Town of Tonawanda
Office of the Supervisor
[redacted]

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2010 APR -1 PM 2:00

March 26, 2010

Senator Kristin E. Gillibrand
United States Senate
478 Russell Senate Office Building
Washington, DC 20510

Senator Charles E. Schumer
United States Senate
313 Hart Senate Office Building
Washington, DC 20510

Congresswoman Louise M. Slaughter
United States House of Representatives
[redacted]
Buffalo, NY 14203

Re: US Army Corps of Engineers (ACOE)
Buffalo District, Record of Decision (ROD)
Seaway Site, Town of Tonawanda, New York
Formerly Utilized Sites Remedial Action Program (FUSRAP)

Honorable Members of the United States Congress:

The Army Corps of Engineers (ACOE) released its Record of Decision in October of 2009 for the Seaway Site in the Town of Tonawanda. Unfortunately, the decision was the same as previous recommendations from the year before. Additional review and evaluation resulted in the same disappointing decision with which the Town of Tonawanda, our adjacent local and county governments, the New York State Department of Environmental Conservation (DEC) and the Environmental Protection Agency (EPA) all disagree.

Re: FUSRAP Clean up

As you know, our Town has several FUSRAP sites, including the Seaway Landfill. It also has its own landfill where such materials have been identified. The source of the contaminated radioactive materials has been traced to the Federal Government's Manhattan Project of the 1940's. According to Dr. Douglas Rokke, US Army Major (Ret.), who authored the Regulation, "...decontamination must be completed as required by United States Army Regulation (AR)700-48 that includes not only uranium weapons but releases of all radioactive materials resulting from military operations" (emphasis added). See attached copy of AR 700-48 and the article entitled, "The Health and Environmental Effects of Uranium Munitions,'dated December 13, 2008 prepared by Dr. Rokke.

The Town has discussed the application of AR 700-48 with Dr. Rokke and it is his contention that it requires removal of all contaminated soils from both sites in the Town and not just a portion with capping, as is slated to occur at the Seaway Landfill. We are requesting that you investigate Dr. Rokke's claim and advise as to the accuracy of his position on this critically important issue.

We appreciate your past efforts and thank you in advance for your further assistance regarding these landfills. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

[redacted]

Supervisor

[redacted]

The Health and Environmental Effects of Uranium Munitions- Report for Archbishop Silvano Tomasi, Apostolic Nuncio, Permanent Observer of the Holy See to the United Nations Office and other International Observations.

Prepared by:

[redacted] Ph.D.; Major, retired/disabled; U.S. Army
former Director, U.S. Army Depleted Uranium project

December 13 , 2008

[redacted]

The continued use and prior use of uranium munitions is causing adverse health and environmental effects that are being ignored by the leaders those nations and their military commanders who are responsible for uranium weapons use.

During the summer of 1991, the United States military had collected artillery, tanks, Bradley fighting vehicles, conventional and unconventional munitions, trucks, etc. at Camp Doha in Kuwait. As result of carelessness this weapons depot caught fire with consequent catastrophic explosions resulting in death, injury, illness and extensive environmental contamination from depleted uranium and conventional explosives. Recently the emirate of Kuwait required the United States Department of Defense to remove the contamination. Consequently, over 6,700 tons of contaminated soil sand and other residue was collected and has been shipped back to the United States for burial by American Ecology at Boise Idaho. When [redacted] an investigative journalist, and I contacted American Ecology we found out that they had absolutely no knowledge of U.S. Army Regulation 700-48, U.S. Army PAM 700-48, U.S. Army Technical Bulletin 9-1300-278, and all of the medical orders dealing with depleted uranium contamination, environmental remediation procedures, safety, and medical care . They had never heard of U.S. Environmental Protection Agency guidelines for dealing with mixed – hazardous waste such as radioactive materials and conventional explosives byproducts. (reference "Approaches for the Remediation of Federal Facility Sites Contaminated with Explosives or Radioactive Wastes", EPA/625/R-93/013, September 1993). The shipment across the ocean, unloading at Longview, Washington State port, transport by rail, and burial in Idaho endangers not only the residents of these areas but poses a significant agricultural threat through introduction of pests, microbes, etc. foreign to our nation.

Sadly the known adverse health and environmental hazards from uranium weapons contamination also are prevalent throughout the United States. The Environmental

Protection Agency has listed the former Nuclear Metals- Starmet uranium weapons manufacturing site in Concord Massachuetts on EPA's Superfund National Priority List because it poses a significant risk to public health and the environment. Consequently the community in which the United States was born on April 18, 1775 is now the location of America's own closed dirty bomb factory that will endanger the health and safety of the descendants of our original patriots- "the Minutemen". The closed "National Lead" uranium weapons manufacturing site in Albany New York also poses a significant health and environmental risk. There is also substantial uranium weapons contamination as a consequence of combat training, manufacturing, or research operations in Maryland, Nevada, Hawaii, Florida, Indiana, Tennessee, New Hampshire, Texas, and Puerto Rico. In all probability uranium weapons contamination is abundant throughout United States weapons firing ranges and those ranges located throughout Europe.

The previous delivery of at least 100 GBU 28 bunker busters bombs containing depleted uranium warheads by the United States and their use by Israel against Lebanese targets during 2006 has resulted in additional radioactive and chemical toxic contamination with consequent adverse health and environmental effects throughout the middle east. Israeli tank gunners are also using depleted uranium tank rounds as photographs verify.

Today, United States, British, Canadian, Australian, and Israeli military personnel are using illegal uranium munitions- their own "dirty bombs" while U.S. Army, U.S. Department of Energy, U.S. Department of Defense, British Ministry of Defence, Canadian Ministry of Defence, Australian Defence Ministry, and Israeli officials deny that there are any adverse health and environmental effects as a consequence of the manufacture, testing, and/or use of uranium munitions to avoid liability for the willful and illegal dispersal of a radioactive toxic material - depleted uranium. This directly contradicted by internal United States Department of Defense documents such as the Pentagon briefing given by Colonel J. Edgar Wakayama, Director of the Operational Test and Evaluation Command (http://www.traprockpeace.org/du_dtic_wakayama_Aug2002.html) that confirms not only lung cancer but other serious medical problems such as respiratory, eye, skin, genetic abnormalities, and specific warnings about food, water, air, and soil contamination. It is critical to understand that Assistant Secretary of the U.S. Army Walker ordered the Director of the United States Army Environmental Policy Institute to determine how to reduce the toxicity of uranium munitions and the reported conclusion was that quote "Ways to Reduce DU Toxicity No available technology can significantly change the inherent chemical and radiological toxicity of DU. These are intrinsic properties of uranium. " end quote. The United States Department of Veterans Affairs VISN 11 recently distributed a booklet "Some things you need to know about veterans- A Clinicians Guide to Veteran's Specific Issues" in which they state quote:

"Some of the physical symptoms which may occur as a result of exposure to depleted uranium are: sleep problems, mood swings, symptoms in upper or lower respiratory system, neuropsychological symptoms (including memory loss), chronic fatigue and immune system dysfunction (CFDIS), skin rashes and unusual hair loss, aching joints, headaches, abdominal pain, sensitivity to light, blurred vision, menstrual disorders, gastrointestinal symptoms (recurrent diarrhea), nervous disorders (such as numbness in a limb), multiple chemical

sensitivity, birth defects in children whose parents were exposed." End quote

The use of uranium weapons (radioactive chemically toxic dirty bombs) is absolutely unacceptable, and a crime against humanity because they do not discriminate between combatants and noncombatants; they permanently contaminate air, water, soil, and food; and they can not be cleaned up to restore contaminated areas to pre-war or pre-uranium use conditions that would allow unrestricted use of the area. The intended use of uranium weapons while ignoring all adverse health and environmental effects was specified in the March 1, 1991 Los Alamos memo even while the March 1991 memo from the Defense Nuclear Agency warned of serious hazards (http://www.traprockpeace.org/twomemos.html). Consequently the citizens of the world and all governments must force cessation of uranium weapons use. I demand that Israel now provide medical care to all DU casualties in Lebanon and clean up all DU contamination.

Simply, U.S., British, Australian, Canadian, and Israeli officials arrogantly refuse to comply with regulations, orders, and directives that require officials to provide prompt and effective medical care to "all" exposed individuals. Reference: Medical Management of Unusual Depleted Uranium Casualties, DOD, Pentagon, 10/14/93, Medical Management of Army personnel Exposed to Depleted Uranium (DU) Headquarters, U.S. Army Medical Command 29 April 2004, and section 2-5 of U.S. Army Regulation 700-48.

They also refuse to clean up dispersed radioactive Contamination as required by Army Regulation- AR 700-48: "Management of Equipment Contaminated With Depleted Uranium or Radioactive Commodities" (Headquarters, Department Of The Army, Washington, D.C., September 2002) and U.S. Army Technical Bulletin- TB 9-1300-278: "Guidelines For Safe Response To Handling, Storage, And Transportation Accidents Involving Army Tank Munitions Or Armor Which Contain Depleted Uranium" (Headquarters, Department Of The Army, Washington, D.C., JULY 1996). Specifically section 2-4 of United States Army Regulation-AR 700-48 dated September 16, 2002 requires that:
(1) "Military personnel "identify, segregate, isolate, secure, and label all RCE" (radiologically contaminated equipment).
(2) "Procedures to minimize the spread of radioactivity will be implemented as soon as possible."
(3) "Radioactive material and waste will not be locally disposed of through burial, submersion, incineration, destruction in place, or abandonment" and
(4) "All equipment, to include captured or combat RCE, will be surveyed, packaged, retrograded, decontaminated and released IAW Technical Bulletin 9-1300-278, DA PAM 700-48" (Note: Maximum exposure limits are specified in Appendix F).

United States Department of Defense leaders are not showing the depleted uranium training tapes to military personnel. These three video tapes: (1) "Depleted Uranium Hazard Awareness", (2) "Contaminated and Damaged Equipment Management", and (3) "Operation of the AN/PDR 77 Radiac Set" are essential to understanding the hazards from the use of uranium weapons and management of uranium weapons contamination. These educational videos must shown to not only United States but all military personnel from every nation that

is involved in use of uranium munitions and the consequent management of uranium contamination.

The previous and current use of uranium weapons, the release of radioactive components in destroyed U.S. and foreign military equipment, and releases of industrial, medical, research facility radioactive materials have resulted in unacceptable exposures. Therefore, decontamination must be completed as required by United States Army Regulation 700-48 that includes not only uranium weapons but releases of all radioactive materials resulting from military operations.

The extent of adverse health and environmental effects of uranium weapons contamination is not limited to combat zones in the Balkans, Iraq, and Afghanistan but includes facilities and sites where uranium weapons were manufactured or tested including Vieques; Puerto Rico; Colonie, New York; Concord, MA; Jefferson Proving Grounds, Indiana; and Schofield Barracks, Hawaii. Therefore medical care must be provided by the United States Department of Defense officials to all civilians and military personnel affected by the manufacturing, testing, research, and/or use of uranium munitions. Thorough environmental remediation also must be completed without further delay.

I am disgusted that seventeen years after I was tasked to clean up the depleted uranium mess from Gulf War 1 and over thirteen years since I completed the depleted uranium project that United States Department of Defense officials and others still attempt to justify uranium munitions use while refusing to provide mandatory medical care and complete mandatory environmental remediation. Sadly, Department of Defense, Department of Energy, and Department of Veterans Affairs officials, and their representatives continue personal attacks aimed to silence or discredit those of us who demand that medical care be provided to all DU casualties and that environmental remediation be completed in compliance with U.S. Army Regulation 700-48. But beyond the ignored mandatory actions the willful dispersal of tons of solid radioactive and chemically toxic munitions contamination in the form of uranium munitions is illegal (http://www.traprockpeace.org/karen_parker_du_illegality.pdf) and just does not even pass the common sense test. According to the U.S. Department of Homeland Security, DHS, uranium munitions are dirty bomb. DHS issued "dirty bomb" response guidelines, http://www.access.gpo.gov/su_docs/aces/fr-cont.html, on January 3, 2006 for incidents within the United States but ignore DOD use of uranium weapons and existing DOD regulations. These guidelines specifically state that: "Characteristics of RDD and IND Incidents: A radiological incident is defined as an event or series of events, deliberate or accidental, leading to the release, or potential release, into the environment of radioactive material in sufficient quantity to warrant consideration of protective actions. Use of an RDD or IND is an act of terror that produces a radiological incident." Thus the use of uranium munitions is "an act or terror" as defined by DHS. Finally continued compliance with the infamous March 1991 Los Alamos Memorandum that was issued to ensure continued use of uranium munitions can not be justified.

Specific actions to mitigate the adverse health and environmental effects caused by the previous and current use of uranium munitions must be implemented. The leaders of the

nations who have used and are using uranium munitions must acknowledge and accept responsibility for willful use of illegal uranium munitions- their own "dirty bombs"- resulting in adverse health and environmental effects.

They must order:
1. medical care for all civilian, combatant, and noncombatant casualties,
2. thorough environmental remediation,
3. immediate cessation of retaliation against all individuals who demand compliance with medical care and environmental remediation requirements,
4. and stopping the already illegal the use (UN finding) of depleted uranium munitions.

I pray that you and our Holy Father Pope Benedict XVI will able to provide some influence to stimulate leaders of nations responsible for the uranium weapons catastrophe to finally provide medical care to all casualties and to complete environmental remediation. I pray that we can finally encourage the leaders all nations to never use uranium munitions again. I pray that you will join me in my hope for Divine intervention. I pray that together we can motivate God's children, the citizens of all nations, to live together in peace. In conclusion I wish to quote Archbishop Tutu's comments to the United Nations Human Rights Council on September 18, 2008; "God is hoping that somehow you will help to make God's world a more gentle place, more compassionate place, a more caring place. And God has no one except such as you. I pray that you will be able to fulfill this high calling. It is a high calling. It is a divinely given vocation." I have accepted this calling but I pray for your help and assistance. I pray for God's assistance.

THANK YOU.

References- The following web sites provide copies of the actual regulations and orders and other pertinent official documents related to the use of uranium weapons and mandatory but ignored response to the adverse health and environmental effects. I will also send copies of these documents these as attachments. The web site reference to http://www.traprockpeace.org/du_dtic_wakayama_Aug2002.html is a copy of a hidden internal United States Department of Defense briefing given by Colonel J. Edgar Wakayama that confirms adverse health and environmental effects.

http://www.traprockpeace.org/twomemos.html
http://www.traprockpeace.org/rokke_du_3_ques.html
http://www.traprockpeace.org/du_dtic_wakayama_Aug2002.html
http://www.traprockpeace.org/karen_parker_du_illegality.pdf
http://www.access.gpo.gov/su_docs/aces/fr-cont.html
http://cryptome.org/dhs010306.txt

http://www.boston.com/news/local/articles/2008/05/15/razing_urged_for_waste_site/
http://www.tdn.com/articles/2008/04/29/area_news/doc4816651072f72767559743.txt>

Photo by David Silverman (Getty Images) Image 71440735 http://editorial.gettyimages.com

Army Regulation 700–48

Logistics

Management of Equipment Contaminated with Depleted Uranium or Radioactive Commodities

Headquarters
Department of the Army
Washington, DC
16 September 2002

UNCLASSIFIED

SUMMARY of CHANGE

AR 700-48
Management of Equipment Contaminated with Depleted Uranium or Radioactive Commodities

This revision, dated 16 September 2002--

- Updates office symbols throughout.
- Removes the obsolete publication, AR 385-11.
- Adds technical reference TB 43-0137.

This new Department of the Army regulation, dated 3 December 1999--

- Establishes formal Army policy and procedures for handling equipment determined to be contaminated with depleted uranium or radioactive commodities.
- Delineates actions as a result of combat and non-combat situations.
- Prescribes guidance for handling foreign equipment that may be contaminated.
- Establishes the Army Contaminated Equipment Retrograde Team (ACERT).

Headquarters
Department of the Army
Washington, DC
16 September 2002

***Army Regulation 700–48**

Effective 16 October 2002

Logistics

Management of Equipment Contaminated with Depleted Uranium or Radioactive Commodities

By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army

History. This is an administrative revision of this publication. The portions of the publication affected by this revision are highlighted on the summary of change page.

Summary. This regulation prescribes policy and procedures for the management of equipment contaminated with Depleted Uranium or radioactive commodities. Handling procedures for contaminated equipment are prescribed in DA Pamphlet 700-48.

Applicability. This regulation applies to Department of the Army (DA) commands, installations, and activities. This includes the U.S. Army Reserve (USAR) and the Army National Guard of the United States (ARNGUS). This regulation remains applicable to DA personnel deployed to either humanitarian or peacekeeping missions where the degree of readiness to respond to hostile fire requires the availability of radioactive commodities, such as depleted uranium, as a contingency.

Proponent and exception authority. The proponent of this regulation is the Deputy Chief of Staff, G–4. The Deputy Chief of Staff, G–4, has authority to approve exceptions to this regulation that are consistent with controlling law and regulation. The Deputy Chief of Staff, G–4, may delegate this approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process. This regulation does not contain management control provisions.

Supplementation. Supplementation of this regulation and establishment of command or local form are prohibited without prior approval from Headquarters, Department of the Army (HQDA) (DALO-SMR), Washington, DC 20310-0500.

Suggested Improvements. Users are invited to send comments and suggested improvements to this regulation. Internet users can send comments and suggested improvements through the electronic Department of the Army DA Form 2028 (Recommended Changes to Publications and Blank Forms) found within the Deputy Chief of Staff, G–4, regulations and pamphlets. Anyone without Internet access should submit comments and suggested improvements on DA Form 2028 directly to the Director, U.S. Army Logistics Integration Agency, ATTN: LOIA–AP, 5001 Eisenhower Avenue, Alexandria, VA 22333–0001.

Distribution. This publication is available in electronic media only and is intended for command level B for Active Army, Army National Guard, and U.S. Army Reserve.

Contents (Listed by paragraph and page number)

*This regulation supercedes AR 700–48, 3 December 1999.

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Contents—Continued

Chapter 1
Introduction

Section I
Background

1–1. Purpose
This regulation—

a. Establishes the policies, responsibilities, and procedures for the proper management of—

(1) Damaged equipment containing depleted uranium or radioactive commodities.

(2) Any equipment contaminated by depleted uranium or radioactive commodities.

b. In addition, provide commanders guidance on how these procedures may be modified consistent with operational risk and risk management principles per FM 101-5.

1–2. References
Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms
Abbreviations and special terms used in this regulation are explained in the glossary.

1–4. Policy
a. It is DA policy to always ensure that radiation exposures are as low as is reasonably achievable (ALARA). In general, commanders at all levels should take prudent measures to keep exposures to all personnel ALARA that are consistent with the operational risks. An integral part of ALARA is consideration of the risk caused by implementing a protective procedure. Personnel protective measures designed for use in a non-combat environment may not be appropriate during military operations. The risk management process (see para 2-2) should be used to formulate proper protective measures during military operations.

b. The policies in this regulation are designed to provide a framework for the commanders to make the risk management decisions required to safely process and use radiologically contaminated equipment (RCE) in the full spectrum of military operations. The overall operational commander is responsible for risk management to include the risk from radiation exposure to RCE.

1–5. Scope
a. The guidance contained within this document provides guidelines for OCONUS war and OCONUS operations other than war. In OCONUS situations host nation agreements may also apply.

b. This regulation applies to the entire range of military operations for RCE, which includes:

(1) Contamination from Depleted Uranium (DU) munitions (combat vehicles damaged by DU fire or combat vehicles containing DU armor that have been damaged in any way).

(2) Equipment contaminated as a result of the use or damage of DA-controlled radioactive commodities, such as those identified in the DA Technical Bulletin (TB) 43–0116, containing—

(a) Tritium (h–3), for example, the M1A1 Collimator.

(b) Americium-241 (Am-241), for example, the M43A1 detector unit.

(c) Nickel-63 (NI–63), for example, the CAM and ICAM chemical agent monitors, and the M88 ACADA detector unit.

(d) Thorium-232 (Th-232), for example, the M21 RSCAAL stand-off detector and the AN/PVS–2 night vision sight.

(e) Cessium-137 (Cs-137), for example, the MC–1 moisture and density tester.

(f) Strontium-90 (SR–90), for example, the AN/UDM–2 RADIAC calibrator.

(g) Plutonium-239 (Pu-239), for example, the AN/UDM–6 RADIAC calibrator.

(h) Krypton-85 (Kr-85), for example, the AN/PDR–27 RADIAC radiological detector.

(i) Radium-226 (Ra-226), for example, the AN/GRC–106 radio set.

(3) Foreign Equipment suspected to contain or to have been contaminated with similar radioactive sources as above.

c. This regulation does not apply to equipment contaminated by sources such as:

(1) Radiation dispersal weapons.

(2) Fallout from nuclear weapons/detonations.

(3) Nuclear reactor accidents.

(4) Nuclear weapons accidents.

(5) Nuclear reactor fuel rods.

1–6. Deviations

a. Authorized deviations to Army standards and procedures are allowed. Deviations from Federal and DOD regulations and standards are not authorized.

b. The following personnel may authorize deviations from Army standards and procedures.

(1) Each MACOM commanding general.

(2) The Superintendent, U.S. Military Academy.

(3) The Chief, National Guard Bureau (NGB). (The Chief, NGB may further delegate deviation authority to the State Adjutant Generals.)

(4) Unified Commanders of U.S. forces.

c. Only personnel listed in paragraph b above may approve residual risk levels deemed to be too high or extremely high. Authority to accept residual risk will be IAW FM 101-5. For the purpose of this regulation, the personnel listed in para b are considered MACOM commanding generals.

d. Deviations may be approved for periods of one year or less. The respective approval authority may approve deviation renewals provided conditions cited in the original deviation remain the same.

e. Any accident or mishap occurring under an approved deviation will cause automatic termination of the approval until the respective approving authority completes an investigation and revalidates the deviation.

f. Where the conditions cited in past requests for deviation are expected to remain the same, or to reoccur with regularity, action should be taken to address these conditions in revisions to the approved Army standards and procedures.

Section II
Responsibilities

1–7. Responsibilities

a. The Assistant Secretary of the Army Manpower and Reserve Affairs (ASA M&RA) will—

(1) Establish the overall policy for medical concerns.

(2) Establish and promulgate operation exposure guidance for peacetime and wartime conditions.

b. The Assistant Secretary of the Army Installations and Environment (ASA I&E) will establish the occupational health and environmental policy for supporting industrial facilities and installations.

c. The Headquarters, Department of the Army (HQDA), Office of the Deputy Chief of Staff (DCS), G–4, will promulgate DA policy for processing RCE.

d. The HQDA, Office of the DCS, G–3, will promulgate operational procedures for processing RCE.

e. The HQDA, Director of Army Safety (DASAF) will establish Army Radiation Safety Protection Policy and oversee the Army Radiation Safety Protection Program.

f. The HQDA, Office of The Surgeon General (OTSG) will—

(1) Formulate medical surveillance policies with regard to personnel exposures to radioactive commodities and radioactive contamination.

(2) Formulate policy governing exposures to radioactive commodities which includes the requirements for medical surveillance.

(3) Provide guidance to the HQDA Staff and Major Army Commanders regarding emergency medical care procedures, exposure assessments, treatment protocols, medical surveillance (dose records), and the medical management of personnel who have been exposed to radioactive and/or mixed waste.

(4) Provide Nuclear Medical Science Officers (AOC 72A), Health Physics Specialists (MOS 91SN4), and other personnel as needed to provide field support to monitor U.S. Army Contaminated Equipment Retrograde Team (ACERT) and U.S. Army Radiological Control (RADCON) Team health risks and to perform other duties consistent with performing health risk assessments, personnel/equipment monitoring, and the medical treatment missions of the Army Medical Department.

g. The Commanders of Major Army Commands (MACOMS) will—

(1) Provide adequate resources to procure, use, transport, handle, store, maintain, repair, decontaminate, and dispose of RCE in a safe and compliant manner.

(2) Ensure that all personnel receive RCE hazard awareness training as necessary. Additional selected personnel involved in retrograde operations will be trained in battle damage assessment, repair, recovery and retrograde procedures, and/or operational planning, training and implementation procedures as prepared and disseminated by the U.S. Army Training and Doctrine Command (TRADOC).

(3) Furnish Explosive Ordnance Disposal (EOD) personnel to handle known or suspected RCE ammunition and explosives.

h. The Commander, U.S. Army Materiel Command (AMC) will—

(1) Dispense information (appropriate Nuclear Regulatory Commission license information, technical bulletins, manuals, policies, and maintenance procedures) through AMC major subordinate commands concerning characteristics,

risks, and proper handling of RCE and that such information is included as part of their commodity fielding plans and logistics assistance operations.

(2) Deploy personnel to:

(a) Furnish soldiers, commanders, and staffs with the most current safety-of-use messages, material management policies, radioactive commodity requirements, and guidelines for handling depleted uranium items and other radiological items.

(b) Provide on-site assistance to units as needed.

(3) Ensure that adequate Radiation Detection, Indication, and Computation (RADIAC) systems are developed and fielded to identify RCE hazards.

(4) Establish policies regarding transportation and handling, maintenance, use, retrograde, decontamination, demilitarization, and disposal for all contaminated equipment.

(5) Establish and manage the US Army Contaminated Equipment Retrograde Team. The ACERT will be responsible for providing onsite technical and packaging assistance IAW all applicable federal, state, and international standards during the retrograde of RCE. See DA PAM 700-48, Appendix F for a description of the ACERT.

(6) When required, utilize the RADCON Team to assist in the management of RCE, that requires radiological surveys and characterizations.

(7) If requested by the Supported CINC, AMC may deploy the ACERT to act at theater level, assisting in the processing of RCE.

(8) Provide guidance for the proper storage and handling of RCE at storage/staging areas located in theater.

(9) Operate a designated facility that is responsible for the decontamination of equipment destined for depot rebuild or which could not be decontaminated in theater.

(10) As needed, process foreign captured equipment to ensure the proper disposition of any radioactive sources that may remain on them.

(11) Prioritize reclamation and repair of RCE held at the designated reclamation point.

(12) Ensure the proper storage and handling of affected equipment at AMC storage/staging areas located throughout the retrograde process.

(13) Coordinate all efforts with the NRC licensee of the material.

(14) Provide personnel monitoring devices and services to DA, DLA, and DA contractors.

i. The Commander, U.S. Army Medical Command (MEDCOM) will—

(1) Provide radiological hygiene services that include bioassay, medical surveillance, health risk assessment, and medical treatment as required to the commanders.

(2) Assist in the development of procedure methodologies for the ACERT.

(3) When required utilize the U.S. Army Radiological Advisory Medical Team (RAMT) to assist in the medical monitoring of personnel engaged in retrograde of RCE. See DA PAM 700-48 appendix H for a description of the RAMT.

j. The Commander, U.S. Army Training and Doctrine Command (TRADOC) will develop and update RCE hazard awareness training. Training will cover the characteristics, risks, and proper handling of radioactive and hazardous materials and include:

(1) A general awareness program to be provided to all soldiers entering and currently in the U.S. Army that are not in a specific Military Occupational Specialty.

(2) Specific training to students in the following TRADOC schools whose Military Occupational Specialty or Area of Concentration may involve RCE: Armor, Chemical, Engineer, Infantry, Ordnance (including Battle Damage Assessment and Repair), Quartermaster, Signal, Transportation, and Medical. The above list is not all-inclusive. The intent is that all personnel who operate, maintain and/or recover the RCE will be trained to the degree necessary for safe operations and compliance with this regulation.

(3) Detailed hazard awareness training and instruction on procedures described in DA PAM 700-48 to personnel who possess, store, or use licensed commodity materials as part of their MOS/AOC.

k. The Commander, Military Traffic Management Command (MTMC) will ship materiel subject to this regulation IAW with all applicable Federal, state, international transportation standards and NRC license requirements.

l. The Commander, Transportation Movement Control Agency (TMCA) will command and control all transportation units (Movement Control Battalions and Movement Teams) to coordinate and control all movements of RCE. The TMCA will ensure that RCE is handled within guidelines of the 'special movement policy and procedures' and appropriate publications. Monitoring of the sensitive freight will continue to ensure arrival at the final destination.

m. The Area Commander (TAACOM) will—

(1) Ensure their Radiation Safety Officer (RSO) provides guidance to commanders on matters concerning radiation, DU, and radioactive commodities. This person may be a Nuclear Medical Science Officer (AOC 72A67C) on the Surgeon's Staff, a trained Chemical Corps Officer (AOC 74A) on the Commander's staff, or a GS-1306 trained civilian employee. The RSO should coordinate with the Nuclear, Biological, and Chemical (NBC) staff in the Chain of Command.

(2) Establish separate collection and storage points located in theater for damaged and contaminated material awaiting assessment, cleanup, or evacuation.

(3) Transport RCE from the local collection points to the theater operated collection points IAW guidance provided by the ACERT.

(4) Ensure all efforts to notify the NRC licensee is made by the G4.

n. The Corps/Joint Task Force (JTF)/Division Commanders will—

(1) Appoint a Radiation Safety Officer (RSO) to provide guidance to commanders on matters concerning radiation, DU, and radioactive commodities. This person may be a Nuclear Medical Science Officer (AOC 72A67C) on the Surgeon's Staff, a trained Chemical Corps Officer (AOC 74A) on Corps/JTF/Division Staff, or a GS-1306 trained civilian employee. The RSO should coordinate with the NBC staff in the Chain of Command.

(2) Process contaminated equipment and materials IAW this regulation, TB 9-1300-278, DA PAM 700-48, and Operational Exposure Guidance (OEG).

(3) Ensure all efforts to notify the NRC licensee is made by the General's Staff Logistics Officer (G4).

o. The Commanders of Support Battalions and Maintenance Companies that maintain radioactive commodities will—

(1) Establish unit level RCE collection points.

(2) Accept RCE from other units, on request.

(3) Retain radioactive equipment that is damaged and potentially contaminated in the RCE collection point. Potentially contaminated equipment will not normally be returned to the originating unit for disposal.

(4) Report the RCE inventory to the TAACOM RSO.

(5) Establish and promulgate operational exposure guidance for peacetime and wartime conditions.

(6) Coordinate with the TAACOM RSO for the retrograde of the RCE, and with the NRC licensee, if possible.

(7) Ensure that personnel handling radioactive commodities receive recurring training in the proper methods for handling RCE.

(8) Ensure the proper final disposition of all RCE in their control IAW Army policy and procedures.

Chapter 2
Radiologically Contaminated Equipment Management

2–1. General

a. The US Army will comply with the all applicable federal, state, and host nation laws (including status of forces agreements), NRC license regulations and policies regarding radioactive materials and contaminated equipment, and applicable Army regulations.

b. The Commander for the deployment/operation will assume responsibility for risk management based upon the Commander-in-Chief's (CINC's) assessment of the risks posed by the operation and the guidance and policies in this regulation.

c. Emergency medical considerations outweigh radiological contamination concerns. The health and safety of the individual is the primary concern. The condition of injured personnel should be assessed and stabilized prior to considering any decontamination operations.

d. In general, commanders at all levels should take prudent measures to keep radiation exposures to all personnel as low as is reasonably achievable that are consistent with the operational risks.

2–2. Risk Management

The risk management process per FM 101-5 will be utilized by commanders throughout the entire retrograde process to ensure that the needs for mission accomplishment, safety of personnel, and proper handling of the contaminated equipment are balanced. This should include:

a. Health Risk Assessments to the degree applicable to the operational environment.

b. Safety Risk Assessments in conjunction with Mission, Enemy Terrain, Troops, Time (METT-T) and civilian considerations.

c. Guidance in this regulation and DA PAM 700-48.

2–3. Training

a. Personnel handling radioactive commodities as a part of their duties will receive the basic training required for personal safety and hazard awareness.

b. Recovery and maintenance personnel will receive training in retrograde procedures for radioactive contamination and material for all systems they will be required to recover, repair, or maintain.

c. Training will be conducted on an annual or as needed basis.

2–4. Handling of RCE

a. General.

(1) During peacetime or as soon as operational risk permits, the Corps/JTF/Division Commander's RSO will identify, segregate, isolate, secure, and label all RCE. Procedures to minimize the spread of radioactivity will be implemented as soon as possible.

(2) Radiologically contaminated equipment does not prevent the use of a combat vehicle or equipment for a combat mission.

(3) RSO must consider the operational situation, mission, level of contamination, and types of contaminate when evaluating the need to utilize contaminated equipment.

(4) After the Corps Commander certifies the equipment is decontaminated IAW established OEG or peacetime regulations, it may be reutilized.

(5) The equipment for release for unrestricted use must be decontaminated to comply with peacetime regulations versus OEG.

(6) Explosives Ordnance Disposal (EOD) Units will render equipment safe prior to retrograde operations when appropriate.

b. Use and cannibalization.

(1) The operation of RCE or cannibalization is prohibited unless the commander has determined that:

(a) The operational risk is comparable to that found in combat.

(b) The equipment is required for mission completion.

(c) Under no condition shall the following items be used or cannibalized if damaged: MC-1 Soil Moisture Density Tester (Soil and Asphalt) (NSN 6635-01-030-6896), or commercially procured TROXLER Surface Moisture-Density Gauge AN/UDM-2 RADIAC Calibrator Set (NSN 6665-00-179-9037), AN/UDM-6 RADIAC Calibrator Set (NSN 6665-00-767-7497).

(2) Under those circumstances in which the commander has waived prohibitive use (see para 2-4b(1)) and determined that the operational risk is comparable to combat, equipment may be decontaminated and used for a specified mission. Once the circumstances are met, operational necessity is over, that waived contaminated equipment will be handled IAW peacetime procedures.

c. Handling.

(1) The unit/team/individual responsible for the equipment, whether friendly or foreign, at the time of damage or contamination is responsible for taking all action consistent with this regulation and DA PAM 700-48.

(2) The MACOM commander may designate a radioactive waste/commodity processing facility. The ACERT, RADCON and RAMT Teams may be deployed to assist in the processing and management supervision of RCE.

(3) Maintenance forms, warning tags, and other forms of communication will be used to ensure that personnel involved in the reclamation are aware of the contamination status.

(4) In peacetime, RCE will be transported to the command esignated location for receipt of radioactive material where the extent of contamination can be assessed and remediated under controlled conditions.

(5) In peacetime, the Corps/JTF/Division Commander's RSO monitor the separation of RCE from uncontaminated equipment. The separation must be maintained throughout the entire handling process.

(6) All equipment, to include captured or combat RCE, will be surveyed, packaged, retrograded, decontaminated and released IAW Technical Bulletin 9-1300-278, DA PAM 700-48 and other relevant guidance.

(7) Equipment will be decontaminated to the maximum extent as far forward in theater as possible, IAW the OEG. Under all other conditions, decontamination in-theater will be performed only in accordance with guidance from the ACERT/RADCON/Chemical Officer/NBC Staff.

d. Personal Safety. Personnel handling contaminated equipment need to follow the personal safety measures outlined in DA PAM 700-48 and AR 40-5.

e. Disposal.

(1) In general, environmental impact must be considered prior to equipment retrograde. Retrograde operations must minimize the spread of contamination preventing further harm to personnel and damage to equipment.

(2) Radioactive material and waste will not be locally disposed of through burial, submersion, incineration, destruction in place, or abandonment without approval from overall MACOM commander. If local disposal is approved, the responsible MACOM commander must document the general nature of the disposed material and the exact location of the disposal. As soon as possible the MACOM commander must forward all corresponding documentation to the Chief, Health Physicist, AMCSF-P, HQAMC.

(3) Demilitarization in the field is authorized only as a means to ensure that the equipment will not fall into enemy hands.

2–5. Medical Surveillance

a. The MACOM commander has the responsibility for determining the likelihood of significant exposure from contaminated equipment to any individual. Individuals that the command determines may have been exposed will be sent to a medical treatment facility for appropriate screening (i.e., individuals did not follow the personal protective measures outlined in DA PAM 700-48 and AR 40-5 or any of the recommended handling procedures as outlined in the relevant regulations and technical manuals).

b. Medical personnel will perform the appropriate medical monitoring, which may include bioassay.

c. Medical documentation of RCE exposed personnel is mandatory, use form SF 600 (Chronological Record of Medical Care).

Appendix A
References

Section I
Required Publications

DA Pam 700–48
Handling Procedures for Equipment Contaminated with Depleted Uranium or Radioactive Commodities. (Cited in paras 1-7h(5), 1-7i(3), 1-7j(3), 1-7n(2), 2-2c, 2-4c(1), 2-4c(6), 2-4d, 2-5a.)

FM 101–5
Staff Organizations and Operations. (Cited in paras 1-1, 1-6c, 2-2)

TB 9–1300–278
Guidelines for Safe Response to Handling, Storage, and Transportation Accidents Involving Army Tank Munitions or Armor which Contain Depleted Uranium. (Cited in paras 1-7n(2), 2-4C(6))

Section II
Related Publications

AR 11–34
The Army Respiratory Protection Program

AR 40–5
Preventive Medicine

AR 40–13
Medical Support-Nuclear/Chemical Accidents and Incidents

AR 385–40
Accident Reporting and Records

AR 750–1
Army Material Maintenance Policy and Retail Maintenance Operations

DA Pam 40–18
Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation

DA Pam 700–48
Handling Procedures for Equipment Contaminated with Depleted Uranium or Radioactive Commodities

FM 3–3–1
Nuclear Contamination Avoidance

FM 3–4
NBC Protection

FM 3–5
NBC Decontamination

FM 8–9
NATO Handbook on the Medical Aspects of NBC Defense Operations

FM 9–43–2
Recovery and Battlefield Damage Assessment and Repair

FM 21–10
Field Hygiene and Sanitation

TB 11–6665–227–12
Safe Handling, Storage, and Transportation of Calibrator Set, RADIAC, AN/UDM-2

TB 43–0116
Identification of Radioactive Items in the Army

TB 43–0137
Transportation for U.S. Army Radioactive Commodities

TB 43–0216
Safety and Hazard Warnings for Operation and Maintenance of TACOM Equipment

TM 3–261
Handling and Disposal of Unwanted Radioactive Material

TM 55–315
Transportation Guidance for Safe Transport of Radioactive Materials

TM 3–6665–312–12&P
Operator's and Organizational Maintenance Manual including Repair Parts and Special Tools List for M8A1 Automatic Chemical Agent Alarm

TM 3–6665–312–30&P
Intermediate Direct Support Maintenance Manual (including Repair Parts and Special Tools List) for M8A1 Automatic Chemical Agent Alarm)

TM 3–6665–331–10
Operator's Manual for the Chemical Agent Monitor (CAM)

TM 3–6665–331–23&P
Unit and Direct Support Maintenance Manual (including Repair Parts and Special Tools List) for the Chemical Agent Monitor (CAM)

TM 5–6635–386–12&P
Unit Maintenance Manual for Tester, Density and Moisture (Soil and Asphalt), Nuclear Method (Campbell-Pacific Model MC-1)

TM 11–6665–227–12
Operator's and Organizational Maintenance Manual for Calibrator Set, RADIAC, AN/UDM-2

TM 11–6665–24810
Operator's Manual for Calibrator, RADIAC, AN/UDM-6

Technical Report (TR) 94–11
U.S. Army CECOM, Tritium Commodities

Allied Command Europe (ACE) Directive No. 80–63
Policy for Defensive Measures against Radiological Hazards during Peacekeeping Operations

Foreign Science and Technology Center (FSTC) Guidebook AST–1500Z–100–93
Radiation Protection Officer's Guidebook, Identification Guide for Radioactive Sources in Foreign Material

DODI 6055.8
Occupational Radiation Protection Program

Title 10, Code of Federal Regulations (CFR)
Energy (NRC Regulations)

Title 40, CFR
Environmental Protection Agency Regulations

Title 49, CFR
Transportation Regulations

U.S. Army Industrial Operations Command, AMSIO–DMW, Standing Operating Procedure MAY 97,
Shipping Procedures for Unwanted Radioactive Materials

U.S. Army Industrial Operations Command Pamphlet 385–1
Handling of Unwanted Radioactive Material

Section III
Prescribed Forms
This section contains no entries.

Section IV
Referenced Forms

SF Form 600
Chronological Record of Medical Care

Glossary

Section I
Abbreviations

AIRDC
U.S. Army Ionizing Dosimetry Center

ALARA
As Low As Is Reasonably Achievable

ACERT
Army Contaminated Equipment Retrograde Team

AMC
Army Materiel Command

BDAR
Battlefield Damage Assessment and Repair

CONUS
Continental United States

CTT
Common Task Training

DB
Double Bagging

DS/GS
Direct Support/General Support

DU
Depleted Uranium

EOD
Explosive Ordnance Disposal

FSTC
Foreign Science and Technology Center

FORSCOM
U.S. Army Forces Command

CG
Commanding General

IAW
In Accordance With

IOC
Industrial Operations Command

IHO
Industrial Hygiene Officer

IMA
Installation Medical Authority

JTF
Joint Task Force

LAR/LAO
Logistics Assistance Representative/Logistics Assistance Officer

LLRW
Low-Level Radioactive Waste (Radioactive Waste)

LRPO
Local Radiation Protection Officer

MACOM
Major Army Command

METT-T
Mission, Enemy, Terrain, Troops, Time

MOPP
Mission-Oriented Protective Posture

NBC
Nuclear, Biological, and Chemical

NRC
Nuclear Regulatory Commission

OEG
Operational Exposure Guidance

OSC
On-Scene Commander

OOTW
Operations Other Than War

PPE
Personnel Protective Equipment

QASAS
Quality Assurance Specialist Ammunition Surveillance

RADCON
Army Radiological Control Team

RADIAC
Radiation Detection, Indication, And Computation

RAMT
Army Radiological Advisory Medical Team

RCE
Radiologically Contaminated Equipment

RCO
Radiation Control Officer

RPO
Radiation Protection Officer

RPSO
Radiation Protection Staff Officer

RSO
Radiation Safety Officer

SITREP
Situation Report

SOP
Standing Operating Procedures

TI
Technical Inspection

TMDE
Test, Measurement, and Diagnostic Equipment

WRAMC
Walter Reed Army Medical Center

Section II
Terms

As Low As Is Reasonably Achievable
The principle of making every reasonable effort to maintain exposures to radiation as far below the dose limits in Part 20 of Title 10 of the Code of Federal Regulations as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the benefits to the public health and safety, and other societal, socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

Decontamination
The process by which radioactive and/or mixed waste materials are removed from materiel.

Depleted Uranium
A by-product of the uranium fuel enrichment process. As a result, this by-product or waste stream contains lower concentrations (depleted) of the U-234/U-235 radioisotopes than was contained in the original natural uranium ore.

Double Bagging
The process of taking the necessary steps to contain the radioactive material to decrease the chance of radiological contamination spreading. On the bag mark the following information: date, time, location of bagging, suspected isotope, suspected activity of the isotope, and the names of all personnel involved with the material. Small materials that are radiologically contaminated may require the materials be placed into a plastic bag, or similar type container, and then that plastic bag be placed into another plastic bag with proper tagging. Larger radiological contaminated materials, i.e. vehicles, tanks, will need to be contained by wrapping the entire vehicle. Plastic wrap, traps, shrink wrap or any other material may be used that will encompass the entire vehicle so that the spread of contamination is minimized to the fullest extent possible.

Foreign items
All encompassing term for the weapon system's equipment, apparatus, documents, and supplies of a foreign military force or non-military organization.

Free release
Decontaminated materiel released for unrestricted use by the general public.

Health physics
The science of determining, evaluating, and controlling the health effects of exposure to ionizing radiation.

Host nation
A nation in which representatives or organizations of another state are present because of government invitation and/or international agreement.

Host nation support
Civil and/or military assistance rendered by a nation for foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations.

Industrial Hygiene Officer
The individual designated by the commander as chief advisor and responsible party for all matters related to mixed waste within an individual command.

Low-Level Radioactive Waste (Radioactive Waste)
Unwanted solid, liquid, or gaseous material that contains radionuclides regulated under the Atomic Energy Act as amended, falls below the threshold for activity and quantity listed in 10 CFR 62.2, and is of negligible economic value considering the cost of recovery.

Material
Equipment, vehicles, and other commodities to include supply items.

Mission-Oriented Protective Posture
Protective clothing and equipment used to operate in an NBC contaminated combat environment.

Mixed waste
Hazardous waste as defined by the U.S. Environmental Protection Agency in combination with LLRW.

Operational Exposure Guidance
Instructions from the Commander as to the allowable radiation exposures for soldiers in a certain operation or situation, with respect to radiation dose levels and/or radioactive contamination. The OEG will be determined in consultation with the Command Surgeon.

Radiation safety
For the purposes of this regulation, a scientific discipline whose objective is the protection of people and the environment from unnecessary exposure to radiation. Radiation safety is concerned with understanding, evaluating, and controlling the risks from radiation exposure relative to the benefits derived. Same as 'health physics' and 'radiation protection.'

Radioactive commodities
Commodities that contain radioactive materials.

Radiologically Contaminated Equipment
U.S. or foreign Modified Table(s) of Organization and Equipment (MTOE), Common Table(s) of Allowances (CTA), Table(s) Distribution Allowance (TDA), or Prescribed Load List (PLL) items that were contaminated by depleted uranium or radioactive commodities as a result of combat action, maintenance activities, or accidents.

Radiation Safety Officer/Radiation Protection Officer/Radiation Protection Staff Officer/Radiation Control Officer
The individual designated by the commander as chief advisor and responsible party for all matters related to radioactive materials within an individual command.

Retrograde
Overseas command's return (retrograde) of materiel to CONUS. Retrograde cargo normally consists of unserviceable, economically repairable items and weapon systems destined for depot repair. MTMC has responsibility for the coordination and direction of all shipments; the extraction of an abandoned, disabled, or immobilized vehicle; and if necessary, its removal to a maintenance point.

Risk assessment
The formal or informal process used to determine the total impact of a single or several risks present on a given population for the purpose of determining appropriate actions of preserving personnel health and safety. Assessment of risk must consider the resulting effects on environmental damage. There are Health Risk Assessments and Safety Risk Assessments (FM 101-5).

Risk decision
The decision to accept or not accept the risk(s) associated with an action made by the individual responsible for performing that action.

Risk management
The process of weighing, identifying, and controlling hazards to protect the force.

Risk management process
The process of identifying and controlling hazards to protect the force. It includes five steps that represent a logical thought process from which users develop tools, techniques, and procedures for applying risk management in their areas of responsibility. It is a closed-loop process applicable to any situation and environment. Its five steps are:

a. Identify hazards: Identify hazards to the force. Consider all aspects of the current and future situations, environment, and known historical problem areas.

b. Assess hazards: Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss and cost.

c. Develop controls and make risk decisions: Develop control measures that eliminate the hazard or reduce its risk. As control measures are developed, reevaluate risks until all risks are reduced to a level where benefits outweigh potential costs.

d. Implement controls: Put controls in place that reduces the risk.

e. Supervise and evaluate: Enforce standards and controls. Evaluate the effectiveness of the controls and adjust/update as necessary.

Risk management integration
The method of firmly fixing the risk management process as a principle for individuals and organizations.

Tagging
The process of identifying that a material is radiologically contaminated. To properly tag a material the following information is necessary:

a. Name and signature of personnel that determined the material was radiologically contaminated or suspected to be.

b. The location were the material was surveyed

c. Date and Time

d. Type of isotope if known

e. Activity or level of contamination found. The information should be placed onto a card that can be attached with wire strand to the material, adhesive back tape, or taped on to the material so that others dealing with the material know what they are working with.

Transportation standards
U.S. Department of Transportation requirements established under Title 49 of the Code of Federal Regulations.

Unrestricted use
Same as Free Release.

Unwanted radioactive material
Radioactive materials that have been damaged or have reached the end of their useful life and have been determined to no longer serve the purpose for which they were intended.

Section III
Special Abbreviations and Terms
This section contains no entries.

TB 9-1300-278

Supersedes copy dated 28 September 1990

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

GUIDELINES FOR SAFE RESPONSE TO HANDLING, STORAGE, AND TRANSPORTATION ACCIDENTS INVOLVING ARMY TANK MUNITIONS OR ARMOR WHICH CONTAIN DEPLETED URANIUM

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1996

CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 23 February 2001

GUIDELINES FOR SAFE RESPONSE TO HANDLING, STORAGE, AND TRANSPORTATION ACCIDENTS INVOLVING ARMY TANK MUNITIONS OR ARMOR WHICH CONTAIN DEPLETED URANIUM

1. TB 9-1300-278, 21 July 1996, is changed to incorporate the Bradley Fighting Vehicle (BFV) Fires chapter.

2. Remove old pages and insert new pages indicated below.

3. New or changed material is indicated by vertical bar in the margin of the page.

Remove pages	Insert pages
i and ii	i and ii
3-1 thru 3-4	3-1 thru 3-4
4-1 thru 4-4	4-1 thru 4-4
None	5-1 thru 5-5/(5-6 blank)
5-1 and 5-2	6-1 and 6-2
6-1 thru 6-3/(6-4 blank)	7-1 and 7-3/(7-4 blank)
7-1 thru 7-4	8-1 thru 8-4
A-1/(A-2 blank)	A-1/(A-2 blank)

4. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0101801

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 344019, requirements for TB 9-1300-278.

*U.S. GOVERNMENT PRINTING OFFICE:1996-746/40012

APPENDIX F

RECOMMENDED MAXIMUM PERMISSIBLE CONTAMINATION LEVELS (a)

Contaminated Item	Corrective Action	Maximum Alpha		Maximum Beta	
		Fixed (b) (dpm/100cm2)	Removable (c) (dpm/100cm2)	Fixed (b) (mrad/hr at 2.5cm)	Removable (c) (dpm/100cm2)
1. Personal clothing, including shoes	see note 1	200	none	0.05	none
2. Protective clothing					
a. General	see note 1	1000	200	0.02	1000
b. Respirators	see note 1	200	none	0.06	none
c. Laundry	see note 2	-	-	-	-
3. Work area and equipment (unrestricted use)	see note 3	5000	500	0.05	500
4. Vehicles (unrestricted use)	see note 4	1000	500	0.05	500
5. Skin					
a. Body	see note 5	200	none	0.06	none
b. Hands	see note 5	400	none	0.06	none

Decontaminate soil to 35 picocuries per gram

note 1: Replace or dispose as radioactive waste if above limits
note 2: Release only to NRC licensed launderer, if contaminated, or dispose as radioactive waste
note 3: Control and post, then decontaminate if above limits
note 4: Decontaminate if above limits
note 5: Continue decontamination if above

(a) Reference: AR 385-11
(b) Measured with a calibrated radiation measurement instrument
(c) Determined using smears analyzed with a calibrated counting system

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
02144

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*U.S. GOVERNMENT PRINTING OFFICE:1996-746/40012

Subpart D--Radiation Dose Limits for Individual Members of the Public

Source: 56 FR 23398, May 21, 1991, unless otherwise noted.

§ 20.1301 Dose limits for individual members of the public.

(a) Each licensee shall conduct operations so that —

(1) The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 mSv) in a year, exclusive of the dose contributions from background radiation, from any administration the individual has received, from exposure to individuals administered radioactive material and released under § 35.75, from voluntary participation in medical research programs, and from the licensee's disposal of radioactive material into sanitary sewerage in accordance with § 20.2003, and

(2) The dose in any unrestricted area from external sources, exclusive of the dose contributions from patients administered radioactive material and released in accordance with § 35.75, does not exceed 0.002 rem (0.02 millisievert) in any one hour.

(b) If the licensee permits members of the public to have access to controlled areas, the limits for members of the public continue to apply to those individuals.

(c) Notwithstanding paragraph (a)(1) of this section, a licensee may permit visitors to an individual who cannot be released, under § 35.75, to receive a radiation dose greater than 0.1 rem (1 mSv) if—

(1) The radiation dose received does not exceed 0.5 rem (5 mSv); and

(2) The authorized user, as defined in 10 CFR Part 35, has determined before the visit that it is appropriate.

(d) A licensee or license applicant may apply for prior NRC authorization to operate up to an annual dose limit for an individual member of the public of 0.5 rem (5 mSv). The licensee or license applicant shall include the following information in this application:

(1) Demonstration of the need for and the expected duration of operations in excess of the limit in paragraph (a) of this section;

(2) The licensee's program to assess and control dose within the 0.5 rem (5 mSv) annual limit; and

(3) The procedures to be followed to maintain the dose as low as is reasonably achievable.

(e) In addition to the requirements of this part, a licensee subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190 shall comply with those standards.

(f) The Commission may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee *may release* in effluents in order to restrict the collective dose.

[56 FR 23398, May 21, 1991, as amended at 60 FR 48625, Sept. 20, 1995; 62 FR 4133, Jan. 29, 1997; 67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002]