

NRC FORM 313

(9-86)

10 CFR 30, 32, 33, 34,
35 and 40

APPLICATION FOR MATERIAL LICENSE

RECEIVED
SEP 14 1986
NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB
3150-0120
Expires 5-31-87

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, PENNELYVANIA,
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 19406ALABAMA, 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 60137ARKANSAS, 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 76011ALASKA, 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 _____
- ☒ C. RENEWAL OF LICENSE NUMBER SUB 1283

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

Day & Zimmermann, Inc.
Kansas Division
Kansas Army Ammunition Plant
Parsons, Kansas 67357

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

Kansas Army Ammunition Plant
Parsons, Kansas 673578903140717 880218
REG4 LIC40
SUB-1283 PNU

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Larry Wetherell, Radiation Protection Officer RPO

TELEPHONE NUMBER

316-421-7528

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 AND EXPERIENCE.

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

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT

N/A

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

FEE CATEGORY 2. I AMOUNT
ENCLOSED \$ 60.0013. 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

Larry Wetherell

Radiation Protection Officer

18 Aug 86

ANNUAL RECEIPTS

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

<\$250K	\$1M-3.5M
\$250K-500K	\$3.5M-7M
\$500K-750K	\$7M-10M
\$750K-1M	>\$10M

c. NUMBER OF BEDS

☐ YES☐ NO

FOR NRC USE ONLY.

TYPE OF FEE

FEE LOG

FEE CATEGORY

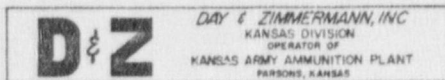
COMMENTS

APPROVED BY

AMOUNT RECEIVED

CHECK NUMBER

DATE



- 5) a) Uranium 238 99.8%
 b) Plated Metal
 c) 46 Kilograms
- 6) Material will be utilized in its physical state only as shielding media for X-radiation. It is cadmium plated to prevent oxidation and steel stamped "Caution Radioactive Material - Depleted Uranium".
- 7) See attached pages
- 8) Industrial X-ray Technician - no special training is required due to the fact that this material is utilized for shielding only and is sealed inside the X-ray tube head module, Varian Linatron 400.
- 9) N/A
- 10) See attached pages

RADIATION TRAINING - LARRY L. WETHERELL, RPO

1. Principles & Practices of Radiation Protection

Location	Duration	On-Job	Formal
Kansas Army Ammo Plant	19 Years	X	
Radiation Safety USAEHA Aberdeen Proving Ground Edgewood Arsenal, MD	30 Days		X
Radiac Calibrator Custodian Course USAEHA Aberdeen Proving Ground Edgewood Arsenal, MD	5 Days		X
Civil Defense Radiological Training Civil Defense Office Joplin, MO	2 Years		X
School of Radiology St. John's Hospital Joplin, MO	2 Years		X
Radiation Monitoring Kansas State Office of Civil Defense Kansas AAP Parsons, KS	5 Days		X
Battelle Radiation & Instrumentation Course Parsons, KS	4 Days		X

2. Radioactivity Measurement Standardization & Monitoring Techniques

Location	Duration	On-Job	Formal
Kansas Army Ammo Plant	19 Years	X	

Civil Defense Radiological Training Civil Defense Office Joplin, MO	2 Years	X
School of Radiology St. John's Hospital Joplin, MO	2 Years	X
Radiation Monitoring Kansas State Office of Civil Defense Kansas AAP Parsons, KS	5 Days	X
Radiation Safety USAEHA Aberdeen Proving Ground Edgewood Arsenal, MD	30 Days	X
Radiac Calibrator Custodian Course USAEHA Aberdeen Proving Ground Edgewood Arsenal, MD	5 Days	X
Battelle Radiation & Instrumentation Course Kansas AAP Parsons, KS	4 Days	X

3. Mathematics & Calculations Basic to the Use & Measurement of Radioactivity

Location	Duration	On-Job	Formal
Kansas Army Ammo Plant	19 Years	X	
Radiation Safety USAEHA Aberdeen Proving Ground Edgewood Arsenal, MD	30 Days		X
Battelle Radiation & Instrumentation Course Kansas AAP Parsons, KS	4 Days		X

Civil Defense	2 Years	X
Radiological Training		
Civil Defense Office		
Joplin, MO		

Radiological Monitoring	5 Days	X
Kansas State Office of		
Civil Defense		
Kansas AAP		
Parsons, KS		

Radiac Calibrator	5 Days	X
Custodian Course		
USAEHA		
Aberdeen Proving Ground		
Edgewood Arsenal, MD		

4. Biological Effects of Radiation

Location	Duration	On-Job	Formal
Kansas Army Ammo Plant	19 Years	X	
Radiation Safety	30 Days		X
USAEHA			
Aberdeen Proving Ground			
Edgewood Arsenal, MD			
Battelle Radiation & Instrumentation Course	4 Days		X
Civil Defense	2 Years		X
Radiological Training			
Civil Defense Office			
Joplin, MO			
School of Radiology	2 Years		X
St. John's Hospital			
Joplin, MO			
Radiological Monitoring	5 Days		X
Kansas State Office of			
Civil Defense			
Kansas AAP			
Parsons, KS			

Radiac Calibrator 5 Days
Custodian Course
USAEHA
Aberdeen Proving Ground
Edgewood Arsenal, MD

X

RADIATION TRAINING - DAVID T. EMERY, ALTERNATE RPO

1. Principles and Practices of Radiation Protection

<u>Where Trained</u>	<u>Duration</u>	<u>On-Job</u>	<u>Formal</u>
Kansas Army Ammunition Plant	4 years	Yes	
Physical Chemistry Kansas University	1 semester		Yes

2. Radioactivity Measurement Standardization and Monitoring Techniques

<u>Where Trained</u>	<u>Duration</u>	<u>On-Job</u>	<u>Formal</u>
Kansas Army Ammunition Plant	4 years	Yes	
Radiological Safety I Fundamentals	Correspondence Course		Yes
Physical Chemistry Kansas University	1 semester		Yes

3. Mathematics and Calculations Basic to the Use and Measurement of Radioactivity

<u>Where Trained</u>	<u>Duration</u>	<u>On-Job</u>	<u>Formal</u>
Kansas Army Ammunition Plant	4 years	Yes	
Radiological Safety I Fundamentals	Correspondence Course		Yes
Mathematics Labette Community College	2 semesters		Yes
Mathematics Kansas University	2 semesters		Yes
Physics Labette Community College	1 semester		Yes
Physics Kansas University	1 semester		Yes
Physical Chemistry Kansas University	1 semester		Yes

4. Biological Effects of Radiation

<u>Where Trained</u>	<u>Duration</u>	<u>On-Job</u>	<u>Formal</u>
Kansas Army Ammunition Plant	4 years	Yes	
Radiological Safety I Fundamentals	Correspondence Course		Yes

RADIATION PROTECTION PROGRAM

PURPOSE

The purpose of the Radiation Protection Program is to provide a work environment safe from harmful radiation for all employees. A Radiation Protection Officer (RPO) is appointed and a Radiation Control Committee (RCC) is established to implement the program to control and monitor sources of ionizing and non-ionizing radiation. It is the intent of this program to limit personal exposures to radiation to the lowest possible levels. This program is designed to implement and follow applicable federal and Army Regulations.

RESPONSIBILITY

The Radiation Protection Officer (RPO) is responsible for conducting the Radiation Protection Program and conducting radiation survey and leak tests on all new, existing or repaired equipment which produces X - or gamma rays and on all micro-wave ovens.

The Radiation Control Committee (RCC) is responsible for controlling the fundamental program.

The Medical Department is responsible for pre-employment examinations, semi-annual examinations (with blood tests, if needed) and maintaining employee medical records.

The Quality Control Department is responsible for dosimetry badge distribution and control, recordkeeping pertaining to dosimetry, and reporting dosimetry results to the Safety Department and the Plant Hospital.

The Medical Director is responsible for the use of medical x-ray units.

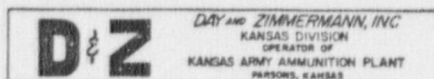
Technical and Engineering Services is responsible for the use of industrial x-ray units.

Projects and Facilities Engineering is responsible for installation and maintenance of all units.

DEFINITIONS

Dose - The quantity of radiation received by the body or a portion of the body.

Dosimeter - A device for measuring exposure to radiation.



Ionizing Radiation - Electromagnetic or particulate radiation capable of producing ions as it passes through matter. (X-rays, gamma rays, neutrons, etc.)

Microwave Oven - A device designed to heat, cook, or dry food through the application of electromagnetic energy.

mW/cm^2 - The standard unit of power for microwave leakage, milliwatts per square centimeter.

mR/hr - The unit of measure of ionization in air by X or gamma radiation, milliroentgen per hour.

Non-ionizing Radiation - Radiation which is not capable of producing ions as it passes through matter (microwaves, etc.).

Radiation - Energy emitted as particles or waves characterized by radio activity.

Radiation Survey - A comprehensive testing around a radiation producing item which identifies levels of radiation recorded and locations the level was recorded at.

RCC - Radiation Control Committee

REM - A special unit for measuring the effects of radiation received by exposed persons.

RPO - Radiation Protection Officer

Thermal Luminescent Disc (TLD) - A device designed to be worn or carried by a person for measuring personal radiation exposure.

Visual Survey - Consists of visually checking all operating and safety control features associated with the microwave oven.

X-Ray - Electromagnetic radiation capable of penetrating solid material and of ionizing gases.

Exposure Limits - Exposure of employees 19 years or older will be limited to 1.25 rem per calendar quarter or 5(N-18)rem total lifetime dose where N equals the present age in years. In restricted areas, accumulated dose to the skin of the whole body or the thyroid will not exceed 7 1/2 rem in any calendar quarter or 30 rem in any calendar year. Accumulated dose to the hands and forearms and feet or ankles will not exceed 18 3/4 rem in any calendar quarter or 75 rem in any calendar year.

Members of the general public and employees under 19 years of age will not be exposed in excess of 0.125 rem in any calendar quarter or 0.500 rem in any calendar year. Pregnant women will not be exposed to ionizing radiation for other than medical reasons.

PROGRAM ELEMENTS

Medical Examination of Personnel - Each Kansas Army Ammunition Plant employee assigned to a radiation area will have a pre-employment examination which includes medical history, radiation exposure history, physical examination and a complete blood count.

Periodic examinations will be given to all x-ray personnel every six months and will include an eye examination as well as a physical examination.

Upon termination of occupational exposure, the individual will be give a medical examination.

All examination records will be included with the employee's medical records.

A list of individuals occupationally exposed to radiation will be maintained to facilitate the scheduling of examinations.

Personal Dosimetry - All employees in radiation areas will wear film badges/Thermal Luminescent Discs (TLD's) at all times when exposure is possible. Employees will return TLD's to the issuing individual or the designated storage location when leaving radiation areas permanently or at the end of the shift. Exchange for servicing of TLD's will be made monthly.

Visitors (casuals) to radiation areas will be issued and will wear TLD's during such time as they are in the area of possible exposure. No badges will be issued to visitors who bring their own monitoring devices.

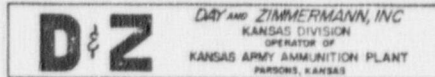
D&Z Quality Assurance will issue and exchange TLD's used at Kansas Army Ammunition Plant. They will receive the monthly and annual, "TLD Occupational Radiation Exposure Report" from the dosimeter service contractor and distribute copies of it to Safety and Plant Hospital as required.

Radiation Surveys

Non-Ionizing Sources - There are currently a small number of microwave ovens on plant which constitute all of the non-ionizing radiation sources.

All microwaves on plant will be visually surveyed monthly and instrument surveyed semi-annually. Surveys of microwaves will be conducted by the RPO. All survey findings will be recorded and kept on file with the RPO.

Any instrument test of all microwaves will be conducted prior to placing them in service. A meter reading of $5\text{mW}/\text{CM}^2$ will cause a microwave to be removed from service until corrective maintenance is performed or the unit is replaced.



Ionizing Sources - Surveys of ionizing sources of radiation will be performed by the RPO prior to new operations involving ionizing sources starting semi-annually and when changes are made involving ionizing radiation. Special attention will be given to door sills and jams, interlocks, electrical fixtures in walls, pipe holes, ducts, louvers, operator's position and other pertinent items.

Exposure as instrument measured will not exceed 10 mR/hr. at 1 foot except at Bldg 951 where the measured limit at the console is higher and where time at the console is limited.

Should a source of ionizing radiation fail to meet exposure limits, it will be removed from service until maintenance can be performed to bring it within limits.

Locations of the monitoring points with survey results, statement of the hazard, and any recommendations will be recorded and filed for each survey. All survey findings will be kept on file with the RPO.

Radiation Area Signs - All radiation areas will be posted with signs and symbols conforming to federal and Army directives.

REGULATIONS, GUIDELINES, REFERENCE ITEMS

Army Regulations:

- AR 40-14 Control and Recording Procedures for Occupational Exposure to Ionizing Radiation
- AR 40-44 Control of Potential Health Hazards from Microwave
- AR 40-583 Control of Potential Hazards to Health from Microwave and Radio Frequency Radiation
- AR 385-11 Ionizing Radiation Protection
- TB MED 523 Control of Hazard to Health from Microwave and Radio Frequency Radiation and Ultra-sound
- TB MED 521 Management and Control of X-rays

DARCOM Regulations:

- DARCOM-R 385-100 AMC Safety Manual
- AMC-R 385-25 Radiation Protection

Code of Federal Regulations:

Title 10, Nuclear Regulatory Commission

USA Standards Institute Publications:

ASA Safety Code for Industrial Use of X-Ray

U.S. Department of Commerce, National Bureau of Standards Handbooks:

Radiological Monitoring Methods & Instruments

Protection Against Betatron-Synchrotron Radiations up to 100 Million Electron Volts

Photographic Dosimetry of X and Gamma Rays

Permissible Dose for External Sources of Ionizing Radiation

Protection Against Neutron Radiation up to 30 Million Electron Volts

Safe Handling of Bodies Containing Radioactive Isotopes

Safe Design and Use of Industrial Beta-Ray Sources

Protection Against Radiation from Sealed Gamma Sources

Measurement of Absorbed Doses of Neutrons and of Mixtures of Neutrons and Gamma Rays

Medical X-ray Protection up to 3 Million Volts

Report of International Commission on Radiological Units and Measurements

A Manual of Radioactivity Procedures

Radiation Quantities and Units (ICRU Report 10a)

Physical Aspects of Irradiation (ICRU Report 10b)

Radioactivity (ICRU Report 10c)

Clinical Dosimetry (ICRU Report 10d)

Radiobiological Dosimetry (ICRU Report 10e)

Methods of Evaluating Radiological Equipment and Materials (ICRU Report 10f)

Safe Handling of Radioactive Materials

Safety Standards for Non-Medical X-ray and Sealed Gamma Ray Sources:
Part I. General

Miscellaneous

Radiological Health Handbook, U.S. Department of Health, Education,
and Welfare

ENVIRONMENTAL ASSESSMENT for DU SHIELDING

January, 1984

1 INTRODUCTION

This Environmental Assessment (EA) addresses the impacts upon the environment that are directly related to the use of Depleted Uranium (DU). All other impacts, such as emissions from boilers and impacts due to construction, etc., have been fully addressed in the Installation Environmental Impact Assessment (EIA), Revision 1, dated April 1980 (original August 1978), on file at the Kansas Army Ammunition Plant and AMCCOM Environmental Office.

The following EA is submitted in order to comply with the National Environmental Policy Act (NEPA) and is in accordance with AR 200-2.

2 DESCRIPTION OF THE PROPOSED ACTION

The proposed action is for use of DU to shield radiation produced by the action of a linear accelerator.

3 PURPOSE AND NEED FOR THE PROPOSAL

The mission of the Kansas Army Ammunition Plant is to Load And Pack (LAP) selected and assigned items of ammunition for use by the Armed Forces in the defense of our nation against enemies. It is the goal of Kansas Army Ammunition Plant to do its part in ensuring a readiness status as high as is required.

A part of the mission is to maintain a quality product. To this end certain items are subjected to testing. One test is to X-ray the LAPed units. The linear accelerator is used for such non-destructive testing, and the DU is an integral part of the X-ray producing device. The DU is used as a safety shield.

4 ALTERNATIVES CONSIDERED

None

5 ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION AND ALTERNATIVES

The activities involving the source material DU will be only to use it for shielding. No machining, grinding, milling, or any other process which could generate airborne particles of DU and present an internal radiation hazard.

January, 1984

will occur.

A Radiation Protection Officer (RPO) and an Alternate Radiation Protection Officer (Alt. RPO) have been identified to maintain a radiation safety program. A radiation Safety Committee will be maintained and will review the overall radiation safety program and assure the close integration of the program with other safety and security concerns. Detailed Standing Operating Procedures (SOPs) will be maintained at the operational sites. Briefings and training of supervisory personnel and operators will be made relating to the various aspects of radiation safety in relation to the technical features of the x-ray process.

The following environmental impact factors were considered in this assessment:

- 1 Hazardous and toxic substances: Uranium is a naturally occurring element which in nature is composed of 99.3 percent U-238 (radioisotical half life 4.5×10^9 to the ninth years) and 0.7 percent U-235 (half life 7.1×10^8 to the eighth years). Each of these alpha-emitting radionuclides begins a series of decay products that ends in the production of a non-radioactive isotope of lead. The principal effects of natural and depleted uranium noted with animals and plants are attributed to the chemical toxicity of uranium rather than its radioactivity. Uranium toxicity is similar to that of lead. Toxicity to plants due to uranium has been noted at soil concentrations of 50 micrograms of uranium per gram of soil. Although some uptake of uranium does occur, a Los Alamos study indicates that plants do discriminate against uranium; i.e., the uranium level detected in plants is less than that detected in soil. Examination of plants for uranium uptake indicates that even with levels toxic to the plant no higher uptake was found than for plants in soils with only background levels in the soil. In this context, background levels are typically one or less microgram per gram of soil. Animals inhabiting areas contaminated with uranium have also been examined by Sandia Livermore Laboratories/Lawrence Livermore Laboratories which concluded that while uranium was detected in some animals, there was no significant difference from that noted in animals inhabiting areas where uranium contamination did not occur.

January, 1964

- 2 Air quality: The only conceivable effect on the air quality would be caused by a catastrophic accident. A hazard burn test was conducted at the Nevada Test Site in October 1977.
- 3 Water quality: The potential for adverse release of material to water could occur during a catastrophic accident. Surface water sampling has shown that there would be insignificant effect on water quality because of the low solubility of the materials in water. Percolation of contaminated material into underground aquifers is not expected due to the relative insolubility of DU and the overall impermeability of the soil.
- 4 Land use: There will be no permanent impact on Government land.
- 5 Ecology: There will be no impact on the ecology of the area. No environmentally significant secondary effects to the flora and fauna are expected.
- 6 Cultural quality: The area involved is already restricted in use.
- 7 Noise: There will be no increase in the noise level of the area other than those generated by normal manufacturing methods.
- 8 Archeological and history: There are no historical or archeological sites involved.

- 1 The proposed action is not considered to be a major Federal action significantly affecting the quality of the human environment.
- 2 Its implementation is not considered to be environmentally controversial.
- 3 It does not require an Environmental Impact Statement.
- 4 There are findings of no significant impact.

6 REFERENCES

- 1 Hanson, W.C. (1974). Ecological Considerations of Depleted Uranium Munitions, LA-5559, Los Alamos Scientific Laboratory, New Mexico.
- 2 Hanson, W.C. and Miera, F.R., Jr. (1976). Long-Term Ecological Effects of Exposure to Uranium, LA-6269, Los Alamos Scientific Laboratory, New Mexico.
- 3 Hanson W.C. and Miera, F.R., Jr. (1977). Continued Studies of Long-term Ecological Effects to Exposure to Uranium, LA-6742 AFATLTR-77-35, Los Alamos Scientific Laboratory, New Mexico.
- 4 Tank Burn Test, Operation Hotbox, DU Task Force, Dover, New Jersey, DU-1.