NRC FORM 313 (5-1997)
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: 7/31/1999

Estimated burden per response to comply with this information collection request: 7 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. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0120), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a currently valid OMB control number.

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:

ATLANTA FEDERAL CENTER
U. S. NUCLEAR REGULATORY COMMISSION, REGION II
61 FORSYTH STREET, S.W., SUITE 23T85
ATLANTA, GEORGIA 30303-3415

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING SECTION
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
   - [X] B. AMENDMENT TO LICENSE NUMBER SUB 1435
   - [ ] C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include Zip code)*
   Commander
   U.S. Army Soldier and Biological Chemical Command, ATTN: AMSSB-RCB-RS
   Aberdeen Proving Ground, MD 21010-5424

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED
   Jefferson Proving Ground
   Madison, Indiana 47250-5100

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION
   Joyce E. Kuykendall
   TELEPHONE NUMBER
   410-436-7118

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 AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSEE FEES *(See 10 CFR 170 and Section 170.31)*
    FEE CATEGORY N/A
    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.

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 CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OFJUNE 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
JOHN M. FERRITER, Dir, Oper.,Remed. & Rest.	John M Ferriter	29 Feb 00

FOR NRC USE ONLY

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

NRC FORM 313 (5-1997)

ENCL 1

PRINTED ON RECYCLED PAPER

Joyce E. Kuykendall, **Health Physicist**
U.S. Army Soldier and Biological Chemical Command, Aberdeen Proving Ground, Maryland

1. Experience:

August 1999 to Present, **U.S. Army Soldier and Biological Chemical Command (SBCCOM), Aberdeen Proving Ground, Maryland.** Responsible for the management of worldwide program for the use of chemical and biological detection instrumentation developed by SBCCOM. Appointed as Radiation Safety Officer to administer and implement NRC license requirements and develop radiation safety criteria for use in the life cycle management of the instrumentation. Provides advice and assistance to program management and logistics activities to insure that radiation safety requirements are incorporated into policy and procedures for training, use, storage, transportation, maintenance, and disposal. Provides radiation safety criteria for use in procurement actions and monitor manufacturing contractors for compliance with radiation safety requirements. Evaluates quality assurance test plans and reports of testing to insure integrity of instrumentation throughout its life cycle. Provides safety consultation and assistance to users, trainers, and maintainers and conducts site evaluations of user, maintenance, training and storage operations. Conduct investigation and evaluation of accidents and incidents and provide recommendations for corrective actions.

September 1988 to August 1999, **U.S. Army Aviation and Missile Command (AMCOM), Redstone Arsenal, Alabama.** Appointed as Command Radiation Protection Officer (RPO). Also served as the Installation RPO and coordinated the command Radiation Control Committee, implementing the command and Installation Ionizing and Non-ionizing Radiation Protection Programs. Provided operational review of ionizing and nonionizing radiation operations involving research and development, testing, and training in support of missile and aviation systems. Developed procedures for the safe handling of radioactive materials/devices, lasers and radiofrequency systems; reviewed and provided subject matter expert consultation and oversight of radiation related work processes and procedures to assure compliance with appropriate Federal regulations and guidance. Administered installation personnel and environmental dosimetry programs and provided guidance and direction on personnel radiation exposures. Established training requirements and assured training for radiation workers and visitors was provided as necessary. Coordinated the disposal of radioactive waste with the DoD Waste Disposal Manager.

Administered radiation safety program for NRC licenses and Department of Army radiation authorizations for the possession of radioactive material for installation use as well as AMCOM managed devices and instrumentation containing radioactive material. Provided health physics and radiation safety consultation to worldwide activities using radioactive commodities in missile and aviation systems.

October 1982 to September 1988, **U.S. Army Combat Systems Test Activity (CSTA), Aberdeen Proving Ground (APG), Maryland.** Served as activity Alternate RPO. Assisted in the development and implementation of the CSTA/APG installation Radiation Protection Program and was a voting member of the CSTA Radiation Control Committee. Conducted/oversaw radiological surveys and leak tests and operational reviews of ionizing radiation operations at to include Depleted Uranium (DU) munitions hard and soft target testing, industrial x-ray operations, and radioactive component test operations to insure compliance with Nuclear Regulatory Commission testing licenses. Inspected test ranges, approved radiological safety instrumentation used in test operations and evaluated procedures for proper safety practices, implementing/ enforcing safety requirements imposed by NRC licensing. Determined the need for radiological safety training and provided classroom as well as on the job instruction for personnel who are

ITEM 7. Individual Responsible for Radiation Safety Program and Their Training Experience.

classified as radiation workers. Coordinated and conducted radiological training for support personnel, such as emergency response personnel, and provided contract training when necessary.

Controlled the Activity personnel monitoring program, coordinating with the Army Ionizing Radiation Dosimetry Center (AIRDC) on processing of results, reviewed dosimetry reports to determine and interpret levels of exposure. Reviewed the support of the health physics augmentation contract for the APG DU testing sites as the Alternate Contracting Officer's Representative (COR). Provided radiation protection clearance for incoming and outgoing material shipments, prepared certification and instructions for packaging according to regulations. Coordinated radioactive waste disposal with the DoD Waste Disposal Manager. Provided health physics support for the APRF Nuclear Accident/Incident Control Plan.

[Detail - ***July 1986 to August 1987,*** **Army Pulse Reactor Facility (APRF), Aberdeen Proving Grounds, Maryland.** Provided health physics monitoring for reactor operations. Determined status of reactor and established safe entry times using reactor console instrumentation and air monitoring equipment. Performed monthly radiation surveys of reactor areas and special surveys when evaluation of experimenters required. Recorded all significant health physics and environmental activities in Health Physics Log on a daily basis. Conducted health physics training for reactor staff, support personnel, contractor personnel conducting experiments, and emergency response personnel. Training consisted of formal classroom as well as job specific training. Collected environmental samples for environmental monitoring program and reviewed results received from laboratory. Collected and analyzed swipe tests and maintained records of samples for use in determining safety controls. Controlled reactor dosimetry program for reactor personnel and experimenters using the APRF. Maintained daily records of exposure and imposed exposure restrictions when necessary. Prepared radioactive material shipments for experimenters and provided proper documentation for transportation of test items. Determined maintenance needs of radiation monitoring instrumentation and coordinated calibration of instrumentation.]

April 1981 to October 1982, **U.S. Army Environmental Hygiene Agency (AEHA), Aberdeen Proving Ground, Maryland.** Analyzed and documented results of laboratory analysis of environmental and biological samples for radioactivity using gas flow proportional and liquid scintillation counting and gamma spectroscopy. Compiled analytical data for review of Senior Chemist for final reporting to customer. Analyzed samples for participation in EPA and international interlaboratory intercomparisons and EPA performance evaluations. Analyzed intralaboratory quality control samples with each group of samples and maintained quality control charts and logbooks for laboratory quality assurance program. Calibrated instruments using liquid and sealed NBS or NBS traceable standards and maintained calibration data. Prepared chemical reagents of proper purity for use in laboratory analysis. Maintained daily laboratory logbook. Assisted in the development of a guidebook for providing instructions to personnel on proper sample collection, packaging, and transportation procedures.

2. Education:

Florida Institute of Technology, Melbourne, Florida, Currently Pursuing M.S. in Systems Management, Anticipated Completion in Summer of 2000.

Faulkner University, Montgomery, Alabama, B.A. Business Administration, 1990.

Cecil Community College, North East, Maryland, A.A. Arts and Sciences 1974.

3. Specialized Training:

Radioactive Material Handling Safety Course, 24-29 August 1999, 28 hours, U.S. Army Armament and Chemical Acquisition and Logistics Activity, Rock Island, IL

DoD Radioactive Material Disposal and Transportation Seminar, 3-7 May 1999, 40 hours, Chem-Nuclear Systems Inc., Columbia, SC

Industrial Radiation Safety Symposium, 9-10 September 1998, 16 hours, U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM), Aberdeen Proving Ground, MD

Internal Dosimetry Seminar, 18 to 20 November 1996, 24 hours, Oak Ridge Institute for Science and Education (ORISE) and the Radiation Internal Dose Information Center (RIDIC), Oak Ridge, TN

U.S. DoD Radioactive Waste Guidance Course, 24-28 June 1996, 40 hours, Chem-Nuclear Systems, Inc., Columbia, SC

Resource Conservation and Recovery Act - Basic Course, 8 to 12 January 1996, 40 hours, U.S. Army Missile Command, Environmental Institute, Redstone Arsenal, AL

Basic Radiation Protection and H3 Illumination Devices, 8 to 10 December 1993, 24 hours, Allied Technology Group, Inc., Fremont, CA

Professional Enrichment Program Training, 10 to 14 July 1993, Health Physics Society Meeting, Atlanta, GA (Fundamentals of Non-ionizing Radiation, A Review of ICRP 60, Implementation of the Revised 10 CFR 20, The Natural Radiation Environment)

U.S. Army Radioactive Waste Guidance Course, 30 July to 3 August 1990, 40 hours, Chem-Nuclear Systems, Inc., Columbia, South Carolina

Applied Health Physics, 9 April to 11 May 1990, 200 hours, Oak Ridge Associated Universities, Oak Ridge, TN

Environmental Monitoring for Radioactivity, 31 August to 4 September 1987, 40 hours, Oak Ridge Associated Universities, Oak Ridge, TN

Radiological Protection Management Course, 31 March to 2 April 1987, 24 hours, AMC Field Safety Activity, Charleston, IN

Radiation Control and Emergency Procedures, 3 to 7 March 1986, 40 hours, Engineering Technology, Inc., Waco, TX

Radiation and Women Symposium, 2 April 1986, 8 hours, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, MD

Radioactive Material Transportation Course, 21 to 25 April 1986, 40 hours, Chem-Nuclear Systems, Inc., Columbia, SC

Thermoluminescent Dosimetry Seminar, 28 September 1985, 8 hours, National Bureau of Standards, Gaithersburg, MD

Radiological Safety Course, 31 July to 20 August 1985, 120 hours, U.S. Army Chemical School, Fort McClellan, AL

Defense Hazardous Materials Handling Course, 11 to 14 June 1985, 32 hours, U.S. Army Logistics Management Center, Ft. Lee, VA

Radioactive Waste Packaging, Transportation and Disposal, Regulatory Awareness Course, 15 to 19 April 1985, 40 hours, Chem-Nuclear Systems, Inc., Columbia, SC

OSHA Respirator Training, 10 to 14 September 1984, 40 hours, Occupational Safety and Health Administration, Chicago, IL

Health Physics Aspects of Depleted Uranium, 5 to 9 March 1984, 40 hours, Batelle Pacific Northwest Labs, Richland, WA

Alpha Team Operations, 24 to 31 January 1984, 44 hours, U.S. Army Defense Ammunitions Center and School, Savanna, IL

Radiation Protection Officers Workshop, 21 to 25 March 1983, 40 hours, U.S. Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD

Radiation Protection Training Seminar, 27 to 28 September 1982, 16 hours, Batelle Pacific Northwest Labs, Richland, WA

4. Professional Membership:

Member - Health Physics Society (14 years)

Member - Alabama Chapter Health Physics Society (10 years)
Served as Chapter Secretary - 1993

Member - Baltimore-Washington Chapter Health Physics Society (7 years)

5. Radioisotope Handling Experience:

USAMICOM, REDSTONE ARSENAL, ALABAMA and USACSTA, ABERDEEN PROVING GROUND, MARYLAND			
ISOTOPE	**DESCRIPTION**	**DURATION**	**TYPE**
Americium 241	millicurie amounts	18 years	Survey/Leak tests
Carbon 14	microcurie amounts	18 years	Survey/Leak tests
Cadmium 109	millicurie amounts	18 years	Survey/Leak tests
Californium 252	microcurie amounts	18 years	Survey/Leak tests
Cesium 137	curie amounts	18 years	Survey/Leak tests
Cobalt 60	curie amounts	18 years	Survey/Leak tests
Iron 55	millicurie amounts	18 years	Survey/Leak tests
Iridium 192	curie amounts	18 years	Survey/Leak tests
Krypton 85	millicurie amounts	18 years	Survey/Leak tests
Nickel 63	millicurie amounts	18 years	Survey/Leak tests
Promethium 147	millicurie amounts	18 years	Survey/Leak tests
Plutonium 239	microcurie amounts	18 years	Survey/Leak tests
Radium 226	millicurie amounts	18 years	Survey/Leak tests
Strontium 90	millicurie amounts	18 years	Survey/Leak tests
Thallium 204	millicurie amounts	18 years	Survey/Leak tests
Thorium 230	microcurie amounts	18 years	Survey/Leak tests
Thorium 232	microcurie amounts	18 years	Survey/leak tests
Tritium(H3)	curie amounts	18 years	Survey/leak tests
Uranium 238	curie amounts	18 years	Survey/Leak tests

XRAY PRODUCING EQUIPMENT	DURATION	TYPE
Industrial/Non destructive testing up to 11Mev	18 years	Survey
Betatron/Flash Xray up to 25Mev	11 years	Survey

USAEHA, ABERDEEN PROVING GROUND, MARYLAND			
ISOTOPE	**DESCRIPTION**	**DURATION**	**TYPE**
Nickel 63	microcurie amounts	1.5 years	radiochemistry - nuclear counting (RCNC)laboratory tests/operations
Strontium 90	microcurie amounts	1.5 years	RCNC laboratory tests/ operations
Uranium 238	microcurie amounts	1.5 years	RCNC laboratory tests/ operations
Carbon 14	microcurie amounts	1.5 years	RCNC laboratory tests/ operations
Tritium (H3)	microcurie amounts	1.5 years	RCNC laboratory tests/operations

Updated 21 September 1999

JPG SECURITY PLAN

ENCL 2

14 February 2000

JPG SECURITY PLAN

1. PURPOSE: This plan outlines the security measure at Jefferson Proving Ground (JPG) during caretaker status.

2. SCOPE: This plan includes both major areas of the proving ground, the northern impact area and the cantonment area.

3. GENERAL:

a. JPG consists of approximately 55,000 acres in southeastern Indiana. The proving ground is essentially rectangular in shape, oriented north south, approximately 17.2 miles long (north-south) and 4-6 miles wide (east-west).

b. JPG is divided into two major areas. There is an impact are of approximately 52,000 acres and cantonment area in the south of approximately 3,000 acres. The firing line separates the two areas.

c. JPG is about 6 miles north of Madison, Indiana. The cantonment area and the southern portion of the impact are is in Jefferson County. The western portion of the remaining impact area is in Jennings County and eastern portion of the remaining impact area is in Ripley County. The lands surrounding JPG are predominantly farmlands and woodlands.

d. JPG is managed by a three-person site management team. The Indiana Air National Guard maintains a detachment which has offices in the cantonment area and the impact area. They conduct air-ground gunnery operations in the impact are 6-7 days per week. The impact area is also a site for an Unexploded Ordnance (UXO) technology demonstration project. This is jointly managed by the Army and Navy using a contractor to conduct the field trials. The Army Corps of Engineers is managing an environmental remediation effort in the cantonment area using a contractor. The U.S. Fish & Wildlife Service and the Indiana Department of Natural Resources conduct natural resources surveys throughout the proving ground. They also enforce hunting and fishing regulations.

e. The entire area is fenced with six-foot chain link fence topped with barbed wire. There is approximately 48 miles of fence. Security warning signs are also placed along the fence line to caution persons not to enter the property. The Army has erected a new fence which crosses the installation from east to west at the firing line and separates the cantonment area from the impact area. All gates through this new fence remain locked. Only authorized parties are allowed to proceed into the north range area.

f. Workers, visitors and tenants use the main gate into the cantonment area. The main gate is monitored during normal duty hours and is locked when not monitored. Only authorized personnel are issued keys to the main gate.

4. RISK MANAGEMENT:

a. There is little of value on JPG. All weapons and ammunition have been removed. Other government personal property not used by those working on the proving ground during caretaker status has also been removed.

b. The proving ground perimeter is fenced and signs placed in conformance with Army regulations. There is no Army requirement for a fence for security reasons. The purpose of the fence is to define the boundary. The fence and signs act as a deterrent to keep unauthorized people off of the installation. Additionally, there are buffer areas (not contaminated with UXO) 1500 feet wide inside the east and west perimeter fences and approximately two miles wide inside the north perimeter fence. Interior roads leading to the impact area are also posted with warning signs.

c. The general public is aware of the risks involved in entering the impact area. The presence of unexploded ordnance and depleted uranium in the impact area has been publicly documented in environmental documentation and in the media. The rural nature of the installation and public awareness of the hazards significantly reduces the number of unauthorized entries. This is particularly true of unauthorized entries into the impact area.

5. COORDINATING INFORMATION:

a. On 15 April 1995, Indiana Governor Evan Bayh signed and accepted the retrocession of exclusive federal jurisdiction to concurrent jurisdiction for JPG in Jefferson, Jennings and Ripley counties.

b. The respective county sheriffs have jurisdiction on JPG. They have been briefed on their areas. They have toured the installation and shown their respective boundaries. They have been issued keys to the JPG gates to allow ready access. The county sheriffs conduct routine, random patrols on the federal property. The patrol frequency is approximately daily. In addition, the deputy sheriffs are also designated as Deputy Federal Game Wardens.

c. The U.S. Fish and & Wildlife Service and the Indiana Department of Natural Resources have routine access to the proving ground to conduct surveys and to enforce hunting and fishing laws and regulations.

d. The Indiana State Police also has access to the federal land for patrol and jurisdiction should the need arise.

6. COLLATERAL SECURITY MEASURES:

a. All personnel who work on JPG, government employees or contractors, are advised to report any evidence of crime, trespassing, vandalism, downed fence, etc., to the site management team. These personnel are also advised to report any inappropriate actions or the presence of any questionable activity to the site management team. The site management team is responsible for reporting to the Commander, Newport Chemical Activity, Newport, IN concurrently with reports

to the U.S. Fish & Wildlife Service, the Indiana Department of Natural Resources, the Indiana State Police and the county sheriffs.

b. The Indiana Air National Guard monitors the perimeter fence as they travel the perimeter road network to and from their downrange site. They also observe the impact area for unauthorized personnel. Breeches in the fence line or unauthorized personnel are reported to the site management team. The contract personnel working on the UXO technical demonstration project also report breeches in the fence line and unauthorized personnel to the site management team. The U.S. Fish & Wildlife Service and the Indiana Department of Natural Resources personnel also report cuts in the fence or unauthorized personnel to the site management team.

7. COMMAND AND CONTROL:

a. The site management team is a part of the staff of the U.S. Army Soldier and Biological Chemical Command (SBCCOM). Aberdeen Proving Ground, MD with a duty station at JPG. Their local reporting activity is the Newport Chemical Activity, Newport, IN.

b. The Army plans to monitor caretaker function for the foreseeable future using the on-site management team or through an agreement with the State of Indiana.

d. This security plan is reviewed annually by the SBCCOM Headquarters.

8. JPG REUSE INFORMATION:

The Army's intent is to dispose of the real property of JPG. The Army is in the process of negotiating with the U.S. Air National Guard for the transfer of the impact area to that service. The Army has leased the cantonment area to a private citizen from Madison, Indiana. Title will not pass until the area is determined to be clear of environmental contamination and UXO. The Jefferson County will utilize about 200 acres for park use. The State of Indiana will use two buildings to establish a recycling center. The Madison Port Authority is purchasing a building to house a train engine, 17 miles of track, and will have a railroad right of way to the building. These actions have not been completed. This would not change the jurisdictional responsibility for the respective sheriff's offices.

9. SECURITY OF JPG DU AREA:

a. General Description of the Area. The DU area is a 2000-acre area located inside the 52,000-acre area of JPG which lies north of the firing line. The DU area has been characterized revealing that most of the DU is located along the three firing lines: it is not evenly distributed in the area. A person walking in the area would have a very small chance of seeing any DU because the area has been surface cleaned and remaining DU is mostly buried or otherwise hidden by grasses and other natural cover. Anyone in the area would receive almost no radiation exposure from the DU because the average radiation levels in the areas of highest DU concentration are only a few times background.

b. Physical barriers. The larger range area, north of the firing line, is bounded on the west, north and east sides by the JPG boundary fence (a six-foot high chain line fence) and on the south, along the firing line, by a new fence of the same type. At each location where a stream crosses the fence line, the fence is replaced by a steel cable with warning signs attached. (Experience has shown that a fence across a stream collects large amounts of debris which damages the fence: a steel cable with warning signs attached provides acceptable security and safety without the high potential for damage.) The perimeter fence, described above, shall be inspected quarterly. Each inspection shall be documented to include: (1) the date of inspection, (2) the name of the inspector(s), (3) a description of any damage observed, and (4) the location of the damage. For every incident of damage a record shall be maintained documenting the action taken to make repairs. For any repair that takes more than 60 days the NRC will be notified and milestones shall be given for completion of the repair. All gates on the perimeter fence shall be kept locked except when in use, and the keys shall be controlled by the on site staff. All roads approaching the DU area are barricaded and marked with a radiation warning sign. All personnel who are allowed into the restricted area shall be instructed not remove or pass any barricade.

c. Warning Signs. The perimeter fence is posted with warning signs with the words US Government Property, NO TRESPASSING (red, white and blue sign shaped like a shield) and a warning symbol for dangerous unexploded ordnance. All roads approaching the DU area are barricaded and posted with warning signs with the Radiation Hazard symbol and the words Caution, Radioactive Materials. In addition, 100 additional radiation warning signs are posted around the perimeter of the DU area.

d. Entry Control. The entire north range area is protected by a fence. All gates into the area are locked and the keys controlled by the on site staff. Only authorized personnel who have received training shall be allowed north of the firing line.

e. Training.

(1) On Site Personnel. All on site management personnel have been given DU safety training by the SBCCOM health physicists.

(2) Visitors. This includes hunters. All personnel who are allowed entry into the area north of the firing line are given a DU safety briefing including a description of the properties of DU, the harmful effects of DU and what to do if contact is made with DU. They shall be instructed to not leave their assigned area. They shall be instructed that barricades are placed at each approach to the DU area, that they shall not remove or pass any barricade, and that they shall report any violation of these rules to the on site staff. Hunters that may have inadvertently entered the DU contamination area shall be monitored for radioactive contamination at the check station as they leave.

f. Risk Assessment for the DU Area of JPG. See Enclosure.

RISK ASSESSMENT FOR THE DU AREA OF JEFFERSON PROVING GROUND

HAZARD	SUPPORTING FACTORS (THAT MAY BE PRESENT)	MITIGATING FACTORS
Health hazard from exposure to DU in the range impact area.	1. Access to DU impact area. 2. Access to DU in significant quantities. 3. Significant internal or external DU exposure.	1.a. Entire range area surrounded by chain link fence. 1.b. Outer perimeter fence posted with security warning signs. 1.c. All roads leading to DU impact area are barricaded and posted with radiation caution signs. 100 additional signs posted around perimeter of DU impact area. 1.d. Unauthorized access monitored by site management staff. Authorized users and area law enforcement agencies. 1.e. All personnel with authorized entry to north range area are briefed on hazards existing and instructed to stay on main roads. 1.f. Hunting program includes briefing of hunters, assignment to specific areas and monitoring by local site management officials and U.S. Fish and Wildlife Service game wardens.

RISK ASSESSMENT FOR THE DU AREA OF JEFFERSON PROVING GROUND
(CONTINUED)

MITIGATING FACTORS (CONTINUED)	MITIGATING FACTORS (CONTINUED)	RESIDUAL HAZARDS
2.a. Accessible surface DU was cleaned up by JPG staff prior to closure of JPG ranges. 2.b. Radiac meters necessary to find any remaining DU fragments. 2.c. Site scoping and characterization studies show very limited surface contamination in only a small percentage of DU impact area. 2.d. Historical experience by JPG and scoping and characterization contractors showed no contamination of personnel from extensive movement in and around the DU area.	3.a. Large, or for that matter, any, quantities of DU are not readily accessible in the impact area (due to past clean up, buried, or covered by dense foliage). 3.b. Individuals who may have been in the area (for whatever reason) will be monitored for contamination. 3.c. No, or very limited, detectable (ingestible or breathable) particulate contamination as reported by Mound and Los Alamos studies.	1. Minimal 2. Minimal. 3. Minimal.

CONCLUSION

Given all the safeguards that are in place, the residual hazard caused by the DU impact is is considered to be minimal and acceptable.

Enclosure