

“How hazardous is this stuff, anyway?”

Unfired shells or intact DU armor do not exceed peacetime regulatory standards for personal exposures

The metal jacket on DU rounds (and steel armor encasing DU panels on M1 tanks) means virtually no radiation is emitted



Unfired or intact, DU DOES NOT pose a health risk!

“How Do I Protect Myself?”



- **Cover exposed skin**
- **Wash hands to avoid secondary ingestion**
- **Respiratory protection if causing large amount of suspension of soil**
- **If possible, avoid the area of suspected contamination**



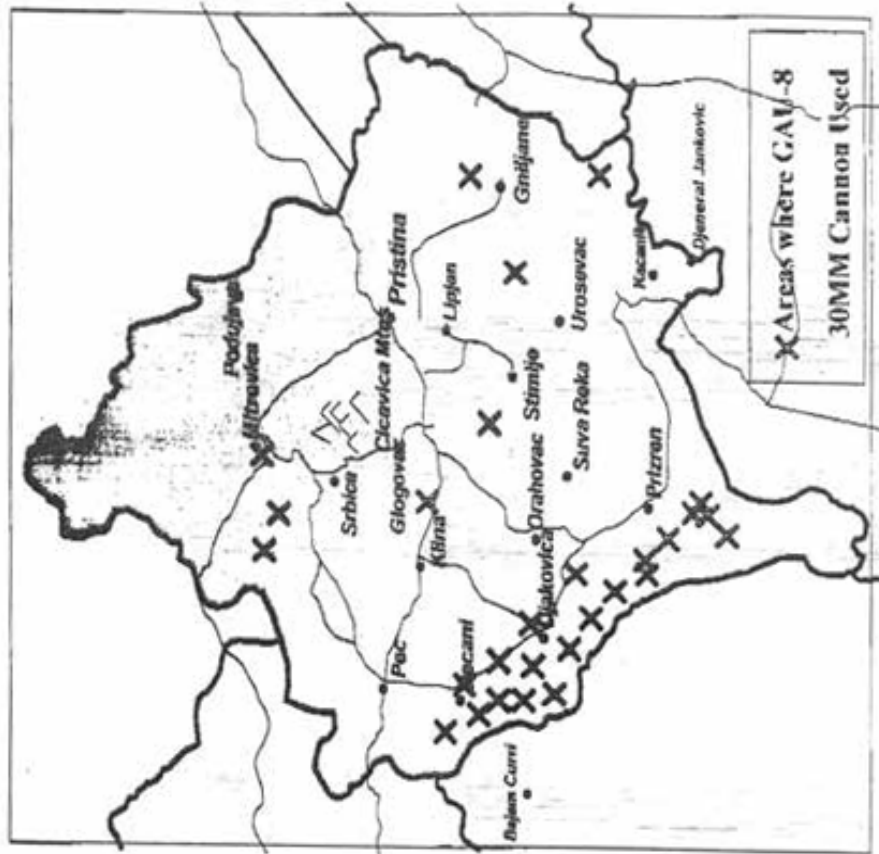
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Use of Depleted Uranium Ammunition

- Areas of concentration marked on the attached map indicate a position where one or more aircraft attacked
- Markings are not precise, the overall area covered by the X on the map should give the required positional deviation
- Source of data for areas depicted was from pilot debriefs after engaging in FLEX targeting process during Operation Allied Force



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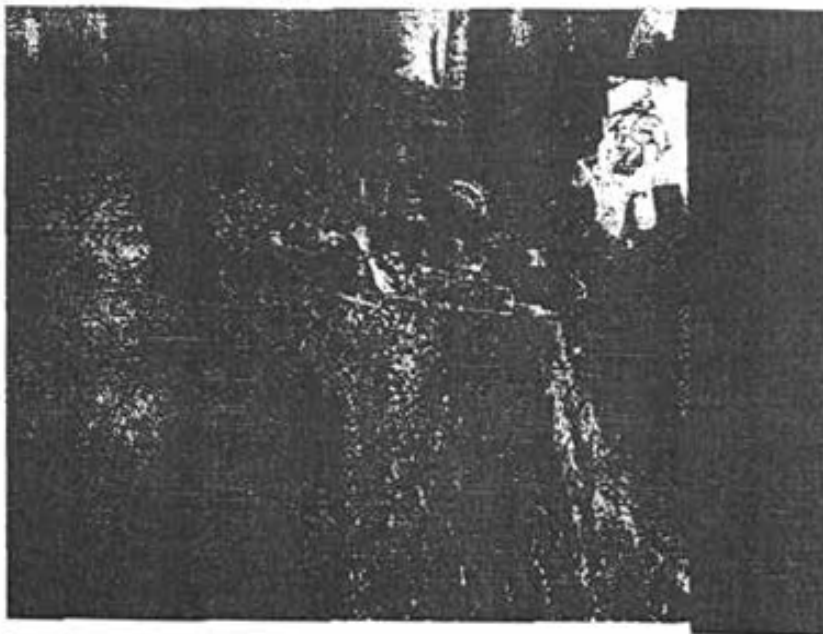
NATO Position on DU

Operational Level

- DU is a safe and effective munition.
- The health hazards presented by exposure to remnants of DU rounds is similar to exposure to heavy metals.
- DU rounds contain uranium that is found naturally in soil and rocks.
- Coherent NATO strategy to deal with the health or environmental consequences of DU
- DU use locations data for Kosovo known by NATO partners/KFOR HQ

KFOR Efforts

- **MOST EFFECTIVE WEAPON AGAINST RUMORS IS INFORMATION.**
- Determination/development of operational guidance.
- Environmental radiological sampling information distributed to MNBs.
- Distribution of DU usage information to all MNBs.
- Biological monitoring/health risk assessment procedures available.



UNEP DU-Assessment Team

UNEP DU-ASSESSMENT TEAM SCHEDULE

- Arrival of UNEP DU-Assessment Team on 5 NOV 00
- 6 NOV 00 - Briefings
- 7 - 16 NOV 00 - 11 Field Surveys
- 16 NOV 00 - Debriefings
- 17 NOV 00 - Final Calls
- Press Conference



UNEP DU-Assessment Team

Aim of the Field surveys:

- **Extension of surface contamination?**
- **Contamination of ground-/surface water and potable water?**
- **Risk for the population in the future?**



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Field surveys:

- Investigation at 11 instead of the planned 6 sites
- 7 penetrators + 7 sabots found
- Measuring of radiation at all sites
- Several 100s of samples (incl. background samples)
 - ⇒ soil
 - ⇒ water (ground water/surface water stream)
 - ⇒ vegetation
 - ⇒ milk
- 3 smear tests



First results:

- Coordinates provided by KFOR deem to be correct
- 6 sites were clear/without radiation,
at 5 sites radiation was measurable,
at 5 sites parts of DU ammunition were found
- Radiation only measurable within approximately 10 cm of penetrator,
no other soil contamination detected by field measurements
- Metal detectors are able to find DU rounds
- There is no danger for de-mining activities next to or at DU-sites

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Way ahead:

- All samples will be examined in laboratories
- The final results and the report are expected to be ready in February 2001

ALLEGATO 3

TRAINING SUPPORT PACKAGE (TSP)

TSP Number / Title	TA-031-DUAT-001 Tier I: Depleted Uranium General Awareness
Task Number(s) / Title(s)	031-503-1017 Respond to Depleted Uranium on the Battlefield
Effective Date	01-JUL-1999
Supersedes TSP(s)	TA-031-DUAT-001 and TA-031-DUAT-002, 01-AUG-1997, and all other DU TSPs dated prior to 30 June 1999.
TSP Users	All soldiers.
Proponent	UNITED STATES ARMY CHEMICAL SCHOOL DIRECTORATE OF TRAINING DEVELOPMENT FORT LEONARD WOOD, MO 65473-5000
Comments / Recommendations	Send comments and recommendations to: COMMANDANT: UNITED STATES ARMY CHEMICAL SCHOOL DIRECTORATE OF TRAINING DEVELOPMENT FORT LEONARD WOOD, MO 65473-5000
Foreign Disclosure Statement	The materials contained in this course have been reviewed by the course developers in coordination with the US Army Chemical School, Ft. Leonard Wood, foreign disclosure authority. This course is releasable to military students from foreign countries on a case-by-case basis. Foreign countries desiring to place students in this course must meet one or more of the following criteria: (1) Own (a specific piece of equipment); (2) Have a signed Letter of Intent (LOI); (3) Waiver from HQDA; (4) USG release for training; (5) etc.

PREFACE

Purpose	<p>This Training Support Package (TSP) provides the instructor with a standardized lesson plan for presenting instruction for:</p>
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	Task Id: 031-503-1017
	Title: Respond to Depleted Uranium on the Battlefield
	Conditions: In a classroom or field environment.
	Standards: Identify sources of depleted uranium on the battlefield and take protective measures as appropriate.
	<hr/>
Terminal Learning Objective	<p>Note: Inform the students of the following Terminal Learning Objective requirements.</p> <p>At the completion of this lesson, you [the student] will:</p>
	<hr/>
	Action: At the completion of this lesson, you will be able to respond safely and effectively to depleted uranium (DU) on the battlefield and initiate additional protective measures. You will also be able to recognize the special cases when these additional protective measures are necessary in order to keep exposures below US safety standards and as low as reasonably achievable.
	Conditions: In a simulated combat situation where DU munitions or weapons systems that could contain DU are in use or could be used: protective mask, gloves, and first aid supplies.
	Standards: Without reference: 1) describe depleted uranium (DU), 2) identify military uses of DU, 3) identify protective measures required for handling intact DU armor and unfired DU munitions, 4) identify situations in which DU could present a hazard, 5) state the actions to be taken when in, on, or near an armored combat vehicle at the time of impact by munitions, 6) state the protective measures to be taken when decontaminating the crew compartment of a damaged armored vehicle, 7) state the actions to take when finding penetrators or parts of penetrators, 8) state the actions to be taken when near actively burning fires that involve DU munitions, and 9) state first aid procedures for injuries involving DU.
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This TSP Contains

Table of Contents		Page
Preface		2
Lesson Plans	Section I. – Administrative Data	4
	Section II. – Introduction	7
	Terminal Learning Objective	8
	Section III. – Presentation	9
	Enabling Learning Objective 1	9
	Enabling Learning Objective 2	10
	Enabling Learning Objective 3	12
	Enabling Learning Objective 4	13
	Enabling Learning Objective 5	14
	Enabling Learning Objective 6	15
	Enabling Learning Objective 7	16
	Enabling Learning Objective 8	17
	Enabling Learning Objective 9	18
	Section IV. – Summary	19
	Section V. – Student Evaluation	25
Appendices	A. Viewgraph Transparencies (VGT)	26
	B. Glossary of Terms	27
	C. Student Handouts	28

TA-031-DUAT-001 / Tier I: Depleted Uranium General Awareness
01-JUL-1999

SECTION I ADMINISTRATIVE DATA

All Courses Including this Lesson	<u>Course Number</u>	<u>Course Title</u>
	N/A	
Task(s) Taught	<u>Task Number</u>	<u>Task Title</u>
	031-503-1017	Respond to Depleted Uranium on the Battlefield
Supported or Reinforced Task(s)	Supported TRADOC Common Core (TCC) Tasks: 031-503-1035, 031-503-1013, 031-503-1018	
Academic Hours	The Academic hours required to teach this TSP are as follows:	
	<u>Peacetime Hours/Methods</u>	<u>Mobilization Hours/Methods</u>
Total:	1.0 hr/LE/CO	1.0 hr/LE/CO
Test Lesson Number	Testing: <u>Hours</u>	<u>Lesson No.</u>
	None	
	<u>Description</u>	
	Review of Test Results: _____	_____
Prerequisite Lesson(s)	None	
Clearance and Access	UNCLASSIFIED / UNRESTRICTED	

References

<u>Number</u>	<u>Title / Date</u>
STP 21-1-SMCT	Soldier's Manual of Common Tasks - Skill Level 1.
AR 40-5	Preventive Medicine, October 1990.
AR 11-9	The Army Radiation Safety Program (to be published). Supersedes AR 40-14, Occupational Ionizing Radiation Personnel Dosimetry, June 1995.
AR 700-48 (Draft)	Management of Equipment Contaminated with Depleted Uranium and/or Other Low Level Radioactive Materials.
FM 3-5 (Draft)	NBC Decontamination.
GTA 3-4-1A	Depleted Uranium Awareness. Proponent, USACMLS, 1 July 1999.
TVT 3-117	"Tier I: Depleted Uranium General Awareness" videotape. Proponent, USACMLS, June 1999.
	<u>Environmental Exposure Report: Depleted Uranium in the Gulf</u> , The Office of the Special Assistant for Gulf War Illnesses (www.gulflink.osd.mil/du), 4 August 1998.
	<u>Health and Environmental Consequences of Depleted Uranium Use in the US Army</u> , Army Environmental Policy Institute (AEPI), Champaign, Illinois, June 1995.
	MEMORANDUM, DASG-ZH, Headquarters, Department of the Army, SUBJECT: Policy for the Treatment of Personnel Wounded by Depleted Uranium Munitions, April 1999.
	<u>A Review of the Scientific Literature As It Pertains to Gulf War Illnesses: Volume 7 Depleted Uranium</u> (RAND Report), Naomi H. Harley, Ernest C. Foulkes, Lee H. Hilborne, Arlene Hudson, and C. Ross Anthony. National Defense Research Institute, 15 April 1999, (http://www.gulflink.osd.mil/library/randrep/du/cover.html).
Student Study Assignments	None
Instructor Requirements	One primary instructor
Additional Support Personnel Requirements	None
Equipment Required	1 video cassette player and television monitor 1 overhead projector with screen and slides

Materials Required	Instructor Materials: TVT 3-117, "Tier I: Depleted Uranium General Awareness" videotape, mockups or dummy rounds (if presentation is done in classroom)			
Classroom, Training Area, and Range Requirements	One lecture/conference classroom			
Ammunition Requirements	None			
Instructional Guidance	<p>a. Ensure classrooms are scheduled and set up.</p> <p>b. Assign instructors. c. Ensure all student materials are on hand in quantities needed. d. Ensure equipment is in working condition. e. UNIFORM: Duty f. Special instructions: Ensure instructor reviews the lesson plan and video prior to executing this training and fully understands the subject and standard.</p>			
Design Decisions	None			
Proponent Lesson Plan Approvals	<u>Name</u>	<u>Rank</u>	<u>Position</u>	<u>Date</u>