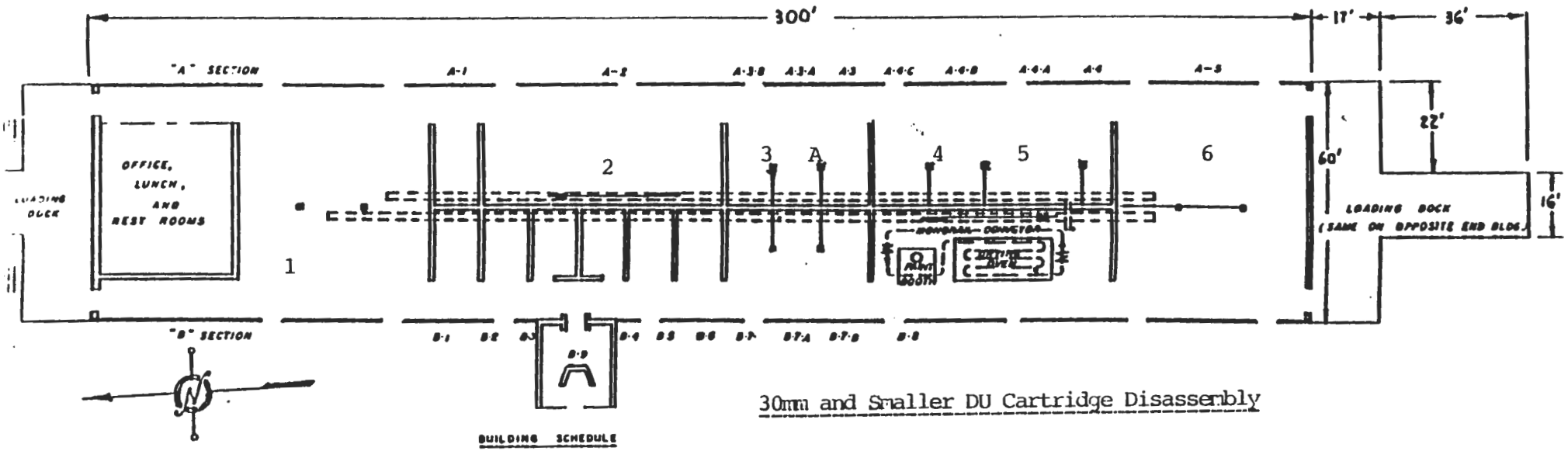
H_2 - Hole in Plastic Ceiling for Air Makeup


B819
N
20'-0"
30'-0"
20'-0"
50'-0"
40'-0"
APPROX 10'
VIEW 'A-A'
Plastic Interior Rooms
A
A
CLEAN AREA FOR PERSONEL
SECONDARY DECON
CLEAN AREA PARTS REMOVAL
GROSS DECON
DRY ICE MACHINE
3'-0"
5'-1/2"
4'-0
10'-5"
19'-8"
5'-10"
12'-0"
1'-0"
3'-0"
5'-0"
100'-6"



APE 2214 at Design Facility

Enclosure 10 to Supplement 2



30mm and Smaller DU Cartridge Disassembly

1 Receive Ammunition

2 Unpack Ammunition

3 APE 2214 Seperates Projectile from Case

4 Components Removed from Conveyors

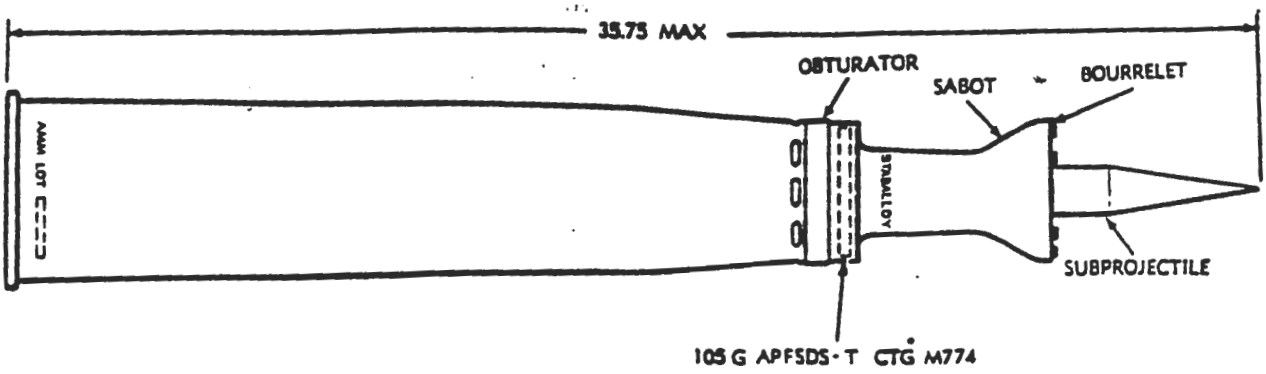
5 Pack Components for Storage or Shipment

A APE 2214 *

6 Storage Prior to Shipment

* Air Monitor Placement

CARTRIDGE, 105-MILLIMETER: APFSDS-T, M774



ARD80-0051

Type Classification:

LCCA Oct 1980.

Use:

This cartridge is an armor-piercing antitank cartridge and is intended for use in 105mm, M68 gun against armored targets.

Description:

The projectile consists of a sub-projectile and sabot. The sub-projectile consists of a monolithic staballoy (depleted uranium) core, which is fitted with an aluminum windshield with steel tip to eliminate aerodynamic heating and an aluminum fin assembly. The aluminum sabot, composed of three 120° sections, is assembled around the sub-projectile. A steel bourrelet, containing three shear cuts, is screwed to the sabot forward face. A nylon obturator and polypropylene seal is assembled around the sabot, and a silicone rubber seal is applied over the rear face of the sabot. An M13 Tracer is assembled to the fin and is held in place by a threaded plug and disc assembly. The projectile is crimped to an M148A1B1 Cartridge Case, which holds approximately 13 pounds of M30 propellant, and is fitted with an M120 electric primer. A gun tube wear-reducing titanium-dioxide liner is assembled to the interior wall of the cartridge case.

Functioning:

During projectile flight, the tracer burns for a minimum of 2.5 seconds. The sabot discards upon leaving the gun tube by aerodynamic and centrifugal forces. The projectile is fin stabilized in flight. In order that only minimal spin is imparted to the projectile when the obturator engages the gun tube rifling, the plastic seal under the obturator reduces the coefficient of friction, producing approximately 80 percent slippage. The core penetrates the target solely by kinetic energy.

Tabulated Data:

NOTE

Classified tabulated data has not been included in this change.

Complete round:

Type	APFSDS-T
Weight	37.8 lb
Length	35.75 in.
Cannon used with	M68

Projectile:

Subprojectile material	Depleted uranium
Sabot	Aluminum
Color	Black w/white markings

Components
  Cartridge case ---- M148A1B1
  Propellant -------- M30
  Primer ------------ M120
  Tracer ------------ M13

Temperature Limits:

Firing:
  Lower limit ------- -35°F (-37.2°C)
  Upper limit ------- +125°F (+52.0°C)
Storage:
  Lower limit ------- -70°F (-57.0°C)
  Upper limit ------- +160°F (+71.1°C)

Packing ------------ 1 round per fiber container; 2 containers per wooden box

Packing Box:
  Weight ------------ 140 lb
  Dimensions -------- 47-7/16 x 13-5/16 x 7-1/16 in.
  Volume ------------ 3.4 cu ft

NOTE

See SC for complete packing data including NSN's.

Shipping and Storage Data:

Storage class/SCG ----- (08) 1.2C
DOT shipping class ---- B
DOT designation ------- AMMUNITION FOR CANNON WITH SOLID PROJECTILES
DODAC ----------------- 1315-C523
Drawing number -------- 9329513

Limitations:

Projectile is not to be disposed of by burning or detonation.

The M774 is a full service round which may only be fired during war emergency. All peace time firings are prohibited except at times of NRC license and host nation agreement.

NOTE

Loss or unauthorized firings of the M774 must be reported to HQ, AMCCOM, within 24 hours of the discovery. Telephone reports should be followed with a written report to:

Commander
USA AMCCOM
ATTN: AMSMC-CG, Radiological Protection Officer (RPO)
Rock Island, IL 61299
Autovon: 793-2969/2964/2965/2966
Commercial: (309) 782-2969/2964/2965/2966

FTS: 367-2969/2964/2965
Non-duty, Post Operator:
  Autovon: 793-1110
  Commercial: (309) 782-6001
Ask for Staff Duty Officer

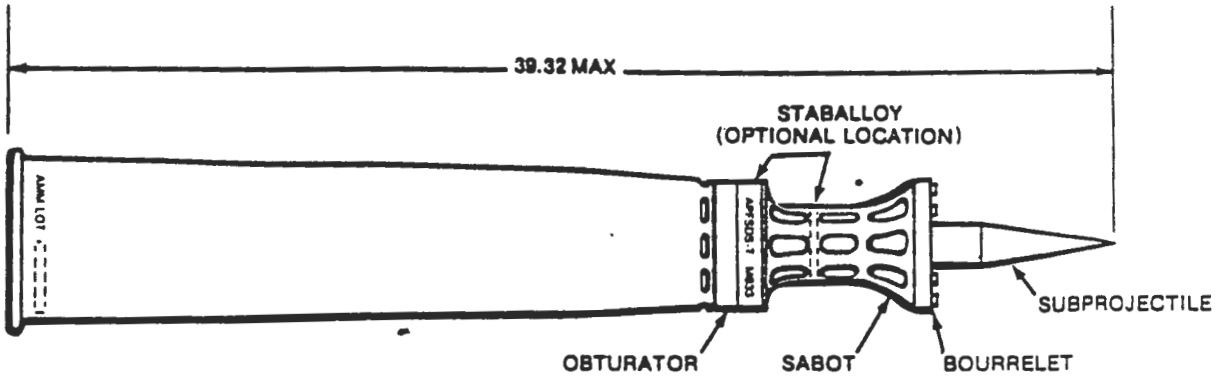
All transmissions regarding incidents of this nature must be classified at least CONFIDENTIAL.

The possession of the source material (Depleted Uranium) is licensed to HQ, AMCCOM, in accordance with Federal Law, Title 10, Code of Federal Regulations. The AMCCOM Commander (RPO) is responsible for the license compliance and personally accountable for the source material. Violations of this law may result in a personal fine or imprisonment. Failure to report a non-compliance is also punishable under federal law.

References:

SC 1305/30-IL	TM 9-1300-251-34
SB 700-20	TM 9-1300-250
DARCOM-P 700-3-3	TM 9-2350-257-10-2
TM 9-1300-251-20	TM 9-2350-253-10
TM 9-2350-215-10	TM 9-2350-255-10

CARTRIDGE, 105-MILLIMETER: APFSDS-T, M833



ARD 82-0326-A

TYPE CLASSIFICATION:

TC Std 7 Apr 83 by DA Letter.

USE:

This cartridge is an armor-piercing antitank cartridge and is intended for use on 105mm guns M68 cannon, against armored targets.

DESCRIPTION:

The projectile consists of a subprojectile and sabot. The subprojectile consists of a monolithic staballoy (depleted uranium) core, and is fitted with an aluminum windshield with steel tip to eliminate aerodynamic heating and an aluminum fin assembly. The aluminum sabot is composed of three 120° sections, which transfer momentum to the subprojectile through a series of mating buttress grooves. The sabot is an adaptation of the M735/M774 technology differing in design by the use of gussets in the sabot segments to retain strength and rigidity and reduce the weight. A steel bourrelet, containing three shear cuts, is screwed to the

sabot forward face. A two piece nylon obturator and polypropylene seal is assembled around the sabot, and a silicone rubber seal is applied over the rear face of the sabot. An M13 Tracer is assembled to the fin and is held in place by a threaded plug and disc assembly. The projectile is crimped to an M148A1B1 Cartridge Case, which holds approximately 12.8 pounds of M30 propellant, and is fitted with an M120 electric primer. A gun tube wear-reducing titaniumdioxide liner is assembled to the interior wall of the cartridge case.

FUNCTIONING:

During projectile flight, the tracer burns for a minimum of 2.5 seconds. The sabot discards upon leaving the gun tube by aerodynamic and centrifugal forces. The projectile is fin stabilized in flight. In order that only minimal spin is imparted to the projectile when the obturator engages the gun tube rifling, the plastic seal under the obturator reduces the coefficient of friction, producing approximately 80 percent slippage. The core penetrates the target solely by kinetic energy.

TABULATED DATA:

NOTE

Classified tabulated data has not been included in this change.

Complete round:

Type	APFSDS-T
Weight	38.2 lb (17.3 kg)
Length	39.32 in.
Cannon used	M68

Projectile:

Sabot	Aluminum

Subprojectile:

Body material	Depleted uranium
Color	Black w/white markings

Components:

Cartridge case	M148A1B1
Propellant	M30
Primer	M120
Tracer	M13

TEMPERATURE LIMITS:

Firing:

Lower limit	-35°F (-37.2°C)
Upper limit	+125°F (+52.0°C)

Storage:

Lower limit	-50°F (-46°C)
Upper limit	+145°F (+62.8°C)

PACKING:

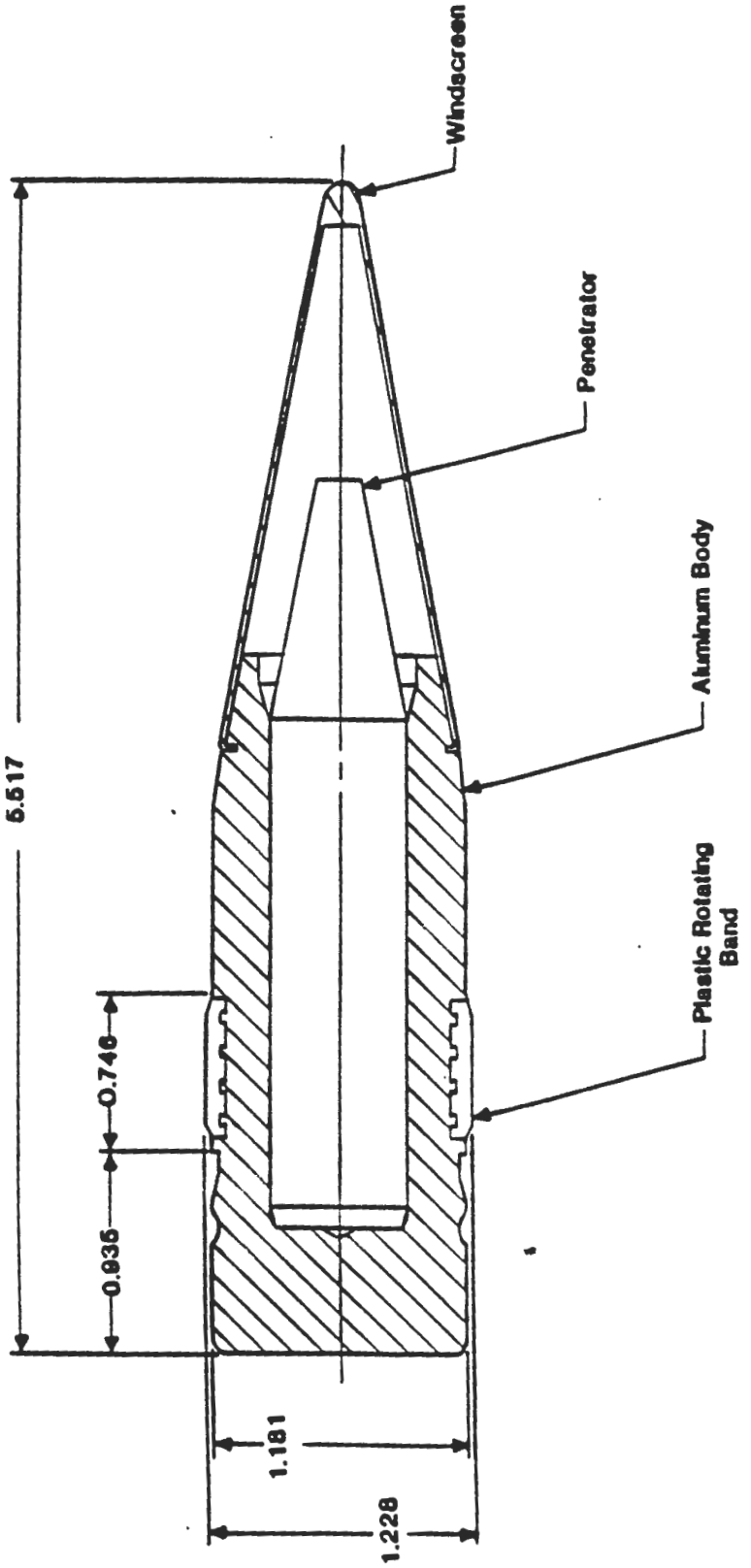
Alternate	1 round per fiber container, 2 containers per wooden box
Standard	1 round per metal container, 30 containers to a pallet

PACKING BOX:

Weight	124 lb
Dimensions	48-3/4 x 14-1/16 x 8-9/16 in.
Volume	3.3 cu ft

METAL CONTAINER:

Weight	0.67 lb
Dimensions	45.67 x 7.13 x 7.13
Volume	0.9 cu ft



Projectile, 30MM PGU-14A/B (API)

Enclosure 2 to Supplement 2

NOTE

See SC for complete packing data including NSN's.

Shipping & Storage Data:

Quantity-Distance Class	(08) 1.2
Storage Compatibility	C
DOT Shipping Class	B
DOT Designation	AMMUNITION FOR CANNON WITH SOLID PROJECTILES
DODAC	1315-C524
Drawing Number	9342932

Limitations:

Projectile is not to be disposed of by burning or detonation.

The XM833 is a full service round which may only be fired during war emergency. All peacetime firings are prohibited except at times of NRC license and host nation agreement.

Firing the M833 at Ammunition Temperatures above +125°F (+52.0°C) may result in excessive chamber pressures. Firing the M833 at the Ammunition Temperatures below -35°F (-37.2°C) may result in weapon damage.

NOTE

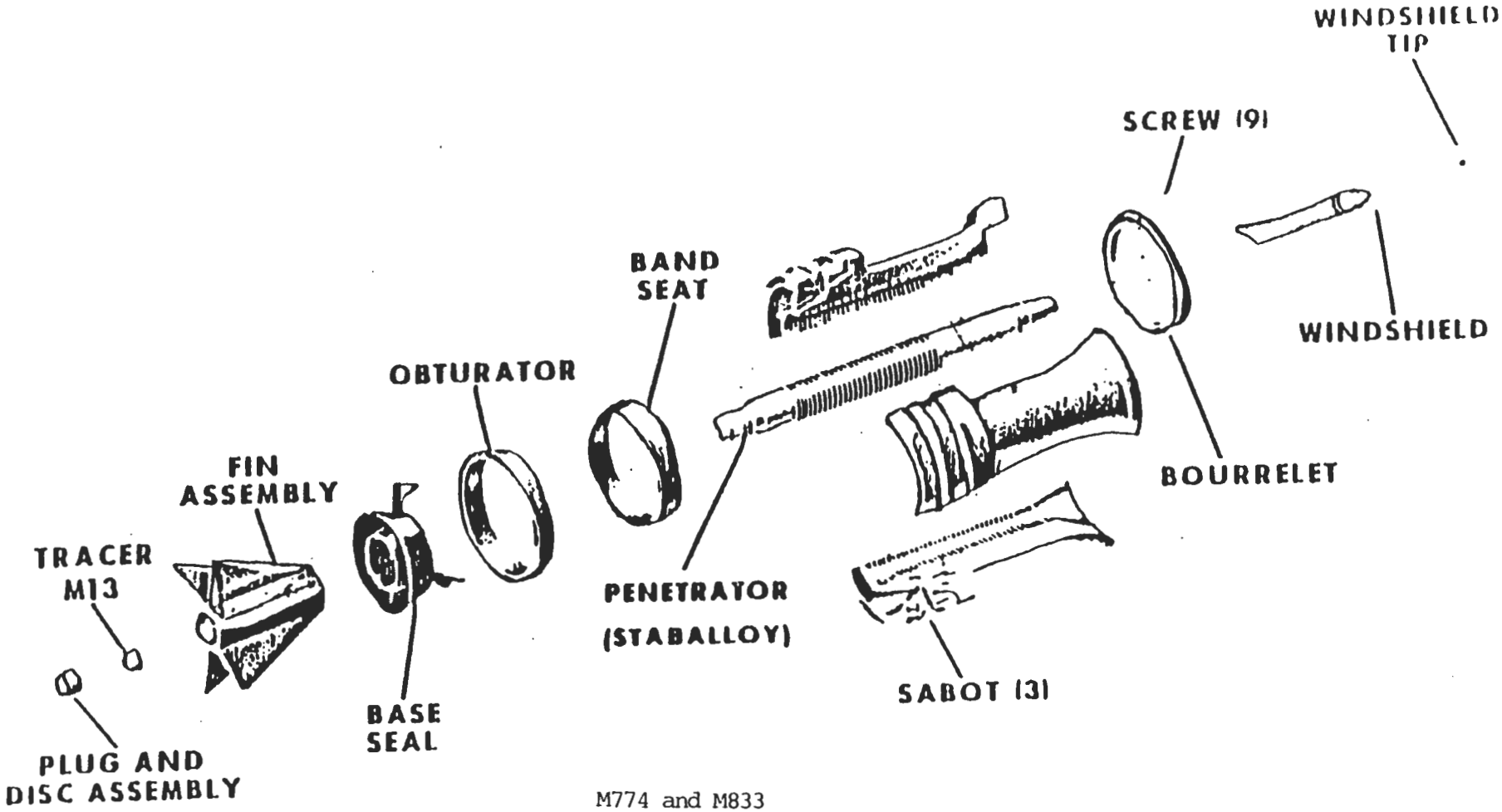
Loss or unauthorized firings of the M833 must be reported to HQ, AMCCOM RPO within 24 hours of the discovery. Telephone reports should be followed with a written report to:

Cdr USA AMCCOM
ATTN: AMSMC-CG/Radiological Protection Officer (RPO)
Rock Island, IL 61299
Autovon: 793-2969/2964/2965/2966
Commercial: (309) 782-2969/2964/2965/2966
FTS: 367-2969/2964/2965
Non-duty, Post Operator:
Autovon: 793-1110
Commercial: (309) 782-6001
Ask for Staff Duty Officer

All transmissions regarding incidents of this nature must be classified at least confidential. The possession of the source material (Depleted Uranium) is licensed to HQ, AMCCOM, in accordance with Federal Law, Title 10, Code of Federal Regulations. The AMCCOM Commander (Radiological Protection Officer) is responsible for the license compliance and personally accountable for the source material. Violations of this law may result in a personal fine or imprisonment. Failure to report a non-compliance is also punishable under Federal Law.

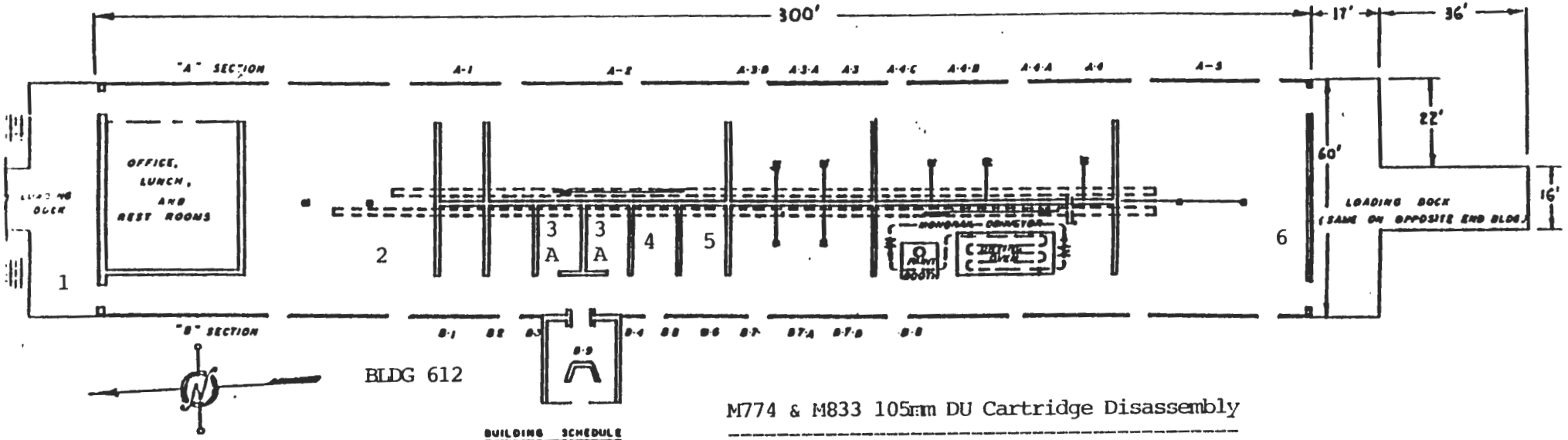
REFERENCES:

SC 1305-30-IL
SB 700-20
DARCOM-P 700-3-3
TM 9-1300-250
TM 9-1300-251-20
TM 9-1300-251-34
TM 9-2350-215-10
TM 9-2350-255-10-3
TM 9-2350-257-10-3



M774 and M833

Enclosure 14 to Supplement 2



M774 & M833 105mm DU Cartridge Disassembly

1 Receive Ammunition

2 Unpack Ammunition

3 Seperate Projectile from Cartridge Case Using APE 1001

4 Pack Projectiles Tracers Removed

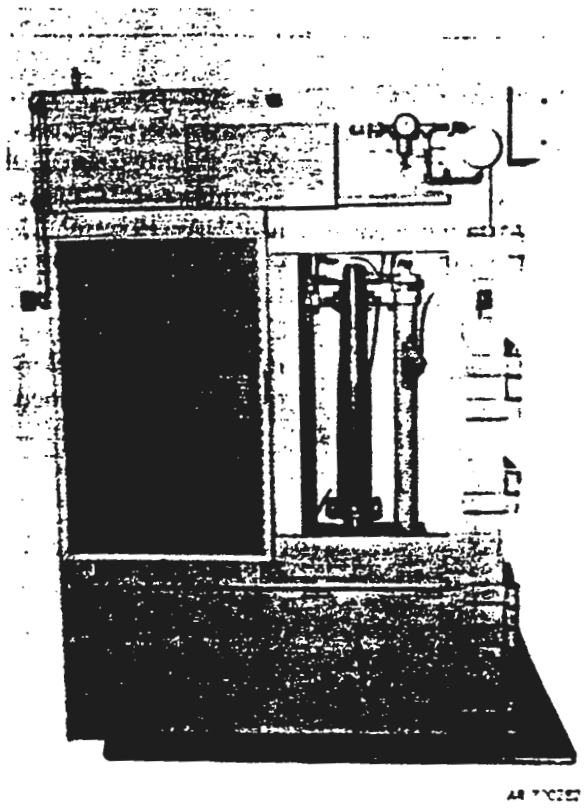
5 Pack Cartridge Cases

6 Outload Processed Amunition

A APE 1001*

* Air Monitors @ Each Machine

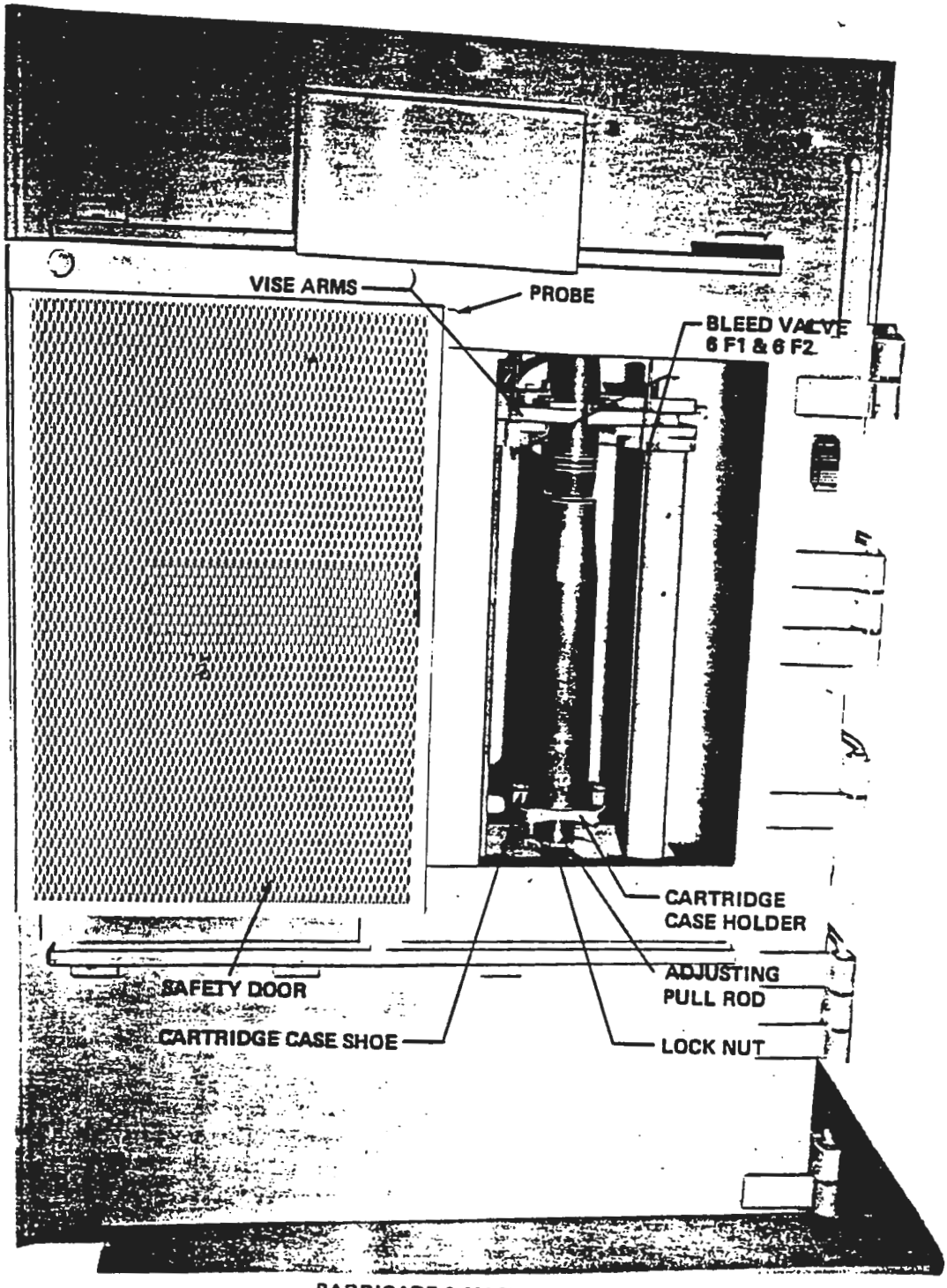
APE 1001M1--MACHINE, VERTICAL PULL APART



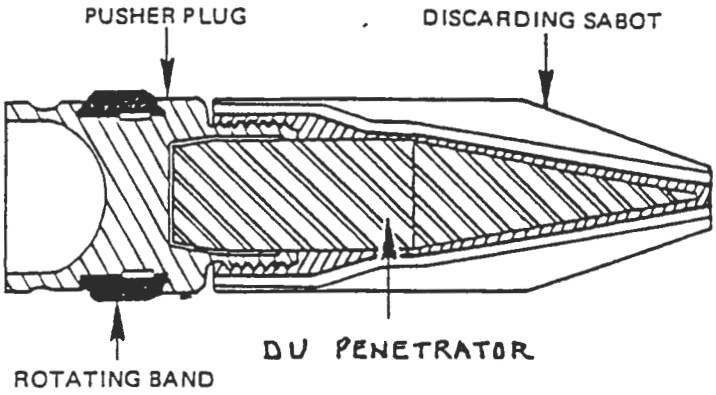
Use:
The vertical pull apart machine is a semiautomatic multipurpose machine used for processing 37MM through 106MM fixed artillery ammunition, Navy ammunition, 76mm/62, 3"/50, 5"/38, 5"/54, 6"/47 and rocket motors. It performs the following operations:

a. Separate projectile from cartridge case.
b. Resize cartridge case mouth.
c. Assemble projectile to cartridge case.
d. Calibrate the pounds of pull required to separate the projectile from the cartridge case.
e. Crimp the cartridge case to the projectile.
f. Prime and deprime cartridge cases with press type primers.
g. Continuity test 2.75-inch and 3.5-inch rocket motors.

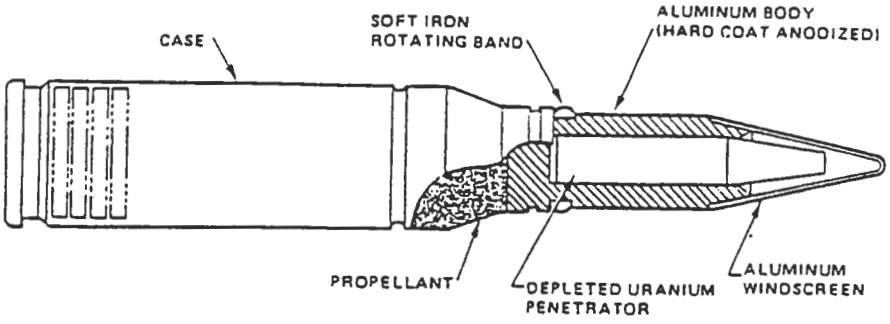
Description:
The vertical pull apart machine is constructed with a base plate, operating table, three bolster rods, vise assembly, pull cylinder, and fulcrum arm assembly. The machine is powered by air. An operational shield is provided to protect the operator. Some shields are supplied with an installed deluge system.



Enclosure 17 to Supplement 2

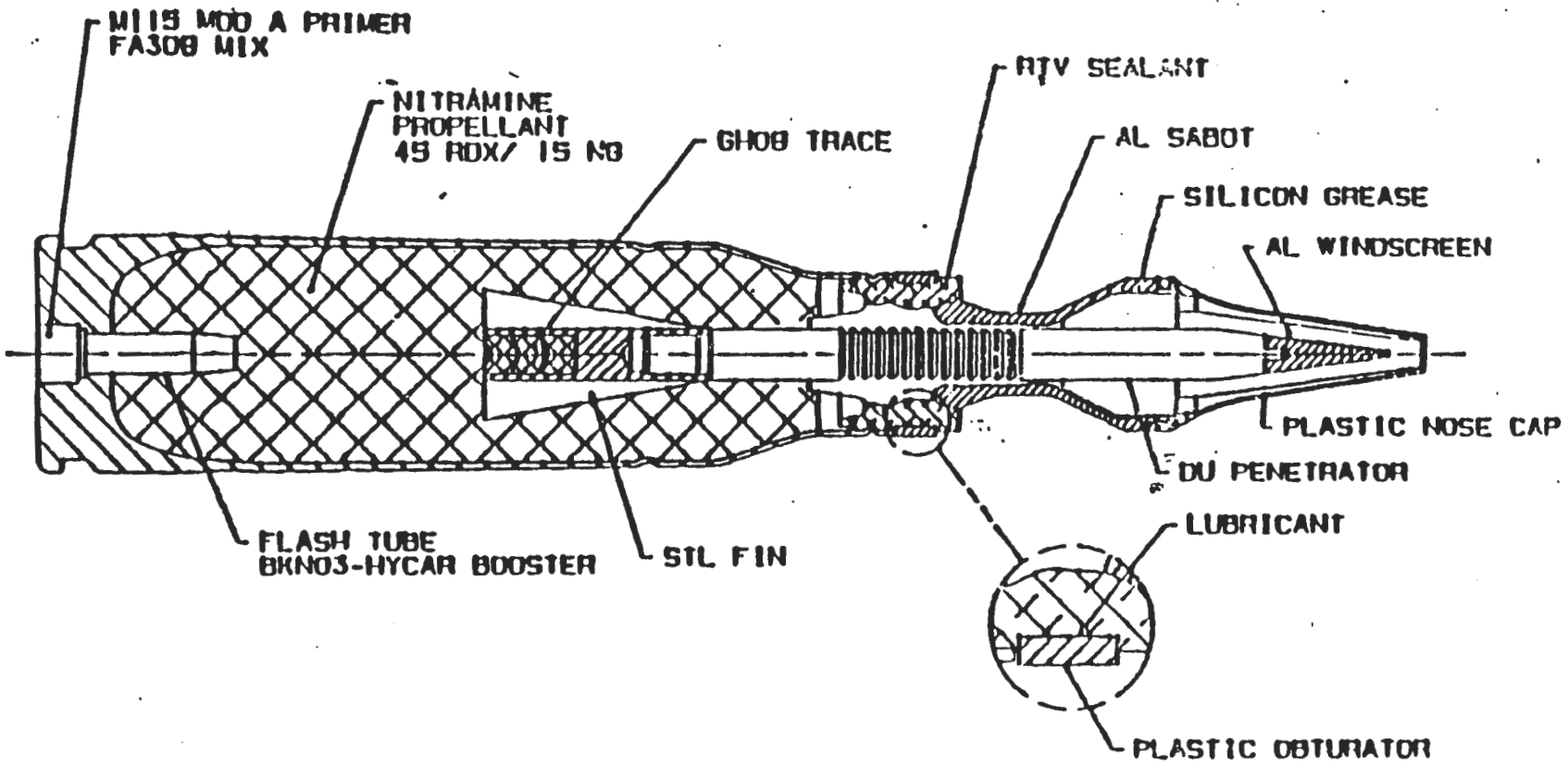


PROJECTILE OF 20MM DU CARTRIDGE.



25MM PGU-20/U CARTRIDGE.

M919 CARTRIDGE



SUPPLEMENT 3
Reference NRC Form 313, Block 7

INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE:

1. General.

a. The Radiological Protection Officer (RPO) is Michael R. Lewis. The alternate Radiological Protection Officer is Thomas J. Stincic. First line supervisors for Depleted Uranium ammunition operations, first line supervisors for Directorate of Product Assurance and first line supervisors for decontamination operations are given annual training.

2. Type of training.

a. Principles and practices of radiation protection. (A)

b. Radioactivity measurement standardization, monitoring techniques, and instruments. (B)

c. Mathematics and calculations basic to the use and measurements of radioactivity. (C)

d. Biological effects of radiation. (D)

e. Safety practices applicable to the protection from radiation, chemical toxicity, pyrophoric property, and explosive property of source materials. (E)

3. Format of training and experience.

a. Name.

b. Type of training.

c. Course and location.

d. Duration and year.

e. On-the-job-training. (OJT)

f. Formal training.

g. Experience.

4. Michael R. Lewis Radiation Protection Officer

a. Training.

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Savanna, IL	2 weeks 1-12 Aug 77	Yes	Yes
A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 7-11 May 79	Yes	Yes
A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 16-20 Jun 80	Yes	Yes
A,B,C,D	Radiological Safety Ft. McClellan, AL	3 weeks 21 Jan-10 Feb 81	Yes	Yes
A,B,C,D,E	DU Safety Course Ft. Belvoir, VA	1 week 5-9 Mar 84	No	Yes
A,B,C,D	Occupational Radiation Safety, Ft. Belvoir, VA	2 weeks 9-20 Jul 84	No	Yes
A,C	Chemical Nuclear Systems Inc, Seminar, Columbia, SC	1 week 22-26 Apr 85	No	Yes
A,C	Chemical Nuclear Systems Inc, Seminar, Columbia, SC	1 week 20-24 Jul 87	No	Yes
A,C	Computer Based Occuptional Radiation Protection Ft. Belvoir, VA	1 week 24-28 Jul 89	No	Yes
A,C	US Army Radiological Bioassey and Dosimetry: RBD Software Ft. Belvoir, VA	1 week 17-21 Jun 91	No	Yes
B,C	Health Physics, Instrumentation and Air Sampling for Radioactive Materials Ft. Belvoir, VA	1 week 27-31 Jul 92	No	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions Storage Check Sources:Am241 .1uCi,Th230 .01uCi, Cs137 1uCi,Kr85 5mCi	Seneca Army Depot	Aug 77 - May 80	Alpha Team Member (Radiation Accident Reponse Team)
Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Feb 81 - Feb 91	Alternate Radiation Protection Officer

Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Feb 91 - Present	Radiation Protection Officer

5. Thomas J. Stincic Alternate Radiation Protection Officer

a. Training.

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Savanna, IL	2 weeks 1-12 Aug 77	Yes	Yes
A,B	AMC Ammunition School Seneca Army Depot Romulus, NY	2 days 16-17 Feb 78	No	Yes
A,B,C,D	Health Physics & Radiation Accidents Oak Ridge Assoc. Universities Oak Ridge, TN	1 week 23-27 Jan 78	Yes	Yes
A	NUWAX-79 Defense Nuclear Agency/DOE, Nevada Test Site, NV	3 days 18-20 Apr 79	Yes	No
A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 16-20 Jul 79	Yes	Yes
A,B,C,D,E	Instrumentation Eberline Corp. Santa Fe, NM	1 week 7-11 Apr 80	Yes	Yes
A,B,C,D	Radiation Safety by Leo Foley, Field Safety Activity Romulus, NY	2 weeks 10-21 Aug 81	No	Yes
A,B,C,D	Radiation Safety by Thomas Grucci, Romulus, NY	2 weeks Oct 81	No	Yes
A,B,D	RMC Technical Svcs Ft. Belvoir, VA	1 week 9-13 Jun 84	No	Yes
A,B,C,D,E	DU Safety Course Ft. Belvoir	1 week 5-9 Mar 84	No	Yes
A,B,C,D	Occupational Radiation Safety, Ft. Belvoir, VA	2 weeks 9-20 Jul 84	No	Yes
A,B,D	Trans. Radioactive Mat. Ft. Belvoir, VA	1 week 14-18 Jan 85	No	Yes
A,B,C,D	Radiation Dosimetry and Measurement Ft. Belvoir, VA	1 week 9-13 Mar 87	No	Yes

A,C	Computer Based Occuptional Radiation Protection Ft. Belvoir, VA	1 week 24-28 Jul 89	No	Yes

b. Experience.

Activity	Site	Duration	Responsibility
SW Munitions Storage Check Sources: Am241 .1uCi,Th230 .01uCi, Cs137 1uCi, Kr85 5mCi	Seneca Army Depot	2 Years	Alpha Team Chief (Radiation Accident Response Team)
Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radioactive Source Set M3A1: Am241 300uCi per set	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiac Calibrator AN/UDM-6 Pu289 1.4uCi	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Columbite Concentrate Storage 1400 Tons Unknown Ci content	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiac Calibrator UDM-2 Sr90 180 mCi	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiological Decontamination of Pitchblende Ore Unknown Ci content	Seneca Army Depot	Jul 85	Radiation Safety

6. John Hennessey, Edward Mitchell, and Phillip Wilkie. First Line Supervisors Ammunitions Operations

a. Training

Type	Course/Location	Duration	OJT	Formal
A,B,C,D,E	DU Safety Course Ft. Belvoir, VA	5-9 Mar 84	Yes	Yes

SUPPLEMENT 4
Reference NRC Form 313, Block 8

TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

SECTION I. TRAINING OUTLINE.

1. Types of Radiation.

    a. Alpha.
    b. Beta.
    c. Gamma.
    d. X-rays.
    e. Neutron.

2. Units of Radiation.

    a. RAD (absorbed dose).
    b. REM (dose equivalent).

3. Biological Effects.

    a. Acute.
    b. Chronic.
    c. Video Presentation. (1 1/2 hour)

4. ALARA-(As Low As Is Reasonable Achievable).

    a. Exposure Limits.
        (1) General Public.
        (2) Prenatal.
        (3) History at Seneca Army Depot.

    b. Protective Measures.
        (1) Time.
        (2) Distance.
        (3) Shielding.

    c. Dosimetry.
        (1) Types: Body, Wrist, Ring, Bioassay.
        (2) Storage.
        (3) When needed.
        (4) Medical Documentation.
        (5) DD Form 1952.
        (6) Reviewed by RPO, Ionizing Radiation Control Committee and Depot Doctor.

    d. Surveys.
        (1) Pre-operational Background.
        (2) Monitoring.
        (3) Equipment.
        (4) Types.

8. Regulatory Requirements.

   a. Title 10 Code of Federal Regulation (CFR) - Parts 19,20,21,40,71

   b. NRC Guides as Handouts.
      (1) 8.13 INSTRUCTION CONCERNING PRENATAL RADIATION EXPOSURE
      (2) 8.29 INSTRUCTION CONCERNING RISKS FROM OCCUPATIONAL RADIATION EXPOSURE

   c. NRC Information Notice 92-37: IMPLEMENTATION OF THE DELIBERATE MISCONDUCT RULE

   d. Army Regulations.
      (1) AR 40-5, Preventive Medicine.
      (2) AR 40-14, Control and Recording Procedures for the Exposure to to Ionizing Radiation and Radioactive Materials.
      (3) AR 385-11, Ionizing Radiation Protection (Licensing, Control, Transporation, Disposal, and Radiation Safety).

9. Seneca Army Depot NRC License SUC-1275.
   a. Quantity Limits.
   b. Munitions Licensed.
   c. Individual(s) Responsible.
   d. Licensed Operations.
   e. Radiation Safety Program.

10. Department of Transportation Exemptions

11. Waste Management.
   a. Types, Storage, Disposal.
   b. Demilitarization Waste.
   c. Decontamination Waste.

11. Standing Operating Procedures for Operations.

   a. Normal Procedures.
      (1) Explosive Safety.
      (2) Industrial Safety.
      (3) Industrial Hygiene.
      (4) Radiation Safety.
      (5) General Safety
      (6) NRC Requirements

   b. Emergency Procedures.
      (1) Accident - Stand Upwind.
      (2) MET-L-X extinguisher.
      (3) Fire - Fight only incipient fires.
      (4) Evacuate upwind.

   c. Reporting Unsafe Acts/Conditions.
      (1) Employees.
      (2) Supervisors.
      (3) Safety Office/RPO.
      (4) NRC

e. Personal Hygiene.
   (1) Wash prior to eating, drinking, smoking, etc.
   (2) No eating, drinking, etc in Radiation Areas.
   (3) No food storage in Radiation Areas.
   (4) Wounds covered.

f. Protective Clothing and Equipment.
   (1) Need, Use, Approval.
   (2) Replacement and Disposal.
   (3) Types.
   (4) Cleaning (Contaminated).

g. Restrictive Area Signs -(Caution Radioactive Material).
   (1) Caution Radioactive Material(s).
   (2) Caution, Radiation Area.
   (3) Caution, High Radiation Area.
   (4) Caution, Airborne Radioactivity Area.

5. Depleted Uranium-(DU) 30mm Under This License.

a. Description.
   (1) Dense Solid Metallic Alloy.
   (2) Heavy Metal Poison Hazard.
   (3) Explosive as a Munition.
   (4) Low Radioactivity.
   (5) Internal and External Hazards.
   (6) Can Not Under This License Be Physically Altered

6. Depleted Uranium (DU) - Other Munitions Held at Seneca Army Depot.

a. Description.
   (1) 20mm .
   (2) 25mm .
   (3) 105mm.
   (4) 120mm.

b. Hazards - See Supplement 4, Section I paragraph 5, (1) to (5)

7. Decontamination

a. Protective Measures Radiation
b. Protective Measures General Safety
c. Dosimetry
   (1) TLDs, Whole Body Wrist, and Ring
   (2) Need for Bioassay
   (3) Annual Briefing
   (4) Reviewed by RPO, Ionizing Radiation Control Committee and Depot Doctor
   (5) ALARA
   (6) Waste Disposal

DU Test

Name _____ Date _____

1. What should you do if you see an incipient fire involving DU ammunition?

   A. Sound Alarm.
   B. Try to extinguish with approved MET-L-X extinguisher.
   C. Evacuate 2000 feet upwind.
   D. All of the above.

2. DU stands for?

   A. Demilitarized units.
   B. Depleted uranium.
   C. Displaced urbanites.
   D. Discolored uranic-acid.

3. There is an NRC requirement to report any condition which may lead to or cause a violation of NRC regulations.

   A. True.
   B. False.

4. What is the approved fire extinguisher for DU?

   A. Dry chemical.
   B. Mitee Minie Wet Metal Blanket.
   C. Light Water.
   D. Carbon dioxide.
   E. MET-L-X.

5. Whole body radiation exposure is detected using:

   A. Air swipes.
   B. Health Clinic X-ray machine.
   C. Thermoluminescent dosimeters (TLDs) when required.
   D. Blood pressure.

6. Define ALARA. _____

   _____

7. You can keep your exposure to a minimum by:

   A. Work quickly.
   B. Staying around containers only as long as necessary.
   C. Keeping one meter from containers when possible.
   D. All of the above.

8. If you see an NRC inspector making an official inspection, you may not talk with him or her?

   A. True.
   B. False.

9. DU, as used on this depot, is:

   A. Used at the rifle range for test firings.
   B. A ammunition components.
   C. Held for the public pending release documents.
   D. Used for reactor fuel stockpile.

10. The worst hazard associated with a normal DU ammunition operation is:

   A. Explosive.
   B. Fellow workers.
   C. Beta radiation.
   D. Gamma radiation.

11. People are exposed to radiation from:

   A. Radon gas.
   B. Medical X-rays.
   C. Food and water.
   D. All of the above.

12. The best method for determining DU contamination is:

   A. Specially trained dogs.
   B. Litmus paper.
   C. Swipe tests.
   D. The blue glow when the lights are out.

13. Personal dosimetry records may be seen by the exposed individual:

   A. Never.
   B. Only under a doctor's orders.
   C. When directed by a state court or higher.
   D. When authorized by the Radiation Protection Officer.
   E. When the individual wishes.

14. If you believe that a violation of NRC rules and regulations or of Seneca Army Depot's NRC License has occurred with regard to radiological working conditions, you may request an inspection by giving notice of the alleged violation to the NRC.

   A. True.
   B. False.

15. When DU is involved in a fire the most dangerous place is:

   A. Upwind.
   B. Post 7.
   C. Emergency Operations Center.
   D. In the smoke plume.
   E. On the igloo roof.

Answers to Sample Test for Restricted Area Workers:

1. D.
2. B.
3. A.
4. E.
5. C.
6. AS LOW AS REASONABLY ACHIEVABLE.
7. D.
8. B.
9. B.
10. A.
11. D.
12. C.
13. E.
14. A.
15. D.

SUPPLEMENT 5
Reference NRC Form 313, Block 9

FACILITIES AND EQUIPMENT

1. Location

a. Seneca Army Depot is located in the heart of Central New York State's Finger Lakes Region directly between Rochester and Syracuse. It is part of a nation wide network of installations, subinstallations, and separate units that comprise the U.S. Army Material Command (AMC). The depot covers approximately 11,000 acres. The depot performs renovation (maintenance), and inspection on most conventional ammunition items such as high explosive projectiles, illuminating projectiles,land-minds, small arms, propelling charges and 30mm non DU cartridges. As an ammunition depot, access to the depot is restricted and access to the ammunition storage and ammunition maintenance areas are restricted further.

2. Ammunition Facilities

a. Storage of 30mm DU cartridges as well as other DU cartridges will be stored in earth covered concrete igloo type magazines. The igloos are designed for the storage of ammunition items. The positioning of the igloos within a storage block is designed to prevent sympathetic detonation from one igloo to another. Igloos will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations.

b. Inspection and maintenance does not require the cartridges to be disassembled. Since DU cartridges will not be involved in operations producing fumes, dusts, mists, or gases, special ventilation systems or special radiological facilities will not be required. Inspection and maintenance will be performed in building designed for ammunition operations. When DU is present the buildings will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations.

c. Demilitarization will be performed in building 612. Building 612 is designed for ammunition operations. It is 1350 feet from the nearest boundary. The floor is sealed to facilitate cleaning up of explosive material if spilled. The building is covered by lighting protection which is tested for grounding adequacy as required per current regulations. See Enclosure 1 to Supplement 5 for building layout. When DU is present in building 612 it will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations. Prior to start up of demilitarization of any cartridge listed in this license a detailed background survey will be made.

d. Decontamination will be performed in building 819. Building 819 is designed for mechanical operations, having a 10 ton overhead hoist on mono-rails. The building is approximately 2000 feet from igloos and administrative buildings. Prior to start up of decontamination operations a detailed radiological survey will be made of the building. When DU is present in the building it will be properly posted in accordance with 10 CFR 20.203 and subsequent regulations.

3. Equipment

a. The following radic equipment, or its equivalent, is available to facilities for routine and emergency use:

Type Instrument	Number Available	Radiation Detected	Sensitivity Range
Ludlum Model 19	2	gamma	0-5000 uR/hr
Ludlum Model 3 1 mg/cm2	14	alpha	0-500000 cpm
Ludlum Model 3 1.5-2 mg/cm2	14	beta/gamma	0-200 mR/hr
Ludlum Model 2220 Radaicmeters	8	5 ea. Fidler Probe 5 ea. SPA 3 Probes 6 ea. PG2 Probes	

b. The folowing laboratory equipment, or its equivalent, is available to facitities for low level counting:

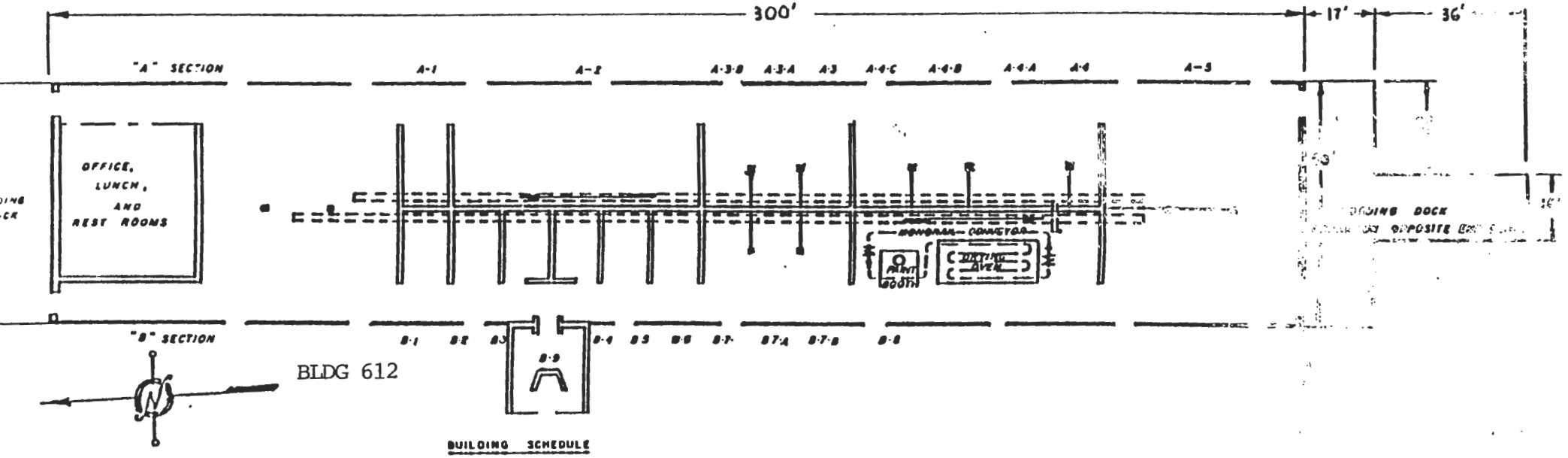
Type Instrument	Number Available	Radiation Detected	Sensitivity Range
Nuclear Measurements Corp PC-5 Counter 0.9 mg/cm2	2	alpha/beta	7-10 cpm
Beckman LS-6000-IC Liquid Scintillation Counter	1	alpha/beta	2-20 cpm
Eberline BC-4	1	beta	
Eberline SAC-4	1	alpha	

c. Instrumentation used for surveys and monitoring are calibrated at least yearly and after every repair. Calibration services are performed bt the U.S. Army Test, Measurement and Diagnostic Support Center using standard calibration procedures with the sources traceable to the National Institute of Standards and Technology. Records showing calibration will be kept for two years. Laboratory equipment will have a Quality Assurance program using sources traceable to the National Institute of Standards and Technology. Quality Assurance program records will be kept for two years.

d. The U.S. Army Ionizing Radiation Dosimetry Center accredited by yhe National Voluntry Laboratory Accreditation Program will analyze the Thermoluminescene Dosimetry (TLD) badges quarterly. Bioassays will be performed by U.S. Army Enviromental Hygiene Agency.

e. Met-L-X fire extringuishers will be present during all operations involving DU ammunition. Depot fire fighters have protective clothing and self contained breathing apparatus.

f. Demilitarization exposes personnel to explosive material. The following equipment personnal protective equipment will be utilized for portions of the demilitarization process: approved full face respirators, gloves, headcovering, conductive soled shoes, face shields, and explosive handlers coveralls.



BUILDING SCHEDULE

FLOOR··· CONCRETE
SIDE WALLS ···MASONRY (8" BLOCK)
INTERIOR WALLS ··· 12" REINFORCED CONCRETE AND 2" ARMOR PLATE STEEL DIVIDER WALLS
ROOF ··· STEEL TRUSS, GYPSUM PLANK, BUILT-UP

Building 612

SUPPLEMENT 6
Reference NRC Form 313, Block 10

RADIATION SAFETY PROGRAM:

1. Purpose.

a. The purpose of this program is to establish procedures to protect the health of personnel, minimize risk to personnel and property, and make every reasonable effort to maintain radiation exposure as low as reasonable achievable.

2. Scope.

a. This program is applicable to the transportation, storage, shipment, maintenance, inspection, decontamination, demilitarization, and disposal of all NRC licensed material at Seneca Army Depot to include tenant activities.

3. Policy.

a. Seneca Army Depot will provide a safe, healthful working environment for all employees. All Department of Army regulations, Department of Transportation, and Nuclear Regulatory Commission (NRC) rules will be followed.

4. Responsibilities of the Commander.

a. The Commander at Seneca Army Depot has overall responsibility for the radiation safety of all individuals who work in or frequent restricted areas under his or her control. The Commander is responsible for overall state of compliance with applicable NRC regulations and terms of this license. The Commander will designate in writing an Radiation Protection Officer (RPO) and one or more alternate RPOs.

5. Responsibilities of the Radiation Protection Officer.

a. The Radiation Protection Officer is responsible for all aspects of radiological protection during the storage, handling, maintenance,disposition, decontamination, demilitarization, and shipment of radioactive material.

b. The RPO is responsible for Annual training for all individuals who work with DU cartridges to include biological effects of radiation.

c. The RPO will keep the Commander and other Seneca Army Depot organizations informed of any incident that occurs locally.

d. Annual training for all individuals who perform demilitarization and decontamination to include biological effects of radiation is the responsiblility of the RPO.

6. Responsibilities of Supervisors.

a. Assuring that their personnel have received adequate instruction prior to being exposed to radiation.

b. Supervisors will prepare, prior to the start of any operation involving radioactive material or possible exposure to radiation, a standing operating procedure to include emergency procedures for review by the RPO. This includes day-to-day supervision to insure that personnel working are complying with designed safety measures and reporting unsafe acts or conditions to management.

7. Responsibilities of Workers.

a. Knowing and following standing operating procedures, rules, and instructions.

b. Workers are responsible for properly using safety equipment and personnel protective equipment if required.

c. Worker will report to their supervisor, any accident, unusual incident, personal injury (however slight), suspected over-exposure and/or suspected internal exposure, as soon as possible after the occurrence.

8. Ionizing Radiation Control Committee (IRCC)

a. The IRCC is an advisory body appointed under a charter to the commander in fulfilling his or her responsibilities. The committee will consist of:

(1) Commander

(2) Radiation Protection Officer

(3) Medical Officer

(4) Safety Manager

(5) Representatives of employee organizations

(6) Ammunition Division

(7) Other personnel knowledgeable in radiation safety

b. The committee will establish local rules and precedures for procurement storage and safe use of radiation sources.

c. The committee will review proposals to use or procure radioactive items, such as SOPs and applications for licenses and authorizations.

d. The committee will study reports of incidents and adverse findings.

e. The committee will make recommendations for improvements.

f. The IRCC will meet atleast quarterly.

9. Radiation Safety Program Elements.

a. The following tasks are essential elements of the Radiation Safety Program.

(1) Providing training for personnel who work in or frequent restricted areas.

(2) Developing and implementing procedures for routine and emergency response operations involving licensed radioactive material.

(3) Providing radiological monitoring for personnel

(4) Select and evaluating facilities and equipment for radiological operations.

(5) Controling contamination and exposure to radioactive materials.

(6) Complying with all NRC licenses applicable to Seneca Army Depot.

(7) Assuring inventory control of licensed material.

(8) Conducting investigations of radiological incidents or accidents and reporting them as required by Army and federal regulations.

(9) Ensuring that ALARA is the guiding principle in radiological operations.

(10) Performing radiological surveys.

b. Annual audits and evaluations of the effectiveness of the Radiation Safety Program. This will usually be performed by higher headquarters as a part of the Combined Radiation Protection Survey Program.

10. Radiological Monitoring Procedures.

a. Surveys for DU munitions storage areas will be as follows:

(1) Surveys will be performed annually.

(2) Surveys will consist of swipes and monitoring.

(3) Documentation will consist of a drawing or diagram of the facility, the instrument used, the calibration due date of the instrument, results and the individual(s) performing the survey, and the date of the survey.

(4) Records will be kept on file in the Safety Office.

b. Transportation surveys will consist of the following.

(1) DU received will be surveyed in accordance with the requirements of 10 CFR 20.205 and subsequent regulations.

(2) DU munitions shipped will comply with 49 CFR and DOT Exemption E-9649, as appropriate.

(3) Transportation of DU resulting from demilitarization and decontamination will comply with 49 CFR.

c. Inspection and maintenance areas surveys will consist of the following.

(1) Normally, Inspection and maintenance does not expose bare DU. The frequency of area surveys will be as determined by the RPO but not less than quarterly.

(2) Surveys will consist of swipes and monitoring.

(3) Documentation will be in accordance with Supplement 6, paragraph 10a(3).

(4) Records will be kept on file in the Safety Office.

d. Demilitarization area surveys will consist of, as a minimum the following:

(1) DU from demilitarized cartridges may or may not expose bare DU depending on type of cartridge. The frequency of area surveys will be as shown in Table 6-1.

(2) Surveys will consist of swipes and monitoring.

(3) Air sampling will be performed at the separation point on the APE 1001 and APE 2214, except for 30mm PGU-14 series, 25mm PGU-20 series, and 20mm MK149, see Table 6-1.

(4) Documentation will be in accordance with Supplement 6, paragraph 10a(3).

(5) Records will be kept on file in the Safety Office.

e. Surveys in the storage area for industrial machinery and equipment will consist of, as a minimum the following.

(1) The frequency of the survey will be monthly.

(2) Surveys will consist of swipes and monitoring.

(3) Documentation will be in accordance with Supplement 6, paragraph 10a(3).

(4) Records will be keep on file in the Safety Office.

f. Industrial machinery and equipment decontamination area surveys will consist as a minimum the following:

(1) Due to the size of and type of industrial machinery and equipment and the method used to decontaminate, the frequency of area surveys will be as listed in Table 6-2.

(2) Surveys will consist of swipes and monitoring.

(3) Air sampling will be required for decontamination. See Enclosure 1 to Supplement 6 and Table 6-2.

(4) Documentation will be in accordance with Supplement 6, paragraph 10a(3).

(5) Records will be kept on file in the Safety Office.

g. Surveys in each area will of a sufficient number to evaluate the extent of radiation hazard present and shall be 100 cm2.

11. Personnel Surveys.

a. Personnel involved in transportation and storage operations will not normally be in contact with open containers of DU. Monitoring of their person will not normally be performed.

b. Personnel involved in inspection or maintenance of DU cartridges will monitor their hands upon leaving the work area with calibrtated hand held survey instruments, if readings are over background, decontamination will be performed.

c. Personnel engaged in demilitarization will have their hands and feet monitored upon leaving the work area with calibrated hand held survey instruments, if readings are over background, decontamination will be performed. Additionally, any protective clothing shall be monitored, if background or below clothing will be released to normal laundry, if contaminated it will be sent to a licensed nuclear laundry. Monitoring will be with calibrated hand held survey instruments.

d. Personnel engaged in decontamination of industrial machinery and equipment have their hands and feet monitored upon leaving Clean Area for Personnel Room building 819, with hand held calibrated survey instruments, if reading are over background decontamination will be performed. No protective clothing will be removed from the decontamination facility.

12. Personnel Dosimetry (Thermoluminescence Dosimetry (TLD) Badges).

a. Past TLD history at Seneca Army Depot indicates that TLDs are not required for personnel involved in storage, shipping, receiving, and inspection. Any change major in operations would require further analysis.

b. TLDs will be worn by personnel involved in demilitarization; whole body for all personnel and whole body and wrist badges for personnel who directly handle DU components.

c. TLDs both whole body and ring badges, will be worn by personnel involved in decontamination operations.

d. Any personnel who may receive a dose equivalent in excess of 10 percent of the applicable standard in 10 CFR 20 will wear a TLD.

e. The U.S. Army Ionizing Radiation Dosimetry Center accredited by the National Voluntary Laboratory Accreditation Program will analyze the TLDs quarterly.

f. The results of any exposure to radiation or radioactive material shown in dosimetry or bioassy records will be given at least annually to workers.

13. Bioassay.

a. Personnel involved in maintenance, inspection, shipping, receiving, and storage will not normally be given bioassys as no exposure to bare DU will occur.

b. A baseline bioassay will be given to all demilitarization workers and one every 6 months thereafter until the job is complete. The length of a particular demilitarization job would be determined by the quantity of cartridges.

c. A baseline bioassay will be given to all decontamination workers and one every 6 months there after.

14. Respiratory Protection.

a. Seneca Army Depot will use procedures or other engineering controls to the extent practicable to limit concentrations of airborne radioactive materials.

b. The Installation Respiratory Protection Director assigned by written orders is responsible for performing respiratory fit testing, employee training, records, and evaluating the program for overall effectiveness.

c. Only equipment certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA) will be used.

d. Air sampling sufficient to identify the hazard will be performed for operations in which airborne radioactive material may be possible. Certain operations in demilitarization and decontamination where bare DU is involved will require air monitoring. Air sampling devices with filter media that are 99% efficient for collecting particles with a diameter greater than 0.3 micrometer will be used.

e. Physicals will be given prior to initial use and fit testing will be performed at least annually.

f. The SOPs will contain instructions for normal usage of respirators and procedures to follow in the event of equipment malfunction, psychological distress, or deterioration of working conditions.

g. Respirators will be required for demilitarization in the bays containing the APE 1001 and APE 2214 (except for 30mm,20mm and 25mmPGU-20) because of loose explosive powder and as a precaution for the unlikely event of airborne radioactive material.

h. Air supplied respirators will be required for decontamination of industrial machinery and equipmment.

15. Radiological Emergency Response (Accidents and Incidents).

a. Seneca Army Depot Disaster Control Plan (SENECA-DCP) contains written radiological emergency response procedures for Seneca Army Depot. The following information, as a minimum, will be contained in SENECA-DCP.

b. DU ammunition fire. Personnel discovering a fire involving DU or DU material shall first give alarm and then attempt to extinguish the blaze (using MET-L-X extinguishers only) if it is very small. Alarm will be given by telephoning 117. Give the information in paragraph 14f below. All personnel not directly involved in the initial fire fighting efforts will be evacuated at least 2000 feet upwind of the scene. Unprotected personnel downwind shall be evacuated or shall be told to remain indoors with windows and doors closed. The decision to fight the fire, maintain fire fighting efforts, or withdraw is a judgment to be made by the senior person present.

c. Radioactive check sources. Personnel discovering a fire involving a radioactive check source shall first give the alarm and then attempt to extinguish the fire if it is very small. Alarm will be given by telephone, dialing 117 and giving the information in paragraph 14f below. All personnel not directly involved in the fire fighting will be evacuated to at least 2000 feet upwind of the scene. Unprotected personnel downwind will be told to remain indoors with the doors and windows closed. The decision to fight the fire, maintain fire fighting efforts, or withdraw is a judgment to be made by the senior person present.

d. Vehicle accident. In the event a vehicle carrying radioactive material is involved in an accident, the driver will immediately notify the Security Police, at extension 117, and their supervisor. The driver should then attempt to position the vehicle away from normal flow of traffic. Offpost vehicles are escorted by Depot personnel in which case the depot employee shall make notifications and direct appropriate actions.

e. Theft or loss. Suspected theft or loss will be immediately reported to the Security Office. The discovery of theft or loss of ammunition or DU material in such quantities and under such circumstances that it appears that a substantial hazard may result to persons in unrestricted areas the Nuclear Regulatory Commission, Region I, King of Prussia, Pennsylvania will be notified immediately by telephone. Thirty days after learning of a loss or theft, a written report will be made to the NRC, Document Control Desk, Washington, DC, with a copy furnished to NRC Region I office in accordance with the requirements in 10 CFR 20.402 and subsequent regulations. Additionally, Army channels and other license holders will be notified as appropriate.

f. Local notification. The first person having knowledge of a radiological accident/incident will immediately call the Security Desk Sergeant. The following information will be furnished:

(1) Name of individual calling.

(2) What happened.

(3) Where it happened.

(4) Whether fire is involved.

(5) Are people injured.

The Security Desk Sergeant will immediately notify the Security Officer, Radiation Protection Officer or alternate, Fire Chief, Safety Manager, Depot Commander or other personnel as identified on the Seneca Army Depot Master Alert Roster as required.

16. Nuclear Regulatory Commission Notification

a. Reports of theft or loss of licensed material will be in accordance with 10 CFR 20.402 and subsequent regulations.

b. Reports of incidents will be in accordance with 10 CFR 20.403 and subsequent regulations.

c. Reports of overexposures and excessive levels and concentrations will be reported in accordance with 10 CFR 20.405 and subsequent regulations.

17. Other Hazards

a. Consideration will be given to other hazards that may be present during operations involving radioactive material and appropriate protective equipment, medical surveillance programs, and controls applied. All safety aspects will be coordinated through the Safety Office, Radiation Protection Officer, Health Clinic and Industrial .

18. Effluents

a. No liquid effluents will be released or discharged by this license under normal circumstances. DU will not cause radiation levels at the boundaries of unrestricted areas to exceed 0.002 rem (0.02mSv) in any one hour or 0.05 rem (0.5 mSv) in a year due to storage restrictions and placement in the restricted area. Engineering controls will be applied and measurements taken for decontamination operations to restrict concentrations of radioactive material in building 819 to less than the values specified in Table 2, Appendix B to paragraphs 20.1001-20.2401 of 10 CFR in the unrestricted areas.

19. Labeling

a. Labeling of containers will be in accordance with 10 CFR 203(f) and subsequent regulations except as exempted.

20. Records and Record Keeping

a. Records of radiation exposure are medical records and as such form a permanent part of personnel records kept on Government workers. Records of surveys, monitoring, and disposals will be kept for 3 years.

Demilitarization
Survey Frequency*

Model	AREA						
	Unpack	Transfer	APE Process	Case	Propellant	Projectile	Packaging**
20mm MK149	M	M	D***	-	-	-	M
25mm PGU-20	M	M	D***	-	-	-	M
25mm M919	M	M	D,A	E	X	B	D
30mm PGU-14	M	M	D***	-	-	-	M
105mm M774	M	M	D,A	E	X	B	D
105mm M833	M	M	D,A	E	X	B	D

M=MONTHLY
D=DAILY
E=EACH, SWIPE ONLY
B=BAGGED
X=PROPELLANT WILL BE SAVED AND STORED AS CONTAMINATED UNTIL PROVEN OTHERWISE

A=AIR MONITORING WILL BE PERFORMED AT SEPARATION POINT ON EACH APE MACHINE TO RUN CONTINIOUSLY WITH ANALYSIS EVERY 4 HOURS

*Abnormal Mechanical Problems, Unexpected Results Will Require More Frequent Analysis

** Packaging includes all areas from APE Machine to final packaging for shipping

*** Cartridge Completely Encapulated No Air Monitoring Required

Table 6-1

DECONTAMINATION SURVEYS Bldg 819
SURVEY FREQUENCY

Area	Frequency
Front of Double Doors	Daily at close of shift
Hallway Entrance	Daily at close of Shift
Exit Clean Parts Room	Daily at close of Shift
Floor Equipment Area	Daily at Close of Shift
Personnel Clean Room	Daily at Close of Shift
Secondary Decon, Clean Parts Room, Gross Decon Room	Weekly

4 Staplex Air Monitors will be set up monitor for airborne contamination

Table 6-2

SUPPLEMENT 7
Reference NRC Form 313, Block 11

WASTE MANAGEMENT

1. General.

a. Radioactive waste generated by U.S. Army users is disposed of in accordance with the U.S. Army Armament, Munitions and Chemical Command (AMCCOM) Pamphlet 385-1, Handbook for Disposal of Unwanted Radioactive Waste, Technical Manual (TM) 3-261, Handling and Disposal of Unwanted Radioactive Material, Army Regulation (AR) 385-11, Ionizing Radiation Protection, and current NRC and Department of Transportation (DOT) regulations. At the present time, Headquarters, AMCCOM, Safety Office, Radioactive Waste Disposal Division, is the responsible agency for the safe disposal of all unwanted, low-level radioactive material in the U.S. Army. They issue instructions to all Army users on proper packaging and marking of shipments of radioactive waste. They also conduct on-site audits for full compliance with NRC, DOT and burial site criteria.

b. The depleted uranium ammunition will not normally be involved in operations producing fumes, dusts, mists, or gases; nor will the source material be used in any chemical, metalurgical or nuclear process. The demilitarization process is expected to produce complete projectiles with little or no radioactive waste.

c. If any demilitarization is accomplished on any cartridge listed in this license, any waste will be disposed of in accordance with (IAW) paragraph a above. Licensed material will be transferred to another license holder or disposed of by burial in a licensed low level radioactive waste site. The disposal of any unsafe material generated by demilitarization will be coordinated with the AMCCOM Safety Office, Radioactive Waste Disposal Division.

d. Any radioactive waste generated by decontamination of industrial machinery or equipment will be disposed of in accordance with paragraph a above. If any mixed waste is generated by decontamination, the disposition will be coordinated with AMCCOM Safety Office, Radioactive Waste Disposal Division.

e. It may be more economical to dispose of parts of industrial machinery or equipment than to decontaminate them. Disposal will be in accordance with paragraph a above.

2. Statement of Intent and Decommissioning Costs.

a. Seneca Army Depot will comply with 10 CFR, Part 40, paragraph 40.36(e)(4).

b. Funding in the amount of $750,000.00 will be requested through U.S. Army budgetary procedures for decommissioning when and as needed.

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

SDSSE-LS

30 SEP 1992

MEMORANDUM FOR United States Nuclear Regulatory Commission, Region 1
475 Allendale Road, King of Prussia, PA 19406-1415

SUBJECT: Amendment to NRC License SUC-1275

1. Seneca Army Depot requests an amendment to our current NRC License SUC-1275, prior to license action under NRC control number 116420. We wish to receive and store approximately twenty-six machines which are contaminated with depleted uranium and beryllium as solids. The machines are currently located at the U.S. Army Materials Technology Laboratory, Watertown, MA.

2. The Materials Technology Laboratory is being closed under the Base Realignment and Closure Commission. The above machines must be removed from the state by 31 Dec 92. There is political pressure to meet this deadline.

3. The machines will be stored in an exclusive use section of Building 825 (encl 1). This is a metal warehouse, located in a security area of the installation (encl 2). They will be placed on plastic sheets to prevent contamination of the floor. Access to the machines will be strictly controlled. The machines will be shipped in accordance with DOT and NRC rules. Storage will be in accordance with NRC regulations and the machines will be surveyed monthly. No attempt will be made to decontaminate until we receive our new license.

4. Request that this amendment be expedited so that the machines are removed from Massachusetts by the deadline.

5. This request has been coordinated with and approved by Mr. John Manfre, U.S. Army Material Command Health Physicist.

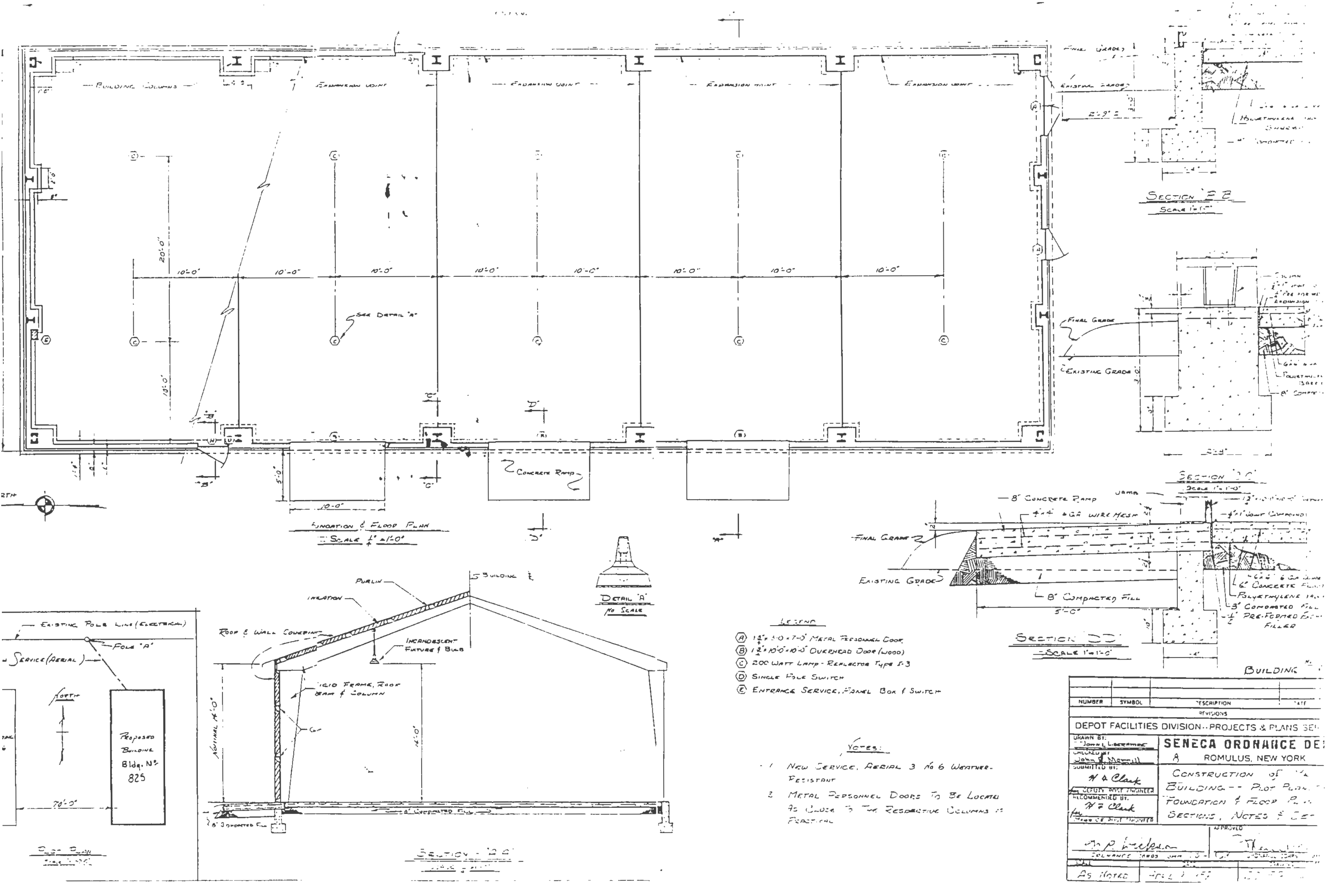
6. Request you FAX the amendment to Seneca Army Depot at (607) 869-1361.

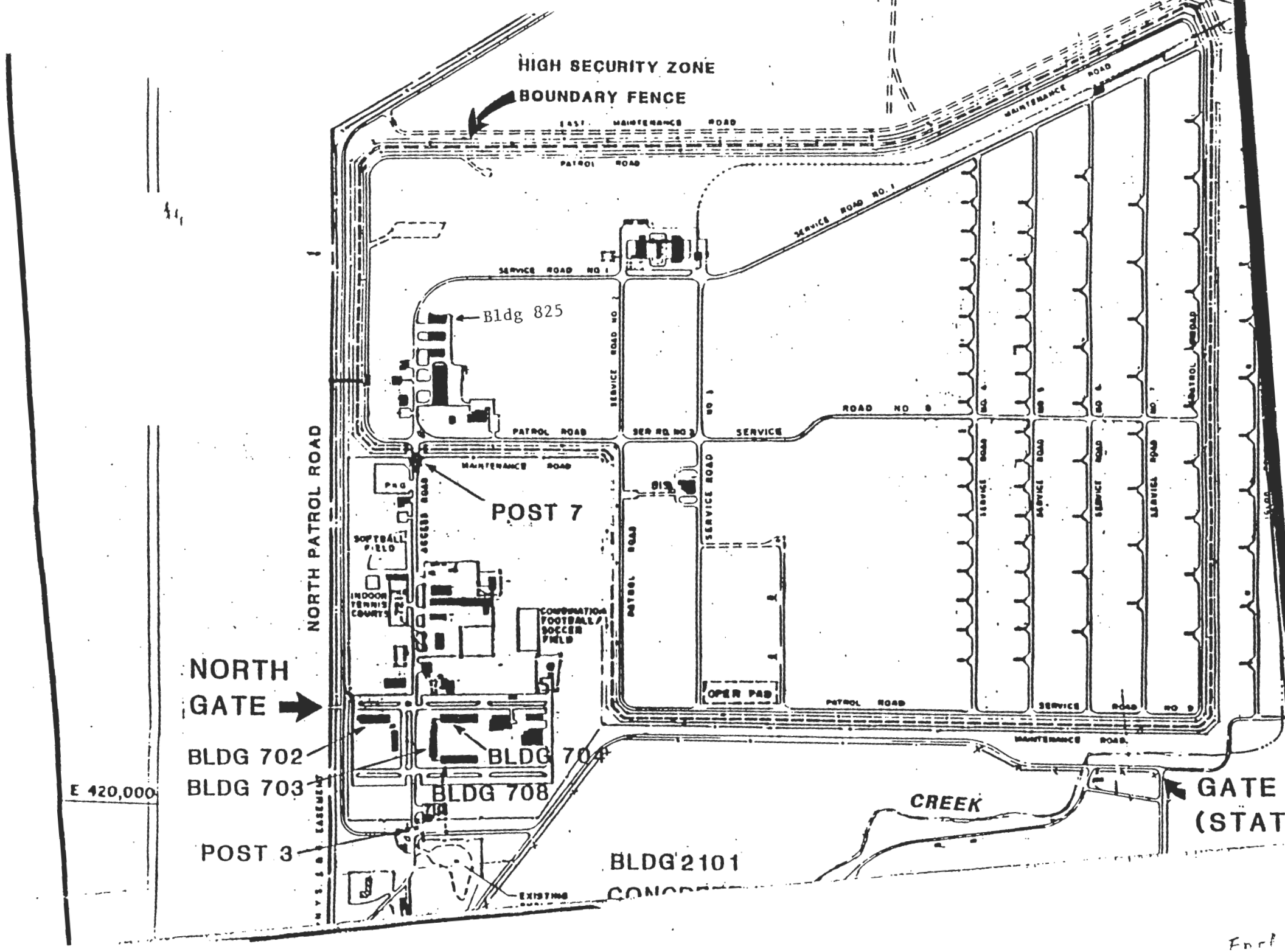
7. Point of contact is Mr. Michael Lewis, Radiation Protection Officer, at (607) 869-1261.

JAMES B. CROSS
Colonel, Ordnance Corps
Commanding

2 Encls
1. Bldg 825 drawing
2. Facility drawing

CF:
DESCOM, AMBBB-IN-S (Ken Davis)
AMC, AMCSF-P (John Manfre)


Building Columns
Expansion Joint
Expansion Joint
Expansion Joint
Expansion Joint
10'-0"
20'-0"
10'-0"
See Detail "A"
Concrete Ramp
Foundation & Floor Plan
Scale 1/8" = 1'-0"
Final Grade
Existing Grade
Section "E-E"
Final Grade
Existing Grade
Section "C-C"
8" Concrete Ramp
4"x4" 6 Ga. Wire Mesh
Final Grade
Existing Grade
8" Compacted Fill
6" Concrete Floor
Polyethylene
3" Compacted Fill
1/2" Pre-Formed Expansion Filler
Section "D-D"
Scale 1" = 1'-0"
Detail "A"
No Scale
Purlin
Insulation
Roof & Wall Covering
Incandescent Fixture & Bulb
Rigid Frame, Roof Beam & Column
Building ℄
14'-0"
8" Compacted Fill
Section "A-A"
Existing Pole Line (Electrical)
Pole "A"
Service (Aerial)
North
Proposed Building Bldg. No. 825
70'-0"
Plot Plan
Legend
(A) 1 3/4" x 3'-0" x 7'-0" Metal Personnel Door
(B) 1 3/4" x 10'-0" x 10'-0" Overhead Door (Wood)
(C) 200 Watt Lamp - Reflector Type I-3
(D) Single Pole Switch
(E) Entrance Service, Panel Box & Switch
Notes:
1. New Service, Aerial 3 No 6 Weather-Resistant
2. Metal Personnel Doors To Be Located As Close To The Respective Columns As Practical
Building
Number
Symbol
Description
Date
Revisions
DEPOT FACILITIES DIVISION -- PROJECTS & PLANS SE
Drawn by: John L Lieberman
Checked by: John Merrill
Submitted by: H A Clark
Deputy Post Engineer
Recommended by: H F Clark
Post Engineer
SENECA ORDNANCE DE
ROMULUS, NEW YORK
Construction of
Building -- Plot Plan
Foundation & Floor Plan
Sections, Notes &
Approved
Ordnance Corps
As Noted


HIGH SECURITY ZONE
BOUNDARY FENCE
EAST MAINTENANCE ROAD
PATROL ROAD
SERVICE ROAD NO 1
Bldg 825
PATROL ROAD
SER RD NO 3
SERVICE ROAD NO 5
MAINTENANCE ROAD
POST 7
NORTH PATROL ROAD
SOFTBALL FIELD
INDOOR TENNIS COURTS
CONFORMATION FOOTBALL/ SOCCER FIELD
SERVICE ROAD
PATROL ROAD
OPER PAD
NORTH GATE
BLDG 702
BLDG 703
BLDG 704
BLDG 708
E 420,000
POST 3
CREEK
BLDG 2101
EXISTING
GATE
(STAT

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

December 21, 1992

Safety Office

SUBJECT: Letter of Intent License Renewal SUC-1275

Mr. Kinneman
United States Nuclear Regulatory Commission
Region I
Nuclear Materials Section B (Licensing Section)
475 Allendale Road
King of Prussia, Pennsylvania 19406

Dear Mr. Kinneman,

Seneca Army Depot has suffered the loss of two missions with the potential reduction of approximately 500 jobs. The process of downsizing the Depot is, at present, in the court system. We wish to develop a unique capability to ensure our survival. This market niche is in the area of radiological demilitarization and decontamination. The timing of this change is most important as Army Depots and Activities seek work for the future.

Historically NRC license SUC-1275 held by Seneca Army Depot limited itself to 30mm PGU-14 series depleted uranium cartridge. The DU cartridges were received, shipped, inspected, stored and maintained, with a one line reference to demilitarization (demil) in the past license. The intent now is to store for demil, DU cartridges held by other licensees and demil these cartridges when directed by higher headquarters. As an east coast Army storage depot, unserviceable DU munitions could be sent here verus shipping them to more distant facilities.

There are many facilities throughout the United States that have low level DU contaminated machinery and equipment. The disposal cost would be tremendous to relegate these assets to burial. The renewal of SUC-1275 seeks to decontaminate machinery and equipment. The volume reduction would be a savings to the Army and environmentally correct. Carbon dioxide blasting, a promising method used by the nuclear power industry and the Department of Energy would be the cornerstone of decontamination.

The generation of mixed waste would be avoided whenever possible. Seneca Army Depot has interim permits from the Environmental Protection Agency and the State Of New York to store mixed waste. Treatment technology developed by Martin Marietta Energy Systems at Oak Ridge, Tennessee for the Y-12 plant could be used for the minimization or treatment of mixed waste generated by this license.

Point of contact is Michael R. Lewis at 607-869-1432.

(2)

Sincerely,

Thomas J. Stincic
Safety Manager

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

JUN 08 1993

License No. SUC-1275
Docket No. 040-08526
Control No. 116420

U. S. Department of the Army
Colonel James B. Cross
Commander
ATTN: SDSSE-CO
Seneca Army Depot
Romulus, New York 14541-5001

Dear Colonel Cross:

This is in reference to your request in an application dated October 30, 1992, to renew License No. SUC-1275, your Letter of Intent dated December 21, 1992, and your request in a letter dated September 30, 1992, to amend License No. SUC-1275. In order to continue our review, we need the following additional information:

1. From your Letter of Intent License Renewal SUC-1275 dated December 21, 1992, we understand that you want License No. SUC-1275 (Application dated October 30, 1992) to include authorization for the storage and demilitarization of depleted uranium ammunition from other licensees, as well as that which you are presently licensed for. From the letter of intent, the renewal application, and the amendment request dated September 30, 1992, we further understand that you want authorization for storage and decontamination of machinery and equipment contaminated with depleted uranium and beryllium. Please advise us if our understanding of your intentions is not correct.

2. State the separate quantities of depleted uranium that you wish to be authorized for demilitarization, decontamination, and storage.

3. Confirm that by your reference to "igloos," you mean magazines designed for the storage of ammunition.

4. Confirm that when magazines containing DU ammunition are not locked and authorized operations are in progress, you will maintain control of the licensed material in accordance with 10 CFR 20.207 (or 10 CFR 20.1802 of the new Part 20).

5. How long is unserviceable and/or uneconomical for repair DU ammunition kept in storage before being broken down for disposal?

6. During maintenance work on non-DU components of DU ammunition, who conducts the required radiation (direct reading) monitoring and the wipe tests?

7. Paragraph 2. f. of Section IV, Supplement 2 of the application dated October 30, 1992, requires the worker to grasp the (M774 and M833, 105 mm, DU cartridges) projectile with both hands to remove it from the APE 1001 Pull Apart Machine and then bag the projectile. Paragraph 2. h. requires packaging with the windshield, bourrelet, sabot, base seal, obturator, and fin assembly installed and Paragraph 2. i. requires the powder from the cartridge to be packaged and labeled as contaminated waste until proven otherwise.

   a) Are workers required to wear gloves and extremity monitors (ring badges) when removing the projectile from the machine? If not, what is the exposure you estimate such a worker will receive to the extremities?

   b) Can we infer from Paragraph 2. h., that the items mentioned are still attached to the projectile when it is bagged? If so, when, where, how, and by whom are these items separated from the projectile and do the procedures for this operation require gloves and/or ring badges?

   c) How is the powder from the cartridge determined to be free of DU contamination? If the powder is contaminated, how is this mixed waste handled and disposed of?

8. Enclosure 1 to Supplement 5, Building 612 layout, was not included with the application package, please submit the referenced document.

9. Your renewal application dated October 30, 1992, requests authorization to store and decontaminate machinery and equipment contaminated with depleted uranium (DU). Estimate how much machinery and equipment will be stored, how long these will be in storage, how much DU waste will be generated, and how much **mixed** (both radioactive and hazardous) waste will be generated. Review the enclosed Information Notice No. 90-09 and submit the information appropriate to your facility.

10. The letter dated December 21, 1992, states that carbon dioxide blasting will be used for the decontamination of machinery and equipment, and that treatment technology developed by Martin Marietta Energy Systems could be used for the minimization or treatment of mixed waste generated. Please submit the following:

    a) Detailed procedures for these two operations,

    b) The alternative procedures you will follow if either or both of these techniques fail to work,

    c) Your plans for limiting mixed waste, and

    d) Your plan for disposing of mixed waste. Do you plan to treat it so that it is no longer mixed waste or dispose in a particular facility?

11. Confirm that all component parts of each item will be sufficiently decontaminated to assure that residual contamination in excess of the limits established in Table 2-2, Supplement 2 of the application dated October 30, 1992, will not remain when the item is released for unrestricted use or recycling.

12. Do you plan to issue "Work Permits," or similar documents, based on the decontamination procedure(s), the degree of contamination, and extent of engineering controls applied? If not, how will you instruct workers regarding the need for radiation protection, protective clothing and equipment, and how will you administer those requirements?

13. Paragraph 11., Section VI., in Supplement 2 of the application dated October 30, 1992, describes a decontamination technique for use on contaminated machinery and equipment using carbon dioxide in a disposable plastic containment room. Submit the following:

    a) For the disposable plastic room, a more detailed sketch with a brief discussion of specifications for assembly and the requirements for ventilation, lighting, power, operating equipment, and emergency equipment.

    b) Survey procedures and instruments used to determine that gross contamination has been removed prior to moving the item or its components into Area 2 of the plastic room.

c) Cleanup of the plastic disposable room, removal of contaminated material and equipment, and the ultimate take-down, packaging, and disposal of the plastic room.

14. Confirm workers will receive specific training for the work to be performed in the plastic disposable room, for the setup and preparation of the room, and for the ultimate takedown of the room.

15. Supplement 5 of the application dated October 30, 1992, includes a listing of radiation survey and measuring instruments. However, you do not include surveying/monitoring techniques to be employed or the type of instruments and probes to be used for surveying or monitoring total and fixed radioactivity on the various machines and equipment or on cartridges and components of ammunition. Submit a tabulation of survey instruments and integral detectors used, the survey techniques to be employed with these, and the sensitivity for the detection of DU and uranium-238 at the measurement geometry. Show that the instrumentation can detect the quantities specified in Table 2-2, Supplement 2 of the application dated October 30, 1992.

16. Confirm that survey documentation discussed under 10.e.(3) in Supplement 6 of the application dated October 30, 1992, will include the identification and a sketch of the machine or equipment surveyed.

17. Confirm that the surveys specified, described in 10.f. in Supplement 6 of the application dated October 30, 1992, are conducted within the disposable plastic room in building 819, and that survey documentation discussed under 10.f.(4) requires the identification and a sketch of the machinery or equipment surveyed.

18. Identify the areas and conditions under which air sampling will be conducted. Will this information be included in a "Work Permit" or instruction?

19. Confirm that you will include, **"compliance with the U. S. NRC regulations"**, in Paragraph 1., Section II., Supplement 2 of the application dated October 30, 1992.

20. It is not clear whether Paragraph 6.a., Section VI., in Supplement 2 of the application dated October 30, 1992, refers to Contamination of Personnel or not; please clarify.

21. Confirm that records of radiation survey instrument calibrations will be maintained for three years in accordance with 10 CFR 20.2103 of the new Part 20 Regulations.

22. Confirm that the Ionizing Radiation Control Committee (IRCC) will maintain a record (minutes) documenting each meeting.

23. Section 13 in Supplement 6 of the application dated October 30, 1992 addresses personnel bioassay. Please specify the type of assay (body count, urinalysis, fecal analysis, etc.) that is provided for the workers.

24. Paragraphs 15.b. and c. in Supplement 6 of the application dated October 30, 1992 both incorrectly refer to paragraph 14.f. in the text. The correct reference appears to be paragraph 15.f.

25. Paragraphs 16, 18, and 19 in Supplement 6 of the application dated October 30, 1992 refer to Part 20 of 10 CFR. The references are not consistent. Paragraph 18 refers to the new Part 20 and the others refer to the old Part 20. Please confirm that these references will reflect the new Part 20, when it becomes effective.

26. Submit the Standard Operating Procedures (SOP's) discussed in Paragraphs 2., 3., and 4. in Section II., Supplement 2 of the application dated October 30, 1992.

27. Do the SOP's employed by the Quality Assurance Specialist, to assess serviceability/acceptability of DU ammunition, include specific precautions for handling DU ammunition, such as the use of gloves and/or extremity monitoring with ring badges?

28. Submit the SOP's written for specific demilitarization operation at the Seneca Depot as stated in Paragraph 1., Section III., and Paragraph 1., Section IV., in Supplement 2 of the application dated October 30, 1992.

29. Submit the procedures and/or SOP's for the controls employed to minimize release of radionuclides to the environment and to minimize personnel exposure during the decontamination of machinery and equipment as discussed in Paragraph 3., Section VI. in Supplement 2 of the application dated October 30, 1992.

30. Submit copies of the SOP's outlined under Paragraph 12., (apparently erroneously numbered 11.) Section I. in Supplement 4 of the application dated October 30, 1992.

31. Submit the SOP's and instructions for the normal use of respirators and for use in case of problems as specified under 14.f.in Supplement 6 of the application. Confirm that you will comply with the regulations in Subpart H, 20.1701 of 10 CFR Part 20 before employing respirators to limit exposure to airborne radioactivity.

32. We are considering whether an Environmental Assessment is required for the decontamination of machinery and equipment pursuant to 10 CFR 51.60. To assist in this consideration, please discuss whether the contaminated items will come only from licenses of the U. S. Army or from other organizations.

33. We will limit the length of time that contaminated equipment may be stored before being decontaminated. What is a reasonable storage time from an operational standpoint?

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 116420. The reviewer for this licensing action is C. Thor Oberg. If you have any technical questions regarding this deficiency letter please call the reviewer at (215) 337-5202.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely,

John D. Kinneman, Chief
Research, Development and
Decommissioning Section
Division of Radiation Safety
and Safeguards

Enclosure:
10 CFR 20

License No. SUC-1275
Docket No. 040-08526
Control No. 116420

Responses are keyed to your questions, 1-33:

1. Your understanding of our intentions is correct, except that decontamination of machinery and equipment may or may not have beryllium contamination.

2. Seneca, under NRC license SUC-1275, requests to possess 5 million kilograms or 16,744,809 individual cartridges of depleted uranium in the form of 30mm cartridges. Currently, the depot has in its possession 27% of its current restriction of 4,082,400 kilograms. The higher limit is to reflect operational changes, realignment of Army facilities, and removal of munitions from Europe. Under demilitarization of depleted uranium cartridges, the licensee under renewal seeks 5 million kilograms of cartridges stored here but licensed under other licenses. The intent is to store these for demil at our location or for later transfer to other properly licensed facilities for demil. The quantity of individual cartridges for demil would be the aggregate sum of the four different cartridges. Monthly computer radioactive material listings indicate current quantities. Calculations for kilogram limit would be made to insure the kilogram limit would not be exceeded. Contaminated industrial machinery and equipment would be restricted to 10,000 kilograms of depleted uranium. The quantity of industrial machines and equipment will be limited to 25 pieces to insure that the depot does not become a mere storage dump for unwanted items. Upon completion of 10 items, 10 additional could be shipped in. Shipping documents would indicate contamination levels for calculations of depleted uranium kilogram limit. It is the responsibility of the Radiation Protection Officer to check possession limits as set forth in Supplement 1, Paragraph c., on a monthly basis.

3. Magazines, specifically earth covered magazines, are the preferred type for storage of ammunition or explosives (Army Materiel Command Regulation 385-100, Paragraph 18-2). The earth covered magazines at Seneca are of the igloo type construction.

4. As an ammunition item, DU cartridges are not allowed outside their shipping and storage container unless an authorized operation is being performed. The shipping and storage containers are lead wire sealed in two places. All operations performed on DU cartridges take place in the ammunition area, which is a restricted area. Additionally, Security Police patrol the area 24 hours a day. Ammunition Transfer Record (ATR), DA Form 4508, tracks the movement of the cartridges from location to location.

5. Ammunition items are managed by an item manager. Once ammunition is placed in a condition code that reflects it is no longer serviceable, it is the item manager's responsibility to dispose of the unserviceable ammunition. Length of time it is held is determined by available funding, procedures, work load of selected facility, work load of other facilities, and location of ammunition. Facilities having licensed demilitarization capability will be directed to do so.

6. The ammunition worker is directed by the SOPs to perform this operation.

7. a. Workers will be required to wear gloves, a body TLD, and a ring TLD. The ring TLD may be dropped if in-time data indicates the worker receives less than 5% of the annual limit. The ring TLD will not be dropped until three years of data is accumulated.

b. The only item removed will be tracers, if present. Gloves and ring TLD will be worn as in 7.a above. Packaging will be with the windshield, bourrelet, sabot, base seal, obturator, and fin assembly installed. The intent is to sell or bury the complete unit if higher headquarters dictates, then the decontamination facility could be used for decontamination. Proper packaging and safeguards would be followed for intra-depot transportation.

c. The Army is working on this question and this licensee will follow procedures promulgated by higher headquarters and approved by the NRC by amendment to this license.

8. Enclosure 1 to Supplement 5 is provided at Encl 1. This is the same building as in enclosure 11 to Supplement 2 and enclosure 15 to Supplement 2.

9. It is estimated that approximately 25 machines or other equipment would be on the installation awaiting decontamination. Of this total, equipment/machines already disassembled or in the decontamination/disassembly process, would not be included. It is further estimated that the length of time from arrival on the installation until complete decontamination/disassembly, would be no longer than 360 days.

Without being able to test this process on an actual machine, we can only estimate that we would generate an average of 1 to 2 fifty-five gallon 17C/17H drums from each machine. This waste would be strictly radioactive waste, with little or no, mixed waste generated. Separately, hazardous waste in the form of PCB-contaminated fluids/oils would probably be found in most of these machines, and require appropriate packaging and/or disposal.

10. a. Due to the cost of the carbon dioxide blasting system, the process is being replaced by the Aerojet Sponge Jet System. The system has four major units as follows:

(1) The FEED UNIT is a pneumatically-powered device for propelling the foam cleaning media against surfaces to be cleaned or otherwise prepared. The Feed Unit is portable and produced in several sizes to accommodate the needs of a variety of end users. A hopper, mounted atop the unit holds the foam cleaning media. The media is fed by an auger device into a metering chamber which mixes the foam cleaning media with compressed air. The foam cleaning media/air mixture is conducted using standard abrasive blasting hose through a standard abrasive blasting nozzle to the surface to be cleaned or prepared. By varying the Feed Unit air pressure and type of foam cleaning media used, the system can be used in a range from removing soot from wallpaper to removal of fully-cured high-performance protective coatings from steel and concrete surfaces.

(2) The SIFTER UNIT is used to mechanically remove large debris and powdery residues from the foam cleaning media after each use. The used foam cleaning media is swept up or otherwise collected in the work area and placed into the electrically-powered Sifter. This unit vibrates and causes the used foam cleaning media to pass vertically downward through a series of progressively finer screens. Any coarse materials, such as paint flakes, rust particles, etc. are collected in the first, coarsest screen. Next the reusable foam cleaning media particles are collected in the next, finer screen, and finally, any fine dust particles fall to the bottom of the Sifter for proper disposal. Fines from media used to absorb radioactive contaminants are disposed of as radioactive waste.

(3) After sifting, the reclaimed foam cleaning media can be immediately reused in the Feed Unit. After between three to five media cycles, the foam cleaning media should be laundered in the WASH UNIT. The Wash Unit is a portable, closed-cycle device which centrifugally launders the foam cleaning media. The contaminated wash water is collected, filtered and reused within the Wash Unit.

(4) For ultimate disposal, the contaminated wash water from the Wash Unit can be either treated in the user's waste treatment system or evaporated using the EVAPORATOR UNIT. This unit reduces the waste water to a minimum volume disposable residue.

OPERATIONAL PROCEDURE - Decontamination of Machinery and Equipment Using the Sponge-Jet Cleaning System:

a. The Decontamination Process will be performed in Bldg 819 using mechanical methods and finish cleaned by the Sponge-Jet System.

b. Dress out using the approved personal protective equipment and respirator.

c. Move the machines/equipment from the carrier to a holding area.

d. Transfer machine/equipment from holding area to the front section of Bldg 819 (one at a time as space permits).

e. Assure all personnel who will be working on equipment are dressed out.

f. Start up fresh air supply within the work area.

g. Close overhead entrance door.

h. Check receiving records for contamination levels. Monitor equipment to determine highest level of contamination and record. Sketch machine, identify location where contamination is found and record levels.

i. Use vacuum and sump pumps to remove all fluids, if present. Be certain not to cross contaminate or mix waste.

j. Use putty knives and scrapers to remove heavy deposits of sludge, grease, oil and metal chips. (Do not flush with solvents or other fluids at this time; goal is to keep contaminated waste to a bare minimum).

k. Break or cut fluid carrying lines and drain fluids, if present, into same type fluid container. Remove lines at fittings using caution not to spill any remaining fluid. Drain fluid in approved container. Take lines to Sponge-Jet Room.

l. Begin to remove all attachments and accessories using slings/chains and overhead crane.

m. Scrape contaminants over/into approved container and monitor part:

(1) If part is solid (without cracks, crevices or other reservoirs) and is free of contamination, send to "Clean Area" in NW bay. Process part for disposal/scrap.

(2) If part has other attachments or reservoirs - disassemble, clean and monitor.

(3) Parts that are found to be contaminated (to include parts that cannot be certified clean due to the nature or design of part; i.e., fluid lines, elect conduit or parts with recessed areas) will be taken to the Sponge-Jet decon room directly North of the disassembly room.

n. Continue to disassemble machine/equipment down to the bare casting. Scrape and monitor all parts. Transfer clean parts to "Clean Room" and dirty (contaminated) parts to the Sponge-Jet "Dirty Room".

o. Parts found to be contaminated will be cleaned using the Sponge-Jet System. Description as follows:

The Feed Unit is a pneumatically-powered device for propelling the foam cleaning media against surfaces to be cleaned. The Feed Unit is portable and produced in several sizes to accommodate the needs of a variety of end users. A hopper, mounted atop the unit holds the foam cleaning media. The media is fed by an auger device into a metering chamber which mixes the foam cleaning media with compressed air. The foam cleaning media is fed through a blasting hose and a blasting nozzle to the surface to be cleaned. The sponge media captures, absorbs and removes the contaminants from the surfaces.

(1) SOP will be posted and understood prior to operations.

(2) Operator(s) of the system will be properly trained and certified.

(3) Operator will use and adhere to all safety aspects of the process.

(4) Operator will not operate for more than an hour at a time.

(5) After parts have been cleaned they will be transferred to a clean pallet and removed to the "Clean Room".

p. In most cases all parts will be considered scrap and transferred to DRMO following the procedure for separation of precious metals.

q. In those cases where a decision has been made to decontaminate and reutilize a machine, care will be taken during the disassembly process not to damage components.

r. A clean-up procedure will be made part of this procedure. Operators will follow this procedure during the clean-up phase.

s. Media will be cleaned up and recycled through the Sifter Unit. Description as follows:

(1) The Sifter Unit is used to mechanically remove large debris and powdery residues from the foam cleaning media after each use. The used foam cleaning media is swept up or otherwise collected in the work area and placed into the electrically-powered Sifter. This unit vibrates and causes the used foam cleaning media to pass vertically downward through a series of progressively finer screens. Any coarse materials, such as paint flakes, rust particles, etc. are collected in the first, coarsest screen. Next, the resusable foam cleaning media particles are collected in the next, finer screen, and finally, any fine dust particles fall to the bottom of the Sifter for proper disposal. Fines from media used to absorb radioactive contaminants are disposed of as radioactive waste.

(2) Alternate procedures available to implement if the aforementioned procedures fail include the use of conventional sand-blasting, and the use of a portable grinder to abrade the contaminated sections.

(3) We plan to minimize the amount of mixed waste generated by only using, except in extreme cases, nonhazardous mediums to remove the contamination. Examples of mediums include soap and water, sand, abrasion with power grinder, etc.

The treatment technology being developed by Martin Marietta Energy System, Oak Ridge, Tennessee, is still in phase II of its development and, as such, can't be used until phase III (full production) is running and licensed by the NRC.

11. All components will be decontaminated to the lowest level possible. If components, after being surveyed by meter and dry swipe, are 100% contamination-free, then they will be processed as scrap metal. If ALL contamination cannot be removed, then they will be properly packaged for LLRW disposal.

12. Instruction to workers will be contained in Standard Operating Procedures for decontamination jobs. Controls, degree of protective equipment, and procedures will be based on a worse-case analysis with oversight provided by supervisors.

13. a. The disposable plastic room shall be constructed of plexiglass sheets over four inch by four inch studs. Interior walls will have sheets on both sides. All joints will be sealed. Emergency lighting will be provided for the interior of the room. Three each ACCU-2M3 absolute contamination control units (these using three filters) decontaminate to 99.99% at 0.3 microns. Make up air will be supplied thru the top of the room. The ceiling will be plexiglass. The Sponge-Jet System will be in the gross decontamination room. Staplex air monitors are placed inside and outside the room for monitoring. See enclosure 9 to supplement 2, page 1 of 2, for the typical layout. Surveys will be performed at the frequency shown in Table 6-2.

b. Removable contamination will be checked for using wipe samples. Traceable standards will be used to determine instrument efficiency and sufficient counting time will be used to have a minimum level of detection below that in Table 2-2. A log shall be kept of instrument calibration, daily checks and swipe results. The log shall be kept on file for three years. Fixed contamination will be checked for, using a count rate survey instrument calibrated with a U238 traceable source. The MDA will be calculated using the formula 5-2 as contained in NUREG/CR-5849, Manual for Conducting Radiological Surveys in Support of License Termination. Consideration will be given for the geometry of the item. A log shall be kept for three years showing the item, areas checked, and results. Seneca presently has twenty-six Ludlum Model 3 instruments.

c. Table 6-2 lists the survey frequency for the decontamination room. Clean-up will be performed to keep the rooms as near as possible to background; this work will be performed at least weekly. Removal of contaminated material and the ultimate tear down will be performed under the direction of the Radiation Protection Officer following the Guidelines of NUREG/CR-5849. Shipment of waste will be in accordance with all State and Nuclear Regulatory Commission regulations.

14. Workers will receive specific training for decontamination operations to include set up and preparation of decontamination room. The ultimate tear down of the decontamination will require a study of the room, clean-up, and radiological surveys and, again, specific training for the workers will be provided.

15. Scanning will be used for general conditions and identification of elevated activity levels. This will provide information for documentation of the items elevated areas. After proper decontamination of the item surface, activity measurements will be performed at the areas documented during the scanning phase.

Tabulation of Instruments:

- Ludlum Model 3 Probe 43-5, a scintillation probe used for surface scanning and surface activity measurements. The approximate detection sensitivity using trained operators would be 200 dpm/100 cm2 for scanning and for activity measurements 150-200 dpm/100 cm2 using a static count. Logs would be kept for each instrument showing efficiency and check-out procedures to show activity measurement MDA using formula 5-2 of NUREG/CR 5849.

- Ludlum Model 3 with Probe 44-9, a Geiger-Mueller probe would be used for scanning and for activity measurements. The approximate scanning detection sensitivy would be 2000-3000 dpm/100 cm2 and for activity measurement 1500-3000 dpm/100 cm2 using a static count. Logs would be kept for each instrument showing efficiency and check-out procedures to show activity measurement MDA using formula 5-2 of NUREG 5849. Consideration will be given to geometry and each item will be analyzed to ensure calculation shows activity under release limits. Seneca presently has 26 Ludlum Model 3 instruments, 14 with scintillation probes and 12 with G-M pancake probes. Gross alpha/beta smear will be analyzed on a gas proportional counter with a detection sensitivity of 1-2 dpm. Calibration and Quality Control Charts will be kept on counters and retained for 3 years. Seneca presently has 2 Nuclear Measurement Corp PC-5 counters and 1 automatic system on order.

16. Each piece of equipment will be sketched and/or photographed, and identified by description as to make, model, series, serial number, etc. This information will be a requirement in the Standard Operating Procedures for each operation.

17. Survey and clean-up will be conducted in the decontamination room daily to prevent the spread of contamination and provide a safe working environment. A sketch or photograph will be a requirement of the Standard Operating Procedures for identification purposes.

18. Air sampling will be run continuously during demilitarization and decontamination operations. Instructions for air sampling will be contained in Standard Operating Procedures. Logs will be kept of air sampling results. Log will be retained a minimum of 3 years.

19. Compliance with the U.S. NRC Regulations will be added to Paragraph 1, Section II, Supplement 2.

20. Paragraph 6.a refers to contamination of machinery and equipment, protective clothing and procedure for monitoring of personnel; this will be contained in Standard Operating Procedures.

21. Records of radiation survey instrument calibration will be kept for three years. Additionally, U.S. Army TMDE located on post keeps a continuous file on all instrumentation done by them.

22. Ionizing Radiation Control Committee minutes are taken by the Radiation Protection Officer and are maintained in the Safety Office. Minutes of the meetings are reviewed by Headquarters, U.S. Army Depot System Command.

23. To check on air sampling program and on confinement procedures, urinalysis will be used. In vivo and fecal analysis will be provided when circumstances dictate. Regulatory Guide 8.11, Applications of Bioassay for Uranium, will be followed.

24. Paragraph 15f is the correct reference.

25. All references will reflect the new Part 20 when it becomes effective.

26, 27, 28. The SOPs discussed in Paragraphs 2, 3 and 4 in Section II, Supplement 2 of the application dated October 30, 1992, and the SOPs for specific demilitarization operations at Seneca Army Depot Activity referenced in Paragraph 1, Section IV in Supplement 2 of the same application do not exist at present.

Before a demil (or other operation) begins, a Depot Maintenance Work Requirement (DMWR) is provided to the installation (two copies of AMCCOM DMWR 9-1315-C523-XI example provided at Encl 2). A local SOP is developed from the DMWR, applicable regulations, and requirement.

A different SOP is required for each operation involving a specific munition. Seneca will develop a specific SOP for a specific model number of 105mm ammunition, a specific SOP for a specific model number of 120mm ammunition and so forth.

These SOPs are not typically developed until a job is to be undertaken. An operation cannot begin without an approved SOP, an example of which is provided for your information at Encl 3.

All SOPs used by Quality Assurance Personnel to assess serviceability of DU ammunition include specific precautions for handling DU ammunition.

29. The plastic room will maintain negative pressure in relationship to the remainder of the building.

30. SOPs are generated for each hazardous operation at Seneca Army Depot Activity. Normal operations are covered in SEAD Regulation 385-1, SEAD ACCIDENT PREVENTION PROGRAM (two copies provided at Encl 4). The intent of Paragraph 11, which should be labeled 11a, is to show that workers receive adequate training and are governed by Safety Regulations.

31. Seneca will use to the maximum extent possible, engineering controls, and processes to control the concentrations of radioactive material in the air. Standard Operating Procedures will direct the use of respirators. The following information will be covered during the qualitative or quantitative respirator fit testing session:

a. Respirators shall be selected on the basis of hazards to which the worker is exposed.

b. The user shall be instructed and trained in the proper use of respirators and their limitations.

c. Respirators shall be regularly cleaned and disinfected by the person assigned the respirator.

d. Respirators shall be stored in a convenient, clean, and sanitary location. This will be the responsiblity of the employee assigned the respirator.

e. Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use such as self-contained devices shall be thoroughly inspected at least once a month and after each use.

f. Appropriate surveillance of work area conditions and degree of employee exposure or stress shall be maintained by inspection from the Industrial Hygienist or Safety Office.

g. There shall be regular inspection and evaluation to determine the continued effectiveness of the program by the Industrial Hygienist and/or Safety Office.

h. Persons will not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment by the physician at the health clinic. The respirator user's medical status will be reviewed periodically.

i. Only equipment certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA) will be used.

32. The machines currently being considered for decontamination will come from the U.S. Army, the Department of Energy and the U.S. Air Force.

33. We believe an appropriate length of time that these machines may be stored prior to being worked on would be six months. This is based on Seneca accepting 25 machines from a single customer and decontaminating them at the rate of one per week.

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

Safety Office

SUBJECT: License No. SUC-1275, Control No. 116420

Mr. John D. Kinneman, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguards
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Mr. Kinneman:

Reference telephone conversation between Mr. Lewis, this office, and Mr. Oberg, U.S. Nuclear Regulatory Commission, September 10, 1993, seeking clarification of our response to the NRC letter dated June 8, 1993. The following additional information is keyed to your original request.

a. Answer 4: Mr. Oberg questioned if constant surveillance would be provided when the DU ammunition is out of the storage igloo.

Clarification: We will provide constant surveillance of DU cartridges when they are out of storage.

b. Answer 7b: Mr. Oberg questioned if tracers are on all DU munitions and if we intend to separate the windshield, bourrelet, sabot, base seal obturator and fin assembly from the penetrator.

Clarification: Tracers are present on the M774, M919 and M833 for which the licensee seeks demilitarization. These tracers will be removed, as they are energetic material. It is the intent of the licensee not to separate the penetrator from the windshield, bourrelet, sabot, base seal, obturator, and fin assembly. The parts will not be decontaminated, only disposed of.

c. Answer 7c: Mr. Oberg again stated concern about the powder being contaminated.

Clarification: Again, the Army is working on the problem and this licensee will follow procedures promulgated by higher headquarters. The licensee will have procedures to follow before any demilitarization occurs and the procedures will be approved by the NRC.

d. Answer 9: Mr. Oberg questioned if machines in progress counted against the 25 machines on the installation. Also, how much mixed waste would be generated and its ultimate fate?

Clarification: It is estimated that approximately 25 machines, or other equipment, would be on the installation awaiting decontamination. Of this total, equipment/machines already disassembled or in the decontamination/disassembly process, a maximum of two (2), would not be included. It is estimated the length of time from arrival for storage until start of the decontamination/disassembly process, will be no longer than 180 days. Decontamination/disassembly would begin within the 180 day storage time frame and will be completed within 360 days from equipment arrival on site. In no case will the equipment/machine be on site for more than 360 days. In the event of unforeseen circumstances the equipment cannot be completed in that time frame, it will be returned to the original owner. The contract with the equipment's original owner will require that it can be shipped back until such time the equipment can be processed in a more timely fashion within the time parameter mentioned above. The amount of mixed waste generated is estimated to be one 33-gallon drum from each machine. The contract will specify that all machines be shipped dry of fluids/oils. The mixed waste would amount to sludge and residue from the cleaning process. Seneca is currently pursuing technologies to treat mixed waste. In the interim, we have facilities to properly store it. New York State inspects our mixed waste facility on a recurring basis.

e. Answer 10: Mr. Oberg asked for a definition of DRMO.

Clarification: DRMO stands for Defense Reutilization and Marketing Office, which is an off-site scrap branch of the Griffiss Air Force Base DRMO office.

f. Answer 13a: Mr. Oberg questioned emergency procedures/SOP for the decontamination room.

Clarification: The following emergency procedures will be added:
POWER FAILURE: The building is equipped with an emergency generator that will be maintained to provide a backup to commercial power. The generator kicks on as soon as commercial power is interrupted.

LIGHTING: In addition to existing lighting, the area has battery-powered emergency lighting installed.

FIRE PROTECTION: The Depot fire department is trained to respond to radiological fire hazards and is aware of the hazards involved in the operation. Additionally, adequate fire extinguishers (heavy metal type) will be installed in the work area, as required.

PERSONNEL RESCUE AND INJURY: The operation will be monitored by a dedicated observer, dressed appropriately, to respond to any emergency that requires personnel rescue. This person will be thoroughly familiar with all facets of the operation and will be able to respond to all emergencies.

g. Answer 26, 27 and 28: Mr. Oberg asked for SOPs referenced in paragraphs 2, 3 and 4, Section II, Supplement 2.

Clarification: SOPs referenced in paragraphs 3 and 4 is SOP SE-0000-L-0001 dated Sept 29, 1986, with Revision 2 dated Oct 7, 1992. This SOP was submitted with the response to your questions in the letter dated June 8, 1993, as an example. SOPs are continually reviewed and, as such, change frequently. The SOP referenced in paragraph 2 is better described as Army Regulations covering ammunition, Safety Regulations for explosives, Technical Manuals and local SOPs such as SE-0000-L-0001 above. DU Cartridges as an ammunition item are subject to a myriad of rules due to the explosive nature of the item.

h. Answer 29: Mr. Oberg asked for the controls to be applied to minimize release of radioactive material to the environment and minimize personnel exposure.

Clarification: In addition to written SOPs, the following controls will be used to minimize radiation exposure to personnel and the environment.

Section VI, paragraph 8, to Supplement 2 of the application covers personnel protective equipment for the workers and personnel decontamination procedures. Supplement 6, Radiation Safety Program also covers personnel safety and requirements for surveys, dosimetry, bioassay, respiratory protection and emergency response procedures.

Environmental protection will be provided by the use of the sealed plexiglas room and the use of three ventilation units with appropriate HEPA filters. Also, the areas will be continuously monitored during operations by Staplex air monitors. The areas will be surveyed in accordance with Table 6-2 of application.

i. Answer 30: Mr. Oberg was concerned about the numbering of paragraphs 11-13 on pages 4-3 and 4-4, Supplement 4 of the application.

Clarification: The second paragraph 11 on page 4-3 will be renumbered 12, paragraph 12 to 13, and paragraph 13 to 14.

j. Answer 33. Mr. Oberg questioned what would happen if we could not clean a machine in the 360 day time frame.

Clarification: In accepting machinery for decontamination, a contract will be entered into with the originator stating that:

- the machine will be properly packaged
- all fluids will be removed
- Seneca has the right to inspect machines prior to shipment, and we reserve to right to ship the machine back if it cannot be decontaminated in 360 days.

It is anticipated that an inspection team from the Depot will inspect machines prior to shipment.

Request you provide a written response to this letter at your earliest convenience.

Sincerely,

ROY E. JOHNSON
LTC, U.S. Army
Commanding Officer

Safety

CAB

MOD

C, RAT

FEB

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

May 24, 1994

Office of the Commander

SUBJECT: License Renewal SUC-1275

Dr. Mohamed Shanbaky
Chief, Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguard for the U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Dr. Shanbaky:

Reference is made to your letter dated March 25, 1994, seeking additional information for renewal of NRC License SUC-1275.

It is the policy of the Department of Army to serve as a trustee of the environment. We anticipate that radiological waste generated from decontamination operations would be held for more than 180 days because of problems between New York State and South Carolina. We will not seek a categorical exclusion from the requirement for an Environmental Assessment. Two copies of the Environmental Report are enclosed for your review. Mail Control Number is 116420.

POC for Seneca is Mr. Michael R. Lewis at 607-869-1432.

Sincerely,

By R. Johnson

Roy E. Johnson
LTC, U.S. Army
Commanding

Enclosure

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

MAR 25 1994

License No. SUC-1275
Docket No. 040-08526
Control No. 116420

Department of the Army
Seneca Army Depot Activity
LTC Roy E. Johnson
Commanding Officer
ATTN: SDSSE-CO
Romulus, New York 14541-5001

Dear LTC Johnson:

This is in reference to your request in an application dated October 30, 1992, to renew License No. SUC-1275, and your Letter of Intent dated December 21, 1992. In order to continue our review, we need the following additional information:

1. Regarding the requirement for an Environmental Assessment (EA) for the decontamination of other Agencies' [the Department of Energy's (DOE) and the U. S. Air Force's] machinery and equipment pursuant to 10 CFR 51.60, you have the following options:

   a) If you choose to qualify for a categorical exclusion from the requirement for an EA, you must confirm that the Seneca Army Depot Activity (Seneca) will limit the interim storage period of the other Agencies' machinery and equipment contaminated with depleted uranium (DU), and the DU waste from remedial activities on these items, to less than 180 days, or

   b) If you choose to reject the interim storage period of less than 180 days for the other Agencies' Du contaminated items and DU waste, an EA will be required. Submit a complete Environmental Report in accordance with the requirements of 10 CFR 51.60.

2. Pursuant to your acceptance of the limited interim storage period of less than 180 days for the other Agencies' DU contaminated items and waste (Item 1. above), submit the following:

   a) An established or planned tracking system to inventory and document the quantity of other Agencies' (DOE's and the U. S. Air Force's), and the Army's, DU on hand at any given time, as contamination on machinery and equipment and as DU waste from remedial activities, of less than 10,000 kilograms or a total of 3.36 curies, and

b) An established or planned tracking system to document and maintain a chronological record of the other Agencies' DU, from receipt of the items contaminated with DU to the shipment of the remedial DU waste for disposal, to verify the period of less than 180 days residence time on the Seneca site.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 116420. The reviewer for this licensing action is C. Thor Oberg. If you have any technical questions regarding this deficiency letter please call the reviewer at (610) 337 5202.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely,

M. Shanbaky

Mohamed M. Shanbaky, PhD, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards

cc:
Commander
U. S. Army Command
ATTN: AMCS F-P (J. Manfre)
500 Eisenhower Avenue
Alexandria, Virginia 22333-0001

Michael Lewis
Radiation Safety Officer
Seneca Army Depot Activity
ATTN: SDSSE-CO
Romulus, New York 14541-5001

[53FR24018

with written instructions issued by the Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards, as appropriate.

54 FR 15372

(b) Each applicant for a license to manufacture a nuclear power reactor, or for an amendment to a license to manufacture seeking approval of the final design of the nuclear power reactor, pursuant to Appendix M of Part 52 of this chapter shall submit to the Commission an environmental report or any supplement to an environmental report in the manner specified in § 50.4. The applicant shall retain an additional 109 copies of the environmental report or any supplement to the environmental report for distribution to parties and Boards in the NRC proceeding, Federal, State, and local officials and any affected Indian tribes, in accordance with written instructions issued by the Director of Nuclear Reactor Regulation.

Environmental Reports—Materials Licenses

58 FR 7715

§ 51.60 Environmental report—materials licenses.

≫ (a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to Parts 30, 32, 33, 34, 35, 36, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1) through (b)(6) of this section, shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report" or "Supplement to Applicant's Environmental Report," as appropriate. The "Applicant's Environmental Report" shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations or proposed decommissioning activities. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

REQUISITION AND INVOICE / SHIPPI DOCUMENT

Form Approved OMB No. 0 46 Expires Oct 991

1. FROM: *(Include ZIP Code)*
Commander, Seneca Army Depot Activity
ATTN: SDSTO-SES
Romulus, NY 14541-5001

SHEET NO. | NO. OF SHEETS | 5. REQUISITION DATE | 6. REQUISITION NUMBER

7. DATE MATERIAL REQUIRED *(YYMMDD)* | 8. PRIORITY

2. TO: *(Include ZIP Code)*
Mr. John D. Kinneman, Chief
Research, Developement and Decommissioning Section
U.S. Nuclear Regulatory Commission
475 Allendale Rd., King of Prussia, PA 19406-1415

9. AUTHORITY OR PURPOSE
License Renewal

10. SIGNATURE. | 11a. VOUCHER NUMBER & DATE *(YYMMDD)*

3. SHIP TO - MARK FOR
Mr. John D. Kinneman

12. DATE SHIPPED *(YYMMDD)* | b.

13. MODE OF SHIPMENT | 14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.

4. APPROPRIATIONS SYMBOL AND SUBHEAD	OBJECT CLASS	EXPENDITURE ACCOUNT (From)	(To)	CHARGEABLE ACTIVITY	BUREAU CONTROL ACTIVITY NO.	BUREAU CONTROL NO.	AMOUNT

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND/OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
1	Package, Federal EX Overnight Record By 93270 323 J.O.# 54NSAF CC: 7000							

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO | 17. SPECIAL HANDLING

18. RECAPITULATION OF SHIPMENT	ISSUED BY	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
	CHECKED BY					
	PACKED BY					
				← TOTAL →		

19. RECEIPT				
	CONTAINERS RECEIVED EXCEPT AS NOTED	DATE *(YYMMDD)*	BY	SHEET TOTAL
	QUANTITIES RECEIVED EXCEPT AS NOTED	DATE *(YYMMDD)*	BY	GRAND TOTAL
	POSTED	DATE *(YYMMDD)*	BY	20 RECEIVER'S VOUCHER NO.

DD Form 1149, MAR 89
306/080

Previous editions are obsolete.

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

22 Apr 1994

Safety Office

SUBJECT: License Renewal SUC-1275

Dr. Mohamed Shanbaky, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguard for the
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Dr. Shanbaky:

Reference is made your letter dated March 25, 1994, seeking additional information for renewal of NRC license SUC-1275. It is the policy of the Department of Army to serve as a trustee of the environment. We anticipate that radiological waste generated from decontamination operations would be held for more than 180 days because of problems between New York State and South Carolina. We will, therefore, not seek a categorical exclusion from the requirement for a Environmental Assessment (EA). Please allow us an additional 30 days to properly complete the EA. Mail Control Number is 116420.

Point of contact is Mr. Michael R. Lewis at 607 869-1432.

Sincerely,

Roy E. Johnson

ROY E. JOHNSON
LTC, U.S. Army
Commanding Officer

ENVIRONMENTAL REPORT
OF DU CONTAMINATED ITEMS AND WASTE

I. PURPOSE: The purpose of the proposed action is fivefold:

a. To store a maximum of 25 pieces of Depleted Uranium (DU) contaminated equipment shipped from other federal agencies for periods not to exceed 360 days;

b. To disassemble each piece of contaminated equipment and fully decontaminate the parts to the extent possible;

c. To store waste generated as either low-level radioactive waste (LLRW) or as mixed hazardous waste in accordance with all applicable federal and state regulations and procedures;

d. To reutilize or sell as precious metals or scrap (through DRMO), all equipment and parts determined to be "clean" IAW federal and state criteria; and

e. To store in separate onsite facilities (magazines), all packaged parts which cannot be adequately decontaminated and all drummed hazardous waste, only, until such time as each may be shipped offsite for final disposition at an approved waste management or LLRW facility.

II. DESCRIPTION of PROPOSED ACTIONS: Accept receipt of DU contaminated machinery and equipment, determine reusability, disassemble and decontaminate equipment to acceptable levels for rebuild or scrap value, reassemble cleaned equipment, package LLRW and contaminated parts that are not able to be cleaned sufficiently IAW 49 CFR 173 and 10 CFR 71, and store packaged waste for shipment to an approved and licensed disposal site.

III. Preoperational Procedures:

a. Contracting with machine vendor.

(1) The initial visit to the vendor would be to inspect each machine and survey for the total Depleted Uranium contamination activity in kilograms. This would be to ensure that the NRC license restriction of 100,000 kg of DU is not exceeded.

(2) The contract will specify that the vendor will drain all fluids and have the machine tested for PCB contamination. It will also specify that if PCB's are present, the machine has to be decontaminated before shipment to Seneca.

(3) Once the contract is in place and all preliminary work is completed, Seneca will send a team to the vendor to prepare the machine for shipment. It will be disassembled as needed, palletized and then double-wrapped in heavy plastic such as "Grifylon" or other suitable heavy gauge plastic.

(4) The vendor will be responsible for shipment to Seneca when it has been determined that the Depot is ready for receipt of the equipment.

(5) A provision will be included in the contract to return the machinery to the vendor if the machine cannot be processed in a timely manner (NTE 360 days). This is to preclude Seneca from becoming a storage warehouse for contaminated machinery. The majority of the equipment would be completed sooner, but unforseen circumstances could extend the processing time beyond the 180 day estimate, into the additional 180-day backup period.

b. Preparation for receipt of machines and equipment:

(1) Bldg. 825 will be the temporary storage building (See Enclosure 1) for the machines and equipment received from the vendor. The size of the building (4000 square feet) limits the amount of machinery that can be stored at any one time. At no time would the number of stored machines exceed 25 pieces.

(a) The entire floor of Bldg. 825 will be covered with a double layer of heavy plastic to set the contaminated items on. This will help in the future decontamination of the building.

(b) The received machines will be stored in Bldg. 825 until scheduled for decontamination at Bldg. 819.

(2) Bldg. 819 will be the only decontamination facility.(See Enclosure 2).

(a) The interior of the building would be modified as seen in Enclosure 3. The disposable plastic rooms shall be constructed of plexiglass sheets over four inch by four inch studs. Interior walls will have sheets on both sides. All joints will be sealed. Emergency lighting will be provided for the interior of the rooms. The ceiling will be plexiglass.

(b) Installation of (3) three Absolute Contamination Control Units (ACCU-2M3) clean air machines is next. These machines use a series of three filters, including a HEPA filter that assures that all exhausted air has been decontaminated to 99.99% at 0.3 microns.

(c) Negative air pressure in the two decon rooms will be maintained with makeup air supplied through the opening designed into the plexiglass ceiling.

(d) Four Staplex air monitors will run continuously while operations are performed.

(e) Prior to the start up of the decontamination process, the air flow patterns will be determined using inert machines as targets. Predominate airflow patterns and likely radioactive material transport routes will be noted. The location of ventilation air inlets and exhausts will be adjusted to maximize worker protection.

(f) All workers will receive specific training for decontamination operations to include: operation of each piece of equipment, set up and preparation of decon rooms, safety and health related areas of concern, emergency procedures, and the complete Operational Procedure from dress-out phase to clean-up phase.

(3) Radiation Waste Storage Areas:

(a) The LLRW in Bldg. 819 will be stored in a STC (Strong Tight Container; i.e., 17H drum, B25 container, etc.) and will be closed at the end of each day's operation. When full, each container will be monitored, sealed and the total DU calculated in kilograms and recorded.

(b) The full containers will then be moved to an earth-covered magazine (igloo type construction) for storage until pickup of LLRW can be arranged.

(c) Up to ten (10) magazines could be used to store LLRW with each magazine capable of storing up to 700 drums. Any oversized pieces that cannot be decontaminated would also be stored in a double-doored magazine included in the above total.

(d) Oversized pieces too large for a drum would be double-wrapped in heavy plastic or placed in a B25 container for shipment IAW 49 CFR 173.425(c) bulk shipment requirements.

(e) The magazines measure 40X60 feet and the double-door magazines are 40X80 feet. It is estimated that each machine would generate 1 or 2 drums of LLRW in the decontamination process. As a result of the process, it is estimated that up to 100 drums per year would be generated. Under this scenario, SEDA has the capacity to store LLRW through the year 2000 and beyond with no adverse environmental impacts to personnel, the local community or the environment.

(f) The movement of LLRW to the magazines will be accomplished using an enclosed trailer over dedicated, paved onpost roads. The distance will not exceed one mile. At the completion of the transfer, the trailer will be monitored for contamination.

(g) Magazines containing DU LLRW will be kept locked at all times except when authorized operations are in progress. Keys to the magazines will be under positive control at all times.

(4) Mixed Waste Storage Areas:

(a) Approximately twenty percent (20%) of the machines may be contaminated with residual Polychlorinated biphenol's (PCB'S). The PCB/DU waste generated during the cleaning process will be segregated in hazardous waste drums and stored in a separate magazine.

(b) It is estimated that 20 - 25 drums of PCB/DU contaminated waste will be generated per year. If stored in the magazines described above, the Mixed Waste Storage facility is also capable of safely

storing all the waste generated up to and beyond the year 2000.

c. Personnel Protection Program:

(1) Respiratory Protection Program -

(a) The depot will use procedures or other engineering controls to the extent practicable to limit concentrations of airborne radioactive materials.

(b) The Installation Respiratory Protection Director assigned by written orders is responsible for performing respiratory fit testing, keeping records, and evaluating the program for overall effectiveness.

(c) Only equipment certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA) will be used.

(d) Physicals will be given prior to initial use and fit testing will be performed at least annually.

(e) The SOP's will contain instructions for normal use and care of respirators and procedures to follow in the event of equipment malfunction, psychological distress, or deterioration of working conditions.

(f) Air-supplied respirators will be required for the decontamination process at Bldg. 819.

(2) Protective Clothing and Equipment

(a) Protective clothing and equipment requirements will vary with the degree of contamination and the extent of engineering controls applied. The determination will be made by the Safety Manager and Radiation Protection Officer and may include some of the following:

(1) NIOSH/MSHA approved respirators with appropriate cartridges or airline respirators. Fullface respirators will be used.

(2) Full protective clothing

(3) Safety shoes and covers.

(4) Safety glasses.

(5) Air monitoring devices.

(6) Gloves.

(7) Personnel monitoring devices (extremity and whole body).

(8) Hearing protection.

(b) Only NRC licensed firms specializing in laundering radioactive contaminated clothing will be used to clean the protective clothing.

(c) A baseline bioassay will be administered to all decontamination workers, as assigned, and every 6 months thereafter.

d. Receipt and Storage of Equipment

(1) Upon arrival at SEDA, the equipment trailer will be driven to Bldg. 825. The equipment will be unloaded, visually inspected and temporarily stored.

(2) When the equipment is scheduled for decontamination at Bldg. 819, it will be removed from Bldg. 825, placed on a flatbed trailer and transported onpost the one half mile to Bldg. 819. There it will be off-loaded and placed in the gross decon area for processing.

(3) The flatbed trailer will then be monitored to assure that no contamination occurred in transport between Bldgs. 825 and 819.

IV. Safeguards Against the Spread of Contamination in Bldg. 819 -

a. Controls will be instituted to minimize the release of radionuclides into the environment and minimize the exposure to personnel.

b. In addition to the aforementioned Personnel Protection Program, (i.e., respiratory, personal protective equipment (PPE) and medical surveillance), the following steps will be taken to avoid the spread of contamination.

(1) Contamination will be contained by the use of monitoring and protective clothing. Protective clothing has been discussed under Preoperational Procedures.

(2) Work on the equipment will be performed beginning at the area of least contamination and ending in the area of maximum contamination.

(3) To the extent possible, the minimum amount of decontamination liquids will be used.

(4) Whenever possible, the easiest method or the mildest agent will be used in the decontamination process.

(5) Contaminated clothing will be held for laundering or, if disposable, treated as LLRW and placed in the appropriate drum.

c. Surveys in the storage area and the equipment decontamination areas will be performed at intervals as outlined in Post Operational Procedures.

d. Workers will receive specific training for the decontamination

operations to include set up and preparation of decontamination room. The ultimate tear down (final closure) of the decontamination room will require a study of the room, clean-up, and radiological surveys and, added training specific to the requirements for closure.

e. Scanning will be used for general conditions and to identify and document elevated activity levels and areas.

f. Urinalysis will be used to check on the air sampling program and on confinement procedures. In vivo and fecal analysis will be provided when circumstances dictate. Regulatory Guide 8.11, Applications of Bioassy for Uranium, will be followed.

g. A daily survey and clean up will be conducted in the decontamination room to prevent the spread of contamination and to ensure a safe working environment.

h. All filters and residue from the Aerojet Sponge Jet System and from the Absolute Contamination Control Unit HEPA filters will be treated as LLRW and disposed of in waste drums.

i. HEPA filters will be changed in accordance with manufacturers' instructions. Used filters will be monitored for contamination and dealt with accordingly.

j. Negative pressure will be constantly maintained in both decon rooms during operating periods with the ACCU filters and Staplex air monitors running continuously. This will preclude the release of any contamination to the outside of the plastic room.

k. Prior to the close of each shift, the plastic rooms will be sealed and the ACCU units shut down to stop air movement and prevent release to the environment during non-operational hours.

l. If decontamination operations will not be performed for longer than a week, i.e. holiday periods or extended vacations, the decon rooms will be clean and empty.

V. Operational procedures- equipment used

a. Description of the Aerojet Sponge Jet System -

(1) The FEED UNIT is a pneumatically-powered device for propelling the foam cleaning media against surfaces to be cleaned/prepared. The Feed Unit is portable and produced in several sizes to accommodate a variety of end-user needs. A hopper, mounted atop the unit holds the foam cleaning media. The media is fed by an auger device into a metering chamber which mixes the foam cleaning media with compressed air. The foam cleaning media/air mixture is conducted using a standard abrasive blasting nozzle applied to the surface to be cleaned or prepared. By varying the Feed Unit air pressure and type of foam cleaning media used, the system can be used in a range from removing soot from wallpaper to removal of fully-cured high-performance protective coatings from steel and concrete surfaces.

(2) The SIFTER UNIT is used to mechanically remove large debris and powdery residues from the foam cleaning media after each use. The used foam cleaning media is swept up or otherwise collected in the work area and placed into the electrically-powered Sifter. The unit vibrates and causes the used foam cleaning media to pass vertically downward through a series of progressively finer screens. Any coarse materials, (i.e. paint flakes or rust particles) are collected in the first, coarsest screen. Next, the reusable foam cleaning media particles are collected in the next, finer screen, and finally, any fine dust particles fall to the bottom of the Sifter and are disposed of. Fines from media used to absorb radioactive contaminants are disposed of as radioactive wastes.

(3) After sifting, the reclaimed foam cleaning media can be immediately reused in the Feed Unit. After three to five media cycles, the foam cleaning media may be laundered in the WASH UNIT. The Wash Unit is a portable, closed-cycle device which centrifugally launders the foam cleaning media. The contaminated wash water is collected, filtered and reused within the Wash Unit.

(4) For ultimate disposal, the contaminated wash water from the Wash Unit can be evaporated using the EVAPORATOR UNIT. This unit reduces the waste water to a minimum volume disposable residue.

b. The following methods of decontamination may be used with consideration given at all times to the protection of personnel, radiation levels, the minimization of mixed or radioactive waste, and the protection of the environment.

(1) Dry vacuuming with an approved vacuum cleaner equipped with HEPA filters. Using brooms or other dry sweeping methods will be forbidden.

(2) Damp mopping with a minimum amount of solution and with frequent changing of rags to minimize spread of contamination. Rags to be placed in LLRW container.

(3) Wet vacuuming with an approved cleaner equipped with absolute filters.

(4) Cleaning with biodegradable decontaminant fluids (i.e., detergent and water).

(5) Alternate methods may be developed if the above general methods are not effective. For example, different base materials may require different methods.

(6) The use of putty knives and scrapers to remove heavy deposits of sludge, grease, oil and metal chips may be required. Sanding and grinding may also have to be used to abrade the contaminated sections if the aforementioned procedures fail to decontaminate some pieces.

VI. Operational procedures - Decontamination of machinery

a. Personnel dress out procedures:

(1) Dress out in full protective clothing, to include booties, coveralls, hood and gloves.

(2) Put on fullfaced, supplied- air respirator.

(3) Tape all joints and exposed areas.

b. Operating procedures:

(1) The Decontamination Process will be performed in Bldg. 819 using mechanical methods and finish clean by the Sponge-Jet System.

(2) Assure all personnel who will be working on the equipment are dressed out.

(3) Start up fresh air supply within the work area.

(4) Turn on air filtration/ventilation units and air monitoring staplexes.

(5) Lay two sheets of plastic on floor of Area 1.

(6) Move in packaged, contaminated machine/equipment in place under 4 foot x 4 foot makeup air hole in plastic ceiling of Area 1.

(7) Close overhead entrance door and close both sets of plastic doors to Area 1.

(8) Remove wrapping from machine and dispose of as LLRW. Check receiving records for previously recorded contamination levels.

(9) Sketch machine or photograph for identification purposes. Monitor equipment to determine highest level of contamination and record findings.

(10) Form curtain around machine with a sheet of plastic and begin to disassemble and clean machine.

(11) Begin to remove all attachments and accessories using slings/chains and overhead crane.

(12) Use putty knives and scrapers to remove heavy deposits of sludge, grease and oil. Check records for previous testing for type of hydraulic fluids. Break or cut fluid-carrying lines and drain fluids, if present, into same type fluid container. Remove lines at fittings using caution not to spill any remaining fluids.

(13) Scrape contaminants from removed components into approved container and monitor component:

(a) If part is solid (without cracks, crevices or other reservoirs) and is free of contamination, send to "Clean Area" in NW bay. Process part for disposal/scrap/reuse.

(b) If part has other attachments or reservoirs - disassemble, clean and monitor.

(c) Parts that are found to be contaminated (to include parts that can not be certified clean due to the nature or design of the component: i.e, fluid lines, electrical conduit or parts with recessed areas) will be taken to the Sponge-Jet decon room directly north of the disassembly room.

(14) Continue to disassemble machine/equipment down to the bare casting. Scrape and monitor all parts. Transfer clean parts to "Clean Room" and dirty (contaminated) parts to the Sponge-Jet "Dirty Room".

(15) Parts found to be contaminated will be cleaned using the Sponge-Jet system.

(a) SOP's will be posted and understood prior to Sponge-Jet operation.

(b) Operator(s) of the Sponge-Jet will be properly trained and certified.

(c) Operator will use and adhere to all safety procedures.

(d) Operator will not operate for more than one hour at a time.

(e) After parts have been decontaminated they will be transferred to
the "Clean Room".

(16) In most cases, following the procedure for separation of precious metals, all parts will be considered scrap and transferred to the Defense Reutilization and Marketing Office (DRMO) for resale.

(17) In those cases where a decision has been made to decontaminate and reutilize a machine, care will be taken during disassembly not to damage components.

(18) When the main body of the machine has had gross contamination removed, the curtain will be lowered and folded in such a manner that all contamination will remain inside and will be disposed of in LLRW containers.

(19) Machine will be raised and set on blocks. Underside will be decontaminated and cleaned. Do final cleaning of machine body.

(20) Lift machine body and remove first sheet of plastic from under machine and dispose of in LLRW container.

(21) If the machine is still contaminated after an attempt to reduce the level of contamination to the lowest possible level, double wrap the machine body for transport to an onsite established RAD waste storage area.

(22) If the machine is below acceptable levels, remove from the decon room for scrap disposal.

(23) Wrap and dispose of second sheet of plastic that was under the machine.

(24) Clean the plastic floor.

(25) Take swipes and direct instrument readings to determine if any removable or fixed contamination remains. If contamination is found, it must be remediated before the next piece of equipment is brought into the building.

c. Decontamination/outprocessing of personnel:

(1) Remove booties, coveralls, gloves in that order rolling inside out to entrap contamination inside and dispose of an LLRW containers or hold for laundering.

(2) Thoroughly monitor person with survey instruments.

(3) Remove any contamination found.

(4) Remove supplied air mask and hood.

(5) Monitor neck and face.

(6) After being declared clean, personnel should immediately wash all exposed skin.

VII. Post-Operational Procedures - Final Parts Disposition

a. Clean Parts - parts cleaned to State and Federal regulatory standards will be sent to DRMO for scrap resale value or saved for rebuilding of the equipment.

b. Contaminated Parts - parts not able to be cleaned for reuse or resale will be disposed of as LLRW.

c. Required surveys -

(1) The front of the double doors, hallway entrance, exit to the clean parts room, floor equipment area, and the personnel clean room will be checked for contamination before the close of each shift.

(2) The secondary decon, clean parts room, and gross decon room will be surveyed weekly.

d. The Depot Radiation Safety Program is already in place and will be adhered to for the Decontamination Project.

(1) The program establishes procedures to protect the health of personnel, minimize risk to personnel and property, and make every effort to maintain radiation exposure as low as reasonable achievable.

(2) The program is applicable to the transportation, storage, shipment, maintenance, inspection, decontamination, demilitarization, and disposal of all NRC licensed materials to Seneca Army Depot Activity.

(3) It is the policy of Seneca Army Depot Activity to provide a safe, healthful working environment for all employees. All Department of Army regulations, Department of Transportation, and Nuclear Regulatory Commission (NRC) rules will be followed.

VIII. Inventory Control and Records-Keeping -

a. An Inventory Control computer-designed program will be established to track the complete project from receipt of the items to final offsite disposal.

(1) The program will be designed to record all pertinent equipment identification (to include make, model and serial number), any previous tests performed (i.e. PCB test results) and total calculated DU activity in kilograms.

(2) The program will also track the total DU on-hand at the installation at any time, whether it be from contaminated equipment or as LLRW DU in storage areas. This will preclude SEDA from exceeding the authorized NRC license quantities.

IX. Storage of Low Level Radioactive Waste (LLRW)-

a. LLRW will be stored onsite in secured, earth-covered magazines.

b. All DU LLRW will be stored in an approved Strong Tight Container (STC) to await transport to an approved and licensed waste site.

c. The U.S. Army Armament, Munitions, and Chemical Command (AMCCOM) is the responsible agency for the safe disposal of all unwanted low-level radioactive materials in the U.S. Army. All disposal operations will be coordinated through AMCCOM.

d. All LLRW generated will be inventoried, segregated and storage posted IAW all Army, Federal and State regulatory requirements.

X. Storage of Mixed Hazardous Waste-

a. Any mixed hazardous waste will be properly stored onsite in a dedicated storage magazine.

b. All mixed hazardous waste will be segregated by type,

inventoried and stored IAW all Army, Federal and State regulatory requirements.

c. The Depot Radiation Protection Officer in conjunction with the environmental engineering branch, will be responsible for the ultimate disposal of this waste material and proper coordination with the applicable agencies involved.

XI. ALTERNATIVES: There are two alternatives regarding the temporary storage of radioactive waste for more than 180 days and retaining contaminated machinery and equipment and parts for more than 180 days. One is not to have this mission at Seneca Army Depot Activity, resulting in the loss of jobs and the subsequent loss to the local economy. The second is to wait for New York State to build a low level radioactive waste management site and/or enter into a compact with a state having a site.

a. Not to have the mission at Seneca Army Depot Activity:

(1) Positive: The positive effect of not having the mission would be that no radioactive material would be transported into the state and no additional radioactive material and waste would be held by Seneca, pending offsite disposition.

(2) Negative: As the Department of Defense downsizes, each Depot needs new and unique missions to stay in business. The resulting loss would also affect the local economy.

b. Wait for New York State to build a low level radioactive waste management site and/or enter into a compact with a state operating such a facility.

(1) Positive: This would be in compliance with the Low Level Radioactive Waste Policy Act, as amended in 1986 (Public Law 99-240).

(2) Negative: New York does not have a present site identified, much less in operation, and has decided to go it alone for a waste site. There is no way to predict when New York State will have a site where LLRW can be shipped for disposition.

XII. ENVIRONMENTAL IMPACT: This operation will cause no significant change in the environment. All processes are performed indoors with safeguards to monitor for any release of radioactive or hazardous materials.

a. Land Use. No change in land use will result from this operation. Present buildings, roads, and infrastructure will be used.

b. Habitats. There are areas on the Depot that are habitats for certain species of animals that are indigenous to this area. Neither demilitarization nor decontamination will perceivably affect the animals. Vehicle traffic would be the only disturbing factor and it would be transitory in nature, occurring almost exclusively during

normal duty hours. The animals live with the normal vehicle traffic and the addition of this mission would not greatly increase overall traffic.

c. Air Quality. This installation is located in an area which is in attainment of state and federal air quality standards. No material will be released into the air. Attainment standards therefore will not be affected by the proposed mission.

d. Water Quality. No radioactive or other hazardous material will be introduced into the sewage system because the Sponge-Jet System will evaporate all liquids to a residue.

e. Flora and Fauna. There are no identified species of endangered plants or animals on the Depot. Operations are performed indoors and as such, no impact is expected.

f. Noise. Noise pollution will be a by-product of operating air compressors and other equipment. Being inside a building, in open areas of the depot, it is anticipated that noise pollution will be minor and only occur during duty hours.

g. Historical/Archaeological Sites. There are four sites that have been identified as potentially significant. As no new construction or other changes are proposed, the impact would be negligible.

XIII. Persons/Agencies Consulted:

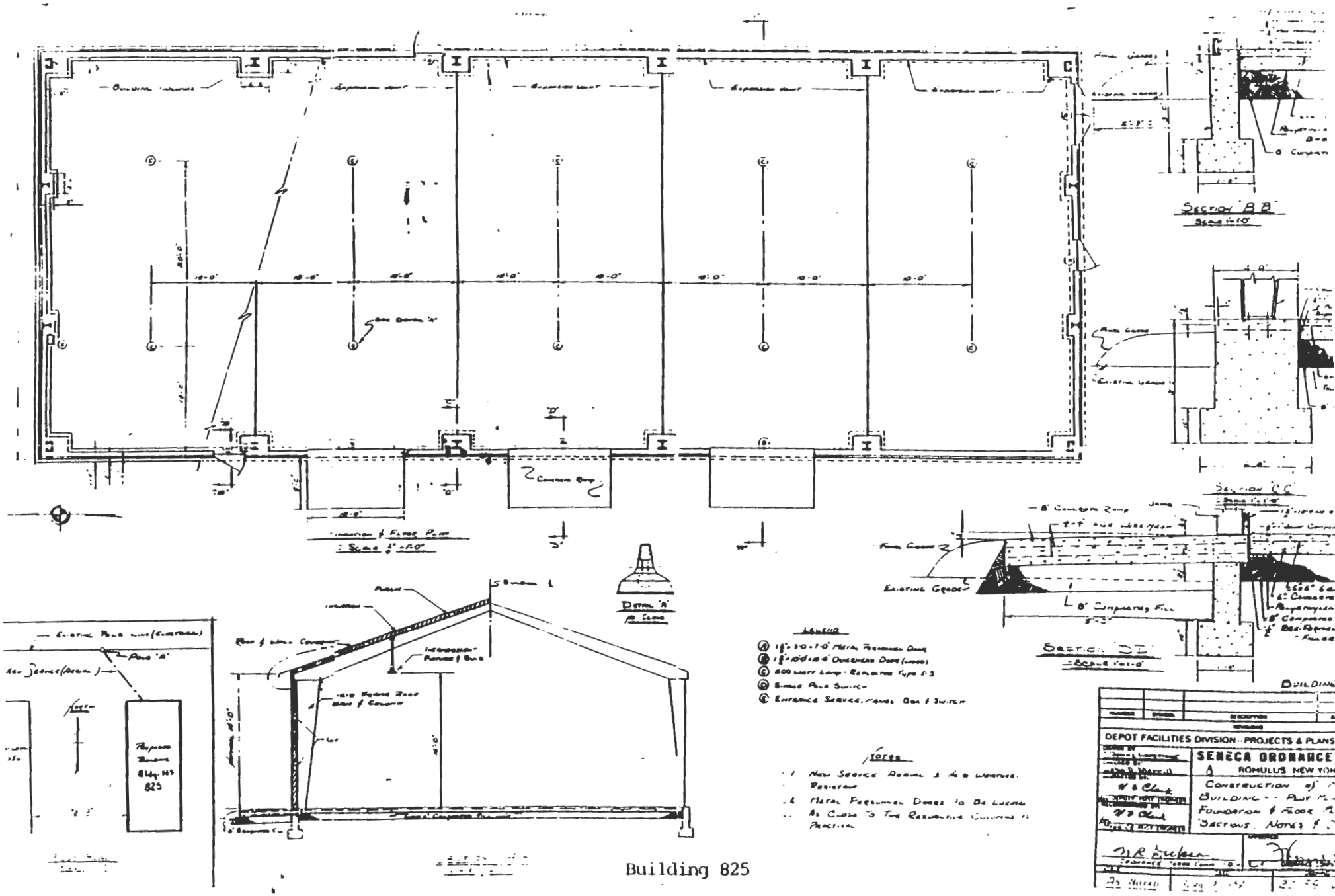
a. Randall W. Battaglia, Environmental Engineer, Seneca

b. Thomas J. Stincic, Saftey Manager, Seneca

c. Michael R. Lewis, Radiation Protection Officer, Seneca

d. Thomas E. Reynolds, Radiological Assistance Team, Seneca

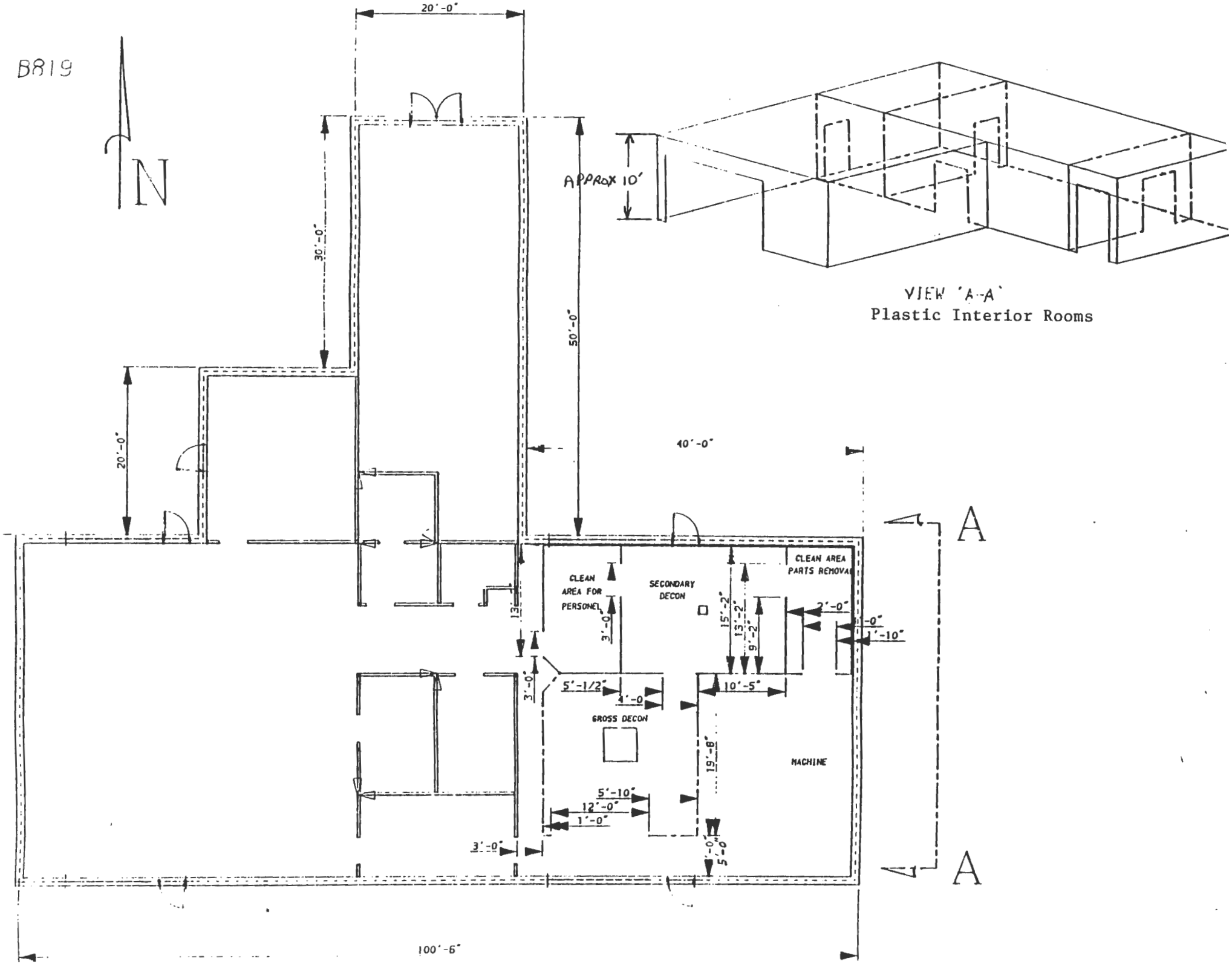
e. Robert Huneau, Environmental Protection Specialist, Seneca



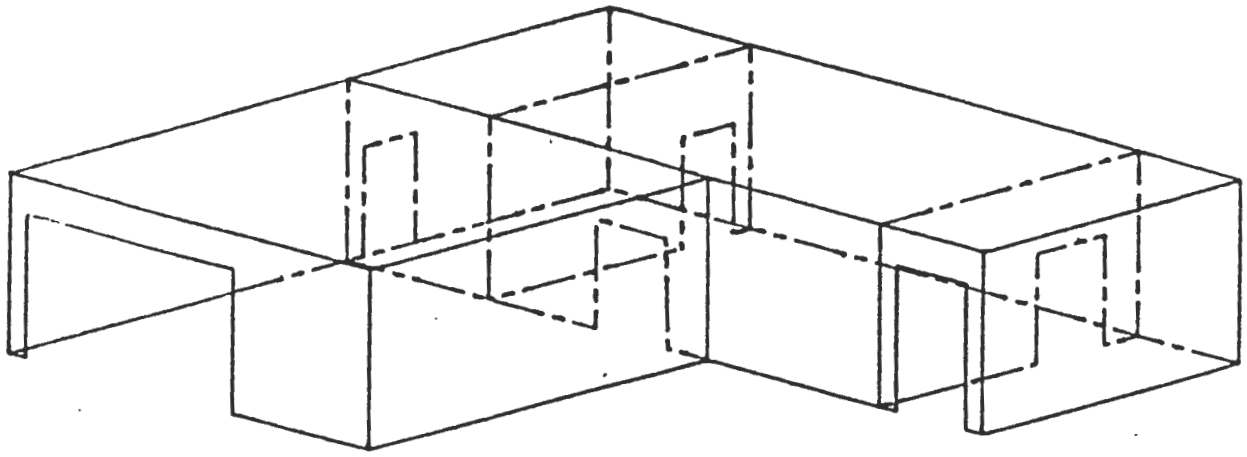
Building 825

Enclosure 1

B819

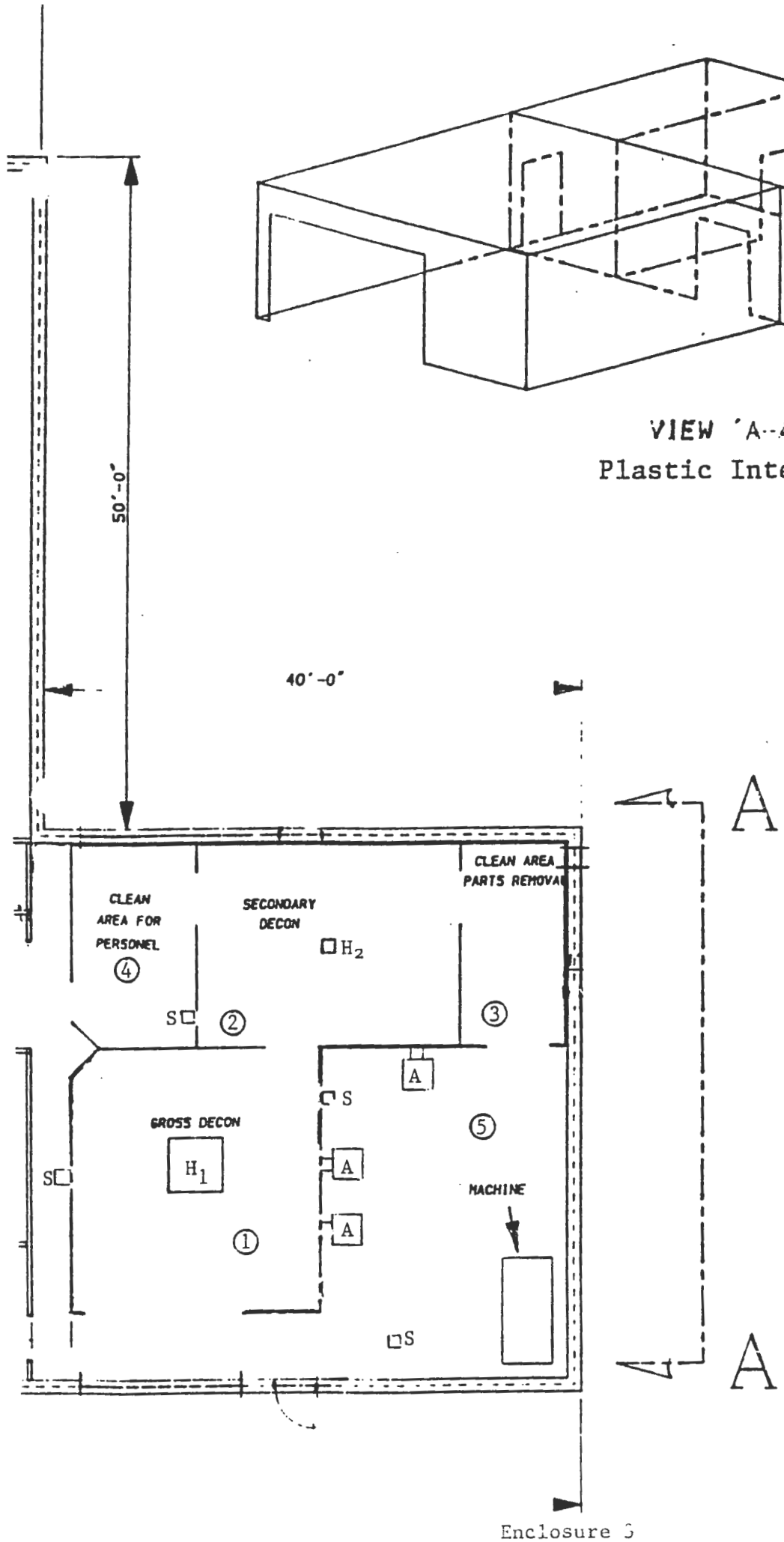


VIEW 'A-A'
Plastic Interior Rooms



VIEW 'A--A'

Plastic Interior Rooms



FACILITY/EQUIPMENT LAYOUT
EAST SIDE -- BUILDING 819

AREA ① - Gross Decontamination R

AREA ② - Secondary Decontaminati Room

AREA ③ - Clean Area for Parts Removal

AREA ④ - Clean Area for Personne In/Out Processing

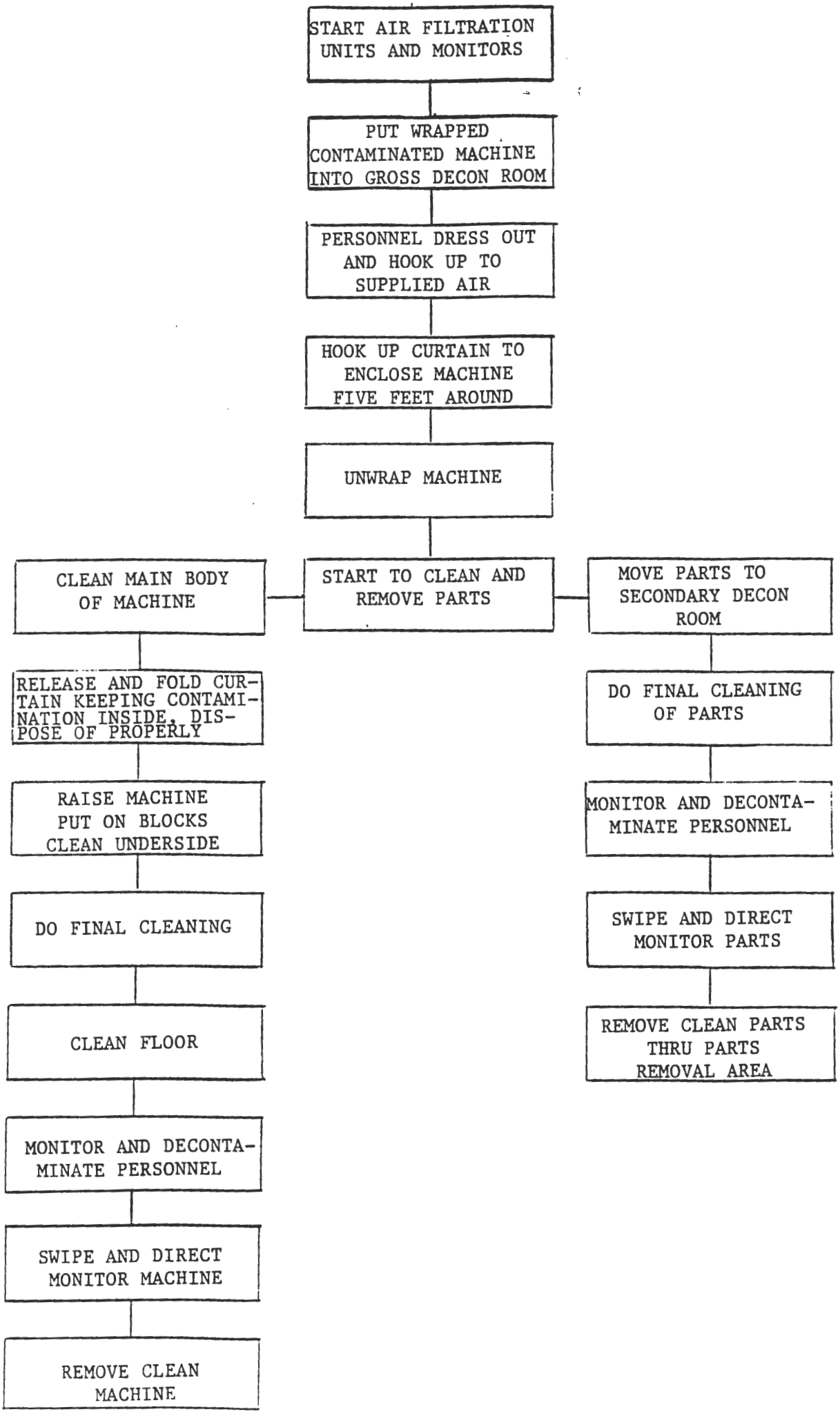
AREA ⑤ - Clean Area

A - Air Filtration/Ventilation Un with HEPA Filters

S - Staplex Air Samplers

H_1 - Hole in Plastic Ceiling for Air Makeup and Hoist Attachment

H_2 - Hole in Plastic Ceiling for Air Makeup


START AIR FILTRATION UNITS AND MONITORS
PUT WRAPPED CONTAMINATED MACHINE INTO GROSS DECON ROOM
PERSONNEL DRESS OUT AND HOOK UP TO SUPPLIED AIR
HOOK UP CURTAIN TO ENCLOSE MACHINE FIVE FEET AROUND
UNWRAP MACHINE
START TO CLEAN AND REMOVE PARTS
CLEAN MAIN BODY OF MACHINE
RELEASE AND FOLD CURTAIN KEEPING CONTAMINATION INSIDE, DISPOSE OF PROPERLY
RAISE MACHINE PUT ON BLOCKS CLEAN UNDERSIDE
DO FINAL CLEANING
CLEAN FLOOR
MONITOR AND DECONTAMINATE PERSONNEL
SWIPE AND DIRECT MONITOR MACHINE
REMOVE CLEAN MACHINE
MOVE PARTS TO SECONDARY DECON ROOM
DO FINAL CLEANING OF PARTS
MONITOR AND DECONTAMINATE PERSONNEL
SWIPE AND DIRECT MONITOR PARTS
REMOVE CLEAN PARTS THRU PARTS REMOVAL AREA

SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

REQUISITION AND INVOICE / SHIPPING DOCUMENT

Form Approved
OMB No. 0704-
Expires Oct 31, 1991

1. FROM: (Include ZIP Code)
Commander, Seneca Army Depot Activity
ATTN: SDSTO-SES
Romulus, NY 14541-5001

SHEET NO. | NO OF SHEETS | 5. REQUISITION DATE | 6. REQUISITION NUMBER

7. DATE MATERIAL REQUIRED (YYMMDD) | 8. PRIORITY

2. TO: (Include ZIP Code)
Mohamed Shanbaky, PhD, Chief
Research and Development Section
U.S. Nuclear Regulatory Commission

9. AUTHORITY OR PURPOSE
License Renewal

10. SIGNATURE | 11a. VOUCHER NUMBER & DATE (YYMMDD)

3. SHIP TO - MARK FOR
475 Allendale Rd., King of Prussia, PA 19406-1415

Mohamed Shanbaky

12. DATE SHIPPED (YYMMDD) | b.

13. MODE OF SHIPMENT | 14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.

4. APPROPRIATIONS SYMBOL AND SUBHEAD	OBJECT CLASS	EXPENDITURE ACCOUNT (From)	(To)	CHARGEABLE ACTIVITY	BUREAU CONTROL ACTIVITY NO.	BUREAU CONTROL NO.	AMOUNT

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND / OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
1	Package, Federal EX Overnight J.O.# 5WNSAF CC: W0700 W0100							

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO

17. SPECIAL HANDLING

18. RECAPITULATION OF SHIPMENT

ISSUED BY	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
CHECKED BY					
PACKED BY					
			← TOTAL →		

19. RECEIPT

CONTAINERS RECEIVED EXCEPT AS NOTED	DATE (YYMMDD)	BY	SHEET TOTAL
QUANTITIES RECEIVED EXCEPT AS NOTED	DATE (YYMMDD)	BY	GRAND TOTAL
POSTED	DATE (YYMMDD)	BY	20 RECEIVER'S VOUCHER NO.

DD Form 1149, MAR 89
306/080

51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Previous editions are obsolete.

DEPARTMENT OF THE ARMY
SENECA army DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

Safety Office 15 Dec 93

SUBJECT: Constant Surveillance of DU Ammunition

Dr. Mohamed Shanbaky, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguard for the
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Dr. Shanbaky

Reference is made to telephone conversion between Mr. Stincic, this office, and Mr. Oberg, U.S. Nuclear Regulatory Commission, December 13, 1993, seeking additional information on surveillance of DU out of storage. Reference Mail Control No. 116420.

Due to the intrinsically hazardous nature of ammunition, multiple safe guards are always present; security being one of the most important. There are three cases when DU ammunition is out of storage:

a. The first being maintenance and inspection. This is only done in government owned or contracted facilities. These facilities are designed for explosive operations and are in the ammunition area. The ammunition will be under constant surveillance by the workers or will be kept under lock and key during duty hours when operations are not being performed on the items. The facilities are at least Inhabited Building Distances from the boundary to protect the public from harm. The facilities are locked after duty hours and security patrols are performed every two hours as a minimum. The general public is denied access to these operations.

b. Shipping DU ammunition may present a problem if the volume of cartridges is large enough so that the ammunition is staged prior to loading. Staging is caused by the fact the ammunition lot numbers may be in several igloos, DOT exemptions labels must be applied, shipping labels applied, and for efficiency the ammunitions is readied for loading prior to the arrival of the conveyance. During the staging operations constant surveillance will be provided by the workers. After duty hours the ammunition area is closed and security patrols are performed every two hours as a minimum. Large volumes of

ammunition present the problem that only so much explosives are allowed in any one area.

c. The third case is receipt of DU ammunition. It too presents a problem if large volumes are present. The DU ammunition must be segregated by ammunition lot number, only so much explosives are allowed in any one area, and the space on loading/unloaded platforms is physically limited. Constant surveillance will be provided by the workers during duty hours. After duty hours the ammunition area is closed and security patrols are performed every two hours as a minimum.

The Depot is paid by the ton for ammunition operations and with the limited resources of people and equipment operations are performed efficiently with in the constraints of explosive safety The general public is not allowed access to the ammunition area. The ammunition area is enclosed with a five-foot tall chain link fence with a one-foot barbed wire overhang which is locked after duty hours. Security patrols are performed by armed guards. Seneca has more than twenty sites where rail cars may be loaded/unloaded and trucks may be load/unloaded at each of the 519 igloos, or at the rail sites.

Installation history shows that no DU ammunition has ever been lost or stolen from Seneca. This information obtained from the Civilian Executive Assistant who has been involved with 30mm DU from the first NRC license at Seneca and the Safety Manager whose involvement with DU goes back to 1980.

We therefore believe that these actions fulfill the intent of 10 CFR 20.1802 and that no further actions are deemed necessary. Request that these actions will be incorporated as a condition of the license.

Michael R. Lewis
Radiation Protection Officer

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 7, 1994

License No. SUC-1275
Docket No. 040-08526
Control No. 116420

Department of the Army
Seneca Army Depot Activity
LTC Roy E. Johnson
Commanding Officer
ATTN: SDSSE-CO
Romulus, New York 14541-5001

Dear LTC Johnson:

This is in reference to your request in an application dated October 30, 1992, to renew License No. SUC-1275. This also refers to your letters dated December 21, 1992, September 2 and 27, 1993, and May 24, 1994. In order to continue our review, we need the following additional information:

Regarding your request for authorization to remediate DU contaminated machinery and equipment from the U. S. Army and other agencies, many complex safety issues are still unresolved. Should you wish to continue your request for the proposed decontamination activity, please inform this office.

Based on your response to this deficiency letter, we are planning to issue a renewal of your license only for possession, use, storage, and demilitarization of the U. S. Army and U. S. Navy DU ammunition. Further review of the machinery and equipment (M&E) remediation work could be continued under an amendment.

To continue our review, you are required to submit all the necessary documentation for financial assurance (FA) for decommissioning including a decommissioning funding plan (DFP) and the associated instrument such as a letter of credit or, for a government agency, a statement of intent. We will need documented FA and DFP for your licensed programs as outlined below in Section A of this letter.

Please respond to the following items regarding financial assurance, the DU generated by demilitarization activities, and your emergency preparedness plans.

A. Financial Assurance and Decommissioning Funding Plan

Pursuant to 10 CFR 40.36 (enclosed), the Seneca Army Depot Activity (Seneca) is required to furnish financial assurance for decommissioning of their proposed licensed programs; the possession and storage of the U. S. Army's DU ammunition, possession and storage of the U. S. Army's and Navy's DU ammunition for demilitarization, and the storage or

disposition of DU metal generated by demilitarization. 10 CFR 40.36(a) requires that "Each applicant for a specific license authorizing the possession and use of more than 100 millicuries of source material in a readily dispersible form shall submit a Decommissioning Funding Plan (DFP) as described in paragraph (d)." This plan must include an estimate of the actual costs for decommissioning your facility. The appropriate level of detail for the cost estimate is discussed in Appendix F to Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72" (enclosed). Based upon the possession limits of your license and the application date of your license renewal, a DFP must be included. Please submit a DFP that describes the actual costs for decommissioning your facility. In accordance with 10 CFR 40.36(e)(4), submit with the DFP a Statement of Intent containing the cost estimate for decommissioning and signed by an individual who is responsible for apportioning U. S. Army funds (see Attachment I, Suggested Wording for a Statement of Intent for a Government Licensee).

You may also find NUREG/CR-1754 "Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities" and its Addendum 1 (enclosed) to be useful.

B. DU Obtained as a Result of Demilitarization

1. DU Metal or Waste

a. Based on statements made in the enclosures to your letters dated September 2 and 27, 1993, and November 2, 1992, the demilitarization of this ammunition could generate significant amounts of DU metal. Please submit your estimate of the quantity of DU that will be generated by separation from ammunition as a result of demilitarization activities over a period of time, and the total projected amount of DU produced. In addition, submit your plans for the disposition of this DU.

b. If the DU metal removed from the ammunition by demilitarization is to be classified as radioactive waste, submit your plans for handling and disposing of this waste.

2. Mixed-Waste

a. Confirm that you are not currently storing any DU in mixed-waste as can be inferred from Item d. in your letter dated September 27, 1993.

b. Confirm that you will not perform any operation involving DU that will generate mixed-waste.

c. Please advise us of the status of the handling, processing, and/or disposal procedures that the Army is working on regarding explosive material contaminated with DU. If your procedures are now available, please submit a copy of these

procedures. Our concerns in this matter are that this material could be considered as mixed-waste requiring special precautions and treatment.

d. Your letter dated December 21, 1992, discussed interim permits that you received from the EPA and the State of New York to store mixed-waste. Please submit copies of these permits.

C. Emergency Preparedness Plan

Based on the amount of ammunition that you will be storing and working with for the demilitarization operations, please advise us of your emergency preparedness plans, established or proposed, in case of explosion and/or fire or other violent incidents [see **Attachment II** (Occurrences to be Addressed by Your Emergency Preparedness Plans) and 10 CFR 30.32(i)]. We presume that the Seneca Army Depot Activity has such emergency preparedness plans, as described in Attachment II, available for review. If not, it is possible to modify the "SEAD ACCIDENT PREVENTION PROGRAM," SEAD-R 385-1, (received from you as an enclosure to your letter dated September 2, 1993) to include an emergency preparedness plan.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 116420. The reviewer for this licensing action is C. Thor Oberg. If you have any technical questions regarding this deficiency letter please call the reviewer at (610) 337-5202.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely yours,

M. S Shanbaky

Mohamed M. Shanbaky, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards

Enclosures:
1. 10 CFR Parts 30, 40, and 71
2. Regulatory Guide 3.66
3. NUREG/CR-1754
4. Attachments I and II

cc:
Commander
U. S. Army Command
ATTN: AMCS F-P (J. Manfre)
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

Michael Lewis
Radiation Safety Officer
Seneca Army Depot Activity
ATTN: SDSSE-CO
Romulus, NY 14541-5001

Attachment II

Occurrences to be Addressed by Your Emergency Preparedness Plans

1. Explosion on Site: Your plan should address

   a. personnel evacuation plans and emergency medical treatment and transportation availability;

   b. decontamination of personnel (i.e., injured personnel) and areas, medical intervention and treatment, and dose assessments for accident personnel on site and off site;

   c. the capability of local hospital to provide treatment for injured or wounded and/or radioactively contaminated personnel (i.e., letters of agreement);

   d. the capability of your security to provide orderly control over the site subsequent to this or other incidents;

   e. the capability of the site Fire Brigade and the outside local fire department to cope with this and other incidents;

   f. your radiological assessments and controls established or planned for such an incident; and

   g. advise us of your meteorological capabilities or dependency on outside assistance.

2. Fire on Site: Respond as delineated under Item 1. above. In addition, you should address

   a. evacuation, medical, and radiological provisions you have ascribed for the public;

   b. the arrangements you have and the assistance you can expect from the Local and State Police organizations and their familiarity with the site and possible incidents.

3. Violent Weather, Earthquake, Flood, etc.: These incidents should also be address as outlined under Items 1. and 2. above.

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK 14541-5001

REPLY TO
ATTENTION OF

Safety Office

January 5, 1995

Dr. Mohamed M. Shanbaky
Chief, Research and Development Section
Division of Radiation Safety and Safeguards
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Dr. Shanbaky:

Reference is made to your letter dated November 7, 1994, seeking additional information. Request an additional 30 days from the January 6, 1995 suspense for response. In reference to decommissioning cost (Statement of Intent), there are still some unresolved issues relating to the level of authority to obligate funds for decommissioning in the Army budgetary process. Due to the significant potential costs involved, the specific type of funding is at issue. These specific points are being addressed to higher command channels.

Mail Control Number is 116420.

Point of contact is Mr. Michael R. Lewis at (607) 869-1432.

Sincerely,

Roy E. Johnson

Roy E. Johnson
LTC, U.S. Army
Commanding Officer

SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

REQUISITION AND INVOICE / SHIPPING DOCUMENT

Form Approved
OMB No. 0704-0246
Expires Oct 31, 1991

1 FROM (Include ZIP Code)
Commander, Seneca Army Depot Activity
ATTN: SDSTO-SES
Romulus, NY 14541-5001

2 TO (Include ZIP Code)
Mohamed Shanbaky, PhD, Chief
Research and Development Section
U.S. Nuclear Regulatory Commission

3 SHIP TO - MARK FOR
475 Allendale Rd
King of Prussia, PA 19406-1415

Mohamed Shanbaky

SHEET NO. | NO OF SHEETS | 5. REQUISITION DATE | 6. REQUISITION NUMBER

7. DATE MATERIAL REQUIRED (YYMMDD) | 8. PRIORITY

9. AUTHORITY OR PURPOSE
License Renewal

10. SIGNATURE
Michael R Lewis

11a. VOUCHER NUMBER & DATE (YYMMDD)

12. DATE SHIPPED (YYMMDD) | b.

13. MODE OF SHIPMENT | 14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.

4. APPROPRIATIONS SYMBOL AND SUBHEAD	OBJECT CLASS	EXPENDITURE ACCOUNT (From)	(To)	CHARGEABLE ACTIVITY	BUREAU CONTROL ACTIVITY NO.	BUREAU CONTROL NO.	AMOUNT

ITEM NO (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND/OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
1	Package, Federal EX Overnight J.O. # 5WNSAF CC: W0100 Rec'd Milroy 45031							

16 TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO

17. SPECIAL HANDLING

18. RECAPITULATION OF SHIPMENT	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
ISSUED BY					
CHECKED BY					
PACKED BY			← TOTAL →		

19 RECEIPT	DATE (YYMMDD)	BY	
CONTAINERS RECEIVED EXCEPT AS NOTED			SHEET TOTAL
QUANTITIES RECEIVED EXCEPT AS NOTED			GRAND TOTAL
POSTED			20 RECEIVER'S VOUCHER NO.

DD Form 1149, MAR 89 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

306/080

Previous editions are obsolete.

DEPARTMENT OF THE ARMY
SENECA ARMY DEPOT ACTIVITY
5786 STATE RTE 96
ROMULUS NEW YORK 14541-5001

REPLY TO
ATTENTION OF

January 27, 1995

Safety Office

Dr. Mohamed M. Shanbaky, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Dr. Shanbaky:

Reference your letter of November 7, 1994, Control Number 116420, Docket Number 040-08526, and License Number SUC-1275, responses are keyed to your paragraph numbers:

A. Financial Assurance and Decommissioning Plan

The estimated cost of decommissioning would be approximately 5.45 million dollars if the storage igloos are considered unaffected areas, and 17.20 million dollars otherwise. It should be noted that ammunition shipping and storage containers are not opened in the igloos and no contamination has been found to date in annual surveys. Totals were estimated using engineering drawings of the facilities and NUREG/CR-1754. A statement of intent for a government license is included with the above information (enclosure 1).

B. DU Obtained as a Result of Demilitarization

1a. Other government facilities have been chosen for demilitarization of DU ammunition: Savanna Army Depot for small caliber (30mm and less) and Iowa Army Ammunition Plant for large caliber (greater than 30mm). However, at SEDA the following is estimated as maximum for a three-year period: 300,000 rounds of 20mm at 21,000 kg; 300,000 rounds of 25mm at 44,000 kg; 300,000 rounds of 30mm at 89,000 kg; and 150,000 rounds of 105mm at 550,200 kg. Presently, SEDA holds approximately 12,000 rounds of 20-25mm, of which none are in Condition Code H (demilitarization candidate). Of the approximate 80,000 rounds of 105mm, it is estimated that 3,000 are in Condition Code H; of the approximate 12,000,000 rounds of 30mm, only 700 are in Condition Code H. Figures are approximate due to shipping and receiving. For Seneca to demilitarize the above estimates, ammunition would have to be shipped to SEDA and demilitarization authority directed by higher headquarters.

1b. DU metal removed will be transferred to another licensee. New York State does not have a burial site on line and probably will not for some time. The stance of New York State for waste is storage. Headquarters, U.S. Army Armament, Munition and Chemical Command (AMCCOM) - renamed Armament and Chemical Acquisition and Logistics Activity (ACALA) effective October 1, 1994, is the responsible agency for low-level radioactive waste. With the current state of affairs in disposal, no generation of radioactive waste will be performed until approval is gained from ACALA Radioactive Waste Disposal Division for the disposition of waste.

2a. SEDA does not have any mixed waste as a result of operations under license SUC-1275, or any other DU license.

2b. SEDA will not perform any operation that will generate mixed waste under NRC License SUC-1275.

2c. The Army presently does not have approved procedures for the handling, processing and disposal of explosive material contaminated with DU. The problem is being studied under government contract. It should be noted that penetrators under SUC-1275 are encapsulated and do not contact the explosive material. Any explosive material on the encapsulation would be wiped off prior to further operations.

2d. The State of New York Environmental Permit consists of 7 three-inch loose leaf binders. A site visit is scheduled to characterize the mixed waste currently held at SEDA. Please note that this material was generated under an old DOE project and not related to current operations. The site visit is scheduled in the January-February 1995 time frame, with possible disposal at Envirocare during the summer of 1995. Enclosed please find EPA information and extracted material from the New York State Environmental Permit (enclosure 2).

C. Emergency Preparedness

Seneca Army Depot Activity's emergency response is contained in the Disaster Control Plan (Seneca-DCP). The DCP covers natural forces, major accidents or incidents, oil spills or hazardous substance pollution, and enemy action. The DCP controls the actions of the security branch, fire department, radiological assistance team (RAT), and other elements required to control emergencies. The DCP prescribes procedures for the operation of the Emergency Operations Center (EOC). The EOC acts as the central clearing house for notifications and situation reports to off-post headquarters and agencies; requests from on-site emergency teams for additional resources; requests for information

from off-post sources; and requests for support from civil authorities. Security is provided 24-hours per day by an armed guard force presently totaling 34. The on-post fire department currently consists of 14 personnel with four fire trucks, a rescue vehicle and an ambulance. The fire department is a 24-hour a day operation. The EOC and response teams are exercised at least annually - this includes the security forces, fire department, radiological assistance team, emergency medical technicians, and radiation protection officers for incidents involving DU. Accident scenarios include evacuation of personnel, emergency medical treatment, decontamination of personnel, dose assessment for accident personnel on and off site, and radiological assessments. In the past, off-post agencies have been invited to participate. The nearest hospital, Geneva General, has a Memorandum of Understanding with Seneca for the acceptance of contaminated personnel. Initial dose assessment would be made by the Doctor in attendance with input from the Depot RPO. Further assessment would be directed by the Army Materiel Command Surgeon General. Seneca has an on-post meteorological station linked by telephone line to the Public Works Branch.

Please add John Cleary and Thomas Reynolds as authorized local Radiation Protection Officers for license SUC 1275. A resume of training and experience is at enclosure 3.

We appreciate your continued efforts in reviewing SEDA's request to renew License No. SUC-1275.

Point of contact is Michael R. Lewis, (607) 869-1432, FAX (607) 869-1950. Mail Control number is 116420.

Roy E. Johnson

ROY E. JOHNSON
LTC, U.S. Army
Commanding Officer

Enclosures

Building 5

Overall dimensions:	32.0 feet x 367.4 feet
Floor Area :	11,756.8 sq.ft.
Wall Area :	approx. 1100 linear feet of wall x approx. 9.6 ft. ceiling height= approximately 10,560 sq.ft.
Ceiling Area:	11,756.8 sq.ft.
TOTAL AREA :	34,073.6 sq.ft.

Total Number of one-meter grids: 3186

Building 306

Overall dimensions:	50.6 feet x 114.0 feet
Floor Area:	5768.4 sq.ft.
Ceiling Area :	5768.4 sq.ft.
Wall Area:	approx. 800 linear feet of wall x approx. 8.0 ft. ceiling height = 6,400 sq.ft.
TOTAL AREA :	17,936.8 sq.ft.

Total Number of one-meter grids: 1672

Storage Magazines

24 each 26.8 ft x 80 ft. = 132,360 sq.ft.
66 each 26.8 ft x 60 ft. = 272,844 sq.ft.

TOTAL AREA :	405,204 sq.ft.

Total Number of one-meter grids: 37,722
Total Number of 3-meter grids: 4200 **

** (If storage magazines considered as uneffected areas, 3-meter grids may be used)

Encl 1

Building 612

Overall dimensions:	310.0 feet x 60.0 feet
Floor Area:	18,600 sq.ft.
Ceiling Area:	18,600 sq.ft.
Wall Area:	approx. 1900 linear feet of walls x approx. 13.0 ft. ceiling height = 24,700 sq.ft.
TOTAL AREA	61,900 sq.ft.

Total Number of one-meter grids: 5758

Building 2073

Overall Dimensions:	80.0 feet x 38.0 feet
Floor Area:	3040 sq.ft.
Ceiling Area:	3040 sq.ft.
Wall Area:	approx. 228 linear feet of walls x approx. 13.0 ft. ceiling height = 2,964 sq.ft.
TOTAL AREA	9,044 sq.ft.

Total Number of one-meter grids: 842

DECON

Decommissioning activities begin with a radiation survey to determine the extent and magnitude of surface contamination on facility components. Survey results are used to formulate a plan, to include procedures and techniques , to be followed in decommissioning of the facility. After the facility is decontaminated, to verify compliance withe the SCP and NRC guidelines, and before the facility can be released for unrestricted use, a second survey is performed. For the facilities involved at SEDA, the manpower and cost of radiation surveys represent a significant portion of the total manpower and cost of decommissioning.

Time Estimates

NOTE: These estimates are of the interior of the facilities mentioned and are based on the existing condition of the facilities as of 7 December 1994, and cost estimating guidelines contained in NUREG/CR-1754. Estimates for floors, ceilings, and walls are based on a work crew that includes a foreman and two technicians. Packaging and disposal of LLRW should be addressed separately.

Building 5

3186 one-meter grids (sq.m.)
Floor----1093 sq.m. = 1311 M/H
Ceiling--1093 sq.m. = 1311 M/H
Walls----1000 sq.m. = 2621 M/H

Totals----3186 sq.m. = 5243 Man Hours

Building 306

1672 one-meter grids
Floor----536 sq.m. = 641 M/H
Ceiling--536 sq.m. = 641 M/H
Walls----600 sq.m. =2873M/H

Totals--1872sq.m. = 4155 M/H

Building 2073

842 one-meter grids
Floor----283 sq.m. = 339 M/H
Ceiling--283 sq.m. = 339 M/H
Walls----276 sq.m. = 1322 M/H

Totals---842 sq.m. = 2000 Man Hours

Storage Magazines

24 each 26.8 x 80 feet x 13.4 feet high = 132,360 ft
66 each 26.8 x 60 feet x 13.4 feet high = 272,844 ft
Floor----------13,700 sq.m.
Walls/Ceiling---23,022 sq.m.

Totals----------37,722 sq.m. = 45,266 Man Hours
(4,200 3m. grids = 5,030 Man Hours)

Miscellaneous

In addition to the above estimates, there are several items in buildings 5, 306, 612, and 2073 that will add additional man hours to the above estimate in the event of contamination of said facilities.

Building 2073 has a 13' x 13' paint booth, a 21' x 14' drying oven, and a 9' x 14' make-up unit. As of 19 Dec 94, the paint booth and drying oven, tough operational, have not been used. There are no floor drains in work area of building 2073.

Building 306 has floor drains in the rest rooms only.
Building 612 and building 5 have no floor drains.
Where possible, we attempted to provide cost estimates under two conditions:

- CONDITION A Detailing all maintenance facilities in one-meter grids, and the storage magazines in 3-meter grids
- CONDITION B Detailing all facilities and storage magazines in one-meter grids

APPENDIX F

COST ESTIMATING TABLES

1. Planning and Preparation

Table 1

Task	Work Days Supervisor	Foreman	H.P.	Clerical	Total	Total Cost
1. Preparation of Documentation for Regulatory Agencies						
2. Submittal of Decommissioning Plan to NRC when required by 10 CFR 30.36(c)(2), 40.42(c)(2), or 70.38(c)(2)*						
3. Development of Work Plans						
4. Procuring of Special Equipment						
5. Staff Training						
6. Characterization of Radiological Condition of the Facility (Including soil and tailings analysis or groundwater analysis, if applicable)						
7. Other						
8. Total						

* For assistance in preparation of cost estimate for 10 CFR Part 72, consult NRC Office of Nuclear Material Safety and Safeguards.

APPENDIX F (Continued)
COST ESTIMATING TABLES

Table 2

Position	Unit Cost for Workers: Basic Salaries ($/yr)	Overhead Rate (%)	Worker Cost/year
Supervisor			
Foreman			
Craftsman			
Technician			
Health Physicist			
Laborer			
Clerical			
Other			

2. Decontamination and/or Dismantling of Radioactive Facility Components*

	No.	Dimensions	Buildings	No.	Dimensions
Glove Boxes	0	(m^3)	Amount of Floor Space	94	15,612 (m^2)
Fume Hood	0	(m^3)	Ventilation Ductwork	94	(m)
Hot Cells	0	(m^3)	Amount of Wall Space	94	29,838 (m^2)
Lab Benches	0	(m)	Other CEILINGS	94	1,912 (m^2)
Sink and Drain	0	(m)			

Table 3

Work Days

Task	Supervisor	Foreman	Technicians	H.P.	Craftsmen	Laborer	Total	Total Cost
1. Decon/Dismantle Major Components and/or Processing and Storage Tanks								
2. Decon/Dismantle Laboratories, Fume Hoods, Glove Boxes, Benches, etc.								

*Indicate whether component is to be decontaminated to unrestricted release levels or packaged and disposed of at a low-level waste site.

Table 3 (continued)

Work Days 8 Hour Days @ $178.87

Task		Supervisor	Foreman	Technicians	H.P.	Craftsmen	Laborer	Total	Total Cost
3. Decon/Dismantle Waste Areas									
- Radwaste Areas									
- Scrap Recovery Areas									
- Other									
4. Decon/Dismantle Service Facilities	*	685	685	1370	170	86	86	3082	$4.41M
	**	2361	2361	4722	591	296	296	10,627	$15.2 M
- Maintenance Shop									
- Decontamination Areas									
- Ventilation Systems									
- Other									
5. Decon/Dismantle Waste Treatment Facilities and Storage Areas on the Site (Including exhume and package contaminated soil and tailings, if any)									
- Fluoride Lagoons									
- Nitrate Lagoons									
- CaF2 Waste Recovery									
- Ground Water Restoration									
- Other									

** If 90 storage igloos gridded in 1 meter grids instead of 3 meter grids

* A Cost
** B Cost

APPENDIX F (Continued)
COST ESTIMATING TABLES

Table 3 (continued)

Work Days

Task	Supervisor	Foreman	Technicians	H.P.	Craftsmen	Laborer	Total	Total Cost
6. Monitor for compliance, reclean and remonitor, if necessary								
7. Other (e.g., contractor fees) Clerical				600			600	858.6 K

Table 4

Equipment/Supply	Quantity	$ Cost A	$ Cost B
Liq Scin Vials	4200	2142	19,114
Dry Smears	4200	272	2,416
Wet Swipes	4200	2747	24,670
Lab Analysis $10 each	8400	84,000	377,220

3. Packaging, Shipping, and Disposal of Radioactive Wastes

Table 5

Waste Type	Volume (m^3)	No. of Containers	Type of Containers	Unit Cost of Container	Cost of Container
Total					

Table 6

Distance Shipped _____ (miles)
Unit cost for shipment _____ ($/mile/truckload)
Additional charges
Overweight _____ ($/mile)
Surcharges _____ ($/mile)

Waste Type	No. of Shipments	Unit Cost for Shipping	Distance Shipped	Surcharge	Transportation Cost
Total					

APPENDIX F (Continued)
COST ESTIMATING TABLES

Table 7

Burial Charges _____ ($/m^3)
Surcharges
Per container _____ ($)
Disposal _____ ($/m^3)

Waste Type	Burial Volume	Unit Cost of Burial	Surcharge	Burial Cost
Total				

4. Restoration of Contaminated Areas on Facility Ground

Table 8

Task	Work Days Supervisor	Foreman	H.P.	Clerical	Total	Total Cost
Backfill and Restore Site						

5. Final Radiation Survey

Table 9

Task	Work Days Supervisor	Foreman	Technicians H.P.	Clerical	Total	$ Total Cost A
10 % of Grids	5	20	4 40	40	109	156 K
10 % Lab Samples						8.4 K
Total						

Above figures include an estimate of
100 % sample of all grids over MDA

Total Cost B
686 K
37 K

6. Site Stabilization, Long-Term Surveillance (if applicable)

Table 10

Task	Work Days Supervisor	Foreman	H.P.	Clerical	Total	Total Cost
_____	_____	_____	___	_____	____	____
_____	_____	_____	___	_____	____	____
_____	_____	_____	___	_____	____	____

SUM of TABLES Cost A $ 5.45 Million Cost B $ 17.2 Million

TO: U.S. Nuclear Regulatory Commission
Region I
Division of Radiation Safety and Safeguards
Nuclear Materials Safety Branch
475 Allendale Road
King of Prussia, PA 19406

STATEMENT OF INTENT

As Commander of Seneca Army Depot Activity, I, or a successor in command, exercise express authority and responsibility to request funding for decommissioning activities associated with operations authorized by U. S. Nuclear Regulatory Commission Materials License No. SUC-1275. This authority is established by Army Regulation 37-1, 30 APRIL 1991, Army Command Policy. Within this authority, I intend to have sufficient funds made available when necessary to decommission the facilities under this license. The current estimated cost for decommissioning is 17.2 million dollars. I intend to request and obtain these funds sufficiently in advance of decommissioning to prevent delay of required activities.

A copy of Assumption of Command Orders is attached as evidence that I am authorized to represent Seneca Army Depot Activity in this transaction.

Roy E. Johnson

ROY E. JOHNSON
LTC, U.S. Army
Commanding Officer

Enc 1

SDSTO-SECO (600) 15 Jul 93

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Assumption of Command By Authority of AR 600-20, para 2-3b

The undersigned assumes command of Seneca Army Depot Activity, Romulus, New York 14541-5001, effective 1030/15 July 1993.

Roy E. Johnson

ROY E. JOHNSON
LTC OD
Commanding

DISTRIBUTION:
CG, DESCOM
CDR, TOAD
Indiv
Ofc CDR
Legal Ofc
EOO
Safety Ofc
PAO
Mission Opns Div
Ammunition Survl Div
Instal Mgt Div
Resources Div
Civ Pers Ofc
CDR, RG-Seneca
CDR, LORAN-C
Health Clinic
Commissary
DRMO
TMDE

SECTION A

PART A PERMIT APPLICATION [*40 CFR 270.13*]

The owner or operator of this depot is required to submit a completed Part A application as part of the 6NYCRR Part 373 permit application.

A-1 INFORMATION REQUIRED FOR PART A SUPPLIED IN 6NYCRR PART 373 PERMIT APPLICATION

A topographic map of the entire facility, as required in 40 CFR 270.13(l), is presented in Appendix 1. A more detailed description of the facility, its construction and layout, and its surroundings is presented in Section B. Photographs clearly delineating all existing treatment areas, as required in 40 CFR 270.13(h)(2), are not included (SEAD will provide at a later date). Information regarding the location of these facilities is provided in the drawings and maps included in Appendix 1 of the 6NYCRR Part 373 Permit Application. These drawings and maps provide a more accurate depiction of the waste management features of the treatment facility than could be obtained at this time through the use of photographic methods.

Use Only

For State Use Only

EPA

United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

Date Received
Month Day Year

I. ID Number(s)

A. EPA ID Number	B. Secondary ID Number *(if applicable)*
NY0213820830	

II. Name of Facility

SENECA ARMY DEPOT

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street

ROUTE 96

Street *(continued)*

City or Town	State	ZIP Code
ROMULUS	NY	14541-5001

County Code *(if known)*	County Name
	SENECA

B. Land Type	C. Geographic Location		D. Facility Existence Date
(enter code)	*LATITUDE (degrees, minutes, & seconds)*	*LONGITUDE (degrees, minutes, & seconds)*	Month Day Year
F	42 43 36	076 51 33	06 11 1941

IV. Facility Mailing Address

Street or P.O. Box

ROUTE 96

City or Town	State	ZIP Code
ROMULUS	NY	14541-5001

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(last)*	*(first)*
BATTAGLIA	RANDALL

Job Title	Phone Number *(area code and number)*
ENVIRON. ENG.	607-869-1450

VI. Facility Contact Address *(See Instructions)*

A. Contact Address Location	A. Contact Address Mailing	B. Street or P.O. Box
	X	ROUTE 96 BLDG. 123

City or Town	State	ZIP Code
ROMULUS	NY	14541-5001

EPA I.D. Number *(enter from page 1)*: NYO213820830

Secondary ID Number *(enter from page 1)*:

VII. Operator Information *(see instructions)*

Name of Operator: JAMES CROSS COMMANDING OFFICER

Street or P.O. Box: ROUTE 96

City or Town: ROMULUS

State: NY

ZIP Code: 14541-5001

Phone Number *(area code and number)*: 607-869-1616

B. Operator Type: F

C. Change of Operator Indicator: Yes [X] No [ ]

Date Changed: Month / Day / Year

VIII. Facility Owner *(see instructions)*

A. Name of Facility's Legal Owner: US GOVERNMENT

Street or P.O. Box:

City or Town:

State:

ZIP Code:

Phone Number *(area code and number)*: - -

B. Owner Type: F

C. Change of Owner Indicator: Yes [ ] No [X]

Date Changed: Month / Day / Year

IX. SIC Codes *(4-digit, in order of significance)*

Primary	Secondary
(description)	(description)
Secondary	**Secondary**
(description)	(description)

X. Other Environmental Permits *(see instructions)*

A. Permit Type *(enter code)*	B. Permit Number	C. Description
N	NY0021296	NPDES-Discharge to Surface Water
F	FW850-80-015	State 404 Wetlands
E	8E4530890008	State Restricted Burning

EPA I.D. Number *(enter from page 1)*

N	Y	0	2	1	3	8	2	0	8	3	0

Secondary ID Number *(enter from page 1)*

XI. Nature of Business *(provide a brief description)*

The primary mission of SEAD is the receipt, storage maintenance and supply of ammunition. However, over the years SEAD's mission has broadened to include the receipt, storage, care, and maintenance of general supplies, industrial plant equipment, special weapons, and tank and automotive major items and assemblies. The sole function of the deactivation furnace is the demilitarization of obsolete and unserviceable munitions.

XII. Process - Codes and Design Capacities

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Twelve lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided in Item XIII.*

B. PROCESS DESIGN CAPACITY - *For each code entered in column A, enter the capacity of the process.*

1. AMOUNT -*Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process unit.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	DISPOSAL:	
D79	INJECTION WELL	GALLONS; LITERS; GALLONS PER DAY; OR LITERS PER DAY
D80	LANDFILL	ACRE-FEET OR HECTARE-METER
D81	LAND APPLICATION	ACRES OR HECTARES
D82	OCEAN DISPOSAL	GALLONS PER DAY OR LITERS PER DAY
D83	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	STORAGE:	
S01	CONTAINER (barrel, drum, etc.)	GALLONS OR LITERS
S02	TANK	GALLONS OR LITERS
S03	WASTE PILE	CUBIC YARDS OR CUBIC METERS
S04	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	TREATMENT:	
T01	TANK	GALLONS PER DAY OR LITERS PER DAY
T02	SURFACE IMPOUNDMENT	GALLONS PER DAY OR LITERS PER DAY
T03	INCINERATOR	SHORT TONS PER HOUR; METRIC TONS PER HOUR; GALLONS PER HOUR; LITERS PER HOUR; OR BTU'S PER HOUR
T04	OTHER TREATMENT (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundment or incinerators. Describe the processes in the space provided in Item XIII.)	GALLONS PER DAY; LITERS PER DAY; POUNDS PER HOUR; SHORT TONS PER HOUR; KILOGRAMS PER HOUR; METRIC TONS PER DAY; METRIC TONS PER HOUR; OR SHORT TONS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
GALLONS PER HOUR	E
GALLONS PER DAY	U
LITERS	L
LITERS PER HOUR	H
LITERS PER DAY	V
SHORT TONS PER HOUR	D
METRIC TONS PER HOUR	W
SHORT TONS PER DAY	N
METRIC TONS PER DAY	S
POUNDS PER HOUR	J
KILOGRAMS PER HOUR	R
CUBIC YARDS	Y
CUBIC METERS	C
ACRES	B
ACRE-FEET	A
HECTARES	Q
HECTARE-METER	F
BTU's PER HOUR	K

EPA I.D. Number (enter from page 1)	Secondary ID Number (enter from page 1)
N Y 0 2 1 3 8 2 0 8 3 0	

XII. Process – Codes and Design Capacities (continued)

EXAMPLE FOR COMPLETING ITEM XII (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

Line Number	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	C. PROCESS TOTAL NUMBER OF UNITS	FOR OFFICIAL USE ONLY
X 1	S 0 2	600	G	0 0 2	
X 2	T 0 3	20	E	0 0 1	
1	S 0 1	24155	G	0 0 3	
2	T 0 3	.154	D	0 0 1	
3	T 0 4	2.3	N	0 0 2	
4					
5					
6					
7					
8					
9					
1 0					
1 1					
1 2					

NOTE: If you need to list more than 12 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for additional treatment processes in Item XIII.

XIII. Additional Treatment Processes (follow instructions from Item XII)

Line Number (enter numbers in sequence with Item XII)	A. PROCESS CODE	B. TREATMENT PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	C. PROCESS TOTAL NUMBER OF UNITS	D. DESCRIPTION OF PROCESS
0 3	T 0 4	1.5	N	0 0 1	OPEN BURNING Tons per day
0 3	T 0 4	.8	N	0 0 1	OPEN DETONATION Tons per day
	T 0 4				
	T 0 4				

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
N	Y	0	2	1	3	8	2	0	8	3	0												

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. ESTIMATED ANNUAL QUANTITY - *For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. UNIT OF MEASURE - *For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that processes that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of item XIV-D(1).*
3. *Enter in the space provided on page 7, item XIV-E, the line number and the additional code(s).*

2. PROCESS DESCRIPTION: *If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER- Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA HAZARD WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESS (1) PROCESS CODES (enter)									D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

EPA I.D. Number (enter from page 1): NY021382083 0

Secondary ID Number (enter from page 1):

Description of Hazardous Wastes (continued)

Line Number	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D003	320	T	T03	
2	D030				
3	D003	230	T	T04	
4	D030				
5	D002	3000	P	S01	
6	D006				included with above
7	D008				included with above
8	D005	5000	P	S01	
9	D002				included with above
10	D001	30000	P	S01	
11	F005	600	P	S01	
12	D001	200	P	S01	
13	F004				included with above
14	F005				included with above
15	D001	1000	P	S01	
16	B001				included with above
17	D001	4500	P	S01	
18	B002				included with above
19	D001	1500	P	S01	
20	B003				included with above
21	D001	5000	P	S01	
22	B004				included with above
23	D001	3000	P	S01	
24	B005				included with above
25	D001	1000	P	S01	
26	B006				included with above
27	D001	3500	P	S01	
28	B007				included with above
29					
30					
31	D002	100	P	S01	
32	F002				included with above
33	F002	5000	P	S01	

EPA I.D. Number *(enter from page 1)*: N Y 0 2 1 3 8 2 0 8 3 0

(Continued) Pg. 6

Secondary ID Number *(enter from page 1)*:

Description of Hazardous Wastes (continued)

Line Number	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D040				included with above
2	F003	200	P	S01	
3	R001				included with above
4	F002	200	P	S01	
5	R001				included with above
6	D001	200	P	S01	
7	R001				included with above
8	F002	200	P	S01	
9	D040				included with above
10	R001				included with above
11	F005	200	P	S01	
12	R001				
13	U228	400	P	S01	
14	U131	3200	P	S01	
15	D026	400	P	S01	
16	F027	400	P	S01	
17	F024	400	P	S01	
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
32					
33					

EPA I.D. Number *(enter from page 1)*												Secondary ID Number *(enter from page 1)*														
N	Y	0	2	1	3	8	2	0	8	3	0															

XIV. Description of Hazardous Waste *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 6.

Line Number	*Additional Process Codes (enter)*

XV. Map

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Owner Signature	Date Signed

Name and Official Title *(type or print)*
U.S. GOVERNMENT

Operator Signature	Date Signed

Name and Official Title *(type or print)*
JAMES B. CROSS - U.S. ARMY, COMMANDING OFFICER

XIX. Comments

Updated photographs (Section XVII) will be submitted separately at a later date.

Note: Mail completed form to the appropriate EPA Regional or State Office. (refer to instructions for more information)

ATTACHMENT ONE

DEACTIVATION FURNACE
(ROTARY KILN INCINERATOR WITH BAGHOUSE)
BUILDING 367

Ammunition from storage and/or disassembly operations is received by the carrier.

Packaged ammunition is placed on the unpacking table and unpacked. Packing material is then placed on pallets for transfer to the demolition grounds for burning or to DRMO for resale if there is no explosive contamination. Unpacked ammunition is placed on an endless conveyor for transfer to the deactivation furnace at prescribed intervals. The ammunition is burned and exploded by the heat in the furnace. The residue from the furnace is transferred by endless conveyor to metal containers and allowed to cool. When cooled, the scrap metal is inspected 100% for any unexploded ordnance. After this inspection, the scrap metal is placed in wooden boxes for the transfer to DRMO.

ATTACHMENT TWO

DEMOLITION GROUNDS
DETONATION OPERATIONS

Ammunition and components to be detonated are transferred to the demolition grounds via carrier.

Demolition holes are prepared by the user of an 18-ton bulldozer.

Ammunition is unpacked at the unpack site at the demolition grounds and transferred to the demolition field by carrier and/or lift truck.

Material to be detonated is placed in a hole dug by the bulldozer. Demolition material used to destroy the ammunition or components is transferred from storage. The material is placed in the hole with the ammunition to be destroyed. A primer cord is attached to the demolition material, and blasting caps are attached to primer cord. The primer cord is attached to the circuit wire. The bulldozer will then fill the hole and place a minimum of eight feet of dirt over the material to be detonated. Operators will retire to the dugout, close the gate, raise the red flag, unlock the control panel, and detonate the desired hole.

ATTACHMENT THREE

DEMOLITION GROUNDS
OPEN BURNING OPERATIONS

Ammunition and components are transferred to the demolition grounds by carrier from disassembly and/or storage locations.

Propellants are burned in a burning pan. The propellants are placed in the burning pan according to Standard Operating Procedures. A primer cord is attached to the circuit wire. Operators retire to the dugout, close the gate, raise the flag, unlock the control panel, and ignite the propellants.

Propellants will be burned on the ground only when an imminent emergency exists.

Explosive contaminated materials such as artillery casings, gloves, boxes, packing materials, etc., are burned or flashed on the ground at pad J.

Combustible beds are prepared at burning pad J utilizing used pallets, wooden boxes, etc. A small amount of fuel oil is used to initiate vigorous combustion. When the combustible beds are prepared, the explosive contaminated material is transferred to the burning pit, and are placed on the combustible bed for burning. A trail of propellant approximately 5 feet long, six inches wide and three inches deep is placed on the ground next to the combustible bed. Electric squib is placed in the propellant trail and connected to the firing wires. Operators close the gates, raise the red flag, and fire the circuits from the panel in the office. After waiting a prescribed time, operators will return to the pits and pick up any metal parts or other metal debris for transfer to DRMO.

ATTACHMENT FOUR

HAZARDOUS WASTE STORAGE FACILITIES

There are three buildings at SEAD in which hazardous waste is stored. Building 307 is a Hazardous Waste Storage Facility, Building 301 is a PCB Storage Facility, and Building 803 is a Mixed Waste Storage Facility.

Hazardous wastes are primarily generated from machine rework operations and are stored in Building 307. These wastes include spent solvents, still bottoms from 1,1,1-trichloroethane vapor degreasers, sludge from oil/grease separators, cleaning compounds, paper filters from paint spray booths, and spent battery acids. Building 301 stores transformers containing oil with PCBs. Building 803 stores paper wipes in drums that have been contaminated with various solvents and low level radioactive components.

SENECA ARMY DEPOT
6NYCRR PART 373 PERMIT APPLICATION

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ATTACHMENT FOUR

HAZARDOUS WASTE STORAGE FACILITIES

There are three buildings at SEAD in which hazardous waste is stored. Building 307 is a Hazardous Waste Storage Facility, Building 301 is a PCB Storage Facility, and Building 803 is a Mixed Waste Storage Facility.

Hazardous wastes are primarily generated from machine rework operations and are stored in Building 307. These wastes include spent solvents, still bottoms from 1,1,1-trichloroethane vapor degreasers, sludge from oil/grease separators, cleaning compounds, paper filters from paint spray booths, and spent battery acids. Building 301 stores transformers containing oil with PCBs. Building 803 stores paper wipes in drums that have been contaminated with various solvents and low level radioactive components.

Building 301 is inspected weekly by the FEE, and bi-weekly by the Fire Department. These inspections, described in Section F-2, are performed to ensure that no leaks or spills have occurred and that the structural integrity of the building and floor remains intact.

D-3 BUILDING 803 - MIXED WASTE STORAGE FACILITY

Mixed waste generated by cleaning and maintenance of mission components in nearby buildings is transported to Building 803 for storage prior to shipment off-site. The containers used, the design and operation of Building 803, and management practices followed are described herein.

D-3.1 Description of Containers [*6NYCRR Part 373-2.9(b), (c)*]

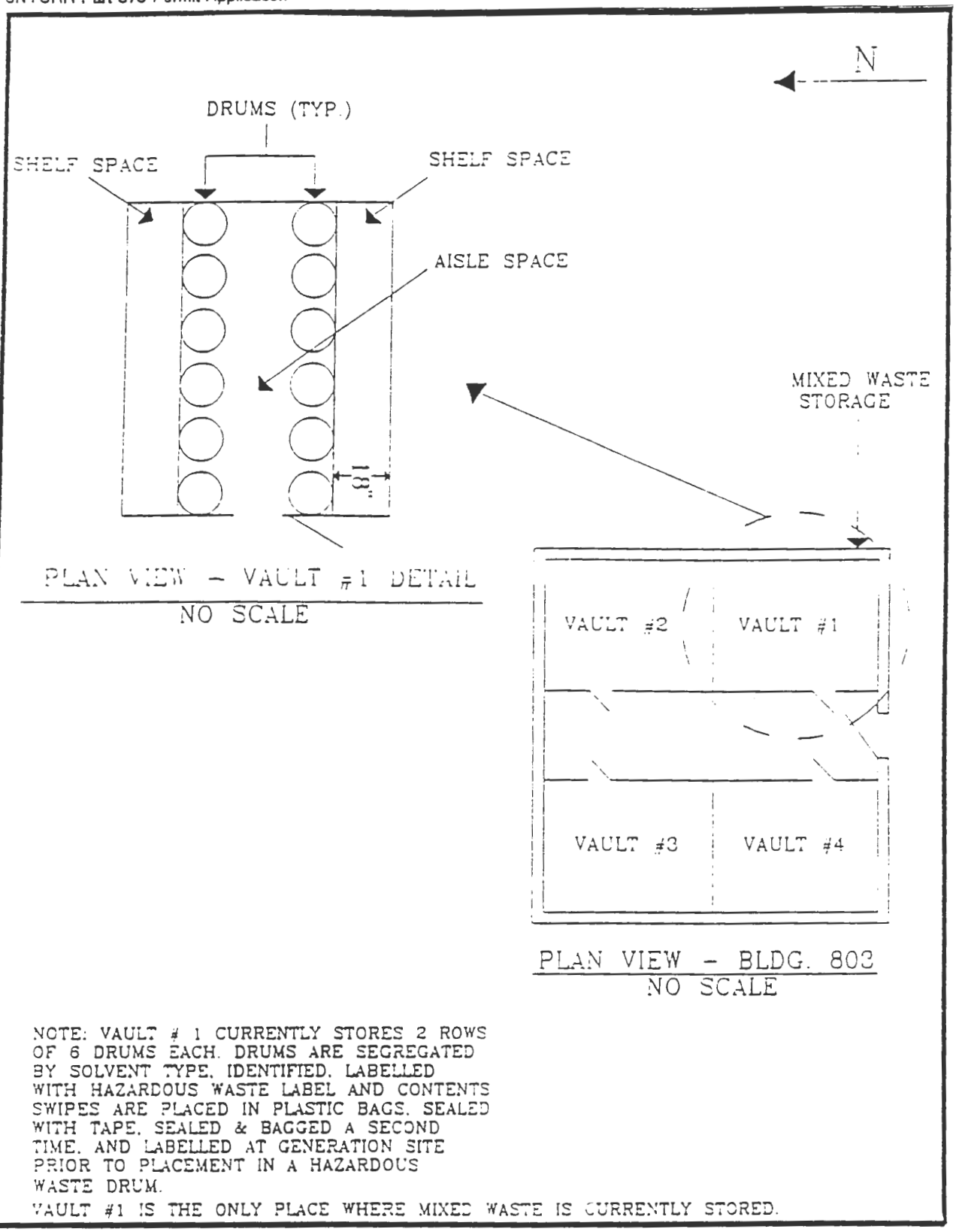
Mixed wastes are stored in new 55-gallon open top drums that conform to appropriate DOT specifications for containers holding hazardous materials in transport. Those specifications are shown in Tables C-2 and C-3, describing shipping containers for hazardous waste.

The mixed wastes consist of paper wipes contaminated with isopropanol, freon, trichloroethylene, acetone, or toluene and low-level radioactive components. The wipes are segregated by solvent type, bagged, sealed with tape, double bagged, taped again, labelled for identification, then placed in a hazardous waste labelled drum. Drums are also clearly stenciled with the appropriate waste type to ensure segregation of wipes.

D-3.2 Secondary Containment System Design and Operation [*6NYCRR Part 373-2.9(f)*]

The secondary containment system of Building 803 consists of a six-inch concrete slab floor reinforced with #4 bars. The floor has never been sealed and contains no seams. The entire building is a concrete structure with 1½-foot thick walls between the vaults. Four vaults exist within the building that are approximately 10' x 13'. There are two empty shelves on either side of the vault. Six drums are stored alongside of each shelf. A total of twelve drums are currently stored in the one vault which currently stores mixed wastes. Potentially all four vaults could contain 24 drums each (if drums are double stacked). This corresponds to a maximum of 96 drums to be stored in Building 803. Figure D-6 shows a plan view of the building and a layout of the vault in which mixed wastes are currently stored. The roof and walls of the building are concrete and prevent precipitation from contacting drums. The entrance to the building is via a 4-foot wide door adjacent to a similar false door. This first entrance is followed by a steel gate. The floor is not sloped in either direction nor are drains present. Drums are not stored on pallets.

Security of this building is very high. It is a limited access facility equipped with an intrusion detection system. Both doors are locked and only a few people at SEAD have the keys required to enter. In order to inspect or enter the area where Building 803 is located for any reason, clearance and escorts are necessary. Escorts are required for the duration of the visit.



PLAN VIEW – VAULT #1 DETAIL
NO SCALE

PLAN VIEW – BLDG. 803
NO SCALE

NOTE: VAULT # 1 CURRENTLY STORES 2 ROWS OF 6 DRUMS EACH. DRUMS ARE SEGREGATED BY SOLVENT TYPE, IDENTIFIED, LABELLED WITH HAZARDOUS WASTE LABEL AND CONTENTS SWIPES ARE PLACED IN PLASTIC BAGS, SEALED WITH TAPE, SEALED & BAGGED A SECOND TIME, AND LABELLED AT GENERATION SITE PRIOR TO PLACEMENT IN A HAZARDOUS WASTE DRUM.
VAULT #1 IS THE ONLY PLACE WHERE MIXED WASTE IS CURRENTLY STORED.

FIGURE D-6 PLAN VIEW - BUILDING 803

D-3.3 Container Management Practices [*6NYCRR Part 373-2.9(d) (e), (g) and (h)*]

Figure D-7 is a schematic representation of the mixed waste management practices at SEAD. Mixed wastes are generated at various nearby locations. Supervisors are responsible for overseeing that wastes are properly segregated, double bagged and sealed before they are placed in drums.

The mixed wastes are solids (paper wipes) stored in drums. They are contaminated with solvents and low-level radioactive components. The drums are labelled and segregated according to solvent type. They are open top drums which remain closed and sealed unless opened to add more waste at the generation point.

The mission personnel inspect the drums weekly for signs of leaks, corrosion, improper sealing of bungs or lids, labelling, dents, creases, or damage. If a drum is not determined to be acceptable for storage or transportation, it is placed in an 85-gallon overpack drum. Inspection logs of the weekly inspections are sent to the environmental office for recordkeeping until closure of the facility.

In case a shipment of the mixed waste is to occur and the off-site disposal facility has been contacted, several departments on-site will be notified of the impending shipment also. They include:

- Military Police - To provide traffic control and block certain roads.
- Fire Department - To prepare alternative emergency routes.
- Mission Personnel - To perform the loading.
- Quality Assurance - To monitor the loading operations.

These departments will aid in the safe shipment of the wastes off-site.

D-4 DEACTIVATION FURNACE PROCESS INFORMATION [*40 CFR 270.19*]

D-4.1 Engineering Description of APE 1236 Deactivation Furnace [*40 CFR 270.62(b)(2)(II)*]

At SEAD, thermal treatment of hazardous and nonhazardous wastes is accomplished in a U.S. Army Ammunition Peculiar Equipment (APE) 1236 Deactivation Furnace. The waste treated in the APE 1236 Deactivation Furnace is obsolete, unuseable, unserviceable munitions. The furnace includes feed and discharge assemblies, a rotary kiln retort, and air pollution control equipment. Detailed drawings of the APE 1236 Deactivation Furnace (AC-SK-88-55-02, Sheets 1, 2, and 3 of 3) are located in Appendix 15. Appendix 5, the Trial Burn Plan, contains design details of the APE 1236 Deactivation Furnace. All drawings and plans associated with the deactivation furnace and a list of those drawings are located in Appendix 14.

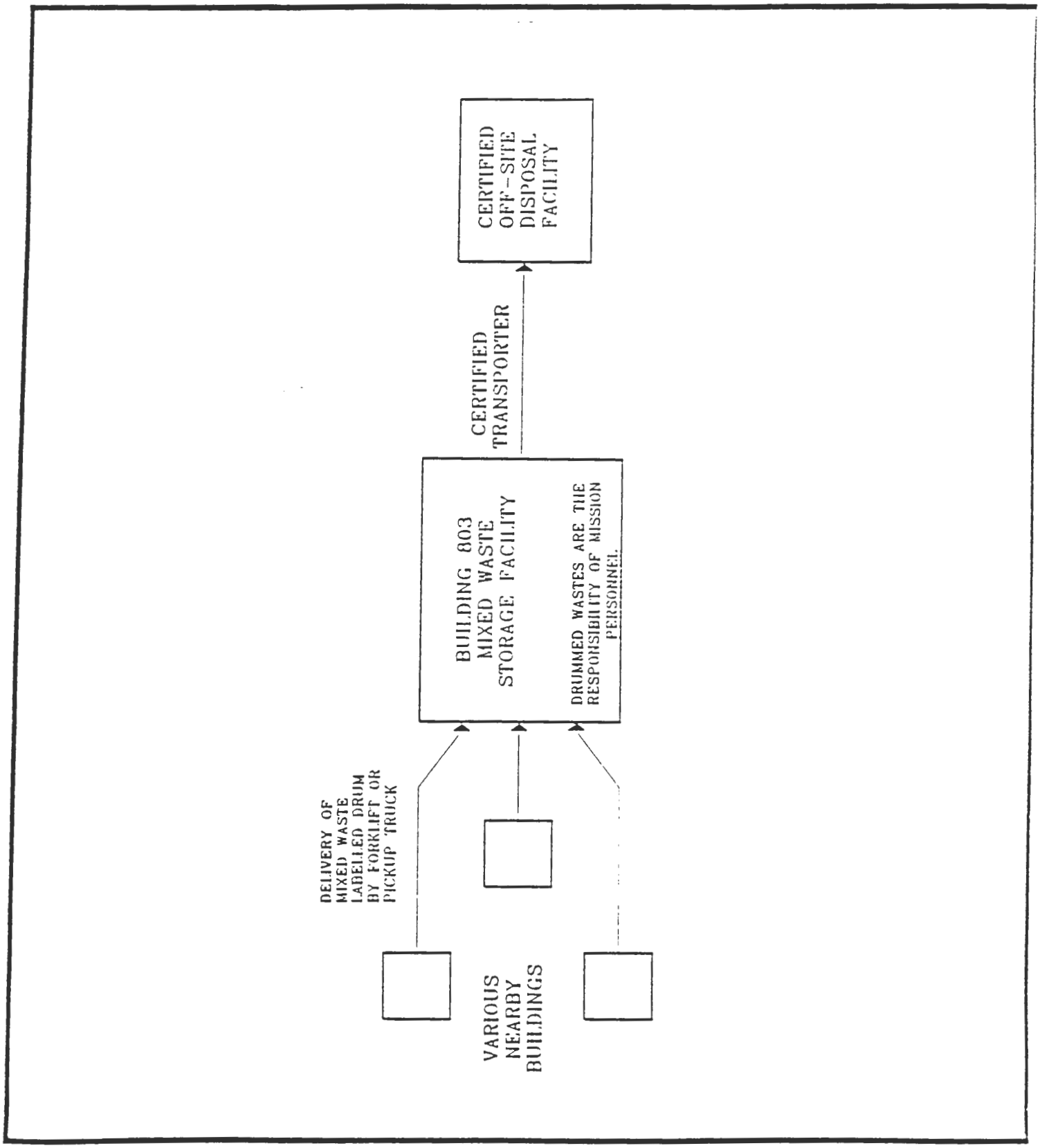


FIGURE D-7 SCHEMATIC DIAGRAM OF MIXED WASTE MANAGEMENT PRACTICES

when the retort is operating, thus precluding accumulation of ignitable materials on the conveyor where they may be exposed to excessive heat from the retort.

7. Periodic conductivity tests of safety shoes and calibration checks of the Conductive Shoe Tester are performed as specified by the area supervisor in the instructions posted at the site of the testing.

F-5.2 General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Wastes [*40 CFR 264.17(b)*][*6NYCRR Part 373-2.2(l)(1)*]

General precautions for handling ignitable or reactive wastes are discusses above. Incompatible wastes are kept strictly segregated and are not mixed at the SEAD.

1. All PEP waste materials treated or disposed of by the APE 1236 Deactivation Furnace are segregated by type and protected from open flame, smoking, cutting and welding areas, hot surfaces, friction heat, sparks (static, electrical, or mechanical), or radiant heat. The wastes are treated only in the controlled and contained environment within the APE 1236 Deactivation Furnace.

2. Normal operating procedures minimize the risk of initiation of the PEP. Sparks are avoided at the facility by requiring all of the operating personnel to wear conductive shoes and stand on conductive mats when feeding PEP wastes.

3. Heat or spark-producing, electrically powered (not approved for hazardous locations) tools, or impact tools required for maintenance, are permitted in at the facility only with written permission.

4. All electrical equipment is appropriately classified for the operational area. All electrical equipment is grounded, and periodically tested for continuity and resistance to ground. Electrical equipment is in accordance with the above referenced Army Safety Manual (which in turn references the National Electrical Code, NFPA-70), requirements.

5. The techniques and procedures used to prevent accidental ignition or explosion at the facility are documented by knowledge of the PEP to be treated and over 70 years experience accumulated by the U.S. Army in the handling and demilitarization of such materials.

6. The feed rates for the PEP are carefully developed through extensive, controlled testing. These approved rates are documented in the APE 1236 Deactivation Furnace Operating Manual and SOPs. Feed rate for a specific item is programmed at the feeder scale controls. The programmable controller prohibits the operators from feeding the PEP faster than the allowable, preset rate.

Response

No TE suit will resist every known hazardous chemical. ASTM F739-81 is a standard test which will determine breakthrough time for a material versus chemical attack. Protective clothing considerations involve chemical resistance, physical properties, cost, and decontamination potential.

Identification of the chemicals and the degree of hazards is essential to choosing appropriate PPE for response personnel. TE suits with SCBA is sometimes required to perform this initial step. Choosing PPE for response personnel involves planning for appropriate PPE as well as decision making during the response actions.

G-4.6 Storage and Treatment of Released Material *[40 CFR 264.56(g)][6NYCRR Part 373-2.4(g)(7)]*

The storage and treatment of any materials released in a spill will be contained by secondary containment structures. Response procedures prior to cleanup will additionally require high priority considerations for isolation of the spill source.

If a release of liquid hazardous waste were to take place inside a hazardous waste storage area, the release would be contained and removed as much as possible using appropriate absorbents. Solids will be swept up and stored in 55-gallon drums. The absorbents used would be collected and stored in 55-gallon drums also. Once sealed in a drum, the waste absorbents are handled similarly to other wastes in the storage area. Isolation procedures may include "overpacking" leaking drums.

The storage will then be decontaminated with a series of dilute solvent or detergent washes followed by a clear water rinse using a high-pressure hose. Wastewater generated during this procedure will be confined to the storage area and pumped into drums or bulk tanks. After each subsequent rinse (minimum of three), the rinsewater will be sampled and analyzed for chemical constituents stored in the hazardous waste storage facility.

The first sample will be taken after a minimum amount of solvent is used to establish a baseline for contamination (large quantities of solvent rinsewater may simply dilute to non-detectable limits).

Sampling will occur after each rinse until no contaminants are detectable. Analysis will be performed according to SEAD's Waste Analysis Plan.

If a release of hazardous waste were to take place outside a hazardous waste storage area, the waste will be contained and removed as much as possible using appropriate absorbents. Solids and any absorbents used will be swept up and stored in 55-gallon drums.

In areas of possible contamination, soil samples will be collected and analyzed for organic/chemical parameters using appropriate SW846 methods for the contaminant of concern. A NYSDOH ELAP certified laboratory will perform the sampling and analysis. Any contaminated soil will be removed with heavy equipment if necessary. Spill residues will be transported by a permitted transporter to permitted off-site disposal facilities, as appropriate.

If the extent of soil contamination indicates possible groundwater contamination, appropriate investigations will be performed at that time involving monitoring well installation and groundwater sampling. Surface waters are located some distance from the storage facilities and are not anticipated to be contaminated due to the amount of hazardous waste stored in these facilities and the containment that exists.

All personnel involved in the decontamination will be equipped with acid/solvent-resistant overalls, head protection, resistant gloves and boots, and full-face respirators fitted with organic vapor and acid gas filter cartridges. Overalls and gloves will be disposed of as hazardous waste. Pumps, hoses, containers, and equipment will be decontaminated with triple flushing/rinsing comparable to rinsing a container with a minimum of 10% of its volume with a suitable solvent. If there is a reasonable doubt of acceptable decontamination, the equipment will be disposed of as a hazardous waste.

If release, fire, or explosion were to take place at the deactivation furnace, the inside of Building 367 (if affected) will be decontaminated in a similar manner as described for the storage facilities. Furnace components would also have to be decontaminated in addition to the facility.

The areas surrounding the deactivation furnace would have to be visually inspected for whole munitions that had been released due to the incident. These whole munitions would be collected by technically qualified personnel and inspected for potential reincineration or disposal if just the casing remains.

In areas surrounding the furnace where contamination is possible, soil samples will be collected and analyzed for suspected contaminants according to a list of munition components. Any contaminated soil will be removed with a backhoe or front-end loader and transported to a secure off-site facility for ultimate disposal. If the extent of soil contamination indicates groundwater contamination, an investigation will proceed as described for the storage facilities.

Water used to decontaminate the building and equipment and contaminated soil will be collected and removed as described for the storage facilities.

The primary hazardous constituents in the waste processed are lead and barium. However, due to the incident, munitions might have been released partially processed and unprocessed so organic constituents will also be likely.

TABLE I-1

MAXIMUM ANTICIPATED WASTE INVENTORY AT CLOSURE
SENECA ARMY DEPOT

EPA/DEC ID #	Description	Estimated Hazard	Inventory at Closure (Drums)
Building 307			
D001	Spent Stoddard Solvent Paper Paint Filters Lacquer Thinning Liquid	Ignitable	25 5
D002	Cleaning Compound	Corrosive	25
D005	Deactivation Furnace Dust	EP Toxic	8
D008	Battery Acid Sludge from Oil/Grease Separators	EP Toxic	3 3
F002	Methylene Chloride	Toxic	4
F003	Acetone and Toluene Wipes	Toxic	2
F005	Mixed Solvents Rags with Solvents (F002, F003)	Toxic, Ignitible	4 25
B001	PCB Oil	Toxic	1
B002	PCB Hydraulic Fluid	Toxic	3
B003	PCB Hydraulic Fluid	Toxic	2
B007	Other PCB Contaminated Materials Still Bottoms from 1,1,1-Trichloroethane Vapor Degreasers	Toxic Toxic	5 4
Building 301			
B004	PCB Contaminated Articles	Toxic	50
B005	PCB Articles	Toxic	5 units
B006	PCB Transformers	Toxic	5 units
Building 803			
F001-F005, R001	Contaminated Wipes (Solvents and Radioactive Components)	Toxic, Ignitable	96

I-1.4.1 Closure of the Hazardous Waste Storage Facility - Building 307 [*6NYCRR Part 373-2.7*]

Building 307 stores hazardous waste generated at SEAD primarily from machine rework operations in 55-gallon drums. Closure activities for Building 307 must therefore meet requirements for closing hazardous waste management facilities. The closure of Building 307 will meet the closure performance standard and will be implemented in accordance with the approved closure plan. Any inventory of wastes will be removed and disposed of in accordance with the approved plan. Also, the building will be decontaminated according to the approved closure plan. See Section I-2 for a description of planned closure activities for the Hazardous Waste Storage Facility.

I-1.4.2 Closure of the PCB Storage Facility - Building 301 [*6NYCRR Part 373-2.7*]

Building 301 stores PCB contaminated articles, primarily transformers taken out of service or for repair. Closure activities for Building 301 must therefore meet requirements for closing hazardous waste management facilities. The closure of Building 301 will be performed according to the approved closure plan as described in Section I-1.4.1. See Section I-3 for a description of the planned closure activities for the PCB Storage Facility.

I-1.4.3 Closure of the Mixed Waste Storage Facility - Building 803 [*6NYCRR Part 373-2.7*]

Building 803 stores mixed waste consisting primarily of paper wipes contaminated with solvents and low-level radioactive waste in 55-gallon drums. Closure activities for Building 803 must therefore meet requirements for closing hazardous waste management facilities. The closure of Building 803 will be performed according to the approved closure plan as described in Section I-1.4.1. See Section I-4 for a description of the planned closure activities for the Mixed Waste Storage Facility.

I-1.4.4 Closure of APE 1236 Deactivation Furnace [*6NYCRR Part 373-2.15(h)*]

The APE 1236 Deactivation Furnace treats hazardous waste generated at SEAD through thermal treatment. Closure activities for the APE 1236 Deactivation Furnace must therefore meet the requirements for closing hazardous waste incinerators. The closure of the APE 1236 Deactivation Furnace will meet the closure performance standard and will be implemented in accordance with the approved closure plan. The closure plan for the Deactivation Furnace is a stand alone document and is included in Appendix 12.

I-1.5 Schedule of Closure [*6NYCRR Part 373-2.7(d)*]

As closure of the storage facilities is not contemplated at this time, specific dates for closure cannot be determined. Final closure will be implemented when the Army decides to close each facility. Closure shall then commence after the 60-day notification period required by 6NYCRR Part 373-2.7 (b).

Ninety days prior the anticipated closure date no additional hazardous waste will be treated in the APE 1236 Deactivation Furnace. In essence, this facility will shut down operation ninety days prior to the intended operating life to prevent generation of hazardous wastes. The date of anticipated closure of the storage facilities must be no later than 30 days after the hazardous waste management unit receives the known final volume of hazardous wastes. Closure will be completed within 180-days of implementation. A general schedule for closure is shown in Figure I-1.

I-1.6 Extensions for Closure Time

No extensions for closure time are anticipated at this time. If additional time is required for closure SEAD will request a modification to the permit as required according to 6NYCRR Part 373-2.7(d).

I-1.7 Post-Closure Plans [*40 CFR 270.14(b)(13)*][*6NYCRR Part 373-2.7(g)*]

In accordance with 6NYCRR Part 373.2.7(a)(2) post-closure plans are not required as part of the 6NYCRR Part 373 Application. Since the Hazardous Waste Storage Facility, the PCB Storage Facility, the APE 1236 Deactivation Furnace, and the Mixed Waste Storage Facility are not hazardous waste disposal facilities, nor waste piles, nor surface impoundments, nor tank systems, post-closure requirements do not apply.

I-1.8 Notice In Deed and Notice to Local Authority [*40 CFR 264.120*]

Since the facilities at SEAD only store and treat hazardous waste and do not dispose of hazardous waste, notation is not necessary in the deed informing potential purchasers of restrictions associated with a disposal site, as required by 40 CFR 264.120.

I-1.9 Closure Cost Estimate [*40 CFR 264.140(c)*][*6NYCRR Part 373-2.8(c)*]

The closure cost information is not required for SEAD,a Federally owned/operated facility. SEAD is exempt from this requirement under 6NYCRR Part 373-2.8(a)(3) and 40 CFR 264.140(c).

I-1.10 Financial Assurance Mechanism for Closure [*6NYCRR Part 373-2.8(d)*]

The requirements of this section are not applicable to Federally owned/operated facilities under 6NYCRR Part 373-2.8(a)(3).

I-1.11 Post Closure Cost Estimate [*6NYCRR Part 373-2.8(e)*]

The requirements of this section are not applicable since Federally owned/operated facilities are exempt under 6NYCRR Part 373-2.8(a)(3).

I-1.12 Financial Assurance Mechanism for Post Closure [*6NYCRR Part 373-2.8(f)*]

The requirements of this section are not applicable since Federally owned/operated facilities are exempt under 6NYCRR Part 373-2.8(a)(3).

I-1.13 Liability Insurance [*6NYCRR Part 373-2.8*]

The requirements of this section are not applicable to Federally owned/operated facilities under 6NYCRR Part 373-2.8(a)(3).

I-2 CLOSURE PLAN FOR HAZARDOUS WASTE STORAGE FACILITY BUILDING 307

I-2.1 General

Building 307 consists of storage for hazardous waste generated throughout the depot prior to shipment offsite. These wastes are primarily generated from machine rework operations and are stored in Building 307. These wastes include spent solvents, still bottoms from 1,1,1-trichloroethane vapor degreasers, sludge from oil/grease separations, cleaning compounds, paper filters from paint spray booths, and spent battery acids. Most waste is stored in new 55-gallon drums and occasionally small amounts of waste are stored in 5-gallon pails.

Building 307 is a corrugated metal building with a six-inch thick monolithic, reinforced concrete slab floor surrounded by a six-inch concrete curb. Drums are stored on wooded pallets and clearly labelled by type of waste (i.e, flammable solid, corrosive liquid, etc.) The maximum storage capacity, single stack, is 150 drums.

The closure plan is developed in accordance with 6NYCRR 373-2.7 (b-f(1)). Parts 373-2.7 (f(2)-j) are not required according to 373-2.7(a)(2). The steps needed to close the hazardous waste storage operations at Building 307 include the performance of a depot-wide drum inventory, removal of the stored waste from the building, and decontamination of the building.

I-2.2 Closure Performance Standard

The closure plan for the Seneca Army Depot has been developed to ensure that, upon completion of operations, a systematic approach will be followed such that the areas utilized for hazardous waste storage will be suitably decontaminated to eliminate or minimize the need for further maintenance, threats to human health and the environment, and the release of hazardous constituents to groundwater, surface waters, or the atmosphere. Specific procedures to satisfy the closure performance standard are presented in detail in the following sections.

I-2.3 Closure Plan

The following section outlines the procedures to be followed to close Building 307 in accordance with the requirements of 6NYCRR Part 373-2.7(b), the Closure Performance Standard.

I-2.3.1 Maximum Inventory

Maximum inventory of hazardous wastes ever on-site over the active life of the facility will be estimated at the time of closure. The maximum anticipated waste inventory is outlined in Table I-1. Fourteen days prior to closure, FEE will perform a detailed inventory of all drummed hazardous wastes within the Depot and arrange for transfer to Building 307. These steps will ensure that no drums used within SEAD for temporary accumulation of hazardous waste will remain, on-site without plans for secure storage and approved ultimate disposal. Drums found at the facility which previously contained hazardous waste, but are now "empty, but containing residue," will be collected and stored in Building 307.

Two days prior to the scheduled removal of drums from Building 307, a meeting will be held between the FEE and the disposal contractor. At this time, a thorough inspection of the storage areas will be performed to (1) ascertain the condition of the drums stored and arrange for transfer of hazardous wastes to intact containers, if necessary; (2) collect samples of drummed waste in accordance with the procedures set forth in the Waste Analysis Plan; and (3) review the contractor's responsibilities in conforming with all aspects of the closure plan, including waste manifesting, spill prevention, and safety.

All drums will be removed from the storage area on their respective pallets using forklift truck. Depending on waste incompatibility, corrosivity, toxicity, ignitability, and reactivity wastes may be transported separately. Empty drums stored in the storage area will also be transported separately. Empty drums stored in the storage area will also be transported off-site at this time. This transfer will be supervised by FEE and QA personnel to ensure compliance with all aspects of safety plans and approved closure techniques.

Drums containing hazardous liquids and sludges will be transported to a secure off-site facility for ultimate disposal. Empty drums will preferably be transferred to an approved drum reconditioning facility, or crushed/shredded and disposed of off-site in a secure land burial facility.

I-2.3.2 Decontamination

After the removal of all drums, the disposal contractor, along with FEE and QA personnel, will inspect all storage areas floors for leakage/spillage. Appropriate absorbents will be utilized by the contractor to contain and remove liquids. Solid materials will be swept up and sealed in steel 55-gallon steel drums. All personnel involved in the decontamination procedures will be equipped with acid/solvent resistant

overalls, head protection, resistant gloves and boots, and fullface respirators fitted with organic vapor and acid gas filter cartridges.

The storage area will then be decontaminated using a series of dilute solvent or detergent washes, followed by clear water rinse using a high-pressure hose. Waste water generated by this operation will be collected in the confined area of the storage area and pumped to drums or a bulk tank. After each subsequent rinse (minimum of three) the rinsewater will be sampled and analyzed for any chemical constituents that were stored in 307 to decontaminate the effectiveness of decontamination.

The first sample will be taken after a minimum amount of solvent is used, to establish a baseline for any contaminants (large quantities of solvent rinsewater may simply dilute to non-detectable limits).

Sampling will occur after each rinse, until no contaminants are detectable. Analysis will consist of characteristics listed in Section C.

TYVEX branch disposable coveralls, and boot covers will be used for decontamination. At the end of each day's activities, and at completion of decontamination, these and rubber gloves will be disposed as Hazardous Waste. All pumps, hoses, containers and equipment must be decontaminated with triple flushing/rinsing comparable to rinsing a container with a minimum of 10% of it's volume of a suitable solvent. If there is reasonable doubt of achieving an acceptable level of decontamination, the equipment will be disposed of as a hazardous waste. This waste water will be transported off-site by an approved Hazardous Waste hauler for ultimate disposal.

No contamination of surface soils is expected in the areas surrounding the Hazardous Waste storage facilities. However, some leakage or spillage may be unavoidable during the inventory removal and decontamination procedures. In areas of possible contamination, soil samples will be taken and analyzed for organic/chemical parameters using GC/MS or atomic absorption laboratory analysis. It has been assumed that approximately 20 cubic yards of soil may have to be removed from the areas adjacent to each facility and transferred to a secure disposal site. Contaminated soils will be removed with a backhoe or front-end loader and transported to a secure off-site facility for ultimate disposal using a dump truck properly equipped to prevent unwanted release of the soil in transit.

Additional activities to ensure that the closure satisfies the closure performance standards such as groundwater monitoring or run-on and run-off control will be outlined if determined to be necessary at the time of closure. Since wastes are stored indoors this is anticipated to be unnecessary.

I-2.3.3 Schedule

The anticipated closure schedule is depicted in Figure I-1. As closure of Building 307 is not contemplated at this time, specific dates for closure cannot be determined. Final closure will be implemented when the

Additional activities to ensure that the closure satisfies the closure performance standards such as groundwater monitoring or run-on and run-off control will be outlined if determined to be necessary at the time of closure. Since wastes are stored indoors this is anticipated to be unnecessary.

I-4.3.3 Schedule

The anticipated closure schedule is depicted in Figure I-1. As closure of Building 803 is not contemplated at this time, specific dates for closure cannot be determined. Final closure will be implemented when the Army decides to close the facility. The commissioner will be notified at least 60 days prior to the date closure is expected to begin. Closure will be completed within 180 days of implementation.

I-4.3.4 Certification

Within 60 days of completion of closure the owner or operator will submit to the commissioner, by registered mail, a certification that was completed in accordance with the specification contained in the approved closure plan.

I-4.4 Amendment to the Closure Plan

The owner or operator will submit a written request for a permit modification to authorize a change in operating plans, facility design or the approved closure plan in accordance with the procedures in Part 373-1. The written request will also include a copy of the amended closure plan for approval. This amended closure plan will be submitted at least 60 days prior to a change in facility design or operation and no later than 60 days after the occurrence of an unexpected event affecting the closure plan .

Amendments to be inserted into individual copies of all other holders of the closure plan or if necessary, amended closure plans will be submitted to those persons at the time of approval of the amendment.

RADIATION PROTECTION OFFICERS LOCAL

1. General.

a. The Radiological Protection Officer (RPO) is Michael R. Lewis. The local RPOs are John F. Cleary and Thomas E. Reynolds, their training and experience is listed below.

2. Type of training.

a. Principles and practices of radiation protection. (A)

b. Radioactivity measurement standardization, monitoring techniques, and instruments. (B)

c. Mathematics and calculations basic to the use and measurements of radioactivity. (C)

d. Biological effects of radiation. (D)

e. Safety practices applicable to the protection from radiation, chemical toxicity, pyrophoric property, and explosive property of source materials. (E)

3. Format of training and experience.

a. Name.

b. Type of training.

c. Course and location.

d. Duration and year.

e. On-the-job-training. (OJT)

f. Formal training.

g. Experience.

4. John Cleary

a. Training

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Act. Savanna, IL	2 weeks 1980	Yes	Yes
A,B,C,D	MAIRA Operations Savanna Army Depot Act. Savanna, IL	2 weeks 1994	Yes	Yes

A,B,C,D	Management of Radiation Accidents and Emergency Preparedness Home Study	1987	No	Yes
A,B,C,D	Emergency Program Manager FEMA Home Study	Oct 1990	No	Yes
A,B,C	Emergency Management U.S.A FEMA Home Study	Mar 1991	No	Yes
A,B,C	Preparedness Planning FEMA Home Study	1991	No	Yes
A,B,C,D	Radiological Emergency Management FEMA Home Study	1992	No	Yes
A,B,C,D	Joint Forces Training-RADCON TEAM Nevada Test Site	1 week 1983 & 1987	Yes	Yes
A,B,C	SFRX 86/90 Seneca Army Depot Romulus, NY	1 week 1986 & 1990	Yes	Yes
A,B,C,D	Army Research Laboratory Radiation Worker Course Seneca Army Depot Romulus, NY	1 week Nov 92	Yes	Yes
A,B,C	Radioactive Waste Guidance Course, Chem Nuclear Systems Inc., Columbia, SC	1 week May 92	No	Yes
A,B,C,D	Radiological Safety Course U.S. Army Chemical School Ft. McClellan, AL	3 weeks	Yes	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions Storage, 10Ci	Seneca Army Depot	1977-Present	Worker, Alpha Team Member
H3, 10Ci	Various TACOM Depots	1992-Present	Radiological Assistance Team (RAT) Leader
DU	Army Reaserch Laboratory, Watertown, MA	Jan 92-Feb 93	RAT Leader/ Site Cleanup

Am241,Cs137,U238, C14, and H3 as check sources and standards	SW Munitions Seneca Army Depot	1977-Present	Worker/RAT Leader
H3, Ra226	Ft.Ord, CA	1994	Project Leader, NRC License Decommissioning
I131, U238	Wayne County New York		County Radiation Officer

5. Thomas E. Reynolds

a. Training

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Act Savanna, IL	2 weeks May 80	Yes	Yes
A,B,C,D	Joint Forces Training RADCON Nevada Test Site NV	1 week Oct 83	Yes	Yes
A,B,C	SREX-90 Seneca Army Depot Romulus, NY	1 week Jul 90	Yes	Yes
A,C,D	Occupational Safety & Health Course, US Army Field Safety Activity Charlestown, IN	2 weeks May 91	Yes	Yes
A,B,D	Hazardous Materials Response Technicians Course, East Longmeadow, MA	1 week Sept 91	Yes	Yes
A,B,C,D	Health Physics Instrumention and Air Sampling for Radio-Active Materials, Ft. Belvoir, VA	1 week Jul 92	Yes	Yes
A,B,C,D	Army Research Laboratory Radiation Worker Course Seneca Army Depot Romulus, NY	1 week Nov 92	Yes	Yes
A,B,C	Radioactive Waste Guildance Course, Chen Nuclear Systems Inc., Columbia, SC	1 week Jul 93	Yes	Yes

A,B,C,D	Radiation Safey Correspponce Course, Fundamentals	Apr 94	No	Yes
A,B,C,D	Radiological Safety Course U.S. Army Chemical School	3 weeks Apr 94	Yes	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions 10 Ci	Seneca Army Depot	Aug79-Present	Alpha Team Member SW Assembler and Repairer
H3, 10 Ci	Ft. Bragg NC	Jul 92-Aug 92	Radiological Assistance Team Member Spill Cleanup
Am241,Cs137,U238 C14, and H3 as check sources and standards	SW Munitions Seneca Army Depot	Feb80-Present	Radiological Assistance Team Member Worker
DU	Army Research Laboratory Watertown,MA	Jan 92-Feb 94	Site Clean-up Worker
H3, Ra226	Ft.Ord, CA	Jan 94-Apr 94	Supervisor, NRC License Decomissioning
I131, U238	Wayne County Emergency Management	Feb 94-Present	Alternate Radiation Protection Officer and Consultant