

Sample search in the INIS Bibliography on: health effects of depleted uranium

B.Negeri, INIS, 1400 Vienna, Austria

date of search: February 2001

No.	Records	Request
1	769	"DEPLETED-URANIUM" in DE
2	20722	explode "HEALTH-HAZARDS"
3	70175	explode "BIOLOGICAL-RADIATION-EFFECTS"
4	8043	explode "TOXICITY"
5	5979	explode "CARCINOGENESIS"
6	26409	explode "CARCINOMAS"
7	116183	#1 or #2 or #3 or #4 or #5 or #6
8	4982	depleted
9	228957	uranium
* 10	47	(#1 or (depleted adj uranium)) and (#2 or #3 or #4 or #5 or #6)

Record 1 of 47 - INIS 1997-2000/09

TI: Depleted uranium. A post-war disaster for environment and health
AU: Diehl,-P.; Fahey,-D.; Bertell,-R.; Robicheau,-D.; Bristow,-R.; Arbuthnot,-F.; Van-der-Keur,-H
CA: Laka Foundation, Amsterdam (Netherlands)
SO: Amsterdam (Netherlands) Laka Foundation May 1999 39 p.
NT: Prepared in the course of the preparations for the The Hague Appeal for Peace 1999 conference Available from Laka Foundation, Ketelhuisplein 43, 1054 RD Amsterdam (NL)
PY: 1999
LA: English
CI: Netherlands
PT: I (Miscellaneous); X (Microfiche-Unavailable-from-INIS)
AB: In the course of the preparations for the The Hague Appeal for Peace '99 conference in the Netherlands, Laka decided to make a brochure about the use of depleted uranium in conventional weaponry and its consequences. The idea was born because of the short time reserved during the session for the presentation of all details about depleted uranium (DU). Although the word 'depleted uranium' may suggest no harmful impact from radiation, this brochure will clarify the real radiotoxic (and chemotoxic) properties of DU. Laka asked several 'insiders' to take part in the completion of the brochure. Thanks to their efforts, we have been able to present well-documented articles for activists, scientists, scholars and students to share with them valuable information about the hazardous impact of DU contamination and its consequences on human health and the environment. Taking notice of the growing military use of DU, we must consider not only the increased threats of radioactive battlefields but also the whole dirty cycle in the uranium industry connected with the DU technology and its impact on health and the environment in the surroundings of test areas and in the uranium industry itself. The contents of all the contributions are under the responsibility of the authors. The titles of the contributions are (1) Depleted uranium. A by-product of the nuclear chain; (2) Depleted uranium weapons. Lessons from the 1991 Gulf War; (3) Gulf War veterans and depleted uranium; (4) The next testing site for depleted uranium weaponry; (5) Depleted uranium. The thoughts of the first British Gulf War veteran to be tested for, and found to be poisoned with depleted uranium; (6) The health of the Iraqi people; (7) Uranium pollution from the amsterdam 1992 plane crash; and (8) an overview of organizations involved in campaigns against depleted uranium. refs.

DEI: biological-radiation-effects; depleted-uranium; inhalation-; iraq-; isotope-separation; land-pollution; local-fallout; mass-balance; military-personnel; netherlands-; nuclear-weapons; public-health; radioactive-waste-disposal; radioactive-waste-storage; test-facilities; uranium-
DEC: actinides-; arab-countries; asia-; biological-effects; developed-countries; developing-countries; elements-; europe-; fallout-; intake-; management-; medicine-; metals-; middle-east; personnel-; pollution-; preventive-medicine; radiation-effects; separation-processes; storage-; uranium-; waste-disposal; waste-management; waste-storage; western-europe
CC: B3110; C1500
C1: B3110
CD: Radioactive-materials-monitoring-and-transport; Effects-of-External-Irradiation-on-Man
UD: 3046
AN: 30-052836

Record 2 of 47 - INIS 1997-2000/09

TI: Potential health impacts from range fires at Aberdeen Proving Ground, Maryland.
AU: Willians,-G.P.; Hermes,-A.M.; Policastro,-A.J.; Hartmann,-H.M.; Tomasko,-D
CA: Argonne National Lab., Environmental Assessment Div., IL (United States)
FUNDING ORGANIZATION: Department of Defense, Washington, DC (United States)
SO: Mar 1998 101 p.
NT: Available from INIS in electronic form; ALSO AVAILABLE FROM OSTI AS DE98004910; NTIS; US GOVT. PRINTING OFFICE DEP.
RN: ANL/EAD/TM--79 (ANLEADTM79); Contract W-31109-ENG-38 (W31109ENG38)
PY: 1998
LA: English
CI: United-States
PT: R (Report)
AB: This study uses atmospheric dispersion computer models to evaluate the potential for human health impacts from exposure to contaminants that could be dispersed by fires on the testing ranges at Aberdeen Proving Ground, Maryland. It was designed as a screening study and does not estimate actual human health risks. Considered are five contaminants possibly present in the soil and vegetation from past human activities at APG--lead, arsenic, trichloroethylene (TCE), depleted uranium (DU), and dichlorodiphenyltrichloroethane (DDT); and two chemical warfare agents that could be released from unexploded ordnance rounds heated in a range fire--mustard and phosgene. For comparison, dispersion of two naturally occurring compounds that could be released by burning of uncontaminated vegetation--vinyl acetate and 2-furaldehyde--is also examined. Data from previous studies on soil contamination at APG are used in conjunction with conservative estimates about plant uptake of contaminants, atmospheric conditions, and size and frequency of range fires at APG to estimate dispersion and possible human exposure. The results are compared with US Environmental Protection Agency action levels. The comparisons indicate that for all of the anthropogenic contaminants except arsenic and mustard, exposure levels would be at least an order of magnitude lower than the corresponding action levels. Because of the compoundingly conservative nature of the assumptions made, they conclude that the potential for significant human health risks from range fires is low. The authors recommend that future efforts be directed at fire management and control, rather than at conducting additional studies to more accurately estimate actual human health risk from range fires.

DEI: arsenic-; chemical-warfare-agents; chlorinated-aliphatic-hydrocarbons; computerized-simulation; ddt-; depleted-uranium; environmental-transport; fires-; health-hazards; lead-; military-facilities; phosgene-; toxic-materials
DEC: actinides-; aromatics-; carbonic-acid-derivatives; elements-; halogenated-aliphatic-hydrocarbons; hazardous-materials; hazards-; insecticides-; mass-transfer; materials-; metals-; organic-chlorine-compounds; organic-compounds; organic-halogen-compounds; pesticides-; semimetals-; simulation-; uranium-
CC: B3350; B3310
C1: B3350
CD: Chemical-effluents-monitoring-and-transport; Radioactive-materials-monitoring-and-transport
UD: 3009
AN: 30-009125

Record 3 of 47 - INIS 1997-2000/09

TI: Study on depleted uranium at the airplane accident in Bijlmermeer, Amsterdam, Netherlands
OT: Onderzoek verarmd uranium vliegtuigongeval Bijlmermeer
AU: Veltkamp, -A.C.; Van-Hienen, -J.F.A. (ECN Nucleair Onderzoek, Petten (Netherlands))
CA: Energieonderzoek Centrum Nederland ECN, Petten (Netherlands)
SO: Sep 1998 30 p.
NT: ECN-reports, published in the CX-series, are classified. However, this particular report is released for publication Available from BIDOC, Energieonderzoek Centrum Nederland (ECN), Postbus 1, 1755 ZG Petten (NL)
RN: ECN-CX--98-102 (ECNCX98102); Project ECN 810297 (ECN810297)
PY: 1998
LA: Dutch
CI: Netherlands
PT: R (Report); X (Microfiche-Unavailable-from-INIS)
AB: The El Al airplane, which crashed in the urban area Bijlmermeer in Amsterdam, Netherlands, October 4th, 1992, contained balance weights of depleted uranium. Part of the balance weights has not been found after the disaster and its not sure what happened with the lost part. One of the options is that the uranium atomized during or after the fire. To clarify this the Dutch Civil Aviation Authority (RLD) ordered the Netherlands Energy Research Foundation (ECN) to study the fore-mentioned option on the basis of the following questions: (1) at which temperature will depleted uranium atomize and thus be released into the air?; (2) at which temperature will depleted uranium burn?; and (3) what is the chance that depleted uranium will atomize under the conditions as they occurred during the aircraft accident in the Bijlmermeer? The overall impression is that during the fire little if any uranium oxide has been released into the air. Because of lack of knowledge about the actual conditions, partial or complete oxidation can not be excluded with cast-iron certainty. 16 refs.
DEI: accidents-; aircraft-; atomization-; depleted-uranium; evaporation-; fission-product-release; netherlands-; radiation-hazards; radiation-protection; radioactive-aerosols; uranium-oxides
DEC: actinide-compounds; actinides-; aerosols-; chalcogenides-; colloids-; developed-countries; dispersions-; elements-; europe-; hazards-; health-hazards; metals-; oxides-; oxygen-compounds; phase-transformations; sols-; uranium-; uranium-compounds; western-europe
CC: C5500
C1: C5500
CD: Dosimetry-and-Monitoring
UD: 3005

AN: 30-004614

Record 4 of 47 - INIS 1997-2000/09

TI: Uranium at the Bijlmer disaster. Effective dosis of inhaled depleted uranium

OT: Uranium bij de Bijlmerramp. Effectieve volgdosis van ingeademd verarmd uranium

AU: Keverling-Buisman,-A.S. (ECN Stralingstechnologie, Petten (Netherlands))

SO: NVS-Nieuws (Dec 1998) v. 23(5) p. 12-13

PY: 1998

LA: Dutch

CI: Netherlands

PT: J (Journal-Article)

AB: The El Al airplane, which crashed in the urban area Bijlmermeer in Amsterdam, Netherlands, October 4th, 1992, contained balance weights of depleted uranium. Part of the balance weights has not been found after the disaster and its not sure what happened with the lost part. One of the options is that the uranium atomized during or after the fire. To clarify this the Dutch Civil Aviation Authority (RLD) ordered the Netherlands Energy Research Foundation (ECN) to study the fore-mentioned option. The effects on the public health of occupants, spectators and rescue workers were investigated by RIVM. In this article the results of the ECN study and the RIVM study are summarized, focusing on the title subject. 2 refs.

DEI: aircraft-; atomization-; depleted-uranium; dose-response-relationships; evaporation-; explosions-; fires-; internal-irradiation; netherlands-; public-health; radiation-accidents; radiation-hazards; radioactive-aerosols; uranium-234; uranium-235; uranium-238; uranium-oxides

DEC: accidents-; actinide-compounds; actinide-nuclei; actinides-; aerosols-; alpha-decay-radioisotopes; chalcogenides-; colloids-; developed-countries; dispersions-; elements-; europe-; even-even-nuclei; even-odd-nuclei; hazards-; health-hazards; heavy-ion-decay-radioisotopes; heavy-nuclei; internal-conversion-radioisotopes; irradiation-; isomeric-transition-isotopes; isotopes-; magnesium-28-decay-radioisotopes; medicine-; metals-; minutes-living-radioisotopes; neon-24-decay-radioisotopes; nuclei-; oxides-; oxygen-compounds; phase-transformations; preventive-medicine; radioisotopes-; sols-; spontaneous-fission-radioisotopes; uranium-; uranium-compounds; uranium-isotopes; western-europe; years-living-radioisotopes

IS: CODEN NVSNAD

CC: C2110; C5500

C1: C2110

CD: Effects-of-internal-irradiation-and-various-aspects-of-radioisotope-kinetics-and-toxicity-in-man; Dosimetry-and-Monitoring

UD: 3005

AN: 30-004553

Record 5 of 47 - INIS 1997-2000/09

TI: Public health risks of the El Al Boeing disaster. Reconstruction study depleted uranium

OT: Gezondheidsrisico's brand El Al Boeing. Reconstructieonderzoek verarmd uranium

AU: Smetsers,-R.C.G.M.; Uijt-de-Haag,-P.A.M. (Rijksinstituut voor Volksgezondheid en Milieu RIVM, Bilthoven (Netherlands)); Veltkamp,-A.C.; Van-Hienen,-J.F.A. (ECN Nucleair Onderzoek, Petten (Netherlands))

SO: NVS-Nieuws (Dec 1998) v. 23(5) p. 8-11

PY: 1998

LA: Dutch
CI: Netherlands
PT: J (Journal-Article)
AB: The El Al airplane, which crashed in the urban area Bijlmermeer in Amsterdam, Netherlands, October 4th, 1992, contained balance weights of depleted uranium. Part of the balance weights has not been found after the disaster and its not sure what happened with the lost part. One of the options is that the uranium atomized during or after the fire. To clarify this the Dutch Civil Aviation Authority (RLD) ordered the Netherlands Energy Research Foundation (ECN) to study the fore-mentioned option. The effects on the public health of occupants, spectators and rescue workers were investigated by RIVM. In this article the results of the ECN study and the RIVM study are summarized. 7 refs.
DEI: acute-exposure; aircraft-; atomization-; depleted-uranium; dose-response-relationships; evaporation-; explosions-; fires-; fission-product-release; netherlands-; occupational-exposure; public-health; radiation-accidents; radiation-hazards; radioactive-aerosols; risk-assessment; uranium-238; uranium-oxides
DEC: accidents-; actinide-compounds; actinide-nuclei; actinides-; aerosols-; alpha-decay-radioisotopes; chalcogenides-; colloids-; developed-countries; dispersions-; elements-; europe-; even-even-nuclei; hazards-; health-hazards; heavy-nuclei; isotopes-; medicine-; metals-; nuclei-; oxides-; oxygen-compounds; phase-transformations; preventive-medicine; radioisotopes-; sols-; spontaneous-fission-radioisotopes; uranium-; uranium-compounds; uranium-isotopes; western-europe; years-living-radioisotopes
IS: CODEN NVSNAD
CC: C5500
C1: C5500
CD: Dosimetry-and-Monitoring
UD: 3005
AN: 30-004552

Record 6 of 47 - INIS 1997-2000/09

TI: Draft Programmatic Environmental Impact Statement for alternative strategies for the long-term management and use of depleted uranium hexafluoride. Volume 2: Appendices
CA: Argonne National Lab., IL (United States)
FUNDING ORGANIZATION: USDOE Assistant Secretary for Nuclear Energy, Washington, DC (United States)
SO: Dec 1997 763 p.
NT: Available from INIS in electronic form; ALSO AVAILABLE FROM OSTI AS DE98003287; NTIS; US GOVT. PRINTING OFFICE DEP.
RN: DOE/EIS--0269-Vol.2 (DOEEIS0269Vol2); Contract W-31-109-ENG-38 (W31109ENG38)
PY: 1997
LA: English
CI: United-States
PT: R (Report)
AB: This PEIS assesses the potential impacts of alternative management of alternative management strategies for depleted uranium hexafluoride (UF sub 6) currently stored at three DOE sites: Paducah site near Paducah, Kentucky; Portsmouth site near Portsmouth, Ohio; and K-25 site on the Oak Ridge Reservation, Oak Ridge, Tennessee. The alternatives analyzed in the PEIS include no action, long-term storage as UF sub 6 , long-term storage as uranium oxide, use as uranium oxide, use as uranium metal, and disposal. The preferred alternative for the long-term management of depleted UF sub 6 is to use the entire inventory of material. This volume contains the appendices to volume I.

DEI: depleted-uranium; ecology-; environmental-impacts; health-hazards; orgdp-; paducah-plant; portsmouth-gaseous-diffusion-plant; radioactive-waste-management; uranium-hexafluoride
DEC: actinide-compounds; actinides-; elements-; fluorides-; fluorine-compounds; gaseous-diffusion-plants; halides-; halogen-compounds; hazards-; industrial-plants; isotope-separation-plants; management-; metals-; national-organizations; nuclear-facilities; uranium-; uranium-compounds; uranium-fluorides; us-aec; us-doe; us-erda; us-organizations; waste-management
CC: E2300; B3140; E5000
C1: E2300
CD: Reactor-Fuels; Site-studies; WASTE-MANAGEMENT
UD: 2930
AN: 29-039837

Record 7 of 47 - INIS 1997-2000/09

TI: Strategies for the transmutation of americium
AU: Kloosterman,-J.L. (Netherlands Energy Research Foundation (ECN), Petten (Netherlands)); Kiefhaber,-E.; Rome,-M.; Tommasi,-J
CA: Global '97: International conference on future nuclear systems Yokohama (Japan) 5-10 Oct 1997
SO: Power Reactor and Nuclear Fuel Development Corp., Tokyo (Japan); Japan Atomic Energy Research Inst., Tokyo (Japan) International conference on future nuclear systems. Challenge towards second nuclear era with advanced fuel cycles. Proceedings Tokyo (Japan) Atomic Energy Society of Japan 1997 1588 p. p. 338-343 Published in 2 volumes
PY: 1997
LA: English
CI: Japan
PT: B (Book); K (Conference)
AB: The consequences of americium recycling on the core safety and the fuel cycle are investigated for several reactor types. In general, homogeneous recycling of americium is not recommended due to the severe impact on core operation and the contamination of the whole fuel cycle with ^{239}Pu and curium isotopes. The heterogeneous transmutation of americium is investigated by the EFT-TRA collaboration. Both multiple recycling of americium in a fast reactor and once-through transmutation in high thermal or epithermal neutron fluxes are considered. The first option relies on small loss fractions (in a dedicated reprocessing plant) and the ability to recycle the hazardous ^{239}Pu and curium isotopes. Once-through transmutation relies on clad materials and inert matrices able to withstand high damage doses. To reach a considerable reduction of the radiotoxicity, at least 90% of the actinides have to be fissioned. (author)
DEI: americium-; americium-oxides; depleted-uranium; fission-yield; heterogeneous-reactor-cores; irradiation-; matrix-materials; mixed-oxide-fuels; pwr-type-reactors; radiation-hazards; radiation-heating; super-phenix-reactor; temperature-coefficient; transmutation-; void-coefficient
DEC: actinide-compounds; actinides-; americium-compounds; breeder-reactors; chalcogenides-; elements-; energy-sources; enriched-uranium-reactors; epithermal-reactors; fast-reactors; fbr-type-reactors; fuels-; hazards-; health-hazards; heating-; liquid-metal-cooled-reactors; lmfbr-type-reactors; materials-; metals-; nuclear-fuels; nuclear-reaction-yield; oxides-; oxygen-compounds; plutonium-reactors; power-reactors; reactivity-coefficients; reactor-components; reactor-cores; reactor-materials; reactors-; sodium-cooled-reactors; solid-fuels; thermal-reactors; transplutonium-compounds; transplutonium-elements; transuranium-compounds; transuranium-elements; uranium-; water-cooled-reactors; water-moderated-reactors; yields-

CC: B1620; E5100; E3500
C1: B1620
CD: Spent-fuel-reprocessing; Waste-Treatment; Power-Reactors,-Breeding
UD: 2928
AN: 29-037436
See Also: 29-014965

Record 8 of 47 - INIS 1997-2000/09

TI: Ammunition produced from depleted uranium.
AU: Ristic,-D.; Benderac,-R.; Vejnovic,-Z. (Institute of security, Belgrade (Yugoslavia)); Orlic,-M.; Pavlovic,-S. (Institute of nuclear sciences VINCA, Belgrade (Yugoslavia))
CA: Yugoslav Nuclear Society Conference (YUNSC'96). Belgrade (Yugoslavia). 6-9 Oct 1996. Jugoslovensko nuklearno drustvo konferencija, zbornik radova.
SO: Antic,-D. (ed.) (Institut za Nuklearne Nauke VINCA, Belgrade (Yugoslavia)). Proceedings; Yugoslav Nuclear Society ; Institute of Nuclear Sciences VINCA. Zbornik radova; Jugoslovensko nuklearno drustvo; Institut za Nuklearne nauke VINCA. Belgrade (Yugoslavia). Institute of Nuclear Sciences VINCA. 1997. 746 p. p. 557-562.
NT: 9 refs., 5 figs.
PY: 1997
LA: English
CI: Yugoslavia
PT: B (Book); K (Conference)
AB: During the bombing of military and civilian targets in the Serbian republic, NATO forces have used special ammunition produced from depleted uranium. Beside its great piercing power, it also presented a certain radioactive hazard for the armed forces, the civilian inhabitants and the environment on the whole. depleted uranium is a radioactive nuclear waste. Its radioactivity comes from the decay of uranium-238, uranium-235, and their daughters. measured and estimated activity of the round is about 3.4 MBq. Total emission of alpha and beta particles from the round surface is 1.19998 alpha, i.e. 35.914 beta particles per second. In contact with the rounds, because of the presence of radioactive radiation, skin changes may occur (necrosis and ulceration) which can be visibly manifested in somewhat less than 80 hours. Mechanical, physical and chemical characteristics of this ammunition as well as the results of dosimetric and spectrometric measurements, dose and estimated effects are given in this paper. (author).
DEI: alpha-dosimetry; beta-dosimetry; depleted-uranium; health-hazards; projectiles-; radiation-effects; spectroscopy-
DEC: actinides-; dosimetry-; elements-; hazards-; metals-; uranium-
IS: ISBN 86-7306-012-5.
CC: F4000
C1: F4000
CD: SAFEGUARDS
UD: 2917
AN: 29-027992

Record 9 of 47 - INIS 1997-2000/09

TI: ITEP concept of the use of electro-nuclear facilities in the atomic power industry.
AU: Chuvillo,-I.; Kiselev,-G. (Institute for Theoretical and Experimental Physics, Moscow (Russian Federation))

SO: International Atomic Energy Agency, Vienna (Austria). Accelerator driven systems: Energy generation and transmutation of nuclear waste. Status report. Nov 1997. 481 p. p. 376-388.

NT: 1 fig., 4 tabs. Available from INIS in electronic form and/or on microfiche .

RN: IAEA-TECDOC--985 (IAEATECDOC985)

PY: 1997

LA: English

CI: IAEA

PT: R (Report)

AB: Conceptual investigations into the use of Accelerator Driven Systems (ADS) in the atomic power industry are discussed as a possible integrated solution to some general problems faced by the atomic power industry. Among them, a special attention is devoted to the storage of large amounts of spent nuclear fuel (SNF) from NPPs, storage of large amounts of depleted Uranium which has no application at the present time, dealing with the large amount of highly enriched uranium released as a result of nuclear disarmament, dealing with large amounts of weapon-grade Plutonium, the need to extend the fuel basis of the atomic power industry after 2010 in the case of further development, reduction of environmental effects, non-proliferation problems associated with processing of weapon-grade Plutonium, its storage and possible use as nuclear fuel, and economic aspects.

DEI: accelerators-; depleted-uranium; economics-; fuel-cycle; high-level-radioactive-wastes; nuclear-power; nuclear-weapons; plutonium-; power-generation; safety-; spent-fuels; toxicity-; transmutation-

DEC: actinides-; elements-; energy-sources; fuels-; materials-; metals-; nuclear-fuels; power-; radioactive-materials; radioactive-wastes; reactor-materials; transuranium-elements; uranium-; wastes-

CC: E3000; E1600; E5100

CI: E3000

CD: SPECIFIC-FISSION-REACTOR-TYPES-AND-THEIR-ASSOCIATED-PLANTS; Accelerators; Waste-Treatment

UD: 2913

AN: 29-022041

See Also: 29-022018

Record 10 of 47 - INIS 1997-2000/09

TI: Ecological risk assessment for radionuclides and metals: A radiological and chemical approach.

AU: Mahini,-X. (Ogden Environmental and Energy Services, San Francisco, CA (United States)); Mahini,-R. (Electric Power Research Inst., Palo Alto, CA (United States)); Fan,-A. (California Environmental Protection Agency, Berkeley, CA (United States))

CA: 17. annual meeting of the Society of Environmental Toxicology and Chemistry: partnerships for the environment - science, education, and policy. Washington, DC (United States). 17-21 Nov 1996.

SO: Anon.-SETAC 17. annual meeting -- Abstract book. Partnerships for the environment: Science, education, and policy. Pensacola, FL (United States). Society of Environmental Toxicology and Chemistry. 1995. 378 p. p. 96-97.

NT: Society of Environmental Toxicology and Chemistry Press, 1010 North 12th Avenue, Pensacola, FL 32501-3370 (United States) \$30.00.

RN: CONF-961149-- (CONF961149)

PY: 1995

LA: English

CI: United-States

PT: B (Book); K (Conference)

AB: In response to the regulatory concern over the adverse effects of depleted uranium (DU) on ecological receptors at two sites contaminated with DU and metals, an ecological risk assessment (ERA) was performed, in conjunction with a radiological/chemical human health risk assessment (HRA). To date, most research on the harmful effects of radiation has focused only on humans. With regard to radiation protection of the environment, national and international radiation protection advisory committees have concluded that levels protecting human health should be sufficient to protect the environment as well. To select chemicals of potential ecological concern, a qualitative ERA was first performed by comparing chemical stressor concentrations in abiotic media with various benchmarked criteria. The results indicate that, as with the case of human health, DU was the ecological risk-driving chemical at these sites. Both radiological and chemical effects posed by DU were then estimated for the bald eagle, an endangered species that represents the assessment end point of the quantitative ERA. Abiotic media and food webs evaluated were: soils, surface water, plants, terrestrial (both mammalian and avian) species, and aquatic species. The results of the quantitative ERA indicate that the decision to cleanup DU contamination at these sites can solely be based on human health effects as limiting criteria. The risk assessments were well received by the regulatory agencies overseeing the project.

DEM: metals-; remedial-action; uranium-

DEI: environmental-impacts; risk-assessment; site-characterization; toxicity-

DEC: actinides-; elements-

IS: ISSN 1087-8939.

CC: E2300

C1: E2300

CD: Reactor-Fuels

UD: 2814

AN: 28-045585

Record 11 of 47 - INIS 1997-2000/09

TI: A screening model for depleted uranium testing using environmental radiation monitoring data.

AU: Dunfrund,-F.L. (Yuma Proving Ground, AZ (United States)); Ebinger,-M.H.; Hansen,-W.R. (Los Alamos National Laboratory, NM (United States)) (and others)

CA: 41. Annual Meeting of the Health Physics Society. Seattle, WA (United States). 21-25 Jul 1996.

SO: Health-Physics. (Jun 1996). v. 70(Suppl.6). p. 65b.

RN: CONF-9607135-- (CONF9607135)

PY: 1996

LA: English

CI: United-States

PT: J (Journal-Article); K (Conference)

AB: Information from an ecological risk assessment of depleted uranium test areas at Yuma Proving Ground (YPG) was used to update the required environmental radiation monitoring (ERM) plan. Data to be collected for the ERM can also be used to evaluate the potential for adverse radiological and toxicological effects to terrestrial reptiles and mammals in the affected areas. We developed a spreadsheet-based screening model that incorporates the ERM data and associated uncertainties. The purpose of the model is to provide a conservative estimate of radiological exposure of terrestrial, biota to DU using the ERM data. The uncertainty in the estimate is also predicted so that the variation in the radiological exposure can be used in assessing potential adverse effects from DU testing. Toxicological effects are evaluated as well as radiological effects in the same program using the same data. Our presentation shows an example data set, model calculations, and the report of expected radiation dose

rates and probable kidney burdens of select mammals and reptiles. The model can also be used in an inverse mode to calculate the soil concentration required to give either a radiological dose that would produce a potential adverse effect such as fatal cancer or a toxicological dose that would result in nephrotoxic effects in mammals.

DEM: depleted-uranium; kidneys-; mammals-

DEI: dose-rates; radiation-doses; radiation-monitoring; reptiles-; risk-assessment; test-facilities; testing-; toxicity-

DEC: actinides-; animals-; body-; elements-; metals-; monitoring-; organs-; uranium-; vertebrates-

IS: ISSN 0017-9078. CODEN HLTPAO.

CC: C2120; B3140; C5500

C1: C2120

CD: Effects-of-internal-irradiation-and-various-aspects-of-radioisotope-kinetics-and-toxicity-in-animals,-plants-and-microorganisms; Site-studies; Dosimetry-and-Monitoring

UD: 2804

AN: 28-012966

Record 12 of 47 - INIS 1997-2000/09

TI: Long-term fate of depleted uranium at Aberdeen and Yuma Proving Grounds: Human health and ecological risk assessments.

AU: Ebinger,-M.H.; Beckman,-R.J.; Myers,-O.B. (Los Alamos National Lab., NM (United States)); Kennedy,-P.L.; Clements,-W.; Bestgen,-H.T. (Colorado State Univ., Ft. Collins, CO (United States). Dept. of Fishery and Wildlife Biology)
CA: Los Alamos National Lab., NM (United States).

FUNDING ORGANIZATION: Department of the Army, Washington, DC (United States).

SO: Sep 1996. 218 p.

NT: Availability: INIS; Also available from OSTI as DE97000452; NTIS; US Govt. Printing Office Dep.

RN: LA--13156-MS (LA13156MS); Contract W-7405-ENG-36 (W7405ENG36)

PY: 1996

LA: English

CI: United-States

PT: R (Report)

AB: The purpose of this study was to evaluate the immediate and long-term consequences of depleted uranium (DU) in the environment at Aberdeen Proving Ground (APG) and Yuma Proving Ground (YPG) for the Test and Evaluation Command (TECOM) of the US Army. Specifically, we examined the potential for adverse radiological and toxicological effects to humans and ecosystems caused by exposure to DU at both installations. We developed contaminant transport models of aquatic and terrestrial ecosystems at APG and terrestrial ecosystems at YPG to assess potential adverse effects from DU exposure. Sensitivity and uncertainty analyses of the initial models showed the portions of the models that most influenced predicted DU concentrations, and the results of the sensitivity analyses were fundamental tools in designing field sampling campaigns at both installations. Results of uranium (U) isotope analyses of field samples provided data to evaluate the source of U in the environment and the toxicological and radiological doses to different ecosystem components and to humans. Probabilistic doses were estimated from the field data, and DU was identified in several components of the food chain at APG and YPG. Dose estimates from APG data indicated that U or DU uptake was insufficient to cause adverse toxicological or radiological effects. Dose estimates from YPG data indicated that U or DU uptake is insufficient to cause radiological effects in ecosystem components or in humans, but toxicological effects in small mammals

(e.g., kangaroo rats and pocket mice) may occur from U or DU ingestion. The results of this study were used to modify environmental radiation monitoring plans at APG and YPG to ensure collection of adequate data for ongoing ecological and human health risk assessments.

DEM: depleted-uranium
DEI: environmental-effects; health-hazards; risk-assessment; usa-
DEC: actinides-; developed-countries; elements-; hazards-; metals-; north-america; uranium-
DEP: military-facilities
CC: B3110
C1: B3110
CD: Radioactive-materials-monitoring-and-transport
UD: 2804
AN: 28-012580

Record 13 of 47 - INIS 1970-1975

TI: Particle size distribution of fragments from depleted uranium penetrators fired against armor plate targets.
AU: Hanson,-W.C.; Elder,-J.C.; Ettinger,-H.J.; Hantel,-L.W.; Owens,-J.W.
CA: Los Alamos Scientific Lab., N.Mex. (USA).
SO: Jun 1974. 11 p.
NT: Availability: INIS
RN: LA--5654 (LA5654)
PY: 1974
LA: English
CI: United-States
PT: R (Report)
DEM: depleted-uranium; radioactive-aerosols
DEI: combustion-; environment-; man-; particle-size; radiation-hazards; uranium-
DEC: actinides-; aerosols-; animals-; chemical-reactions; colloids-; dispersions-; elements-; hazards-; health-hazards; mammals-; metals-; oxidation-; primates-; size-; sols-; vertebrates-
CC: B1300; B3000; C2100
C1: B1300
CD: Radiochemistry-and-Nuclear-Chemistry; Earth-Sciences; Tissue-Distribution,-Metabolism,-Toxicology-and-Removal-of-Radionuclides
UD: 0608
AN: 06-174828

Record 14 of 47 - INIS 1970-1975

TI: Ecological considerations of depleted uranium munitions.
AU: Hanson,-W.C.
CA: Los Alamos Scientific Lab., N.Mex. (USA).
SO: Jun 1974. 7 p.
NT: Availability: INIS
RN: LA--5559 (LA5559)
PY: 1974
LA: English
CI: United-States
PT: R (Report)
DEM: depleted-uranium; ecosystems-; uranium-
DEI: biological-effects; environment-; fires-; health-hazards; land-pollution; pollution-; toxicity-; water-pollution
DEC: actinides-; elements-; hazards-; metals-

CC: C5200
CI: C5200
CD: Radiation-Hazards-and-Safety-Evaluations-of-Nuclear-Installations
UD: 0523
AN: 05-152608

Record 15 of 47 - INIS 1970-1975

TI: The effect of foodstuffs and related compounds on durability of glazes containing natural thorium, and natural or depleted uranium.
AU: Stradling,-G.N.; Green,-N.; Fletcher,-M.A. (Queen Elizabeth Hospital, Birmingham (UK))
SO: Transactions-and-Journal-of-the-British-Ceramic-Society-UK. (Sep 1972). v. 71(6) p. 171-175.
PY: 1972
LA: English
CI: United-Kingdom
PT: J (Journal-Article)
DEI: aluminium-oxides; chelating-agents; chemical-composition; chemical-reactions; color-; depleted-uranium; external-irradiation; food-; glazes-; icrp-; industry-; internal-irradiation; mixtures-; natural-uranium; photographic-film-dosemeters; radiation-hazards; radiation-monitoring; recommendations-; safety-standards; silicon-oxides; solubility-; thorium-; thorium-oxides; uranium-oxides
DEC: actinide-compounds; actinides-; aluminium-compounds; coatings-; dispersions-; dosemeters-; elements-; hazards-; health-hazards; international-organizations; irradiation-; measuring-instruments; metals-; monitoring-; optical-properties; organoleptic-properties; oxides-; physical-properties; silicon-compounds; thorium-compounds; uranium-; uranium-compounds
CC: C4300
CI: C4300
CD: Food-Protection-and-Preservation
UD: 0405
AN: 04-045861

Record 16 of 47 - INIS 1976 - 1979

TI: Radiological and toxicological assessment of an external heat (burn) test of the 105MM cartridge, APFSDS-T, XM-744.
AU: Gilchrist,-R.L.; Parker,-G.B.; Mishima,-J.
CA: Battelle Pacific Northwest Labs., Richland, WA (USA).
SO: Mar 1978. 37 p.
NT: Availability: INIS; Available from NTIS., PC A03/MF A01.
RN: PNL--2670 (PNL2670)
PY: 1978
LA: English
CI: United-States
PT: R (Report)
AB: The potential radiological and toxicological hazard of depleted uranium aerosol release was investigated. This type of release might arise from accidents with XM-774 ammunition involving great heat. Twelve rounds of packaged ammunition were subjected to an external heat (burn) test. Examination of the site on the day following the test revealed that all 12 depleted uranium penetrators were completely intact. Oxidation of the penetrators was not apparent, even on the most severely burned projectile located at ground zero. Eleven of the 12 projectiles were recovered with the sabots intact; some sabots appeared charred. It was concluded that no airborne release of depleted uranium

had occurred and subsequently there had been no radiological or toxicological hazard from DU during this test. However, this conclusion may not apply to the release of depleted uranium in other types of fires involving this ammunition because other factors may affect the fire. These factors include type of fuel, number of ammunition rounds, and type of structure housing the ammunition.

DEM: depleted-uranium
DEI: air-pollution; chemical-effluents; health-hazards; radioactive-effluents; temperature-dependence; testing-
DEC: actinides-; elements-; hazards-; metals-; nonradioactive-wastes; pollution-; radioactive-materials; radioactive-wastes; uranium-; wastes-
CC: C5200; B3300
C1: C5200
CD: Radiation-Hazards-and-Safety-Evaluations-of-Nuclear-Installations; Atmosphere
UD: 1003
AN: 10-426547

Record 17 of 47 - INIS 1980 - 1983

TI: A view from the nuclear fuel reprocessing industry.
AU: Smith,-R.; Hartley,-G. (British Nuclear Fuels Ltd., Sellafield)
SO: Chemistry-and-Industry-London-UK. (20 Nov 1982). (no.22) p. 894-897.
PY: 1982
LA: English
CI: United-Kingdom
PT: J (Journal-Article)
AB: Radiological protection in UK nuclear industry is discussed, with special reference to British Nuclear Fuels Ltd. The following aspects are covered: historical introduction, relevant legislation and general principles; radioactive decay processes (fission, fission products, radio-isotopes, ionising radiations, neutrons); risk assessment (historical, biological radiation effects; ICRP recommendations, dose limits); cost effectiveness of protection; plant design principles; examples of containment (shielding, ventilation and contamination control required for various types of radioactive materials, e.g. fission products, plutonium, depleted uranium; fuel rod storage ponds and decanning caves; fission products at dissolution stage; glovebox handling of Pu operations; critical assembly of fissile materials; surface contamination control; monitoring radiation levels). (U.K.).
DEM: fuel-reprocessing-plants
DEI: biological-radiation-effects; bnfl-; containment-; cost-benefit-analysis; depleted-uranium; fission-products; icrp-; legislation-; plutonium-; radiation-hazards; radiation-monitoring; radiation-protection; reprocessing-; risk-analysis
DEC: actinides-; biological-effects; economic-analysis; elements-; hazards-; health-hazards; international-organizations; isotopes-; materials-; metals-; monitoring-; national-organizations; nuclear-facilities; radiation-effects; radioactive-materials; separation-processes; transuranium-elements; united-kingdom-organizations; uranium-
IS: ISSN 0009-3068.
CC: C5200; B1600
C1: C5200
CD: Radiation-Hazards-and-Safety-Evaluations-of-Nuclear-Installations; Fuel-Processing-and-Reprocessing
UD: 1406
AN: 14-737427

Record 18 of 47 - INIS 1980 - 1983

TI: Packaging configurations and handling requirements for nuclear materials.
AU: Jefferson,-R.M.
CA: Sandia National Labs., Albuquerque, NM (USA).
Rail carrier workshop. Columbus, OH, USA. 13 - 14 May 1981.
SO: 1981. 18 p.
NT: Availability: INIS; Available from NTIS., PC A02/MF A01.
RN: CONF-810583--1 (CONF8105831)
PY: 1981
LA: English
CI: United-States
PT: R (Report); K (Conference)
AB: The basic safety concepts for radioactive material are that the package is the primary protection for the public, that the protection afforded by the package should be proportional to the hazard and that the package must be proved by performance. These principles are contained in Department of Energy (DOE), Nuclear Regulatory Commission (NRC) and Department of Transportation (DOT) regulations which classify hazards of various radioactive materials and link packaging requirements to the physical form and quantities being shipped. Packaging requirements are reflected in performance standards to guarantee that shipments of low hazard quantities will survive the rigors of normal transportation and that shipments of high hazard quantities will survive extreme severity transportation accidents. Administrative controls provide for segregation of radioactive material from people and other sensitive or hazardous material. They also provide the necessary information function to control the total amounts in a conveyance and to assure that appropriate emergency response activities be started in case of accidents or other emergencies. Radioactive materials shipped in conjunction with the nuclear reactor programs include, ores, concentrates, gaseous diffusion feedstocks, enriched and depleted uranium, fresh fuel, spent fuel, high level wastes, low level wastes and transuranic wastes. Each material is packaged and shipped in accordance with regulations and all hazard classes, quantity limits and packaging types are called into use. From the minimal requirements needed to ship the low hazard uranium ores or concentrates to the very stringent requirements in packaging and moving high level wastes or spent fuel, the regulatory system provides a means for carrying out transportation of radioactive material which assures low and controlled risk to the public.
DEM: packaging-rules; radioactive-materials
DEI: packaging-; radiation-hazards; reviews-; safety-; transport-
DEC: document-types; hazards-; health-hazards; law-; regulations-
CC: E1500
C1: E1500
CD: Handling-of-Radioactive-Materials
UD: 1221
AN: 12-632713

Record 19 of 47 - INIS 1980 - 1983

TI: Uranium compounds in ceramic enamels-radioactivity analysis and use hazards.
AU: Cucchi,-G.; Amadesi,-P. (Comitato Nazionale per l'Energia Nucleare, Bologna (Italy))
CA: 5. congress of the International Radiation Protection Society on radiation protection. Jerusalem, Israel. Mar 1980.
SO: International Radiation Protection Association, Washington, DC (USA).
Radiation protection. A systematic approach to safety. Oxford. Pergamon Press. 1980. 1278 p. p. 480-482. In 2 volumes.

PY: 1980
LA: English
CI: United-Kingdom
PT: B (Book); K (Conference)
AB: An analysis was made of the radioactivity of enamel samples, containing depleted Uranium and Uranium ore, such as employed by the ceramic industry to produce paving and lining tiles. An investigation was also made of various types of tiles with depleted Uranium containing enamels, in order to evaluate the use hazard for dwelling houses, in particular in regard to the wear of tiled floors by children as a critical group. The risk to the population due to the use of tiles dyed with enamel containing depleted Uranium was considered an undue risk and as such not permissible. (U.K.).
DEM: radiation-hazards; enamels-
DEI: beta-detection; ceramics-; children-; contamination-; gonads-; italy-; radiation-doses; uranium-; uranium-compounds; uranium-ores
DEC: actinide-compounds; actinides-; animals-; charged-particle-detection; coatings-; elements-; europe-; hazards-; health-hazards; mammals-; man-; metals-; ores-; primates-; radiation-detection; vertebrates-
IS: ISBN 0 08 025912 X.
CC: C5500; C2100; B1100
C1: C5500
CD: Personnel-Dosimetry-and-Monitoring; Tissue-Distribution,-Metabolism,-Toxicology-and-Removal-of-Radionuclides; Chemical-and-Isotopic-Analysis
UD: 1214
AN: 12-613528

Record 20 of 47 - INIS 1980 - 1983

TI: Perspective for the future. Fast breeders - a controversial necessity.
AU: Marshall,-W. (UKAEA Headquarters, London)
CA: Forum on nuclear power and Wales. Cardiff, UK. 8 Dec 1978.
SO: Jones,-G.R.H.; Parry,-E.A. (The North East Wales Institute of Higher Education) (eds.). Wales Council of Churches, Cardiff (UK). Nuclear power and Wales. Aug 1979. 98 p. p. 49-65. x.
NT: Available from G.H.R.Jones, Kelsterton College, Connah's Quay.
PY: 1979
LA: English
CI: United-Kingdom
PT: I (Miscellaneous); K (Conference); X (Microfiche-Unavailable-from-INIS)
AB: The general energy situation is outlined. Fast breeder reactors are described; the economics of the production and use of plutonium and the use of depleted uranium are examined in detail. The relation between reprocessing, the production of plutonium and the dangers of weapons proliferation is discussed. Radioactive waste management and radiation hazards are discussed. The wider aspects of the use of energy sources and the growing aspirations of the developing world are considered. (U.K.).
DEM: nuclear-power; fbr-type-reactors
DEI: developing-countries; economics-; energy-consumption; energy-sources; fuel-cycle; global-aspects; plutonium-; power-demand; proliferation-; radiation-hazards; radioactive-wastes; reprocessing-; sociology-; specifications-
DEC: actinides-; breeder-reactors; elements-; epithermal-reactors; fast-reactors; hazards-; health-hazards; metals-; power-; radioactive-materials; reactors-; separation-processes; transuranium-elements; wastes-
CC: E3500; C5200
C1: E3500
CD: Power-Reactors,-Breeding; Radiation-Hazards-and-Safety-Evaluations-of-Nuclear-Installations

UD: 1204
AN: 12-582274

Record 21 of 47 - INIS 1980 - 1983

TI: The carcinogenic effect of localized fission fragment irradiation of rat lung.

AU: Batchelor,-A.L.; Buckley,-P.; Gore,-D.J.; Jenner,-T.J.; Major,-I.R. (Medical Research Council, Harwell (UK). Radiobiological Research Unit); Bailey,-M.R.

SO: Int.-J.-Radiat.-Biol.-Relat.-Stud.-Phys.,-Chem.-Med. (Mar 1980). v. 37(3) p. 249-266.

PY: 1980

LA: English

CI: United-Kingdom

PT: J (Journal-Article)

AB: In a preliminary investigation of 'hot particle' carcinogenesis uranium oxide particles were introduced into the lungs of rats either by intubation of a liquid suspension of the particles or by inhalation of an aerosol. Subsequently the animals were briefly exposed to slow neutrons in a nuclear reactor resulting in localized irradiation of the lung by fission fragments emitted from ^{235}U atoms in the oxide particles. The uranium used in the intubation experiments was either enriched or depleted in ^{235}U . Squamous cell carcinomas developed at the site of deposition of the enriched uranium oxide in many cases but no lung tumours occurred in the rats with the depleted uranium oxide, in which the lung tissue was exposed to very few fission fragments. Only enriched uranium oxide was used in the inhalation experiments. Pulmonary squamous cell carcinomas occurred after the fission fragment irradiation but were fewer than in the intubation experiments. Adenocarcinomas of the lung were seen in rats exposed to uranium oxide without subsequent irradiation by neutrons in the reactor and in rats irradiated with neutrons but not previously exposed to uranium oxide. It is concluded that (i) fission fragments were possibly implicated in the genesis of the squamous cell carcinomas, which only developed in those animals exposed to enriched uranium oxide and neutrons and (ii) the adenocarcinomas in the rats inhaling enriched uranium oxide only were likely to have been caused by protracted irradiation of the lung with alpha-rays emitted from the enriched uranium. (author).

DEM: biological-hot-spots; fission-fragments; lungs-

DEI: alpha-particles; biological-radiation-effects; carcinogenesis-; carcinomas-; fission-; in-vivo; isotope-ratio; neutron-reactions; neutrons-; rats-; uranium-oxides; uranium-235

DEC: actinide-compounds; actinide-nuclei; alpha-decay-radioisotopes; animals-; baryon-reactions; baryons-; biological-effects; body-; chalcogenides-; charged-particles; diseases-; elementary-particles; even-odd-nuclei; fermions-; hadron-reactions; hadrons-; heavy-nuclei; helium-ions; ions-; isomeric-transition-isotopes; isotopes-; mammals-; minutes-living-radioisotopes; neoplasms-; nuclear-fragments; nuclear-reactions; nuclei-; nucleon-reactions; nucleons-; organs-; oxides-; oxygen-compounds; pathogenesis-; radiation-effects; radioisotopes-; respiratory-system; rodents-; uranium-compounds; uranium-isotopes; vertebrates-; years-living-radioisotopes

IS: ISSN 0020-7616.

CC: C2100

C1: C2100

CD: Tissue-Distribution,-Metabolism,-Toxicology-and-Removal-of-Radionuclides

UD: 1115

AN: 11-541113

Record 22 of 47 - INIS 1980 - 1983

TI: Characterization of airborne uranium from test firing of XM774 ammunition.
AU: Glissmeyer,-J.A.; Mishima,-J.
CA: Battelle Pacific Northwest Labs., Richland, WA (USA).
SO: Nov 1979. 109 p.
NT: Availability: INIS; Available from NTIS., PC A06/MF A01.
RN: PNL--2944 (PNL2944)
PY: 1979
LA: English
CI: United-States
PT: R (Report)
AB: Pacific Northwest Laboratory conducted experiments at Aberdeen Proving Grounds, Maryland, to characterize the airborne depleted uranium (DU) resulting from the test firings of 105-mm, APFSDS-T XM774 ammunition. The goal was to obtain data pertinent to evaluations of human inhalation exposure to the airborne DU. Data was desired concerning the following: (1) size distribution of airborne DU; (2) quantity of airborne DU; (3) dispersion of airborne DU from the target vicinity; (4) amount of DU deposited on the ground; (5) solubility of airborne DU compounds in lung fluid; and (6) oxide forms of airborne and fallout DU. The experiments involved extensive air sampling for total airborne DU particulates and respirable DU particles both above the targets and at distances downwind. Fallout and fragments were collected around the target area. High-speed movies of the smoke generated from the impact of the penetrators were taken to estimate the cloud volumes. Results of the experiments are presented.
DEM: depleted-uranium
DEI: inhalation-; radiation-hazards; testing-
DEC: actinides-; elements-; hazards-; health-hazards; intake-; metals-; uranium-
CC: E1400; B3300
C1: E1400
CD: Nuclear-Explosions; Atmosphere
UD: 1111
AN: 11-528355

Record 23 of 47 - INIS 1980 - 1983

TI: Radiological safety evaluation report for NUWAX-79 exercise. Simulation of nuclear weapons accident.
AU: King,-W.C.
CA: California Univ., Livermore (USA). Lawrence Livermore Lab.
SO: Mar 1979. 34 p.
NT: Availability: INIS; Available from NTIS., PC A03/MF A01.
RN: UCID--18173 (UCID18173)
PY: 1979
LA: English
CI: United-States
PT: R (Report); N (Numerical-Data)
AB: An analysis of the radiological safety of the NUWAX-79 exercise to be conducted on the Nevada Test Site in April 1979 is given. An evaluation of the radiological safety to the participants is made using depleted uranium (D-38) in mock weapons parts, and ^{226}Ra and its daughters as a radioactive contaminant of equipment and terrain. The radiological impact to offsite persons is also discussed, particularly for people living at Lathrop Wells, Nevada, which is located 7 miles south of the site proposed for the exercise. It is the conclusion of this evaluation that the potential radiological risk of this exercise is very low, and that no individual should receive exposure to

radioactivity greater than one-tenth of the level permitted under current federal radiation exposure guidelines.

DEM: fission-products; human-populations; food-chains; contamination-; health-hazards; soils-; surface-air

DEI: daughter-products; depleted-uranium; dosimetry-; environment-; environmental-exposure-pathway; experimental-data; fallout-; isolated-values; nuclear-weapons; radiation-accidents; radiation-doses; radionuclide-migration; radium-223; risk-analysis; simulation-

DEC: accidents-; actinides-; air-; alpha-decay-radioisotopes; data-; data-forms; days-living-radioisotopes; elements-; even-odd-nuclei; fluids-; gases-; hazards-; heavy-nuclei; information-; isotopes-; metals-; nuclei-; numerical-data; populations-; radioactive-materials; radioisotopes-; radium-isotopes; uranium-

CC: C2100; B3300; C2200; E1400; C5200

C1: C2100

CD: Tissue-Distribution,-Metabolism,-Toxicology-and-Removal-of-Radionuclides; Atmosphere; Radionuclide-Ecology; Nuclear-Explosions; Radiation-Hazards-and-Safety-Evaluations-of-Nuclear-Installations

UD: 1109

AN: 11-521900

Record 24 of 47 - INIS 1984 - 1986

TI: Dissolution of uranium oxide materials in simulated lung fluid.

AU: Scripsick,-R.C.; Soderholm,-S.C.

SO: Voelz,-G.L. (comp.). Los Alamos National Lab., NM (USA). Occupational health and environment research 1983: Health, Safety, and Environment Division. Progress report. May 1985. p. 28-29.

NT: Availability: INIS; Available from NTIS, PC A05/MF A01 as DE85016207.

RN: LA--10365-PR (LA10365PR)

PY: 1985

LA: English

CI: United-States

PT: R (Report)

AB: Depleted uranium (DU) oxide aerosols prepared in the laboratory and collected in the field were tested to characterize their dissolution in simulated lung fluid and to determine how dissolution is affected by aerosol preparation. DU, a by-product of the uranium fuel cycle, has been selected by the US military for use in several types of munitions. During development, manufacture, testing, and use of these munitions, opportunities exist for inhalation exposure to various (usually oxide) aerosol forms of DU. The hazard potential associated with such exposures is closely related to the chemical form, the size of the DU aerosol material, and its dissolution properties. Five DU sample materials produced by exposing uranium alloy penetrators to certain controlled oxidation atmospheres were studied (oxidation temperatures ranged from 500 to 900 sup 0 C). In addition, two DU sample materials collected in the field were provided by the US Air Force. All sample materials were generated as aerosols and the respirable fraction was separated and collected. Data suggest that under some conditions a rapidly dissolving U sub 3 O sub 8 fraction may be formed concurrent with the production of UO sub 2.

DEM: radioactive-aerosols; uranium-oxides

DEI: body-fluids; by-products; chemical-preparation; depleted-uranium; dissolution-; fuel-cycle; inhalation-; lungs-; radiation-hazards; simulation-; us-organizations

DEC: actinide-compounds; actinides-; aerosols-; biological-materials; body-; chalcogenides-; colloids-; dispersions-; elements-; hazards-; health-hazards;

intake-; materials-; metals-; national-organizations; organs-; oxides-; oxygen-compounds; respiratory-system; sols-; synthesis-; uranium-; uranium-compounds
CC: B1320; C2110
C1: B1320
CD: Properties-of-radioactive-materials; Radioisotope-effects,-kinetics-and-toxicology-in-man
UD: 1722
AN: 17-076603

Record 25 of 47 - INIS 1984 - 1986

TI: Potential behavior of depleted uranium penetrators under shipping and bulk storage accident conditions.
AU: Mishima,-J.; Parkhurst,-M.A.; Scherpelz,-R.I.
CA: Pacific Northwest Labs., Richland, WA (USA).
SO: Mar 1985. 138 p.
NT: Availability: INIS; Available from NTIS, PC A07/MF A01 as DE85009778.
RN: PNL--5415 (PNL5415)
PY: 1985
LA: English
CI: United-States
PT: R (Report); N (Numerical-Data)
AB: An investigation of the potential hazard from airborne releases of depleted uranium (DU) from the Army's M829 munitions was conducted at the Pacific Northwest Laboratory. The study included: (1) assessing the characteristics of DU oxide from an April 1983 burn test, (2) postulating conditions of specific accident situations, and (3) reviewing laboratory and theoretical studies of oxidation and airborne transport of DU from accidents. Results of the experimental measurements of the DU oxides were combined with atmospheric transport models and lung and kidney exposure data to help establish reasonable exclusion boundaries to protect personnel and the public at an accident site. 121 references, 44 figures, 30 tables.
DEM: depleted-uranium; uranium-oxides
DEI: accidents-; biological-radiation-effects; body-fluids; combustion-products; compiled-data; diffusion-; earth-atmosphere; health-hazards; inhalation-; kidneys-; lungs-; particle-size; radiation-doses; radionuclide-migration; solubility-; toxicity-
DEC: actinide-compounds; actinides-; biological-effects; biological-materials; body-; chalcogenides-; data-; elements-; environmental-transport; hazards-; information-; intake-; mass-transfer; materials-; metals-; numerical-data; organs-; oxides-; oxygen-compounds; radiation-effects; respiratory-system; size-; uranium-; uranium-compounds
CC: C2110; B3310; C5230
C1: C2110
CD: Radioisotope-effects,-kinetics-and-toxicology-in-man; Radioactive-materials-monitoring-and-transport;-meteorology; Environmental-aspects-of-chemical-and-thermal-effluents-from-existing-nuclear-installations
UD: 1621
AN: 16-074533

Record 26 of 47 - INIS 1984 - 1986

TI: Radiological assessment of cartridge 120-mm, APFSDS-T, XM829 ammunition.
AU: Hooker,-C.D.; Hadlock,-D.E.; Soldat,-K.L.; Gilchrist,-R.L.
CA: Pacific Northwest Lab., Richland, WA (USA).
SO: Dec 1983. 40 p.
NT: Availability: INIS; Available from NTIS, PC A03/MF A01 as DE84007511.

RN: PNL--4392 (PNL4392)

PY: 1983

LA: English

CI: United-States

PT: R (Report)

AB: The components of the XM829 round effectively shield out nonpenetrating beta radiation emitted by the depleted uranium; however, photons can penetrate the components of the round and are therefore the predominant emission. The radiation levels associated with the XM829 ammunition are low. The maximum emissions measured from a cartridge are not likely to result in exposure to military personnel above the maximum permissible nonoccupational dose limits listed in Army Regulation (AR) 40-14. Based upon the specifications contained in 49 CFR 173.424 and the radiation measurement data, the XM829 shipping package may be excepted from the specification packaging, marking and labeling requirements of subpart 49 CFR 173 as long as the outer surface of the uranium is enclosed in an inactive sheath and the conditions specified in 49 CFR 421 (b), (c), and (d) are met.

DEM: depleted-uranium

DEI: performance-; radiation-hazards; radiation-protection; safety-

DEC: actinides-; elements-; hazards-; health-hazards; metals-; uranium-

CC: C1500

C1: C1500

CD: Effects-of-External-Radiation-on-Man

UD: 1517

AN: 15-052427

Record 27 of 47 - INIS 1987 - 1989

TI: Risk assessment for transportation of depleted uranium oxide.

AU: Bernhardt,-D.E. (Rogers and Associates Engineering Corp., Salt Lake City, UT (USA)); Prewett,-S.V. (Aerojet Ordnance Tennessee, Inc., Jonesboro, TN (USA))

CA: 29. annual meeting of the Institute of Nuclear Materials Management. Las Vegas, NV (USA). 26-29 Jun 1988.

SO: Nuclear-Materials-Management. (1988). v. 17 p. 619-626.

RN: CONF-880631-- (CONF880631)

PY: 1988

LA: English

CI: United-States

PT: J (Journal-Article); K (Conference)

AB: Metallic uranium manufacturing wastes are pyrophoric and must be stabilized before transportation or disposal. The wastes can be stabilized by oxidizing them in an incinerator. Uranium oxide is granular and could be dispersed in the event of an accident. The risks associated with transportation and disposal accidents for depleted uranium (DU) oxide are determined, and the radiological risks are compared to the nonradiological risks of physical injuries and deaths. The assessment of risks from transportation accidents is based on accidents that have occurred, assessments of the severity and consequences of accidents in suburban and rural areas, characteristics of the material, and release of material under accident conditions and its dispersion in the atmosphere. The highest doses for the transportation accidents are 22 mrem (0.22 mBq) for an accident in a suburban area and 18 mrem (0.18 mBq) for an accident in a rural area. The probability of an accident occurring in a suburban area times the health effects risk from the consequences of an accident gives an estimate of about 0.0035×10^{-6} cancers or fatal health effects per shipment for a 340 mile trip. The probability of a fatal nonradiation related injury from a truck accident is about 38×10^{-6} per trip. Techniques for reducing the

potential radiological risk of accidents should be evaluated to ensure they do not increase the overall risk.

DEM: uranium-oxides; waste-transportation

DEI: death-; environmental-impacts; evaluation-; health-hazards; incinerators-; radiation-accidents; radiation-injuries; radioactive-waste-disposal; remedial-action; risk-assessment; toxicity-; transport-regulations

DEC: accidents-; actinide-compounds; biological-effects; biological-radiation-effects; chalcogenides-; diseases-; hazards-; injuries-; law-; management-; oxides-; oxygen-compounds; radiation-effects; regulations-; uranium-compounds; waste-disposal; waste-management

IS: ISSN 0362-0034. CODEN NUMMB.

CC: E1510; C5240; F2400

CI: E1510

CD: Transport-and-storage; Environmental-safety-of-nuclear-installations; Transport-and-Storage-of-Radioactive-Materials-and-Wastes

UD: 2010

AN: 20-034483

Record 28 of 47 - INIS 1987 - 1989

TI: Environmental monitoring report for Pantex Plant covering 1986.

AU: Laseter,-W.A.

CA: Mason and Hanger-Silas Mason Co., Inc., Amarillo, TX (USA).

SO: Apr 1987. 97 p.

NT: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted. Available from NTIS, PC A05/MF A01; 1 as DE87012069.

RN: MHSMP--87-18 (MHSMP8718)

PY: 1987

LA: English

CI: United-States

PT: R (Report)

AB: This report summarizes the environmental monitoring program at Pantex Plant for 1986. It has been prepared in accordance with the US Department of Energy Order 5484.1. This report presents monitoring data for both radioactive and nonradioactive species in the local environment. Plant activities involve the handling of significant quantities of uranium, plutonium and tritium in the form of completed parts received from other DOE facilities, resulting in a very low potential for release of these radionuclides to the atmosphere. In 1986 only small releases of depleted uranium (depleted in the isotope U-235) and tritium occurred which could have affected the local environment. Monitoring data indicate that concentrations of these nuclides in the environment are below established criteria for air and water and therefore should not present a health hazard either to employees or to the public.

DEM: pantex-plant

DEI: chemical-effluents; environment-; health-hazards; human-populations; personnel-; plutonium-; radioactive-effluents; risk-assessment; tritium-; uranium-235

DEC: actinide-nuclei; actinides-; alpha-decay-radioisotopes; beta-decay-radioisotopes; beta-minus-decay-radioisotopes; chemical-wastes; elements-; even-odd-nuclei; hazards-; heavy-nuclei; hydrogen-isotopes; internal-conversion-radioisoto; isomeric-transition-isotopes; isotopes-; light-nuclei; materials-; metals-; minutes-living-radioisotopes; national-organizations; nonradioactive-wastes; nuclei-; odd-even-nuclei; populations-; radioactive-materials; radioactive-wastes; radioisotopes-; spontaneous-fission-radioisoto; transuranium-elements; uranium-isotopes; us-doe; us-erda; us-organizations; wastes-; years-living-radioisotopes

CC: C5220; B3310; B3110; B3200
C1: C5220
CD: Environmental-aspects-of-radioactive-effluents-from-existing-nuclear-
installations; Radioactive-materials-monitoring-and-transport;-meteorology;
Radioactive-materials-monitoring-and-transport; Water
UD: 1902
AN: 19-005112

Record 29 of 47 - INIS 1987 - 1989

TI: Ambient air quality in uranium production areas.
AU: Langer,-G.
SO: Smith,-L.C.-Rockwell International Corp., Golden, CO (USA). Rocky Flats
Plant. HS and E application technology: Semiannual progress report, January 1985
through June 1985. 24 Dec 1986. p. 8-13.
NT: Available from NTIS, PC A04/MF A01; 1 as DE87009472.
RN: RFP--3990 (RFP3990)
PY: 1986
LA: English
CI: United-States
PT: R (Report); N (Numerical-Data); X (Microfiche-Unavailable-from-INIS)
AB: The purpose of this ambient air quality study was to measure the
concentration and particle size of airborne uranium-238 particles in the
depleted uranium production areas of Building 444 of the Rocky Flats Plant.
Operations in this building include reclamation of uranium-238 scrap by re-
melting into ingots, and oxidation of uranium-238 chips in a chip roaster.
Previous ambient air quality studies have monitored the operations of a roller
mill, shears, and extrusion presses in Building 865. Data for all operations
were reviewed in this study. The results were used to evaluate the health hazard
of the dust in both buildings. 1 reference, 3 figures, 3 tables.
DEM: rocky-flats-plant; uranium-238
DEI: air-pollution; experimental-data; monitoring-; particle-size; radiation-
hazards; radioecological-concentration
DEC: actinide-nuclei; alpha-decay-radioisotopes; data-; ecological-
concentration; even-even-nuclei; hazards-; health-hazards; heavy-nuclei;
information-; isotopes-; national-organizations; nuclei-; numerical-data;
pollution-; radioisotopes-; size-; spontaneous-fission-radioisoto; uranium-
isotopes; us-aec; us-doe; us-erda; us-organizations; years-living-radioisotopes
CC: B3310; C2110
C1: B3310
CD: Radioactive-materials-monitoring-and-transport;-meteorology; Radioisotope-
effects,-kinetics-and-toxicology-in-man
UD: 1901
AN: 19-001329

Record 30 of 47 - INIS 1987 - 1989

TI: System cost-effectiveness for increasing cask shielding.
AU: Smith,-R.I.
CA: Pacific Northwest Lab., Richland, WA (USA).
Waste management '87. Tucson, AZ (USA). 1-5 Mar 1987.
SO: Feb 1987. 4 p.
NT: Paper copy only, copy does not permit microfiche production.
Availability: INIS; Available from NTIS, PC A02; 3 as DE87006433.
RN: PNL-SA--14580 (PNLSA14580); CONF-870306--37 (CONF87030637)
PY: 1987
LA: English

CI: United-States
PT: R (Report); K (Conference)
AB: A methodology is developed for evaluating the cost-effectiveness for the federal waste management system of reducing the aggregate system radiation dose by increasing shielding on spent fuel transport casks. The methodology is evaluated for 100-ton rail casks which utilize steel, lead, and depleted uranium, respectively, for gamma shielding. For these examples, reducing the external radiation dose rate from the casks to less than one-half the current DOT limit does not appear to be cost-effective.
DEM: casks-
DEI: radiation-doses; radiation-hazards; shielding-
DEC: containers-; hazards-; health-hazards
CC: E1520; E1510; C1500
C1: E1520
CD: Shipping-containers; Transport-and-storage; Effects-of-External-Radiation-on-Man
UD: 1821
AN: 18-085869

Record 31 of 47 - INIS 1987 - 1989

TI: Safety analysis of the existing 850 Firing Facility.
AU: Odell,-B.N.
CA: Lawrence Livermore National Lab., CA (USA).
SO: 5 Jun 1986. 46 p.
NT: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted. Availability: INIS; Available from NTIS, PC A03/MF A01; 1 as DE86013614.
RN: UCID--20815 (UCID20815)
PY: 1986
LA: English
CI: United-States
PT: R (Report)
AB: A safety analysis was performed to determine if normal operations and/or potential accidents at the 850 Firing Facility at Site 300 could present undue hazards to the general public, personnel at Site 300, or have an adverse effect on the environment. The normal operations and credible accidents that might have an effect on these facilities or have off-site consequences were considered. It was determined by this analysis that all but one of the hazards were either low or of the type or magnitude routinely encountered and/or accepted by the public. The exception was explosives, which was classified as a moderate hazard per the requirements given in DOE Order 5481.1A. This safety analysis concluded that the operation at this facility will present no undue risk to the health and safety of LLNL employees or the public.
DEM: lawrence-livermore-laboratory
DEI: beryllium-; chemical-explosives; depleted-uranium; fire-hazards; health-hazards; radiation-doses; safety-analysis; testing-
DEC: actinides-; alkaline-earth-metals; elements-; explosives-; hazards-; lawrence-livermore-national-la; metals-; national-organizations; uranium-; us-aec; us-doe; us-erda; us-organizations
CC: C1500
C1: C1500
CD: Effects-of-External-Radiation-on-Man
UD: 1811
AN: 18-045803

Record 32 of 47 - INIS 1990 - 12/92

TI: SARP shielding analysis at the Oak Ridge Y-12 plant.
AU: Cramer,-S.N.; Dabbs,-R.D. (Oak Ridge National Lab., TN (United States));
Cain,-V.R. (Martin Marietta Energy Systems, Inc., Oak Ridge, TN (United States))
CA: Annual meeting of the American Nuclear Society (ANS). Orlando, FL (United
States). 2-6 Jun 1991.
SO: Transactions-of-the-American-Nuclear-Society. (1991). v. 63 p. 367-368.
RN: CONF-910603-- (CONF910603)
PY: 1991
LA: English
CI: United-States
PT: J (Journal-Article); K (Conference)
AB: Shipments of radioactive and fissile material from the Oak Ridge Y-12
plant, managed by Martin Marietta Energy Systems, Inc., must be in accordance
with governing regulations from the Department of Transportation and the US
Nuclear Regulatory Commission (NRC) and orders from the US Department of Energy
(DOE). The safety requirements addressed by these regulations and orders pertain
to the containment of radioactive material, radiation shielding, and
subcriticality of fissile material. A safety analysis report for packaging
(SARP) must be prepared by the company for each material-container combination
and approved by DOE prior to shipment. When shielding calculations are required
for a SARP, the analysis is done by the Radiation Shielding Information Center
at Oak Ridge National Laboratory, and survey measurements are made at various
stages in the packing and shipment procedures by Y-12 plant health physics
personnel. The analysis aid in the design of the shipping containers prior to
fabrication, and the dose measurements at the time of shipment have always been
well below regulatory limits.
DEM: containers-; fissile-materials; y-12-plant
DEI: accidents-; carbon-; criticality-; depleted-uranium; fabrication-; highly-
enriched-uranium; iron-; o-codes; ornl-; radiation-doses; radiation-hazards;
radiation-protection; regulations-; safety-; shielding-; silicon-; spontaneous-
fission; transport-; uranium-232; us-doe; us-dot; us-nrc
DEC: actinide-nuclei; actinides-; alpha-decay-radioisotopes; computer-codes;
decay-; elements-; enriched-uranium; even-even-nuclei; fission-; fissionable-
materials; hazards-; health-hazards; heavy-ion-decay-radioisotopes; heavy-
nuclei; isotope-enriched-materials; isotopes-; laws-; materials-; metals-;
national-organizations; neon-24-decay-radioisotopes; nonmetals-; nuclear-decay;
nuclear-reactions; nuclei-; radioisotopes-; semimetals-; spontaneous-fission-
radioisoto; transition-elements; uranium-; uranium-isotopes; us-aec; us-erda;
us-organizations; years-living-radioisotopes
IS: ISSN 0003-018X. CODEN TANSA.
CC: E1510
C1: E1510
CD: Transport-and-storage
UD: 2312
AN: 23-036266

Record 33 of 47 - INIS 1990 - 12/92

TI: Radioactivity in zirconium oxide powders used in industrial applications.
AU: Lischinsky,-J.; Vigliani,-M.A.; Allard,-D.J. (Applied Consultants, Inc.,
Woburn, MA (USA))
SO: Health-Physics. (Jun 1991). v. 60(6) p. 859-862.
PY: 1991
LA: English
CI: United-States
PT: J (Journal-Article)

AB: Recent work involving the decommissioning of a former ceramic manufacturing facility licensed by the Nuclear Regulatory Commission for activities involving depleted uranium oxide has uncovered the presence of unexpected high levels of natural radioactivity in non-licensed zirconium oxide powders also used in the same facility. A comparison between the levels of source material found in samples of this material and the current regulatory guidance for licensed activities and decommissioning has been conducted. It has been determined that the radioactivity in the zirconium oxide is of a high enough magnitude to raise health physics concerns in the areas of licensing and regulatory compliance, decontamination criteria, and worker health and safety. An examination of these areas has been conducted and the implications associated with our findings are presented.

DEM: industry-; uranium-; zirconium-oxides

DEI: contamination-; decommissioning-; natural-radioactivity; occupational-safety; powders-; radiation-hazards; thorium-

DEC: actinides-; chalcogenides-; elements-; hazards-; health-hazards; metals-; oxides-; oxygen-compounds; radioactivity-; safety-; transition-element-compounds; zirconium-compounds

IS: ISSN 0017-9078. CODEN HLTPA.

CC: C2110

C1: C2110

CD: Radioisotope-effects,-kinetics-and-toxicology-in-man

UD: 2221

AN: 22-076602

Record 34 of 47 - INIS 1990 - 12/92

TI: Qualitative risk assessment as a remediation management tool.

AU: Knutson,-D.E.

CA: EG and G Rocky Flats, Inc., Golden, CO (USA).

FUNDING ORGANIZATION: USDOE, Washington, DC (USA).

SO: 14 Mar 1991. 180 p.

NT: Thesis (M.S.). Availability: INIS; OSTI as DE91010415; NTIS; INIS; US Govt. Printing Office Dep.

RN: RFP--4348 (RFP4348); Contract AC34-90DP62349 (AC3490DP62349)

PY: 1991

LA: English

CI: United-States

PT: R (Report); U (Thesis-or-Dissertation)

AB: The technique used to complete this thesis utilizes existing NRC and EPA guidance on health-based risk to qualitatively prioritize preliminary assessments and provide a tool for the direction and management of remediation activities. This method is intended as a decision making tool to aid in prioritizing the remediation effort and manage the remedial investigation and feasibility study (RI/FS) process. It is not a replacement for the RI/FS. The methodology for qualitative risk assessment utilizes data gathered in preliminary assessments and calculates the health-based hazards and consequences from contaminants found at each individual location. The health-based qualitative risk indicated that number-sign 6 fuel oil, carbon tetrachloride, depleted uranium, and enriched uranium were the contaminants of major concern, in that order. Plutonium ranked approximately sixth in the contaminant of concern priority. 38 refs., 1 fig., 9 tabs.

DEM: carbon-tetrachloride; petroleum-products; plutonium-; uranium-

DEI: health-hazards; management-; radiation-hazards; remedial-action; risk-assessment

DEC: actinides-; elements-; hazards-; metals-; organic-chlorine-compounds; organic-compounds; organic-halogen-compounds; transuranium-elements

CC: C5400
C1: C5400
CD: Radiation-Protection-Procedures
UD: 2217
AN: 22-063320

Record 35 of 47 - INIS 1990 - 12/92

TI: SARP shielding analysis at the Oak Ridge Y-12 plant.
AU: Cramer,-S.N.; Dabbs,-R.D. (Oak Ridge National Lab., TN (United States));
Cain,-V.R. (Martin Marietta Energy Systems, Inc., Oak Ridge, TN (United States))
CA: Annual meeting of the American Nuclear Society (ANS). Orlando, FL (United
States). 2-6 Jun 1991.
SO: Transactions-of-the-American-Nuclear-Society. (1991). v. 63 p. 367-368.
RN: CONF-910603-- (CONF910603)
PY: 1991
LA: English
CI: United-States
PT: J (Journal-Article); K (Conference)
AB: Shipments of radioactive and fissile material from the Oak Ridge Y-12
plant, managed by Martin Marietta Energy Systems, Inc., must be in accordance
with governing regulations from the Department of Transportation and the US
Nuclear Regulatory Commission (NRC) and orders from the US Department of Energy
(DOE). The safety requirements addressed by these regulations and orders pertain
to the containment of radioactive material, radiation shielding, and
subcriticality of fissile material. A safety analysis report for packaging
(SARP) must be prepared by the company for each material-container combination
and approved by DOE prior to shipment. When shielding calculations are required
for a SARP, the analysis is done by the Radiation Shielding Information Center
at Oak Ridge National Laboratory, and survey measurements are made at various
stages in the packing and shipment procedures by Y-12 plant health physics
personnel. The analysis aid in the design of the shipping containers prior to
fabrication, and the dose measurements at the time of shipment have always been
well below regulatory limits.
DEM: containers-; fissile-materials; y-12-plant
DEI: accidents-; carbon-; criticality-; depleted-uranium; fabrication-; highly-
enriched-uranium; iron-; o-codes; ornl-; radiation-doses; radiation-hazards;
radiation-protection; regulations-; safety-; shielding-; silicon-; spontaneous-
fission; transport-; uranium-232; us-doe; us-dot; us-nrc
DEC: actinide-nuclei; actinides-; alpha-decay-radioisotopes; computer-codes;
decay-; elements-; enriched-uranium; even-even-nuclei; fission-; fissionable-
materials; hazards-; health-hazards; heavy-ion-decay-radioisotopes; heavy-
nuclei; isotope-enriched-materials; isotopes-; laws-; materials-; metals-;
national-organizations; neon-24-decay-radioisotopes; nonmetals-; nuclear-decay;
nuclear-reactions; nuclei-; radioisotopes-; semimetals-; spontaneous-fission-
radioisoto; transition-elements; uranium-; uranium-isotopes; us-aec; us-erda;
us-organizations; years-living-radioisotopes
IS: ISSN 0003-018X. CODEN TANSA.
CC: E1510
C1: E1510
CD: Transport-and-storage
UD: 2312
AN: 23-036266

Record 36 of 47 - INIS 1990 - 12/92

TI: Radioactivity in zirconium oxide powders used in industrial applications.

AU: Lischinsky,-J.; Vigliani,-M.A.; Allard,-D.J. (Applied Consultants, Inc., Woburn, MA (USA))
SO: Health-Physics. (Jun 1991). v. 60(6) p. 859-862.
PY: 1991
LA: English
CI: United-States
PT: J (Journal-Article)
AB: Recent work involving the decommissioning of a former ceramic manufacturing facility licensed by the Nuclear Regulatory Commission for activities involving depleted uranium oxide has uncovered the presence of unexpected high levels of natural radioactivity in non-licensed zirconium oxide powders also used in the same facility. A comparison between the levels of source material found in samples of this material and the current regulatory guidance for licensed activities and decommissioning has been conducted. It has been determined that the radioactivity in the zirconium oxide is of a high enough magnitude to raise health physics concerns in the areas of licensing and regulatory compliance, decontamination criteria, and worker health and safety. An examination of these areas has been conducted and the implications associated with our findings are presented.
DEM: industry-; uranium-; zirconium-oxides
DEI: contamination-; decommissioning-; natural-radioactivity; occupational-safety; powders-; radiation-hazards; thorium-
DEC: actinides-; chalcogenides-; elements-; hazards-; health-hazards; metals-; oxides-; oxygen-compounds; radioactivity-; safety-; transition-element-compounds; zirconium-compounds
IS: ISSN 0017-9078. CODEN HLTPA.
CC: C2110
C1: C2110
CD: Radioisotope-effects,-kinetics-and-toxicology-in-man
UD: 2221
AN: 22-076602

Record 37 of 47 - INIS 1990 - 12/92

TI: Qualitative risk assessment as a remediation management tool.
AU: Knutson,-D.E.
CA: EG and G Rocky Flats, Inc., Golden, CO (USA).
FUNDING ORGANIZATION: USDOE, Washington, DC (USA).
SO: 14 Mar 1991. 180 p.
NT: Thesis (M.S.). Availability: INIS; OSTI as DE91010415; NTIS; INIS; US Govt. Printing Office Dep.
RN: RFP--4348 (RFP4348); Contract AC34-90DP62349 (AC3490DP62349)
PY: 1991
LA: English
CI: United-States
PT: R (Report); U (Thesis-or-Dissertation)
AB: The technique used to complete this thesis utilizes existing NRC and EPA guidance on health-based risk to qualitatively prioritize preliminary assessments and provide a tool for the direction and management of remediation activities. This method is intended as a decision making tool to aid in prioritizing the remediation effort and manage the remedial investigation and feasibility study (RI/FS) process. It is not a replacement for the RI/FS. The methodology for qualitative risk assessment utilizes data gathered in preliminary assessments and calculates the health-based hazards and consequences from contaminants found at each individual location. The health-based qualitative risk indicated that number-sign 6 fuel oil, carbon tetrachloride, depleted uranium, and enriched uranium were the contaminants of major concern,

in that order. Plutonium ranked approximately sixth in the contaminant of concern priority. 38 refs., 1 fig., 9 tabs.

DEM: carbon-tetrachloride; petroleum-products; plutonium-; uranium-
DEI: health-hazards; management-; radiation-hazards; remedial-action; risk-assessment

DEC: actinides-; elements-; hazards-; metals-; organic-chlorine-compounds; organic-compounds; organic-halogen-compounds; transuranium-elements

CC: C5400

C1: C5400

CD: Radiation-Protection-Procedures

UD: 2217

AN: 22-063320

Record 38 of 47 - INIS 1/93-12/96

TI: Assaying depleted uranium in bones in-situ using a non-invasive x-ray fluorescence technique.

AU: Bloch,-P.; Shapiro,-I.M. (Univ. of Penn. Inst. of Environmental Studies, Philadelphia, PA (United States))

CA: 43. annual Denver x-ray conference on applications of x-ray analysis. Steamboat Spring, CO (United States). 1-5 Aug 1994.

SO: Advances-in-X-Ray-Analysis. (1995). v. 38. p. 595-599.

RN: CONF-9408178-- (CONF9408178)

PY: 1995

LA: English

CI: United-States

PT: J (Journal-Article); K (Conference)

AB: The occupational exposure to uranium associated with milling and fabrication of depleted uranium is presently assessed from bioassay of urine samples. The evaluation of the body-burden of uranium from urine analysis has many difficulties and uncertainties associated with accounting for the bio-transport of inhaled uranium particles from the lungs, to absorption in the blood and excretion through the kidneys. The chemical toxicity of uranium and other transuranic elements is not fully understood, partially because of the difficulty of assessing the body burden of these metals in-situ. The transuranic elements are known to be deposited and retained in bone. A non-invasive X-ray fluorescence technique has been developed to assay the depleted uranium in bones in-situ. The K-shell electrons in uranium, which have a binding energy of 115.6 keV, are excited by the 122 and 136 keV gamma rays from a Co-57 source. A liquid N sub 2 cooled intrinsic Ge-detector is employed to measure the characteristic K fluorescence from the uranium as well as the coherently scattered gamma rays from the Co-57 source. The quantity of uranium in the bone is determined from the number of K fluorescence events extracted from the measured scattered photon spectrum. In addition, the bone mineral mass is determined from the number of coherently scattered gamma rays, permitting the assay of uranium to be pressed in terms of micrograms per unit mass bone. Using this system it was possible to measure molar concentrations of uranium with high precision and reproducibility.

DEM: depleted-uranium

DEI: biological-localization; biological-radiation-effects; bone-tissues; in-vivo; uranium-; x-ray-fluorescence-analysis

DEC: actinides-; animal-tissues; biological-effects; body-; chemical-analysis; connective-tissue; elements-; metals-; nondestructive-analysis; radiation-effects; x-ray-emission-analysis

IS: ISSN 0376-0308. CODEN AXRAAA.

CC: C2110; C6200; G6100

C1: C2110

CD: Effects-of-internal-irradiation-and-various-aspects-of-radioisotope-kinetics-and-toxicity-in-man; Radioisotopes-in-Diagnosis; Nuclear-Techniques-in-Condensed-Matter-Physics
UD: 2724
AN: 27-074793

Record 39 of 47 - INIS 1/93-12/96

TI: The validity of generic limits on residual uranium-238 radioactivity in soil.
AU: Wood,-R.P.; Eckart,-R.E. (Univ. of Cincinnati, OH (United States). Dept. of Mechanical, Industrial, and Nuclear Engineering)
CA: '93 international conference on nuclear waste management and environmental remediation. Prague (Czech Republic). 5-11 Sep 1993.
SO: Ahlstroem,-P.E.; Chapman,-C.C.; Kohout,-R.; Marek,-J. (eds.). Proceedings of the 1993 international conference on nuclear waste management and environmental remediation. Volume 2: High level radioactive waste and spent fuel management. New York, NY (United States). American Society of Mechanical Engineers. 1993. 853 p. p. 267-275.
NT: American Society of Mechanical Engineers, 22 Law Drive, Box 2900, Fairfield, NJ 07007-2900 (United States) Available as 3 volume set, Order No. IX0354 \$185.00.
RN: CONF-930906-- (CONF930906)
PY: 1993
LA: English
CI: United-States
PT: B (Book); K (Conference); N (Numerical-Data)
AB: Restoration and subsequent unrestricted use of sites contaminated by radioactive materials requires that an acceptable level of residual radioactive contamination be determined. Investigation using the pathway analysis method of three different, hypothetical sites contaminated with depleted uranium-238 indicates that identical levels of residual soil contamination may result in substantially different exposures to individuals residing on the site. The differences may be greater than a factor of three in peak annual effective dose equivalent. Additionally, the time frame over which the peak doses are received may vary dramatically. The actual function of dose vs. time is seen to be site specific, depending strongly on the site hydrogeology and the chemical form of the uranium. These results suggest that a site specific determination of the risks from residual contamination should be used in place of generic residual soil contamination limits to determine if a site may be released for unrestricted use.
DEM: soils-; uranium-238
DEI: decontamination-; environmental-exposure-pathway; experimental-data; maximum-permissible-level; radiation-doses; radiation-hazards; radioecological-concentration; remedial-action; removal-
DEC: actinide-nuclei; alpha-decay-radioisotopes; cleaning-; data-; ecological-concentration; even-even-nuclei; hazards-; health-hazards; heavy-nuclei; information-; isotopes-; nuclei-; numerical-data; radioisotopes-; safety-standards; spontaneous-fission-radioisotopes; standards-; uranium-isotopes; years-living-radioisotopes
IS: ISBN 0-7918-0691-X.
CC: E2300; B3110; C5500
C1: E2300
CD: Reactor-Fuels; Radioactive-materials-monitoring-and-transport; Dosimetry-and-Monitoring
UD: 2705
AN: 27-015292

Record 40 of 47 - INIS 1/93-12/96

TI: Reference computations of public dose and cancer risk from airborne releases of uranium and Class W plutonium.

AU: Peterson,-V.L.

CA: EG and G Rocky Flats, Inc., Golden, CO (United States). Rocky Flats Plant. FUNDING ORGANIZATION: USDOE, Washington, DC (United States).

SO: 6 Jun 1995. 98 p.

NT: Availability: INIS; Also available from OSTI as DE95015955; NTIS; US Govt. Printing Office Dep.

RN: RFP--4965 (RFP4965); Contract AC34-90RF62349 (AC3490RF62349)

PY: 1995

LA: English

CI: United-States

PT: R (Report)

AB: This report presents 'reference' computations that can be used by safety analysts in the evaluations of the consequences of postulated atmospheric releases of radionuclides from the Rocky Flats Environmental Technology Site. These computations deal specifically with doses and health risks to the public. The radionuclides considered are Class W Plutonium, all classes of Enriched Uranium, and all classes of Depleted Uranium. (The other class of plutonium, Y, was treated in an earlier report.) In each case, one gram of the respirable material is assumed to be released at ground level both with and without fire. The resulting doses and health risks can be scaled to whatever amount of release is appropriate for a postulated accident being investigated. The report begins with a summary of the organ-specific stochastic risk factors appropriate for alpha radiation, which poses the main health risk of plutonium and uranium. This is followed by a summary of the atmospheric dispersion factors for unfavorable and typical weather conditions for the calculation of consequences to both the Maximum Offsite Individual and the general population within 80 km (50 miles) of the site.

DEM: human-populations; particulates-; plutonium-; uranium-

DEI: aerosols-; atmospheric-circulation; inhalation-; radiation-doses; radiation-hazards; risk-assessment

DEC: actinides-; colloids-; dispersions-; elements-; hazards-; health-hazards; intake-; metals-; particles-; populations-; sols-; transuranium-elements

CC: C5500; B3310; E2300

C1: C5500

CD: Dosimetry-and-Monitoring; Radioactive-materials-monitoring-and-transport; Reactor-Fuels

UD: 2702

AN: 27-005320

Record 41 of 47 - INIS 1/93-12/96

TI: Comparison of models used for ecological risk assessment and human health risk assessment.

AU: Ryti,-R.T.; Gallegos,-A.F. (Los Alamos National Lab., NM (United States))

CA: 15. annual meeting of the Society of Environmental Toxicology and Chemistry (SETAC). Denver, CO (United States). 30 Oct - 3 Nov 1994.

SO: Anon.-Society of Environmental Toxicology and Chemistry 15th annual meeting: Abstract book. Ecological risk: Science, policy, law, and perception. Pensacola, FL (United States). Society of Environmental Toxicology and Chemistry. 1994. 286 p. p. 172.

NT: Society of Environmental Toxicology and Chemistry, 1010 North 12th Avenue, Pensacola, FL 32501-3307 (United States) \$25.00.

RN: CONF-9410273-- (CONF9410273)

PY: 1994

LA: English

CI: United-States

PT: B (Book); K (Conference)

AB: Models are used to derive action levels for site screening, or to estimate potential ecological or human health risks posed by potentially hazardous sites. At the Los Alamos National Laboratory (LANL), which is RCRA-regulated, the human-health screening action levels are based on hazardous constituents described in RCRA Subpart S and RESRAD-derived soil guidelines (based on 10 mRem/year) for radiological constituents. Also, an ecological risk screening model was developed for a former firing site, where the primary constituents include depleted uranium, beryllium and lead. Sites that fail the screening models are evaluated with site-specific human risk assessment (using RESRAD and other approaches) and a detailed ecological effect model (ECOTRAN). ECOTRAN is based on pharmacokinetics transport modeling within a multitrophic-level biological-growth dynamics model. ECOTRAN provides detailed temporal records of contaminant concentrations in biota, and annual averages of these body burdens are compared to equivalent site-specific runs of the RESRAD model. The results show that thoughtful interpretation of the results of these models must be applied before they can be used for evaluation of current risk posed by sites and the benefits of various remedial options. This presentation compares the concentrations of biological media in the RESRAD screening runs to the concentrations in ecological endpoints predicted by the ecological screening model. The assumptions and limitations of these screening models and the decision process where these are screening models are applied are discussed.

DEM: beryllium-; depleted-uranium; environmental-transport; health-hazards; lanl-; lead-

DEI: e-codes; environmental-impacts; mathematical-models; r-codes; resource-recovery-acts

DEC: actinides-; alkaline-earth-metals; computer-codes; elements-; hazards-; laws-; mass-transfer; metals-; national-organizations; uranium-; us-doe; us-organizations

CC: C5200

C1: C5200

CD: Environmental-Aspects-of-Nuclear-Installations

UD: 2618

AN: 26-059539

Record 42 of 47 - INIS 1/93-12/96

TI: Evaluation of depleted uranium in the environment at Aberdeen Proving Grounds, Maryland and Yuma Proving Grounds, Arizona. Final report.

AU: Kennedy,-P.L.; Clements,-W.H.; Myers,-O.B.; Bestgen,-H.T.; Jenkins,-D.G. (Colorado State Univ., Fort Collins, CO (United States). Dept. of Fishery and Wildlife Biology)

CA: Los Alamos National Lab., NM (United States).

FUNDING ORGANIZATION: Department of Defense, Washington, DC (United States).

SO: [1995]. 211 p.

NT: Availability: INIS; Also available from OSTI as DE95005102; NTIS; US Govt. Printing Office Dep.

RN: LA-SUB--94-173 (LASUB94173); Contract W-7405-ENG-36 (W7405ENG36)

PY: 1995

LA: English

CI: United-States

PT: R (Report)

AB: This report represents an evaluation of depleted uranium (DU) introduced into the environment at the Aberdeen Proving Grounds (APG), Maryland and Yuma Proving Grounds (YPG) Arizona. This was a cooperative project between the Environmental Sciences and Statistical Analyses Groups at LANL and with the Department of Fishery and Wildlife Biology at Colorado State University. The project represents a unique approach to assessing the environmental impact of DU in two dissimilar ecosystems. Ecological exposure models were created for each ecosystem and sensitivity/uncertainty analyses were conducted to identify exposure pathways which were most influential in the fate and transport of DU in the environment. Research included field sampling, field exposure experiment, and laboratory experiments. The first section addresses DU at the APG site. Chapter topics include bioenergetics-based food web model; field exposure experiments; bioconcentration by phytoplankton and the toxicity of U to zooplankton; physical processes governing the desorption of uranium from sediment to water; transfer of uranium from sediment to benthic invertebrates; spread of adsorption by benthic invertebrates; uptake of uranium by fish. The final section of the report addresses DU at the YPG site. Chapters include the following information: Du transport processes and pathway model; field studies of performance of exposure model; uptake and elimination rates for kangaroo rates; chemical toxicity in kangaroo rat kidneys.

DEM: arizona-; depleted-uranium; maryland-

DEI: aquatic-ecosystems; arid-lands; biological-effects; desorption-; environmental-transport; invertebrates-; phytoplankton-; radioactive-waste-disposal; radioecological-concentration; rats-; sensitivity-; toxicity-; zooplankton-

DEC: actinides-; animals-; aquatic-organisms; developed-countries; ecological-concentration; ecosystems-; elements-; mammals-; management-; mass-transfer; metals-; north-america; plankton-; rodents-; uranium-; usa-; vertebrates-; waste-disposal; waste-management

CC: C2100; C5500; B3210

C1: C2100

CD: Effects-of-Internal-Irradiation,-Radioisotope-Kinetics-and-Toxicity-in-Microorganisms,-Plants,-Animals-and-Man; Dosimetry-and-Monitoring; Radioactive-materials-monitoring-and-transport

UD: 2612

AN: 26-044583

Record 43 of 47 - INIS 1/93-12/96

TI: Depleted uranium disposal options evaluation.

AU: Hertzler,-T.J.; Nishimoto,-D.D.; Otis,-M.D. (Science Applications International Corp., Idaho Falls, ID (United States). Waste Management Technology Div.)

CA: EG and G Idaho, Inc., Idaho Falls, ID (United States).

Science Applications International Corp., Idaho Falls, ID (United States). Waste Management Technology Div.

FUNDING ORGANIZATION: USDOE, Washington, DC (United States).

SO: May 1994. 78 p.

NT: Availability: INIS; Also available from OSTI as DE95002029; NTIS; US Govt. Printing Office Dep.

RN: EGG-MS--11297 (EGGMS11297); Contract AC07-76ID01570 (AC0776ID01570)

PY: 1994

LA: English

CI: United-States

PT: R (Report)

AB: The Department of Energy (DOE), Office of Environmental Restoration and Waste Management, has chartered a study to evaluate alternative management

strategies for depleted uranium (DU) currently stored throughout the DOE complex. Historically, DU has been maintained as a strategic resource because of uses for DU metal and potential uses for further enrichment or for uranium oxide as breeder reactor blanket fuel. This study has focused on evaluating the disposal options for DU if it were considered a waste. This report is in no way declaring these DU reserves a "waste," but is intended to provide baseline data for comparison with other management options for use of DU. To PICS considered in this report include: Retrievable disposal; permanent disposal; health hazards; radiation toxicity and chemical toxicity.

DEM: depleted-uranium; monitored-retrievable-storage; radioactive-waste-disposal

DEI: cost-estimation; health-hazards; toxicity-

DEC: actinides-; elements-; hazards-; management-; metals-; radioactive-waste-storage; spent-fuel-storage; storage-; uranium-; waste-disposal; waste-management; waste-storage

CC: E5000; C2100

C1: E5000

CD: WASTE-MANAGEMENT; Effects-of-Internal-Irradiation,-Radioisotope-Kinetics-and-Toxicity-in-Microorganisms,-Plants,-Animals-and-Man

UD: 2608

AN: 26-030837

Record 44 of 47 - INIS 1/93-12/96

TI: Calculation of shielding parameters.

OT: Calculo de parametros de blindaje.

AU: Montoya-Z,-J.

CA: Universidad Nacional Autonoma de Mexico, Mexico City (Mexico).

SO: 1994. 123 p.

NT: Thesis (Applied Mathematics and Computation). Availability: INIS

RN: INIS-mf--14395 (INISmf14395)

PY: 1994

LA: Spanish

CI: Mexico

PT: I (Miscellaneous); U (Thesis-or-Dissertation)

AB: With the propose of reduce the hazard to radiation, exist three basic factors: a) time, the time to exposition to working person inside to area, from exist determined speed the doses, is proportional of the time permanence; b) distance, the reduce to doses is inverse square of the distance to exposition point; c) building, consist to interpose between source and exposition point to material. The main aspect development to the analysis of parameters distance and building. The analysis consist to development of the mathematical implicit, in the model of source radioactive, beginning with the geometry to source, distance to exposition source, and configuration building. In the final part was realize one comparative studied to calculus of parameters to blinding, employs two codes CPBGAM and MICROSIELD, the first made as part to work thesis. The point source its a good approximation to any one real source, but in the majority of the time to propose analysis the spatial distribution of the source must realized in explicit way. The buildings calculus in volumetry's source can be approximate begin's of plan as source adaptations. It's important to have present that not only the building exist the exposition to the radiation, and the parameters time and distance plays an important paper too. (Author).

DEM: shielding-materials; shielding-

DEI: biological-radiation-effects; c-codes; computerized-simulation; depleted-uranium; lead-; m-codes; radiation-protection; radiation-sources; triga-3-salazar-reactor

DEC: actinides-; biological-effects; computer-codes; elements-; enriched-uranium-reactors; homogeneous-reactors; hydride-moderated-reactors; irradiation-reactors; isotope-production-reactors; materials-; metals-; radiation-effects; reactors-; research-and-test-reactors; simulation-; solid-homogeneous-reactors; thermal-reactors; triga-type-reactors; uranium-; water-cooled-reactors; water-moderated-reactors

CC: F5100
C1: F5100
CD: Nuclear-Computation-and-Simulation
UD: 2601
AN: 26-002715

Record 45 of 47 - INIS 1/93-12/96

TI: Depleted uranium human health risk assessment, Jefferson Proving Ground, Indiana.

AU: Ebinger,-M.H.; Hansen,-W.R.

CA: Los Alamos National Lab., NM (United States).

FUNDING ORGANIZATION: Department of Defense, Washington, DC (United States).

SO: 29 Apr 1994. 77 p.

NT: Availability: INIS; Also available from OSTI as DE94013003; NTIS; US Govt. Printing Office Dep.

RN: LA-UR--94-1809 (LAUR941809); Contract W-7405-ENG-36 (W7405ENG36)

PY: 1994

LA: English

CI: United-States

PT: R (Report)

AB: The risk to human health from fragments of depleted uranium (DU) at Jefferson Proving Ground (JPG) was estimated using two types of ecosystem pathway models. A steady-state, model of the JPG area was developed to examine the effects of DU in soils, water, and vegetation on deer that were hunted and consumed by humans. The RESRAD code was also used to estimate the effects of farming the impact area and consuming the products derived from the farm. The steady-state model showed that minimal doses to humans are expected from consumption of deer that inhabit the impact area. Median values for doses to humans range from about 1 mrem (+2.4) to 0.04 mrem (+0.13) and translate to less than 1×10^6 sup - sup 6 detriments (excess cancers) in the population. Monte Carlo simulation of the steady-state model was used to derive the probability distributions from which the median values were drawn. Sensitivity analyses of the steady-state model showed that the amount of DU in airborne dust and, therefore, the amount of DU on the vegetation surface, controlled the amount of DU ingested by deer and by humans. Human doses from the RESRAD estimates ranged from less than 1 mrem/y to about 6.5 mrem/y in a hunting scenario and subsistence fanning scenario, respectively. The human doses exceeded the 100 mrem/y dose limit when drinking water for the farming scenario was obtained from the on-site aquifer that was presumably contaminated with DU. The two farming scenarios were unrealistic land uses because the additional risk to humans due to unexploded ordnance in the impact area was not figured into the risk estimate. The doses estimated with RESRAD translated to less than 1×10^6 sup - sup 6 detriments to about 1×10^3 sup - sup 3 detriments. The higher risks were associated only with the farming scenario in which drinking water was obtained on-site.

DEM: depleted-uranium; food-chains

DEI: contamination-; drinking-water; environmental-exposure-pathway; health-hazards; human-populations; indiana-; ingestion-; mathematical-models; plants-; r-codes; radiation-doses; radionuclide-migration; risk-assessment

DEC: actinides-; computer-codes; developed-countries; elements-; environmental-transport; hazards-; hydrogen-compounds; intake-; mass-transfer; metals-; north-america; oxygen-compounds; populations-; uranium-; usa-; water-
CC: C2100; B3110; B3210
C1: C2100
CD: Effects-of-Internal-Irradiation,-Radioisotope-Kinetics-and-Toxicity-in-Microorganisms,-Plants,-Animals-and-Man; Radioactive-materials-monitoring-and-transport; Radioactive-materials-monitoring-and-transport
UD: 2523
AN: 25-069573

Record 46 of 47 - INIS 1/93-12/96

TI: Uranium tipped ammunition.
AU: Roche,-P. (Greenpeace, London (United Kingdom))
SO: Safe-Energy. (Oct-Nov 1993). (no.97). p. 10-11.
PY: 1993
LA: English
CI: United-Kingdom
PT: J (Journal-Article)
AB: During the uranium enrichment process required to make nuclear weapons or fuel, the concentration of the 'fissile' U-235 isotope has to be increased. What is left, depleted uranium, is about half as radioactive as natural uranium, but very dense and extremely hard. It is used in armour piercing shells. External radiation levels from depleted uranium (DU) are low. However DU is about as toxic as lead and could be harmful to the kidneys if eaten or inhaled. It is estimated that between 40 and 300 tonnes of depleted uranium were left behind by the Allied armies after the Gulf war. The biggest hazard would be from depleted uranium shells which have hit Iraqi armoured vehicles and the resulting dust inhaled. There is a possible link between depleted uranium shells and an illness known as 'Desert Storm Syndrome' occurring in some Gulf war veterans. As these shells are a toxic and radioactive hazard to health and the environment their use and testing should be stopped because of the risks to troops and those living near test firing ranges. (UK).
DEM: depleted-uranium
DEI: dusts-; environmental-effects; inhalation-; military-personnel; radiation-doses; radiation-hazards
DEC: actinides-; elements-; hazards-; health-hazards; intake-; metals-; personnel-; uranium-
IS: ISSN 1350-5114. CODEN SEEREV.
CC: C2110; F1400
C1: C2110
CD: Effects-of-internal-irradiation-and-various-aspects-of-radioisotope-kinetics-and-toxicity-in-man; Social-Impact-of-Nuclear-Science-and-Technology
UD: 2506
AN: 25-017886

Record 47 of 47 - INIS 1/93-12/96

TI: Ecological risk assessment of depleted uranium in the environment at Aberdeen Proving Ground. Annual report, 1991.
AU: Clements,-W.H.; Kennedy,-P.L.; Myers,-O.B. (Colorado State Univ., Fort Collins, CO (United States). Dept. of Fishery and Wildlife Biology)
CA: Los Alamos National Lab., NM (United States).
Colorado State Univ., Fort Collins, CO (United States). Dept. of Fishery and Wildlife Biology.

FUNDING ORGANIZATION: Department of Defense, Washington, DC (United States).

SO: [1993]. 32 p.

NT: Availability: INIS; OSTI as DE93008911; NTIS; INIS; US Govt. Printing Office Dep.

RN: LA-SUB--93-76 (LASUB9376); Contract W-7405-ENG-36 (W7405ENG36)

PY: 1993

LA: English

CI: United-States

PT: R (Report); Y (Progress-Report)

AB: A preliminary ecological risk assessment was conducted to evaluate the effects of depleted uranium (DU) in the Aberdeen Proving Ground (APG) ecosystem and its potential for human health effects. An ecological risk assessment of DU should include the processes of hazard identification, dose-response assessment, exposure assessment, and risk characterization. Ecological risk assessments also should explicitly examine risks incurred by nonhuman as well as human populations, because risk assessments based only on human health do not always protect other species. To begin to assess the potential ecological risk of DU release to the environment we modeled DU transport through the principal components of the aquatic ecosystem at APG. We focused on the APG aquatic system because of the close proximity of the Chesapeake Bay and concerns about potential impacts on this ecosystem. Our objective in using a model to estimate environmental fate of DU is to ultimately reduce the uncertainty about predicted ecological risks due to DU from APG. The model functions to summarize information on the structure and functional properties of the APG aquatic system, to provide an exposure assessment by estimating the fate of DU in the environment, and to evaluate the sources of uncertainty about DU transport.

DEM: aquatic-ecosystems; depleted-uranium; food-chains

DEI: chesapeake-bay; contamination-; environmental-transport; fishes-; health-hazards; ingestion-; metals-; phytoplankton-; progress-report; radiation-doses; radionuclide-migration; risk-assessment; sediments-; sensitivity-analysis

DEC: actinides-; animals-; aquatic-organisms; atlantic-ocean; bays-; coastal-waters; document-types; ecosystems-; elements-; hazards-; intake-; mass-transfer; plankton-; seas-; surface-waters; uranium-; vertebrates-

CC: B3140; B3240

C1: B3140

CD: Site-studies; Site-studies

UD: 2420

AN: 24-063395